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Index to the Rural New Yorker, Volume LX., 1901.

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THE RURAL NEW-YORKER, No. 409 Pearl Street, New York.

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2658. NEW YORK, JANUARY 5, 1901. $1 PER YEAR

THE ESSENTIALS OF PEACH CULTURE.

A LIFE'S EXPERIENCE BOILED DOWN.

The Soil, the Tree and Its Care.

FIRST OF ALL.—Several years ago, in an article on peach culture, I wrote what then seemed to me to be "the ten commandments of peach culture"; they were widely copied, and I am told have been very helpful in leading many to the heaven of a good and profitable peach orchard. Now I have forgotten just what those "ten commandments" were, but am going to take it for granted that some of them are now out of date, and in reply to THE R. N.-Y.'s demand for some of the leading requirements to the successful culture of the peach, may break the whole ten, for the fellow who gets his living by peach growing is learning and unlearning some things all the time, yet I hope continually growing in grace. The first and greatest essential to success, is a love of Nature; trees, plants and living things; a pleasure in their care and development; a love of peaches because they are so beautiful, as well as good, and a genuine enjoyment in producing the finest peaches that can be grown, regardless of whether there would be any money profit in such production. "Horse sense" and good business judgment, with the "under-dog" habit of never knowing when you are whipped, are further requirements; and abrupt elevations of lands that are reasonably free from water, and that furnish quick frost and air drainage.

THE SOIL.—A warm, light, loamy soil is best, yet about any except a stiff clay will answer, if other things are right. I used just to dote on commercial fertilizers, but am now convinced that with culture enough (and yet who will ever give culture enough?) there is not the necessity for the great amounts of fertilizers we have been applying. Rocky hill lands that have been just a little too tough a proposition for good tillage in the past, make an ideal foundation for a peach orchard; there is color and flavor for peaches in these rocky old hills, and it is cheaper to remove rocks at odd seasons of the year than to buy fertilizers. I have already reclaimed two so-called abandoned farms, and have 125 acres of promising orchard among the rocks, or where they once were. Have now tackled another 50-acre tract of rocks, trees and brush, properties that I would not have taken as a gift eight years ago, and so bad now that agricultural college trustees, members of State boards of agriculture, high officials in the Grange, professors of horticulture and other "visiting statesmen," all shake their heads and say, "I don't know"; one or two more outspoken than the rest even went so far as to say I was "peach crazy" and "stark mad" to waste money on such rough lands, when good cleared land could be bought at less than the cost of clearing this; well, perhaps so, but if I don't get more fun and profit out of the rough-land peach orchards than some fellows do on their so-called "better land" it will be a surprise party to me. Digging out rocks beats subsoiling, yet where the rocks are out of the way, it will pay to use a subsoil plow before planting the orchard, except, of course, where lands have sandy or gravel subsoil; and if the land is too rough to lick into shape, don't plant the trees the first year; just plow the best you can, and sow cow peas broadcast thickly; they are great helps in breaking up land, besides enriching it.

GET BIG TREES.—When ready to plant trees, get big ones. I have planted nearly 400,000 peach trees in orchards the past 20 years, nearly all June-budded or else light to medium-sized one-year trees, with occasional lots of heavy No. 1 or extra-sized trees. I have fooled myself with "good medium three to four-foot trees" long enough; from now on give me the big ones; five to six feet high and three-quarters-inch caliper will lay the foundation of a better orchard than any smaller size. I really care nothing about the top, so long as you can get a heavy root and strong cane 15 or 18 inches up; you will cut away the rest anyway, and so be in shape to build any sort of top you may. Distance apart; well, here is where the man comes in again, and then the locality; I have made the most money North and South planting 13 feet apart or closer each way. Of course, it means a lot of pruning, while wide-apart planting tempts neglect of this most necessary operation with the peach tree. Still, taking human nature as it is, I cannot advise the other fellow to plant very close, 18 to 22 feet apart each way will doubtless give the best results; planting closer in the South than in the North, where trees are inclined to more wood and foliage growth. Don't plant any so-called "catch crops" in a young orchard; you'll catch it if you do; plant horse and mule legs in plenty, up and down and across, between the peach trees, their hoof prints will do no harm if harrows and cultivators follow close behind. At least once a week for the three best growing months of May, June and July in this latitude allows 12 to 15 good cultures, and if you throw in a few more for good luck, the trees will smile on you for it.

GREEN CROPS.—The first two years, after a month or six weeks of thorough culture, seed to cow peas over two-thirds the space between the rows of trees, leaving space enough for good single-horse culture up and down each side of the trees for two months more. Leaving the pea vines on the ground as a Winter mulch will be less loss than to plow them under, and so have bare ground all Winter. After two years of peas in an orchard the tree roots should reach out through the whole orchard, and should have the whole run of it to feed and drink upon during the rapid growing months, when the liveliest culture is being given. If culture has been what it ought from opening of Spring down to last of July or early August, trees will be growing so fast that they can't well stop before Fall, and the whole ground should be seeded to clover at the last cultivation. I consider 15 to 20 pounds of seed per acre is little enough for a thick clover carpet over the ground through the Fall and Winter, and is a great protection to peach roots. Plow this clover under early the next Spring; don't fool yourself into letting it grow a few weeks in Spring, so as "to have a lot of stuff to plow under"; six weeks of the best peach season's growth can easily be checked by allowing the clover to grow two or three weeks after it's time to Spring-plow the orchard. The time to begin Spring culture in a peach orchard is just as soon as the soil can easily be worked after frost is out.

PRUNING.—As to pruning, a light open head is what is wanted; don't shorten in too much of first year's growth. The second year shorten pretty liberally all the strongest branches, and let the side branches spread so as to make a broad low head. After the second year, cut away most of the strong leaders entirely every season; if in any instance it seems best not to cut one entirely away, never cut it back to a dormant bud, but always to some side branches; these will slowly take on growth and great fruiting strength, and check the upward tendency of growth that is sure to follow the cutting back of a strong peach limb to a dormant bud. Don't bother much with the little side branches, high or low, that will never make leaders. Most pruners like to slick up the trunk and main branches of a peach tree by cutting these all away. It is a fruiting mistake to do this; pruning a peach tree as here suggested should give three-fourths of the fruit near enough to the ground so that it can be gathered without the use of stepladders. Learn to know yellows in a tree at sight a year or two before it hangs out its sign with "pennyroyal sprouts" or prematurely high-colored fruit. Promptly pull and burn all yellows-infested trees, no matter what other job you may have

THE OTAHEITE ORANGE. FIG. 1. SEE RURALISMS, PAGE 6.

on hand; attend to the yellows first. Feeding, as growth or lack of it seems to demand; fruit thinning, picking, packing and marketing and perhaps at times spraying when the trees are dormant, all require close attention, yet the points I have touched are the foundation to build a successful peach orchard upon.

Connecticut. J. H. HALE.

FEEDING MUSCLE-MAKERS INTO PLANTS.

FERTILIZER NITROGEN VS. CROP NITROGEN.

An Increased Value of Hay.

PART II.

INCREASING FEEDING VALUE.—In the experiments with mixed grasses, the nitrogen in the fertilizer increased very considerably the yields of hay, and, also, to a marked degree, the proportion of protein in the crop. The feeding value of the crop, where the largest quantities of nitrogen were used, was, therefore, much greater than on plots where little or no nitrogen has been used. On the whole, the most economical returns in yields were obtained from plots where nitrate of soda was used at the rate of 320 pounds per acre (equal to 50 pounds of nitrogen). The increase in yields due to the nitrogen is shown by the following table. The mineral fertilizers were uniform on all the plots except the one where no fertilizer was used, and the results on the separate plots are the average of three years' experiments. On the plots to which nitrogen was added the results are the averages from the use of nitrate of soda and sulphate of ammonia, on plots supplied with uniform quantities of nitrogen. Similar experiments to these were made with distinct kinds of grasses, and the effects of the nitrogen in increasing the protein of the crop was even more striking than in the case of the mixed grasses:

Nitrogen per acre.	Relative yield of hay per acre.
No fertilizer	1,881 pounds
No nitrogen	2,664 pounds
Nitrogen, 25 pounds	3,645 pounds
Nitrogen, 50 pounds	4,727 pounds
Nitrogen, 75 pounds	5,015 pounds

DIFFERING RESULTS WITH CORN.—In the experiments with corn the effects of the nitrogen in increasing the yield of the crop, especially where the larger quantities of nitrogen were used, were not so marked as in the experiments with mixed grasses. As was pointed out in the first part of this article, soluble nitrogen compounds like nitrate of soda and sulphate of ammonia are readily leached out of the soil in seasons of heavy rainfall. When these materials are used in large quantities for corn, much of the nitrogen may be lost before the crop can make use of it. At any rate, a large series of experiments made by the Storrs Station indicates that there is little economy in using nitrate of soda or sulphate of ammonia in amounts sufficient to supply over 40 to 50 pounds of nitrogen per acre when the yields alone are considered. When the proportion of protein, in both the seed and the stover are taken into account, however, even larger amounts of nitrogen than these may prove profitable. On the whole, it seems more desirable to use about 200 pounds of nitrate of soda or its equivalent of sulphate of ammonia (160 pounds) in connection with stable manure or green manuring. The following table makes clear the fact that the larger quantities of nitrogen have caused relatively little increase in the yields :

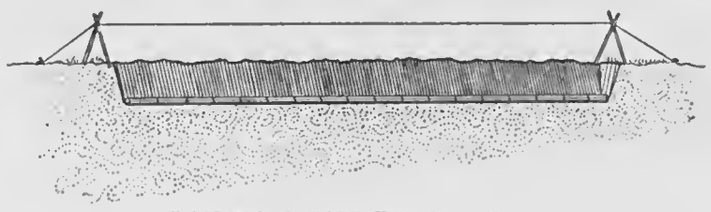
Nitrogen per acre.	Relative yield of corn (grain) per acre.
No fertilizer	1,197 pounds
No nitrogen	1,778 pounds
Nitrogen, 25 pounds	2,399 pounds
Nitrogen, 50 pounds	2,937 pounds
Nitrogen, 75 pounds	3,004 pounds

As will be seen farther on in this article the larger quantities of nitrogen did increase the yields per acre of protein to quite a marked degree. While the total yield of grain was increased only 67 pounds where 75 pounds of nitrogen were used over that obtained where 50 pounds were used, the actual protein in the crop was 60 pounds greater where the larger quantities of nitrogen were applied.

NITROGEN ON LEGUMES.—When we come to the consideration of the effects of nitrogen on the legumes, such as cow peas and Soy beans, the experiments tell a very different story. On these two crops there was a decided contrast in the effects of the nitrogen in the fertilizer upon both the yield and the percentages of protein as compared with those obtained with corn and with grasses. In experiments covering a period of five years with cow-pea fodder the yields obtained on plots where only mineral fertilizers (phosphoric acid, potash and lime) have been used, have been very nearly as great as on any of the plots to which nitrogen was added with the mineral fertilizers. The following table shows the poor result obtained from nitrogen:

Nitrogen	Relative yield of cow peas (green fodder) per acre.
No fertilizer	9,660 pounds
No nitrogen	18,485 pounds
Nitrogen, 25 pounds	19,265 pounds
Nitrogen, 50 pounds	18,465 pounds
Nitrogen, 75 pounds	18,100 pounds

What is still more interesting, the effect of the nitrogen on the percentages of protein in the crop is much less on the cow-pea fodder than upon the grasses or corn. The value of the nitrogen to improve the feeding value of the crop is shown in the table which follows, which gives the percentages and the yields per acre of the protein. It may be seen that the yields of protein for the cow-pea fodder are essentially the same on all the plots irrespective of the amount of nitrogen used in the fertilizer. In the case of the Soy-bean seed there was a slight increase



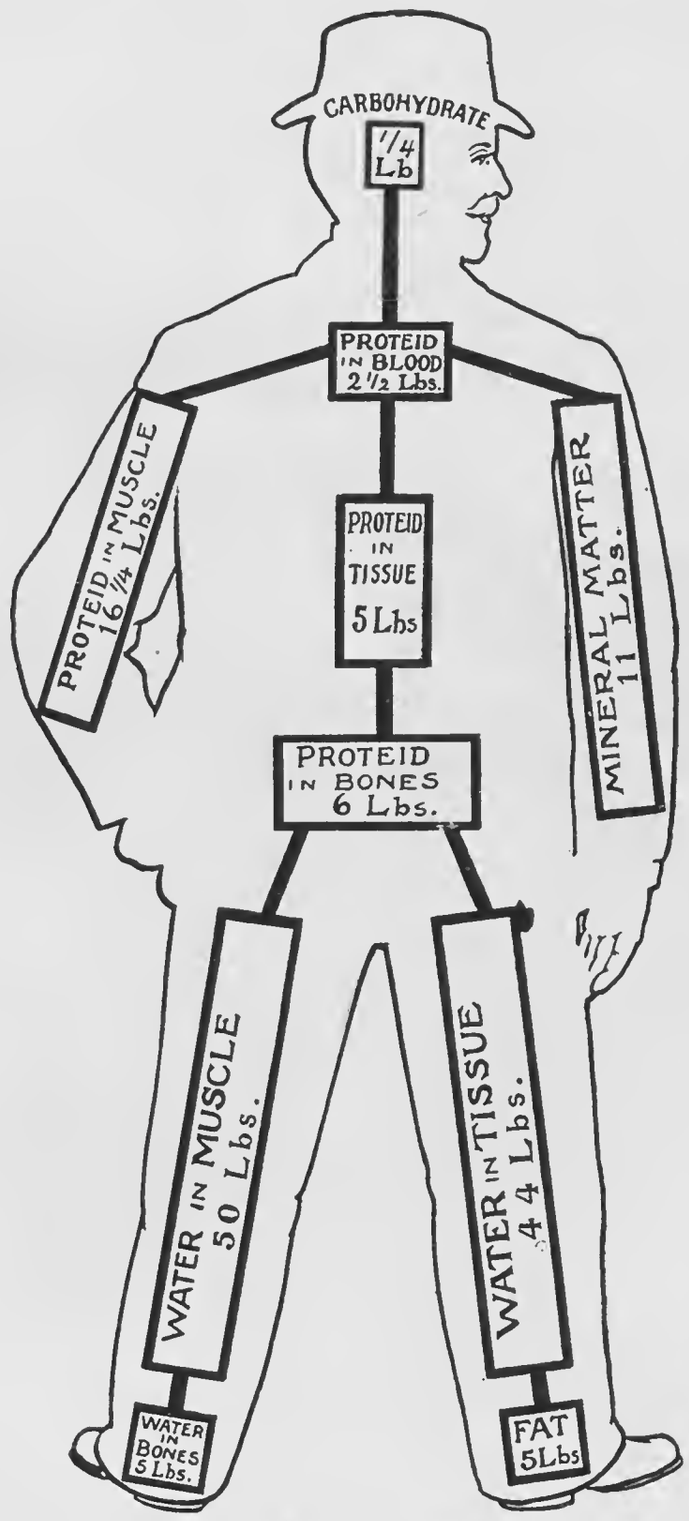
LAYING A TILE DRAIN. FIG. 2.

in protein corresponding somewhat with the amount of nitrogen used. However, the increase in protein for this crop as effected by the nitrogen was much less than with the grasses and corn.

Per cent in the dry substance of protein.

Fertilizers per acre.	Mixed grasses. per ct.	Corn. per ct. (in grain).	Cow-pea fodder. per ct.	Soy bean secds. per ct.
Mineral fertilizer	7.83	10.13	18.37	39.30
Minerals & nitrogen, 25 lbs.	7.73	10.54	18.04	39.93
Minerals & nitrogen, 50 lbs.	8.46	11.05	17.69	40.71
Minerals & nitrogen, 75 lbs.	9.39	11.88	19.14	41.47

VALUE OF COW-PEA FODDER.—One point of interest to which I would like to call attention here is the large yields of protein per acre obtained with cow-pea fodder as compared with the total yields from mixed grasses and from corn including the stover. The average yield of the mixed grasses, on the most heavily fertilized plots, was 2½ tons per acre of thoroughly dried hay, which gave 4,458 pounds of dry matter and 432 pounds of protein. The average yield of cow-pea fodder from the plots with mineral fertilizers only was a little over nine tons of green crop,



A DOMESTIC SCIENCE MAN. FIG. 3.

equal to 3,850 pounds of dry matter and 666 pounds of protein. The total yield of protein per acre from the corn and stover was 486 pounds on the most heavily-fertilized plot. These experiments lead to the conclusion that the farmer who considers only the total yields of fodder obtained from his crops is leaving out of account one of the most important phases in the management of the farm, especially if it be a dairy farm. The farmer needs to study the feeding value of the crops he raises as well as of those which he buys. Only in this way can he realize the full benefits derived from the fertilizer or manure which he uses. As yet the markets do not recognize any difference in the feeding value of the hay due to differences in composition, but the farmer who feeds the hay from his most heavily-fertilized meadows and sells that from the poorly-fertilized fields would certainly be practicing a shrewd bit of economy.

[Prof.] C. S. PHELPS.

TALKS ABOUT DRAINAGE.

How to Lay the Tile.

We have a piece of land with a wet strip from two to four rods wide running through it. I would like to know how to tile it. Would one row through the center be sufficient, or would it require more? How many and how deep should the tiles be laid? J. K.

Cresco, Iowa.

First see that you have a good outlet for the water. Second, dig a narrow ditch along the center of the wet strip deep enough to drain the land, say three to four feet, according to the nature of the soil. If it is liable to settle down much after the water is drawn off it should be deeper than it would otherwise. Trim the bottom of the ditch carefully to a true grade. A string stretched over the center of the ditch is a very efficient help in getting both line and grade. See Fig. 2. The line of the tile should be as straight as the circumstances will permit, and the tile laid to a true grade, which may be ascertained exactly by measuring down from the string. A sag in the tile is sure to be filled with silt sooner or later, destroying its usefulness. A single line of tile through this tract ought to drain it of surface water, the size of the tile depending on the extent of the tract and the amount of water coming into it. In any case I would not use smaller than four-inch tile. If there are springs they must be provided for. When the bottom of the ditch is very truly and carefully brought to grade the tile may be laid end to end along the bottom, the joints covered with an inverted sod or its equivalent to keep loose dirt out, and the ditch filled up. If the grading string is used to measure down the tiling may be laid and covered as fast as the ditch is dug, commencing at the outlet. F. HODGMAN.

The Effect of Tile Drainage.

I have been told that in parts of Illinois the tile drains have been taken up, because they took off more water than was necessary, and were the ruination of Illinois bottom lands. I am interested because I have 40 acres of land which, in a fairly dry season, has raised as high as 85 bushels of corn per acre, but ordinarily it is too wet, and my only resource has been to ditch it. I have just been putting another ditch through it this week (couldn't do this in December every year), but find that the ditches take up too much land. As we list all of our corn in this section of Nebraska it necessitates running the rows the same way every year. Not only this, if the land was tiled it seems to me that all of the rich soil which washes down from the upland would remain upon the bottom land, while if ditched, would pass on down, depriving the land of this cream of soils. What is the truth? C. V. D.

Nebraska.

We have been quite fully informed for 20 years with the progress of land drainage in Illinois, having attended the drainage conventions for 20 years past; have corresponded with hundreds of persons interested in land drainage; have viewed several of the large drainage districts; have visited many of the large farms where systems of under-drainage were being constructed; have observed carefully the effects and have never heard it claimed by anyone before, that tile drains "took more water than necessary". Neither have we heard it asserted at any time, by anyone, or through the press, or otherwise, that "tile drainage was the ruination of Illinois bottom lands". To the contrary, we know of thousands of acres of low-lying bottom lands that have been reclaimed by under-drainage and have been yielding magnificent crops for many years. Besides, there are great enterprises being carried forward, and others being planned, looking forward to the reclamation of large areas of bottom lands in Illinois and other States. If tile drainage has the injurious effect claimed by C. V. D., the wideawake, energetic capitalist would soon find it out and discontinue the work.

In the pioneer work of under-drainage in Illinois and other States, many of the tile drains were poorly constructed, were too shallow, and the tile was not laid true to the grade, which after a few years did not work well for the reason that the silt settled in the depressions, almost filling the tile until the drains were practically worthless. In many such cases the drains have been taken up and replaced with larger tile, laid, in many instances, two or three times the depth of the first tile. In other cases the first lines of tile drains were ignored altogether, and a new system of drains put in at a greater depth, using larger tile and all requisite care as to grade, joints and connections. The necessary information as to the why and how to under-drain has been so widely diffused in the past 20 years that there are now few mistakes made, comparatively speaking, in the work of tile drainage. To illustrate more fully the progress which has been made, it was common in the pioneer work to use two or three-inch tile in the construction of lateral drains, but it was soon found that larger tile did better work, so that at this time very few if any two-inch tile are used, only a few threes, and most of the leading men in the work of land drainage will not use a tile less than four inches. If there was any trouble arising from the tendency to carry away too much water, as claimed by C. V. D., the change in sizes of tile used would be to smaller sizes, so as to lessen rather than to increase the capacity of the drains. Referring again to bottom lands, there are some that are naturally under-drained by underlying strata of sand and gravel, that do not need to be tile-drained. Again, there are bottom lands, thousands of acres, where the water level in the soil is so near the surface in the early part of the season, that under or tile drainage is the only means by which these large areas of rich land can be made available for agricultural purposes.

In the early settlement of the State the prevailing opinion as to the future of the low-lying acres of bottom land was that they would never be available for agricultural uses, but the beneficial effects of under-drainage have worked a change in the crops grown, and the betterment of the sanitary conditions of the country has been so marked that land values have gone up to very high marks. In many instances $100 per acre and even higher figures are paid for them; lands which before being tile-drained were held at $5 per acre and even less. Such are the facts as we find them to-day, notwithstanding the sayings of others to the contrary. J. J. W. B.

Indianapolis, Ind.

THE FARM INSTITUTES OF WISCONSIN.

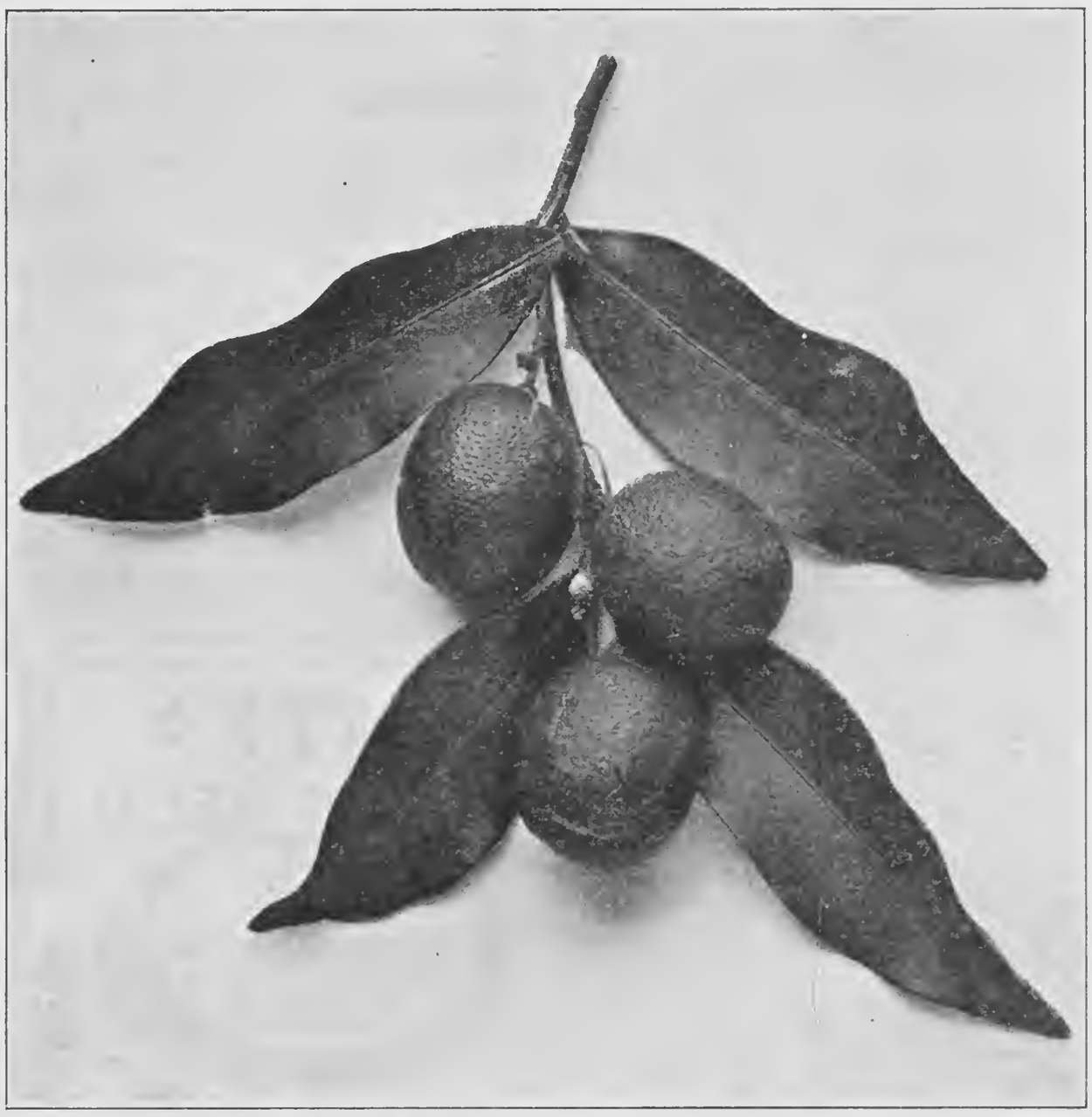
Of the Farmer and for the Farmer.

During the first three months of the coming year there occur in Wisconsin 101 meetings, composed of the most intelligent and wideawake farmers in the State. For two days, through five sessions of two hours each, these men and women will discuss in an intelligent manner, the topics of greatest interest to them, relating experiences of past efforts and suggesting methods for the future. All of these discussions are led in the right direction and controlled by a "conductor," who suggests the topics and opens the way by a 20-minute talk. These conductors are all practical farmers, owning and successfully operating farms in Wisconsin. In many instances a cooking school is held in connection with the other meetings, conducted by an expert cook. In these, the line of work is of quite as great interest as the other meetings. This, in brief, is an outline of the farm-institute work in this State. This is the fifteenth year of the existence of this branch of agricultural education, during which time over 1,500 meetings have been held. The institute work is one of the three main divisions of the Agricultural College of the State University, the experiment station and the college courses comprising the other two. Of these three, the experiment station is designed to solve some of the problems of greatest import to the farmer. Well-trained experts are constantly at work aiming to discover Nature's secrets. How may we most easily unlock the plant food in the soil? What is the history of these millions of organisms in a drop of milk, and how can we control or destroy them? All these things accrue to the good of the farmer, but they are of necessity slowly evolved, and the end sought is too often obscured by terms and methods not familiar to him.

The college courses are more popular, especially the short course, which is patronized almost wholly by farmers' sons, but not every one can come to Madison even for 14 weeks in the Winter. Therefore further to extend the work, the institute system of agricultural education has been devised, to bring to the very doors, as it were, the information needed, and an opportunity for the interchange of ideas. The largely-increased attendance at the meetings, the enthusiasm manifested, as well as the growing demand for meetings, is evidence of the popularity and value of the work. The institutes are located only on petition, the petitioners agreeing to furnish a meeting place with heat and light, the central management attending to the rest. One hundred and fifty-one petitions were received last year, but the means at command allowed of only 101 meetings. One hundred of these were located in the remoter parts of the State, and mainly in new territory, while the last or "round-up" meeting is usually held in one of the larger towns. This is an event of very considerable importance and very largely attended. For this occasion, "imported talent" is largely employed, and a Winter fair or exhibition of farm products is held, with a prize list offered by the merchants of the town. The proceedings of the "round-up" are printed in full in book form, to be distributed free to all interested. This is an extremely popular publication and the annual edition of 60,000 copies is always exhausted before a new one is issued. By an enactment of the Legislature, one copy is sent to each school district in the State, to be put in the school library. The distribution is effected in part through the agricultural press of the State, as the publishers forward the book to subscribers, on request.

While the general supervision and control of the work is in the hands of the regents of the University, the real direction is delegated by them to a superintendent. It is plain that the success or failure of the work must depend largely upon this superintendent. For the past six years this position has been filled by Mr. George McKerrow. The splendid success of the work and the increased confidence and interest are the best evidence of his fitness for the position. Another evidence is his large stock farm operated very successfully by him for many years, previous to taking up the institute work. As a breeder of purebred horses, cattle and sheep, he has been well-known to the stockmen of the State for over a quarter of a century. The students of the short course, when engaged in competitive stock-judging, never fail to visit the McKerrow farm, for here may be found one of the finest flocks of purebred sheep in the Northwest. Mr. McKerrow is a man of excellent attainments and knows farming and the farmers of Wisconsin, and gets very close to them in his work. The same is true of the conductors. Their talks are not those of the man who gleans from the written work of others, and adds to this his own dreams of the way things ought to be, while his own barn door is off the hinges and his cattle are subsisting on such protein and carbohydrates as may be found in the straw stack. It cannot be justly charged against any man connected with the institute work that he is not a successful, practical farmer, and herein lies the secret of the grand success of the work; it is of the farmers, for the farmers and by the farmers. It costs the people of the State $12,000 a year to maintain the institutes, one-half of which is absorbed by the expense of printing of 60,000 copies of the bulletin. A portion of the returns may be found in the census statistics of Wisconsin's farm products, but the larger benefits are not thus expressed. The knowledge derived, the power accruing from this knowledge and the contentment following, are not reducible to any form available to the census taker. The institutes in Wisconsin are free from any political taint whatever. Only once did the politician ever attempt to gain admission, and then the door was slammed in his face so forcibly that no further attempt has ever been made.

FREDERIC CRANEFIELD.



NAGAMI OR OVAL KUMQUAT. Fig. 3. See Ruralisms, Page 6.

A DOMESTIC SCIENCE MAN.

A woman who is studying domestic science work sent us, through a friend, a chart from which the drawing shown at Fig. 3 was made. The following lines were written under the chart:

See this new and beautiful man
Made on a domestic-science plan!
Water makes up most his weight,
Proteid as I indicate;
Mineral matter is also great,
Just a little of carbohydrate.
Fats are needed, may I state?
What he *is* I leave to fate.

We trust that fate will be kind to this poor combination of water, minerals, fat and proteids, and if fate take the form of a domestic-science woman such kindness is probably assured. The man weighs 145 pounds. Of this 99 pounds, or 68 per cent is water. As he puts on fat this proportion of water will grow larger. It may shock some of our solid citizens to be informed that they are composed so largely of fluid, but it should be an incentive to them to make up the proportion of solid matter by putting more sand or mineral matter in character and will.

PEACH TREES ON BLACK WALNUT ROOTS.

A Big Story from Kentucky.

Not long since I was attending the State horticultural meeting in Elizabethtown, Ky., the county seat of Hardin County, which is in the Blue-grass region, and noted for its fine horses and rye whisky. Before the hour for the meeting to convene I was introduced to the various officials in the court house, and among others to the county judge. Being a very genial and communicative old gentleman, and knowing that I was there in the interests of fruit culture, he very kindly proceeded to tell me of the fruit industry in Hardin County. He began by announcing that I might not know that the largest and best peaches in the whole country grew there. He said they had been sold as high as $12.50 per bushel, and that I might know just how they grew such fine peaches he said the trees were "grown on Black-walnut roots." At this rare information I smiled audibly and said: "See here, Judge, don't try to guy me in that way; no kind of peach tree will grow on any such root." This evidently nettled him, for was he not the judge of the county court, and his honor and veracity unimpeachable? The latter I did not doubt and I respected his white head, but I at once thought of the close proximity of the Ohio nurserymen who have such marvelous peach trees and other things to sell, and that possibly they had been doing missionary work in Kentucky. So I asked the Judge whether they had not been favored with those wonderful trees from north of the Ohio River. "Oh! no," he said, "they are budded right here. We have men who know all about fruit culture. You know the peach borers do not work in Black walnut roots, and the trees grow wonderfully in our rich soil." To this I could only reply, that I did not doubt his belief in this new mode of growing peaches, but that I did not; and I bade him good morning after some conversation on other topics, leaving him of the firm conviction that I was a hardened disbeliever in the greatest secret of modern peach culture.

A few days later I was at a meeting of the Maryland Horticultural Society in Baltimore and there confided the secret method to Roland Morrill, of Michigan; J. H. Hall, of Connecticut, and other noted peach growers who were present; but somehow they did not say they would adopt it. With all the eloquence I could command I tried to show Mr. Morrill the advantage of $12.50 per bushel over the $7.50 he was able to get for the best of his peaches in 1899, but it was all in vain. Perhaps our friend, Prof. Massey, of North Carolina, will catch on to the idea, and try it for growing new-fangled pears or quinces. Doubtless all the pears or quinces grown on Black-walnut stocks in North Carolina or elsewhere, will have seeds nearly as large as walnuts and with kernels as rich as butter and as sweet as honey. For, why will not "the new horticulture" work as well in North Carolina as it does in Kentucky?

H. E. VAN DEMAN.

A STEAM HORSE IN CALIFORNIA.

We have been using one of the Daniel Best's 50-horse-power traction steam engines for seven years, and it has proved a grand success for plowing, harrowing and pulling a combined harvester. In plowing, we pull with it 16 10-inch plows, and plow about 40 acres per day. In harrowing, we pull enough harrows to cut the width of 60 feet, and harrow about 150 acres per day. In harvesting, we pull a combined harvester, with a cut of 25 feet, and have cut, thrashed, cleaned and put into bags ready for market 80 acres of wheat, 1,155 bags, 164,010 pounds, in one day. We cut and thrash about 3,000 acres of grain every season. In regard to the pushing or pulling of headers or binders we will say that they are entirely out of use in this part of California. We have never used our engine for hauling loads to market, as we are on the banks of the Sacramento River, and ship all our produce to San Francisco by river. However, these engines are used in lumber camps for hauling logs to the sawmills, and also in the southern part of the State for hauling salt and ore. There are six of these engines in use here in a radius of 12 miles and there would be more of them but that the price is $7,000, including the combined harvester, the engine alone costing $5,000.

BOYER BROS.
California.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Windmills for Electric Power.

C. T. H., Maine.—Is it practicable to use a windmill to develop electric power through a dynamo to run, say, a five-horse-power motor, or would the first cost be prohibitive?

ANS.—While a considerable number of attempts have been made to utilize wind power in developing electricity for lighting purposes nothing really satisfactory has yet been secured. The windmill as a motor is so unsteady, and it is idle so frequently that it is always necessary to use storage batteries in connection with the windmill. The storage batteries are themselves expensive, and it is very difficult to govern the windmill so as to get a sufficiently uniform rate of motion economically to charge a storage battery. It is necessary that the motion be quite uniform while this work is being done, and governors must be used to slow down the speed of the windmill when it is running too high, and in this way a large amount of the effective wind is lost and cannot be utilized in charging the battery.

[Prof.] F. H. KING.

Picking Potatoes by Machinery.

D., Mass.—Is there any machine known to you for picking potatoes? I mean after they have laid on the ground long enough to dry. I know that sometimes they are sacked from diggers of the Hoover pattern, but it is desirable that they be allowed to dry somewhat before being piled together. It seems strange to me that we should have machinery for doing all the work about this crop except picking them up, even to cutting the seed, and that's an easy job, a sitting-down job, a regular lazy man's job, compared with that back-breaking, man-killing, drive-the-boy-off-the-farm job of picking up the crop. It doesn't seem creditable that we should continue to gather the millions of bushels of potatoes that we grow every year in this fashion. Here is a demand. Who will supply a machine to do the work?

ANS.—We expect that the human hand will have a monopoly of picking potatoes and milking cows for a good many years to come. We have heard of only one case where potatoes were picked up by machinery and that was reported last year. The Hoover digger was hauled by a traction engine. Behind the digger was a wide float or stone boat, and the potatoes were delivered upon it from the digger. This would not work at all on our own farm. After all, it is the finger and thumb and wrist movement that gives the small farmer every chance in potato growing and dairying. If it could all be done by steam or horse-power, where would the hand-worker be?

Late Cabbage in Iowa.

J. K., Cresco, Iowa.—We have two large towns nearby where we could sell cabbage at 10 cents per head if kept until February or March. I intend to follow plans for storage given in THE R. N.-Y. a few weeks ago. I would like to know what time to set out plants to have good solid heads, which will not burst. That is the greatest difficulty with us, especially in a wet Fall.

ANS.—We annually grow about four acres of cabbage for market, but always sell in October and November and let the buyer do the keeping. We could keep it if necessary though, but as we can always get four cents per head from the field we don't need to. We plant the seed in the rows where it is to stand, drilling it in rows three feet apart; and, of course, much thicker than we will need the plants to stand. For Surehead and Flat Dutch we plant the seed May 25 to 30, and thin out to a stand three weeks later. Very little trouble about bursting. That is caused by planting too early, or using too early varieties. We use horse manure the year previous; never have used fertilizers. They are unknown here. Varieties, Surehead or good strain of Flat Dutch.

Iowa. HENRY FIELD.

The Value of Wool Waste.

U. S. B., So. Hingham, Mass.—What is the value, or what are the fertilizing properties, of the waste from wool-scouring establishments? There is such a place 1½ mile from me, where they sell the waste at $1 per load; that is, all two horses can draw. I have used some in haphazard way, planted field corn with it on light sandy soil; stable manure on part of field gave equal results at greater cost. There seems to be a good deal of wool fiber, much of what is probably alkali soil from far western regions. There is a strong smell of sheep; it is heavy, and heats quickly. As it comes from their dusting machine it is fine and dry, but the pile is exposed to the weather, and becomes lumpy and greasy. I do not send sample, as I suppose the stuff is well known by those who answer such questions as this.

ANS.—Such waste varies greatly in value. There may be all the way from one to 10 per cent of nitrogen in it. At $1 per load it will pay. It is valuable chiefly for its nitrogen, which is very slow or unavailable until the waste is rotted. It has not been found good practice, we think, to plow the waste directly into the soil. It would be better to mix it with the manure, use it to absorb the liquids in the stable, or as a mulch for trees or bush fruits. It does not make good bedding, as it sticks to the cattle and is not clean. For use behind the cows as an absorbent it does well. When mixed with horse manure it is slowly rotted and becomes more available. We would certainly haul all we could get at the price named, but would not expect it to take the place of fertilizers or manure the first year. It must be rotted before the nitrogen will be ready for use.

Great Need of Phosphoric Acid.

G. H. M., Bradenville, Pa.—Why do you advise using more phosphoric acid than potash in a fertilizer when there is more potash in the ashes of crops?

ANS.—This question is an important one, and has received a great deal of consideration at the hands of experimenters. The chief arguments used to show that phosphoric acid should be applied in greater quantities than potash in a commercial fertilizer are that on the average, soils contain more potash than phosphoric acid. In fact, most soils contain sufficient potash to supply the needed requirements of maximum crops for very long periods, and when cultivation, proper tillage and management are used, this element may be readily extracted. In general farm practice, where grain and stock are sold, a larger proportion of phosphoric acid is taken from the farm than of potash, because the phosphoric acid is located chiefly in the grain, while the potash is chiefly located in the straw, which is usually retained and returned to the farm. In the growing of animals, too, more phosphoric acid is retained from the food than of potash. Phosphoric acid being the chief constituent of the bone, and potash being required in the animal body in very small amounts, hence in the selling of stock, phosphoric acid is the only mineral element largely removed. It has also been shown that phosphoric acid is much more essential in the early life of the plant than the potash. In the early growth of the various crops, phosphoric acid needs to be absorbed in much greater quantities, if maximum growth and uniform development are attained. For root crops, an abundance of "available" phosphoric acid will cause a greater development of root fibers, which will enable the plant to gather more readily the other food required. Or, in other words, phosphoric acid is particularly essential in hastening the growth of young plants. Experiments have shown that with the exception of light sandy soils and peculiar formations, deficient in feldspathic compounds, phosphatic manures are much more effective than potassic, probably for the reason just given. It is my judgment that, for general farming, the phosphoric acid should exceed the potash, but for certain other lines, particularly market gardening, fruit growing, etc., the potash should be used in larger quantities than is supplied by the average fertilizer, or that there should be a closer relation between the phosphoric acid and potash. That there is a tendency in this direction is shown by the composition of the average commercial fertilizer, which is much richer in potash than formerly.

E. B. VOORHEES.

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Catch Crops in Corn.

G. H. M., Bradenville, Pa.—Will the sowing of Crimson clover, oats and rye or cow peas in the corn at the last cultivation in June have any ill effect on the yield of the corn? Will they not act as weeds, use up the moisture and reduce the crop of corn?

ANS.—In some very dry seasons they will. We have known a crop of late sweet corn to be injured by the Crimson clover that was seeded in early August. Generally when there is moisture enough at seeding time to start the clover well both crops will get through. This year we waited until later and sowed oats and rye together. The corn made a good crop, and the smaller grains produced good pasture and Winter covering.

SUBSOILING ON NEW ENGLAND'S HILLS.

One of our readers wishes to know whether it will pay to subsoil-plow the gravelly soils of the average New England hills. Our own judgment would be that this would not pay except possibly for some such crop as Alfalfa, but we would like to know what good farmers have to say about it.

No; I do not think that it would pay to subsoil-plow the gravelly soils of average New England hills, unless there is a large quantity of stable manure to be applied. Of course, if the soil is made rich, it can be worked deeply with best results. G. M. GOWELL.

Maine Agl. College.

I have carried out an experiment in subsoiling on a level field of alluvial formation where the subsoil consists of a rather compact clay, so tenacious that in opening ditches for tile drains the workmen when digging by the rod preferred to use a pick. I had thought that subsoiling on land of this character must prove beneficial. The experiment was carried out upon a large scale. Two broad strips running through a field of fairly even quality, which was about 1,200 feet in length, were subsoiled, while similar strips adjoining on either hand were left without subsoiling. Manuring and all other treatment were the same for both subsoiled and unsub soiled strips. There was no appreciable gain as a result of the subsoiling. Of course our so-called gravelly New England hills vary widely in tenacity and texture of soil, but I think that most of them would stand less in supposed need of subsoiling than the field which was the scene of my experiment. I accordingly conclude that the probabilities are that it would not pay to subsoil such soils unless perhaps it should be for fruit trees. WM. P. BROOKS.

Mass. Agl. College.

I once made some practical investigations of subsoiling while connected with the Missouri State College, and with deep plowing both there and in Utah. The results were not favorable to subsoiling. An investigation of the results of other trials at other stations showed a balance against subsoiling. I found an increase of moisture in the subsoiled area, especially so in a wet year, it appearing that the compact subsoil of the Missouri land held it. It also appeared that in such seasons less water ran off subsoiled land, and that too much was retained. In any event, in a wet year the crops were decreased, and slightly more decreased than increased in a dry year. On the New England hills subsoiling among the rocks would be costly, and I judge from observation uneconomical. What is to be gained? When such soil is dug up (that is subsoil) and thrown back into hole made it will not fill it; in other words, it occupies less space than before. The action of frosts, earthworms and decaying roots loosens soils, and when the frost-expanded soils, perforated by roots and worms, are broken up and allowed to settle together less space is occupied. It is an error to suppose that roots cannot penetrate such subsoils. It is an error also to suppose that the roots of most of our crops care to go deeply. I have found that the bulk of roots are within the first four inches, where fermentation and decomposition are by far the most active. As agriculture in New England rests on the food from these processes and from artificial supply I hold that subsoiling will not be likely to be an economical and perhaps not even a helpful process in New England.

New Hampshire J. W. SANBORN.

PLAIN TALKS ON PLAIN TOPICS.

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I want your advice about a new tree protector.

All right—it won't cost you a cent, and you may not like it after you get it.

I have discovered a new way of protecting trees from diseases—like blights or rots.

Is it a spray?

No, it is much cheaper and easier than spraying.

Do you bore a hole in the tree or put your "medicine" at the roots?

That's my business! It has cost me time and money to perfect my plan. It belongs to me just as much as a mechanical invention belongs to an inventor. I have tried it until I know it will work.

What do you want advice about?

I want to know how to sell my secret, so I can get some needed money out of it. If you will advertise it and talk about it I will pay you a commission on sales.

That is an old story—older than the hills; of course we will not do anything of the sort.

Do you mean to say that people offer such secrets for sale?

Plenty of them. During the past year at least five men have told your tale with variations. One proposed to uncover a root of the tree and stick the end in a bottle containing his "medicine". The other bored holes in the tree and put in sulphur and other substances. Another had a secret plan for making strawberries fruit at any month of the Summer. Still another wanted us to join a company for propagating a microbe, which is to be bottled and sold to farmers. When put into any old trash like weeds or straw this microbe will manufacture the finest of manure. You are not alone by any means.

Don't you believe this remedy cured my trees?

You say so—what else do we know about it?

Are you open to conviction?

Certainly—as wide as a church door.

What will convince you?

Send your remedy to half a dozen leading experiment stations and ask the workers there to test it. If they O. K. it we ask nothing more.

But they are jealous of practical men. They will either condemn it because it is not scientific, or else steal it, and I shall get nothing out of it.

Nonsense! You will be dealing with honest, honorable men. If your remedy won't stand scientific investigation it won't stand common sense. After years of patient study the scientists have given us the Bordeaux Mixture as the most reliable "cure-all" for plant diseases. It is a good remedy, but not perfect.

That's just it. They don't want a common farmer to come in with a new thing and show that he is smarter than they are.

Why do you talk in this childish way? People are tired of pumping and spraying, and would gladly welcome an easier method of treating disease. You cannot keep your process a secret anyway. You cannot have perfected a system of treatment, for you do not pretend to understand the laws of plant life. Even if you have by accident discovered some general principle of treating plant diseases, it will have to be overhauled, tested and proved before it can come into general use.

Do you pretend that the scientists at the experiment stations know everything?

Not by a good deal. They have much to learn. They haven't been able to tell us half they know so that we can understand it. It is only now and then that they can lay down fixed and definite rules for us, but they can apply the fixed and unchangeable rules of natural law to such claims as yours, and tell us whether it is worth talking about or not. Don't be so foolish as to think Nature has reached over the heads of her hardest students to give you a prize!

But do not men who never received a doctor's diploma discover remedies for human diseases?

They make pills or decoctions which overcome constipation. That is about all! Most of their patients would be "cured" if they would exercise with a buck-saw, quit eating so much fat meat and eat half a dozen apples every day. A man who values his orchard or his own organs will go for medicine to those who know why they give medicine—not those who simply know that they give it.

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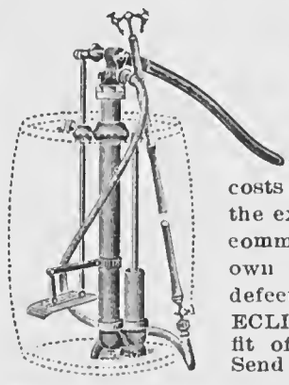

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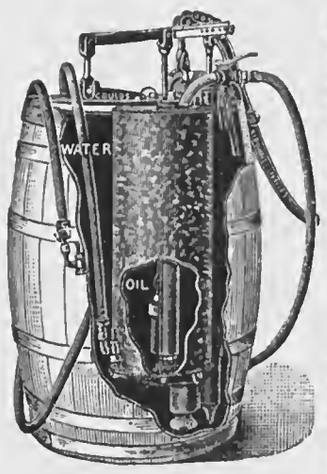

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Ruralisms

NOTES FROM THE RURAL GROUNDS.

ORANGES FOR POT CULTURE.—The growing of orange or lemon trees from seeds is an interesting operation for the window gardener, but as time passes and they grow strong and bulky, without showing signs of fruiting, one begins to question their value from even a decorative standpoint and to consider the advisability of grafting or budding to some known fruitful variety, or discarding the subjects altogether. It is rare indeed that a seedling Citrus tree will bloom and bear fruit until it is nearly 10 years old and has reached an unwieldy size, and the fruits, when finally produced, are rarely of any value. The seedlings of cultivated oranges and lemons are even less likely to reproduce the good qualities of the parent than are our northern orchard fruits, and we all know how frequently the latter revert to useless primitive types. In the Otaheite orange, a dwarf form of the common sweet orange, Citrus Sinensis, and the kumquat, Citrus Japonica, both of comparatively recent introduction to American culture, we have two handsome and practicable plants for the window or small greenhouse. The Otaheite orange is now well known, and is extensively grown. In pot culture it makes a sturdy little bush with glossy green leaves and little bright yellow oranges, which hang on with great persistency for several months after they have colored up. They are edible but of low quality, the flavor being sweetish and insipid, though occasionally a sour or bitter fruit is met with. The culture is very simple, a fruiting plant growing well for several seasons in a five or six-inch pot. It is not unusual for little plants in two or three-inch pots to flower and mature fruits, but under ordinary window conditions such small receptacles cannot be kept sufficiently moist. A good compact soil, containing some crushed or ground bones, suits these oranges very well. For the rest they like plenty of sunlight and a moderatcly warm situation. The leaves should be kept free from dust and black fungus by frequent showerings of warm water, and scales, Mealy bugs and other insects may be readily removed by scrubbing with soapsuds in which a little kerosene oil can be incorporated. The blooms of the Otaheite orange have the true orange-flower odor, but are smaller than those of the edible varieties and generally of a pinkish color.

The kumquat is to be preferred to the Otaheite orange, in that it freely bears fruits delicious to the taste as well as pleasing in appearance. It is a native of southern China, and forms a large bush or small tree when grown on its own roots in a locality free from frost. It is extensively cultivated in Japan, and has lately been planted in considerable quantity in Florida and California. The little fruits are much prized for preserving, and are eaten fresh to a large extent. A sweet gelatinous layer is found between the sour central pulp and the thin, pleasantly-flavored rind, and forms an agreeable combination when the fruit is eaten whole. Two varieties are grown, one having round fruits and somewhat thorny branches, and the other plum-shaped fruits an inch in diameter and 1½ to two inches long. The trees bearing the oval or plum-shaped fruits are almost thornless. For pot culture kumquats are grafted on hardy orange, Citrus trifoliata, stocks which dwarf them very much and is said to render them hardier when grown in the open. Little trees less than two feet high bear as many as 100 fruits, which come to full maturity and flavor in a window or under glass, if given plenty of sunlight and a temperature sufficient to keep geraniums in a growing condition. They require about the same treatment as the dwarf orange, but those grafted or budded on hardy stocks often become quite dormant after fruiting, and can be stored in a light, frost-proof cellar until Spring if the soil about the roots is kept moderately moist. During the flowering period, in June or July, the trees should be placed outside so that bees and other insects can have acccss to the blooms and insure pollenization. If plunged in ashes or other sharp material and faithfully watered these dwarfed Citrus plants may well spend the Summer out in the sunshine, but should be taken inside before the nights turn very chilly, especially if well set with fruits. The portraits of the two Citrus fruits, shown at Figs. 1 and 4, on first and third page, are taken from specimens grown on the Rural Grounds under the most ordinary conditions. The Otaheite orange tree is 16 inches high and is established in a six-inch pot. It bore 14 perfect oranges this season. The kumquat is 22 inches high and growing in an eight-inch pot; 73 fruits were ripened. Each plant is about five years old, and has bore repeated crops. The pictures show the fruits somewhat reduced in size.

RHUBARB AND CELERY.—On December 12 we bedded five large roots of Victoria rhubarb in each of the two cellars on the Rural Grounds, placing one lot sufficiently near hot water pipes to secure a soil temperature of 55 degrees. The other lot is in an unheated cellar in which the Winter temperature rarely exceeds 40 degrees, and in which slight frost may penetrate. The clumps were loosened just before a sharp freeze, and transferred to the cellar while the ball of earth was solidly frozen, loose soil worked between them, and well-watered after thawing out. All this is in the usual method adopted by rhubarb forcers, but we wish to note the effect in earliness and amount of product of the different temperatures; all other conditions being about the same.

As noted on page 34 of the last volume, celery is grown on the Rural Grounds without banking or earthing up, except a slight handling when a severe frost seems imminent in order to protect the young growth in the center to some extent. The plants are cultivated in the usual manner, except that the soil is kept entirely level, the celery growing in as free and unrestrained a manner as cabbage or lettuce. These clumps are lifted and placed close together on the earthen floor in the coolest part of a cellar, and the soil watered whenever it shows signs of drying out, taking care not to wet the foliage. The result has always been a strong, erect and delicately-bleached growth from the center, at the expense of the reserve materials stored in the thick rootstock, that to our taste excels in quality any celery bleached by earth banking or other means available in trenches. In this last week of December we have 700 fine bunches developing in storage just as the market surplus is diminishing. Under these conditions celery will keep until March if not attacked by aphides or plant lice, and is instantly available when wanted. If aphides appear it is best used rapidly, as nothing but the use of tobacco in the form of smoke, infusion or powder will check them unless facilities for using carbon bisulphide or hydrocyanic acid gas are created. We have never been troubled with the insects until late in February, by which time the celery is chiefly a memory. No novelty is claimed for this practical method of storing celery, but we feel like calling repeated attention to its value. W. V. F.

The Rise of Ruby Queen

A. J. P. of this place informed me that his Ruby Queen rose has made the astonishing growth of over 140 feet since May. I have just called to look at the plant in his greenhouse, and after measuring one of the numerous runners myself, I am satisfied his claim is correct. This exceeds greatly any growth claimed thus far for the Ruby Queen in THE R. N.-Y. The plant is in fine growth. The grower also has several new layers of it growing. W. P.

Port Chester, N. Y.

THE R. N.-Y. is glad to publish the above remarkable growth of a Ruby Queen rose from the little plant sent out last May. We will venture the opinion, however, that few, if any, blooms will be produced on this plant as long as it is kept under glass. Rosa Wichuraiana and its immediate hybrids produce their flowers from wood of the previous year's growth after it has been checked and ripened by a lengthened period of cold weather. Dormant plants taken inside, bloom finely if of sufficient size, but glass-grown shoots have never bloomed on the Rural Grounds. The great inherent vigor of the variety is well shown by a growth of 140 feet of branches in less than eight months.

FRUIT NOTES FROM MONTANA.

There are a number of the Idaho pear trees in this State, and quite a good many came through the hard Winter two years ago, which killed off a large percentage of our pear orchards, and set back the remainder. I was plowing one day and the next morning the thermometer had dropped to 22 degrees below zero without snow. That was the starter of the damage. The pear is a good one, undoubtedly, but our standards are Bartlett, Clapp and Flemish Beauty. Perhaps Idaho will outdo them, but such is not the verdict at present, chiefly perhaps as there are not many of the trees in the State. In apples, we think we can beat the world, as we have no insect pests or fungous diseases. The orchard inspection last year, a very thorough one, only revealed three cases of Codling-moth in Montana orchards. Why the moth is not more plentiful seems curious, as the fruit inspectors found that it has been shipped into the State by the carload. We are now getting in shape to supply our home market, and have many large orchards of several hundred acres. My own, of about 1,500 trees, is considered quite small. As far as shipping east is concerned it would be quite possible to put on the market in perfect condition. In a conversation I had with the representative of the Northern Pacific Railroad a year or so ago, he told me we could never ship east of Chicago or to Europe at a profit, as we then came into competition with your big orchards, with the disadvantage of freight added. However, he said that we had an unlimited market in the country immediately east of us, in which we would have the advantage of freight distance over our great competitors, Oregon and Washington, quality also giving us an advantage over these two States, where wormy apples are strongly in evidence. It may interest you to know that Wealthy is a late Fall and Winter apple with us. H. C. B. COLVILL.

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HOPE FARM NOTES.

A HEALTHY MIND.—I seem to have made what is called "a bad break" when I sat on my old stone wall and let memory run away with me, and then told about it! People are coming from near and far to point out the evil results from such poor farming. Some of our good friends seem to think that it's like leaving weeds in your cornfield to try to give vitality to the wild oats and other misplaced plants in your past history. Others object to the use of Sunday for such stone-wall meditations. I wish I had space for some of these letters, but I will give one at least, which is a good send-off for the new year:

I have been much interested in many of your articles in the most highly appreciated paper, THE R. N.-Y., and one thought has stuck to me until I find myself attempting to answer in a perhaps broken way. Now, our friend spoke of spending a Sunday afternoon sitting on the fence contemplating. Well, I presume most farmers have had more or less experience in this line. Now, the important thing is where were our thoughts in our measure of man's ability to do great things, or did we see God mapped out in everything the eye could look upon? I believe most of us are prone to see our own works and forget the great Creator. I don't intend to accuse our friend of doing so thoughtless a thing, but wonder if he ever tried spending God's holy day in this way or something similar. For instance: Get up nearly as early on the Lord's Day, do absolutely necessary chores, having shaven and washed night before, which is only a cleanly and wholesome way for all to do. When the Madame announces breakfast and all are comfortably seated smelling of fried Chester and hot coffee, read from God's word how we should live on the Sabbath Day, instilling into the young mind holy seed and comfort to those older in years. After breakfast don the Sunday garments, all hands, old, middle-aged and young; go to church, listen to the sermon for the purpose of finding out God's will concerning farmers. What a rest to the brain that has been perplexed with drought and bugs. Of course, the children must attend Sunday school and get the benefits of it. How necessary for the children's teaching, and just let me tell you it is just the place for all, young and old, learning how the rich young ruler could not be saved for his riches, and again how Zaccheus was converted with his riches. B. BRIGGS.

It's hard to beat that plan as far as it goes, but our friend doesn't go on and tell what he would do after he got back from church. Pray don't think I sat on that stone wall thinking to crack up the great things our folks have done or expect to do. As I sat looking off over the hills that day the vast contrast between the mighty power of God and the puny force of man came home to me as never before. The men who built the stone wall and cleared the fields thought their work would endure, and perhaps they boasted of it. Just a few idle years, and their work is undone—their results wiped out by the ceaseless, fateful march of Nature. I thought that day of the idle, careless hours and days I had passed—standing still, marking time, while God and Nature marched on.

TO-MORROW.—These are good thoughts to bring up at New Year's time, but another friend gives me a gentle dig as follows:

We are heartily glad to think the practical Hope Farm man found no evil spirits among his shadowy Thanksgiving visitors. We are of the opinion that the good, hardy son of toil has little time to deal with visitors of the past, the future tense being of more importance than the past. Where he failed in the past he must amend and strive for better things.

Amen, says the Hope Farm man! I won't agree not to sit on stone walls and think about yesterday, but I won't talk much about it. I can't go back and remake yesterday, but to-day is only to-morrow's yesterday after all. Sometimes however, yesterday jumps out of the past and slaps you on the back so that you can't ignore it. Twenty years ago at this time of the year a certain young man went wandering, homeless and alone, through a farming neighborhood in a western State. He was trying to work his way through college, and had turned book agent for the time. Dogs had barked and bitten his pride into the dust; women with brooms and men with stern voices had classed him with a rogue who went through the neighborhood two weeks before. Without home, money, credit or hope this young man by chance met a school teacher, who took him home to his father's farm for the night. The old folks took that young man in, gave him a job, got back his courage and nerve, and built up hope in his heart. That young man was your humble servant, and now, 20 years after, it seems like a hand reaching out of the forgotten past when I get a letter from that school teacher. He has met with some reverses and has a boy of his own 17 years old, who wants to work *his* way through an eastern college! So you see we can't always get away from our yesterdays after all—and thank the good Lord we can't—say I.

BEST FOOT FIRST.—Hope Farm was a sort of Madameless Eden for nearly a week. A telegram came stating that Jack was sick in Massachusetts. The Madame went to see about it and it was nearly a week before Jack could be brought back. The little Bud had never been separated from her mother for more than 24 hours at a time before, but she kept looking for "to-morrow" and finally her mother's to-morrow came. That hopeful day always comes to those who work and wait for it—not to those who shirk and complain. Was the Madame glad to get back? Well, now, it was as good as a whole series of Christmas presents to see her, with her work dress on, walking about the house with the children tagging after her and the grown folks listening with every ear to the story of her trip. She had an attentive audience, I can tell you. To my mind the best thing she had to tell was the story of a dear old invalid lady. This invalid lost the use of her limbs; but instead of grieving she was thankful that her hands were free. Then disease claimed one hand entirely and crippled the other, but instead of grieving over this loss she was thankful that eyes and ears were left! Now suppose we grown-up folks started this new century with the solemn vow that we would take life that way—not grieving over losses but thankful for what is left us! But some one will stand up and say, "Why doesn't this man tell us about *farming*?" In answer to that question I will stop right now with the remark that *right living* beats any other crop you can raise on the farm.

FARM NOTES.—I am going to try some of that waste molasses from a beet-sugar factory for feeding. My idea has been to make a sort of "switchell" or molasses and water and pour it over the cut fodder. Those who have fed it say pour the thick molasses right over the grain. It will take the place of corn, and may put fat on the ribs of old Major and Franko. That's more than corn will do. . . . We finally decided to rake up leaves for bedding, and now have a fine lot on hand. They were bagged about as a reader advised last week. Why should not the forest be made to feed the farm? As between gathering leaves in the woods or getting planer shavings at $1 a load I will take the leaves. Since the ground froze up the Winter oats have failed. I doubt whether we shall see them in the Spring. I did not much expect it for the oats gave Fall pasture enough to more than pay their cost. Still it's human nature to ask for "more." . . . The more I feed pigs the surer I am that it pays to have good stock. Scrubs will do well at working over manure, but that is not the highest ambition of the hog owner. Good pork will buy more Christmas presents for the children than manure pile work will. I am satisfied that we can make pork at a good profit in New Jersey, and now I mean to go at it right. After studying the breed question as carefully as I knew how I have picked out the Berkshires as best suited to our conditions, and I have bought a registered sow which Hope Farm is prepared to brag about. This black lady has a pedigree several yards long, and hams and shoulders capable of carrying it. Say what you will about it, a pedigreed animal brings a good influence to a farm, and all the underfoot friends profit by her coming. . . The weather turned warm and wet at Christmas and the frost is rapidly coming out of the ground. Perhaps before this is printed old Jack will have put it back again, but as I write it looks as though we could plow by New Year's! This open Winter saves the coal bill at least. H. W. C.

OHIO STATE HORT. SOCIETY.

PART III.

Prof. Green brought with him from the experiment station a fine collection of over 40 varieties of apples. Among these were several samples of the true Gano, a Ben Davis upon which the stripes are dissolved and blended into a smooth, clear bright red. The quality and texture of the apple is identical with that of Ben Davis, certainly no better. The York Imperial was conspicuous in nearly every collection. It is a good apple and is growing in popularity. Fine specimens of Rome Beauty were shown by several growers. There is no question but that this variety is hard to beat in southern Ohio, and in many other places among the hills of the State. Mr. E. M. Buechly, of Greenville, O., brought with him samples of the Greenville, formerly called Downing's Winter Maiden's Blush. This is an apple I had long desired to see and taste, and was not disappointed. A Maiden's Blush in Winter is all that need be said in its praise, as that old variety has long been a standard of excellence in its season. As I write this I have before me a specimen of the Opalescent, which represents the most beautiful, brilliantly colored, plate of apples of the entire list exhibited at our meeting. It is large, deep golden yellow ground almost entirely covered with a rich, dark red, prominently dotted. The flesh is tinged with yellow and is of good quality. It is a beautiful apple with a beautiful name, and if the tree prove healthy, vigorous and productive, and the fruit of good keeping qualities, it will prove a winner for the marketmen. There was a fine display of Grimes Golden which is claiming more attention than ever on account of its great popularity among those who appreciate an apple of the highest dessert qualities. This variety, upon most markets, sells at sight, and will command a price higher by one fourth than any other Winter variety. It is claimed by some that the tree is short-lived, while others report healthy 30-year-olds that are on full duty. Well-developed samples of Lankford closely resembled York Imperial, but proved to be very different in quality and texture. The Lankford is of good flavor and is a splendid cooker. The exhibits of grapes were not extensive, and the condition rather bad. There was quite a display of pears, also an interesting one of the evaporated fruits of California. Mr. Montgomery, of Licking County, and Mr. Farnsworth, of Lucas County, made fine competitive displays of potatoes, the first premium being awarded Mr. Montgomery. Officers elected for the ensuing year are as follows: Wm. Miller, Gypsum, president; W. N. Scarff, New Carlisle, vice-president; W. W. Farnsworth, Waterville, secretary; N. Ohmer, Dayton, treasurer. F. H. BALLOU.

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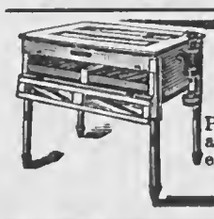

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THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, JANUARY 5, 1901.

THIS COPY

of THE RURAL NEW-YORKER is sent you because we think from inquiry that you will be interested in a reliable farm paper. Please look it over. You will find it clean, well printed on good paper, illustrated and reliable. After 50 years continuous weekly publication, it is at the present time acknowledged to be the best-edited farm paper in America. Last year we distributed the new rose, Ruby Queen, to subscribers. We frequently distribute novelties originated at the Rural Grounds, but never anything that delighted subscribers as this rose did. Hence, we prepared a supply for new yearly subscribers this year. Send us $1 now, and we will send you the paper every week for a year, and this beautiful new rose free and post-paid. In two years you would not let the rose be taken out of your yard for a $5 bill. If you would, or if you are not in every way pleased with the paper, we will return your dollar. Send at once, and we will see that you get a nice rose in right time for planting. If you do not send the yearly subscription, send 10 cents in the coin slot of blank order inclosed, and we will send you the paper every week for 10 weeks. Fold and seal the three gummed edges of the blank, and mail at our risk.

*

WHAT is the use of going to Europe to study the ruins of ancient Greece, while there are millions of pounds of oleo right here in this country? A study of the quickest way of killing the fraud in oleo is of more importance in preserving a live republic than any study of the reasons for the death of an old one!

No one can tell yet what the Senate committee will do with the Grout bill. The committee voted to end the hearings on January 10. This seems favorable to the bill, for the oleo people desire to let the hearings dawdle along until this session of Congress has ended. Now is the time to give your Senators a New Year's present of your written opinion on this oleo matter. Churn out the words and send them right along.

*

THE Superior Court at Hartford, Conn., recently had occasion to decide whether frogs are fish, within the meaning of a statute forbidding the catching of fish in a public reservoir, and reaches the opinion that they are. This recalls the astounding information received by an English traveler, who wished to know whether the rule against admitting dogs would prevent him from taking a turtle into a passenger car. The railway porter appealed to passed the turtle with this decision: "Cats is dogs, and rabbits is dogs, but a tortoise is an insect!"

*

ONE of our readers says that he attended the meeting of the Ohio State Horticultural Society. He says he ought to have joined this Society years ago. While his own operations are comparatively small he can see where he would have been several hundred dollars better off if he had attended more of the meetings. That is what we hear people say of other meetings, and there is no doubt that a live man will get rid of a good many dead ideas at any of our State meetings. Of course, as we say, the man must be alive, and both willing and ready to absorb information. We might take a trunk or a fertilizer sack to such a meeting and leave it open. When we took it home we might find some waste papers and refuse in it, but that would be about all. Some men complain that they cannot learn anything at such meetings, but the trouble usually is that they do not go there in a teachable spirit, but rather with the idea of proving that no one can teach them. We do not call such people live men, for they have ceased to grow! We regret that our farmers' gatherings do not attract hundreds where they now bring together dozens.

*

DENMARK, the great butter-making country of the world, bought last year 35,000,000 pounds of oleo oil from the United States. Last year England bought nearly $40,000,000 worth of butter from Denmark, but the frugal Dane spreads oleo on his own bread. Oleo costs him 15 cents a pound, while England pays 40 cents a pound for his best butter. It will be seen that the Dane does not pay butter prices for his oleo.

*

MOST people find it necessary to eat crow now and then, and there is a knack in knowing how to do it gracefully. Few of us have acquired the art of facing the defeat of a pet plan, without showing bitterness or putting on a flippant don't-care air, which every one knows is not real. A man who, when defeated does not try to conceal the fact that he is sorry, and yet shows that he does not intend to look cross-eyed at the world for the rest of his life, or turn himself into a hedgehog or barrel of vinegar on this account ought to be respected, and usually is—but he is a rare bird.

*

THE R. N.-Y. is a "boxer". We make no secret of our plan to put on the gloves and make a hard fight for the box as an apple package. The barrel is satisfactory for a good share of the trade, but the neat box well packed with high-grade apples will find favor with thousands of city people. The apple trade will be increased by its use. You say the commission men do not want to handle the boxes? Well now, we have had an old-fashioned idea that the fruit grower was working for the interests of his own family, and not for commission men. We thought these gentlemen were working for those who pay them. THE R. N.-Y. is a "boxer". We shall make a fight for the apple box!

*

PROF. Phelps, in his articles on feeding nitrogen to fodder crops, has given farmers a valuable new idea. We may not be able to feed fat into milk, but it is evident that we can increase the amount of protein in our hay by applying soluble nitrogen at the right time. Naturally it follows that the hay to sell is that grown on the poorer fields, and the hay to feed at home is that grown where an abundance of nitrogen is used. This shows the great value of nitrate of soda as a source of nitrogen. It is available at once, and can be applied quickly and easily at almost any stage of the plant's growth. Good farmers have always claimed that it pays to feed the grass crop well. Here we have new evidence of it.

*

WE hope to make the coming year a notable one in certain editorial features of THE R. N.-Y. Mr. J. H. Hale gives us this week the first of a series of articles on "essential principles" of crop production. Our plan is to secure the solid, boiled-down experience of men who have made a life study of some particular crop, and who have mastered it so far as such mastery is given to human thought and energy. These articles will not be filled with dry details, but will deal with essential principles—that is, the points which these strong and successful men have found most important. They will cover all departments of farm operations, and will, we believe, form the strongest collection of horticultural and agricultural articles ever printed by a farm paper.

*

IT is claimed that French chemists have succeeded in separating the gases of which the air is composed, so that the oxygen may be ignited for use as light or fuel. For years efforts have been made to separate and capture the nitrogen in the air, so that it might be used as a fertilizer, but the leguminous plants seem to possess a trade secret regarding the process, which they will not give up. If, by means of some simple apparatus, the oxygen of the air could be separated to be used as fuel we should have an industrial revolution far greater in its results than the introduction of steam or electricity. Coal and oil are now the chief sources of fuel. Steam power is dependent on them, and therefore power or force is concentrated, for it must be tied to the places where fuel is cheaply handled. These places are usually at the seaboard, or on some inland watercourse where competitive freight rates are possible. The effect of using oxygen from the air as fuel would be to scatter the Nation's industries and draw many of them away from the great cities. This we believe would be a desirable thing for farmers. On the other hand, such use of oxygen would be a severe blow to our manufacturers. We are coming to have more and more of a monopoly of coal and oil, and to this extent have an advantage over other nations. With the air providing abundant fuel our manufacturers would lose this advantage.

*

"YOU color your butter; why then is it a fraud to color oleo?" That is the question which the oleo men ask. They have been driven from every other position, and they consider this unanswerable. Let us see about that. Butter is not colored in imitation of some other more expensive product. For centuries butter has been recognized as a yellow substance, and no one is deceived when pure butter fats are uniformly colored. It is not so of oleo. This is a collection of cheap fats costing less than 10 cents a pound. The color is put in so that the manufacturers may sell it at 20 cents or more. In one case the color is used to give a uniform tint to a recognized article of commerce. In the other case it is used to prepare a counterfeit so that cheap fats may be sold for twice their true value. The whole fight of the oleo people is waged for the privilege of counterfeiting an article which has carried a definite color brand for centuries.

*

FROM all over the country come reports to the effect that plain farmers are taking more interest than ever in the various farmers' organizations. In some States there have been vigorous efforts to elect new sets of officers in place of the men who for years have "run things". As a rule, such efforts to procure "a new broom" fail through a lack of organization. In some cases the movement is doomed to failure because ill-advised and based largely on jealousy or personal spite. We are glad, however, to note that farmers begin to realize what they might accomplish if they would use their power wisely and well. There are advantages in having a few able men conduct the affairs of these societies. Often such men do the work at a loss of time and money. Farmers may well come forward and help such men rather than attempt to throw them out. In other cases the management falls into the hands of a "ring" of strong, selfish men who run things for their own benefit. Such men may well be dismissed without ceremony. The point we wish to emphasize is that a few strong, courageous men in an association of this sort can, if they try, secure a solid backing that will enforce reforms. A great majority of the people in this land want something bet ter. They often stand still, marking time—waiting for a strong leader to suggest and lead.

*

BREVITIES.

We hit you hard, Ben Davis,
But you stood up to the craek,
And every time we hit you
You would fire some figures back.
You came and shook the money
That the people pay for you
Beneath our very noses,
And there's nothing left to do.
For money talks, Ben Davis,
As it has since Adam's day;
When your forbears broke Eden
And we'll let you break away.
For your downfall is coming;
We will give you rope enough,
When all your trees are bearing
You will find the sledding rough.
We like your bluff, Ben Davis,
There is money in your cheek,
But when we're asked to plant you—
No I thank you—not this week.

DON'T put young blood into old ruts.

THE greatest *verb* al contract is I'll *try*!

Too many henhouses are cold-storage plants.

STINGETH like an adder—the fellow who foots up your tax bill.

FROST makes some folks hug the stove, while others go and make a move.

THE Crimson clover and oats gave good pasture on Christmas Day.

HORSE sense in the care of the horse will mean horse dollars to the owner.

REMEMBER that the nervous cow gives up her food, while the beefer stores it up.

THE greatest present you will ever have is the opportunity of improving the present.

NO, SIR, you can't overcome the bad blood in a scrub by crossing it with the corn crib.

YES, drought is a blessing if it prove the last straw in forcing the dairymen to build a silo.

A RARE man—he who admits that it is easier to do a thing well than it is to tell about it.

COVER crops are popular now—Grandmother is showing the little girls how to raise a bed quilt.

IN bad designs falter—in good ones make haste, and may the New Year be trimmed up to your taste.

GREATER is he that biteth his tongue over the first word than he that smacketh his chops over the last one.

IT pays to thin overloaded fruit on peach, apple or pear trees. How about strawberries on big plants in hill culture?

HOW about a duty on hides? Well, it is certainly your duty to hide your sorrows, and not make free with them to everybody.

THOSE Pennsylvania milk farmers know how. They held together for the benefit of those who had only a verbal contract—and won.

Events of the Week.

DOMESTIC.—A fire in a cocoanut-shredding factory at Philadelphia, Pa., December 19, caused a loss amounting to $200,000. . . . Attorney-General Griggs argues before the Supreme Court that the Constitution does not follow the flag into Porto Rico and the Philippines. . . . The 15-year-old son of Edward Cudahy, the Omaha millionaire, was kidnapped December 19, and released later on the payment of $25,000 ransom. . . . An explosion of natural gas at Beaver Falls, Pa., December 20, seriously injured seven persons, two fatally. . . . In a four-cornered shooting affair at Sopchoppy, Fla., December 21, State Senator Rouse and Edgar Nims were killed and W. F. Edwards and Frank Walker were badly wounded. . . . . Each of the 3,000 employees of the Crane Company, of Chicago, Ill., received as a Christmas present an amount equal to five per cent of his year's earnings, the aggregate reaching $100,000. . . . At Vancouver, B. C., the breaking of the Lula Island dykes has caused further damage to the sea walls protecting the farmers of the Fraser River Valley. Owing to high tides, strong winds and heavy rains, the lands have been badly flooded, and the village of Steveston is under three feet of water. Wooden sidewalks are floating away and the only means of locomotion is by boats. Wesham Island is badly flooded and ranch owners have been removing their live stock from the submerged fields in freight boats. . . . The Western Union Telegraph Company has been defeated in its suit against the National Bell Telephone Company for $12,000,000 royalties. . . . Greenup Co., Ky., is quarantined in consequence of an outbreak of smallpox. The disease appears unusually prevalent in many parts of the United States. In New York City, new cases continue to develop. . . . Counsel for the Saloon Keepers' Union, of Buffalo, N. Y., have drawn up a bill for introduction during the next session of the State Legislature, providing that saloons in that city may be kept open all night during the Pan-American Exposition. . . . An Indian outbreak is feared at Sitka, Alaska. The situation is serious, as there are far more Indians than whites. . . . The steamer Alpha was wrecked near Union Bay, B. C., December 18, during a terrific gale; nine lives lost. . . . A private bank at Hope, Ind., was entered by burglars December 18, and $15,000 stolen. . . . A race war was in progress December 25 at Cementville, Ind., armed negroes being practically in possession of the town.

CONGRESS.—December 20 the Hay-Pauncefote treaty was ratified by the Senate, with a vote of 55 to 18. The Davis amendment and the Foraker amendment superseding the Clayton-Bulwer treaty were retained, but all other amendments were voted down. Both branches of Congress adjourned until January 3. An effort will be made in the House when the River and Harbor bill is under consideration to tack on to it provisions for extensive storage reservoirs in the West. The River and Harbor Committee has been pursued all the session by western Congressmen who want to get appropriations for this purpose. The committee has steadfastly refused. The storage reservoirs are ostensibly sought for the purpose of improving waterways, but the indirect object is to get vast supplies of water for irrigation schemes. The committee is unwilling to mix river and harbor improvements with the irrigation question.

GENERAL FOREIGN NEWS.—Officials of the American asphalt trust have appealed for warships to protect their interests in Venezuela. President Castro has annulled the asphalt concession, and revolutionists are threatening property. . . . London cablegrams state that disloyal Dutch in Cape Colony are joining the Boer invaders. Fifteen hundred of the native Afrikanders have united with the burghers at one point. Lord Kitchener is on the ground, and his forces have repulsed some of the Boer attacks. The British forces have reoccupied Britstown, recently captured by the Boers. . . . At a meeting of the foreign ministers in Pekin, December 20, everything in regard to the terms of the joint note was agreed to including the British modifications. Through a blunder in the transmission of Secretary Hay's cabled message of instructions to Minister Conger, and to an error in translation of the cipher, Mr. Conger has been voting on the negotiations in direct reverse of the American policy. The latest advices from Pekin state that the joint note embodying the demands of the Envoys on China has been forwarded for acceptance to the Imperial Court, and the indications are that the ultimatum will be agreed to by the Emperor.

FARM AND GARDEN.—The Peninsula Horticultural Society will meet at Middletown, Del., January 9-11.

Breeders of Blue Andalusian fowls are about to organize a club. The annual dues will be small. A meeting for organization the following will serve as officers: E. L. C. Morse, Chicago, Ill., president pro tem.; Newton Cosh, London, Canada, vice-president pro tem.; R. W. Lovett, Boston, Mass., secretary pro tem.

Frank Rockefeller is said to be about to purchase 140,000 acres of land in Kiowa and Clark counties, Kan., upon which to raise purebred stock.

At the eleventh annual meeting of the Missouri Dairymen's Association, at Kansas City, the following officers were reëlected: Norman J. Colman, St. Louis, president; H. C. Goodrich, Calhoun, Mo., first vice-president; John Patterson, Kirksville, Mo., second vice-president; J. J. Smith, Sweet Springs, Mo., third vice-president; G. A. Umstott, Mirabile, Mo., fourth vice-president; J. L. Erwin, Steedman, Mo., treasurer; Levi Chubbuck, St. Louis, secretary. The Association is working to get a bill through the Legislature creating the office of dairy commissioner and establishing a dairy department at the State agricultural college. An expert dairyman must be selected for commissioner and he will in all probability be a man recommended by the Missouri Dairymen's Association. Practical dairymen showed a strong interest in the meeting, and displayed a decided disposition to control its management. They urge Missouri Senators to support the Grout bill.

The Minnesota State Agricultural Society will meet at St. Paul, Minn., January 8-10; E. W. Randall, Hamline, secretary. The Minnesota State Fair Association and the Minnesota Live Stock Breeders' Association will also meet at the same time and place.

A. H. Pierce, known as Shanghai Pierce, the wealthiest cattle man in Texas, died at his home, Pierce Junction, recently. He owned enormous ranches, and was also chief owner of the Gulf and Interstate Railway, which was swept out of existence by the great tornado last September.

The Vermont State Merino Breeders' Association will meet at Middlebury, Vt., January 23, 1901; secretary, L. A. Kiff, Middlebury, Vt.

The Western Ontario Dairymen's Association will meet at London, Ont., January 15-18, 1901; secretary, George Hately, Brantford, Ont.

The Provincial Farmers' Association will meet at Kentville, Nova Scotia, January 30-February 1, 1901; secretary, Chas. R. B. Bryan, Durham, Nova Scotia.

The New Jersey State Fruit and Vegetable Packers' Association will meet at Camden, N. J., January 16, 1901.

The Illinois State Dairymen's Association will meet at Aurora, Ill., January 8-10, 1901; secretary, Geo. Cover, 188 South Water street, Chicago, Ill.

Francis X. Govers, representing the Standard Butter Co., of Owego, N. Y., spoke briefly at the New York Dairymen's Association on the manufacture and utility of liquid air for refrigerator purposes. He expected to give an exhibition of the properties of liquid air and the uses to which it is adapted, but because of an accident to his apparatus, he was unable to do so.

The Rosendale Creamery at Adams, N. Y., managed by R. H. Bent, had an attractive exhibit at the Watertown exhibition hall. This creamery, it was said, receives 25,000 pounds of milk each day, and supplies two-thirds of the butter consumed by the guests at the various hotels at the Thousand Islands. Its exhibit of butter was put up in neat packages weighing all the way from one pound packages to tubs of 60 pounds. This creamery is open every day in the year.

New York City Milk Supply.

Agricultural Commissioner Wieting gives the following figures to show the vast quantity of milk bought annually by New York City. The figures given represent the number of 40-quart cans:

1888	6,062,216
1889	6,630,278
1890	8,141,983
1891	8,269,953
1892	9,084,781
1893	9,303,315
1894	9,485,018
1895	9,336,827
1896	10,079,417
1897	10,338,356
1898	12,382,106
1899	13,121,655
1900	13,504,610

Thus in 1900 there were sent 540,184,400 quarts of milk. It will be seen that the supply has doubled since 1888. Mr. Welting says that whatever the cause may be for this great increase of milk for consumption, the fact remains that the enforcement of the law, the decrease in adulteration of milk and the increase in consumption have gone on hand in hand since the beginning of the enforcement of the milk statutes.

In spite of this immense flood of milk annually carried to this great city it is possible to increase the trade. As we have often stated, most people regard milk as a luxury or drink. Let them be taught to understand that it is a food to be eaten, and there will be a vast increase in its use. The future development of the milk trade is based on the proper education of the people in food values.

A Milk War in Pennsylvania.

One of our readers at Hopbottom, Pa., sends us an account of a strange milk war at that place. It seems that the Scranton Dairy Company sent agents to Hopbottom to contract for the milk, with 83 farmers. They paid a better price than these farmers were then receiving, and they purposed to ship the milk over the D., L. & W. R. R. to La Plume, Pa. Early in December the farmers were notified that the railroad company would not carry milk for the Scranton Dairy Company. The farmers having contracts with the dairy company took the ground that this was not their business, as it was a matter between the railroad and the dairy company. They continued to take their milk to the railroad station, but the railroad would not carry it. Finally the dairy company sent an agent to talk with the farmers about it. He said that as the railroad company would not carry the milk, the dairy company could not buy it. The farmers said that it was not their business to attend to the shipping, as they had lived up to their agreement in delivering the milk. Finally, the farmers hired a lawyer to attend to their interests. The dairy company then found that they could not get away from their contracts, so they agreed to take the milk from 17 farmers who had written contracts, but not from those who had a verbal promise. To the credit of those farmers be it said, that they agreed to stand together and compel the dairy company to fill both written and verbal contracts. Suits were brought resulting in judgments against the dairy company for parties who did not have written contracts. It is claimed that the milk combine of New York City is responsible for this trouble. They are said to have told the D., L. & W. R. R. Company that they must not carry milk to the Scranton Dairy Company, and that if they did, the milk-shipping business would be taken away from them. The idea is that the milk trust desires to keep control of all milk, and so manipulate matters as to have it shipped to New York, thus creating a surplus and reducing the price of milk. If it were sent to Scranton or other places, it would relieve the New York market, and that is just what the trust does not want done. We shall have more facts about this business before long, but farmers may well give thought to the results that will follow by being at the mercy of one trust which can bring such a pull to bear upon another trust.

EXPORT APPLES.—The export trade in apples is reported good by most exporters. There will be a demand through the Winter for hard firm fruit, much of which has been already bought up. A large supply of good fruit was held back during the Fall, and if this is now handled carefully and not crowded upon the market too fast, there will be fair prices and good profit in the trade. The reports given by THE R. N.-Y. last Fall came apparently just in time to be of service to the better class of apple growers. Many of them were on the point of selling at a low figure, as the buyers had almost convinced them that the crop throughout the country was larger than usual. THE R. N.-Y.'s report stiffened their courage, and they either held, or demanded a better price.

Fine Apples in Boxes.

We hope that the days of the barrel as a package for fine apples will soon be numbered. The box, such as is used for California apples, is superior in many ways. There are many city people who cannot keep a barrel of apples. They live in flats where there is no storage room. The result is that they do not buy half the fruit that they would like to use. Could they buy boxes of fine fruit the chances are that they would never be without apples. It is a matter of size of package entirely. We give below some notes from commission men. THE R. N.-Y. will keep at this matter until the box is recognized.

Our experience has been that barrels are small enough packages to handle apples in. On this market it is as easy for us to handle barrels as it would be boxes, therefore we do not feel that boxes would be any advantage to us. When apples are very high we might use boxes, but we can usually sell barrels as well as boxes.

Milwaukee, Wis. E. R. GODFREY & SONS CO.

It is our opinion after a good many years' experience that our customers do not care particularly about the kind or style of package apples are put up in, nearly as much as they do about the quality of the apples contained in the package. We think the barrel is all right as a package. The people are used to it, and there is no complaint in regard to its being too large, but there is an endless number of complaints regarding the quality of the fruit, the majority of which is packed in such a manner that the face of the barrel does not represent the bulk of the fruit below the face. Our farmers are altogether too anxious to pack up everything that grows in the orchard and sell it as No. 1 fruit. We need a new style of farmer a great deal more than a new style of apple package. POTTER & WILLIAMS.

Buffalo, N. Y.

While we favor the packing of apples in boxes, especially those of the fancy brand, it would take some time to educate the people here to use them in that style of package. We think the country trade will take them quicker than the home trade, and in time all would get educated to use them. F. ANKENBAUER & SONS.

Cincinnati, O.

Cheap Dairy Cows in New York State.

A few weeks ago a correspondent in Chemung County, N. Y., spoke of the low price at which dairy cows were being sold. He stated that fodder was scarce and feed high, so that farmers felt obliged to dispose of their surplus stock. Since this article appeared we have been overrun with communications from people who want to buy these cows. There seems to be some misunderstanding about the quality of the animals and the price. The following reports from cow districts in this section are fair, and will give a good idea of the class of stock that is offered. It must not be thought that farmers are selling their best cows at a low figure. That would be nonsense at this time, when butter is bringing a good price. The cows that are sold are mostly culls, probably the poorest in the herd—what we would call the robber cows. Some years ago certain writers made the statement that the best way to engage in the poultry business was to come to the live poultry market in New York City, and buy hens and pullets at live-weight prices, picking them out by color and shape. In order to satisfy ourselves, we bought over 200 of such birds, selecting them as well as we knew how with an eye to the so-called "egg type." The result was that we stocked up with a flock of scrubs, well-covered with vermin, alive with roup, and of little value as layers. We found that no man in his right mind ever sends his best birds to the New York market for sale. In buying this kind of stock one obtains only the culls or robber stock, which some one else wants to get rid of. Those who expect to go to the dairy districts of New York State and buy cows at $20 apiece will probably find in the end that they have purchased the culls or thieves out of some other man's herd.

The cows are all picked up in this locality. The severe drought last season made the price low, but the price of milk here is better than a year ago. O. T. C.

Wellsburg, N. Y.

I do not know of many cows being sold; think they would bring from $20 to $25 apiece. We are so near the railroad that we have a good market for milk; in Buffalo especially, the Pan-American Exposition will make a big demand. Hay is quite scarce, and early in Fall cows have sold in some places as low as $15. A. T. G.

Dayton, N. Y.

There are no good cows here for sale, only at high prices. Old cows are being picked up and driven to Buffalo. I think there is fodder enough here to winter all the stock; a great deal of corn fodder is raised here, and good many silos built in the last two years.

Delevan, N. Y. C. S. P.

SAN JOSE SCALE.—Commissioner Wieting, of New York State, reports that he has issued 893 certificates of inspection to nurserymen, covering 6,026 acres of nursery stock and 901 acres of vineyard, from which wood for propagation is taken; that he granted 425 duplicate certificates to be filed in other States and counties as required by their laws to holders of original certificates; that in addition to the foregoing his agents have inspected 3,065½ acres of orchards and 1,663 acres of vineyards where no certificate was required. This inspection covered 872,720 orchard fruit trees, of which about two-thirds are of bearing age, and all the 1,662 acres of vineyard are of bearing age.

THE CABBAGE CROP.—Readers are beginning to inquire about cabbage. How much of last year's crop was stored for Winter and Spring use? In some sections the late Fall with continued warm weather, caused much of the cabbage to rot or burst, and more than usual was sold at that time. In the large cabbage-growing districts of New York State about half the crop is reported in storage. This is true of the cabbage district to the south of Syracuse, from which large quantities of cabbage are annually shipped. Around Elmira and through Chemung County generally it is reported that no cabbage is left. December just about cleared out the stock. Trade in cabbage has been better than usual. One grower writes that he is buying cabbage from Ontario County, N. Y., at from $9 to $12 per ton, f. o. b. From what we can learn therefore the total amount of stored cabbage is smaller than usual at this time. The open Winter may force some farmers to throw their crop on the market earlier in the Winter than usual.

Woman and Home

From Day to Day.

If no kindly thought or word
We can give, some soul to bless;
If our hands, from hour to hour,
Do no deeds of gentleness:
If to lone and weary ones
We no comfort will impart—
Tho' 'tis Summer in the sky,
Yet 'tis Winter in the heart!

If we strive to lift the gloom
From a dark and burdened life;
If we seek to lull the storm
Of our fallen brother's strife:
If we bid all hate and scorn
From the spirit to depart—
Tho 'tis Winter in the sky,
Yet 'tis Summer in the heart!

—The Golden Penny.

*

ONE of our friends blames a sudden and severe attack of gout in one toe to the persistent use of orange phosphate and other acid drinks during the Summer. She got rid of the trouble by careful dieting, but says that she still feels the need of avoiding acid foods. She quoted the case of one friend who cannot eat oranges persistently without experiencing rheumatic twinges.

*

CANADA certainly sets a good example for this side of the line in the sanctity of the marriage relation. According to recent statistics, during the past 32 years only 271 divorces have been granted throughout the entire Dominion. In Prince Edward Island, with a population of 100,000, there has not been one divorce in 30 years. Evidently the Canadian enters upon marriage as a permanent relation, not a mere civil contract to be dissolved at the caprice of those entering upon it.

*

WE recently ate of a very prettily-served Winter salad, which gave an idea to be used in several forms. Turnip cups were formed by peeling small white turnips and scooping them out into cup form, then boiling in salted water. These were placed upon a bed of water cress, and filled with potato salad, to which boiled beets, cut into small strips, may be added for a garnish. Plain French dressing was served with it. Macedoine salad, which consists of various cold boiled vegetables, such as beets, carrots, peas, string beans and asparagus, cut up and served with mayonnaise, may be put in the turnip cups very suitably.

*

THE Youth's Companion tells of a man who, on his return from a two-days' visit to his brother, thus harrowed his wife's feelings by describing a family misadventure:

"It was at the dinner-table last night," said Mr. Marvin, solemnly, "that this occurred. We were all quietly eating, when suddenly little Mary gave a cry of distress, and closed her eyes. Almost at the same instant my sister-in-law pressed her hand to her forehead, and tears streamed down her face. As I gazed at her in alarm my brother Edward threw up his arms with an exclamation of intense and sudden pain, and then buried his face, over which a spasm was passing, in his napkin."

"Poisoned!" gasped Mrs. Marvin, with hysterical symptoms.

"No, my dear," said Mr. Marvin, with maddening calmness, "it was horseradish."

*

THERE is an old woman in one of the New York market districts who is known as "the quince woman." She sells quince in all sorts of forms, and is said to know more about this fruit than anyone else about the markets. She sells raw quinces, quince preserves, quince butter, quince jelly, quince jam, and quince pasta, the latter being a specialty. It is made by boiling down quince pulp with sugar until, upon cooling, it becomes a solid like damson cheese, and the old "quince woman" has standing orders for this, from a number of customers. She has the knack of altering the color of her wares by differences in cooking, and makes jelly varying from a pale delicate pink to deep red. Many city dwellers are glad to buy these homemade quince preparations, as it is quite troublesome to prepare the fruit.

*

WE have given up New Year's resolutions—we keep on making—and breaking

3666 Blouse Waist.
32 to 40 in bust.

—good resolutions 12 months in the year—but if we began 1901 with the idea of some special and extra determination, it would be against needless worry. We read recently of a woman who, on being reproached for this habit, asserted that no one need tell her that worry didn't do any good, because the things she worried about never happened. That view of the utility of worriment never struck us before. The strongest argument against worry is its deteriorating effect upon mind, character and disposition. A great and crushing sorrow, nobly borne, often elevates and purifies a commonplace character, but endless worry—"fretchedness," as old-country people say—because it rains, or because it doesn't, or because the cake is "sad," or the boys track mud into the house, makes the worrier a misery to herself and to others, and, if bodily ills be added to such a disposition, there is every requisite for lingering illness of a nervous type. Resolute cheerfulness and a determination to see the bright side are the foundation of all personal happiness; it is always possible to get some joy out of life if one puts joy into it.

The Rural Patterns.

An easy and comfortable blouse, more dressy in effect than an ordinary shirt waist, is shown in No. 3666. The model is made of Venetian flannel in hunter's green, with vest and stock of white satin-faced broadcloth, machine stitched and revers of velvet matching the flannel. Down each front, below the revers, are small buttonholes through which the gold chain links are slipped that hold the fronts in place. Countless combinations and a variety of materials can be substituted, however, and tiny silk cord and gold buttons can take the place of the links if desired, or these can be entirely omitted and the fronts hooked invisibly into place. Henrietta, plain and embroidered cashmere, drap d'été, French flannel and taffeta are all suitable and the color of both waist and vest can be changed to anything the wearer may prefer. The foundation for the blouse is a fitted lining with single darts and which closes at the center front. On it are arranged the fronts, vest and back. The fronts are smooth and without fullness at the shoulders, and are drawn in at the waist line. The vest is attached permanently to the right side of the lining and hooks over on to the left beneath the left front. The stock collar is joined to the vest and closes invisibly at the center back. The bishop sleeves are not over full, and are finished at the wrists with straight cuffs. To make this blouse for a woman of medium size 2¾ yards of material 21 inches wide, three yards 27 inches wide, or 1¾ yard 44 inches wide, will be required, with ⅝ yard 50 inches wide, or ¾ yard 21 inches wide, for vest and stock collar. The pattern No. 3666 is cut in sizes for a 32, 34, 36, 38 and 40-inch bust measure, price 10 cents from this office.

The Russian blouse also illustrated is now a very fashionable shape. The model is made from the new vicuna waist cloth in Russian blue with piping of black taffeta, stitching in black silk, and cut steel buttons, but flannel, cashmere, taffeta and all the familiar waist materials are equally appropriate. As shown the waist is cut pointed edge, that renders it peculiarly smart, but the points can be omitted and the edge left plain, as shown in the small cut, if desired. The foundation for the waist is a fitted lining with single darts in fronts and center seam in back only. The back proper is seamless, fits smoothly across the shoulders, the slight fullness being drawn down at the waist line. The fronts are simply gathered in slight fullness at the neck and gathered in at the waist, where they blouse slightly over the stylishly curved belt. The sleeves are in bishop style with pointed cuff bands that hook over invisibly. The neck is finished with high stock collar

3680 Russian Waist.
32 to 40 in. bust.

having a pointed end. To cut this waist for a woman of medium size 3¼ yards of material 21 inches wide, three yards 27 inches wide, or two yards 44 inches wide, will be required. The pattern No. 3680 is cut in sizes for a 32, 34, 36, 38 and 40-inch bust measure; price 10 cents from this office.

Pioneer Experiences; Retrospection.

The pioneers of 50 and 60 years ago, those who are now living, seem to find great pleasure in recalling the past. The work of these enduring spirits opened the way for churches, schools and other desirable and important helps to society. In these changes many things have been gained, and something lost, both in the social and material world. As accessible markets have been opened near their homes, some of the open-handed generosity of the old time has been changed to a more careful attention to the yearly revenue; the great army of tramps, the recent annoyance of farm life, has taught the people to discriminate in their gifts, a useful lesson to learn, too. Some have indulged in a morbid desire to own all the lands adjoining them. The foot peddler who carried his stock tied up in a couple of bandanna handkerchiefs, is no longer entertained free of cost over night, that the family might look over his supply of needles, pins and thread and other necessaries, buying carefully of him what they needed. His successor, who now carries a pack on his back nearly as large as himself, has been almost displaced by local merchants in the nearest town. The free, off-hand speech of casual acquaintances who saw in each other warm friends has changed to more conventional greetings.

Cultivation has done much to improve the face of the country, as well as to increase the fortunes of the tillers of the soil. The rolling prairie and adjacent woodland is as beautiful as ever to the practical eye, perhaps more so, but the lovely wild flowers have disappeared. The cattle who have grazed over the pastures, together with the plow and drag, have left hardly a vestige of the flowers which once seemed to carpet the fields. The Painted-cup, or Squaw pink, the dainty blue Fringed gentian, the Cardinal flower, the harebell, more correctly named by the children Indian's hair; of these scarce anything remains but a sweet memory, and the lady's slipper and ironweed have given place to the weeds of scientific farming, such as burdocks, purslane, pigweeds and other unwelcome comers, against which the present owners have declared war; and fields of corn, oats, Timothy and clover now challenge the admiration of all lovers of the useful and beautiful.

AUNT RACHEL.

A SUBSTITUTE FOR GRAPE JUICE.—To those readers who cannot easily procure grapes I would suggest that they try crab apples or any other sour fruit to make a palatable Summer drink. Prepare the same as unfermented grape juice, after first removing blow, seeds and stem. Lemon may be added if desired. One lemon will season four gallons of juice. I cook the lemon with fruit before squeezing out the juice. The plain apple is very nice, and much unlike the common cider in flavor.

Connecticut. M. E. L.

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Dressmaking as a Business.

There is no other vocation turned to so readily as sewing by young women who are anxious to become self-supporting, and it is the speediest pathway open to women bereft of husband, father or brother. But before one is qualified an imperative term of study, observation and practice is necessary. Artistic dressmaking is taught in the Drexel Institute, Philadelphia; the Armour Institute, Chicago; Pratt Institute, Brooklyn, and in similar institutes of the same class in cities. Artistic dressmaking is not taught in any of the public schools, but is deserving of a place alongside of other accomplishments. Plain sewing is taught in many industrial schools and the advance step will be taken in the near future. In the regular dressmaking schools many dress systems, as well as ordinary dressmaking, are taught. For $4 or $5 a week, lessons are given in dressmaking and designing, and the pupil is taught how to make up the material in vogue. The pupil furnishes the material, etc., and, of course, keeps the garment when it is finished. Many dressmakers from the country and villages avail themselves of such lessons during the dull season.

A woman needs a firm stock of health if she is to be a successful dressmaker. She may have late hours and long ones during the busy season, and must encounter all sorts of weather, stand in crowded street cars or tarry upon the damp street. To be a city dressmaker or under hand for shop work she will do well to have a specialty if she wishes to avoid unexpected tasks. There are advantages in being identified with a certain line of the work. The young woman does well to have an all-round training in a country or private dressmaker's shop before she comes to the city. She should not come without a little money, or people in the background ready to help her. Wages are small; board, lodging and transportation are the essentials. To be a successful city dressmaker one must be unusually clever and thoroughly endowed with the principles of her trade. The next step, and a very important one, is employment. The parlor shop, the down-town shop and the large stores are the establishments open to her. The factory and the sewing in families are also in reach. As a beginner in an establishment the novice is given only overcasting seams, putting on bindings, etc., and paid an average of $3 per week, and this rate will at least hold on for a month or two. In well-regulated shops and large establishments the same garment goes through several hands. The cutter of skirts, who usually works 10 hours a day, receives from $10 to $18 a week for her services; the skirt hands, who completely make the skirt, get $6 a week; the waist finisher from $9 to $12 a week, but she must do fine work, and is expected to finish three waists a week with the aid of a helper who puts on hooks and eyes, belts, etc. The fitter has to be very skillful, a real artist in her line, to command the place and the highest wages, $20 to $35 per week, but she is expected to be infallible, to do the impossible; that is, please the captious, make a sorry figure look at least presentable, and a good one nothing short of perfection. The forewoman oversees all things, and if not the proprietress, gets from $12 to $20 a week. This is a distinct picture of a fashionable dressmaker's shop. In large stores much the same discipline is observed in the dressmaking department, except a large force of women are kept at work refitting, altering or making over garments purchased. The wages, however, are much the same, but the work is harder; more precarious because of the rush and hurry-up admonition. Factory work is open from six to nine months in the year. This work is chiefly on shirt waists and underclothing. The hours are regulated and the rapid worker earns from $5 to $10 a week.

The best and easiest place is the private dressmaker's parlor shop. She is bound to understand thoroughly all branches of the business, and be able to expound the latest styles and fashions, and to construct everything, from a shirt waist to a ball dress or wedding gown. If she is possessed of taste and quickness she is sure of abundant patronage. There are no dull seasons for her. A good dressmaker is almost as truly trusted and as near the family as the doctor or minister. No business is more exacting, and every woman who intends to sew for a living will find the opportunities not very alluring at first, but the only safe and sure method of ascertaining whether or not one may succeed at dressmaking is comprised in a single word—try! If what I have written, gathered from an experience of 20 years as a dressmaker, will enable the readers of THE R. N.-Y. to gain a foresight of the requirements, doubtless many who contemplate leaving the farm and village for service in the city shop or factory will meet with greater success by reason of being forewarned and sufficiently prepared. ALICE M. LONG.

Rural Recipes.

'Twas not framed in gold or silver,
Yet it rather took my eye—
A very small boy on a big doorstep
With half a pumpkin pie.
—Chicago Record.

Mincemeat Balls.—Chop any left-over meat in an Enterprise food chopper, and to two cupfuls of the chopped meat add one tart apple; chop again, and then add one saltspoonful of salt, half as much pepper, one cupful fine bread crumbs, and two eggs well beaten. The whole is well mixed, formed into balls and fried in hot lard. After using the chopper, run a piece of bread through it to cleanse the cutter. The Enterprise includes, among its cutters, a fine one designed for chopping nuts, which will be found very useful in making sandwich fillings. Chopped peanuts, walnuts or pecans make very appetizing and nutritious sandwiches for the school luncheon.

French Stew.—Wash three lambs' hearts and cut in slices. Dry slightly and rub well with flour. Add to them one tablespoonful of butter melted in a stewing kettle. Stir the meat until brown, about 10 minutes, then add hot water to nearly cover, a peeled lemon sliced and two bay leaves; cover and cook gently 40 minutes. Stir often and add water if needed. Remove the bay leaves and lemon and add half a teaspoonful of salt and one-eighth of pepper. This dish is cheap and very nice.

Apple Sponge.—Beat the yolks of three eggs with half a cupful of powdered sugar; flavor with lemon; beat for about 10 minutes; add to it the beaten whites of the eggs. Peel three big tender apples; cut them in thin little slices; sift half a cupful of flour with half a teaspoonful baking powder and mix well with the former; put it in a buttered dairy pan and bake in moderate oven for half an hour; spread powdered sugar over and serve.

Pumpkin Pie.—This recipe differs decidedly from those ordinarily used and is very good. Cut the pumpkin without paring, bake it, skin side down, until tender, and then scoop out the pulp and sift it. For one pie allow 1½ cupful of pumpkin, one cupful of boiling milk, one teaspoonful of butter, half a cupful of sugar, half a teaspoonful of salt, one quarter teaspoonful of cinnamon, same amount of ginger; add one egg, beaten separately. Half bake the crust, fill with the pumpkin and bake until it puffs up.

Jellied Beef.—To make this, which is not only good and nourishing, but also inexpensive, two pounds of stewing beef and a piece of shin-bone are required. Have the bone cracked and the marrow taken out; this will serve for another purpose. Put the meat and the bone in a kettle and cover with boiling water; bring to the boiling point, then simmer gently for three hours. An hour before the meat is done add a sliced onion, a bay leaf and half a teaspoonful of celery seed; also a teaspoonful of salt and one-half saltspoonful of pepper. When the meat is done cool; then chop it fine. Soak a box of gelatin in one-half cupful of cold water for one-half hour; then add to it one quart of the liquor in which the meat was boiled; add the beaten whites of two eggs, bring to the boiling point and boil for five minutes, then strain through a flannel or two thicknesses of cheesecloth. Add the juice of a lemon if liked. Cover the bottom of a round mold with two hard-boiled eggs cut in slices, sprinkle with a teaspoonful of chopped parsley, put in the chopped meat and pour the jelly over; stand aside over night. When served, turn out of the mold and cut in thin slices.

Snowballs with Vanilla Sauce.—In a wide stewpan put nearly one pint of fresh milk; season with one tablespoonful of sugar, a pinch of salt and teaspoonful of vanilla. Whip the whites of three eggs to a stiff froth, add four tablespoonfuls of fine powdered sugar and whip again until as smooth and stiff as whipped cream; moisten a teaspoon in the boiling milk, then use it to put in as many spoonfuls of white of egg as there is room on the surface; let boil up; turn over and boil up again; put them when cooked in a deep dish; when all are done add to the milk a tablespoonful of dissolved cornstarch and the yolks of two eggs, stirring continually; cook two minutes and pour over the balls.

Tropical Corn Bread.—This bread has a decided difference in texture and flavor from the ordinary make. Half a cupful of bread crumbs soaked in a pint of milk, two eggs, two cupfuls of cornmeal, a tablespoonful of butter, a teaspoonful of salt; beat the eggs light, and the soaked bread crumbs to a batter; melt the shortening; stir all together until smooth, and bake in tins in a quick oven.

Yarmouth Biscuit.—Mix three-quarters of a pound of sifted flour, one-half pound of sugar and one-half pound of currants to a paste with half a pound of butter and three eggs. Roll out to one-eighth of an inch in thickness and bake a light brown in quick oven.

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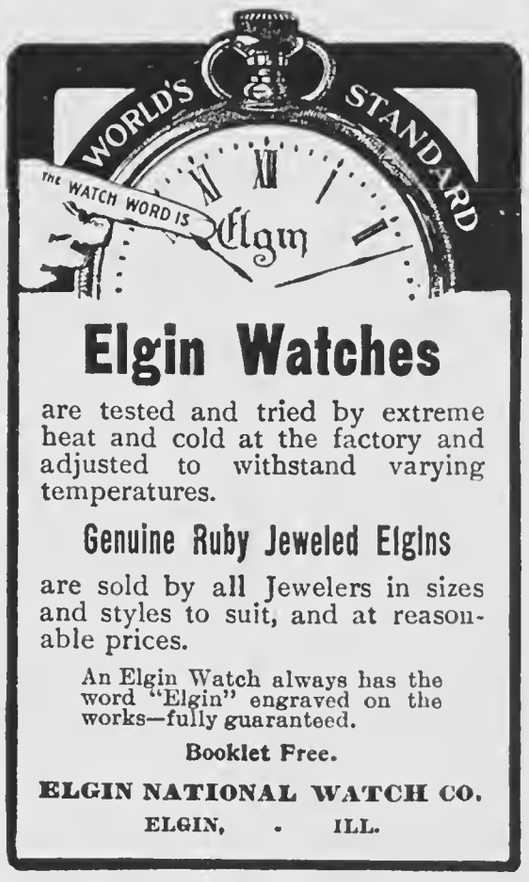

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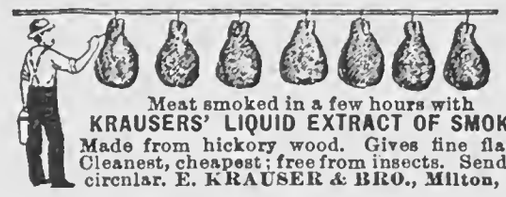

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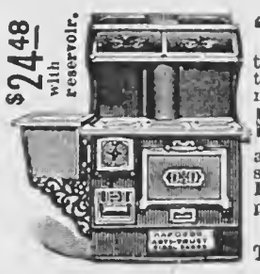

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MARKETS.

REVIEW AND OUTLOOK.

THE EGG MARKET is easier, and the price for western average best dropped to 24 cents. Buyers seem to have but little difficulty in getting all they need at that figure. The dullness in fresh goods materially affected the offerings of cold-storage stock, which showed a wide range of prices.

HOTHOUSE PRODUCTS.—At present there is an excessive supply of mushrooms on hand, and there are many reports of cut prices. The receipts of cucumbers are light and quality inferior. Prime lettuce would sell well, but it is scarce, and the lower grades are hard to dispose of.

LIVE STOCK.—Receipts for the week ending December 27 were 11,398 cattle, 307 cows, 2,448 calves, 31,408 sheep, and 33,860 hogs. Native steers brought $4 to $5.30; bulls, $2.75 to $3.50, and cows, $1.75 to $3.70. Prices for milch cows with calves ranged from $30 to $50. Veal calves sold at $4 to $8.50, and grassers, $3 to $3.50. Receipts of sheep and lambs included several carloads for export alive. The market was dull, common to prime sheep selling at $2.25 to $3.80 per 100 pounds, and lambs, $4.50 to $5.90. A lot of choice State pigs sold at $5.40.

BUTTER.—On account of light receipts and cool weather the market is firm, though prices show no advance from last report, 25 cents being the top for extras. Now and then a lot grading exceptionally high sells at one-fourth to one-half cent advance, but there are not enough deals of this sort to warrant a quotation. The conditions on the lower grades were not so favorable, some showing a decided weakness. An occasional lot of storage creamery reaches 23 cents, but for offerings that show age the demand is light, prices in some instances dropping to 17 cents.

The Week's Quotations.

WHOLESALE PRICES.

SATURDAY, DECEMBER 29, 1900

BEANS AND PEAS.

Beans, marrow, choice, per bu.	—	@2	60
Medium, choice	—	@2	25
Pea, bbl., choice	2 27½	@2	30
Red kidney, choice	2 42½	@2	45
White kidney, choice	2 60	@2	65
Green peas, bbls., bu.	1 27½	@1	30
Scotch, bbl., bu.	1 27½	@1	30

BUTTER.

Creamery, extra	—	@	25
Firsts	23	@	24
Seconds	20	@	20
Lower grades	17	@	19
June, extra	—	@	22½
June, thirds to firsts	17	@	22
State, dairy, half firkins, extra.	—	@	23
Half firkins, first	21	@	22
Firkins	17	@	20
Western, imitation creamery, best	18½	@	19
Lower grades	15	@	17
Western, factory, June packed, fancy	14	@	14½
Held, common to good	11½	@	13½
Fresh, fancy	14	@	14½
Low grades	11½	@	12½
Renovated butter, fancy	19	@	—
Rolls, fresh, choice	16	@	—
Common to prime	12	@	15
Packing stock	11	@	13

CHEESE.

State, f. c., large, Fall made fancy	11¼	@	11½
Large, late made, best	10⅞	@	11
Fair to good	10½	@	10¾
Large, inferior	9½	@	10¼
Small, Fall made, fancy	11¾	@	12
Small, late made, best	—	@	11¼
Small, fair to good	10¾	@	11
Small, inferior	9½	@	10½

EGGS.

QUOTATIONS, LOSS OFF.

Penna. and State, prime, doz..	—	@	25
Western, regular packing, best.	—	@	24
Southern, regular, pack., best..	23	@	23½

QUOTATIONS AT MARK.

State and Penna., fancy	25	@	—
Average, prime	24	@	—
Western, closely graded, fancy.	23	@	—
Regular packing, prime	22	@	22½
Regular packing, common to fair	19	@	21
Kentucky and Tenn., closely graded, fancy	22	@	22½
Average prime lots	21	@	21½
Southern, fresh gathered, fair to good	19	@	20½
Refrigerator, Fall packing, good to choice	18	@	20
West., refrigerator, early packed, choice storage paid	18½	@	19
Limed, Western, fancy	18	@	18½

FEED.

Spring bran, 100-lb. sacks	17 00	@17	50
Winter bran, bulk	17 50	@18	50
Spring middings, 200-lb. sacks.	16 75	@20	00
Red Dog, to arrive	18 60	@19	00
Oil meal	28 00	@	—
Cotton-seed meal	26 00	@	—

EVAPORATED FRUITS.

Apples, fancy	6½	@	7½
Choice	5½	@	6
Prime	4¾	@	5
Low grades	3½	@	4½
Chops	1 50	@1	60
Waste	—	@1	25
Sun dried, quarters	3¾	@	4½
Sun dried, sliced	3¾	@	4½
Apricots, boxes, lb.	8¼	@	13
Bags, lb.	7½	@	12
Peaches, California, unpeeled, boxes	6	@	10
Bags	5½	@	8
Peeled, per lb	13	@	18
Pears, California, per lb	5	@	10

GREEN FRUITS.

Bananas, Aspinwall, firsts	90	@	95
Seconds	50	@	55
Port Limon, first run	1 20	@1	25
Nine to eleven hands	95	@1	00
Seconds	55	@	60
Jamaica, firsts	90	@	—
Pears, table sorts, box	1 25	@2	00
Keiffer, bbl.	1 25	@2	50
Appies, common, bbl.	1 25	@1	75
Baldwin, bbl.	1 50	@2	75
Greening, bbl.	1 75	@3	00
Ben Davis, bbl.	2 00	@2	50
Spy, State, bbl.	2 00	@3	00
Spitzenberg, bbl.	2 50	@4	00
Newtown pippins	1 25	@4	00
Grapes, W. N. Y., Catawba small basket	8	@	11
Catawba, case	1 00	@1	10
Almerias, bbl.	4 50	@9	50
Cranberries, Cape Cod, bbl.	8 00	@10	00
Jersey, bbl.	7 50	@	—
Jersey, crate	2 00	@2	50
Pineapples, Florida, red, 24s, crate	3 00	@3	50
Florida, red, 30s, crate	2 75	@3	00
Florida, red, 36s, crate	—	@2	50
Strawberries, Florida, qt.	60	@	75
California, pint	25	@	50

GRAIN.

Wheat, No. 2 red, spot	78⅝	@	—
No. 1, Northern Duluth	83⅝	@	—
No. 1, hard Duluth	87⅝	@	—
Corn, No. 2, white, to arrive	46¼	@	46½
No. 2, yellow, to arrive	46	@	—
Oats, No. 2, white, in elevator.	32	@	—
Rye, No. 2, West., c. i. f., N. Y.	56	@	—
State & Jersey, c. i. f., N. Y.	52	@	—
Barley, feeding, c. i. f., N. Y.	48	@	50
Malting, c. i. f., Buffalo	60	@	65

HAY AND STRAW.

These quotations are for large bales. Small bales sell for 50 cents per ton less.

Hay, No. 1	90	@	92¼
No. 2	85	@	87½
No. 3	75	@	80
Clover	70	@	75
Clover, mixed	80	@	85
Straw, rye, long	85	@	90

HOTHOUSE PRODUCTS.

Lettuce, choice, 4½ to 3½ dozen to case, per dozen	60	@1	00
Poor to fair, per case	1 50	@2	50
Cucumbers, fair to choice, per dozen	1 50	@2	00
No. 2, per dozen	30	@1	00
Tomatoes, choice, per pound	25	@	35
Radishes, prime, per 100 bunches	2 00	@3	00
Mushrooms, prime, per lb.	25	@	50

COUNTRY—DRESSED MEATS.

Calves, veals, prime, per lb.	10	@	10½
Fair to good, per lb.	8½	@	9½
Common to medium, per lb.	7	@	8
Small, per lb.	4	@	6
Buttermilks, per lb.	5	@	7
Grassers, per lb.	4	@	6
Pork, light, per lb.	7¼	@	7¾
Medium, per lb.	6½	@	7
Heavy, per lb.	5	@	6
Rough, per lb.	3	@	4½
Roasting pigs, per lb.	8	@	11
Pork tenderloins, fresh, per lb.	17	@	18

POTATOES.

Bermuda, prime, per bbl.	4 50	@5	00
No. 2, per bbl.	3 00	@4	00
Long Island, prime, in bulk, bbl.	1 50	@2	00
State & Western, round, 180 lb.	1 75	@1	87
Round, sack	1 65	@1	75
Long, 180 lb.	1 62	@1	75
Poor to fair	1 25	@1	50
Jersey, prime, bbl.	1 37	@1	62
Sweets, Vineland, cloth-top, bbl.	2 50	@3	00
Other Jersey, cloth-top, bbl.	1 75	@2	50
Southern, bbl.	75	@1	00

POULTRY—LIVE.

Fowls, per lb.	9	@	9½
Chickens, per lb.	—	@	8
Roosters, per lb.	5½	@	6
Turkeys, per lb.	7	@	8
Ducks, Western, per pair	50	@	70
Southwestern, per pair	45	@	55
Geese, per pair	1 00	@1	37
Pigeons, per pair	15	@	20

POULTRY—DRESSED.

Turkeys, Jersey & upriver, fancy	—	@	11
Jersey & upriver, fair to good	9	@	10
Md. & Del., fancy	—	@	11
Md. & Del., fair to good	9	@	10
Ohio & Mich., fancy scalded	9½	@	10
Ohio & Mich., fair to good	8½	@	9
Other Western hens, fancy	9½	@	10
Western, mixed	9	@	—
Western, toms	—	@	8½
Poor	6	@	7
Broilers, Phila., 4 lb. and under, per lb.	16	@	18
Roasting chickens, Phila., selected, large	14	@	15
Phila., mixed sizes	11	@	12
Pa., large, per lb	11	@	12
Pa., fair to good	9	@	10
Ohio & Mich., scalded, fancy.	9	@	—
Other W'n, dry-picked, prime.	—	@	9
Other W'n, scalded, prime	—	@	9
Chickens, other W'n, poor to fr.	7	@	8½
Fowls, Ohio and Mich., fancy, scalded	—	@	8½
Other W'n, dry-picked, prime.	8	@	8½
Other W'n dry, scalded, pme.	8	@	8½
Western, poor to fair	6	@	7½
Capons, Western, large	14	@	14
Western, mixed weights	11	@	12
Western, small and slips	—	@	10
Old roosters, per lb	5	@	5½
Ducks, Ohio & Mich., fancy	11	@	12
Md. and Del., prime	10	@	12
Other Western, prime	10	@	11
Poor to fair	6	@	8
Geese, Md. & Del., prime	9	@	10
Md. & Del., poor to fair	7	@	8
Western, prime	8	@	9
Poor	6	@	7
Squabs, choice, large, white, per doz	—	@2	50
Mixed, per doz	1 75	@2	00
Dark, per doz	1 25	@1	50
Small and culls, per doz	50	@1	00

GAME.

Quail, fancy, undrawn, per doz.	—	@2	00
Average best, per doz	1 00	@1	75
Grouse, per pair	50	@	75
Partridges, per pair	1 25	@1	50
Wild ducks, Canvas, prime, pr.	2 50	@3	00
Canvas, poor	1 00	@2	00
Red-head, prime	1 50	@2	00
Red-head, poor	75	@1	25
Mallard, per pair	65	@	75
Teal, blue-wing, per pair	40	@	50
Rabbits, per pair	25	@	30
Jack rabbits, per pair	60	@	70

VEGETABLES.

Onions, Conn. & L. I., wh., bbl.	3 50	@ 5	50
Conn. & L. I., red, bbl.	2 00	@ 2	50
Orange Co., white, bag	2 50	@ 4	50
Bermuda, crate	2 50	@ 2	75
Squash, marrow, bbl.	1 00	@ 1	50
Hubbard, bbl.	1 50	@ 2	00
Florida, white, crate	75	@ 1	00
String beans, Fla., basket	1 50	@ 2	50
Turnips, Jersey, Russia, bbl.	70	@	80
Canada, Russia, bbl.	75	@	85
Peppers, Fla., carrier	1 25	@ 1	75
Celery	10	@	40
Egg plant, Fla., bbl.	2 50	@ 4	00
Green peas, Fla., basket	1 50	@ 2	50
Spinach, Norfolk, bbl.	—	@ 1	50
Baltimore, bbl.	1 00	@ 1	25
Carrots, washed, bbl.	75	@ 1	00
Lettuce, New Orleans, bbl.	2 50	@ 4	50
Florida, ½-bbl.	1 50	@ 3	00
Brussels sprouts, qt.	4	@	10
Parsnips, bbl.	75	@ 1	00
Cabbage, L. I., 100	3 00	@ 4	00
State, ton	12 00	@15	00
Tomatoes, Fla., carrier	2 00	@ 3	50
Chicory, New Orleans, bbl.	2 50	@ 5	00
Beets, L. I., bbl.	75	@ 1	00
Romaine, N. O., bbl.	3 00	@ 5	00
Escarol, N. O., bbl.	2 50	@ 5	00

FURS AND SKINS.

Black bear	15 00	@ 25	00
Cubs and yearlings	5 00	@ 10	00
Badger	75	@ 1	25
Otter	8 00	@ 10	00
Beaver, large	7 00	@ 8	00
Medium	6 00	@ 7	00
Small	3 00	@ 4	00
Silver fox	50 00	@200	00
Cross fox	8 00	@ 25	00
Red fox	1 75	@ 2	00
Gray fox	90	@ 1	00
Fisher	8 00	@ 10	00
Wolf, prairie	1 00	@ 1	10
Timber	3 00	@ 4	00
Wolverine	6 00	@ 8	00
Lynx	4 00	@ 6	00
Wild cat	50	@	60
Marten, dark	6 00	@ 10	00
Pale	3 00	@ 4	00
Skunk, black	1 30	@ 1	40
Half-striped	80	@	85
Long-striped	80	@	90
Striped	40	@	45
White	15	@	20
Raccoon	75	@	90
Opossum, large	30	@	40
Medium	20	@	25
Small	8	@	10
Mink	1 00	@ 2	00
Muskrat, Winter	11	@	12
Fall	8	@	9

MILK.

New York Exchange price within 26-cent freigh zone, 3¼ cents per quart.

BUSINESS BITS.

THAT seems to be a convenient and useful tool advertised by N. B. Foote Co., Frederickstown, O. It almost oils a wagon itself, and there is certainly no need of the operator soiling his hands.

RIGHT now would be a good time to make plans for sugar-making in the Spring. If you need a new evaporator we invite your attention to the I X L, made by Warren Evaporator Works, Warren, O.

FARMERS contemplating building new fences will do well to write for the catalogue published by the Frost Wire Fence Co., of Cleveland, O., makers of fence consisting of all large size hard steel coiled spring wires for laterals, and heavy spring wire stays for uprights, thus insuring many years of satisfactory service.

HAPGOOD MFG. CO., Box 177, Alton, Ill., are offering "Anti-Trust" steel ranges direct to farmers, thereby saving to the buyer the expense and profit of an army of middlemen or agents. If you are not in need of a range at this time, it would be well to ask for the free catalogue of this house and compare their prices on other goods with those of your local dealer.

IF you are interested in bone cutters, we would say that you can probably secure considerable information regarding the poultry business, and at the same time learn something about bone cutters, by sending to W. J. Adam, Joliet, Ill., for his new catalogue, which is due every subscriber of this paper, and which will be sent upon application.

WE call attention to the advertisement of the Michigan wheelbarrow seeder, which appears in another column of this issue. This machine is one of the handiest things the farmer can own, and costs very little. Write the makers, the Seeder & Hammock Chair Company, at Homer, Mich., for free catalogue and special introductory prices. They ship it on trial and guarantee satisfaction.

THE potato crop, as a rule, was very light in this section, and I think that there is not a large quantity stored in this part of the county. The corn crop this year was one of the best ever known, and I think, aside from the potato crop, there has been a fairly good average of production, with a little better price than usual. The turnip is more in evidence here locally than the potato, and brings from 15 to 20 cents per bushel. P. E. T.

Long Island.

A CABBAGE REPORT.—I judge there is fully one-third more cabbage packed away this year than last, in this State. However, I think fully one-third of the stock was badly damaged before being cut from the field by the hard freeze the early part of November, and a good portion of this will never be shipped. The frozen stock is mostly in the hands of the growers, and dealers will be very shy of it. Prices at present at loading points in this station are just half what they were last year at this time. Speculators and growers are not offering this holding very freely at present prices. It seems to be the general opinion here that prices will take a sharp advance soon after January 1. A. M. M.

Apulia, N. Y.

WHEN you write advertisers mention THE R. N.-Y., and you will get a quick reply and "a square deal."

See our guarantee 8th page

Wants, For Sale or Exchange

FOR SALE—Traction Engines and Thrashers, 2nd hand, cheap. F. A. Booth Co., Stanley, N. Y.

Farm Managers, Gardeners, Buttermakers, etc., always on hand. No charges to employers. Write us. Rural Science Agency, Durham, N. H.

WANTED—I want to hire a foreman for a general nursery business. State age, experience and references. Address E. I. MARTIN, Redlands Nursery, Redlands, Cal.

FOR SALE—Farm of 247 acres, five miles from Battle Creek, Calhoun County, Mich. Good buildings, barn and improvements. H. B. McGRAW, 917 Williamson Bldg., Cleveland, O.

COUNTRY SEAT FOR SALE.—250 acres, suitable for game preserve and stock farm; northern New Jersey; railway station on property; connections with New York and Philadelphia. Game and trout stream; large orchard; abundance of nuts: woods; springs; large house, heated with hot water. Coal yard and creamery on property. A rare chance. Address Box 84, Allamuchy, N. J.

GLENN RANCH,

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FOR SALE IN SUBDIVISIONS.

This famous and well-known farm, the home of the late Dr. Glenn, "the wheat king," has been surveyed and subdivided. It is offered for sale in any sized government subdivision at remarkably low prices, and in no case, it is believed, exceeding what it is assessed for County and State taxation purposes.

This great ranch of 40,000 acres runs up and down the western bank of the Sacramento River for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

F. C. LUSK,

Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, of Chico, Butte County, California.

WE PAY $18 A WEEK AND EXPENSES to men with rigs to introduce our Poultry Compound. Send stamp. Javelle Mfg. Co., Dept. 26, Parsons, Kan.

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All cases of DEAFNESS or HARD-HEARING are now CURABLE by our new invention; only those born deaf are incurable. HEAD NOISES CEASE IMMEDIATELY. Describe your case. Examination and advice free. You can cure yourself at home at a nominal cost.

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D. AUSTIN & CO., Commission Merchants. Fruits, Produce, Eggs, Poultry and Calves. Correspondence solicited. 326 Washington St., New York.

Oldest Commission House in New York Est. 1838.
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Produce Commission Merchants,
BUTTER, EGGS AND POULTRY,
284 Washington Street, New York.
Dressed Meats: 22, 24 and 26 Grace Avenue, West Washington Market.
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Refer to Irving National Bank.

NEWTON'S CURE. For Heaves Use $1 size. For Distemper, Cough, Worm Expeller and Conditioner, a 50c. size. Strong recommends Dealers or delivered. Newton Horse Rem. Co. (Y) Toledo, O

"HE WHO RUNS MAY READ"

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FREE WITH ORDER

a valuable and handsomely printed "Almanac and Manual of Information, 1901," a veritable pamphlet encyclopedia of information. Also tells how and why Veterinary Pixine absolutely cures speed cracks, chronic scratches, grease heel, sores and skin affections.

2 oz., 25c.; 8 oz., 50c.; 5-lb. pkge., $4.

Money back if it fails. At all druggists and dealers, or sent postpaid with Almanac.

TROY CHEMICAL CO., Troy, N.Y.

Premium Contest.

During the last week or two we have had lists from club-raisers who had done nothing before in this contest. If they keep on until January 15, they are likely to distance some of those who have been sending small clubs from the beginning. But there is little time left now for delay. If you want some of this cash January 15, just hustle around now. It would pay you handsomely to put in every hour of spare time from now until the last night of the contest. The $2 went to these people last week :

Dec. 24. F. E. Van Eps, New York.
Dec. 26. B. C. Foster, New York.
Dec. 27. Wm. Pickhardt. New York.
Dec. 28. Mrs. C. B. Curtis, New York.
Dec. 29. Chas. E. Bryer, New York.

Your name ought to be in this list next week. There are 50 cash premiums besides that will soon be in somebody's pocket. You can have one of them if you will.

THE RURAL NEW-YORKER,
NEW YORK.

MARKET BRIEFS.

Picked Up Here and There.

CHRISTMAS POULTRY.—Until the first of this week the weather was favorable for handling dressed poultry, but the two or three warm, muggy days changed conditions so that the situation was nearly as bad as at the close of the Thanksgiving market. Prices dropped, selected hen turkeys selling at 10 cents, and large quantities of lower grades going at nine cents or less. A good many shipments were sticky when opened, and spoiled quickly. Chickens and fowls were plenty, and the demand weak. Of course, whatever stuff was fit to be held was put into storage, and will be worked off this week for the New Year trade, unless fresh receipts are unusually heavy.

THE SMALLPOX SCARE in this city has made a harvest for the doctors. During the past two or three weeks probably 500,000 people in this vicinity have been vaccinated. The Board of Health has several depots where people may be vaccinated free of charge, but nearly everyone who has a family physician prefers to have him do the job. The ordinary charge is $1. It takes less than three minutes to do the work, and the virus required costs less than 10 cents. Some of the latest outfits contain a special needle used for making the wound, and this is broken up and thrown away when used, so that there is no danger of carrying disease from one person to another by using the same instrument repeatedly. Another improvement is a wire or celluloid shield which is put on the arm as a protection against the sore being irritated by the clothing.

MISTLETOE for holiday decorations was a scarce article this year, and sold at prices far above the reach of ordinary pocketbooks. The reason was that part of the cargo intended to supply the Christmas trade heated and spoiled on shipboard, and there was no time to get a further stock here. Little sprigs of the genuine European plant sold from 25 to 50 cents each. This plant is a parasite growing on a variety of trees in Europe, and quite destructive to the apple in some districts. The seeds dropped by birds adhere to the bark of trees, grow, and draw their life from the tree. Varieties of mistletoe are found in the United States, but they differ in several particulars from the European plant. There was plenty of fine holly, and a large armful could be bought for 25 cents. Its dark green shiny leaves, red berries, and lasting qualities, make it about all that could be wished for decorations. Some holly is also imported from Europe. It is slightly different from the American plant, and is preferred by some, but is only sold by florists with a high-class trade.

STRAWBERRIES in limited quantities are being received from Florida and California, bringing from 60 to 75 cents per quart wholesale. A man who has been shipping regularly to one party here for several weeks, recently sent a crate on trial to another dealer, who sold it at 15 cents per basket more than the other man had been getting. The first man heard of this, and on the next crate he got made returns at 10 cents per basket above the latter price. Probably he advanced the extra money from his own pocket in order to prevent the new man from getting any further shipments, as the price at which he claimed to have sold them was considerably higher than the market warranted. This is a common practice carried on by some commission receivers to hold the trade of shippers. It is simply a sort of stage performance, the man who puts up this bonus getting even by making short returns now and then. A fruit firm here had handled the strawberries of a certain section, amounting to several thousand dollars, for a number of years. The berries were of good quality, and they had taken the trouble to work up a special trade for them at unusually high prices. Another fruit dealer went into that section, and by representations that he had better facilities for handling their product, induced them to give him a trial for a season. For the first two or three shipments he returned big prices, and after that they dropped off to something less than they had got in former years, the loss on the whole season being heavy. Next year the growers offered the crop to the parties who had previously handled it, but to their astonishment the offer was declined with thanks, the dealers stating in effect that they had been to considerable trouble to get an outlet for these goods at high prices, only to have the trade taken away from them at the most favorable time, and they did not care to run the risk of further similar treatment. W. W. H.

CONNECTICUT FARMERS MEET.

The annual farmers' convention of Connecticut, held at New Haven December 11-13, was more than usually interesting. President Hadley, of Yale University, had for his subject, Higher Education and the Welfare of the Country. He said in opening that higher education helps the community in three distinct ways; by making people better workers in their several occupations, better members of the body politic, and better men in their character and ideals, and his presentation of his reasons for the statement were scholarly and instructive. To Col. James Wood, of Mt. Kisco, N. Y., was assigned the pleasant duty of telling what the Farm as a Home should be, and it goes without saying that he did it well. Dr. W. C. Sturgis, of New Haven, spoke upon the study of botany, claiming that it was not necessary for the student to acquire a scientific knowledge of botany in order to make the work pleasant and useful. One should be thorough about what is done, as guessing around among plants is of no use. Ex-Gov. W. D. Hoard, of Wisconsin, gave two lectures upon Modern Conclusions in Dairying, and What Constitutes a Dairy Farm. The Governor's opinions are fairly well known. He thinks the general-purpose man, the general-purpose cow and general-purpose methods go together, and that the average man with his average cow and average cost of keeping will produce average results. Most Connecticut farmers who attend farmers' conventions agree with him. Dogs breed often, and would be good animals to experiment with for general purposes. When they can breed a general-purpose dog that will run a fox all day, stop on a bird at scent, drive cattle and sheep, with a chance to win in a dog fight, it will be time for us farmers to try to breed a cow that will do any one of half a dozen different things, as we ask of her. Gov. Hoard has a barn built with the King system of ventilation, and thinks very highly of it. He is enthusiastic also about Alfalfa. When properly cured, which requires from two to four days in heaps covered with hay caps, he thinks it excellent forage. After hearing Gov. Hoard tell how he prepared the land for the seed, some of our farmers might think our friend Geo. M. Clark's five tons of good hay a surer thing than a crop of Alfalfa, and sow grass seed instead. There seems to be no chance for Alfalfa unless the preparation of the seed bed is up to the mark, while if there was a little lacking, Clark's style of seeding would give something.

Prof. Charles D. Woods, of Maine, gave a very interesting lecture upon the secretion of milk, but being almost entirely scientific it cannot readily be briefed. J. H. Hale, of peach fame, talked of the lessons of 1899 and 1900 in pomology. He believed the time for marketing fruit in barrels was about ended, and the fruit of the future, like apples and pears, would be sold in bushel boxes while a still smaller box, that a man might carry home to his family, might profitably be used for these fruits, and for peaches. His point was that when a package was broken the cost to the consumer largely went to the retailer, while an unbroken package would be sold at a fair percentage of profit. He believed the best markets would in the future demand a red apple grown east of the Hudson River, as that section of the United States grows the best apples in the world. Asked to name the best strawberry, Mr. Hale said there was no one best berry, but named several varieties, among them Glen Mary, Gandy and Pride of Cumberland. Dr. J. F. Rothrock, of Pennsylvania, considered the forestry problem largely affecting the retention of water and prevention of freshets and droughts, by forests. Attention was called to a statement by Mr. Hale that the fewer trees there were in an orchard the less danger from drought, as the roots of trees drew water from the ground and the leaves threw it off faster than it evaporated from the soil. Dr. Rothrock thought tillage prevented evaporation. One farmer well along in years said that in his boyhood he ate his dinner in haying time by a spring in a meadow. A maple tree in later years grew over the spring, and while it made a nice shade to eat dinner under, it spoiled the spring, no water running from it; and as the spring was the more valuable of the two it was cut down. The discussion practically closed with the statement by Prof. Brewer, of Yale University, that more than one-third of the area of Connecticut is, and must continue, forests, owing to the rough nature of the land.

At the last evening session Col. N. G. Osborn, editor of the New Haven Register, talked of the farmer in public life, and made an earnest plea for honesty in politics and a regard for the welfare of States as a whole rather than of particular sections. The three days' meeting closed with an entertaining paper by Mrs. C. W. Pickett, wife of the editor of the New Haven Leader, Reminiscences of Farm Life. Heretofore Connecticut farmers' conventions have been enlivened by music secured for the entire convention. The music at this convention was, both vocal and instrumental, by New Haven people, who gave their services, most of them for a single performance. This gave a variety that was extremely well-liked by those who attended the convention, particularly as the music was of a very high order. There was a fair exhibit of fruit, nuts and corn, but nothing particularly new. It was a matter of remark that Northern Spy apples were remarkably fine in Connecticut the past season, but no one seemed to know why. Perhaps dry weather suits the Northern Spy. R. S. HINMAN.

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A Spotless Skin

And a clear complexion are desired by every woman and admired by every man.

Eruptions, pimples and similar blemishes are caused by an impure condition of the blood. These skin blemishes are permanently removed by the use of Dr. Pierce's Golden Medical Discovery which thoroughly purifies the blood and cures the cause of the disease.

"For about one year and a half my face was badly broken out," writes Miss Carrie Adams, of 116 West Main St., Battlecreek, Mich. "I spent a great deal of money with doctors and for different kinds of medicine, but received no benefit. At last I read one of your advertisements in a paper, and obtained a bottle of Doctor Pierce's Golden Medical Discovery. Before I had taken one bottle of this medicine I noticed a change, and after taking three bottles I was entirely cured.

Free. The Common Sense Medical Adviser 1008 pages, is sent free on receipt of stamps to cover expense of mailing *only*. Send 21 one-cent stamps for paper covered book, or 31 stamps for cloth binding. Address, Doctor R. V. Pierce, Buffalo, N. Y.

STEEL ROOFING

THE ONLY TOOLS YOU NEED.

5000 Squares
BRAND NEW STEEL ROOFING
Bought at Receivers Sales, sheets either flat, corrugated or "V" crimped. Price per square of 10 x 10 feet or 100 square feet $1.75
No other tool than a hatchet or hammer is required to lay this roofing. We furnish FREE with each order sufficient paint to cover, and nails to lay it. Write for Free Catalogue No. 57 of general merchandise bought by us at SHERIFF'S and RECEIVER'S SALES.
"Our Prices are ONE HALF of others."
CHICAGO HOUSE WRECKING CO.
West 35th and Iron Sts, - Chicago.

WATCHES

(Full Jeweled).

WALTHAM AND ELGIN ONLY.

High-Grade Watches at Low Prices.

Some of our people will want watches this Fall. Our people are used to good things, and will want good watches. We have selected some of the most suitable made by the great American Waltham and Elgin factories. None other so good are made any place in the world. Every watch is warranted, and may be returned at our expense, if you do not want it when you see it. No jeweler can afford to sell them at these prices. They are all stem wind and set. We sell at these prices to subscribers' families only.

No. 1. Men's Solid Gold Watch.

FULL JEWELED, NICKEL WORKS.

No. 1 is a Men's size, solid 14k. gold watch, with either Waltham or Elgin works as ordered. The works contain 15 jewels, compensation expansion balance, safety pinion, and all improvements. The case is either open face or hunting as ordered. At retail such watches sell from $50 to $75 each. We will deliver one to any of our readers in good running order for only $35.

No. 2. American Special.

MEN'S 14K. GOLD-FILLED WATCH.
Full Jeweled, Nickel Works.

No. 2 is a genuine Waltham or Elgin watch, with full jeweled nickel works. It contains all the improvements mentioned in No. 1. The case is made of solid 14k. gold, in two thick plates, stiffened between with a sheet of fine composition metal. It is guaranteed to wear like solid gold for twenty-five years or more. With proper care it will last a lifetime. Price, delivered in good running order, $17.50.

No. 3 is just like No. 2, but open face, screw back and front. Price, delivered in good running order, $14.40.

No. 4. Sterling Silver Watch.

MEN'S WALTHAM OR ELGIN.
Full Jeweled, Nickel Works.

No. 4 is a genuine Waltham or Elgin watch with works just like those in No. 2 and No. 3. The case is made of solid sterling silver, and it weighs three ounces. We have tried two-ounce and four-ounce cases, but we find that the three-ounce case is just the right weight. It is heavy enough to protect the works perfectly and at the same time it is extremely handsome. It is hunting or open face as ordered. Price, delivered in good running order, $12.

No. 5. Waltham or Elgin Watch.

FOR MEN AND BOYS.
Full Jeweled, Nickel Works.

No. 5 is a very serviceable watch for men and boys. The works are just the same as those in No. 3. The case is made of nickel silver, screw back and front, thereby making it dustproof. Nickel silver is a composition metal that looks and wears like solid silver. Price, delivered in good running order, $7.75.

No 6. Ladies' Solid Gold Watch.

FULL JEWELED, NICKEL WORKS.

No. 6 is a genuine Waltham or Elgin watch for ladies' wear. The works contain all the improvements mentioned in offer No. 1. The case, hunting only, is solid 14k. gold, with plain or fancy engraving as ordered. This is not a cheap watch. It ordinarily sells at from $40 to $60. We will deliver one in good running order to any reader for only $30.

No. 7. Ladies' Waltham or Elgin Watch.

14K. GOLD FILLED CASE.
Full Jeweled, Nickel Works.

No. 7 is a ladies' hunting case watch of high merit. The works are just like those in No. 6. The case is made of solid gold in two thick plates stiffened between with a sheet of fine composition metal. It is guaranteed to wear like solid gold for twenty-five years or more, and with careful use it will last a lifetime. Price, delivered in good running order, only $14.50.

THE RURAL NEW-YORKER, NEW YORK.

Nebraska the land of plenty

Why is it that so many men spend their days on rented farms, with no prospect ahead, when within a few hours' ride is a land of plenty; where all kinds of grain and fruit can be raised with the least amount of labor; where cattle and hogs fed on corn bring a handsome profit; where the climate is healthful and churches and schools abound, and where land is cheap. Send to-day for our illustrated booklet "Nebraska." It is full of pictures and has a valuable map. Free.
Address P. S. EUSTIS, G.P.A., C.B & Q R.R., Chicago

Live Stock and Dairy

WESTERN AND EASTERN BUTTER.

Should the Price Vary?

We notice that western creamery butter runs from one-half cent to one cent per pound higher in this market, than State creamery. In Summer, the difference appears to be less than in Winter. Will you tell us why this difference should be made? Is the western butter more uniform or generally higher in quality? If so, why? Are any discriminations made in favor of western butter? If so, what are they? Is there any fair reason why this difference in price should be made?

I find that the prices of both run about alike, although there are two reasons why State creamery does not occupy the first rank in the daily quotations. The larger part of our State creamery goes directly to the dealers and consumers, instead of the regular channel of distribution; the daily quotations are reported upon the sales of the commission trade. The large buyers of creamery butter give preference to western creamery, for the reason that they are able to obtain large lines at regular intervals, while the choice in State creamery is limited. F. J. H. KRACKE.

I have had little practical experience in the butter market, but have watched the course of the market carefully for the last four or five years, and have of course, observed the feature to which you call attention. So far as I know there are no discriminations made in favor of western butter, but perhaps it would be better to say that sufficient reason may be readily found for this difference in price. I think there is no doubt but that the practice of so-called Winter dairying, that is, having cows fresh in the Fall, is more extensive in western dairy districts than in New York or Pennsylvania. This will result in a larger proportion of fresh milk and less "stripper" milk in the West than the East, and consequently butter of a higher flavor and better texture. Another reason is found in the fact that a considerable proportion of the creameries in this State run only every other day during the Winter season. This means a greater proportion of old and often frozen milk, and a consequent loss in flavor. I am of opinion also that another condition exercises considerable influence. A large number of those creameries in this State that make the most and best butter in the Winter have private customers for their make, and their butter does not get into the regular channels of trade, going direct to the consumer, so that only the poorer creamery butter is represented in the open market, and in much larger proportion in the Winter than in the Summer. H. H. WING.

The flavor in butter, other conditions being the same, is largely influenced by the length of time which the cows from which the milk is drawn have been giving milk; i. e., milk drawn from cows which are nearly fresh produces better-flavored butter. My observation leads me to believe that the western farmers more generally begin their dairy season in the Fall or early Winter. This they have been doing for several years, and are better skilled in the care of milk in cold weather, have better facilities for protecting it from freezing, and at that season of the year the milk reaches the creameries in much better condition than in this State. Another factor which may have some influence is the fact that what are termed "long lines" of desirable quality bring better prices than smaller ones. A factory which can offer 100 packages of extras each week can usually get a slight advance over one having only from 15 to 25, and I think in the West the creameries generally are less in number and have a larger output. I doubt whether there is actually any difference in prices in favor of western butter during the Summer, quality and other conditions being the same. The prices on the Jamestown Board of Trade during the months of May, June, July and sometimes in August are usually in advance of the Elgin quotations, and sometimes have been higher than the New York quotations of the same date. This would tend to show that New York State butter, all conditions being the same, stands as good a show as western butter. Yes, I think the western butter is generally more uniform in quality.

J. P. CLARK.

COW LEAKS HER MILK.

I bought a very fine Jersey cow last Fall; she was nearly dry at the time, and due to give milk again the last of December. Since buying her I learned that she leaks her milk badly when in full flow. I have read somewhere about searing with a hot iron the end of the teat when the cow was dry. Can you tell me if this can be successfully done, and give me instructions concerning it? It seems to me it must be a delicate matter, as the milk passage might be entirely closed. There is no veterinary near at hand, but perhaps I might do it myself. If the defect can be remedied she is valuable; if not she is nothing more than beef. W. MCK.

Gabriels, N. Y.

It is often a difficult matter successfully to operate upon the teats of a cow that leaks her milk, so as entirely to prevent the trouble. Where only one teat is involved the case is not so bad; but to make all four teats sore will be met with vigorous resistance to the treatment, from the cow. In the case of valuable animals that leak their milk only on flush feed, when the udder is unusually disturbed, the temporary leaking can be prevented by the application of collodion after each milking. Dry the ends of the teats and then make two or three applications of the collodion to each teat. At the next milking the layer of collodion is picked off, to be renewed after milking as before. The most practical method, where successful, is to cut or burn the end of the teat sufficiently to form a good scab. In healing, the wound should contract so as partially, if not entirely, to close the opening. To cut the teat use a teat-slitter or bistoury, making an incision in four or five directions. Burning with the hot iron I have found to be more successful than cutting. Either operation ought to be performed by a competent veterinary surgeon; but where this is impracticable, the firing would probably be the safer method. Use a smooth-pointed iron, preferably with a large head to retain the heat. Heat the iron to a red heat, and having cast and secured the cow, burn the orifice of the teats by making three or four momentary applications of the hot iron to each teat. The iron should not be in contact with the flesh longer than two seconds at one time, repeating the applications, passing from one teat to the other, until burned sufficiently to form a good eschar. No after treatment is necessary beyond squeezing a little milk from the teats night and morning after the third or fourth day. Do not pick the scab off, but simply force a little milk from the teat to keep the orifice open; or if the cow is in milk, milk very carefully. Should the orifice close entirely, force an opening with a small milking tube, or with a large knitting needle with a well-rounded end. If the first operation is not successful all around a second may be attempted after the teat has entirely recovered from the first.

F. L. KILBORNE.

ACCORDING to the Breeders' Gazette, to "rustle the chuck," in cowboy vocabulary means to prepare a meal for eating. Chuck is the term for food, or "grub," and rustle means to stir around and get it ready.

A COW REPORT.—I send a report of one herd of cows. This was for last March, and given by G. A. Blish, a prosperous farmer, at one of our Grange meetings.

Mareh, 1900: Cows kept, 31 to 36; milked, 27 to 32; average, 30. Quarts of milk, 9,607, wholesaled at 3¼ eents, $312.22. Amount of grain fed to eows:

24 barrels eorn and 36 bushels oats	$33.12
Grinding the same	2.40
3,950 lbs. gluten	46.65
3,100 lbs. mixed feed (bran)	29.45
9 tons hay	130.00
Cornstalks	5.00
20 bu. small potatoes	4.00
Soft corn	3.00
Nutritone (medieine)	.75
Salt	.25
Total cost of keeping	$254.62
Cost of keeping the herd good by trading eows	30.00
Total	$284.62
Balanee in favor of the cows	27.60
Manure from cows	30.00
Total	57.00

No account was made of labor.

M. D. INGHAM.

Sec. of Granby Grange, Mass.

PULP AND MOLASSES.—As regards beet pulp, I think it is worth not far from $2 per ton when bran and cornmeal are worth $18 per ton, and some might consider it worth more than that. I have 27 cows, am milking 22, and am feeding about 1,200 pounds of pulp per day, giving each animal a large scoop full twice a day; silage once a day and hay once a day. I give no feed at noon. A neighbor and myself take a carload together. I got out of pulp for two days, and my cows shrunk on their milk 15 quarts per day. The pulp costs 50 cents per ton at the factory loaded on the car, and the molasses three cents per gallon, and return the barrel. I have never fed any of the molasses, so cannot say much about it. Some of my neighbors fed it last year and liked it very much. I have not heard of anyone using it this year. C. R. S.

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THE RURAL NEW-YORKER, NEW YORK.

PROBLEMS OF DAIRY PRACTICE.

Handling "Devonshire Cream."

Can you tell me what Devonshire cream is, and whether it takes any special machinery to make it? Taking 80 cents per gallon for cream as a basis, does it sell for enough more to leave a profit above the labor? B. P.

Hartwell, O.

Devonshire cream is a heavy clotted cream, so named because first made in the county or shire of Devon in England, which is also the home of the Devon cattle. In an article in THE R. N.-Y. of January 22, 1898, entitled In Transatlantic Dairies, Prof. H. H. Wing speaks as follows of this cream as made in Devonshire; "The milk is set in shallow pans—crocks—and warmed until it just begins to crinkle; then it is set aside until the cream rises. Sometimes it is rewarmed and set aside for the second time. The cream is then taken off for table use, and eaten on bread. It is rather lumpy. I cannot say that I ever found it absorbingly delicious over other cream." So far as known to the writer no special machinery is made for this purpose in America. The inquirer does not state whether he is selling a 20 per cent or a 50 per cent cream for 80 cents per gallon, so it is not possible to estimate the profit. For a special market requiring a heavy cream it might be advantageous to experiment along this line, but for the general market it probably would not pay for the additional labor. J. A. F.

A Trouble With Cheese.

For about eight days in the month of last July, during the hottest weather, the cheese curd would seem to scald all right up to 96 degrees, and above that it would not look as it should, but turn soft and settle in the bottom of the vat, and look milky. The acid would not come on it until two hours longer than the usual time. The cheese now looks all right and is the right consistency, but it has a sweet whey flavor. The trouble was in big blackfly time, and the cows were sprayed at milking time. I have made cheese for three years and have been very successful with it. It brings good prices in the markets.

Hinckley, N. Y. A. N.

As the inquirer indicates, the trouble was probably due to a deficiency of lactic acid in the milk. This might be obviated by warming the milk to a temperature of 85 degrees F., and allowing it to stand until sufficiently ripe, before the rennet is added. The use of an artificial starter would, however, be likely to give the most uniform and hence the best results. Several commercial starters are upon the market, and if the vessels in which they are made are kept clean and sweet, the same starter may be propagated from day to day for from two to three months. The amount of starter needed varies from two to five per cent of the amount of milk, and depends upon the temperature of the air and the condition of the milk when it reaches the factory.

J. A. F.

Butter that Grows Strong.

What is the cause of butter becoming strong a day or two after churning, which mine does? The cow is young; she has had one calf. Will she improve as she gets older? I feed her cornstalks and mangels.

Brighton, N. Y. J. S.

From the information given it is not easy to state the cause of your "butter becoming strong a day or two after churning." In order to make a fine quality butter, the dairy cow should have nothing but the brightest and best of feed. Mangels and cornstalks alone do not make a very liberal ration for a dairy cow, and if mangels are fed in considerable quantity either during or an hour or two before milking, they may be the cause of your trouble. They should be fed directly after milking. Where only one cow is kept, the milk is often set in shallow pans on the same shelves with the food of the family, and readily takes up the characteristic odor of its surroundings. The milk should be carefully and thoroughly strained as soon as it is drawn from the cow, and every care taken to guard it from odors and taints. The cream should be kept at a temperature of 40 degrees or below until the day before churning. The churning should be done at least twice a week, and the same care used to keep the butter in a pure atmosphere as has been suggested for the milk and cream.

J. A. F.

THE BREEDER'S WAYSIDE.

How May the Herd be Improved?

My young friend Bovril has a mixed herd of cows, and he writes me to know what sort of a male he should secure to head his herd. He has grade Shorthorns, Jerseys and Holsteins, and sells milk. The selection of a male to head a herd of cows is a most important matter. There is an old saying that "the bull is half the herd," but sometimes I think him more than half, though strictly speaking he cannot be. To begin with, there really are types of animals which represent the better standard. The best dairy cow should have a large udder when fresh in milk, which extends well up in front on the belly, and high up behind, and which when milked out will shrivel up and not retain a plump outline. This cow also should have a good full chest and strong, level back, and large well-rounded body, that does not incline to fatness. There are other things, but these are the most essential items to consider. The thoughtful breeder should always secure a male from a female that has these highly-desirable qualities, both on the sire and dam's side if possible. He certainly is not wise to buy a bull of whose ancestry he knows nothing. He should see his sire and dam, and grandsire and granddam if he can. Then he will be able to form some idea of what stock he is using. One cannot always tell what a sire is capable of, by mere examination, but if one can see his progeny, then he may form a fair conception of the animal's character. Prepotency in the male is his ability to stamp his qualities on his offspring in a noticeable degree, and so one should seek not only a bull from a prepotent sire, but one that himself shows in his general carriage and build superiority of breeding. It is for this reason that really astute breeders are very careful to buy males coming from sire and dam of known qualities. Not only this, but some families of cattle are distinguished for having numerous representatives that have accomplished certain feats in producing either milk or butter. The advanced registry of the Holstein-Friesian Association, and the butter-test book of the Jersey Cattle Club, show one the names of many prominent individuals of prominent families. Consequently it will be decidedly to advantage to secure a male from a family or strain that has a reputation for accomplishing things.

I would most earnestly recommend that Bovril use a purebred sire on his herd. Bulls from grade stock should not be thought of. Their breeding is an uncertainty, and their offspring will be more uncertain. A grade male is only used by the most indifferent and ignorant of breeders. Now, if I found the right sort of a bull, I should want to use him as nearly as possible on the right sort of cows. So I should have definite views as to the type of cattle I wished to breed, and what they were to be bred for. I should ascertain whether the individuals in my herd were paying their way or not, and those that were not, I should dispose of to the butcher. Then the male should be used on the rest to produce an improved herd of uniform quality. If the bull is prepotent, this will gradually come about. Bovril ought not to cross great extremes. He ought to harmonize the elements. If his herd is mainly Jersey, then it will be desirable to develop the Jersey type if it suits his requirements, but crossing a Jersey on a Holstein is not in itself the most satisfactory thing to do. These breeds are too opposite in character. After improving his grade herd by the use of this male, and weeding out from time to time inferior females, Bovril will see a great improvement in results and appearances. Then the most it will be necessary for him to do will be to secure a new bull in a few years, when fresh blood will be required; always, however, following up the process of selection and weeding out undesirable stock. In connection with this entire subject, one should not overlook the necessity of getting informed as fully as possible about the breeds or breed one is handling, and the principles of breeding. There are many helpful ideas that are coming out from time to time in THE R. N.-Y. and other papers, while books on live stock often suggest much of service to the breeder. You know that the manufacturers of to-day leave no stone unturned to develop their business right up to date. If more of our farmers were inclined that way, their pockets would jingle more than they now do. Study your herd, visit other breeders who are more successful than you, and get ideas from any source you can, so long as they are good ones, and by putting them into practice you will be the gainer thereby. C. S. PLUMB.

HOGHOUSES.—Some time ago I read an article in THE R. N.-Y. in regard to portable hoghouses. I use them altogether. I build my houses upon regular boat runners; all ready to hitch a team to, and move them when and where I wish. With the runners there is no lifting or bother to load the houses on a stone boat; they are ready to hitch the team to at any time. In this way I keep 30 or 40 hogs with a comparatively small amount of labor. I place my houses and hogs on a piece of ground, and let them root and work a while; then I move them to another field. The first field is then in fine condition to plow and raise good crops.

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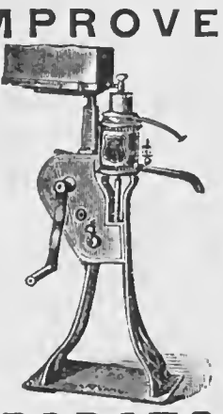

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—Harvard Lampoon.

STRANGER: "What are the principal objects of interest in this town?" Citizen: "Savings bank deposits."—Tit-Bits.

"WHAT do you think of the plans for that gigantic corner in eggs?" "I think they are well laid."—Cleveland Plain Dealer.

"PAW," asked Tommy, "what does the 'D.' in John D. Rockefeller's name stand for?" "I don't know," said Mr. Tucker, "Dollars, I guess."—Chicago Tribune.

YOUNG MOTHER (to butcher): "I have brought my little baby, Mr. Bullwrinkle. Will you kindly weigh him?" Butcher: "Yes, ma'am; bones an' all, I s'pose?"

LITTLE HARRY: "Why haven't we ever had a lady President, papa?" Papa: "Because, Harry, a man-made law makes it imperative that the President be more than 36 years old."—Judge.

HE: "And so she's married! Ah, well! I used to have a soft spot in my heart for her myself." She: "Indeed! Everybody else always supposed it was in your head."—Chicago Times-Herald.

"Is your son pursuing the usual studies?" inquired the visitor. "Yes," answered Farmer Corntossel; "he's still pursuin' 'em, an' from what I kin hear without much show of ketchin' up to 'em."—Washington Star.

"WHAT do you think of the idea of broadening the present course of school studies?" asked the facetious friend of the family. "I don't care how broad they make 'em," answered Tommy, "so's they don't lengthen 'em."—Indianapolis Press.

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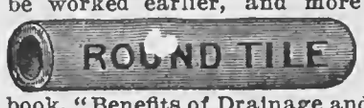

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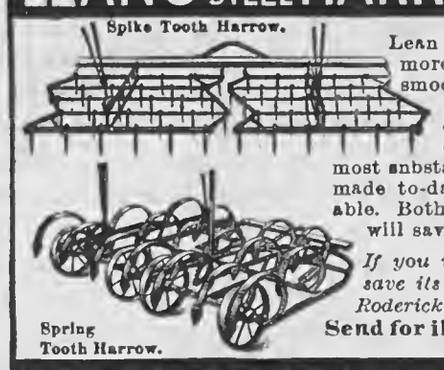

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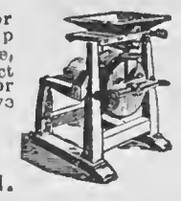

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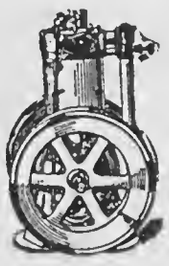

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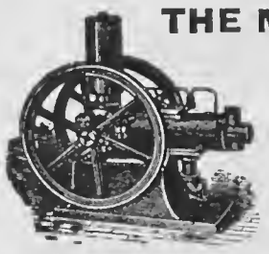

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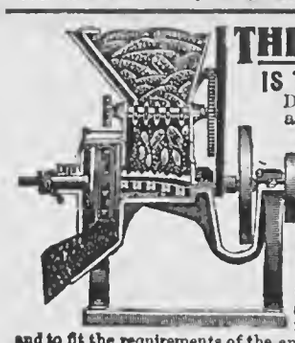

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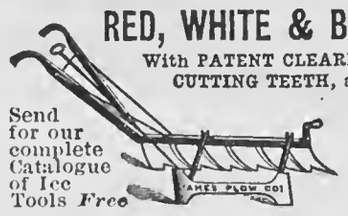

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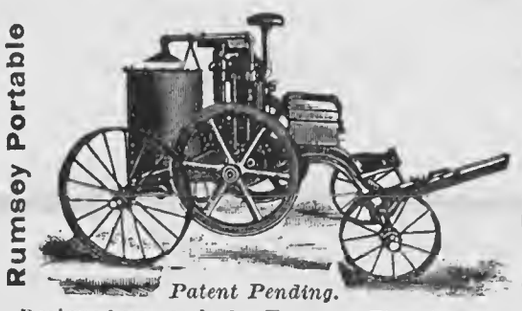

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2659. NEW YORK, JANUARY 12, 1901. $1 PER YEAR.

THE DESTRUCTIVE GREEN PEA-LOUSE.

IT WILL BE HERE ONCE MORE.

What to Do For It

I have 12 acres of Blue-grass and Timothy sod that I intended plowing last Fall, and wished to plant in peas for canning factory the latter part of April, but I fear the grub and cutworms may destroy it. The seed alone will cost me $108. This is more than I would like to chance if there is danger of the worms taking it.

Indiana. READER.

So far as cutworms and grubs are concerned I see no particular reason why Reader should not plant the Blue-grass and Timothy sod in peas next Spring. I would advise him to be particularly careful about planting peas in that section on account of the universal presence throughout the Northwest, as far as Green Bay, Wis., of that notorious insect known as the destructive Green pea-louse, a complete account of which he will find in THE R. N.-Y. for August 4, 1900. From facts which are now in my possession, and which have been coming to me recently from various sources stretching from Portland, Me., to Green Bay, Wis., I conclude that unless conditions change rapidly, there will be another invasion of the pea louse over wider areas the coming Spring. This insect was breeding in the open field late in October in the northeast part of New York State and other States in the North and Northwest. At present I have large colonies in my laboratory, where it is breeding daily upon cow-peas and other peas. It is not very fond, however, of the former, while it is thriving nicely upon the green field pea. Two seasons have passed, and this little insect has been responsible for the destruction of green peas in the field to the extent of more than $7,000,000; during this time, we have had weather conditions of quite different character prevailing throughout the Fall, Winter and Spring of each year, and, at the same time, the total loss to the growers over the area where the insect has made its appearance in destructive numbers is greater by far this year than it was one year ago. Early in the Spring we predicted the presence of this insect throughout the Northwest and more northern States, and sent out a warning at that time, so that persons planting peas could be on their guard.

As a matter of fact, therefore, I unhesitatingly state that the Indiana correspondent takes far greater risk in planting his peas in the Spring from the attacks of the Green pea-louse than he does from their destruction by grubs or cutworms or other insects. It has been demonstrated beyond all question of doubt that where peas have been drilled like wheat it is practically impossible to fight this insect with any degree of satisfaction. Wherever peas have been drilled, especially the late plantings, and where this insect has secured a hold upon them before the blooming season, they have been invariably killed outright, or reduced in vitality to such an extent during the past season that they were not worth cutting; on the other hand, where the peas have been planted in rows from 26 to 30 inches apart, there has been a better opportunity afforded for combating this pest, and in most cases where persistent and energetic work was followed regularly with the brush and cultivator method, cited in the article referred to in THE R. N.-Y., the peas were saved to a very great extent. In one instance, the owner who had planted 600 acres canned between 25,000 and 30,000 cases of two dozen cans each, while the previous year, where his peas were drilled, he lost a total of 480 acres outright, or on a cash basis something like $20,000 or $25,000.

My general advice, therefore, for persons who intend planting peas in the Spring would be for them to secure the early varieties, and get them in the ground as early as possible. In the central Southern States this can be done in many cases in February or March, while in the Northern States I realize it will not be possible to get them in the ground until much later, but wherever the pea is planted for canning or commercial purposes, it must be borne in mind that every precaution should be taken to have the peas in such a condition that this insect can be combated by means of the instruments and methods now demonstrated, whereby it can be kept in check, provided it makes its appearance. So far as varieties are concerned, some varieties are more susceptible to the attacks of insects than others; as an illustration, the variety known as Alaska will no doubt resist to a very much greater extent the attacks of this insect than the variety known as the French Canner, which has a different method of growth, the stem and terminal bud being much more delicate and the leaves much more succulent than those of such varieties as the Alaska and others of a similar character. The varieties known as First and Best and the Alaska have been, perhaps, more generally planted in this section than any others, but in every case, all varieties have succumbed to the attacks of this insect, where they have been thoroughly established upon them before the blooming season. In making preparation, therefore, for the planting in the Spring, the grower must prepare himself with the implements for making a determined and persistent warfare against this pest, with the brush and cultivator method, as soon as the creature makes its appearance, by getting the peas in the ground early, and with fair weather conditions, the plants getting a start and blooming before the insect really establishes itself to any extent upon the vines, the grower has a very good opportunity of securing at least a fair crop, even with an invasion of insects following latter.

Some workers have generally recommended a spraying method for checking and controlling this pest. We were of the same opinion early last season, but after one season's work we have practically demonstrated that no system of spraying is of any special value on a large scale, and I would, therefore, discourage the use of spraying apparatus and spraying material of any kind upon fields of peas infested with this insect, and would especially recommend the use of the brush and pan, or the brush and cultivator method, both of which have been described in previous communications to THE R. N.-Y.

In the accompanying illustration, FIG. 7, a fair idea can be gained of the brush-and-pan method, which we have used for the control of the pea-louse.

[Prof.] W. G. JOHNSON.

FIGHTING THE PEA LOUSE WITH BRUSH AND PAN. FIG. 7.

R. N.-Y.—Those who buy canned peas have only to ask the price of a good sample to realize how this pea-louse has affected trade. In some districts the pack was scarcely half that of former years. If Prof. Johnson is right in his estimates for this year, there will be more trouble than ever. The very fact that this insect is so hard to fight makes it all the more necessary to follow as closely as possible the few lines of warfare which the entomologists have been able to work out. We give considerable space to the matter, as a good majority of our readers are interested in pea growing, either in garden or in field. Of late years the pea crop has been popular with many farmers, who supply canning factories. Prices are now so high that it will be a great temptation to some farmers to put in a large acreage this year. It is our duty to warn them that they must be prepared to put up a stiff fight against this pea-louse. The cannery shark will take advantage of the high prices paid for canned peas to try to work his fraudulent schemes in many neighborhoods. His tongue will blast your pocketbook worse than the plant lice will wilt your peavines. Between the two there will be nothing left for you. Of course this pea-louse, like many other injurious insects, gives to some growers the chance to turn a curse into a blessing. That is a singular thought, and yet it is true. The louse is sure to reduce the general crop of peas, because the great majority of growers will not fight it successfully. Therefore those who are able to resist it and thus obtain a fair crop will find that the louse has given them a partial monopoly which means a better price.

SEEDING A SWAMP TO GRASS.

I have about 30 acres of land which I wish to seed down for pasture. Four years ago it was a dense spruce and huckleberry swamp. In 1897 the timber was all killed by fire, and soon blew down. In 1898 the fire made a clean job of everything; also about six inches of the ground. It seems hard to get a catch of Timothy. The land is never covered with water only around the edge; the soil is a deep muck. Will some one advise me from experience what seeds to sow on this land to bring a good catch and make good lasting pasture? F. F. H.

Decker, Mich.

If the soil is composed of coarse more or less fibrous peat to a depth of two or three feet, sufficiently pure so that it burns readily when dry, as is suggested by the statement that about six inches of the ground burned, it may be that the land will have to be worked for two or three years without getting very much crop from it until the soil has become more compacted, and in better condition to utilize the ground water. One of the most serious difficulties with soils of this character after they have been drained is their tendency to suffer for lack of water in the surface three or four inches, and plants with small roots which develop slowly, as is the case with grass seed and clover, are liable to die out purely on account of lack of moisture. Such ground has to be treated, and crops grown upon it which root deeply in a comparatively short time until it is more decayed. If this is the condition of his soil, F. F. H. would better try to grow either oats for hay or else corn for a year or two. If he tries to grow oats it would be well to try seeding at the same time, but to cut the oats as soon as they begin to lodge badly, so as to be liable to smother out the grass, in case the grass shows signs of making a fair success. It frequently happens that after such pieces of land have been burned over to the depth stated, that grass seed, like Timothy, Redtop or Blue grass will do well upon it for one or two years, and sometimes permanently, the burning rendering available sufficient potash, and changing the texture sufficiently to put the soil in much better condition. If the soil is a fairly-decomposed type of muck or black soil, the probabilities are that before F. F. H. can succeed in growing remunerative crops of any kind upon it it will need to be given a dressing of farmyard manure, or else a treatment of some potash salt. The farmyard manure is apparently preferable to the potash salts, at least so far as our studies indicate. An application of 15 to 20 loads per acre would probably put the soil in good condition for corn, or for seeding to grass with oats or some similar crop. If he wish permanent pasture I would recommend the seeding with a mixture of Timothy, Blue grass and Red-top. It would be necessary, if seeded with oats to watch the conditions, and if the oats became too heavy and are falling badly they should be cut for hay rather than be allowed to mature, and it will probably be better to cut for hay in any case rather than risk the drying out of the soil which they are likely to produce if they come to maturity. The oats should be sown thin on the ground, so as to avoid too much shading, and the tendency to lodge.

[Prof.] F. H. KING.

ASPARAGUS GROWING IN THE SOUTH.

How to Insure a Good Crop

THE FIRST YEAR.—We select high dry sandy land; asparagus does not do well in this section on moist, or clay lands. We first plow the land, turning it as deep as possible without turning up the sand. We then harrow it thoroughly, lay it up with a bull-tongue plow in rows six feet apart. We then throw the land up into large beds with a turn plow, leaving in the V-shape shown at Fig. 8. We then take a long-handled shovel and clean the alley down to the sand subsoil; after this is done we set out the one-year-old roots, 24 inches apart in the alley, dividing the roots lengthwise, and put a large handful of earth on the roots on each side of the crown to hold the plant in position. When this is finished we sow at the rate of 1,000 pounds per acre of fertilizer composed as follows: Five per cent ammonia, seven per cent potash, five per cent phosphoric acid. When the fertilizer is applied we run an Iron Age cultivator on each side of the ridge, letting the mule walk up on the side of the ridge. This throws about six inches of soil on the roots in the alley. The grass comes through this covering inside of one month When it comes through nicely we sow 1,000 pounds more of the same fertilizer in the alley on the roots, and keep on cultivating throughout the Summer with the cultivator, keeping the land clear of grass and weeds. November 10 the grass put in last February was now about as high as a man's shoulder, say four feet. This winds up the first year's cultivation in our section.

SECOND YEAR'S CULTIVATION.—In December we cut down the asparagus tops, and either haul them into the lot as bedding for the mules, or burn them in the field; we then commence in the center of the asparagus alley with a single-horse plow, and plow the soil away from the roots, taking care not to run too deep, and apply 2,000 pounds of fertilizer of the same grade per acre, 1,000 pounds on each side of the asparagus roots. After the fertilizer is applied we run a diamond-tooth single-horse harrow twice in between the rows of asparagus to level the land and make it fine; then we take the single-horse plow and throw the earth back to the asparagus, bedding the earth up over the crowns of the asparagus about 10 inches, using a solid 18-inch sweep to finish up the alley between the asparagus as shown in the lower picture, Fig. 8. We cut only the finest stalks of asparagus the second Spring, and do not cut very long usually. We get enough asparagus the second Spring to pay for the fertilizer used the second year. The third Spring we get a full crop of grass; thereafter we always use one ton of fertilizer every Spring on the asparagus beds. Sometimes after we are

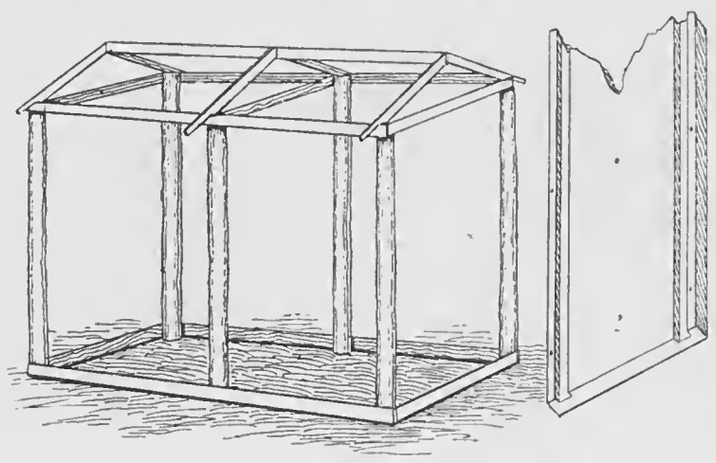
PLANTING ASPARAGUS IN THE SOUTH. FIG. 8.
Upper figure shows how the roots are planted; the lower figure shows them at end of second year.

through cutting in May we apply 1,000 pounds of kainit per acre, but have never seen any result from it. We commence cutting sometimes as early as the latter part of February; the usual time is from March 1 to 10. We cut until May 10. As soon as Norfolk comes in we have to stop. Some years we change the fertilizer and apply 1,000 pounds of the regular mixture, and 1,000 pounds of cotton-seed meal. I imagine a change of fertilizer does good; much depends on the weather. So far the rust has not troubled this section to any extent. I do not notice any rust in the Argenteuil asparagus. One of my neighbors has Palmetto planted, I think I noticed some rust on it. We try to get our grass in as deeply as possible. When we get the bed worked down on the roots the first year the roots are about 15 inches below the soil. Life of the plant in this section is eight to nine years, after that it loses size, and we plow it up and plant young roots again. When I select a piece of land for asparagus, usually one year before planting, I break up the land, apply about 30 one-horse loads of home-made stable manure per acre before breaking, sow two bushels of cow peas broadcast per acre, and let them grow all Summer on the land. Just before they ripen I turn the whole mass into the soil. By doing this I get my land clear of weeds and grass, and put it in fine condition for the asparagus roots. I have been using cow peas for 30 years. I am a great believer in them; they are grand for renovating land.

South Carolina. WM. C. GERATY.

EVERY FARMER CAN HAVE ICE.

At very little expense an ice house can be constructed that will hold and keep well all the ice needed for any farmer's family. We are using a small cheap



FRAME OF ICE HOUSE—ROOF BOARD. FIG. 9.

building that keeps the ice as well as one we built 20 years ago, that cost four times as much. Some farmers have an idea that they must forego this luxury, when almost any kind of a shed will preserve the ice very well, provided it is properly packed. Our present ice house is built as cheaply as possible, and took less than a day's work in construction. Fig. 9 shows the plan of the framework. We used white-oak poles set into the ground about two feet. Some cheap hard-wood bill stuff of 2x4 and 2x6 pieces were used for plates, nail ties, braces and rafters. A fair grade of pine stock boards, 12 inches wide, were used for siding. The siding was nailed on the inside of the poles, horizontally, better to resist lateral pressure from the packed ice and sawdust. A better grade of stock boards, one foot wide, furnished a good roof. Such a board roof should be made quite steep, to shed water, and, with kerfs cut on each edge, makes almost a perfect roof.

Fig. 9 shows how the kerfs are cut, one-half inch wide and three-eighths of an inch deep. The roof boards should be dressed on their upper surface, and the kerfs should be cut at least three-fourths of an inch from each edge. The mill operator sets the buzz saw out of line on the mandrell shaft just right to make a half-inch "wabble." Nail the roof boards on each edge, outside the kerfs, and drive one nail in the center of the board, as shown in Fig. 9. Our ice house cost us less than $15, and will last as long, and keep ice just as well, as one costing $100 or more.

J. H. BROWN.

THE WOOLLY APHIS ON APPLE ROOTS.

A Good Use for Tobacco.

I saw an article on the use of bisulphide of carbon in the treatment of trees and plants in your issue of September 15, 1900. I have an apple orchard of 1,000 trees, quite a pear orchard; also large peach orchard, cherries, plums, etc. A number of my trees are dying and I am unable to determine the cause. Will you describe the different stages of the work of the Woolly aphis, particularly the condition of the bark of the apple tree? What is the expense of treating trees with bisulphide of carbon, what kind of machinery or implements are used, and what is the cost of them? W. A. RUGGLES.

Tecumseh, O. T.

The Woolly aphis is quite a serious orchard pest in south Missouri and adjoining regions. It may be the cause of the trouble with the orchard mentioned. One may easily determine whether or not the aphis is at work by removing the earth from around the roots of some of the injured trees, and looking for the insects. The aphis is a small plant louse, covered with a bluish-white wool. It usually works below ground on the roots of the trees, but sometimes, especially when the soil is wet, or when it can find abundant shade, it comes above ground and sucks the sap from the trunk and limbs of the tree. If it is sufficiently abundant to injure the trees there will be no difficulty in finding many of the insects on the roots. Usually a good many of their skins, cast in moulting, may also be found close to the roots. When badly infested, the trees begin to lose vigor, do not grow with normal rapidity, have fewer leaves than usual and the foliage looks somewhat yellow and sickly, until the tree finally dies, or perhaps blows over in some windstorm. Carbon bisulphide is sometimes used as a remedy, but it is expensive, and unless used with great caution it is liable to kill the trees. If used it should be injected into the soil near the tree, where it will not come in contact with the main roots. The fumes permeate the soil and kill the insects. On account of the danger of killing the trees with bisulphide of carbon and on account of its being quite expensive, it is perhaps safer to recommend the use of finely-powdered tobacco, or tobacco dust from the tobacco factories. The earth should be removed from above the roots of the trees. the tobacco dust sprinkled thinly about them, and the earth replaced. The amount of tobacco used should depend upon the size of the tree, but a small quantity is sufficient to kill the insects. If they reappear after the tobacco has lost its strength, which may be in a year or two, more should be applied The tobacco will also injure the trees if it is applied in large quantities, and should be used sparingly. All things considered it is the best remedy for the insect that we know at this Station. Used in very small quantities, once in two or three years, it will keep the trees free from aphis and will not injure them; in fact it is a good fertilizer.

There are two other diseases of fruit trees that are prevalent in southwest Missouri, either of which may be causing this trouble. One is root rot, a fungous disease, which attacks the roots of the trees, causing them to fall over, revealing the fact that the roots have been entirely destroyed by this white, moldy-looking fungus. There is no known remedy for it, but it does not usually occur over large areas. The other is the root gall, which appears as large, wrinkled knots, at the crown of the tree or on the main branches. This root gall or crown gall is caused by a slime mold, and has been described and worked upon by Prof. Tumey, of the Arizona Experiment Station. He has found that copper sulphate and lime tend to check the disease. An account of his results may be obtained in a bulletin recently published from Tucson, Arizona. Whichever of these troubles, if either, is the cause of loss in the orchards may easily be determined by an examination of the roots of the trees. It should be remembered that the Woolly aphis also causes knots to form on the roots, but they are very small and well distributed over the root system wherever the insects are found, while the crown gall is very large, and usually occurs near the crown of the tree. J. C. WHITTEN.

Missouri Experiment Station.

OUR wheat made an immense growth last Fall, and cattle are being brought in by the thousands to graze it at 50 cents a head a month, or $5 a day for 1,000 animals. We had five good crops in succession here. A. D.

Blackwell, O. T.

HOG MANURE AND CABBAGE.

Does It Mean Club Root?

Regarding club-root in cabbage, my experience has been that the question of soil has more to do with the matter than the manure. If you have a piece of strong loamy soil, inclining to clay, with good natural drainage, you have a soil that with proper care in the details of preparation, fertilizing, etc., can be safely counted on for a good crop of late cabbage, if the right varieties are planted. But in that field there may be, here and there, places or spots that sag below the general level of the rest of the field. Now, if during the growing season of this crop there come a few downpours of rain, a large proportion of the cabbage in those spots will have "big-root," as it is called here, hog manure or no hog manure. Several years ago a prominent butcher of our neighborhood occupied a back corner of the farm we were living on at that time. Of course we had the manure. He had a trade that called for large quantities of pork; he bought cattle and pigs by the carload, the pigs worked up the offal and we drew the manure on the cabbage ground. The blood from the slaughterhouse was led to a large trough in the pigyard adjoining. Owing to this latter fact we discovered that the proportion of nitrogen was too great even for cabbage. We then began to mix it with the coarser product of the barnyard by hauling out alternate loads of each to a pile in the field where it was to be used. A couple of turnings now and then greatly improved the mechanical condition while increasing the availability of the coarse matter. If afraid to use the hog manure alone, why not adopt some modifications of this plan? I never saw any more danger from the use of hog manure than any other kind; the trouble has been that I never could get enough of it. I recall also that when I came into possession of my larger farm there had been quite a number of hogs fattened the Autumn previous, and there was a pile of about two good wagon loads of clear hog manure lying outside the pen. Besides this, we tore down the old pen that had been built on the ground about 50 years before, and it seemed at the time that everything was hog manure for about two feet down. At all events we drew out 12 good loads altogether from that old pen and applied the whole lot, with a half ton of fertilizer, to an acre of ground for late cabbage. The crop was sold in the field for considerably more than I paid for the ground. I wish we had a dozen or two of such things to clean up now; I should be willing to take the chances on "big-root" by using it.

I have heard this talk concerning the danger of using hog manure for cabbage as long as I can remember, but in every instance that has come under my personal observation it has proceeded from a class of men who always sow their cabbage seed when the "signs is in the head," and kill their pork when the moon is nearing the full, "so the meat will swell in the pot." To recapitulate: If I wished to grow a crop of late cabbage, and the ground was bare—no sod—I should draw all the coarse manure I could get, or pay for, not less than 20 loads per acre, plow it under as soon as I could in the Spring, topdress with a few loads of fine stuff and about one-half ton of good cabbage fertilizer analyzing four per cent of nitrogen, eight per cent of phosphoric acid, and 10 per cent of potash applied broadcast, then thoroughly cultivate not too deep, once a week till planting time. This on a soil naturally or artificially well drained; plant 2½ by 2½ feet; one ought to get $125 an acre from that crop. But a good crop of cabbage would not be the sole object of this thorough treatment; it is a well-known fact that there is no crop grown that is better calculated to clean up a weed-infested piece of ground than late cabbage, because to get a crop, even on well-manured ground the cultivator must be kept constantly going, and this at a season of year when showers are less frequent and weed growth less active. August is a better month to subdue weeds than June usually. But again, the next season I should like to plant that field with corn with 200 pounds of muriate of potash, and 600 pounds acid phosphate per acre, applied broadcast. I should plant it to be worked both ways, then work it all Summer perfectly level, and just before cultivating it the last way for the last time sow 10 quarts Mammoth clover of undoubted purity (not less than 97 per cent), then run the cultivator over lightly, and the year following just keep the top cut back. The next year you can grow cabbage, potatoes, or almost anything.

M. GARRAHAN.

GREEN AND DRY CORN IN THE SILO.

I have a small place, 42 acres, on which I keep 25 cows, and each Winter have had to buy hay. So, from what I have read in THE R. N.-Y. and Hoard's Dairyman, I concluded to build a silo, which I did this past Summer at a cost of $123.95, exclusive of my own work and board of carpenters. The silo is 17 feet in diameter inside, and 29 feet 4 inches high to the top of top circle. We put in four acres of corn last Spring, which I knew would not fill it, so after we mowed about the middle of June we manured five acres, plowed it and drilled in corn on July 3. When we filled the silo on September 28 to October 1, the early corn was a little drier than the farmers in this neighborhood like for their silos, but the late corn was in the milk. The teams were loaded first with a load of green and then a load of dry, and by the time it was leveled in the silo it was pretty well mixed. It has kept well with almost no sour smell and a nice green color. Would not this be a better way for farmers to do than to let the corn get too dry, and then pour water on it, as I have seen some do? Right here I would like to ask why you advocate not such heavy eared corn, but more fodder and leaves for the silage, as I saw in the Brevities of a week ago. Yours is the kind I have, as we put in the corn four to six inches in the row and rows three feet eight inches apart.

W. E. G.

Philadelphia, Pa.

R. N.-Y. We think well of that plan, though on our lower soil frost would cut such fodder about one year in five. It will often pay to plow up an old pasture or meadow abont July 1, and drill in corn. About September 1 a heavy seeding of Winter oats and Canada peas can be made. After the corn is cut off the oats and peas will give good Fall pasture. There are several reasons why we prefer a fodder variety of corn for silage. You get more leaf growth—consequently better feed—and it is less liable to sour. You get more bulk to the acre, especially in fodder corn late planted. Where silage contains a large proportion of grain the cows are likely to get too much corn in their ration.

LETTUCE GROWING IN A FORCING HOUSE. FIG. 10.

GROWING LETTUCE IN A FORCING HOUSE

Fig 10 is a good representation of some Winter lettuce taken from a photograph I made recently in one of the forcing-houses at the Michigan Agricultural College. The modern foreing-house has made it possible to enjoy vegetables the year round, and is one of the factors that have done much towards pushing gardening to the front as an industrial a t. The growth shown in Fig. 10 is very rank and thrifty, and yet perfectly tender and edible. A two-foot ru'e partly folded is shown in the foreground, which will give a fair idea of its thriftiness. The lettuce as grown in this forcing-house is first started from the seed in small flats a foot or more square. The length of germination depends largely on the sun. In ordinary weather it commonly takes in the neighborhood of three weeks or a little more before the seed, which has been sown in these flats, has produced a plant large enough for the second planting. When the lettuce plant stands from 1½ to two inches high, it is removed and transplanted into a larger flat. This time the surface is carefully checked into two-inch squares, and the plants set out. They remain in this flat until they have produced sufficient leaf and are far enough developed again to transplant into the regular forcing-house beds. Time is rather indefinite, requiring anywhere from three to five weeks. In this case more depends on the space for transplanting than on the age of the plant up to certain limits.

The beds in which the lettuce is grown are about four feet wide or less, and something between eight inches and a foot deep. The soil used is a black sand loam well mixed with good fertilizer from the barnyard. In some forcing-houses they use fully one-half compost, but I do not believe they use quite so large a proportion in these beds. The lettuce is transplanted into these beds in squares six inches apart. If the plants are very far developed a portion of the leaves is removed. This is to give the roots a better chance to secure a new foothold, and hold the foliage in check during this period. I was informed that this lettuce which is illustrated had been in the forcing beds about six weeks. Owing to less than a week's good sunshine during this time it had not developed as it ought. In taking this picture I simply located my camera on a place where lettuce has just been removed for market, and made no effort to secure an exaggerated illustration. In the foreground will be noted some coarse stems on the surface. These are tobacco fibers from a cigar factory, used in preventing insects, and do the work successfully.

Shiawassee Co., Mich. C. P. REYNOLDS.

A TALK ABOUT THE GRANGE.

What It Is; How Formed.

I notice in a recent issue of THE R. N.-Y. a question in regard to the Grange, asking whether it would be a good antidote to rumshops in country places. The official name of this farmers' organization is Patrons of Husbandry, and the different local lodges are called Subordinate Granges, which are generally four miles or more apart in New York State. Each Grange can manage its own affairs, provided it makes no by-laws in conflict with the laws of State and National Granges. Then there are Pomona or County Granges in most counties, having a large membership. The fourth degree is the great working degree of the order, and is the highest degree in Subordinate Granges. County and State Granges are fifth-degree Granges; the National Grange is a sixth-degree Grange. All fourth-degree members in good standing are eligible to the Pomona Granges. For instance, Monroe Co., N. Y., has about 3,000 fourth-degree members, of whom about 500 are enrolled in the Pomona, which elects the delegates each year to the State Grange. The local Granges are the real foundation and heart of the order, but the higher Granges are necessary to tie the order firmly together so that its influence can be thrown together, as in the case of the Grout bill and many other cases. The best way, I think, to begin in getting up a Grange where it is not understood very well is to write to Brother W. N. Giles, Skaneateles, N. Y., secretary of New York State Grange, for some copies of the declaration of purposes, constitution and by-laws of the National and State Granges, which explains all that is necessary for outsiders to know of the working of the order. Hand these to your most intelligent, progressive farmers, give them time to study up the subject, then get them to sign an application for a Grange and send it to Secretary Giles, who will see that some proper person is sent to organize it. Each Grange chooses its name, and the number of the Grange will be given by the secretary of the National Grange. In the election of officers in the Grange there is no nominating allowed, as the election is always by secret ballot, so each and every member can vote as he or she pleases without fear of offending any other member. This feature is worthy the attention of our political friends. Perhaps a few extracts from the declaration of purposes published by the National Grange will explain the objects of the Grange better than anything else.

"We shall endeavor to advance our cause by laboring to accomplish the following objects: To develop a better and higher manhood and womanhood among ourselves. To enhance the comforts and attractions of our homes, and strengthen our attachments to our pursuits. To reduce our expenses both individual and corporate. To buy less and produce more in order to make our farms self-sustaining. To diversify our crops, and crop no more than we can cultivate. To discountenance the credit system, the mortgage system, the fashion system and every other system tending to prodigality and bankruptcy. We propose meeting together, talking together, working together, buying together, selling together and in general, acting together for our mutual protection. Ours being peculiarly a farmers' institution, we cannot admit all to our ranks."

Surely, brother farmers, these are good principles of action. The cost of joining the Grange is a mere trifle compared with the benefits: $3 for men, $1 for women, 50 cents for girls from 14 to 21, and $1 for boys from 14 to 21.

S. W. COX.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Shredded Fodder for the Silo.

C. R. W., Ionia, N. Y.—I am trying to learn as to the comparative value of cut and shredded corn silage. I was informed several years ago by a man who had had experience in this respect that a silo would hold 20 per cent more when shredded, and stock ate it much cleaner. I would like to learn what experience the Rural family have had in this respect.

ANS.—We have neard the same statement, but have not heard personal experience. Will readers who have tried shredders tell us what they think? We usually settle such questions by opening a debate, for some one of our readers seems to have tried any variety or method we can bring up.

Forcing Rhubarb After Mushrooms.

U. F., Babylon, L. I.—We are growing mushrooms quite extensively for our limited capacity, and as fast as the beds are exhausted, or after the second cropping, they are removed and others put in their place. We have never tried forcing rhubarb, but it struck us that it would be possible to force our rhubarb in our exhausted mushroom bed. We do not find our mushrooms pay any too well at best, but after February 15 we have so far failed to discover a profit. We understand that forced rhubarb pays well if marketed in February and early March. Would you advise it?

ANS.—It seems to us that this would be just the place for rhubarb forcing. We would certainly try it. This rhubarb is a crop out of season, and customers must become used to it before they will buy it readily. After it is once introduced there is a good demand for it.

Killing Insects in Stored Grain.

F. R. L., Dunnville, Ont.—Some time ago I noticed a cure for weevil in wheat. Not thinking I would be troubled with the pest I did not task my memory with the prescription. To-day I noticed on the top of my bins of wheat that it was heating, and a crust forming on top. On examination I found the wheat quite hot, and a very small and lively insect working in it. What shall I do to stop the pest from working?

ANS.—The best way to kill these insects is to use bisulphide of carbon. This liquid quickly exhales a deadly gas, which is heavier than air and sinks down through the grain. Put the bisulphide in a deep dish at the top of the grain. Close the bin and make it as nearly airtight as possible by throwing blankets or bags over the top. The liquid will evaporate and the gas will work down through the grain. The gas is deadly, and very quick to take fire. Do not breathe close to the dish, or bring any light near it.

Muskmelons for Cow Food.

Reader.—I have read a recent article in which the following statements are made:

"Last year the valley of the Arkansas was literally covered with cantaloupes, and thousands of them would have rotted had the raisers attempted to gather them for the markets with the small number of men who could be employed to work. As a result of the shortage of men, the farmers fed the cantaloupes to the cattle and were surprised to see them fatten at once, and, besides, present the milkmaid with a quality of milk that was next to the nectar famed in olden times."

The writer goes on to say that this "discovery" is likely to make Colorado a great Summer cattle-feeding State, as the melons will take the place of corn. Is there any sense in it?

ANS.—The raising of cantaloupes for stock feed would never be profitable. They are a difficult and expensive crop belonging to intensive farming. The land must be very rich, just heavy enough, and so thoroughly underdrained by Nature that no water will stand around or beneath the roots. The vines must be carefully and frequently irrigated, and the whole field cultivated and hoed so as to keep it entirely free from weeds. All this is expensive. It cannot be counted as less than $35 an acre for the mere raising of the crop. The feeding value of cantaloupes is not high when figured per ton, on account of the large amount of water they contain. Pound for pound, there is not much difference between the feeding values of cantaloupes and mangels, while the crop of mangels is very much larger. A crop of four tons of cantaloupes per acre is a pretty large crop. While it is true that quite a number of tons of cantaloupes are fed to stock in the Arkansas valley of Colorado, it is merely the overgrown ones or the overripe ones. They cut no figure in the stock feeding of the country, and it would be difficult to figure any profit from their use, even considering them as a waste product. If they are to be used as feed they give a little better returns when fed to pigs, which are very fond of them. WELLS W. COOKE.

State College, Pa.

For Catarrh and Chilblains.

E. S. B., Harwinton, Conn.—Could you repeat the directions you gave some time ago for the treatment of catarrh? I know bicarbonate of soda was one thing used. Also, can you, or any of your readers, tell of any cure for chilblains?

ANS.—Dry bicarbonate of soda is used as a snuff, and the inside of the nostrils are kept well smeared with vaseline. The bicarbonate or cooking soda will "cut" or loosen the mucus so that it can easily be blown out. Snuff it up—as far back into the nose as possible. We have found this much better than salt water or other home-mixed liquids. The vaseline prevents the annoying dryness of the nose, and is a great relief in any place where dust abounds. This is not given as a "cure" for well-established cases of catarrh, but it will give relief in light cases, and will not injure the nose.

The annoying condition known as chilblains is usually the result of pressure and cold combined. The capillary blood vessels in the upper surfaces of the toes and other portions of the foot become permanently enlarged and congested, and the nerve terminals grow highly sensitive to alterations of atmospheric pressure and temperature. The distressing burning and itching pains of chilblains are well-known to be especially severe when the barometer is falling before a storm, as the congestion always increases as the atmospheric pressure lessens. There is no real cure, in the popular sense of the word, but the affected parts gradually regain their accustomed tone when cold weather passes. Every effort should be made to relieve local pressure on the congested parts, and to keep the feet warm and dry, trusting mainly to time to restore the former condition of the circulation. Frequent baths with strong salt or alum solutions tend to hasten the contraction of the capillaries. Applications of resinol ointment, which may be had at any good drug store, will do much to relieve the burning pains, and is about the only drug having much effect. It is perfectly safe.

Cover Crops and Cultivation in Peach Orchards

E. C. R., Batesburg, S. C.—What is the object of having a cover crop, such as peas or vetch, in a peach orchard during Winter? Is there any objection to plowing in acid rock and potash in the peach orchard during the months of November and December? What is the best means of keeping peach trees from blooming so early that the fruit is killed by frost? When trees have bloomed and frost is predicted, how can the fruit be protected against the frost? How soon should plowing be done in the orchard in the Spring, and would this plowing have any effect as regards frost?

ANS.—The main objects to be gained by growing cover crops in Fall, Winter and early Spring in peach and other orchards, and in fact, on any idle ground is, to take up the nitrogen of the soil that might otherwise be lost by evaporation or drainage, and to furnish humus for the lightening of the soil. They also help to hold the soil from washing, and retain snow longer than if they were not there. Peas and vetch also take nitrogen from the air, and this is so much clear gain. Rye and oats will not do this, hence the advantage of the two former crops. The Fall and Winter is a very good time to plow under potash and phosphoric acid in their various chemical forms. There is a decided advantage in Fall as against Spring application of manures containing potash and phosphoric acid; because they have more time to dissolve and become available plant food. There are many mistakes made by those who apply them without fully understanding this point, and much disappointment as the result of little or no benefits to the crops planted at the time of planting them, or soon after.

Spraying peach trees with common whitewash has been found to have a retarding influence on their blooming by reducing the absorption of heat from the sun, because of the white color repelling the power of sun's rays to a greater extent than the natural color of the twigs and buds. There has been found to be a difference of a week in date of blooming, in some experiments, between sprayed and unsprayed trees in the same orchard rows. It is not possible to hold back the bloom by covering the tree roots with any kind of mulch, although some persons have expressed that belief. The temperature of the air may and will cause the flower buds to develop when the roots are in ice, as has been done with grapevines, roses, etc., where they were standing near a greenhouse into which their tops were extended through openings purposely made. I have seen this done. Saving fruit crops from frost when in bloom is a very difficult and often an expensive or impossible thing to do. Fires are sometimes made at such times, by keeping ready for lighting heaps of logs and brush in the orchard. Burning straw has also been tried with some effect. The outside atmosphere is very difficult to change in temperature by such artificial means as we may have at command. Plowing should be begun in Spring, at the first start of vegetation of the trees. The philosophy of tillage should be well fixed in the mind to be for the purpose of conserving the water in the soil below the surface. The more nearly complete we make and keep the surface in a state of dust the moister will be the lower stratum. I do not believe that the state of tilth would have much effect upon the blooming time of the trees or the prevention of frost effects.

H. E. VAN DEMAN.

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R. M. KELLOGG, Three Rivers, Mich.

NORTHERN CATTLE FOR THE GULF STATES.

Dangers from Texas Fever.

We have a reader in Michigan who wishes to take a herd of Holsteins into one of the Gulf States. He asks us whether it would do to take these cattle to Texas, Mississippi or southern Illinois, and at what season of the year would it be best to go south. There has been a feeling among northern stockmen that it is not safe to take full-grown cattle into the Gulf States, since a large proportion of them die from Texas fever. The recent investigations regarding this disease, however, seem to show that there is not so much danger now as formerly, and we would like very much indeed to know for the benefit of this man and others like him just how much risk a man will take by carrying a herd of Holsteins into the Gulf States. What precautions would you take, when would you go, and would you prefer to take young animals, and not attempt to carry the older ones?

ANS.—Until recently the man who shipped cattle into the Gulf States from portions of Tennessee or from States north of Tennessee, ran the risk of losing from 30 to 80 per cent of his herd, according to the age of the animals. After many failures the veterinarians of this country and of Australia have found means of reducing the loss from Texas fever to an insignificant percentage. The most approved method consists in inoculating the northern animal, either in its original home, or after arrival in the South, with the fresh blood of a southern animal that is infested with ticks, or has recently been so infested. The blood is drawn from the jugular vein of the southern heifer, the skin, instruments, etc., being first sterilized. It is caught in a bottle or other vessel which can be kept stopped with sterile cotton, and in this vessel the blood is beaten with a sterilized glass rod, or other beater, until the fibrin clots can be removed with the rod. Then from one to two cubic centimeters of this defibrinated blood are injected by means of a hyperdermic needle, into the shoulder of the northern animal. The result is a mild form of Texas fever. To make the immunity more certain or intense, another inoculation is made several weeks after all signs of the first fever have disappeared. With detailed directions, which will doubtless be cheerfully furnished by the veterinarians, who have worked on this matter, any physician familiar with the usual means of keeping his instruments sterile, or any very intelligent and careful farmer will be able to do this work. In some cases the veterinarian of a southern experiment station offers to make the inoculations, and the time is doubtless near at hand when simple and detailed directions will be available for all in the form of a bulletin. The stations that have published results of acclimating cattle are those of Missouri, Texas, Mississippi, Louisiana, Arkansas and Alabama. This inoculaletin. The stations that have published either in the North or in the South. If done in a cool climate it may begin in late Summer. In the South inoculation is best begun in late Fall or early Winter. Special care as to food and shelter are necessary during the prevalence of the fever induced by inoculation. Indeed, this special care should continue throughout all the following Summer.

The above outlines the best means of treating cattle to prevent serious losses from Texas fever. The method has given most gratifying results with animals under 18 months old; and in the few published instances where it was used on mature cattle, the results were also satisfactory. However, there is doubtless more risk in inoculating mature animals or pregnant cows than in the case of young animals. In cases where this inoculation seems impracticable, other less certain means of avoiding loss from Texas fever may be pursued. For instance, the calf or yearling, after arrival in the South, preferably in November or December, may be inoculated by placing 25 to 50 ticks on it. Or, in cases where there is no expectation of introducing southern animals into the "imported" herd, or of selling animals from the herd in the South, Texas fever can be permanently kept out of the herd by eliminating the ticks on the cattle and on the entire farm. In this latitude the cold of Winter is sufficient to free a pasture of ticks, making it safe for northern cattle, provided no infested cattle run on it and reinfest it after cold weather is past. From pastures intended for this purpose, southern cattle should be fenced out after January. Possibly near the coast the cold may be insufficient in some Winters to free the pastures of ticks. When pursuing this system the few ticks that may accidentally find lodgment on the cattle may be removed before they have done any harm, by the use of a mixture of kerosene and oil or lard. It is more convenient and in every way more practicable to immunize northern-bred cattle by gradually inoculating them, either with defibrinated blood or with a few ticks, than to attempt the task of entirely excluding the tick. In the herds under the writer's care we aim to prevent excessive tick infestation, but would not willingly exterminate them all so long as there are any ticks on any southern farms with which we may exchange cattle. Young animals can be acclimated in the South with much greater ease than can mature cattle. Yet the few published records of the successful inoculation of mature cattle lead us to believe that the man who has a valuable herd of mature cattle can afford to bring them South rather than sacrifice them, and that he has reasonable grounds for expecting that most of them, if arriving in November or December, or even in January, and if treated as suggested above will survive even though during their first year they fail to make their usual record in milk production.

J. F. DUGGAR.

Alabama Exp. Station.

"Six Good Red Winter Apples."

E. L. P., East Paris, Mich.—I am about to set an apple orchard on heavy clay loam, and am still undecided as to what varieties would be most suitable for my location. Please name about six varieties of good-keeping, red, Winter apples, barring Baldwin and Northern Spy. My objections to the two latter varieties are, that there are now too many Baldwins set, and in addition to this the tree is defective; the Northern Spy is too long in coming into bearing. Can you tell me anything about the Ox Noble?

ANS.—So far as I know there are not so many as "six good keeping, red, Winter apples" suitable to the climate of Michigan among all those catalogued, and especially is this so if we leave out Baldwin and Northern Spy, which it may be well to do. These latter varieties do have the objections mentioned. Wagener is a very good Winter apple for Michigan, having high color, good size and fine quality; but the tree is deficient in the root. If Northern Spy trees were planted and then budded or grafted in the branches to Wagener it would be much better; for the former is a very good tree for a stock. However, the Wagener sometimes makes good trees without this trouble, as I know by experience and observation. Within the last month I have been over a part of Michigan, and saw a beautiful and healthy orchard of Wagener in Benzie County, which is more than 100 miles north of where the questioner lives. There is no valuable variety which will bear earlier and more abundantly than Wagener. Sutton has been tested but little in Michigan, but it does very well in New York and Massachusetts, where the Baldwin has long been a favorite, and is now one of its competitors. It would be wise to plant a row or so of this variety. Red Canada is a well-tested kind of very good color and quality and fair size, but it is not so free a bearer as we would wish it was. However, it is a good kind for general purposes. Jonathan is exceedingly brilliant red and of high quality, but the fruit is rather small. Rome Beauty has been considered worthy of trial in the Baldwin country and may prove very desirable there, as it has shown such signs. "Ox Noble" I do not know.

H. E. VAN DEMAN.

PLAIN TALKS ON PLAIN TOPICS.

National Investments for Agriculture.

You do not seem to favor the National bill granting subsidies to American ships.

You are right about that.

Why?

We oppose the principle of taxing all the people to help a small body of shipbuilders who are better able to take care of themselves than most other business men.

You are not consistent; for farmers have more special privileges to-day than any other class of people.

How do you make that out?

Look at the immense sums of money spent to educate and instruct the farmer. We have to pay for it all, but no business man asks the Government to pay for his education.

The entire yearly cost of the Agricultural Department is $3,500,000. This subsidy bill provides for $9,000,000 to be given to a single industry. The tariff on half a dozen articles we could mention puts five times the cost of the Agricultural Department into the pockets of a few manufacturers.

But the principle is wrong anyway.

No, because all are benefited by the money spent for agriculture.

Who do you expect is going to believe that?

You will when you understand about it. About 70 per cent of our export trade is in farm products. The farmers of America are paying principal and interest of our foreign debt, and building up a surplus abroad.

What has that to do with it?

The Agricultural Department is constantly increasing this trade. Its agents search the foreign markets, advertise our goods and introduce them. Their work with corn and apples alone has added millions to our export trade. If your subsidy bill would increase foreign trade or reduce freight rates it would be worth talking about, but who claims that it will?

But what about the money spent for farm colleges, stations, etc.? How does that help all the people?

By making food cheaper and better. The wise spending of this money has developed a small class of pure scientists and a very large class of intelligent farmers who combine science with practice. The scientists have given the world new varieties of fruits, vegetables and grains, and have discovered new principles of directing plant and animal life, and new methods of handling the soil. The practical men have utilized this knowledge so well that there never was a time before in the history of the world when a nation was so well fed and clothed as are Americans of the present day. Money spent to encourage shipbuilding benefits a few ship-builders and a few more workmen and iron workers. Money spent to encourage agriculture benefits every person who eats or wears clothes. One plan takes an average of 75 cents from every man who voted at the last election and stuffs it into a few fat pockets. The other takes about 25 cents and will, in time, pay it back one hundredfold in the ability to buy better and cheaper food. The money spent for the Agricultural Department is an investment. It is the only true investment Uncle Sam makes.

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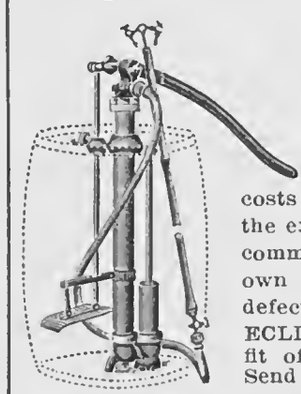
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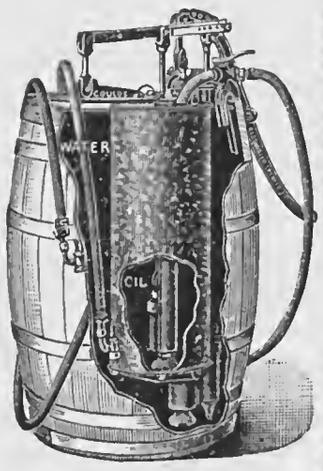

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Ruralisms

NOTES FROM THE RURAL GROUNDS.

GREENHOUSE EXPERIENCE.—Early in 1894 it became necessary to build a small greenhouse on the new Rural Grounds, then being arranged for experimental purposes. We found a space 16 feet by 24 feet at the southern side of the dwelling house, built on the highest point of the plot, the only location available without going to the level at the foot of the slope, several hundred feet away. It is not a good idea in general to attach a greenhouse for the propagation and development of plants to a dwelling, on account of the disagreeable necessity for using such insecticides as tobacco or the dangerous fumes from carbon bisulphide and hydrocyanic gas, but there was little choice in this case. A conservatory, in which plants developed in other buildings are exhibited during their period of perfection, is not open to the same objections. The problem was to get the most utility out of the space and conditions at our disposal and, though the writer was not without experience in commercial glasshouse work, he found it a rather complicated one. The years that have passed since the structure was erected have developed its defects and advantages and, as the construction of small and economical greenhouses is far from being on a settled basis, it may be of interest to sum up conclusions as to its main features. The plan adopted was the ordinary three-quarter span, with the long slope to the south. It is usually advised to run houses of this character due east and west, in order to secure the greatest amount of sunlight, but the position of the dwelling necessitated a range 30 degrees north of east and south of west. This turns out to be an ideal aspect for the latitude of New York, as the benches are flooded with sunlight all day when the sun is at its lowest declination in midwinter, but as the days grow longer more and more shade is cast by the house on the north until in midsummer the northern benches are shaded by 2 P. M. This is a great advantage in carrying over plants sensitive to glaring sunlight, as it obviates the need of shading the glass during Summer, always an unsightly procedure. If building again we would adopt this aspect if at all possible, but its advantages would not be so marked without the tall dwelling on the north. The design of the house, and all the essential woodwork for the same, were furnished by a western firm making a specialty of greenhouse construction, good southern cypress being used. This is by far the most satisfactory way of getting the material, as local mills and carpenters, even if really expert in house-building invariably make a botch of greenhouse or conservatory work, and the usual result is a cumbrous, dark and in many cases short-lived structure. It is not generally known that commercial glasshouse owners either build themselves by supervising unskilled labor, or contract with regular construction firms rather than employ carpenters. In our case the material being all worked out at the factory the actual erection was a simple matter.

It was deemed essential in planning an experimental greenhouse for the purpose of breeding plants to secure the highest possible percentage of light, and glass 16 inches wide was selected and butted together, a special sash-bar and cap being used for the purpose, entirely dispensing with the need of putty. This is a very simple and rapid way of glazing a house, but necessitates the use of the highest grade of glass, as the cheaper qualities are not cut with sufficient accuracy to make close joints. We like the plan in every way, although it has not grown in favor lately. Rather than pay the high price now demanded for first-quality glass we would use a cheaper grade and put it in by the usual lap system. In 1894 glass could be bought for less than half the price now demanded by the trust. According to advice received at the time we laid the glass on the bare sash bars, and covered with the cap, screwing down at every pane. While this made an admirably light and dry roof the wind, during southern gales, would find its way around the edges of the glass in considerable volume. To prevent this we have since placed a strip of candlewick, soaked in linseed oil, under the caps at each edge of the glass. On screwing the cap in place the oil is forced into all slight vacancies, where it hardens, thus making an airtight and waterproof joint. This plan is quite generally adopted now, when the glass is first laid. We decided to use the hot-water system for heating and see no reason to regret it. The water first goes through the dwelling, and returns under the greenhouse benches. Against the advice of the contractor who put in the plant, we insisted on using two-inch pipes, one line of six pipes being required under the front bench. This works well, but we are now inclined to think three four-inch pipes instead would give out a more uniform heat, and prove more durable. On the whole, this little glasshouse has given great satisfaction, and very slight changes would be made in case a need for rebuilding should occur.

A LONG WAIT.—Eight years ago some crosses were made between the familiar Paper White forcing variety of Polyanthus Narcissus and the large Chinese form sold as Joss flower or Chinese Sacred lily, which is also a variety of the same species, Narcissus Tazetta. The resulting bulblets have been since growing either in frames or pots, and two have now developed good blooms. The flowers are large and closely resemble Paper White in purity of color and general make-up, while the foliage and vigorous manner of growth approaches the Joss flower. Just what these hybrids will develop into when the bulbs reach full strength is a question that time alone will show, but the outlook is quite promising. The slow growth of Narcissus seedlings is trying to an impatient gardener, as the increase in size and strength of the seedling for several years is very trifling. There is a great renewal of interest in these sweet and graceful flowers abroad, and some of the newer hybrids have sold for remarkable prices. The Joss flower is a very strong-growing variety of the Polyanthus Narcissus which the Chinese claim to have cultivated from the most remote times for the decoration of their temples or joss houses, and their own dwellings. They always try to bring them into bloom at the opening of their new year, in our month of February. It is not known to the Holland bulb trade, which practically disseminates all other varieties of the Narcissus. It has become very familiar here of late years, and almost everyone knows how to bloom the immense imported bulbs in bowls or water containing enough pebbles to stay the roots. As a matter of course the Joss flower grows and blooms better in soil than in water, just as any other bulb or plant, for the reason that the roots are enabled to draw nourishment as well as moisture from the soil, and sustain the growth in a natural manner. The color of the bloom is generally white or pale yellow, with a yellow cup. The new hybrids are pure white.

W. V. F.

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ARRANGEMENTS are being made for the shipment of mangoes and other tropical fruits from Bombay to Great Britain. They will be taken in cold storage by some of the steamers now engaged in the Australian butter and meat trade, and a good market seems assured.

Propagating Hardy Climbing Roses.

How shall I propagate Prairie Queen and Crimson Rambler roses? I have tried to root layers, but failed, and have taken some hard-wood cuttings, which I have bedded in sand in the cellar. How can I root them? READER.

Roses of the type of the varieties named do not readily form layers, or root from hard cuttings grown in the open air. If the layers are well nicked on the lower side of the bend, and buried deeply in moist soil, which is to be firmly packed, they will often root by the end of second Summer, if not before. Hardy climbing roses are often budded on Manetti and wild briar stocks, and occasionally grafted on the same. Budding is done in the same manner as with peach and other fruit trees, in August or early September, the bud remaining dormant until the next Spring. By far the greater number of roses are propagated from cuttings of young wood grown under glass and rooted in pure sand in a propagating house kept at an average of 65 degrees. The sand is packed very firmly about the cuttings, and kept quite moist. The above varieties of roses root very readily under such conditions. The hard cuttings you have now had better be buried upside down in the earth outside, covering with six or eight inches of clean sand, if procurable. In the Spring plant them in a trench, packing the soil firmly about the bases. Leave only one or two buds above ground. Hard rose-cuttings are sometimes rooted in a mild hotbed, but this method is very uncertain in inexperienced hands.

About three years ago you sent me a root of the Carman grape; it had a fine crop this year. To my mind it is a superior grape. The first time it bore (a year ago) I was very much disappointed in the fruit, and had a mind to dig it up; now I would not part with it. H. C. D.

Ohio.

SEVERAL years ago the Hessian fly got in our wheat in the Fall so badly that it nearly ruined the crop. One man saved his wheat by turning his sheep in his wheat in the Spring. He got rid of the fly, and had a big crop of wheat, but considerably later than it otherwise would have been. Another man told me he killed the fly on a sandy knoll by a heavy application of salt.

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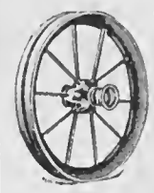

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HOPE FARM NOTES.

Letters and questions have come rushing in upon us lately. They come from all parts of the country, and we may as well take some of them this week for discussion.

SWEET CORN STALKS.—A market gardener in Connecticut asks this question:

Which is the more economical way to get rid of green cornstalks, to plow them under or sell them for $5 an acre standing? We raise sweet corn for market, and do not keep stock enough to use them.

As between plowing such stalks under and selling them at $5 per acre I would sell. It is hard to plow them under right. The whole stalks do not leave the ground in good condition for gardening crops. We should want to have some other crop, like clover, rye or oats, growing in the corn before the ears were fit to pick. I am very sure that I can buy with $5 in cash more available fertility in chemicals than the stalks on an acre will furnish. I would not sell the stalks, however, but would feed them to hogs. A good pen full of hogs will prove very useful on a garden-farm. They will make pork out of wastes that would otherwise be wastes indeed. I would cut these stalks and throw them whole to the hogs. They will do the rest.

GATHERING LEAVES.—I had no idea that so many of our readers gather leaves for bedding. All seem to agree that they make good bedding and manure, and that a chestnut tree may well provide fertility for a hill of corn. The difference of opinion comes when they come to pick the leaves up. Here is the way they do it in Alabama:

Rip the seams of a large bran or burlap sack. Get two broom handles or other sticks as long as the piece of burlap is wide, tack securely to ends of burlap. Rake leaves in piles with rake. Grasp the loader (described above) one stick in each hand, envelop the pile of leaves bringing the sticks together under the leaves. You will have as many leaves as you want to lift at one time, and they are easily dumped into large wagon rack. This may be too late for H. W. C. and others in the Northern States to use this Winter, but they can remember and use it next year, and your southern readers can use it almost any time during the Winter.

Thorsby, Ala. P. C. S.

We are having a very open Winter and can still pick up leaves. The Alabama plan ought to work, but an Ohio man seems to think he can beat it. This is the way:

On page 351 is an interesting account of how to handle leaves, but I am sure I can go it one better. If you have leaves or any other fine stuff of that kind to handle that does not work well with a fork, procure some of the common wire chicken netting of two or three-inch mesh, and take a piece about 12 to 15 feet long and from three to four feet in width. Lay this flat on the ground and rake your leaves on to it, then commence to roll, and, presto, change! Instead of a loose lot of unmanageable stuff you have a nice compact bale that by a few turns of the loose ends of the wire may be secured, loaded into the sled or wagon, or carried in any shape. There is much material on the farm that would make good bedding for stock if it were not so difficult to handle. Clover haulm is one of these. To handle it is much like eating your soup with a fork, but with a sleve of wire netting it can be handled easily. I have been feeding cornstalks without cutting, and to get them out after being picked over by the stock is not an easy job, but with a piece of netting I can carry all of it quickly. I do not think any one will fuss to crowd leaves into a bag, when they can be nicely baled, by simply raking them on a piece of wire netting.

E. C. GREEN.

It strikes me that Mr. Green does the thing right up brown! No use talking—it pays to bunch things up if you expect to utilize them properly.

COVER CROPS.—A farmer in Missouri wants to know why we have so much to say about "cover" crops. Here is his letter:

I notice that what is called a cover crop has become a fad with a great many of THE R. N.-Y. people. What I want to know is what crop will it benefit, and how and why, as I know from experience that it is a positive injury to a wheat crop. If wheat ground can be plowed by July 1 and left to lie bare in the hot sun until seeding time it will produce more wheat per acre than any other way. W. A. COWAN.

When I speak of a "cover" crop I mean clover, rye, oats, rape or some similar crop which grows through the late Fall and Winter and covers the ground. Most of our money crops grow between frost and frost. They are planted after the ground warms in the Spring, and are killed by the first hard frost. We use manure or fertilizer freely, and after frost kills these Summer plants the soil still contains soluble plant food left by the corn or potatoes. We reason that if the soil is left bare this soluble plant food—or at least the nitrogen—will be washed and leached out by the soil and lost to us. On the other hand, if we have some live crop growing through the Fall and Winter, it will utilize and save this plant food. You might throw swill from the kitchen right into the brook—and lose it. You might, on the other hand, build a pen by the side of the brook, put a hog in it, and pour the swill into his trough. We think the cover crop represents the hog in the pen. Another use for the cover crop is adding humus or vegetable matter to the soil. Some of the most profitable farm lands in the East are light and sandy. They are quick and warm, and early crops can be forced rapidly. Fertilizers are used largely and "cover" or green crops, grown between money crops, supply the humus which elsewhere may be supplied in stable manure Again, such crops as clover, cow peas, Soy beans, etc., catch and save nitrogen for us. The plan you speak of is advocated by Mr. Clark, the grass man. This "Summer fallow" gives best results on heavy, black lands where there is plenty of humus. Except when we wish to prepare land for grass seeding there are few places in Hope Farm where it would pay. With us your wheat would be a "cover" crop, but we would raise a crop of early sweet corn or potatoes instead of working the ground.

COW-PEA VALUES.—Another reader in Missouri says he has caught the cow-pea fever:

I have raised the Whippoorwill pea; with me, horses, cattle, hogs and chickens eat them. I had six acres this year; we picked off most of the pods and now the horses spend three-fourths of their time on the patch, and they will feed there as long as there is a peavine they can find. Some have sown them in corn the last plowing, then in the Fall turn the cows in on them. They say there is nothing that will make more and better butter than a patch of such feed.

That is just what others say who have used them for pasture. I seldom feed them down, but plow the whole mass right under. One reason for this is that we are using cow peas on the far-back fields, where it would not be possible for us to turn the stock. We want short hauls for the manure and fertilizer and cow peas for the distant fields. Perhaps we make a mistake when we fail to utilize every feature of the cow pea. Sometimes a man is satisfied to look at one side of a thing, and make no effort to learn about dozens of other sides which other farmers have been forced to learn about. I thought of this last week in watching the children play with one of their Christmas gifts. It was a painted box with seven other smaller boxes fitting into it. They could be taken out and piled one above the other. I was curious enough to measure them. When all were packed in the larger box 56 square inches of surface were presented. When piled one above the other all the boxes gave 268 inches of surface! When only the larger box was used with the others inside, 212 inches of surface were hidden. It is the same way with some men. They narrow a good thing down to a single view, and thus lose the best share of it. Others crowd their powers into the smallest compass and never try to expand.

SAWING WOOD.—Another good friend, who may have a wife who makes dry remarks about green fuel sends this note:

Know ye of any place I can buy a jig saw with frame heavy enough to saw wood on for the stove? It is strange to me if the inventors have not applied the crank in some form at the wood pile. It is a good place for a crank, for a bucksaw is a little too much for the backbone of these present times. It is a good thing to get the prophet's wheels out of the head or the heavens into a man's hands, or under his feet, whether the prophet meant it to be so or not. If he lived to-day and had to saw wood for a stove, he would have separated the wheels from the wings and put them to use.

We think the folding sawing machine advertised in THE R. N.-Y. would eat up that wood pile. It will need a balanced ration of fat on the saw and muscle on the handle. One trouble with the modern backbone is that it wants to be saved by the head. The inventors seem to have neglected the hand saw for much the same reason that they have let the old grain cradle nurse itself alone. Wood sawing is now done by steam or horse-power. I have bought a circular table saw. I expected to use a horse-power to run it, but now hope to hire a portable steam engine for a few days, and get the job done in a hurry. I have known good men, who were accused of having "wheels in the head," but these "wheels" often turned into wings to float them nearer their duty or away from it. The man who can settle the fuel problem without any jar to the family wheels is worthy of wings.

WOMAN'S WORK.—The Madame recently found an article in a newspaper which tells of a Pennsylvania woman who baked 8,303 pies in one year. Her husband, seven sons and a hired man ate these pies—and lived to brag about it. Here is the pith of the story:

"Who ate the pies? Why, we home folks, of course. I'm good for three a day, and I hope I haven't raised a son who can't do as well as the old man. Then I have a hired man who, I'm sorry to say, can beat even me. Why, that fellow will eat six pies a day and get fat on 'em. Never had a hired man about the place who couldn't eat pies. The last man I had said he had stomach trouble and wouldn't touch the nicest tart Mary could bake. He disappeared one night with my best colt and I haven't seen him since."

Now you don't catch me printing my opinion about people who have been mastered by the pie-eating habit. I'm too old a bird to stir up anybody who holds advanced and pronounced opinions on religion, politics or pie-eating. Let us have peace! So long as the women folks are content to go through life bearing a pie-plated chain, the Hope Farmers will continue to hope for better things and say nothing. I don't believe our people ate 60 pies all through 1900. We like puddings better. As old readers know, Aunt Jennie kept an accurate account of certain kitchen statistics last April. I will repeat her figures:

HOPE FARM KITCHEN STATISTICS.
For the month of April, 1900.

Number of eggs cooked	269
" " potatoes eaten	603
" " biscuits baked	209
" " puddings baked	15
" " cakes baked	6
Knives and forks washed	1,218
Spoons washed	1,250
Dishes washed	3,182

Now my purpose in bringing this up once more is to point out to the men folks what an endless job dish-washing is. Just watch some big, fine-looking farmer after supper some night. His day's work is about over. He settles into his soft chair with a sigh of relief, but Mother and the girls bring out their everlasting dish-pan and proceed to give the dishes their evening bath. It seems like a small job, but if you put enough small jobs together you will make an avalanche. I have spent some little time figuring on our dishes. Taking the average area of cup, saucer and plate I find that our women folks washed and wiped over 267,288 square inches of crockery during April. There were 19,758 inches of spoon and fork, which makes 287,046 inches all told. Counting two children for each adult we find that the daily wash and wipe for each adult was 1,290 square inches. For the entire Hope Farm family during 365 days the dirty dish area reaches the fearful total of 5,179,350 square inches. Washing and wiping thoroughly means four times over or a total surface of 20,717,400 square inches! Remember that there are 6,272,640 square inches in an acre! Now then, Friend Farmer, if a part of your stent for 1901 consisted in cleaning over three acres of crockery and metal wouldn't you quit the job early, leave a good share of it dirty, or else provide yourself with the best possible conveniences for doing the work? It's early in the new year now—so let's have the truth from you! No doubt some men will say—mentally if not audibly—"why that's woman's work and women are inferior to men anyway!" Yet these same men may know full well that when the great Judge of duty comes along they will be passed if at all, on their wife's ticket! H. W. C.

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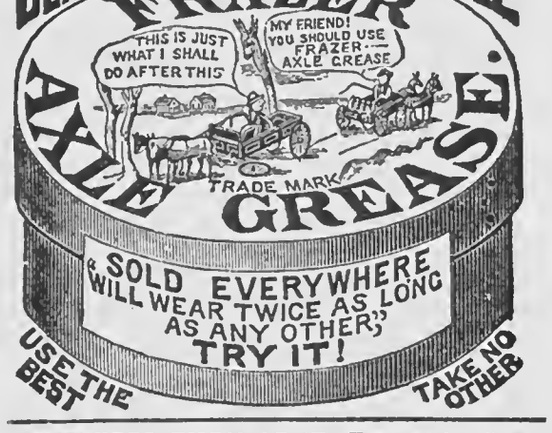

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The Rural New-Yorker

THE BUSINESS FARMER'S PAPER.

A National Weekly Journal for Country and Suburban Homes.

Established 1850.

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THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, JANUARY 12, 1901.

WE are glad to give this week a clear and simple statement of the principles and machinery of the Grange. We hope to follow it with other articles showing what the Grange has actually done for individuals and communities. Other organizations of farmers come and go, but the Grange lives and grows steadily and hopefully. We recommended a live Grange as a good antidote for a country rumshop. It is that, and a remedy for many other ills also.

*

TRANSCONTINENTAL railroads are said to be backing the general irrigation movement outlined at the recent irrigation congress in Chicago. They will unite in efforts to have the arid lands in Arizona, Nevada, New Mexico and other States west of the Mississippi transformed into fertility with the aid of Uncle Sam's pocketbook. It may be, of course, merely a spirit of altruistic patriotism which causes the railways to take up this plan; still, another western boom would mean millions of revenue for the transportation lines. Why not, with equal justice, start a movement for Government aid in reclaiming abandoned New England farms?

*

GOVERNOR Odell, of New York, says that some of the public officers of New York City receive more money for their services than is given to President McKinley. For example, the sheriff of New York County is paid a salary of $20,000 per year, and one-half of certain fees, which amount to $60,000. Other officers also receive vast sums—chiefly through the fee system. This same robbery of the people is carried on by smaller public officials, and the time has come to put an end to it. No business man would permit his clerks to make an income in this way, and the State, county or town should be run on strict business principles. The fee system should go.

*

READ what the commission men say (next page) about the box for apples. Does it not seem ridiculous for a grown-up man to say that such boxes would "lessen the consumption"? Have the small, neat packages of oatmeal and other prepared foods "lessened their consumption"? No—trade has been doubled. City people have no storage place for barrel lots. The statement that the small package will prevent deception is true. You may face two ends of a barrel, but it will be hard to face six sides of the box, as would be necessary in packing three bushels of apples. Join the ranks of the "boxers" so that your finest fruit will have a better chance to show itself.

*

AT the Watertown meeting of the New York State Dairymen's Association a working committee was appointed. The work in mind was that of raising the funds needed to send a good delegation to Washington in the interests of the Grout bill. This committee did not stop to play but got down to work at once. By January 1 they raised $139.64, and the society will be well represented at Washington. Not only this, but the committee has stirred up renewed interest and energy among the dairymen of the State. More money is needed—quarters to meet the $5 bills of the oleo people. Remittances may safely be sent to W. H. Peck, Syracuse, N. Y. Mr. Peck should be supplied with a bushel of money for work in this good cause. Can the dairyman's quarter hope to compete with the $5 bill of the oleoist? Yes, if two cents are added for postage on a strong personal letter to the dairyman's Senator! One of the strongest points made by the honest butter people is the fact that the oleo men have no public sentiment back of them. They are only a few rich men fighting for money which is not rightly their own. Men will fight to preserve the sanctity of a home but not to uphold a cheap boarding house. Farmers will fight for their trade sister, the cow, but the town voter has little love for his distant cousins, the hog and steer—even with their yellow paint on. Senator Chauncey M. Depew, of New York, knows this, and it is one reason why you should load him down with letters well colored with honest butter.

*

A BOSTON cold-storage company recently discovered that a quantity of eggs in its storage chambers had acquired a foreign flavor suggestive of fruit, which would affect their value. About 40,000 cases of eggs were stored in the chambers, but they were not all affected. The storage company believes that the change in flavor was due to fruit stored in an adjoining chamber; yet a brick wall varying in width from 16 to 24 inches separated the egg chamber from other apartments. We believe that small producers or holders of eggs often overlook the fact that foreign flavors or odors are so readily absorbed. It is certainly an error to store eggs in a cellar or pantry where fruit, cheese, and other articles of food are kept. It is likely that complaints concerning the flavor of fresh eggs, on the part of private customers, often result from carelessness in this respect.

*

THE writer well remembers the time when it was a great business risk to attempt to take cattle from the North to the Gulf States. Younger animals sometimes lived, but older ones were sure to suffer from Texas fever, and most of them died. There were many southern breeders who were anxious to improve their herds by importing the best blood that could be obtained, but the severe losses discouraged them. The connection between this fever and the cattle tick has now been worked out, and it is possible to bring cattle from the North with a good chance of success. These cattle are inoculated with the blood from southern cattle, or even with the blood of the cattle tick, and are thus made immune to the disease. This is but one of hundreds of things for which farmers are indebted to the patient work of the scientific men. It will result in millions of increased value to the cattle growers of the South.

*

GOVERNOR Odell, of this State, makes short work of agriculture in his message, and hurries on to what seem to him more important matters. He refers to Commissioner Wieting's report, and probably does well to let the Commissioner talk for him. The Governor suggests a good appropriation for the State Fair, wants the bounty on beet sugar continued, and suggests that the Agricultural Department should have charge of the work of stamping out tuberculosis and glanders among cattle and horses. That is a good suggestion, and the Legislature ought to act upon it this year. Agriculture, the most important industry in the State, receives 250 words out of a total of 15,000! Two questions naturally arise in this connection: Is agriculture any the worse off for this lack of attention? Would agriculture not receive more attention if the farmers of the State had fewer politicians between their real needs and the Governor?

*

A LIVE farmer cannot stand still. He must grow. All about him there is bustle and activity in trade, transportation and manufacturing. In the midst of all this mighty rush and change the farmer cannot stand still and live. Some farmers grow in spite of themselves. The institute, the experiment station or the agricultural papers drop a thought into his mind which he cannot shake out. In spite of all that farmer's reserve, his mind is filled with a craving for knowledge, and the thought grows and develops like bacteria in agreeable soil. Before long the farmer is brought face to face with the idea that some of his old practices and so-called "facts" are wrong. Perhaps the greatest test of a man's fitness to live longer is the disposition he makes of his mental dead wood. Among the worst enemies of American agriculture are the farmers who, while knowing that they ought to change their methods, lack the courage needed to destroy their old hobbies and opinions!

*

NOT long ago we had occasion to take a long drive across the country. It was a cold, windy day—the worst of the season. We put the horses up at a town stable. When we came to drive home at night, in the face of a fierce wind, we found that the stableman had put two hot bricks in the carriage. As every one knows, the feet are the doors through which comfort is driven out of the body by Jack Frost. No one thought of asking the stablekeeper to provide these bricks—he charged nothing for them. Where did he get any profit out of them? Why, our folks never will go anywhere else in that town to stable a horse. They will tell the story of the bricks, and advise all their friends to patronize that man. That makes reputation, which may be the best or the worst advertising a person can have. If a man is selling anything, be it potatoes, stable room or advice, he should give such good measure that his customers will be glad to go out and talk about it. The gift of a single fine apple may grow, in the mouth of a good customer, into a sale for many barrels. "We are advertised by our loving friends!"

*

THE financial statement of one of the great life insurance companies shows that among its assets are bonds of 19 different foreign governments amounting in all to $26,297,440. Probably most of these bonds were bought when foreign agencies of this company were established, but it gives an idea of the vast extent of our present system of life insurance. Nothing quite like it was ever known before in the world, and failure through mismanagement of half a dozen of the large companies, would sweep away the only money provision of millions of women and helpless children.

*

CONFIDENCE operators of all classes are usually supposed to prey upon the innocent and unsuspicious only, but there is no doubt that these adventurers occasionally succeed in swindling their own class. An example of this was the case of a Chicago street fakir, who recently succeeded in buying a lot of nickel watches for 50 cents each. He polished and otherwise treated these watches so that they would pass for silver and then departed for a small town down in Illinois. Here he put an advertisement in the local paper, stating that he had found a silver watch which would be restored to the owner on payment of $2, no questions asked. The next day he received a stream of callers, each of whom announced that he had come to redeem his watch. The watches looked genuine, and each would-be swindler, thinking it a good thing, cheerfully gave up $2. The Chicago man made $1.50 on each watch, and went back home serene in the knowledge that his dupes would make no complaint. It is likely that we shall hear of this mutual swindle in more than one locality.

*

BREVITIES.

THIS Stringfellow method of growing the peach
By making it hoe its own row,
Makes some fellows get on their hind legs and screech,
They claim that in order to grow
A peach that is fit for a king, you must wet,
The ground with your toil—that's the word,
And irrigate every last tree with your sweat,
And keep things eternally stirred.
This let-alone-policy don't suit the men,
With hustle and work in their veins,
They didn't let weeds grow beside their path when
They went out to fight for their gains.
It's hustle and jump—get a move on yourself,
Kick dust through the long Summer day,
Or else you'll be dusted and laid on the shelf,
And that's what these smart fellows say:
A man must be lazy,
He'll surely go crazy,
If he follows the Stringfellow plan,
'Twas good solid hustle,
Both mental and muscle,
Evolved us from primeval man!

THE soiling system cleans up the farm.

READ the pea-louse article on first page.

THE careless man's success is always an accident.

WE observe quite an increase in the use of wood for fuel.

DON'T contract the vice of giving advice and then expand it.

WHAT is a clean conscience? The interest on your principles.

BE a farmer, not only from way back, but for far future as well.

MR. PROCTOR (page 31), points out the difference between nerve and "nerves."

No doubt about it! The robber cow fears a lead pencil and a pair of scales.

THE chances are that there are too many fat formers in your Winter ration.

PURE food laws are good only when enforced by men who are fed on pure moral food.

THE great trouble with some men is that they have a conscience that is an "easy keeper."

YES, YES! Leave an egg 36 hours under a hen that wants to sit, and it will be at least five per cent hen.

ONE of our readers, who is 89 years old, is just planting a quince orchard. There's an example for you, young man!

IN our opinion, the little press bulletins issued by the Vermont Experiment Station are models for interest and brevity.

FARMERS are usually loud in their praise of Alfalfa until they come to plow a heavy field of it. The very big roots that provide the great yield will nearly break the plow.

WE still continue to receive letters arguing for and against the bee and his ability to destroy fruit. The law has now declared the bee *not guilty!* We cannot find space now to print more testimony.

Events of the Week.

DOMESTIC.—A plan of recruiting sailors for the United States Navy from the farms and the country towns is now under consideration at the Navy Department. . . . . The trolley system of Scranton, Pa., was entirely tied up by a strike December 27. . . . . The most destructive fire in the history of Calgary, North West Territory, occurred December 26, the ioss being $100,000. . . . . A mail pouch containing $100,000 in negotiable paper and an unknown amount of money was stolen from the Michigan Central passenger station at Wyandotte, Mich., December 28. . . . . Edwin G. Bedford died near Paris, Ky., December 31, aged 86 years. He was a noted breeder of Short-horn cattle, and paid the highest price ever given for a Short-horn buil, $36,000, at the New York Miils sale in 1876. . . . . At Tooney Creek, near the Wyoming boundary of Montana, masked and mounted raiders killed 2,000 sheep December 30. The sheep belonged to Daupt & Selway, who are ranging about 5,500 sheep in the Otter Creek country. There has been hard feeling between sheep raisers and cattlemen for some time. . . . . Five trainmen were killed and one badly injured in a freight-train collision at Melton, Miss., January 1. . . . . While attempting to escape the smallpox quarantine on a lumber camp near Sparta, Minn., January 2, one man was shot and killed by a guard.

CONGRESS.—Senator Frye, president of the Senate, has received from New York telegraphic petitions from Secretaries Carroll, Morgan, Moorehouse, Ellinwood, Speer, Cobb and Lloyd, representing the National Missionary Societies of the Methodist, Baptist, Presbyterian, Dutch Reformed and Episcopal Churches, asking that when the Senate convenes for the first time in the new century on January 3, its first call shall be the ratification of the treaty to protect the natives of Africa against intoxicants, and favoring a universal application of this new policy of civilization by additional treaties and laws.

PORTO RICO.—The Legislative Assembly of Porto Rico has been in session since December 3, when the House of Delegates was duly organized. The House has been holding daily four-hour sessions, over 45 bills have been introduced and no end of motions and amendments. But one bill has been passed. By law the Assembly is allowed 60 days in which to complete each session. The House is badly in need of a competent force of translators and clerks. There seems to be no system. Bills are prepared and introduced covering most common matters, and in a manner most unbusinesslike. Few of the bills are in proper form. Many have been filed written in pencil on a sheet torn from a scratch pad. Most of the bills are written during the session, and are more in the form of suggestions rather than of projected laws.

PHILIPPINES.—An appended report to General MacArthur's review of the civil affairs of the Philippines for the past fiscal year gives some rather startling facts regarding the introduction and prevalence of leprosy in the Islands. According to the estimates of the Franciscan Fathers, says Major Guy L. Edie, the writer of the report, there are no less than 30,000 lepers in the archipelago, the major portion of these being in the Visayas. A house-to-house inspection, begun last January, found more than 100 lepers concealed in dwellings. These were sent to San Lazaro Hospital, in Manila, but many others escaped into the surrounding country. A commission is now engaged in the work of selecting a suitable island or islands for the purpose of isolating all the lepers in the archipelago. . . . . A conspiracy to acquire claims to a vast amount of mining property in the Philippines has been reported to the War Department. Involved in the transactions are Americans, Englishmen, Spaniards and several citizens of other countries. The claims number 1,618. They cover 149,288,134 square meters of territory and are scattered throughout the mineral regions of the archipelago. More than 1,000 of the claims are for gold lands, 500 for coal, 100 for copper, 16 for iron, and the rest for sulphur, granite and petroleum. . . . . The Philippine Commission has completed the preparation of a bill establishing municipal government in the Islands. It establishes a land tax and abolishes the head tax and tax on occupations. There is a growing scarcity of money in the Philippines, the effort to maintain the arbitrary ratio of two to one between Mexican and American silver dollars having failed. The silver is being sent to China and India.

GENERAL FOREIGN NEWS.—The State Department has been notified by American Charge d'Affaires Griscom, at Constantinople, of the signing of a contract between the Turkish Government and the Cramps for a cruiser, under cover of which the American missionary claims of $90,000 are to be paid. It is expected that a check will be sent by the Cramp Company to Secretary Hay for the amount. This will end the diplomatic controversy with the Sublime Porte. . . . . The Japanese training ship Tsukishima Maru, which has been missing for more than a month, foundered with all on board; 121 lives lost. . . . . Anti-foreign agitation is increasing in Corea. The Russians are invading that country.

FARM AND GARDEN.—The American Devon Cattle Breeders' Club met at West Chester, Pa., December 26. The special business of the meeting was to arrange the Devon exhibit and competition at the Pan-American Exposition. The competition of the Columbian Exposition tending only to butter worth was condemned. milk and cheese being of even greater importance to the people as a whole. Rules, it was decided, should provide for the proper analysis of the curd and give credit for the smaller globule and for the quantity of sugar, all of which are important from the nutritive standpoint, and in food value exceeding the butter fat. Vice-President John I. Banker, Upsonville, Pa., was chairman; L. P. Sisson, Newark, O., secretary. Among those present were James Hilton, Albany, N. Y.; Jos. Hilton, New Scotland, N. Y.; A. S. Worden, Ulysses, Pa.; Dr. J. Cheston Morris. West Chester, Pa., and J. W. Zuber, Atlanta, Ga.

The Agricultural Department bulletin, issued December 27, states that the wheat crop of 1900 is 522,229,505 bushels; area of Winter wheat planted, 30,282,564. The condition of growing crop December 1 was 97. The production of corn in 1900 is estimated at 2,105,102,516 bushels.

Wolves are unusually fierce and aggressive in several counties of Minnesota, and are causing serious loss to farmers.

The State of Texas is asked to make an appropriation of $15,000 to erect three sub-experiment stations in the coast district, to study sugar cane, rice, cotton and tobacco.

Eight students from New York are enrolled for the six weeks' special course of study and training in poultry culture at the Rhode Island College. Bulletin 72, of the Rhode Island Experiment Station (Kingston) deals with the history and development of this unique experiment in agricultural education. This year a six-weeks' special course in horticulture is to follow the course in poultry culture. These popular courses serve to explain two kinds of farm life in such a way as to show their real advantages. This horticultural course, which opens February 20, will be under the direction of Prof. F. W. Card.

The Western Wholesale Nurserymen's Association, in session at Kansas City, Mo., December 11, expressed a unanimous opinion that there would be a rise in the price of nursery stock before Spring. The Association membership embraces the States of Alabama, Missouri, Iowa, Kansas, Nebraska, Colorado and Oklahoma Territory, and about 30 members were present. The following officers for the ensuing year were elected: President, A. L. Brook, Topeka, Kan.; vice-president, R. H. Blair, Kansas City, Mo.; secretary and treasurer, E. J. Holman, Leavenworth, Kan.; executive committee, Peter Younger, Geneva, Neb.; A. Willis, Ottawa, Kan.; R. S. Welch, Shenandoah, Ia.; J. H. Skinner, Topeka, Kan.; A. C. Griesa, Lawrence, Kan.

Secretary Wilson, of the Department of Agriculture, has placed the Government seed order with the New York Market Gardeners' Association at $101,975.59. The last contract, that for 1901, was awarded to Charles Parker, Santa Clara, Cal., at $64,900, and the order for 1900 was executed by the New York Market Gardeners' Association on a bid of $70,980.

A committee of seedsmen from the Seedsmen's League visited the United States Senate at Washington, December 20, to protest against further appropriations for free distribution of seeds by the Government.

State Entomologist Scott, of Georgia, has been sustained by the Federal authorities for destroying fruit trees infected with the San José scale.

A convention of corn growers and stockmen will be held at the College of Agriculture, University of Illinois, Urbana, Ill., January 14 to 25, and in connection a school of instruction in corn and stock judging will be given. Several hundred farmers are expected to attend the meeting. Along with the other work, tests of vitality of grains will be made free of charge by the class in farm crops. Some of the most prominent stock growers in the country will make addresses.

The Apple Crop of 1900.

Never before was there a year when the apple buyers made such a systematic and persistent effort to get the apples for such a small price as this. From the opening of the Spring they kept the papers full of reports of an over-abundant crop. Everywhere they were talking of the 1896 crop and low prices, and the worst of it was that they made many orchardists believe their story, and bought the crop for half what it was worth. I know of several instances where the orchards were sold for what amounted to less than 50 cents per barrel, and the owner did all the work; in one or two instances small farms with a large proportion of apple orchards were bought by a dealer so that the crop gathered paid for the farm. At one of the monthly meetings of our County Farmers' Club the question came up: "What are we going to do with our 1896 crop of apples?" and I was called on to answer it. I said: In the first place we have not an 1896 crop, nor anywhere near it. Then every apple tree and stub had a crop. Now, there are large sections of western New York where there are not enough for home use; nowhere are there as many as in that year. I asked those whose crop promised as many as in 1896 to raise their hands; only one went up. I asked for those who had three-fourths as many, to show hands; one-fourth the audience raised hands. To the request for those with half as many to show hands, half the hands went up. I then said: "There will be a demand for all the apples we have at fair prices. Even were the crop as large as in 1896 the conditions are now so very different from then that the apples will all be taken at much better prices than then. Now, times are good. Everybody has work at good wages, and the laboring man, who eats our apples, has the wherewithal to buy. So don't be fooled into giving away your apples." Still, as shown above, some were so misled. Many farmers sold their firsts, barreled, at from $1.25 to $1.40. They afterwards sold the "drops" at $1.50, and still later the better windfalls at $1.55 to $1.65, so there was no excuse to put poor apples in the middle of No. 1 fruit. A good lot of No. 1 now would sell readily at $2. It will be a long time before farmers will be so easily beguiled into selling their apples before they are picked, and some of those who sold their farms for less than the apples would have brought are trying to find some cheap mule to kick them.

J. S. WOODWARD.

The New York Cabbage Crop.

I have just returned from a three days' trip in Ontario and Tompkins counties, N. Y., buying cabbage. The amount stored in that section is about 4,000 tons; three-fourths of this amount is in the hands of shippers. I saw a few lots, from 50 to 100 tons, of very fine stock held by growers, but most of it held by growers is small and undesirable. Most farmers refuse to sell direct to buyers, and usually sell through a shipper at a loss of from $1 to $3 a ton to the grower. I cannot account for this, only that they lack knowledge of business methods in shipping goods. Again, I offered some farmers 80 per cent of purchase price in advance, but was unable to deal direct, only at an advance of $2 to $3 per ton. The average farmer knows very little about sight drafts, and 90 per cent of them refuse letters of credit, bank and railroad agents' references. At the same time, if one were to pay them a small amount down on an advance of a few dollars a ton above the market price, they seem perfectly willing to contract and ship their goods without any reference whatever. It is indeed strange that farmers will continue to let the speculator make all or most of the profit from their hard labor. There are three railroads through the great cabbage section of Ontario County; the Pennsylvania Railroad alone has hauled 4,000 cars of cabbage this season. On an average of 13 tons per car, 95 per cent of this passed through shippers' hands at a profit of $1 and $2 per ton that should go to the farmer, and would be theirs only that lack of judgment and business methods among farmers gives this amount to the speculator, who is yearly growing fatter and fatter on the farmers' hard labor. I met one gentleman who is agent for a large Pittsburg firm that has been in the cabbage section, shipping from three to five cars a week since October 1. He informed me that he first aimed to buy direct from the farmers, paying highest market prices, but was unable to deal with them. He then made a contract with a speculator to buy his goods for $1.65 per ton. The farmer, of course, takes that amount, and often more than that below market price.

A. G. M.

Boxes for Apples.

Here are more notes from commission men about the plan of packing apples in boxes instead of barrels. It will be seen that the do not favor the change. That being the case, will THE R. N.-Y. stop talking about it? Well, no—all the more reason why we should keep at it. We feel sure that the box is a profitable package for producer and consumer. We are not building fences between these two parties—we are trying to tear one down

The apple package most desired by our customers in this market is the three-bushel barrel; boxes are not approved of under any circumstances.

Milwaukee, Wis. L. A. SCHIAPPACASSE.

We are receivers of apples only in a small way, and possibly our advice would not be worth much. We believe that the smaller packages are better for one reason, that it avoids deception on the part of the packer. It is harder work to deceive in small packages than in barrels, for more apples can be seen. G. L. BRADLEY & CO.

Minneapolis, Minn.

We doubt very much whether it is advisable to pack apples in boxes or smaller packages than barrels. A great many boxes have been used this season in marketing apples, but we think that the results will be very unsatisfactory. Fruit packed in boxes, such as you refer to, is subject to all changes of temperature. The fruit is very often damaged by the slats used in the boxes. We advise all shippers to use nothing but new barrels in packing apples. By following this advice, we think that best results will be obtained. THE KELLY CO.

Cleveland, O.

We cannot say that we are in favor of boxes for apples. We rather think it may lessen the consumption, as some may be only inclined to buy a box instead of a barrel. Also, it seems to us it would be more expensive to furnish boxes, and their handling. Hardly think that apples in boxes would keep as well in storage as they would in barrels. But something should be done to avoid practicing deception in packing apples. Often apples are faced up nicely, and inside of the barrel they are poor and worthless stock. There should be a law passed that every packer should have his name and address on the barrel, and if he practices any deception he should be held accountable for it. HILLMAN BROS.

Minneapolis, Minn.

Impudence of the Oleo Men.

We have received a copy of the Minneapolis Journal containing the following sound talk:

The situation in the Senate affecting the Grout bill is suspicious. The dairy interest is made up of farmers who individually have no money to spend to promote legislation, while the oleomargarine interest is made up of the big meat packers who maintain an extensive and expensive lobby in Washington, and apparently have sufficient influence with the agricultural committee to delay and possibly to block indefinitely the Grout bill for the protection of the buttermakers by prohibiting the counterfeiting of their product. The oleomargarine makers claim that if the fat of beef and pork cannot be manufactured into imitation butter it means a loss of $55,000,000 on cattle and $7,000,000 on hogs. Nobody proposes to prevent the manufacture of this fat into a substitute for butter; all that is asked is that this tallow and lard shall not be colored to imitate butter and sold as butter. What the oleo people demand is the privilege of counterfeiting the real article with a cheaper, inferior product, and they are trying to get the permission of the Senate of the United States to perpetrate this fraud upon the public. They know that the public will prefer real butter to tallow or lard when they can see the difference.

It would seem as if the very transparency of this fraud and the impudence of the proposition which the oleomargarine people make would kill their case in the Senate, for on its face it is an insult to ordinary honesty, but for reasons best known to themselves, members of the Senate listen with patience, and even with favor, to the counterfeiters. Among those who look with favor upon the oleo interest and oppose the Grout bill is that eminent Populist and friend of the farmer, Senator Allen, of Nebraska, who, until lately, had been counted a friend of the butter men, but has recently changed front for some reason.

There is evidently a hard fight before the buttermakers in the Senate, but there is still reason to hope that common fairness will dictate the action of a majority of that body and that the dairy interest will be protected from ruinous competition of the hog butter men by prohibiting the coloring of oleomargarine to look like butter and the selling of it as butter.

THE weather here has been exceedingly fine since the first of the month, no snow, but little wind and not very cold; 46 degrees above zero December 16, with not a cloud to be seen, and hardly enough wind to tell its direction. Some farms are changing hands at $12.50 to $15 an acre. Potato crop rather light from 25 to 100 bushels per acre. Mine went 100 bushels; heard of none other at over 65. Many cattle are dying of cornstalk disease; one man lost 37 in two days; many others lost from three to 10. Potatoes are 30 cents; wheat, 57 cents; corn, 23 cents; oats, 20 to 23 cents; bran, $10 per ton. W. H. H.

Letcher, So. D.

Woman and Home

From Day to Day.

Say, I've got a little brother,
Never teased to have him, nuther,
But he's here;
They just went ahead and bought him,
And last week the doctor brought him,
Wa'n't that queer?

When I heard the news from Molly,
Why, I thought at first 'twas jolly,
'Cause, you see,
I s'posed I could go and get him,
And then mamma, course, would let him
Play with me.

But when I once looked at him
"Why," I says, "Oh, my, is that him?
Just that mite!"
They said, "Yes, and ain't he cunnin?"
And I thought they must be funnin'—
He's a sight.

He's so small, it's just amazin',
And you'd think that he was blazin',
He's so red;
And his nose is like a berry,
And he's bald as Uncle Jerry
On his head.

Why, he isn't worth a dollar!
All he does is cry and holler
More and more,
Won't set up; you can't arrange him—
I don't see why pa don't change him
At the store.

Now we've got to dress and feed him,
And we really didn't need him
More'n a frog;
Why'd they buy a baby brother
When they know I'd a good deal ruther
Have a dog?

—Little Folks.

*

AMONG the Christmas novelties noted this season were sleeve links and brooches of abalone shell, mounted in gold, said to come from Mexico. The abalone or sea-ear is a univalve mollusk found on the Pacific coast, where it clings tightly to the rocks. The shell is lined with mother-of-pearl, dusky of hue, shot with green and pink, much more iridescent than the oyster-shell mother-of-pearl.

*

THE clothes closets built in modern city houses show a great improvement over the old wardrobe with hooks fastened against the wall. In the new models, stout hooks of smooth metal are fastened in the underside of the shelf at regular intervals. On each of these hooks a heavy wire hanger is put. Coats, wraps, waists and dress skirts, hung on these forms remain stretched out so that they cannot wrinkle, and they do not take up nearly so much room as when hung on the old-style hooks. A shirt waist should always be hung over a coat-hanger when not in wear; cotton waists keep fresh much longer when so treated. They should, of course, be aired before being put in the closet.

*

THE New York Sun tells about a small girl who recently caused a family sensation. Her grandmother, living in the West, sent word some weeks ago to her daughter's family in New York that she would be unable to spend Christmas with them as planned. Great was the sad wailing and gnashing of teeth thereat among the grandchildren. Without their grandmother Christmas, Santa Claus and all would scarcely be Christmas. The other day the grandmother received a letter. "Dear Grandmother," it read, "we're all awful sorry you won't be with us Christmas, but never mind, you'll be sorry, too, for you'll not see the new baby that's just come." The name of the eldest granddaughter, Ethel, aged 10, signed the letter. Off went a telegram from the amazed grandmother to her daughter. "Why, in Heaven's name, was new baby kept a secret?" it asked. "Have just heard of it through Ethel's letter. Let me know particulars at once." If the grandmother was amazed, the daughter was dumbfounded. "There is no new baby," read her answer, "see letter." The whole thing proved to be an invention of the sagacious Ethel, who, having observed that her grandmother was never known to fail them upon the arrival of a "new baby," took this means of securing her for Christmas.

*

ONE of the new ideas which some furriers have tried to start this Winter is a bright silk lining in the ears of the furry animal heads used on neck scarfs or muffs. The effect is, of course, singularly grotesque. These heads seem larger and more ferocious in appearance than ever this Winter, and there is certainly some grounds for a recent newspaper cartoon, depicting

3193 Tucked Skirt
22 to 30 in waist.

the terrors of the shopping districts, in which terrified men tried to escape from the savage monsters worn in this way. The fur wraps, both collars and boas, have kept on increasing in size for several years. The mink collars so popular six or seven years ago now look very little and skimpy, when one sees an occasional survivor worn among the present styles. The boas of fox, or brown bear of this Winter's mode are not only very thick, but are much longer than heretofore, the ends reaching almost to the hem of the dress. Naturally the price increases with the size, and fashionable furs are a costly luxury.

The Rural Patterns.

The waist shown in No. 3699 is especially designed for stout figures. As shown it is worn by a woman of advanced years, but the lines are arranged with reference to a slender effect only. Upon the material chosen must depend its suitability to age and condition. The original is in plum colored satin cloth with velvet of the same shade, harmonizing passementerie, and front and undersleeves of chiffon enriched by motifs of lace applique. Younger women would prefer lighter color, but require no change in design.

The foundation for the waist is a fitted lining that includes double darts, side backs and double under-arm gores. The material is laid smoothly over the under-arm gores, but cut to form a V, and elongated side backs that are arranged over the lining. The fronts include single darts and stole extensions that tend to lengthen the waist and are turned back to form revers. The full vest is simply gathered and is included in both shoulder seams and closes at the center, where the fullness conceals the fact. The sleeves are in bell shape over a snug lining, to which the undersleeves are attached.

To cut this basque for a woman of medium size 4 yards of material 21 inches wide, 2 yards 44 inches wide, or 1⅞ yard 50 inches wide, with 1¼ yard 21 inches wide for front and undersleeves, and ⅜ yard of velvet, will be required.

The pattern No. 3699 is cut in sizes for a 36, 38, 40, 42 and 44-inch bust measure, price 10 cents from this office.

A skirt with perpendicular tucks is now in favor, and is especially becoming to short stout figures. In the design illustrated, the group of tucks, three each, are arranged at the front and side seams with the pointed straps between producing a panel effect. As shown the skirt is made of mode colored Venetian cloth, with the straps in a darker shade, but velvet, silk or braid can be used in contrast with a cloth foundation, and the color can be the same or a harmonizing one, as preferred.

The skirt is cut in five gores. The tucks are allowed at the edges of the front and back gores, those at the front turning backward, those at the back turning forward, and are stitched to the point indicated, below which they fall free to intensify the flare. The straps are arranged as indicated and stitched into place. The skirt fits snugly at the upper portion and includes short hip darts in the side portions. The fullness at the back is laid in an inverted plait.

To cut this skirt for a woman of medium size 6⅜ yards of material 44 inches wide, or 4⅞ yards 50 inches wide, will be required.

The pattern No. 3693 is cut in sizes for a 22, 24, 26, 28 and 30-inch waist measure, price 10 cents from this office

Rural Recipes.

He married a girl who couldn't cook,
And thus his hopes ran high;
But alas! she bought a recipe book,
And just begin to try.
Poor chap!
She just began to try.

—Phila. Record.

Apple Layer Cake.—One cupful of sugar creamed with half a cupful of butter; add the beaten yolks of four eggs, one-half cupful of milk, two cupfuls of flour, with two level teaspoonfuls of baking powder sifted through it. One teaspoonful of lemon or almond extract and the beaten whites of the eggs. Bake in three layers. When cold spread

3699 Basque with Full Vest.
36 to 44 in. bust.

with this mixture: Peel and grate four large apples, beat into them one cupful of sugar, two teaspoonfuls of melted butter and two whipped eggs. Pour into a porcelain saucepan and stir steadily over a moderate fire until the mixture has boiled one minute. Remove from the fire, add two teaspoonfuls of lemon juice, a dash of powdered cinnamon and two tablespoonfuls of minced almonds. Cool it and build the cake, sprinkling the top with powdered sugar. Cap the top generously with whipped cream, flavored and serve at the table.

Chocolate Nut Cake.—One pound of English walnuts, shelled. Reserve 42 unbroken halves and chop fine the remainder. Beat to a cream one cupful of granulated sugar and one-half cup of butter. Add two eggs, one at a time and beat well. Stir in alternately one-half cupful of milk and 1½ cupful of flour, adding a level teaspoonful of baking powder to the last half cupful of flour. Bake in two layers. Let the cake cool somewhat before adding this icing: Butter a granite kettle, add two ounces of chocolate (grated), three-quarters of a pound of light brown sugar and one-half cupful of new milk. Cook to the soft ball stage (or when a soft ball is formed when dropped in ice water). Add butter the size of a hickorynut, remove from stove and add one teaspoonful of vanilla. To one-third of the icing add the chopped nut meat; stir until cool enough to spread and put between the layers. Cover the top and sides with the remaining icing, which should be kept soft in an outer dish of hot water and arrange upon it the unbroken meats at regular intervals.

Buttermilk Pie.—Beat together a heaping cupful of sugar and four eggs; add half a cupful of butter; beat thoroughly and add 1½ pint of fresh buttermilk; line pie-tins with crust; slice an apple thin and lay in each pie; fill crust with the mixture and bake with one crust.

Duchess Potatoes.—Pare and chop coarsely four large potatoes and add one small minced onion. Season with teaspoonful of salt, half saltspoonful of pepper; put in baking dish, dot the top with bits of butter—one tablespoonful—and sprinkle one tablespoonful of flour over all; cover with milk and bake one hour in moderate oven, keeping the dish tightly covered. Serve hot from same dish in which it was baked.

Baked Cabbage With Cheese.—Boil a firm white cabbage for 15 minutes in salted water, then change the water for more that is boiling, and boil until tender. Drain and when cool chop fine. Butter a baking dish, and lay in the chopped cabbage. Put one tablespoonful of butter in a frying pan; when it bubbles stir in one tablespoonful of flour, one half-pint of stock, same of boiling water; stir until smooth. Then season with saltspoonful salt, half as much pepper, four tablespoonfuls grated cheese. Pour over the cabbage, sprinkle cracker crumbs over the top, dot with bits of butter and bake in a quick oven 10 minutes.

Plum Roll.—Sift together one pint of flour, one teaspoonful of baking powder and one-half teaspoonful of salt; rub into the prepared flour one tablespoonful of butter and make into a soft dough with milk or water; roll out quite thin, sprinkle with one cup of seeded chopped raisins, one-fourth of a cup of chopped citron and half a teaspoonful of cinnamon; roll up and steam for forty minutes; serve hot, with hard sauce.

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A Woman on Oleo.

HOW ONE HOUSEKEEPER REGARDS THE GROUT BILL.

"What a shame it is that Congress has passed the oleomargarine bill," said Laura; "they will drive the manufacturers out of business. The price of butter will go way up, and then what will the poor laboring man do? The manufacturers cannot make it and compete with butter if they have to pay a tax of 10 cents on the pound.

"But they only have to pay a tax of 10 cents," interposed Martha, "on butterine colored in imitation of butter; the tax on uncolored butterine is reduced by the bill from two cents to one-quarter of a cent a pound."

"But people will not buy it," said Laura, "unless it is colored, and so the manufacturers who realize this will close their factories at once if the bill passes. Then think of the suffering of the poor people! Butter will go up out of sight! Widows and orphans will have to eat their bread dry! Mr. McMurtaugh told me so last night, with tears in his eyes. He said he did not see how Congress could be so heartless as to bring such sufferings on the poor."

"Who is Mr. McMurtaugh?" asked Martha.

"He is a butterine manufacturer," Laura replied.

Really, Martha," said Hepzibah, grimly, "you are incorrigible. Can I never break you of the family trait of asking foolish questions?"

"It was a little obvious, I confess," replied Martha with a smile, "but, aunt, you do not seem to understand the socratic method of imparting instruction by questions. Allow me to continue. Why, Laura, will not the poor man buy uncolored butterine?"

"Because it does not look like butter."

"What are the organs of taste?"

"The tongue and palate, I suppose, and I have heard it stated that the nose has a great deal to do with it."

"Do we eat things on account of the taste or on account of the looks?"

"The looks have a great deal to do with it, anyway," snapped Laura.

"Why is this?"

"Things that do not look attractive are not appetizing."

"Are you fond of persimmons?"

"Yes, when they are thoroughly ripe; they are puckery and horrid before the frost has touched them."

"Is not a ripe persimmon shriveled and ugly, like a rotten apple?"

"I suppose it is."

"Is not a plump, unripe persimmon much more attractive in form and color?"

"I must confess it is," admitted Laura, unwillingly.

"Do you prefer your bread white or yellow?"

"White."

"Are you fond of ice cream?"

"Very."

"Are not several of your favorite kinds white?"

"Yes."

"Are you fond of truffles?"

"I adore them."

"Is there anything æsthetic that appeals to the eye in a truffle?"

"Well, hardly."

"Then why will not people eat white butterine?"

"It must be because they are used to the yellow color of butter."

"Did you ever eat butterine?"

"Yes; a great many times. I supposed I was eating butter at the time and did not notice the difference, but found out afterward that it was butterine. I never bought any to use on the table."

"Then is not most of the butterine sold because those who use it think they are using butter?"

"But the old law prevented the sale of butterine for butter."

"Oh, no," replied Martha, "you are very much mistaken there; the law now in force provides penalties for selling butterine for butter—that is a very different thing. You will notice convictions under this law among the news items nearly every day, and we all know that means a great many offenders escape where one is caught, and the business must be profitable or men would not continually brave the risks of conviction. We will assume that the large manufacturers always sell their product as butterine. Nevertheless the manufacturer profits by the fraud, for many of his customers are jobbers and grocers who palm the stuff off on the unsuspecting public as genuine butter."

"But would you entirely suppress the manufacture of butterine?" asked Laura,

"By no means," replied Martha, "but I believe in the old adage, 'Let every tub stand on its own bottom,' whether it be a butter tub or an oleomargarine tub. In fact, as you well know, for years I have urged the domestic manufacture of butterine—that is to say, the trying out of beef suet on the kitchen stove, mixing it with an equal part of softened butter and allowing it to harden for use in frying and other culinary purposes. This I have called cooking butter. Thus is insured a pure article and payment of excessive profits on butterine avoided."

"Anyhow," said Laura, "I do not believe in sacrificing one industry for the benefit of another."

"That is an argument with which I have no patience," Martha said. "Has the commercial spirit of the age reached such a point that a paternal government must extend its tender fostering care over the manufacture of fraud and lies if sufficient capital be embarked in the enterprise to make it important? Shall we say that the laboring man, like an infant, must be protected against his prejudices, and because the poor man will not eat white oleomargarine (that is, the kind-hearted makers say he will not) is he to be legally fooled for his greatest good by a little philanthropic saffron, into the idea that he is eating pure butter? We might as well repeal at once all laws for the protection of trademarks and let any man put any other man's name he chooses on his goods. It will be found that a suffering world will revolve as usual without colored butterine. The manufacture of the article will not stop, though the excessive profits may. It will be just as good as ever for cooking purposes. Pure white lard is much used in the kitchen, or rather would be if it could be obtained instead of the adulterated stuff on sale, which, however, carries no saffron from among its foreign ingredients."—Chicago Record.

Grandmother's Recipes.

Grandma is one of those who can mix and flavor and bake to perfection without the aid of a cook-book, says the Youth's Companion. She was born to her profession, not made for it by practise and discipline. But alas for her who hopes to copy grandma's recipes, for they do not exist, save in her own brain, and they could never be transferred to paper.

Not so long ago one of the granddaughters went over to the old house with pencil and paper to take down some of the most valuable rules, to make a cook-book of her own, and present copies to all the nieces.

Grandma was delighted to be asked. She sat down, smoothed her apron, folded her plump hands and said:

"Yes, dear, yes. I should admire to give you my receipts, every one of 'em.'"

"We'll begin with the simplest," said Dora, in a businesslike tone. "Apple sauce, now. Yours is better than anybody's. How do you make it?"

"Well, said Grandma, genially, "I peel my apples nice, and quarter 'em and put 'em on the stove with a little water."

"How many apples?" inquired Dora. "How much water?"

That was a poser. Grandma looked at her in real distress.

"Dear me, child," said she, "I can't tell you that to save my life! Why, just take 'em to the pump and pump a mite on 'em."

"Well," said Dora, trying to approach the subject by a different road, "sugar, now. How much of that to a quart saucepan full of apple?"

Grandma looked at her benignantly.

"I just take the sugar-box over to the stove," said she, "and put on—well, what's required. Yes, dear, with my little scoop!"

The apple sauce was given up for graver matters; but there, also, lurked defeat. When it came to buns, Grandma put in currants, but—how many?

"Oh, I don't know, dear," said she, easily. "Not many. Here and there a traveler."

Lamb broth she simmered "till it was done."

"When the goodness is all out o' the meat, child," said she, somewhat pityingly. "Dear me, you can tell that!"

Sour milk gingerbread is one of her masterpieces. Yet how much soda does she use to a cup of milk?

"Enough to sweeten it, dear," says Grandma, "and make it rise real good. You'll know when you try it."

The interview was given up. Dora sat with idle pencil and useless paper, while Grandma, quite unconscious of proving a disappointment, beamed through her glasses and discoursed on the ease of cooking properly, if one gave one's mind to it. Then the dear old lady rose and went out to "get supper," a meal calculated to fill any inexperienced cook with envy to the brim.

Grandma could do it to perfection, but she could not tell how.

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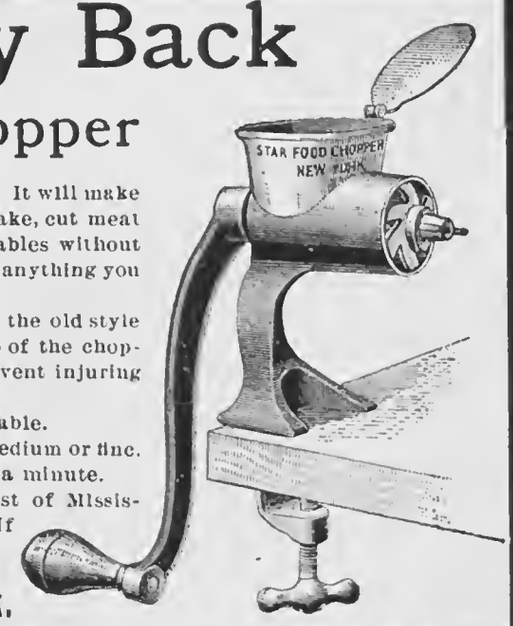

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MARKETS.

REVIEW AND OUTLOOK.

POTATOES have remained at about the samc figure for a number of weeks, and there arc no apparent reasons for an immediate advance in priee. The present cold snap hinders the free movement of the erop, and there are many complaints of frozen stock. Reeelpts from Bermuda are increasing, thc tubers bringing about twiee as mueh as the home-grown product.

EGGS are goIng up again, an advance of two eents per dozen being noted on last week's figurcs. The rise affeets fresh-gathered stock most, yet there ls getting to be a decided scarcity of choice refrigerator goods.

HOP prices remain firm, and holdcrs are looking for a little rise when the brewers lay in their new stocks. The highest figures noted are 19@21 cents for choiee 1900 New York State.

MILK PRICES.—At the last meeting of the New York Consolidated Milk Exehange it was voted to reduce the price of milk from 3¼ to three eents per quart for all points within the 26-cent freight zone.

The Week's Quotations.

WHOLESALE PRICES.

SATURDAY, JANUARY 5, 1901.

BEANS AND PEAS.

Beans, marrow, ehoice, per bu.	—	@2	60
Mcdium, choice	—	@2	25
Pea, bbl., ehoice	2 27½	@	—
Pea, bags, ehoiee	—	@2	27½
Red kidney, choice	2 42½	@2	45
White kidney, eholee	2 60	@2	65
Green peas, bbls., bu	1 27½	@1	30
Seoteh, bbl., bu	1 27½	@1	30

BUTTER.

Creamery, extra	25	@	—
Firsts	23	@	24
Seconds	20	@	22
Lower grades	17	@	19
June, extra	22	@	22½
June, thirds to firsts	17	@	21½
State, dairy, half firkins, extra..	—	@	23
Half firkins, first	21	@	22
Seconds	18	@	20
Thirds	16	@	17
Firkins	17	@	20
Western, imitation creamery, best	18	@	19
Lower grades	14	@	17
Western, factory, June paeked, fancy	13½	@	14
Held, common to good	11	@	13
Fresh, fancy	14	@	14½
Fresh, fair to good	13	@	13½
Low grades	11½	@	12½
Renovated butter, faney	19	@	—
Rolls, fresh, choiee	16	@	—
Fresh, eommon to prime	12	@	15
Paeking stock	11	@	13

EGGS.

QUOTATIONS, LOSS OFF.

Penn. and State, fancy, doz.	—	@	27
Western, firsts	—	@	26
Southern, average best	—	@	25

QUOTATIONS AT MARK.

State and Penn., fancy	—	@	28
Average, prime	26	@	27
Western, closely graded, faney.	—	@	26
Regular paeking, prime	—	@	25
Regular paeking, common to fair	22	@	24
Kentucky & Tennessee, closely graded, faney	—	@	25
Average prime lots	24	@	24½
Southern, fresh gathered, fair to good	21	@	23
Refrigerator, Fall packing, good to choiee	20	@	22
West. refrigerator, April paekings, choice to fancy	20½	@	21
Early paeked, avge., prime	18½	@	19
Common to fair	18½	@	19
Limed, Western, fancy	19½	@	20

FEED.

Spring bran, 100-lb. saeks	17 00	@	17 50
Winter bran, bulk	17 50	@	18 50
Spring middlings, 200-lb. saeks	16 75	@	20 00
Red Dog, to arrive	18 50	@	19 00
Oil meal	28 00	@	—
Cotton-seed meal	26 00	@	—

EVAPORATED FRUITS.

Apples, faney	6½	@	7½
Choiee	5½	@	6
Prime	4¾	@	4⅞
Low grades	3½	@	4½
Chops	1 50	@	1 60
Waste	—	@	1 25
Sun dried, quarters	3¾	@	4½
Sun dried, sliced	3¾	@	4½
Apricots, boxes, lb.	8¼	@	13
Bags, lb.	7½	@	12
Peaehes, California, unpeeled boxes	6	@	10
Peeled, per lb.	13	@	18
Pears, California, per lb.	5	@	10

GREEN FRUITS.

Apples, common, bbl.	1 25	@	1 75
Baldwin, bbl.	1 50	@	2 75
Greening, bbl.	1 75	@	3 25
Ben Davis, bbl.	2 00	@	2 50
Spy, State, bbl.	2 50	@	3 50
Spitzenberg, bbl.	2 50	@	3 50
Newtown pippins	1 25	@	3 50
Grapes, W. N. Y., Catawba, small basket	8	@	11
Catawba, case	1 00	@	1 10
Almerias, bbl.	4 50	@	9 50
Cranberries, Cape Cod, bbl.	8 50	@	10 00
Jersey, bbl.	7 50	@	—
Jersey, erate	2 00	@	2 50
Strawberries, Florida, qt.	60	@	75
Callfornia, pint	30	@	50

GRAIN.

Wheat, No. 2 red, spot	81¾	@	—
No. 1, Northern Duluth	86¾	@	—
No. 1, hard Duluth	91½	@	—
Corn, No. 2, white, to arrive	46¼	@	—
No. 2, yellow, to arrive	46	@	—
Oats, No. 2, white, in elevator..	32¼	@	—
Rye, No. 2, West., c. i. f., N. Y.	56	@	—
State & Jersey, c. i. f., N. Y.	52	@	—
Barley, feeding, e. i. f., N. Y.	48	@	50
Malting, c. i. f., Buffalo	60	@	65

HAY AND STRAW.

These quotations are for large bales. Small bales sell for 50 cents per ton less.

Hay, No. 1	90	@	92¼
No. 2	85	@	87½
No. 3	75	@	80
Clover	70	@	75
Clover, mixed	80	@	85
Straw, rye, long	85	@	90

HOTHOUSE PRODUCTS.

Lettuee, choiee, 3½-4½ dozen ease, per dozen	60	@1	00
Cucumbers, fair to choice, doz.	1 50	@1	75
No. 2, dozen	30	@1	00
Tomatoes, choice, lb.	25	@	35
Radishes, 100 bunehes	1 00	@3	00
Mushrooms, lb.	20	@	40

POTATOES.

Bermuda, prime, per bbl.	4 50	@5	00
No, 2, per bbl.	3 00	@4	00
Long Island, prime, in bulk, bbl.	1 50	@2	00
State and Western, round, 180 lb.	1 75	@1	87
Round, sack	1 65	@1	75
Long, 180 lb.	1 62	@1	75
Poor to fair	1 25	@1	50
Jersey, prime, bbl.	1 37	@1	62
Sweets, Vineland, cloth-top, bbl.	2 50	@3	00
Southern, bbl.	1 00	@1	50

COUNTRY DRESSED MEATS.

Calves, veals, prime, per lb.	10½	@	11
Fair to good, per lb.	9½	@	10
Common to medium, per lb.	7½	@	9
Small, per lb.	5	@	6½
Buttermilks, per lb.	6	@	7½
Grassers, per lb.	5	@	7
Pork, light, per lb.	7¼	@	7¾
Medium, per lb.	6½	@	7
Heavy, per lb.	5	@	6
Rough, per lb.	3	@	4½
Roasting pigs, per lb.	8	@	11
Pork tenderloins, fresh, per lb.	17	@	18

POULTRY—LIVE.

Fowls, per lb.	9½	@	10
Chickens, per lb.	8	@	9
Roosters, per lb.	—	@	6
Turkeys, per lb.	7	@	8½
Ducks, Western, per pair	50	@	70
Southwestern, per pair	45	@	55
Geese, per pair	1 00	@1	37
Pigeons, per pair	15	@	20

POULTRY—DRESSED.

Turkeys, Jersey and upriver, fancy	11	@	12
Jersey and upriver, fair to good	9½	@	10½
Maryland & Delaware, faney.	11	@	12
Md. & Del., fair to good	9½	@	10½
Ohio & Mich., mixed, faney, scalded	—	@	10
Ohio & Mich., fair to good	8½	@	9½
Other Western, hens, prime.	10	@	10½
Western, mixed	9	@	9½
Western, toms	—	@	9
Poor to fair	6	@	7½
Broilers, Philadelphia, 4 lb. and under, per lb.	16	@	18
Roasting ehickens, Philadelphia, selected, large	14	@	15
Phila., mixed sizes	11	@	12
Phila., large, per lb.	11	@	12
Phila., fair to good	9	@	10
Ohio & Mich., sealded, faney.	—	@	10
Other Western, dry pieked, prime	9½	@	10
Other Western, scalded, prime.	9½	@	10
Chiekens, other Western, poor to fair	7	@	9
Fowls, Ohio & Mich., fancy, scalded	9	@	—
Other Western, dry packed, prime	8½	@	9
Western, poor to fair	7	@	8
Old roosters, per lb.	—	@	5½
Capons, Western, large	13	@	14
Western, mixed weights	11	@	12
Western, small and slips	—	@	10
Ducks, Ohio & Mich., fancy	12	@	12½
Md. & Del., prime	12	@	12½
Other Western, prime	10	@	12
Poor to fair	7	@	9
Geese, Md. & Del., prime	9	@	10
Md. & Del., poor to fair	7	@	8
Western, prime	—	@	9
Poor	6	@	8
Squabs, ehoice, large, white, per dozen	75	@	—
Mixed, per dozen	2 00	@2	25
Dark, per dozen	1 25	@1	50
Small and culls, per doz.	50	@1	00

GAME.

Wild ducks, Canvas, prime, per pair	2 50	@3	00
Canvas, poor	1 00	@2	00
Red-head, 5 lb. average to pair	1 75	@2	00
Red-head, light weight	75	@1	25
Mallard, per pair	75	@1	00
Teal, blue-wing, per pair	40	@	50
Rabbits, per pair	15	@	25
Jack rabbits, per pair	50	@	70

VEGETABLES.

Onions, Conn. and L. I., white, bbl.	3 50	@5	50
Conn. and L. I., red, bbl.	2 00	@2	50
Conn. and L. I., yellow, bbl.	2 00	@2	75
Orange Co., white, bag	2 50	@4	50
Orange Co., red, bag	1 50	@2	25
Bermuda, crate	2 50	@2	75
Squash, marrow, bbl.	1 00	@1	50
Hubbard, bbl.	1 50	@2	00
Florida, white, crate	75	@1	00
String beans, Florida, basket.	1 50	@2	50
Turnips, Jersey, Russia, bbl.	70	@	80
Canada, Russia, bbl.	75	@	85
Peppers, Florida, carrier	1 25	@1	50
Celery	10	@	40
Egg plant, Florlda, bbl.	2 50	@4	50
Do, carrier	1 50	@2	50
Green peas, Florida, basket.	1 25	@2	00
Spinaeh, Norfolk, bbl.	50	@	75
Baltimore, bbl.	50	@	70
Carrots, washed, bbl.	75	@1	00
Unwashed, bbl.	50	@	75
Lettuce, New Orleans, bbl.	2 50	@4	00
Florida, ½-bbl.	1 50	@3	50
Brussels sprouts, qt.	5	@	10
Parsnips, bbl.	75	@1	00
Cabbage, L. I., 100	3 00	@4	00
State, ton	14 00	@16	00
Tomatoes, Fla., carrier	1 50	@3	00
Chicory, New Orleans, bbl.	2 50	@5	00
Beets, L. I. bbl.	75	@1	00
Romaine, N. O., bbl.	3 00	@5	00
Esearol, N. O., bbl.	2 50	@5	00
Okra, Havana, carrier	5 00	@6	00
Parsley, Bermuda, box	75	@1	25
Cucumbers, Florida, erate	2 00	@3	00

MILK.

New York Exehange price within 26-cent freight zonc, three cents per quart.

THE Golden Egg states that the probable egg crop in this country for the year 1900 will number 13,000,000,000 eggs, and that if these eggs were stood on end one on top of the other they would reach almost 500,000 miles high.

BUSINESS BITS.

It would seem that no farm family could afford to be without a food ehopper at the price the Star is offered in this issue. Read the offer on another page.

THE Pierce-Williams Company, South Haven, Mich., are making a first-class quality of fruit and vegetable baskets and boxes. These packages are very strong, light, convenient, and attractive in form. If you are a shipper—large or small—write for their frec catalogue. You will get better returns if you pack properly.

MR. A. M. GRANT, superintendent of Phillips' Academy, Andover, Mass., writes that he is convinced that the use of Asbestine Cold Water Paint retarded the spread of the fire from which they suffered December 10 last. In faet, he gives this paint credit for saving the buildings. The fire-proofing quality aecredited to this paint is one that will have great weight wlth paint users.

EVERY farmer that has not learned the food value and the economy of crushed or ground cereals in cattle feeding, the eonvenienee of grinding grains for home use, and the profit in working for neighboring farmers should write to Sprout, Waldron & Co., Muncy, Pa., for their catalogue of mills. These mills are next to indestructible and very rapid in their work. Purchasers get a guarantee that really protects them, but the mills are sold on trial.

A HORSE-TRADER.—The Horseman tells this story of a Miehlgan man: "It is related of him that this year he bought a pair of horses and made the crops on his farm, then sold the horses for a farm, the farm for a house, the house for a team, buggy, harness, etc., sold one horse and a buggy, sold the harness for a pig and a wagon, made three horse trades with the remaining horse and now has a horse, a wagon and pig for sale. In a year he has owned and traded 20 horses, each of whlch was the 'best' horse in Newaygo County."

ROAD NUISANCES.—There have been a number of legal cases in England reeently growing out of the poisoning of llve stock. The leaf of English yew tree, an evergreen, is poisonous. Clippings from a tree or hedge were allowed to remain on the roadside. A heifer ate some of these leaves and was killed. Suit was brought against the man who trimmed the hedge to recover damages. The case seemed to hinge upon the faet that the leaving oi these trimmings on thc public road was a nuisanee. The judge held that it was a public nuisance to put anything on the highway that was dangerous to man or beast lawfully using the road. It did not matter whether the person who put it there knew or did not know that it was dangerous. The judge also said that the farmer had no right to put hedge trimmings on the road whether they were dangerous or not, for that amounted to using the public highway for a private purpose, which was not justified. The result was a verdict for the value of the heifer. This deeision indicates that in England at least anything placed on the highway must be regarded as a nuisance if it interferes with the lawful use of that road by any citizen. Poisonous shrubs, wild cherry leaves, or twigs would come under this head the same as pieces of glass, thorns or tacks, which might injure the foot of a horse or puncture the tire of a bicyele.

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TRY THEM FOR Coughs, Colds, Asthma, Bronchitis, Hoarseness, and Sore Throat.

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Butter, Cheese, Eggs, Pork, Poultry, Dressed Calves Game, etc. E. B. Woodward, 302 Greenwich St., N.Y

Wants, For Sale or Exchange

FOR SALE—Traction Engines and Thrashers, 2nd hand, cheap. F. A. Booth Co., Stanley, N. Y.

WANTED—A position as overseer on a fruit or dairy farm, by young married man, German. Good referenccs. Address Box 70, North East, Pa.

Farm Managers, Gardeners, Buttermakers. etc., always on hand. No charges to employers. Write us. Rural Science Agency, Durham, N. H.

WANTED—I want to hire a foreman for a general nursery business. State age, experience and references. Address E. I. MARTIN, Redlands Nursery, Redlands, Cal.

FOR SALE—Farm of 247 acres, five miles from Battle Creek, Calhoun County, Mich. Good buildings, barn and improvements. H. B. McGRAW, 917 Williamson Bldg,, Cleveland, O.

COUNTRY SEAT FOR SALE.—250 acres, suitable for game preserve and stock farm; northern New Jersey; railway station on property; connections with New York and Philadelphia. Game and trout stream; large orchard; abundance of nuts: woods; springs; large house. heated with hot water. Coal yard and creamery on property. A rare chance. Address Box 84, Allamuchy, N. J.

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Good land; neighbors, schools & churches convenient Mild healthy climate. Low prices & easy terms. Write for free cat. R. B. Chaffin & Co. (Inc.). Richmond, Va.

WANTED—Party to ship me fresh Butter and Eggs weekly. Address JAS. F. MARBARGER Drehersville, Schuylkill County, Pa.

GLENN RANCH,
Glenn County, California,
FOR SALE IN SUBDIVISIONS.

This famous and well-known farm, the home of the late Dr. Glenn, "the wheat king," has been surveyed and subdivided It is offered for sale in any sized government subdivision at remarkably low prices, and in no case, it is believed, exceeding what it is assessed for County and State taxation purposes.

This great ranch of 40,000 acres runs up and down the western bank of the Sacramento River for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

F. C. LUSK,

Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, of Chico, Butte County, California.

LOCAL AGENTS wanted in every section to sell my New Crop Seeds. New plan. Quick sales. Big profits. Splendid outfit. Write to-day. FRANK H. BATTLES, Seed Grower, ROCHESTER, N. Y.

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Speed cracks, scratches, grease heel, mud fever, sores and skin disease cured when veterinarian and all known veterinary remedies failed. It is guaranteed; money back if it fails.

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OUR NEW PLAN, Samples, Circulars, Etc., Don't wait, send your name and address anyway. **FREE** Address GRAY & CO., PLATING WORKS, 729 Miami Building, CINCINNATI, OHIO.

[We recommend above Company as thoroughly reliable.]—EDITOR.

January 15

is the last day for clubs to count for those cash premiums. There are 50 of them—probably enough to go around to all that have sent clubs of any size. It is a question with most club-raisers who have sent clubs simply how big their premium is to be. That depends not on a big club, but on the relative size of a good many small ones. The largest premium is $100. Then come premiums of $75, $50, $30, $20 and so on down. Just a few names now may make a difference of $25 to you in the premium. For the smaller premiums it may make a less difference, but if it were only $10 or $5 it would be worth while to hustle around for a day or two. Besides all this, those $2 bills go out every day to the largest daily clubs. All clubs mailed January 15 will count. Be sure that the postmark is plain on the envelop; or if you write the number sent it will count. Here are the daily winners for last week:

Dec. 31. S. F. Johnson, Ohio.
Jan. 2 Jay E. Allis, New York.
Jan. 3. Mrs. C. B. Curtis, New York.
Jan. 4. Mrs. C. B. Curtis, New York.
Jan. 5. Jay H. Bowker, New York.

We wanted to make the first day of the new century a record-breaker. But it was just a few names short of our best previous record. This was probably due to a delay in the mails, as the next day brought up the average so that the two days beat any two corresponding days of other years, and the first week is far ahead. This report is due those who contributed to the result, and as we cannot thank each one separately, we here say "thanks" to all. Our New Year's resolve is to give readers the best value that they will get for any dollar invested this year.

THE RURAL NEW-YORKER.

Market Briefs.

PICKED UP HERE AND THERE.

SLEIGHT OF HAND.—The following item appears in a New York paper under the head of Business Troubles:

"Chas. L. Pettis and Harvey J. Hunter, comprising the firm of C. L. Pettis & Co., wholesale dealers in produce at No. 204 Duane st., New York, have made an assignment to Uriah W. Tompkins. Before the assignment the sheriff received an attachment against Mr. Hunter for $2,496 in favor of Norman T. Kerr, but found nothing at the store on which to levy."

We have received a number of inquiries about the firm mentioned above, and others doing business in the same lines, namely, buying country produce for cash at prices above the market, and in all cases have advised correspondents to be careful about shipping to those who make such extraordinary promises. It seems to do but little good to publish the names of frauds. While people are reading the names and thinking what first-class scalawags they are, somebody else comes up like a mushroom with a new proposition, which is simply a warmed-up hash of the methods of his predecessors in the fake family, and who for a consideration can get some so-called banking firm to give him a reference. We hope that our readers will give the cold shoulder to all of these commission merchant magicians who can be in one place one minute, with unlimited facilities for handling at a premium anything that a farmer has a mind to ship them, and then all at once disappear, like an icicle on a red-hot stove. There may be some good reasons why people who steal in this way should be allowed to go on ad libitum without punishment, while the man who picks your pocket or holds you up in some dark street is put behind the bars if caught, but the writer fails to discover any particular difference between the two methods. The highwayman at least does not add to his crime by lying about what he intends to do. As soon as he puts the revolver under your nose, you know just what he is after, and thus, in a way, he is entitled to credit for his honesty.

A TOUGH PROBLEM.—A reader on Long Island says that he recently sent 40 three-bushel sacks of potatoes to a commission dealer in this city. They sold at $1.75 per bag, or $70 for the lot. Out of this was deducted $7 commission, $2 cartage, $10.80 freight, and $2.40 for 40 sacks, which the commission man bought here and sent to the shipper. These charges amount to $22.20. He wonders where his profits are coming in. It is somewhat discouraging to the grower to have to turn in nearly one-third of the value of a crop as marketing expense. The freight charge in this case, $10.80 for transporting 120 bushels of potatoes 80 miles, seems excessive. The other items are not unusual. The charge for bags is all right. Six cents apiece was what they cost the dealer, and the general rule is that the package goes with the goods. That is, the price is made on this basis, and, if the buyer returns the package, he usually gets a rebate. Some commission merchants, in order to appear unusually generous, would have made no charge for the bags, and returned the price at which the potatoes sold at just so much less, thus making themselves even. There is no way for the shipper to find this out unless he comes to the other man's office and demands to see the account on the books. If caught in this way he could squirm out of it without any trouble. However, there are plenty of honest dealers who will tell just what the goods sold for, and give an itemized account of expenses. In the city, where rents and all other charges are high, it is not reasonable to expect that merchants are going to give away anything unless they get an equivalent of some sort. The principle is the same as in some clothing stores, where with every suit of clothes, a pair of suspenders, a necktie and one or two other articles are "thrown in." The buyer pays for all these things, however, for the clothing man knows that he is expected to donate these extras, and makes the price accordingly.

A MALICIOUS REPORT has been circulated in some sections of New York, particularly in the Jewish districts on the East Side, to the effect that Mississippi River catfish were being canned and shipped to this market under the brand of Pacific Coast Salmon. This rumor has resulted in some injury to trade, as the Hebrews, for religious reasons, are prohibited from using catfish, and those who did not know that there is a decided difference in color and texture between these two fishes, refused to buy salmon in any shape. It is needless to say that there is no foundation of truth in this report, as salmon and catfish are about as near alike as woodchuck and alligator.

COTTON UP AGAIN.—Unusual activity marks the cotton market here. On the day after New Year speculative transactions on the Exchange amounted to more than 350,000 bales. The prospect that Chinese affairs will be soon settled sufficiently to allow a general extension of trade there, is an encouraging feature. While there are indications that the crop in the South will be larger than at first reported, yet the manufacturing demand in all parts of the world is so extensive that there is no prospect of any serious drop in price.

THEATERIZED BOYS.—A popular theater in New York charges a gallery admission of only 15 cents. Some time before the gallery is opened at night, a line, often several hundred men and boys, mostly boys, forms on the sidewalk. They are newsboys, bootblacks, and ragamuffins of various types. Some are under 12 years of age, and ought to be in bed at that time. Others are older, but vile food, dirt, lack of sleep, and a general knocking around on the ragged edges of life have marked them, and they are stunted and withered up like a potato that has grown a yard or two of sprout in the cellar. Their education is picked up on the streets, and flavored with a little stage comedy or tragedy, as they are able to scrape up the price of a gallery seat. To many of them, home, if they have any, is a place that they don't care for, where they are not wanted, and from which they get no encouragement. They are an uninviting crowd, and the average person who passes this line will put them down as tough cases, candidates for the gutter, jails, prisons, asylums and early graves. Yet, some of these boys have as good material in them as there is in the world. Now and then somebody gives one a bit of encouragement; hope starts to grow in him; he gets his head above the surface and climbs into better things at surprising speed. An illustration of this is seen in Governor Brady, of Alaska, who was once a ragamuffin, kicked around the streets of New York, and sleeping in barrels and boxes, until he was picked up by some one, put on a farm and given a little chance. He pushed ahead; went through Yale College, and is a most useful citizen. Whoever gave him the start made a good investment. W. W. H.

PRICES FOR CROPS.—Wheat, 72 cents, but very little in farmers' hands. Rye, 46 cents per bushel; was a good crop; about half a crop in farmers' hands yet. Storehouses full; no cars to ship in. Apples, 50 to 75 cents per bushel, and are shipping in from outside markets now. Potatoes, 32 cents per bushel; cellars full and no cars to ship in; there has been no competition in buying here, as cars were so scarce. A large amount has been frozen in pits. Butter, 18 cents per pound. The market is well supplied at present, and prices are likely to go lower. Eggs are 22 cents per dozen, not enough to supply the market. Poultry market is overloaded, selling at five cents live, or eight cents dressed. I have been offered 75 cents per bushel for my Ben Davis apples delivered in February. There were a number of carloads bought here in the Fall for 20 cents per basket. The home market pays. W. B.

Stanwood, Mich.

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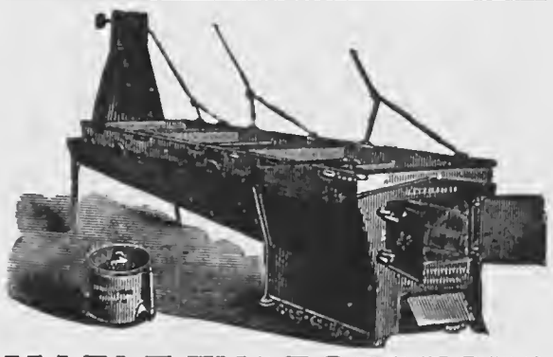
Is boundless. Yet it is utterly helpless to give strength to the child born with a low vitality. The time to give strength to the child is before birth and to impart this gift the mother herself must be strong. Dr. Pierce's Favorite Prescription gives strength to mothers. It preserves them in robust health in the months before baby comes. It practically does away with the pains of motherhood, and enables the mother to endow her child with a healthy body and a happy disposition. "Favorite Prescription" contains no alcohol and is absolutely free from opium and cocaine.

"I consider Dr. Pierce's Favorite Prescription the best medicine made," writes Mrs. Mary Murdock, of 220 Taylor St., Topeka, Kansas. "I know it has no equal. I am the mother of ten children and only one living—the tenth one. She is one year old and is as well and hearty as can be. She is a beauty. Of my other babies, some were born at right time, but dead, others were premature births; one lived to be one year old but she was always feeble. I tried different doctors but none of them could tell what my trouble was. I was examined by surgeons but they found nothing wrong. I did not know what to do, so I thought this last time I would try Dr. Pierce's Favorite Prescription. I took it the entire nine months and now have a fine baby girl, and I can not praise your medicine enough for the good it did me."

Dr. Pierce's Pellets cure heart-burn.



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6 sizes; hand or self-feed. 15 to 75 cords per day. SMALLEY and BATTLE CREEK Drag Saws. No. 2 Self-Feed Battle Creek Drag Saw, for 2 to 4 horses. Price $85.00; with power complete, $150. Famous Electric Circular Saw Machine. The best Long Timber or Pole Saw on Earth. We also make Ensilage and Fodder Cutters, Grinding Mills, the Battle Creek Bolting or Slat Mill. FARM POWERS. Cat. and introduction prices to any one naming this paper.

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Seed Potatoes—120 var. Gold Standard Oats and S. C. W. Leghorns. Cat. and pkt. oats free. HILER BROS., Box 5, Prattsburg, N. Y.

Potatoes—Early Ohio, Hebron, Rose, Fortune, Harvest, Bovee, Queen, Irish Cobbler, Good News, Stump the World, Thoroughbred, Uncle Sam. 85 kinds. C. W. Ford & Co., Fishers, N. Y

Try the New Auto Strawberry. Largest and Best. 8,000 qts. to the acre. 1 doz. plants for $2. Other good kinds as low as $1.50 per 1,000. Cat. free. Slaymaker & Son, Dover, Del

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Apple, Standard and Dwarf Pear, Cherry, Peach and Plum trees. Japan Plums a specialty. Save half your money by buying direct of producer. Our free catalogne of fruit or ornamental trees will tell you how and why. Let us price your list of wants. Established over 20 years.

For 10c *we will mail two plants of our Red Cross Currant.*

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STOP THAT SEED ORDER.

Why spend $2 or $3 when we will give you the Newest and Best Varieties of the famous "O. K." SEEDS FREE. Please read our special offer and see what we can save you. Select what you want. If you don't need all. Limited space necessitates brief mention only.

We guarantee every pkg.

No. 1. Bean—"Early Golden Sunrise." Dwarf, Golden pod. Tender. None better. Gardeners' Delight.
No. 2. Beet—Sweet, crisp and tender. Very early. Medium size. Blood red. Summer and Winter.
No. 3. Cabbage—"S. A. W. S." A queer name? Stands for Summer, Autumn, Winter, Spring. An all the year round variety. You need it.
No. 4. Cauliflower—"Prize Head." Early, large and snow white. Better than any other.
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No. 7. Sweet Corn—"Early Indiana Wonder." Very large. A superior variety.
No. 8. Pop Corn—"Golden Beauty." Pops very large.
No. 9. Cucumber—"Cool & crisp." Productive. Fine slicer and pickler.
No. 10. Lettuce—"Cabbage." So called from its forming close, round heads of tender, crisp leaves.
No. 11. Muskmelon—"Cup of Nectar." Small. Richest flavor. Sweetest you ever ate.
No. 12. Watermelon—"Krueger's Choice." A famous new melon of great size, sweetness and delicious flavor.
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No. 19. Radish—"Apple Flesh." Summer radish, crisp and mild. Can be eaten like an apple.
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No. 22. Spinach—"Long Standing." Best for family gardens. Stands long time in good condition.
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Live Stock and Dairy

AILING ANIMALS.

ANSWERS BY DR. F. L. KILBORNE.

Heifer Fails to Milk.

A heifer I raised came in with her first calf November 30, but has not given any milk from two teats on the right side, front and back. She has a fine udder, well developed, and was raised from good stock. I have tried everything to remedy the wrong, but have thus far failed. Would she be likely to come to her milk if she is kept till she comes in again? L. A. W.
Milford, Conn.

Cases of this kind occur occasionally, but not commonly, in which one or more quarters of a heifer's udder will fail to secrete milk. The trouble may be due to lack of development in those quarters, or to previous inflammation from some injury to that quarter. By rubbing and stripping of the dry quarter at each milking you may yet be able to stimulate a flow of milk. If they fail to come to their milk this season, they may do so at the next calving, if there are no special indications to the contrary; but if they fail then, it would be useless to keep her longer.

Whole Rye for Horses.

Will you inform me whether there would be any risk attending the feeding of unthrashed rye straw to horses? I mean from the awns. These are quite fine as also is the straw, the seeding having been heavy.
Washington, N. C. B.

The risk in feeding unthrashed rye to horses in moderate quantity is not very great, and yet it cannot be said to be safe. The awns are liable, and do occasionally, cause serious trouble in the mouth and throat, as well as in the stomach and intestines. It would be safer to have the rye thrashed and to feed the straw without the chaff, which would contain the greater portion of the awns. The rye itself could be fed mixed with other grain either whole or ground, but it ought not to be more than one-third or one-half of the grain ration.

R. N.-Y.—Some farmers in New Jersey feed whole rye to horses in the following manner: The straw and heads are run through a cutter and moistened. The ground feed is put on this cut rye. This plan works well. Such farmers believe that the awns or spikes scratch off bots from the horse's stomach.

Scratches, Malanders and Thrush in Horse

What will cure my horse? He is coming eight, has breakings out on his legs, which some people call scratches. I can get them to heal, but they will crack open again, particularly on the approach of cold weather. Behind the front knees is the worst place. He also has thrush in three feet and the bottoms of his feet are dry and cracked. E. S.
Lionville, Pa.

When this scaly affection appears under the fetlock it is known as scratches, on the back of the fore legs in the bend of the knee as malanders, and back of the hock as sallenders. There is evidently a constitutional tendency in this horse to these skin diseases, which may be due to unsuitable diet, want of proper care and cleanliness, or to disorder of the liver, kidneys or other organs. There is no permanent cure for these cases, unless the cause can ascertained and removed. They may be apparently entirely cured, only to recur whenever the conditions are favorable. Treatment should be both local and general. Internally I will advise a course of iron and arsenic. Give one teaspoonful dry pulverized sulphate of iron and a large tablespoonful of Fowler's solution of arsenic in feed twice daily. After two weeks omit the iron (containing the arsenic) for a like period, and then repeat as before. Continue for one or two months. A laxative diet should be fed, consisting in part of bran mashes, silage, roots, or other green feed sufficient to keep the bowels moving freely. If there is constipation give half ounce doses best aloes every three or four days until relieved. Locally, use benzoated oxide of zinc ointment twice daily to soften and heal the cracks. If necessary to wash, use warm castile soapsuds, after which rub dry. Wet the legs only when necessary. If thickening of the skin remains, apply mercuric or iodine ointment once a week.

Post-Partum Paralysis in a Cow

I have a two-year-old heifer that recently calved. The heifer evidently had a very hard time, as the calf was very large. The calf was dead when I found it, but seemed to be fully matured. The heifer seems to be all right, except that she cannot use her hind legs enough to stand. She eats and drinks as well as ever, but seems to be very weak. Last Spring I had a cow in the same condition as this heifer. We tried slinging her up, but she would not stand on her hind feet. She would lie with all her weight in the sling, apparently very uncomfortable and in a great deal of pain. I finally killed the cow as there seemed to be no help for her. Both cows were in good condition. I have fed the heifer two quarts potatoes with three pints of corn and oats since taking in from the meadow.
Willsborough, N. Y. B. C. F.

Partial paralysis not infrequently follows a difficult parturition, as in the present case. The cow should have had an active blister applied over the loins, and followed by hypodermic injections of strychnine or dram doses of powdered nux vomica three times daily. Ounce doses of sweet spirits of niter, or alcoholic stimulants can be given to advantage and repeated every four hours. The animal should be provided with a warm comfortable bed, or blanketed if necessary, to keep her warm, and turned from side to side several times daily. If there is constipation give pint doses of raw linseed oil night and morning until relieved. Feed a nutritious, laxative diet, such as bran mashes, boiled flaxseed, oatmeal or oats, or even milk and eggs. Cases of this kind ought always to be placed in charge of a competent veterinarian wherever practicable. Complications, especially retention of urine and inflammation of the womb, are very liable to arise, which can be recognized and successfully treated only under the personal direction of the veterinarian.

GREEN FIELD IN DRY TIMES.

We said last Fall that thousands of farmers in this country have been driven to the practice of soiling or cutting green fodder for their cattle. The last few seasons have been particularly dry, and again and again pastures have dried up, meadows have failed to yield average crops, and the result is that many farmers were caught in two ways. In the Summer, when their cows ought to have been giving an abundance of milk, they failed because there was not succulent food for them. The farmers were either obliged to dispose of some of their cows, feed hay or corn that was needed for Winter feed or else witness a shrinkage of 25 per cent or more in the milk yield. Again, when Winter came they found themselves with half-empty hay mows, and a shortage of dry fodder. Most farmers regard these dry feeds as little short of a curse. Yet they may prove blessings in disguise if such farmers will heed the advice and experience of those who have found better ways of feeding stock. The soiling system consists in cultivating crops rather than raising them as pasture. Under this system a succession of green crops is planted and cultivated, so that one follows the other through the season. It is well-known that a cow at pasture destroys more feed than she eats. It is also evident to many farmers that a greater amount of fodder can be grown on an acre of land that is plowed, fertilized and well-cultivated than will grow on that same acre in natural grasses. Putting these two facts together the soiling farmer plows his ground, plants a succession of crops and carries them to the cow. If any of the crop is left after the suceeding crop is ready, that portion is either cured for hay or put into the silo. This system promptly carried out enables a farmer to laugh at the drought. His cows are well supplied with fodder, he can keep more stock than ever before to the acre, and his Winter supply of feed is always sure. These are the facts, yet comparatively few farmers understand them. A book entitled "Soiling, Ensilage and Stable Construction," by F. S. Peer, gives the experience of a practical man, and is, in our opinion, the best thing of the sort that has ever been printed. It tells how to start the soiling system and how to keep it up. It tells how to make good silage, how to construct or make over a farm stable. The book costs $1, and we can supply it at that price. It ought to be worth $100 to any man who will study it, and then go and write his studies with green ink upon his fields.

From what I can learn a carload of young cows could be purchased in this vicinity at prices ranging from $20 to $30; old cows at a less price. It would probably take about two days to pick them up.
Breesport, N. Y. J. F. M.

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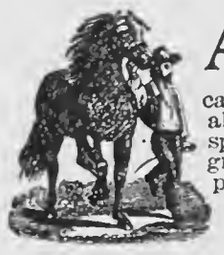

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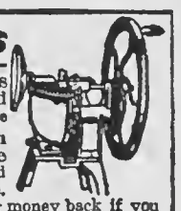
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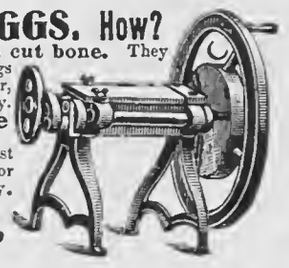

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SOME HABITS OF HENS.

Those Lively Buff Leghorns.

Regarding those Buff Leghorn pullets mentioned on page 779 of last year, we are too apt to regard the fundamental distinctness between breeds as a matter of origin mainly, when the truth is that it is chiefly the product of acquired habit. It has been assumed that Game crosses are accountable for increased liveliness and excitability of the Buff Leghorns, as contrasted with their White or Brown cousins. But these characteristics are the direct reverse of the Game's well-known character, True, the Game fowl moves with unmatched quickness, but it moves but seldom; while the Leghorn is constantly in motion. The Game has nerve, while the Leghorn has nerves, a distinction which places them at the utmost as regards temperament. We are accustomed to sum up the Leghorn's distinct character by reference to the sunny climate of their original home. But let us get down to bed-rock by assuming that from temperamental differences the food consumed goes to make blood mainly in the one instance, and in the other to sus tain nerve power. Both the Leghorn and Game have highly organized nervous systems, as distinguished from the Dorking, the best phlegmatic example among fowls, whose forces preponderate in the building up of much flesh rath r than in products to be given off. The Leghorn's temperament we may describe as nervous-sanguine, the Game's as nervous-athletic. The Game's demeanor is one of the self-assurance of the lymphatic temperament joined to capacity for great and sustained nerve activity when occasion arises, its true character being of the quietest, to distinguish it from the pronounced active habit of the Leghorn and its crosses.

The Leghorn's trait of rapid blood making is its predominant one. We may regard this as the natural concomitant of its active habits. As eggs exist first as blood, a good blood-former should prove to be a good egg-producer. The occasional poor layer found among Leghorns, though generally "scary" enough indicates by the poorly developed comb that its wearer is a poor assimilator of food, as the size of the comb within breed limits is a reliable index of vigor, and the comb grows large, or vice versa, according to the blood pressure at the period of development. Coming now to the question why the Buff Leghorns in question are wilder than White or Brown specimens under similar conditions, the answer inevitably is, because of being a truer Leghorn, judged by this criterion of temperament. Granted a Buff Leghorn is a composite fowl, I hold that many strains are doubtless composed mainly or wholly of White or Brown Leghorn blood. And who knows what in turn these are comprised of? The fanciers are at it untiringly trying the effect of every conceivable advantage of certain crosses to enhance some particular external feature. And it is safe to infer that our Leghorns contain more Spanish and Game blood than any other extraction. Why one color of Leghorns alternates with another in early maturity is a probable matter of several combined influences. Had the flocks all been of one color and breeding records kept the correspondent would doubtless have found one sire's get to surpass others in this respect. Full size is attained before maturity, and what tends to reduce the size of the pullets, other things being equal, will allow of quicker things being equal, will allow of quicker are going to be of more than their wonted size to account for their backward development. Again, as vigor is the final condition upon which usefulness as layers depend, however much stress we may put upon good feeding or heredity, perhaps these Buffs are not so vigorous as their White or Brown neighbors.

F. W. PROCTOR.

WET BREWERS' GRAINS.

In THE R. N.-Y. issue of December 22 a correspondent asks about wet brewers' grains for fattening chickens, saying that he can buy them at eight cents per bushel. While I indorse what you say in regard to their use for fattening purposes, I would like to call attention to their cheapness at eight cents per bushel where a protein feed is required. I have been feeding them to laying hens for some time in a mixture of 10 parts of the wet grains, four parts of cornmeal and one part of animal meal. This I give warm at noon—in the morning they have wheat in the sheaf, and at night some whole corn. The fowls keep in thrifty condition and lay well. If the brewers' grains are fully saturated with water they will weigh 70 pounds per bushel, and it is on this basis that the published analyses are made. But as they come to us they weigh just about double what the dried ones do, or 42 pounds per bushel. Regarding the protein content only the dried grains, at present prices, give us protein at six cents per pound; while wet ones at eight cents per bushel of 42 pounds give it at 2¾ cents per pound. This difference will pay for hauling some water, although as to extra hauling that is offset in my opinion by extra work in carrying water for the dried grains. Wheat bran at present high prices gives us protein at 7½ cents per pound, and oats gives it at nine cents per pound. I do not take into account the carbonaceous elements of the feeds mentioned. If we are after those, corn is, as you say, the thing to get. During cold weather the wet grains invariably come in good condition.

New Jersey. G. D.

WARMING THE DUST BATH.

A recent writer speaks of a warm dust bath for hens with a lamp under it. How is this arranged, and what is it for?

It is noticeable that all poultry instruction books emphasize the importance of providing a Winter dust bath for hens. It is also noticeable, especially to the disappointed novice, that the hens very rarely, if ever, use them. Certainly never when the house and the weather are very cold. It is a case of bringing the horse to water. He will drink if he wants to, and he won't if he doesn't. You cannot persuade him; and you cannot persuade a hen that it's fun or a good thing to wallow in cold dust, in a cold room. But if you will cut a hole in the bottom of the dust box and insert an old dishpan, wash-basin or what not, bottom side up in it, and raise the box off the floor so the lamp will slip under the pan, and warm the earth, it is surprising what comfort they will thus take in their bath, and the good results that follow. The space under the box where the lamp is, should be enclosed to prevent accident. Wire netting or laths is best, so as to admit to the lamp plenty of fresh air. Kerosene exhausts the oxygen so fast that a tight compartment is unsafe. The smallest-sized kerosene cooking stove, costing about 60 cents, is safe and satisfactory. W.

OATS FOR HENS.—One doesn't relish taking back what he has written particularly after the types have told it to so many people; but it is said that "confession is good for the soul." You see, there isn't much use of having a hobby unless one can ride it sometimes. Now, it has long been a hobby of mine that oats are a good feed for hens, but dangerous if fed carelessly or in the usual dry condition. Therefore, when I was told by reliable witnesses that one man had lost 75 or more hens by feeding them dry oats, I at once believed it all, and proceeded to portray the awful lesson. Witness my reward! Not only do poultry-keepers insist that oats are all right, but hens of the flock where I got my evidence keep right on dying off just the same after they are fed no more oats. The ungrateful things! I have carefully examined that "hobby", however, and I find it in good working order. My hens get one or two feeds a week of oats, but the oats are almost invariably boiled and fed warm, not hot. H. H. L.

SHEAF OATS.—A writer in Hoard's Dairyman has this to say of oats cut green and cured like hay: "Do you know that sheaf oats are one of the very best Winter feeds for dairy cows? When there is no silage on hand or none at all grown they form one of the very best substitutes. Sheaf oats, fed to cows in Winter, have a loosening effect almost equal to silage or roots. Cows fed on sheaf oats will never be constipated as they are when fed on straw or hay. I hardly know why this is, but the fact so remains. When there is no silage, cows fed largely on sheaf oats must not be fed too many roots, or they will scour. If a bushel of mangels or turnips is fed daily to cows getting principally sheaf oats for roughage, the results will be bad; this I proved conclusively last Winter."

PEARL GUINEA FOWLS.—I would like information in regard to Pearl Guinea fowls; how to distinguish male from female, how many hens to keep to one male. W. M. T.

Monroe Co., N. Y.

THE male Guinea has larger watties than the females and is usually rather heavier bodied, and in the case of the Pearl variety they usually have white on the breast, which is seldom seen on the female. One male is sufficient for from six to 10 hens. J. E. S.

POULTRY NOTES.—My hens average only about one-third to lay in Winter. April-hatched P. Rock pullets start in to lay in October. I do not house pullets until compelled by snow, giving them the run of the premises as long as possible. Moulting season varies largely in different individuals and different ages; the older birds sometimes do not get their new plumage till Winter. Raw cut bone is most valuable as an egg producer. Then, too, the grain thrown into the dirt in the scratching pen, which they have to work for, is excellent, activity producing cheerfulness and health.

Meredith, N. H. G. F. S.

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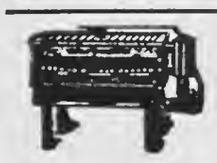
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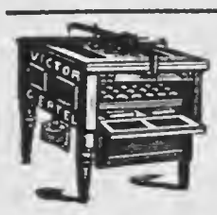
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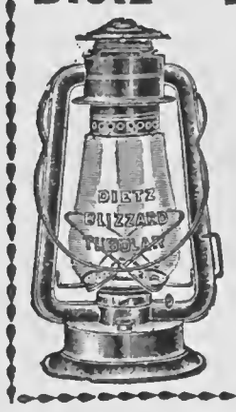

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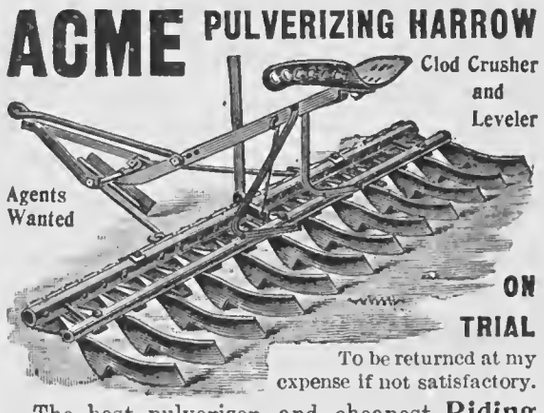

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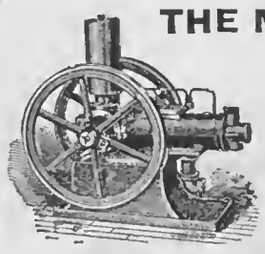

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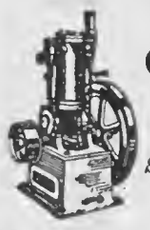

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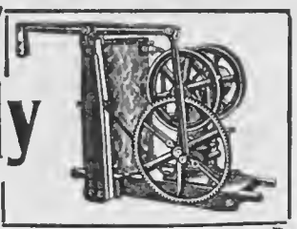

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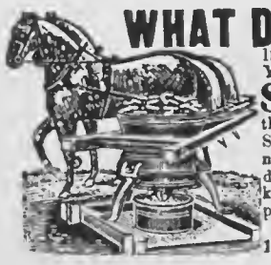

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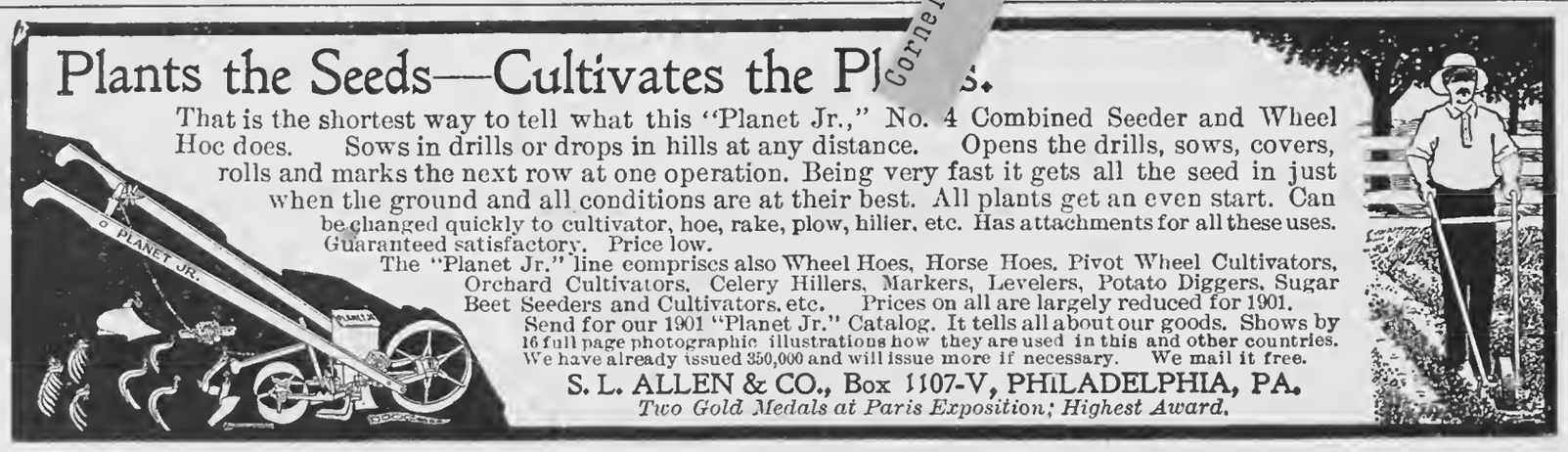

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2660. NEW YORK, JANUARY 19, 1901. $1 PER YEAR.

ALFALFA FOR NEW YORK STATE.

ITS GREAT VALUE AS A STOCK FOOD.

Ought to Be More of It.

AN OLD PLANT.—There is probably no problem of greater interest to the farmer than the production of forage for the farm animals, and especially is this true of the dairyman. At the present time he must face low prices for his products, and it becomes necessary for him if he would receive a fair profit from his business, to reduce the cost of production to the lowest limit possible. When he begins to consider this matter he is at once faced by the problem, "What can I raise that will produce a larger yield per acre, at less expense of labor and money?" It is not my purpose to enter into a general discussion of fodder plants, but to call attention to Alfalfa, which is one of the most productive. While the raising of Alfalfa is comparatively new to us, it has been grown many years in other parts of the world. It has been grown in Greece for nearly 3,000 years as a forage plant. The Romans esteemed it very highly, and Columella writes that it yielded four to six crops a year. In France the plant is known as Lucerne, and in Spain as Alfalfa. It is grown quite extensively in southern Europe. From Spain Alfalfa was introduced into South America and then by way of Mexico to California, where it still retains the Spanish name. While in California and many of the Western and Southern States it is grown quite largely, it has never been much cultivated in the Northern States. In the Eastern States it was introduced from Europe, and is generally known as Lucerne. The Alfalfa from California is said to withstand drought far better than the Lucerne of Europe, while the Lucerne withstands cold Winter better than Alfalfa.

A FAMILY AFFAIR AT MILKING TIME. FIG. 13.

GOOD WORDS FOR IT.—It has been grown successfully for the past 16 years at the New York Experiment Station, and has given large yields of green forage and hay per acre, which has been proven to have a large feeding value, and to contain a much larger per cent of digestible matter than Red clover. The soil at the Station is a stiff clay. The following yield reported for 1886, from seed sown the year previous will give some idea of its productiveness: June 11, yield at rate of 5,166 pounds dry fodder per acre; July 19, 14,385 pounds green fodder per acre; August 18, 11,795 pounds; September 23, 8,172 pounds, or a total for the season of 47,636 pounds of green forage, equal to 23 tons, 1,623 pounds. As to its feeding value, we quote from the year-book of the United States Department of Agriculture for 1896: "One hundred pounds of freshly-cut Alfalfa contain at time of flowering 2.82 pounds of dry matter, and of this the amount digestible is 3.89 pounds of crude protein, 11.2 pounds of carbohydrates and .41 pounds fat, so that the nutritive ratio is 1 to 3.1. One hundred pounds of Alfalfa hay contain the following digestible constituents: 10.53 pounds of crude protein, 37.33 pounds of carbohydrates and 1.38 pounds of fat, with a nutritive ratio of 1 to 38. Alfalfa hay is much richer than clover hay, containing for every 100 pounds 54.5 pounds of digestible substances, of which about 11 pounds are protein. The relation of the crude protein of Alfalfa hay to that of Red clover is as 11 to 7." Altogether Alfalfa is one of the best forage crops grown in the United States, and is adapted to cultivation in a greater range of latitude than Red clover. Its successful cultivation depends largely upon the character of the subsoil. Alfalfa will not do well on any soil, no matter how rich or well prepared, if it is underlaid by rock or hardpan near the surface. Neither will it stand flooding with water; good drainage is absolutely necessary. It will not stand close pasturing because the new growth is sent out from the top of main root, and if this crown is destroyed the root soon dies. To bring this matter a little nearer home I will give some of our experience with this plant, which has been most encouraging.

PRACTICAL EXPERIENCE.—On May 31, 1893, we plowed a piece of land that had been in corn the year before, and contained 150 rods of land. The soil was variable and full of weeds with some Quack grass; not a good chance for Alfalfa, but it was the best we had at the time, and so it was fitted as well as we could do it with the tools at hand, and seeded with 20 pounds of seed on June 2, lightly harrowed in. The weather was favorable, and it soon germinated and started to grow, so that by August 1 it would average 12 or 15 inches high. We harvested a light crop about August 15, and let the remaining growth remain on the ground during the next Winter. During the season of 1894 this piece was mowed three times, and gave an estimated yield of 5½ tons of hay, with a nice growth left on the ground to go into the Winter. From these results we determined to try some more, and on May 23, 1895, we seeded a piece of about one acre adjoining the other. This time we put on 20 pounds of Alfalfa seed, and at the same time one-half bushel of oats, sown broadcast and harrowed lightly. The seed started well, and about the middle of August, when the oats were in the milk, we cut from this piece nearly two tons of hay, weighed at time of drawing from field. The first piece was cut three times again in 1895, with a yield of six tons of hay. For the season of 1896 both pieces were cut three times, with such a satisfactory yield that on May 20, 1897, we seeded another strip, using seed at the rate of 20 pounds per acre with one-half bushel of oats. This last seeding was harvested in August, when the oats were in the milk and the Alfalfa about 15 inches high, giving a yield equal to 1½ ton of hay. The other two pieces were cut three times this season, with a considerable increase of yield. During the season of 1898 the three pieces were cut three times, with a yield that taxed the capacity of our barn to the utmost, besides feeding two horses and a cow all Summer, and about one-half acre was cut in June to mulch strawberries. A growth of one foot or more went down on the ground at the beginning of Winter. We have kept two horses and a cow, and they have been fed almost entirely on Alfalfa since 1895. They are kept in the barn all the year round. At the end of 1896 we had several tons of hay left, and at the end of season of 1897 a large mow full. Note the fact that as yet we have been to no other expense than that of seeding the ground, except to gather the crops.

ITS FEEDING VALUE.—Now as to its feeding value. Our experience would seem to agree with Prof. Cottrell, of the Kansas Experiment Station. He says that good Alfalfa hay contains over 86 per cent as much protein as wheat bran; that the amount of protein in Alfalfa varies from 9.9 per cent when it is poorly cured to 16.2 per cent when the best of care is taken. Average bran contains 13 per cent of digestible protein. With good handling, therefore, Alfalfa hay can be made, which is worth more than its weight of bran. In Colorado, tests show that the leaves of Alfalfa hay contain over 14 per cent digestible protein, so that a ton of them has a feeding value of 2,400 pounds of bran. Alfalfa, like clover hay, when roughly handled, loses many of the leaves. As the best feeding value is in the leaves, we can readily see the reason for care in curing the hay. We have produced a crop of heavy yield and high feeding value. Are we robbing the soil? On the prairie lands of the West, where Alfalfa has been raised for some time, they have found that the soil is actually richer after growing Alfalfa for a few years, and will produce larger crops of grain. The reason of this probably is because its roots go very deep into the soil, and pump up the mineral elements from the lower strata that could not be reached by other crops. This is another point in favor of Alfalfa; it does not impoverish the soil. Then again, the manure made from

feeding the hay has a considerable value if properly handled, and by this means we can save a large part of the fertilizer bill, as the nitrogen is the most expensive element to buy. But above all others the best feature of Alfalfa is that it will furnish green fodder for almost the entire Summer. There are some other points that might be mentioned, but enough has been said to show some of the possibilities of this crop. It is being raised in many parts of this State with good success, and might be in a great many more, if the farmers would give it a fair trial. In sowing Alfalfa always use new seed, as old seed will not germinate so well. If the work is properly done success is quite certain. The coming Spring I expect to sow some Turkestan Alfalfa, as it is said to withstand drought much better, and will report upon it later.

Tompkins Co., N. Y. D. R. P.

CUTTING AND LOADING ICE.

Many articles have been written for the farm papers describing methods of harvesting ice on a large scale. The plan described below is simple, practical, and two farmers can work together and put up eight or 10 loads of ice in a couple of days. They can "change work" with each other, and thus fill two small ice houses at almost no expense in money out. We know how this plan works from personal experience during the last 15 or 20 years. We are obliged to go over three miles away from home for our ice in order to secure a pure article. It is better to haul on sleighs, but we have occasionally been forced to use the wagons for want of snow. For cutting the ice we use a regular cross-cut champion-tooth saw, taking a hand off from one end. A square (see A, in Fig. 14), is made of a piece of six-inch board, with brace attached to make it rigid. This, with a 16-foot two-inch plank, is used for laying out and marking off the squares of ice. Fig. 14 shows a square hole cut, with all but three cakes of ice removed. At the left are eight more cakes marked out ready for cutting. The saw is waiting for an ambitious manipulator. The cakes should be cut as nearly straight as possible, but many operators find it difficult to keep the saw from running to one side, especially when the ice is thick.

The ice derrick is our own invention, and is more convenient and safer to use for lifting the cakes from the water and hoisting into the sleigh or wagon, than any other plan we ever tried. Use two poles to make the derrick and sweep. The upright, B, may be cut from a piece of 2x4 hardwood. It should be about 12 or 14 feet long, well braced at the base. The bottom should be smooth in order to slide freely over the ice. The sweep, C, should be about 16 feet long, with a rope attached to each end. It is pivoted on top of the upright, B, one-third or more projecting over, where the ice tongs are attached. The other two-thirds, with the rope, D, give plenty of leverage for lifting the heavy cakes. After a season of cutting cakes the two icemen proceed to lift out and load up. One seizes the togs and catches on to the floating cakes, while the other presides at the rope, D. The derrick is quickly given a slide just far enough to swing around and hoist the cake into the sleigh box.

A load is quickly made ready for transportation to the ice house by means of this derrick. There is less heavy lifting and straining, with the attendant danger of getting wet or slipping into the water, as when one stands on the edge of the ice and lifts the cakes out by main force. There is also less danger of slipping and being crushed by a heavy cake of ice when loading into the sleigh. The derrick costs less than $1 to make, can be set up or taken down at a moment's notice, and, if cared for, will last for years. It should be made strong enough to handle the heaviest cakes of ice. J. H. BROWN.

WHAT A CEMENT STABLE FLOOR DOES.

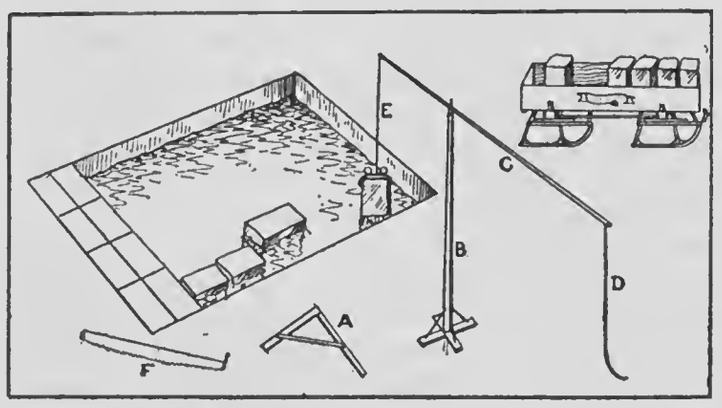
In your issue of May 19, 1900, you answer a question from me in regard to cement manure pit with large cut furnished by L. A. Clinton, of Cornell University. The manure pit is an accomplished fact, as well as a cemented stable 14x30; manure pit 12x30, all three inches thick. Two coats, first small gravel up to the size of Black walnut, one of cement to five of gravel; second coat coarse sand screened from the gravel, one of cement to three of sand. I did not put on the smear coat of cement for a third coat, as I thought it would make it too slippery. Between six and seven barrels of cement (Portland), 400 pounds each at $2.60 net per barrel, were used. My hired man and myself were the high-priced masons who did the civil engineering and labor at $1 per day. Cost, including my time, about $25. Fig. 15 shows the whole thing.

Now for results in water (editorial page, December 29). I am saving every day more than 15 cents' worth of urine which but for the cement would have gone to waste, that is $4.50 per month. So that the first Winter of its use I will have received my money back, to say nothing of gain through added warmth and manure being housed and worked over by hogs like at Hope Farm. Now let the man with horse stable who asked about cement for a covering try Portland cement one part, coarse sand three parts and two inches thick; second coat cement and sand equal parts, one inch thick, and I do not believe it will crack. You gave me a little primer science (privately) once on a time which you ought to keep in print somewhere in every issue for the benefit of beginners like myself. The cement floor is a not unnatural sequence to the knowledge thus obtained. A 16-quart pailful of urine is worth nine cents. At State College, Pa., in 50 days two cows gave results like this: Value of manure, $3.56; urine, $6.06, a trifle over 1 5-7 in favor of liquid. Stop up those augur holes in your cow-stable floor, and do a little figuring, and you will commence to see that cement and a little labor will accomplish something. E. D. R.

Crooked Creek, Pa.

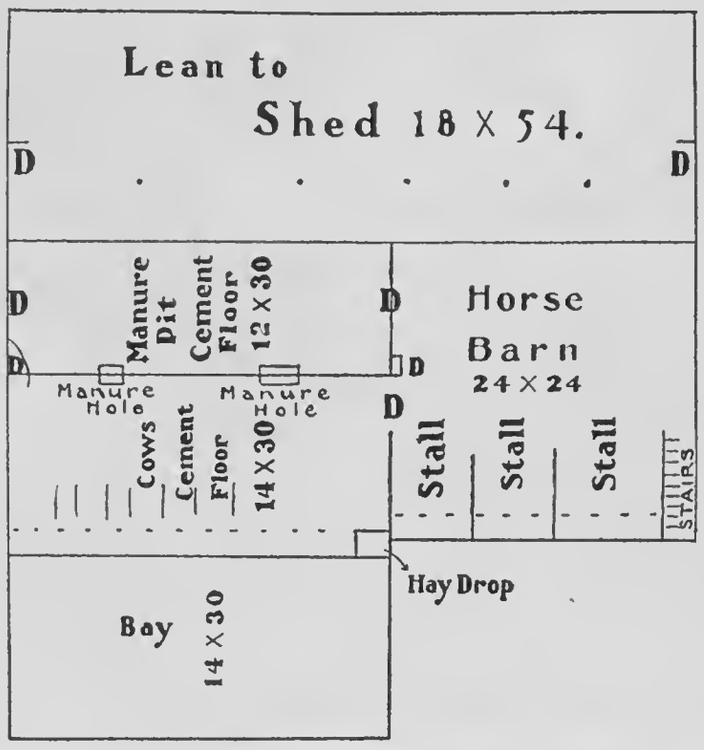
FARMING DIFFICULTIES IN NEW YORK STATE

In connection with the farmers' reading course of this institution, which is essentially a correspondence



CUTTING AND LOADING ICE. Fig. 14.

course, very many interesting letters are received. The object of the course is to help the farmer to a better understanding of the business of farming and the principles of agriculture. Specific difficulties then come up, as well as troubles of a general nature. In looking over the list of obstacles which beset the farmer, one finds that they are divisible into two general classes, those that pertain to the farm, and those that pertain to the orchard and garden. One finds, again, that the farm troubles are of two kinds: first, those in relation to the soil; and, second, those affecting the product of the soil (the farm crop). Orchard troubles are divisible into the same two categories, troubles which are connected with the character or management of the ground, and difficulties of plant growth caused by the presence of injurious enemies. Of course, the soil, and the difficulties connected therewith, embrace the larger number of inquiries. It is reasonable, too, inasmuch as it is nature's labora-



PLAN OF BARN FLOOR. Fig. 15.

tory; and this laboratory, like many of men's laboratories, occasionally gets out of order.

A farmer writes: "My land does not now yield good crops, though I manure it every year with commercial fertilizers. What can I do?" Another man says: "My *new* land does not yield half the crop of wheat that I get from my old. Why?" Then another says: "I have a field with clayey hollows and sandy knolls. Will it pay to make an exchange of soil, carrying the sand to the hollows and bringing the clay to the knolls?" Again another says: "I have a sod orchard of Greenings. The trees were planted 30 years ago. They have not been pruned or cared for and they bear small crops of poor fruit. Can this orchard be renovated?" These are samples of the problems presented and questions asked. They are live problems, too, with a large per cent of the farmers of the State. Those who attend farmers' institutes, read agricultural papers and obtain experiment-station literature, know the importance of the gospel of humus for worn-out lands. Yet, it is a regrettable fact that this gospel while old to the few, is yet new to a large number. How unfortunate this is! The man who says that his farm no longer yields profitable crops, is evidently one of those to whom this gospel should be preached. He should know the value of clover and cover crops as specific soil regenerators. The Farmers' Reading Course Bureau is attempting to coöperate with the farmers' institutes and other agricultural intelligence agencies in disseminating this knowledge. Why new lands are unproductive is quite another question. Specific and definite directions cannot be offered in these cases. Suggestions only can be made. One immediately queries as to the physical condition of the soil—whether in the process of clearing it has been burned over, and in this way the surface humus destroyed; whether it has been plowed in the Fall and the furrows thrown up so that the fullest benefit of frost action might be secured; finally, whether it is not in necd of underdraining.

In the case of the man who wants to swap clay for sandy soil, we have still another question. Here it is largely one of expense. There is no doubt that such an exchange would be mutually beneficial, but the practicability of it would hinge upon the expense. Probably the physical character of these soils might be improved cheaper, by working in coarse yard manures in the case of the clay and green manures in the case of the sandy loam. The question relative to the renovation of the old orchard is a very common one. Here, again, we have another factor entering into the success of the undertaking and affecting the results very materially. The question here is one of quality of labor. Some of the operations connected with the renovation of that orchard require judgment and skill. The ground will need to be plowed and cultivated. This can be done with the ordinary farm labor. The trees will need pruning and spraying. Here judgment, personal interest and some practical skill are required. If the owner is in such a position as will enable him to oversee the work, if he knows how it should be done, or can do it himself, then a large share of the difficultics are removed. If, on the other hand, he is a city man, and resides some distance from his orchard, and must depend upon such labor as is easily obtainable, then the undertaking assumes a much more doubtful complexion. The issue is quite uncertain. There is no doubt, however, that the renovation of such an orchard is entirely feasible and a safe business proposition if knowledge and intelligent labor are available. In considering the character of letters one receives in connection with this farmers' reading-course movement, one cannot help being more and more impressed with the favorable attitude of the New York farmer toward the effort being made for the improvement of his position. This is exceedingly encouraging, and augurs well for the ultimate good of the movement. JOHN CRAIG.

Ithaca, N. Y.

FARMERS' INSTITUTES.

The Earliest Meetings.

We have had annual meetings of boards of agriculture, agricultural societies, farmers' conventions, lectures on agriculture and science, farmers' clubs, etc., but the term "institute" conveys a meaning a little different from any of these. One or more addresses or lectures on some topic pertaining to rural life, to be followed by discussion and questions by the audience, are the leading features. Local history, music, show of fruits or other products may come in to add interest and instruction. About 50 years ago the Farmers' Club of the American Institute in New York held weekly meetings of this pattern for many years. Greeley and other New Yorkers could tell what they knew about farming, while farmers from all parts of the country were invited to present their special topics, the dairy, cattle breeding, horticulture, sheep, ornamental tree planting, etc. These addresses were followed by questions and discussion, distribution of fruits or scions, etc. These meetings were regularly reported in the New York dailies until it became natural to use the term "institute," as applied to a similar class of meetings. A greater range of topics was allowed than would now appear in a well-managed institute, and some men were always ready to ventilate their theories upon an unsuspecting audience.

I used often to attend these meetings whenever in the city and on one occasion heard Mr. Pell, of Pelham, the man whose skill in raising Newtown Pippins and success in shipping to England gave rise to the apple-shipping business of the present day. Mr. Pell gave an illustrated lecture on the effects of galvanism on the growth of plants. He exhibited specimens, in pots, of tomatoes and other plants treated with galvanism, compared with others under the same conditions, the galvanic action being left out. The results were so wonderful and convincing that I immediately arranged for testing the question myself, as the world was crazed by the reports of similar

experiments in pots and field in Britain. I obtained my apparatus, but in the meantime so much doubt was thrown on the accuracy of these experiments, that I have left this question to be tested and settled by the experiment stations, if any have faith enough to make the trial. Squibs like this appeared in the papers: "It is said that with proper care by the use of galvanism we can so hurry up growth that we may plant the seeds of cress in the morning and raise a salad for a late dinner." While we have not yet got the hasty-grown salad has not galvanism done more wonderful things for us in modern civilization?

Connecticut. T. S. GOLD.

Why They Are Called Institutes.

Teachers' institute (U. S.), a gathering of school teachers for instruction and mental assistance. Institute, v. t., to educate; instruct. We speak of the Cooper Institute: the institute of technology. The lectures of Dr. George Birkbeck to workingmen in Glasgow, about the year 1800, were the beginning of the first mechanics' institute. The above definitions are mostly taken from the Standard Dictionary of the English language. The use of a word with a certain meaning, by educated persons, after a time makes it correct. The Institute of Technology in Boston, Mass., might be called a college as we now use the term. The Pratt Institute in Brooklyn is a technical school. A farmers' institute is now spoken of as college-extension work. On August 30, 1871, the trustees of the Illinois Industrial University, now known as the University of Illinois, passed a resolution that the regent and corresponding secretary be authorized to make such arrangements for holding during the coming Winter farmers' institutes at the University and in other parts of the State, as they might find advisable. "We want to bring the live, practical men and the live scientific men together that all may be benefited." The regent of the University, Dr. John M. Gregory, was the leading spirit in starting institutes in Illlnois. Formerly he had been State superintendent of public instruction in Michigan, where he planned teachers' institutes to be held in different portions of the State. Within 10 or 15 years we have heard much of extension work by universities, which some have said originated in England, but the Illinois University began university extension two years before Cambridge, England. W. J. BEAL.

Michigan.

A LANTERN MOTH TRAP.

I send circulars of a new moth trap. What do you think of it? I am a firm believer in spraying, but if this trap will eateh the Codling moth will use it, too.

Bradrick, O. E. G. C.

Most of the claims made for this new moth catcher or trap in the advertising circulars sent out are preposterous; and the use of such terms as "stinging fly," "borer fly" and others, shows that the inventor is not familiar with the insects which infest orchards and other crops. While it is true that an ordinary lamp or other sources of light will attract many different kinds of insects, it is also equally true that many other insects rarely fly to lights. Again, while lights or "trap lanterns" or "moth traps" will attract some of the adult forms of injurious insects, like certain moths and beetles, there are many injurious insects of which a few of the adults are only accidentally caught in such a trap, and, furthermore, many beneficial insects are also caught, sometimes enough to offset all of the injurious kinds. I make these generalizations regarding insects attracted to lights, and thus liable to be caught in a "trap-lantern," from a season's experience in experimenting with a series of such lanterns in various locations on a large farm. My "trap-lanterns" were set near or in orchards, near gardens, in cornfields, in grain fields, and in meadows. Thousands of insects were captured in these lanterns, and their dead bodies carefully preserved an dstudied. Large numbers of cutworm moths and of tent caterpillar moths flew into our lanterns, but a large proportion of these were males, so that we doubtless reduced the numbers of the progeny of these insects, but very little. With most of the insects we caught it was also true that a large majority were males. Most of the beetles we trapped were May beetles or "June bugs," but few of them were females. We caught no Plum curculios, no Potato beetles, no beetles of either of the Apple-tree borers, none of the moths of the Peach-tree borer, no Codling moths, and in fact, but comparatively few specimens of any serious farm or orchard insect pest, except the cutworm moths, tent-caterpillar moths and "June bugs" mentioned above. I do not believe the "new moth catcher" will entrap enough Codling moths, Plum curculios, Potato beetles or any orchard pest to pay for one of the lanterns.

The fact that many different kinds of moths are thus often attracted to lights or to alluring bait in large numbers has led many to believe that the Codling moth could also be lured in sufficient numbers to make it pay to build fires or to place trap-lanterns in an orchard, or to hang sweetened or other baits of various kinds in the trees. Many experiments have been tried along this line by such reliable observers as Riley, Cook and Atkins, and so few Codling moths were captured as conclusively to show the entire futility of attempting to check the pest in this way. Many collectors of insects also report very few captures of the moth at their lures or at lights. Most of the reported captures of the insect in large numbers at baits or traps are the results of mistaken identity. In short, practically all of the definite evidence we have regarding "trap-lanterns" or "moth traps" shows that they are of no use in reducing the numbers of orchard insect pests. One thorough spraying with Paris-green and Bordeaux Mixture at the right time (just after the blossoms have fallen in an apple orchard) will be more effectual against insect enemies than a half-dozen "new moth catchers" in each tree. This notion that insects can be caught at wholesale with a light and trap has been an alluring one to many inventive or restless minds, and hundreds of such devices have been exploited, many of them patented. But none of them has fulfilled the hopes and claims of the inventor when they are put into the hands of experimenters or hard-headed practical agriculturists. M. V. SLINGERLAND.

BUILDING A STONE ROAD.

Ordinarily we find that stone broken uniformly will compact together upon a dry hard earth foundation so that eight inches in depth is sufficient for all practical purposes. It is put down in courses as follows: After the earth foundation has been thoroughly compacted by rolling, and made as uniformly as possible with the proper slope from center to side ditches, a

A HAND-RAISED PIG. Fig. 16. See Page 46.

shoulder is placed at the outer edges of the stone construction. The first course is four inches in depth. This is put on uniformly, and the roller passed over it a few times to bring the pieces of stone together as nearly as possible; thus lessening the voids. The voids are then filled with ground stone from the crusher, by placing it on top of this broken stone and rolling it. A light sprinkling to work the particles down into the foundation is serviceable, but water ought not to be put on in quantities so great that it will run through the stone and soften the foundation. The rolling should be repeated until the mass becomes consolidated together, and if it is left for a while for the action of the air and sunshine it will take a set and become hard. This course we call the "stone foundation." This may consist of large stones from two to 2½ inches in diameter on the average. The larger stone is used so that the whole product of the crusher can be utilized.

The second course is of stone not greater than 1½ inch in diameter on the average placed on the road in the same manner as the foundation stone. More water can be used on this course, as it will not be likely to pass through, and on the surface we put the ground stone about an inch thick, and as it disappears down in the stone to fill the voids we place more on when necessary, and wet and roll until the whole surface becomes smooth and hard. In this way we get the voids filled in the bottom of the course first. It may be necessary to put on the ground stone several times before we get all the voids filled. Too much shade is damaging to a road, while a little shade is no injury. Trees ought to be at least 50 or 60 feet apart to allow the air and sunshine to dry the roads after rains. When the leaves fall they should be removed by sweeping or raking them up when they are dry and burning them. This is very important, and should not in any case be neglected, as the leaves retain moisture which in time will soften the surface of the road bed, and cause it to become rutty, work up into dirt and cause a certain amount of mud as a result.

The road should, at all times, be kept clean and free from mud and dirt, and any vegetable matter that would tend to cause it to be soft and muddy should be removed. As to the cost of the road, that depends upon so many conditions that it would be impossible for me to tell. It depends largely upon the cost of the stone, which embraces the quarrying and hauling. The cost of hauling depends upon the distance, the quarrying upon the condition of the stone in the quarry. The crushing, however, with a portable crusher will cost about 20 or 25 cents per cubic yard. Bowlders found in glacial districts make excellent material for roads, as they are generally found to consist of igneous rock. Flinty rock is not suitable for surfacing a road, as they crush too easily under heavy travel, but flinty rocks and fine dust, sand or shale can be used in the foundation course. I may say in regard to cost of roads where the stone is furnished free of charge and the haul is not over a mile or two, and not include the cost of grading, or preparing the roadbed, the stone construction can be made from $1,200 to $2,500 per mile. E. G. HARRISON,

United States Special Agent and Road Expert.

COVER CROPS IN APPLE ORCHARD.

The articles that have recently appeared in The R. N.-Y. by Prof. Craig and others lead me to say that about the best cover crop I find for my orchards is chickweed. If the land is as rich as it ought to be this weed will take care of itself; with the first Fall rains it will come up quickly, a perfect mat, grows rapidly. Often with us it gets "knee high"; grows all Winter whenever there is an open time. It catches most of the leaves and holds them firmly until time to be plowed in Spring. When the proper time comes chickweed is quickly worked into the soil, furnishes with the retained leaves much humus, and never grows during the dry weather of Summer. But why plow the apple orchard at all? Another year's experience has more fully grounded me in the faith, that constant cultivation is *not* the best way to treat an apple orchard. Keep it constantly in pasture, and treat it properly, and it will be more healthy, grow more fruit of a higher color, better texture and flavor, and that will keep longer and shrink less than it can be made by any system that involves constant cultivation; treated properly, remember that.

J. S. WOODWARD.

A HEMLOCK HEDGE.

If Reader, page 864 (December 29) wishes to set a native hemlock hedge and not have to fill in or leave spaces where little trees die, he will take Mr. Van Deman's advice, and select grass-grown bushy little trees. He will do well to get all as nearly two feet high as possible, and cut back to about 15 inches, taking off no branches. He will wait till past the time for setting trees that shed their leaves, and until he can see the little pale-green new growth starting out. Then, if he is careful in taking up, puts in plenty of water while the earth is being filled in, and packs the ground firmly, he will probably lose few, if any, plants. If he wished to be quite sure in setting his hedge he could take up his wild trees and set them in an easy place to dig, leaving them for two years. They will then, the living ones, have a mass of fibrous roots that will insure them being safely transplanted if reasonable care is used. He will get a hedge that way about as quickly as by setting wild trees in the hedge row, and if he cuts it properly a little every year he will have as beautiful a hedge as grows, taken the year round. R. S. HINMAN.

Connecticut.

FISH FOR CORN FERTILIZER.

I notice in your issue of December 1 this question: "Will whitefish at $1 per 1,000 do for manure alone for corn?" In the Spring of 1899 I put on to one acre of land 20,000 whitefish, for which I paid $25. The fish were spread and plowed in, and when well harrowed the lot was planted to Sciota corn. It was planted in hills three feet 10 inches each way, cultivated and hoed twice. No other fertilizer of any kind used. Result, over 110 bushels of ears of corn, good and sound. The corn a little more than paid for the fish. The stover nearly paid for the labor, so that I called it an even thing. In the Spring of 1900 the same ground was plowed and planted just the same without any fertilizer whatever. Result, 125 bushels good, sound, nice Sciota corn, stover nearly paying for the labor. The corn cost me the Fall of 1899, 50 cents per bushel, shelled. In 1900 it cost me only five cents per bushel, shelled. The land is in better condition for any crop now than in the Spring of 1899. This plot had been planted two previous years to corn and potatoes; with a little phosphate in the hill and a promise of fish (which it did not get). I have seen fish used for manure for corn more or less for 60 years, and cannot call to mind a single failure to bring a fair crop if put on before June 15. I do not know how it may be elsewhere, but I do not think any one who had to buy fertilizer for corn should be afraid to buy fish at $1 per 1,000. On my land I can get better results (in corn and rye) with $1 worth of fish than $2 worth of any other fertilizer.

Madison, Conn. H. J. M.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Self-Fertile Apples.

W. H. S., Rocky Hill, N. J.—Is the Rome Beauty apple self-fertile? If not, what variety is best to plant with it? Will Stayman and Rome Beauty fertilize each other?

ANS.—Yes, I believe the Rome Beauty to be self-fertile, the Stayman is so new that there is very little experience upon which to base an opinion as to its merits as a pollenizer. If it is like its parent, the Winesap, it is valuable in this regard. I would have no hesitancy in planting these two varieties either singly or together. H. E. VAN DEMAN.

Hales Hickorynut; Gilbert Black Walnut.

B. C., East Freedom, Pa.—Can any reader of THE R. N.-Y. tell who grows trees of Hales shellbark hickorynut and the Gilbert Black walnut?

ANS.—There is no one now propagating either of the nuts mentioned, so far as I know. They are very difficult either to bud or graft, and those who have tried to propagate these and other varieties of the hickorynut and walnut have met with very little success. The whole matter is in the experimental stage as yet. H. E VAN DEMAN.

Germinating Mahaleb Cherry and Apple.

J. D. G., Wichita, Kan.—1. Will Mahaleb cherry seed sprout well with same treatment as peach pits? 2. Will it do to plant apple seeds now, or is it better later on, say about February 1?

ANS.—1. Yes, Mahaleb cherry seeds ought to sprout about the same as those of the peach, if they are treated properly. This requires that they be kept moist all Winter in moist earth in a cellar, or in the open ground, planted or stratified. 2. Apple seeds could be planted any time during the Winter when the ground is in workable condition. However, if they are now in good, moist condition they may be expected to do as well if planted in the early Spring. H. E. VAN DEMAN.

Fruit Questions from Colorado.

C. H. C., Paonia, Col.—1. When and how shall I spray apples to protect from Codling moth? I have not been successful so far. 2. Is the Bartlett the best market pear? How does the Anjou compare with it? How would the Anjou (being a much stronger grower than the Bartlett) do to top-graft to that variety? 3. Do you know anything about those new varieties of apples that a western nursery is praising so highly, the Black Ben Davis, Senator, Apple of Commerce and Stayman? 4. Is the White Winter Pearmain a good-selling apple? 5. Is the Carman peach better than the Elberta? 6. Is the Bean spray pump one of the best?

ANS.—1. The proper time to do the first spraying of apples for destroying the Codling moth is just after the bloom falls. Careful experiments have thoroughly proved this to be true. The cause of failure to protect the fruit from this pest, as mentioned, was probably due to the inefficiency of the poison or lack of thoroughness in its application. It is not very difficult to save at least 75 per cent of the fruit by using the spray-pump in a right manner. Prof. Kedzie's preparation of white arsenic and lime is one of the most effectual and cheapest poisons known, and better as well as cheaper than Paris-green. 2. Pear growing is a profitable business if wisely followed. The Bartlett is the leading variety for market, except it be the Kieffer. Anjou is a very good pear, but it is so large that it falls rather badly. The trees would make a very good stock for grafting other kinds upon. 3. The apples mentioned are all so new that it is impossible to give an intelligent opinion of them as to their behavior over the country, except in case of the Stayman, which is quite well tested and known to be valuable. 4. White Winter Pearmain sells quite well where it is known, as it is of good quality, but it is of the wrong color to be very attractive in the general market. 5. Carman is a very good peach. It is better in quality than Elberta, but not more popular in market. 6. The Bean spray pump is a very good one.

H. E. VAN DEMAN.

Newtown Spitzenburgh.

Z. W., Cicero, N. Y.—I would like your opinion of the New York Vandevere (Newtown Spitzenburgh of the West) apple which I find mentioned in a recent catalogue. About 30 years ago I bought an apple or two of this variety at a stand in Syracuse. I never before and never since have found its equal for superiority of color and flavor till last Summer at a neighbor's, but under a different name—Winter Strawberry. I have never seen the same apple mentioned in any nursery catalogue before or since till recently. I am setting out a young orchard, now in my ninetieth year of age, and though I may not live to see any fruit from it, I do not wish to entail upon others apples or orchards which are not satisfactory to myself.

ANS.—Newtown Spitzenburgh is the approved name of one of the choicest apples in existence, so far as quality is concerned, and it is also quite handsome. It is often called New York Vandevere, especially in the Eastern States. I have never heard it called Winter Strawberry, although some may do so. I have seen it in many sections of the country and have long prized it so much that when I planted a family orchard on my farm in Kansas this was one of the varieties selected. It is not a very late keeper, and the tree is not satisfactory under some conditions, but it is well worthy of a place in almost any select list of choice Winter apples.

H. E. VAN DEMAN.

Planting an Orchard.

B. C. B., Moscow Mills, Mo.—1. I have recently come in possession of a piece of thin clayey land, and I wish to plant nursery stock on it this coming Spring. Would you advise the use of commercial fertilizers? If so, what is the best, in what form would you buy it, how would you apply it, and how much in quantity? 2. I have a lot of Summer, Autumn and the least desirable Winter varieties of apple trees, two and three years old. Would you advise planting them and afterwards top-graft to desirable commercial varieties, or would it be better to plant the commercial varieties? I have no sale for the first, while the leading commercial varieties are sold easily at $65 per 1,000.

ANS.—1. An abundant application of well-rotted stable manure would be better than any kind of commercial fertilizer, because the land is doubtless deficient in humus. In addition to the stable manure it would be beneficial to use the commercial fertilizers also. A mixture of 300 pounds muriate of potash, 500 pounds acid phosphate rock and 200 pounds nitrate of soda would be about right for one acre. 2. I presume it is intended that the trees mentioned are to be planted in orchard form and not in a nursery. It would seem, under the circumstances, that it would be wiser to plant them out and top-graft them the second year after setting than to destroy them. H. E. VAN DEMAN.

Castor Pomace and Insects.

J. R. B., Starke, Fla.—I wish to know whether castor-bean pomace used as a fertilizer will destroy insects in the soil. Will they eat it used in that way? We have an insect in this State called the Cricket-mole, which is very destructive to newly-set strawberry plants and other crops.

ANS.—I believe that castor-bean pomace will not have the desired effect in destroying insects. It is, in my opinion, nothing but a superstition, and I have heard the same thing advanced as a reason why the castor bean should be planted about the houses, but have never yet seen an instance where it produced any effect. H. HAROLD HUME.
Florida Exp. Station.

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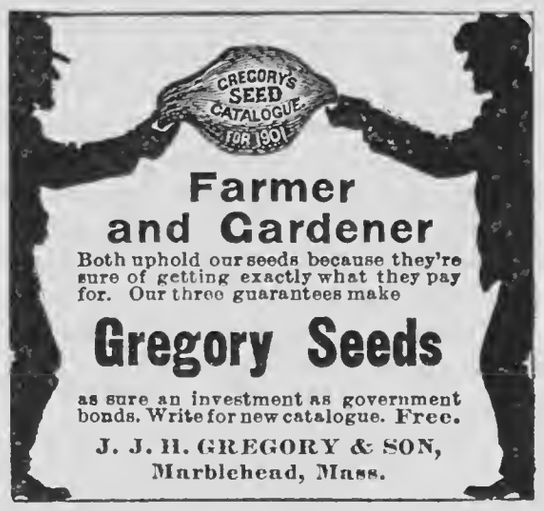

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☞ Should you object to paying ten cents for a seed catalogue (even though it is worth a dollar), then write a postal card for Burpee's "SEED-SENSE" for 1901,—a "strictly business" catalogue of ninety pages. W. ATLEE BURPEE & CO., PHILADELPHIA, PA.

Peck Pleasant Apple.

Reader, Bergen Co., N. J.—Is Peck Pleasant an apple of value for Saddle River Valley, or is it superseded by others?

ANS.—Yes, Peck Pleasant is one of the very best of our Winter apples in regard to quality. It is of rather dull color, being greenish yellow, but it is good enough for anyone on close acquaintance. It is suited to almost any section where apples succeed, and, no doubt, would do well in Bergen Co., N. J., although I have never seen any specimens from there, so far as I remember.

H. E. VAN DEMAN.

Apple Seedlings.

N. B., New Cumberland, Pa.—Do the nurserymen buy apple seedlings and graft them now as they did 20 years ago? I would like to grow about 200,000 to sell. Twenty years ago I could have sold 500,000 as easily as 5,000. I received $4.50 per 1,000. They averaged about three lengths to each root. Is there a demand for them now, and where can I buy apple seeds by the bushel?

ANS.—Yes, the nurserymen follow the same methods, practically, in propagating apple trees that they did 20 years ago. The most common method is by root-grafting on pieces of one-year-old seedlings in the house during the Winter months. Budding in the nursery row is also followed to some extent. This is claimed by some to produce a better tree than by root-grafting, but in practical orcharding I have not been able to see any material difference. Apple seeds are usually bought of a few of the wholesale seedsmen, and sometimes of the wholesale apple-seedling nurserymen. H. E. VAN DEMAN.

Stable Manure for Potatoes.

J. G. K., Karns City, Pa.—I have a five-acre lot that was in oats last year; former crop unknown. I expect to put on it about 125 two-horse loads of manure, plow it under, and plant to potatoes. The ground is mellow creek bottom, naturally good. Would you consider this plan all right, or what more can be done to get a good crop?

ANS.—We do not like to use stable manure heavily for potatoes except on low or sour soils. On lighter soils our experience is that fertilizers give better results. We would prefer to use half the manure you mention and 600 pounds per acre of a high-grade fertilizer. The objection to stable manure is that it neutralizes or sweetens the soil, and thus encourages the growth of the scab germ if it be present.

A Liquid Grafting Wax.

J. J. S., Fowblesburg, Md.—Give recipe for making grafting wax in a liquid state, and in wax state.

ANS.—The following recipes have been extensively used and are reliable: Hard wax: resin, four pounds; beeswax, one pound; half a pint or more of raw linseed oil, free from all cotton-seed oils or other adulterants. Melt all gradually together, turn into cool water, and pull until smooth. More oil can be used if too hard. Liquid wax: good white resin, one pound; beef tallow, one ounce. Melt and remove from the fire. Add gradually eight ounces of alcohol, stirring until mixture is smooth. Keep in closed bottles and apply with a brush when used.

Tobacco Stems for Green Lice.

F. H., Sarnia, Canada.—Could you tell the best way to get rid of green fly on lettuce in the hothouse?

ANS.—Tobacco stems at the rate of 100 pounds to each 20 feet of bench or bed, placed in the walks or hung in nets under the benches, should rid your lettuce of green flies or aphides. Keep them damp by frequent sprinkling. The stalks may also be strewn among the plants. If the insects have gained a strong foothold it may be necessary to fumigate with damp tobacco. Use about one pound of stems to each 100 feet of glass, and repeat the fumigation three or four times a week until the aphides are destroyed. Do not let the tobacco blaze, but keep it smouldering. It is best to avoid the use of smoke when possible, as it affects the quality of the lettuce unfavorably.

BITS OF TALK.

When is the best time to sow Red-clover seed?

In the Spring, at the last heavy frost. We would sow early in the morning on the frozen crust. The later thaw will work the seed in.

* * *

Why do you consider it so necessary to save the liquids of the manure?

It has just been shown by the Pennsylvania Experiment Station that the urine of cattle contains half the nitrogen and three-quarters of the potash in the food. These liquids have "legs"; that is, they run away if permitted to do so, aud thus squandor over half the manurial value in the food. Plaster or absorbents are stable policemen to arrest this fertility.

* * *

What is the simplest fertilizer mixture for fruit?

Three parts of fine ground bone and one part muriate of potash. This is not always the best or the cheapest.

* * *

Is hard-wood sawdust injurious to the soil when it is used as an absorbent for liquid cow manure?

No. Sawdust, when fresh, contains an acid which might injure soils inclined to be sour. The urine of manure neutralizes this acid. It is then safe to use.

THE "WONDERFUL INSECT" described by Prof. Slingerland (December 22, 1900), in addition to the way in which it lays its eggs on stones or brush overhanging or projecting above the surface of the water, also drops the eggs in the water, as I have seen them doing in my ponds in North Carolina. They fly over the water, darting down to the surface, and dropping an egg several times a minute. That the larva is eaten by fish is very certain, as it is one of the most attractive baits for bass and trout, and as I always examine the stomach of every fish I take, I have abundant proof that trout prey on these larvæ. Here at least these flies do not remain hidden during the day, but on the contrary are very active, poising themselves in the air over or about a boat, as if curious to learn what it is, as well as flying down to the water, evidently examining the flies with which one is fishing. I have no bass in my waters, but plenty of trout, both the common variety and the Rainbow trout, and both these will take the hellgrammites as also rise to the fly itself, although I have never seen a fish take one; possibly not being captivated by its appearance. H. STEWART.

North Carolina.

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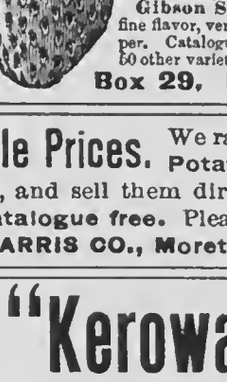
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TREES AND PLANTS—Choice new varieties, such as Premo Dewberry, Brilliant Raspberry, Bobolink and Marie Strawberries. Old standard sorts of Trees and Plants. Free catalogue telling about them. MYER & SON, Bridgeville, Del.

The Tree Breeder just out, will interest every **Rural reader** who grows fruit for home use or market. The popularity of this little publication shows its **real worth.** It is free to tree planters. This number contains articles by Profs. H. E. Van Deman, John Craig and M. V. Slingerland. We have also been assisted in its preparation by other noted horticulturists. Our method of propagation, **breeding from selected bearing trees,** is indorsed by thousands of progressive fruit growers and horticulturists. You cannot afford to miss our **special offers,** page 31, and carefully prepared **collections** for the **home orchard,** page 32, and discounts on early orders.
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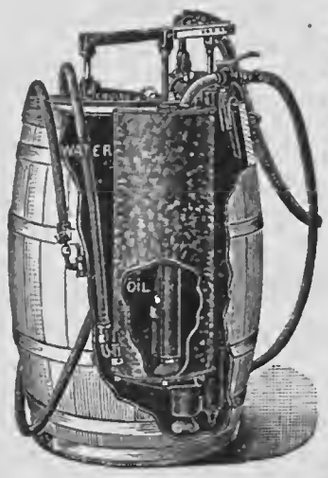

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Warerooms: 16 Murray St., New York.

Ruralisms

NOTES FROM THE RURAL GROUNDS.

THE GREENHOUSE CHICKENS AHEAD.—The small broods of early chickens protected in the greenhouse, as noted in THE R. N.-Y. on page 208 and 338, 1900, are proving winners in the laying record. The Summer-like warmth and security from drafts gave them such a start in development that egg-production commenced remarkably early in the Fall, and is kept up at a most satisfactory rate. They get about as good care as chickens can reasonably expect, their individual wants and peculiarities being catered to by their attendant, but the advantage of a good start is plainly evident. A good variety of grains, consisting of corn, wheat and oats, a hot mess of cooked bran and table-scraps every morning, and a light, dry, scratching shed, furnish them with the needed facilities for the manufacture of the desired eggs. A particular feature is made of supplying them with clean, fresh water at all times, and care is taken to see that the supply of gravel, crushed oyster and clam shells never runs out. Cut fresh bones do not appeal to the mistress of our little poultry yard, as it often appears to be a nasty mess, in comparison with table scraps and kitchen trimmings prepared in a cleanly manner. If a greater number of fowls were kept than the 25 to 30 we have accommodations for, it would probably be necessary to resort to green bones or meat scraps for the required protein. After many trials of fancy-bred fowls of several of the breeds now popular, we have settled on grade Plymouth Rocks and Brown Leghorns as best for our purpose of fairly constant egg-production and table use. None of the purebred fowls ever seemed profitable from our point of view. They were pretty to look at, but they always failed to produce the eggs with sufficient regularity, and were plainly less hardy than grades and cross-breeds. An occasional exchange with neighbors brings in the needed fresh blood, and while the flock is degenerating, according to the fancier's opinion, to the grade of barnyard fowls, it remains in a state of satisfactory efficiency. We do not wish to decry the work of breeders in keeping strains pure and distinct. These high-bred fowls afford a powerful means of grading up ordinary stock, but the fact remains that they are seldom satisfactory for the direct manufacture of poultry products.

JADOO IN THE GARDEN.—A number of tests of Jadoo fiber were made in the field last Summer. Sweet corn, tomatoes, cucumbers, sweet peas, pansies nd a few young rose bushes were planted. each with a goodly quantity of Jadoo for the roots to run in, and near by similar plants with an equal bulk of garden compost as a fertilizer. In every case the plants in Jadoo showed a stronger growth, the foliage was noticeably greener, and the plants held up better during hot dry weather, but the yield in fruit and flowers was not perceptibly increased except in the case of sweet peas and pansies, both distinctively moisture-loving plants. Jadoo is a material that does not easily decompose, but it is extremely retentive of moisture, and once saturated by rain or irrigation gives it up to the plant roots very gradually. The pansies and sweet peas, the latter of the bush and Cupid types, were greatly benefited by the Jadoo, and we are inclined to continue its use for similar plants, but we can see no great advantage for such strong growing crops as can usually take care of themselves with ordinary fertilizers containing a good percentage of humus. It is largely used abroad in old, long-cultivated garden soils for such plants as tomatoes, which do not adapt themselves well to the climate. Under glass we have found it very useful in starting seedlings and delicate plants which have to be grown in small pots. There is less danger of drying out, and of attacks of fungus troubles, but on the other hand plants in Jadoo are likely to be injured by excess of water unless kept separate from those in soil. The material is very lasting, and may be used repeatedly until consumed. We find that a mixture of one-third Jadoo and two-thirds garden loam, without additional fertilizer, suits our plants very well, and is less likely to become sodden than the pure article. Jadoo and its mixtures with soil can be sterilized by exposing to dry heat in an oven sufficient to roast a potato, without losing much of its fertilizing properties. This is of advantage where scarce and valuable seeds are sown, or difficult plants propagated.

BROWN ROT OF STONE FRUITS.—Bulletin No. 50, Georgia Experiment Station (Experiment), treats of this most destructive pest, which annually sweeps away a great proportion of our peaches, plums and cherries just as they are about to ripen. Nothing can well be more aggravating than to witness the rapid transition of our fair fruits, which have escaped the dangers of frost, heat, storm and insects, into those repulsive masses of soft rot. As we have all observed, the brown rot spreads with greatest rapidity during hot, moist weather. When it is discovered it is too late to check its ravages by any known means except the immediate removal and destruction by burning, or deep burying, of the affected fruits as fast as they show the first spot of decay. This is poor satisfaction, but tends to prevent the complete loss of a crop. Spraying the trees and fruits after infection takes place is useless, but repeated experiments show that this most destructive disease may be reduced to tolerable proportions by three or four applications of Bordeaux Mixture, the first to be applied just before blossoming, the second after bloom has entirely dropped, the next 10 days or two weeks before fruit is expected to color, and the last, preferably of copper acetate solution to avoid staining, when fruit is coloring This is all very comforting, but we are quite certain that the scientists have not yet convinced the small fruit-grower or amateur that it pays to do all this. We were caught with a serious loss from rot among our experimental trees last Summer, but if there is virtue in repeated sprayings under our New Jersey conditions we will try to get it. The claim is also made that the keeping qualities of peaches are very much enhanced by spraying. The theory is that the spores on the ripening fruits being destroyed decay is not likely to set in for three to five days longer than would occur with unsprayed fruit. Too much importance can scarcely be assigned to this feature if its utility is borne out by repeated trials. W. V. F.

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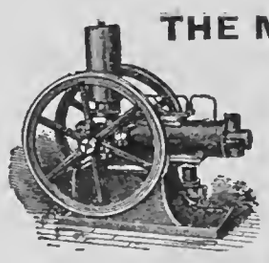

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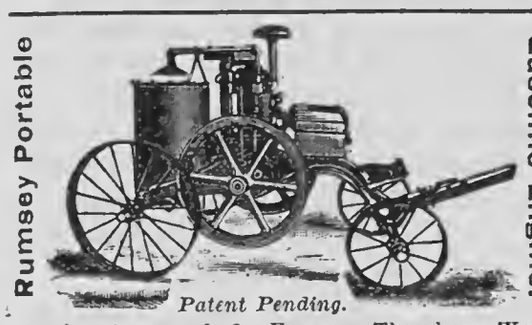
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HOPE FARM NOTES.

I will continue to answer questions and comments this week, as there are many good ones on hand.

LIVE HOGS.—I announced not long ago that after some study of breeds I had invested in a Berkshire—a black lady of royal blood and breeding. This is a sample of what I get:

I see you are going to breed Berkshire swine. Why didn't you take Poland Chinas instead? The Polands are far ahead of the Berkshire for a farm like yours. I think you have made a mistake.

My Cheshire friends also think I am wrong, and the Chester White people seem to know it. I am ready to admit that all these breeds have merit and there may be places where anyone of them would beat the Berkshires. At Hope Farm, however, I think our conditions are such that the Berkshires are most desirable. Some day I hope to put Polands of good breeding beside my Berkshires, give them all a fair chance and let the better hog drive the other off the farm. My judgment is that a black hog suits us best. Another man wants to know what breed of pigs we keep that will eat cabbage. He says he can't make his pigs eat such food. We have been keeping grade Berkshires and Chester Whites. From the first these pigs have eaten cabbage readily. At times it has provided two-thirds of their total food.

FARM VALUES.—The following letter is of interest to me since I have been trying to bring our farm accounts down to a business-like basis:

It is with interest that I noticed your remarks in the Hope Farm Notes in regard to an inventory of stock and other equipment on a farm. Would not the purpose of the inventory help settle the value which should be put on the different items? It seems that the inventory should show not what one thinks he is worth, but the actual value of his property on the day the inventory is taken. Such being the case, would it not be correct to inventory all live stock at a price which could certainly be realized were they placed upon the market on the day the inventory is taken? This may be lower than one's own valuation of them for his own use, but it gets at the real cash value. The stock of corn or other feed on hand certainly ought to be worth what it would bring in the open market at the present market values. A field of Winter wheat ought to be, if well started, worth what it has actually cost to put it in. This should include, of course, barnyard manure or fertilizer used as well as all the time required either of men or teams. Barnyard manure ought to be estimated at a fair valuation, though this may be more difficult to estimate. One might, if he is a good judge, estimate the number of loads, and put it at say, 50 cents a load, if it is of the best quality. This is what, in most sections, it would cost if bought, and it is about what can usually be got for it. In a retail business with which the writer has been connected, it has been the custom to inventory all merchandise which is perfectly salable and fresh at the cost price unless the market has changed. If the market has advanced, it is still inventoried at cost price; but if the market has declined, it is inventoried at the lower price. Goods which may be slightly shelf-worn or which are somewhat out of date are inventoried at a price which will, without fail, sell the goods. For example, two years ago a book which has been supplanted by a later edition and which had cost $4 was inventoried at 50 cents, and there were about 20 of them on hand. The books were afterward actually sold at $1.50 and $2, but the estimate was one which could most certainly be realized. One does not always hit it as well as this, for there are times when it is impossible to avoid a loss even at such low valuations. Then, when the entire amount is figured up 10 per cent is deducted from the gross amount to make everything perfectly safe. This, of course, is rather severe, but at the same time it always keeps one on a safe basis. The same methods might largely be applied to farming. A farm implement ought to be paid for in four years; that is, at the end of the first year it might be inventoried at 25 per cent less than cost, at the end of the second at half the original cost, and so on until it does not appear in the inventory. Young stock would increase in value from year to year if everything goes well. Mature animals will often decrease in value, depending, of course, upon the age and upon other conditions. All these things must be carefully considered in taking the inventory, and they are largely a matter of judgment. I shall be glad to see more notes on the results of your inventory and upon how you get at these values. A. W. STEPHENS.

I would like to hear from others about this. I never took an inventory of farm tools and stock before. I now see that the business of farming must lap over from one year to another. I wanted to put a fair valuation on what we have, so that we can tell from year to year what part of our income goes into material and tools. Some farmers do not put enough into such things, while others put too much. I have never thought it fair to measure farm business by cash returns entirely. On the other hand, some farmers put such a high valuation on their stock that the result is equally unfair. As to valuing stock at what it would bring on the market—that may be fair or not. We gure on Nefiw Year's Day when cash sales would be almost impossible. The same things offered for sale in April would bring 40 per cent more!

HOPE FARM STOCK.—Here are some items of value from my New Year's statement:

One horse, Frank	$150
" " Dan	125
" " Major	15
" " Nellie Bly	125
One pony, Peter	40
" cow, Jersey	25
" heifer, Blossom	30
" calf, Daisy	15
Six pigs @ $7	42
8 tons of hay @ $15	120
15 tons of stalks @ $5	75
70 hens @ .40	28

This of course is only part of a long list including wagons, plows, incubators and tools of all sorts. I did not estimate the manure at all, but when we come to haul it out we will know how many loads there are, and put a value on it. We have no large scales, and do not know exactly how many tons of hay and stalks there are. How do we get these values? Frank would readily sell for $150 to-day. In the Spring he would bring $200. I would not sell him for $250. He cost only $80 four years ago! Dan cost $150, but is not worth so much, on account of his eyes. Old Major probably wouldn't sell for $5, but the Madame wouldn't have him abused for $500. He will surely earn the interest on $15 officiating as "woman's horse." Old Jersey cost $40 with a calf which I sold for $7. She gives nearly as much milk as she did when I bought her, but costs more for grain since her teeth are going. Good hay sells at $20 in our neighborhood, but some of ours was damaged. As a substitute for hay our stalks are worth $6 per ton, though I think our new shredder will raise this value to $8. When figuring up all our outfit on about this basis I am surprised to see how fast young and well-cared-for stock and stuff gain in value, and how rapidly age and poor care destroy values. The farm inventory will bring these facts home to the farmer, and is worth money to him for these things alone. I make no attempt to value the grass seeding or the growing rye, or to estimate what the cow-pea vines on the back field will save in next year's corn crop. I will wait until I see that value in crib and stack. Am I not right in waiting until our labor has given a tangible, salable shape to such things before valuing them?

FARM NOTES.—I don't quite like the looks of my grass seeding. This open Winter, without snow and with freeze and thaw is likely to pull many of the plants out by the roots. Still, I think this grass is safer for the extra pains we took. The soil was well prepared and the seed was put in early, so that it had a good chance. I make no brags about it, however. . . . . I have bought a Leslie or St. Albans shredder for the stalks. It is a powerful machine arranged so as to use a knife head or shredder as desired. We have not yet put the power on it, but Charlie ran a few stalks through. "It didn't do a thing to them!' was his report, as he held up a few ragged-looking fragments. Old Major saw them, too, and let out a loud horse laugh of joy, for a whole stalk is tantalizing to a large stomach when poor teeth stand between. We expect to put the power on this week. . . . We began the new year taking temperatures three times a day. I think such habits of making records are useful for all farmers. We care little which way the wind blows—the chief thing being that it blows hard enough to turn the windmill. Most of our prevailing winds blow down the valley from the northwest, and it is seldom that a day passes without power. . . . Speaking of stock and values makes me think that a good share of our profit, if there be any, must be looked for in the house. I suppose there must have been a time in the world's history when every wrinkle and gray hair which the Madame develops would reduce her value in an inventory! Happily she is not to be valued on the same scale as old Major! I suppose that about $1,000,000 for the Madame and half a million each for the children would be about right. Every good habit and noble thought fixed securely in the minds of these little folks is worth something to the country! In old times the value of the common people was estimated at the price they would bring in the market. I want my little folks to be valued at the price they will refuse to sell themselves for.

H. W. C.

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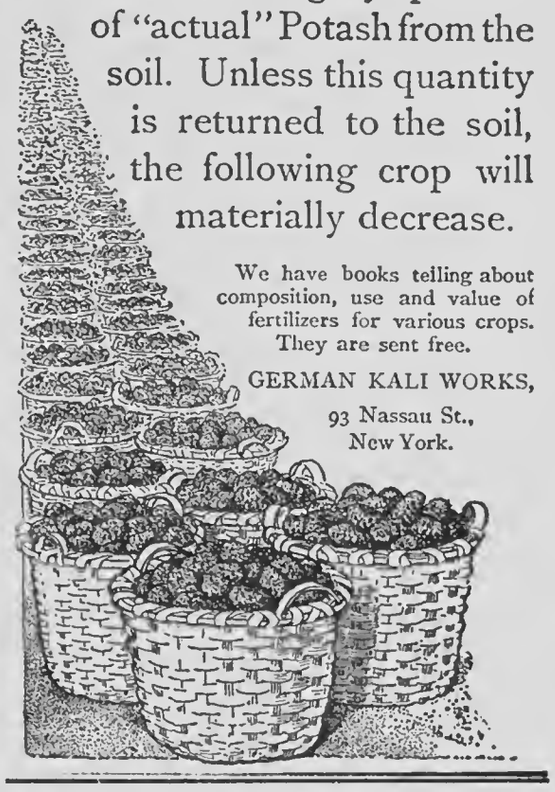

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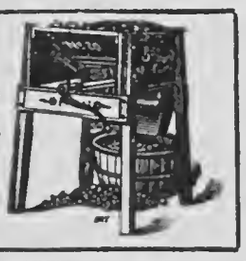

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*

How many anti-oleo letters have you written to your Senator? None? You will feel like a hero, won't you, if he votes against the Grout bill and then says in excuse for such action that the people of his State didn't seem to care anything about it!

*

THERE are many good peach growers who class the Elberta peach with the Ben Davis apple. It is a showy, handsome fruit which sells for its face rather than for its flesh. One grower raised some fine-looking Elbertas, and was told, when he came the second time with them: "No, I do not want any more California peaches!"

*

WE have a letter from Senator Chauncey M. Depew, of New York, in which he promises to vote for the Grout bill. We felt sure that the eloquent tongue of Senator Depew would never roll over words in favor of oleo. The Senator is something of a farmer himself—an officer of the celebrated New York Farmers; of course he believes in killing the miserable grubs that torture the back of the good old cow!

*

How many middle-aged failures do you know? By "middle-aged failures" we mean men or women who have reached the prime of life, having had fair health and average opportunities, and yet have failed to secure competency and home. Take the list of such people within your acquaintance, and put opposite each name the known cause for the failure. We venture to say that a great majority of these failures will be traced directly or indirectly to the use of intoxicating liquor. We also believe that you will have the job of your life to find a life failure that can be honestly traced to the strict performance of duty.

*

ONE of the clearest demonstrations of the power and value of a live Grange is to be seen in the country around Lunenburg, Mass. Scattered through this country are numerous hill towns. In former years such towns, throughout New England, were usually prosperous. The little streams were fringed with factories and shops; the hillside farms produced fine crops of character, packed it into stalwart boys and brainy girls, and sent them out to do the world's work. As the inventors secured more and more of a monopoly of power in the valleys the wealth of the hill towns began to run down hill, like the water in their streams. In many places where there was little to tie farm families together this drain has gone on until farms and villages show the marks of desertion everywhere. At Lunenburg and nearby towns the Grange has largely stopped this drain. It has provided a strong social and business tie needed to make farm life brighter and more attractive. It is safe to say that no organization at present known could have taken quite the place of the Grange in saving these hill towns, and in preserving the best features of the old-fashioned New England home. In one way the Grange is seen at its best in New England.

*

WE have never liked the word "institute" as applied to the well-known meetings of farmers. It seems too formal, and does not seem to convey just the right meaning. Mr. Gold and Prof. Beal show us this week how the name first came into use, and it is now likely to stick, for 30 years of usage makes a strong glue for language. We do not pretend to be dictionary-makers, and there are apparently words enough now in our language, but we would like to see some simpler and more original word used in connection with meetings of farmers.

*

ON January 8 the House Committee on Agriculture at Washington gave a hearing to a committee of wholesale seedsmen, who argued against the Government free-seed distribution. They contended that the Government was interfering with private business. Seedsmen are drawing a comparison between the free-seed distribution and the ship subsidy bill, not at all complimentary to either. The fact is that the free-seed distribution is absolutely indefensible, as THE R. N.-Y. has stated many times before, and the only people vitally interested in it are a few Congressmen, who use the seeds as a political lubricant.

*

SENATOR Towne, the new Senator from Minnesota, will have but a short term in the Senate, but it will be bright with color for the cow if she can only get out of the Senate Agricultural Committee. This is what Senator Towne says:

> Of course, I believe that people who want to eat oleomargarine ought to be permitted to do so. I similarly believe that those who want to eat butter ought to be permitted to do so. Those who buy ought to know what they are buying, and the producer of butter ought not to be submitted to any other competition than that which would naturally exist between the two products on their merits.

The whole story is told in those 72 words. What the oleoists want to do is to sell a counterfeit. Never have lard and suet been of the same color as grass butter. They want to color these inferior fats and deceive the public. There you have the whole story—stripped of all their plausible talk about "poor man's food."

*

LAST year THE R. N.-Y. told of the great damage done to the wheat in Monmouth Co., N. J., by the Angoumois moth. This little insect took the milling value out of nearly 70,000 bushels of grain in central New Jersey. When the millers refused to handle the wheat something of a panic seized the farmers, and great loss was feared. After the article referred to was printed we began to get letters from poultrymen and stock-keepers asking whether this grain was good for feeding. Investigation showed that it was not badly hurt for feeding purposes, and most of it has already been sold at 62 to 70 cents a bushel, and regular wheat buyers handle it as feed. Thus this damaged wheat sells for about as much as the finest grain on the Kansas farm. In the thickly-settled portions of the East anything that has value for feeding animals or plants may be sold. Let us also remember that the New Jersey farms that produced this wheat have been in constant cultivation for more than 125 years—and still produce as many bushels of wheat per acre as the newer soils of the West.

*

THE Maine Pomological Society prepared a fine exhibit of apples and other fruits to be sent to the Buffalo Exposition. We understand that the Maine Legislature refuses to appropriate the money needed to show this fruit properly. If this report be true it is the most surprising thing we have heard of lately. The purest breed of Yankees left on this continent refuse a chance to advertise their wares! It seems impossible. The Maine apples are as fine in finish and flavor as any that can be grown inside the limits of this country—yet few, outside of parts of New England, know it. The people of this country are not running about to hunt up the best things. They are too busy earning the money with which to buy them. The producer must do the advertising, though the consumer often pays for it. California is a fruit-producing State, and the Californians are coming to Buffalo with money and men to crowd more of their fruit into the eastern markets. Much of this fruit, while large and handsome, is far inferior in quality to that grown in Maine orchards. Yet if Maine stands back with hands in pockets while California counts out a fair share of her roll for advertising purposes, California fruit will be demanded and sold. What in the world has become of the old Yankee genius for advertising? It will be a shame if that fine collection of fruit must be sold! Get after that Legislature!

THE article on Alfalfa printed in this issue, is of special interest to fruit growers or small farmers. To read what is said of this plant by western farmers one would think it was useful only on great farms where vast flocks and herds are kept. That is not true. It is also a blessing to the man with a few acres which are crowded hard with fruits or vegetables. As a rule, such a man does not keep much stock, and he cannot afford to have a large share of his land in fodder crops. Other crops pay better—yet the outlay for hay is considerable. Alfalfa gives a heavy yield per acre, and a comparatively small patch of it will furnish hay for the limited stock on a fruit farm. A few acres, which might not be suitable for the money crops, provide the fodder and save the hay bill. This is worth remembering wherever Alfalfa will grow. The only objection we have heard to the crop is the difficulty in plowing it when well established. The roots are large and tough, as one might expect, and the plow has a hard job among them.

*

MANY people are shocked at the disclosures of practices of nurses and others inside certain insane asylums. We are not much surprised at the stories told whenever a public cleaning occurs, for we have, unfortunately, been obliged to learn things about these institutions. Many of them are not asylums at all—they are jails for weak or broken-minded people. Most of them are elegant structures—the cost often running up into hundreds of thousands of dollars. In some cases honest efforts are made to cure the mental disease; in others the patient is regarded as a nuisance to be endured rather than cured. There are, unhappily, many thoughtless people who send friends or relatives to these palace prisons and then take no further notice of them. No wonder the attendants come to regard such patients as so many sticks of human timber! God help the poor nervous wretch whose mind is trembling in the balance, and who falls into the hands of some of these cold-blooded attendants! We think the plan of herding the insane and feeble-minded together in these great buildings is all wrong. They should be separated and classed and kept in small colonies on farms!

*

BREVITIES.

THE WHY MAN.

(Reprinted by Request.)

There was a man in our town and he had wondrous whys,
He went unto an institute—his talk was just this size:
"Say, mister, what is nitrogen and legumes—what are they?
And carbohydrate, oxygen and carbonate, I pray;
And what is an albuminoid, and what is chlorophyl?
And what are these bacteria you tell us how to kill?
Somehow it's worse than Greek to me, this learned stuff you said,
While these big, undiscovered words are buzzing at my head."
The people laughed, the chairman rose and pounded with his cane;
The wise professors wag their heads and look a look of pain.
They sat on our inquiring friend and ridiculed his whys;
And yet he had the right of it! The questions they despise
Were just the things he had to know ere he could understand
The matters they were driving at in speeches wisely planned.
And lots of those who laughed at him and ridiculed that day,
Knew less than he, but were afraid to "give themselves away."
And so they wisely wagged their heads at each big-sounding word,
Altho' they scarcely understood a fraction that they heard.
Chop up your scientific terms and deem it no disgrace
To make your science soluble at every talking place.

NO! NO! The "rest cure" never cured a case of laziness.

IT'S greed that makes some men substitute creed for deed.

IT looks like a sure thing that the quail will eat Potato bugs!

Is beardless barley worth sowing? Who can give facts about it?

HUMILIATING but true—the dollar is the best measure of friendship.

ONE of the best fruit reports we have ever printed on the next page.

THE food fraud and adulterator is the worst thief in the farmer's market.

A KNOWLEDGE of true principles ought to give a man more interest in agriculture.

MILK cans are sterilized by getting into hot water. Would that the same were true of the human tongue!

WE intimated last week that Senator Allen, of Nebraska, is against the Grout bill. We now learn that he favors it, and gladly correct the statement.

THE Baldwin apple was born in New England. Some things must be sent away from home to reach their best estate. Not so with the Baldwin. It is still the best red apple for its native heath.

MEN rise by what is put under their feet. They may put self there and stand securely. They may force others to build the pile, and find that sooner or later those who built will demand their own and pull down the pile.

Events of the Week.

DOMESTIC.—An earthquake shock passed through a portion of Missouri January 4. . . . . Eight men lost their lives by the burning of a lodging house at Minneapolis, Minn., January 6. . . . At Gibbstown, N. J., January 4, a dynamite explosion in a factory for explosives, killed three men. . . . . The families of a number of thrifty and peaceful colored farmers at Neelyville, Mo., have been warned to leave the county, or their homes will be burned and the occupants hanged. . . . . January 4-5, a great snowstorm raged over northern California and southern Oregon, blockading the railroads in many places. . . . . Fire Marshal Seery, who has been investigating the fire and explosion at the building occupied by Tarrant & Co., on Greenwich street, New York, in October, in which seven persons were killed and seven buildings destroyed, with a loss of $1,000,000, recommends that the District Attorney be asked to determine if there was any criminal neglect on the part of Tarrant & Co. Mr. Seery says that in the building there was stored 35 tons of chlorate of potash, 100 barrels of roll sulphur, 44 barrels of flour of sulphur, 55 kegs of chlorate of potash, 16 kegs of nitrate of strontia and 60 kegs of nitrate of potassium, and many other explosives. . . . A specific reward of $13,000 has been offered for Pat Crowe, the alleged kidnapper of young Cudahy, at Omaha, Neb. . . . . Frederick Northway, arrested in St. Louis, on a charge of blowing up a cable conduit with dynamite during the progress of the great street car strike last Summer, has been sentenced to eight years in the penitentiary. Maurice Brennan was sentenced to 10 years in November last. . . . . Nine armed bandits invaded the town of Cavette, O., January 3, and after terrorizing the citizens blew open a safe; they only secured $300. . . . . A boiler explosion wrecked a mill at Watseka, Ill., January 3, killing three men. . . . . A bill is being drafted in Indiana against kidnapping, which will provide for the death penalty or life imprisonment. . . . . The military board appointed by Secretary Root to investigate the death of former cadet Booz at West Point handed in its report January 8. There is no censure of Col. Mills, superintendent of the Academy, nor of any of the other officials. The cadets, however, are criticised for the extremity of their hazing, and hazing as practised at West Point is strongly condemned. One officer of the War Department, while declining to say what the report actually shows, expressed the opinion that the board did not find that Cadet Booz's death was the result of his treatment at the Academy. . . . . Fire in an orphan asylum at Rochester, N. Y., January 8, caused the death of 28 children, and injuries to 12 more. . . . . A tenement fire in New York, January 9, caused the death of four persons. . . . . A head-on collision between a light engine and a freight train, on a trestle near Morgantown, W. Va., January 8, killed six men. . . . . Three nurses at Bellevue Hospital, New York, have been indicted for manslaughter in the first degree, they having caused the death of an insane patient December 22, 1900, by pounding, bruising and choking him. The examination disclosed a horrible state of brutality in Bellevue, both doctors and nurses being utterly heartless. Political influence is the cause of these conditions. . . . . A decree has been signed in a Baltimore court restraining a packing firm of that city from selling fruit in cans bearing the label California, unless the fruit is the product of that State. . . . . Smallpox continues to appear in New York City and adjacent small towns. In Missouri, it has appeared in over 100 different places. New cases are developing in Chicago. . . . . P. D. Armour, the great Chicago packer, died in that city January 6, in his seventieth year. He was a New York State farmer's boy, made his first $100 by working as farm hand and village grocer's clerk; went west in 1852, and leaves an estate valued at $100,000,000.

CONGRESS.—The Senate committee on foreign relations, January 4, agreed to report favorably the reciprocity treaties with Nicaragua, British Guiana and Ecuador, and also a supplementary extradition treaty with Great Britain. . . . . The President sent a message to the Senate declining the request of that body for the transmittal of the Lawshe report on the Cuban postal frauds, for the reason that it is not deemed compatible with the public interests. . . . . In the Senate the consideration of the Army Reorganization bill was begun, that measure displacing the Ship Subsidy bill from its privileged position as unfinished business. During the debate the opposition Senators indicated that their line of attack upon the bill would be against the creation of a large permanent standing army. There was intimation that objection would not be offered to a temporary measure to provide an adequate force to maintain the authority of the United States in the Philippines. . . . . Delegates from the Philadelphia Pure Butter Protective Association were before the Senate Committee on Agriculture January 5 in support of the Grout oleomargarine bill. The speakers were Samuel Jamison, W. D. Edson, J. J. Habecker, W. F. Drennen, I. C. Cleaver, I. W. Davis, L. S. Kaufman, William Sharpless and T. C. Sharpless. They represented wholesale and retail butter dealers, farmers, creamerymen, etc., and all urged the passage of the bill as in the interest of health and the public welfare generally. . . . . The United States Senate, January 9, by a vote of 34 to 15, laid on the table the committee amendments to the Army Reorganization bill relative to the canteen. The effect of this vote is to abolish the canteen. The House considered the River and Harbor Appropriation bill, but made little progress. Several Western members assailed the bill for not containing provision for irrigation reservoirs, and Mr. Corliss, of Michigan, attacked it for not giving proper recognition to the Great Lakes deep waterway project.

FARM AND GARDEN.—John W. Springer, the millionaire president of the National Live Stock Association, was placed under arrest at Denver, Col., January 6, upon a charge of importing a docked horse. This is the first arrest of its kind in the history of the State. E. K. Whitehead, secretary of the Humane Society, signed his name to a bunch of affidavits filed with the information. He takes exception to the importation last July of the magnificent horse, Troubadour, and also to the steed's appearance at the Fall shows. The statute forbidding the docking of horses and their importation into Colorado became a law in April, 1898. Mr. Springer welcomes the prosecution as it will give him an opportunity of contesting the constitutionality of the statute for the benefit of horsemen and others who own docked horses.

The New Jersey State Board of Agriculture met at Trenton, N. J., January 16-18.

The International Consolidated Record Association met at Penn Yan, N. Y., January 15.

The dairy school at the Pennsylvania State College opened January 2 with 40 students. There were 71 applications for admission to the class, but it was impossible to find accommodations for more than 40. It is hoped to increase the facilities by another year.

At a conference of representatives of the horticultural and entomological departments of several eastern and north central States held at Chicago, Ill., concerning the methods of horticultural inspection work of their several States in progress under legislative authority, the formation of a National society of horticultural inspectors resulted. Prof. S. A. Forbes, State entomologist of Illinois, was elected president. This society will hold its next meeting at Washington, in connection with the annual convention of colleges and experiment stations. All persons officially connected with the inspection of nurseries and other horticultural property in the United States or Canada are eligible to membership.

The New York State Swine Breeders' Association will meet at Penn Yan, N. Y., January 15; secretary, H. E. Kline, Himrods, N. Y.

The Western New York Horticultural Society will hold its forty-sixth annual meeting at Rochester, N. Y., January 23-24.

The Connecticut Pomological Society will meet at Hartford, Conn., February 6-7; secretary, H. C. C. Miles, Milford, Conn.

The Pennsylvania Horticultural Society will meet at Harrisburg, Pa., Janury 21-22; secretary, Enos B. Engle, Waynesboro, Pa.

J. F. McNamee, representing the locomotive engineers and the labor federation of Columbus, O., made an argument before the Senate Committee on Agriculture, January 10, against the Grout Oleomargarine bill. He contended for the right of consumers to buy any article they might desire which was not deleterious to health.

The West Virginia State Horticultural Society and the State Sheep Breeders' and Wool Growers' Association will meet at Charleston, W. Va., January 29-30.

NEW JERSEY HORTICULTURAL SOCIETY.

NEW SMALL FRUITS.—The twenty-sixth annual meeting of the New Jersey State Horticultural Society was held at the State House in Trenton, January 3-4. The attendance was good, and much interest was manifested in the practical aspects of fruit and vegetable production. The fruit committee reported the crop of 1900 generally of poor quality and not very profitable. In raspberries, the Miller Red is driving the better-quality Cuthbert from market, on account of its brighter color. Loudon is not desirable for market on account of dull color and adherence to receptacle. Cumberland Black is not an improvement on Kansas in any essential particular. Among blackberries, Wilson is still favorite; Rathbun is very similar, if not identical, with Wilson. El Dorado, best new variety, vigorous, entirely hardy, heavy cropper, fruit very best quality. Erie and Lawton, best late varieties, but subject to root gall in south Jersey. Iceberg, the new California white blackberry, is no better than the old Crystal White, and neither amounts to anything. The Gladstone strawberry is found to be about the same as the Sharpless. Johnston's Early, a new berry from Burlington County, yields well and is as early as Michel. In Mercer County the following are commercially profitable; Tennessee, Gandy, on heavy soils; Glen Mary, Bismarck, Bubach and Pride of Cumberland. The Strawberry aphis, a small, blue species, works on the roots, and is increasingly destructive. Destroy them before planting by dipping roots in tobacco water. Thorough work is necessary. The query: "Does it pay to thin strawberries?" remained unanswered. In currants, North Star was reported very productive, but too small for market. The Early Rivers peach is profitable for near markets. Iron Mountain was declared identical with Ford's Late. Elberta is still best money-maker. The Black peach-louse, an old pest, has been troublesome in 1900. Many trees have it that are suspected of being infected with the yellows. It is more disastrous in some localities than scale. Tobacco answers on leaves, but not on roots. Meritorious apples of recent introduction are Mammoth Blacktwig, York Imperial, Langford and Stayman. Makefield apple, from Bucks County, Pa., supposed to be a bud variation from Smith Cider, is more valuable than the parent on account of color being all red, not splashed like Smith Cider. Tree is similar in all respects. Turn-of-Lane, an old variety from Salem County, is small and bright red, a late keeper, and of superior quality, little disseminated away from place of origin. Ben Davis is most extensively planted, and is the best money-maker.

THE KIEFFER PEAR.—A most interesting debate followed the reply of President D. D. Denise to the question: "Is it advisable to plant more Kieffer pear orchards?" President Denise said the tree is a nice, rapid grower, bears young, and is less subject to blight than other varieties; quality is much improved of late years, and now equal to some others; 25 per cent of the orchards set are neglected and never come into bearing. The local markets are overstocked, but there is a good distant demand. His little orchard of 1,200 trees has made more money than the remainder of farm. Prices no lower than best apples, and the yield is greater. In 1900 the trees yielded over 200 barrels per acre, at net profit of 50 cents per barrel, or $100 per acre. Neighbor with neglected orchard shipped ungraded Kieffers and got only *seven* cents per barrel net return! Best and highest-colored fruit is grown on land not too rich. Should be planted from 20x20 to 35x35 feet apart for best results. Every second year in poor soils should have 1,000 pounds or more of good commercial fertilizer. Must always have good culture, thorough pruning and thinning. Should be picked and put in storage as soon as the fruit will separate from stem. J. S. Collins, the largest Kieffer pear-grower in the State, said that the prices in 1900 were very low; could not dispose of all his crop in southern part of State. Discussion brought out the opinion that the canning test of 1899 was of no value, as many of the heaviest canners used a chemically-prepared sweet, with 50 times the strength of sugar, to save expense. This was satisfactory when first put up, as the color was better than when sugar was used, but later the preparation attacked the cans, giving a tinny taste to contents, and even ate holes through the cans, causing a total loss. One packing firm lost $50,000. Those canned with sugar found a good market, though the chemically-prepared stock injured the sale of all; and doubtless caused the decline in value of Kieffers in south Jersey last Fall, as the chemical tests were largely made in that portion of the State. Kieffers, picked when two-thirds grown, and ripened in the dark, were of best quality, but carried to market poorly. Rust or clouding of the Kieffer received considerable attention. It is thought to be a weakness inherent in the Japan pears, as their skin is thin and tender, and is not caused by insects. Late frosts in Spring, after fruit is set, early frosts in Fall, excessive spraying, too thick foliage and lack of pruning were given as causes. It consists of a corky growth, favored by lack of ventilation. It will remain, but care, culture and pruning to let in sunlight will lessen it. The crop of Kieffer pears in New Jersey is 10 times as great as all other varieties. Other good pears are Manning's Elizabeth, Clapp, Bartlett, Seckel, Duchess, Anjou and Lawrence, in order of ripening. They sold at $2 to $3 per barrel, while Kieffer did not bring more than $1.25 on the average.

PLUM CULTURE.—Two papers on plum culture, by David Baird and William Skillman, excited much interest. It was agreed that no European plum except the Lombard could be grown with profit in New Jersey. The trees grew well and set fruit regularly, but rot and the curculio so reduced it that practically none matured for market. The Lombard is a moderate success, but shows the same faults. No American plum except the Wild Goose has returned profit as yet. In many sections it does not bear unless pollinated with Cumberland. The Japan plums are the only money-makers. A number of varieties have been fruited and discarded. Red June, Abundance, Burbank, Satsuma and Chabot are liked. They are named in order of ripening. Hale, for home use, Wickson and October Purple are thought worthy of planting for further trial. The great defects of the Japans are the tendency to overbear and their susceptibility to brown rot. Bearing trees set five times as many plums as they can bring to maturity. Thinning must be thoroughly done if good fruits are expected. They should not hang closer than two inches apart. A very effective and practical way is by shaking the trees vigorously when plums are the size of a hickorynut. May be repeated several times, and then the tendency will be to leave too many fruits on the tree. Thinning makes size and checks the rot. The trees must be severely pruned. Thorough thinning and pruning will do more to limit rot than spraying which many consider not only useless, but injurious to the foliage. Curculio does not injure Japans, and is considered to be a benefit by reducing number of fruits. The fruit should be picked as soon as it shows color, as some varieties drop. They can be picked before coloring and color on way to market, but quality is injured. Peaches can also be well thinned by shaking.

KILLING THE SCALE.—The San José scale received much attention. Prof. J. B. Smith, State Entomologist, said it was here to stay, and in five years every peach tree and Kieffer pear tree would require special attention. The scale came from Japan and China, and the older Japanese imported trees were more resistant than American-grown stock. The scale often dies on the imported trees. New remedies must be found, as there is no effectual parasite. In time resistant varieties of fruits will be developed. J. H. Hale, of Connecticut, said that the Pernicious scale was the greatest blessing that could happen to fruit growers, as it forced careless cultivators out of the race. No one agreed with this conclusion, but thought it a serious menace. Crude petroleum has been largely used, with generally good results. Mr. Emmor Roberts used petroleum extensively, spraying 3½ acres of apples, using 10 barrels of petroleum. He thinks it often benefits the trees by killing fungi and other insects besides the scales. The petroleum killed many cherry trees and injures peaches frequently. Some apples are more susceptible to the effects of petroleum than others. Yellow Transparent and Wealthy are easily injured. Baldwin, Smith Cider, Cornell Fancy, York Imperial, Gravenstein and Ben Davis not affected. Ohio Pippin and Williams Early died, but were badly weakened by lice and scale previous to the application. The cut surfaces of pruned trees should be painted over before applying petroleum. Some difference of opinion was elicited as to method of spraying. Prof. Smith advised a bunch of two or three nozzles. Mr. Roberts says he uses a single nozzle, and takes advantage of high winds, spraying down the wind. He often covers more than the tree operated on by this means. A unique recommendation was made by H. T. Jones, of the flower committee, to plant the native holly by the acre to cut when in berry for Christmas greens.

NEW JERSEY VEGETABLES.—The vegetable committee reported great loss from the pea-louse. It is estimated that 75 per cent of the whole value of the crop was lost. First and second-early peas not much injured. The insect did not appear in force until nearly the middle of June. The first peas from New Jersey were marketed May 25. The pest can be controlled by careful spraying. J. Brackley, a canner, near Freehold, N. J., planted 1,436 acres of peas, 275 Lima beans and 100 acres of spinach; used 3,250 bushels peas for seed, at the rate of 2¼ bushels per acre; applied 543 tons of fertilizers at rate of 600 pounds to the acre; used 18 two-horse sprayers, as it was the first place in Monmouth County where the louse appeared. He used whale-oil soap solution. The sprayers lifted the vines and covered the lice with solution. Where peas were not sprayed the entire crop of the medium and late varieties was lost. As with the Potato beetle, it is necessary to have everything ready. Cabbages suffered severely from green worms which even attacked lettuce, spinach and celery. One grower in Essex County failed to get a good head from 10,000 plants. Total cabbage crop scarcely 25 per cent of an average, but quality excellent. Growers must now base prices at what it can be grown for elsewhere; $4 per ton pays very well. Tomatoes were a fine crop, though injured in localities by Tobacco worm. In northern part of the State Stone and Beauty are the favorites; in the southern portion, Stone and Paragon are preferred. Perfection is still grown somewhat. Acme grows well in dry weather, but spots too much. Conqueror is extensively planted for very early, and does well on light soils. Dwarf Champion is early and of good quality, but is a weak grower and requires a strong soil. Potatoes, generally only one-third of a crop. The sweet-potato crop was the largest ever grown. Storage houses for sweet potatoes will not pay this year. Direct shipments as far west as Denver have paid fairly well. Sweet corn was of fine quality but injured by Corn worm. Prof. Byron D. Halsted related some interesting results of crossing varieties of sweet corn, dwarf Lima beans, egg plants, tomatoes and the cultivated salsify with the native wild species. He evidently has some good things under way. Prof. E. B. Voorhees, also of the State Experiment Station, made a strong plea for irrigation of garden and fruit crops in the East. He claims that it is only necessary to supply the deficiency of the seasonal rainfall, and not to furnish the entire amount of moisture needed as in the West. When the natural facilities are good a plant, not exceeding $600 in cost has been sufficient to irrigate several acres in New Jersey. W. V. F.

Woman and Home

From Day to Day.

Ah, mother's gettin' old and gray;
Some day, why, she'll be laid away
Down in the field by th' old mill stream,
Where all the roses love to dream.
And when thet happens, like ez not,
The old farm'll jest 'bout go to pot;
We'd lose all hope, ef ma was gone,
Fer she most runs the farm alone.
Up with the sparrers every morn,
Callin' the chickens to their corn;
She cooks a meal I wouldn't trade
Fer the finest farmhouse ever made;
She cleans th' house an' sets the hen,
An' shoos the pigs back to their pen;
She feeds the cow, an' then she goes
Inter th' house, an' sews, an' sews,
An' bakes a cake, an' runs th' churn,
An' gathers in th' wood t' burn;
An' ef you say, "Ma, rest awhile!"
She'll answer, with her old sweet smile,
"Child, I ain't tired a bit. Are you?
We can't rest when there's work to do."
An', supper o'er, the chores all done,
She hears our lessons, one by one,
An' then she sees th' cat is fed,
An' puts the children all to bed,
An' when th' family's tucked away,
Then she, alone, kneels down to pray.

* * * * *

Yes, after all is said and done,
Your mother is the only one.

—Success.

*

MUSHROOM pink is one of the new colors of the season. It is a very soft, delicate tint, and is as attractive in flannel or albatross as in silk, being much used for waists. Pink waists are very often trimmed with gilt buttons and braid, small flat buttons finishing little straps on the stock collar when they do not appear on any other part of the waist.

*

A MAN in Norton County, Kas., has been receiving from the State, for the period of 14 years, 50 cents a day for the care of his insane wife. When the woman was adjudged insane there was no room for her in the State Asylum, and by an arrangement authorized by law for the care of insane persons, the local authorities gave her into the keeping of her husband as a charge upon the State. There were so many of these cases that the State Auditor recently suggested that they be sent to the asylums. The first response came from the Norton County man, whose wife refused to go to the asylum. Upon inquiry it was revealed that the woman's insanity was soon over, and that for years she had been keeping house for her husband, who all the time had been putting in quarterly claims of 50 cents a day. Of course, this pay was discontinued, but it is said that a similar fraud has existed in several cases.

*

WHAT we describe as obstinacy in the character of others we are very likely to consider merely determination in our own. The Youth's Companion tells this little story of a New England couple who possessed the quality referred to in excess:

The lady had been bereft of one helpmeet, and her second husband had twice been left a widower, before the pair were united in the bonds of matrimony. They were both of that temperament which causes its possessor to be characterized as "set.' On the wedding-day the bride found in the back entry, on a conspicuous nail, a sunbonnet which had belonged to her immediate predecessor. She removed it to oblivion in a closet. Her newly-wedded husband made no comment, but replaced the sunbonnet on its accustomed nail. During the next few days the calico head-gear vibrated with more or less regularity between the closet and the nail. Then there came a day when the bride approached her husband with a man's hat in her hand, as he was in the act of reinstalling the sunbonnet.

"If you have that sunbonnet there," she said, firmly, "I shall hang up my first husband's hat on the next nail."

She looked at the bridegroom, and met the counterpart of her own expression. She hung the hat on the designated nail, and although the two people lived to be very old, neither the hat nor the sunbonnet ever moved again till the house came into the hands of a new owner.

*

THE Youth's Companion tells this little story relative to the habits of some unrestrained and untrammeled hens:

Ephraim Knox lived in the center of his native village, and his hens wandered here and there at their own sweet will, to the frequent annoyanee of his neighbors. Ephraim, however, was no respecter of persons, and considered his hens "as good as anybody," and desirable visitors.

When it was decided that the town library should be built in a vacant lot "next door to him," Ephraim was filled with pride and joy, and he and his hens superintended operations from the first.

Ephraim's brother Seth was not devoted to hens. One day he was passing the site of the library with a friend and stopped to view the progress of affairs. Ephraim's hens were there, cackling away as if their lives depended on it. Seth looked at them in disgust.

"What in the world are those hens making such a noise for, do you suppose? There ain't any grain in there," said the friend.

"Well," remarked Seth, dryly, "they've had the oversight of 'most everything in town. You know the cornerstone of the building was laid yesterday, and I calc'late that speckled hen over there thinks she laid it!"

*

THE day after Christmas several of the big New York stores opened their display of washing shirt waists. This has come to be a rule now; as soon as the holiday shopping is over the Spring goods are displayed. It is rather trying to belated shoppers who still wish to buy some Winter garments, for there is a very scant selection to choose from. The wash waists so far shown differ very little from the Winter models, the bishop sleeve, with shallow cuff, being a marked feature. In pattern of material, stripes seem to predominate. The white waists show the same marvelous combinations of lace and embroidery seen in the first display last year, but

3692 Child's Long Coat
2, 4 and years.

they are so hard to launder that they never became popular. The rich woman is almost as badly off as the poor one when away from home, where she must trust to unknown laundresses, and it is amazing how many badly-ironed shirt waists one sees. Bolero effects are seen on many of the new waists, and the sailor collar seems likely to be quite as popular as it was last Summer.

*

A WOMAN in New York has brought a $5,000 damage suit against a druggist, because he sold her a substance that changed her hair to a vivid green. She wished to alter her golden hair to auburn, and was advised to use henna leaves; the result was a crown of vernal sea-green tresses which, while appropriate to a mermaid, are distinctly embarrassing in any other capacity. The druggist claims that henna, being a harmless dye, is sold without question in the ordinary course of trade, and that he is not responsible if the purchaser trifles with nature with embarrassing results. This brings out the fact that most city druggists are insured by a guaranty company, which defends them and conducts the case when lawsuits are brought against them in consequence of mistakes made by employees. A certain premium is paid for each clerk, and the plan is profitable to the guarantor, and a saving of trouble to the druggist.

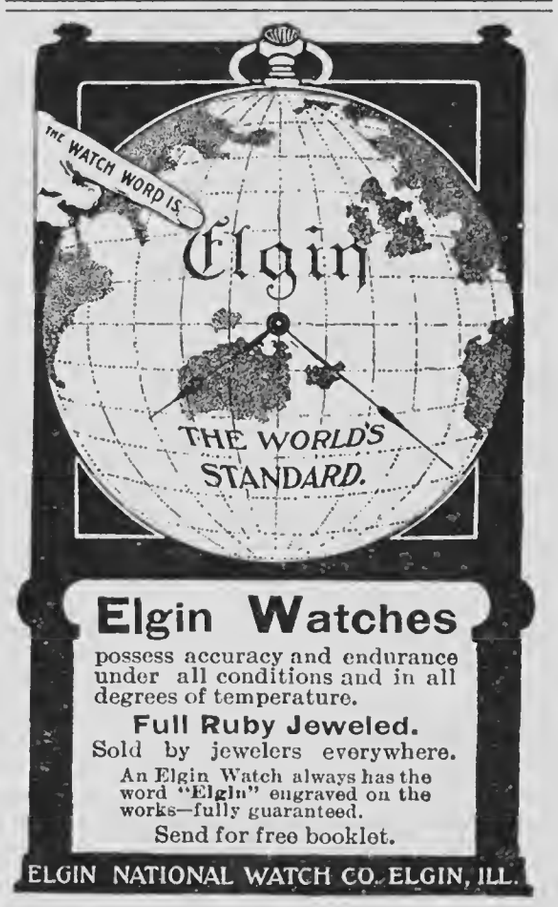
The Rural Patterns.

The child's coat illustrated is especially suitable for the baby just promoted into short clothes, but may also

3702 Home Gown.
32 to 42 in. bust.

be worn by children from four to six years old. As shown the material is Russian blue broadcloth, with trimming of soft gray chinchilla; but younger children wear white bengaline, peau de soie, drap d'ete and velvet, corduroy or velveteen can be substituted for the cloth when the child has reached the mature age of four years. Fur is much used as trimming, but narrow frills of ribbon and stitched bands are entirely correct. The skirt portion is laid in box pleats, two at the front and two at the back, and is attached to a short fitted body. The double capes fall over the shoulders, the upper one being cut in points at the front. At the neck is a turn-over collar. The sleeves are full, in bishop style, and are finished with straight bands or cuffs at the wrists. The coat closes at the center front, where it is supplied with ornamental buttons and buttonholes. To cut this coat for a child of four years of age five yards of material 21 inches wide, 4⅛ yards 27 inches wide, 2⅝ yards 44 or two yards 50 inches wide, will be required. The pattern No. 3692 is cut in sizes for children of two, four and six years of age, price 10 cents from this office.

The simple, but well-modeled house gown shown fits closely at the back, but is free at the front, where it is held by a ribbon at the waist. The shaped backs and under-arm gores give an effect of slenderness and grace, and the soft folds of the front are universally becoming. As shown the material is cashmere in dahlia red, but flannel, flannelette and all washable stuffs are equally appropriate. The princess back, with under-arm gore, fits smoothly, but the full front is made over a short lining fitted with single darts. The sleeves are two-seamed, and roll over to form cuffs at the wrists. The neck is finished with a simple turn-over collar that can be omitted when desired and one of linen worn in its stead. To cut this gown for a woman of medium size 8½ yards of material 27 inches wide, 7½ yards 32 inches wide, or 4¾ yards 44 inches wide, will be required. The pattern No. 3702 is cut in sizes for a 32, 34, 36, 38, 40 and 42-inch bust measure, price 10 cents from this office.



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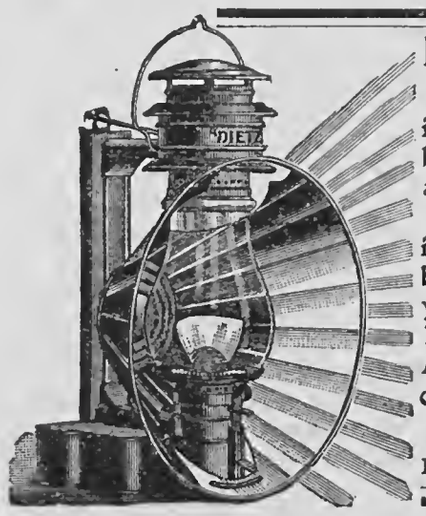
possess accuracy and endurance under all conditions and in all degrees of temperature.
Full Ruby Jeweled.
Sold by jewelers everywhere.
An Elgin Watch always has the word "Elgin" engraved on the works—fully guaranteed.
Send for free booklet.
ELGIN NATIONAL WATCH CO. ELGIN, ILL.

FAMOUS ROAD WAGON $22.50

Price Complete $22.50

This Road Wagon at $22.50 is but one of 171 bargains we offer in Buggies and Carriages. Buying from the Manufacturer you save from **25% to 75%. Everything you buy is sold by us.** Mammoth catalogue of Everything to **Eat, Use and Wear,** contains 13,000 illustrations and quotes wholesale prices to consumers on over 150,000 different articles. **Lithographed Catalogue** of Carpets, Rugs and Draperies, shows goods in their real colors—**freight prepaid and carpets sewed free.** Men's made-to-order **clothing catalogue** has samples attached, and quotes prices, **Expressage paid. Dress Goods catalogue** quotes transportation-paid prices from 15c to $1.50.
Catalogues free this month.
Which one do you want? Address this way:
Julius Hines & Son, Baltimore, Md. Dept. 320

van Houten's Cocoa
is of Unequalled Value as a Household Beverage. Economical, Easy to make—Easy to Digest. Exquisite Flavor.
Sold at all grocery stores—order it next time.



Dietz Nos. 30 and 60 Search Lights.
It is *DIFFICULT* to tell how large and brilliant a light these Lamps give. It must be seen to be appreciated. It is *EASY* to tell how *SAFE* they are—only requires one word *"ABSOLUTELY."*
They burn kerosene (coal oil) and so little of it that the cost of lighting your stable, cow shed, barn or granary is but a trifle. If you consider your comfort worth anything, it is *CHEAPER THAN DARKNESS.* We offer these at *SPECIAL PRICES* to introduce. Write for free circular and catalogue.
R. E. DIETZ COMPANY,
Established 1840. 87 Laight Street, New York.

Have you had a kindness shown?
Pass it on.
'Twas not given for you alone—
Pass it on.
Let it travel down the years,
Let it wipe another's tears,
Till in Heaven the deed appears,
Pass it on.

President-General, Mrs. Cynthia Westover Alden.

Headquarters, No. 96 Fifth Avenue, New York.

Society Motto—"Good Cheer."

Colors—Yellow and White.

Flower—Coreopsis.

Society Song—"Scatter Sunshine."

Though the midnight found us weary,
The morning brings us cheer;
Thank God for every sunrise
In the circuit of the year.
—Margaret E. Sangster.

THE largest branch of the Sunshine Society comprises over 2,300 members. It is composed of young folks, and the members are scattered all over northern Michigan, the president being Mrs. M. E. C. Bates, of Traverse City. The rules of this branch are as follows:

"I will try never to worry or fret about anything.

"I will try to be as happy as I can and to make everybody happy as far as I can.

"I will try to be loving, helpful and kind to everybody and to every living thing.

"If I ever fail in trying to do these things, I will 'try, try again.'"

These rules are printed on a membership card and are signed by each member upon joining the club. They are very good rules for anyone, whether a Sunshine member or not.

* * *

"I BELIEVE," said an energetic little Sunshine woman, quoted in the New York Mail and Express, "that I have a great deal of cork in my nature." And she nodded a merry good-by to a puzzled group who turned a lifelong friend of her, asking what she meant.

"That is certainly one way of expressing it, and a good one too," she said. "It is cork. And I hope you have it in your natures, too. Perhaps you call it by another name, 'cheerfulness' or 'sunny temper,' qualities which the dear God bestowed on us not alone to make our own lives happier, but to brighten up the paths of others.

"Ever since this dear Sunshine woman was a young girl things have gone against her. She has had to fight the fight herself, whereas all you young people have a father, mother or brothers to help you in the battle.

"But Margaret has fought alone, and bravely, and made the most of her happy disposition, thereby smoothing an otherwise rough path. Disappointments? My dear girls! Perhaps the greatest disappointment of your lives was to have the rain fall when you wanted the sun to shine. But Margaret has encountered more serious obstacles. But she never gave up to despair. She simply began again, or, as she expressed it, "Bobbed up again." That's what she meant by the cork in her nature. You all know that if you throw even the tiniest bit of cork upon the surface of the water it will bob up at once. No matter how high the waves, it will always keep on the top. So it has been with Margaret.

"I am sure that there is some of this sunny buoyancy and cheerfulness in the nature of every one of us. It may be latent, but that is all the more reason we should draw it out and make it a help to all with whom we come in contact. Don't you think each of you has it in some degree, and if you have, why not make the most of it?"

The Farmer's Fare.

A handful of questions that fell to my share to answer from the question box of a recent farmers' institute in New York State may be of interest to the readers of THE R. N.-Y.

Is there anything that can be used in the place of eggs when they are 30 cents a dozen?

Nothing will take the place of eggs in angel cake, sponge cake and custards, therefore in midwinter let us make the suet puddings, the apple tapioca, and the creamy rice pudding, and have raised cakes, buns, cookies and good molasses gingerbread. Then in the Spring, when eggs are cheap again, we shall enjoy the custard pie and sponge cake all the more for having gone without them for awhile. I have very little sympathy with the sham sponge cakes and custards where baking powder in the one case and cornstarch in the other are used as vain substitutes for eggs; short cakes and plain cornstarch puddings are far better. When we compare eggs with meat, however, we shall see that even when Winter prices prevail they are not more expensive than the choicer pieces of meat. Eight good-sized eggs weigh a pound, and at 30 cents a dozen would cost 20 cents. There is little waste and little fuel or time is required to prepare them. Compared with a pound of beefsteak or lamb chops the eggs are not so costly as we sometimes think.

What shall we farmers' wives do for dinner when we have no meat but salt pork and codfish?

One great lack in the country, where of all places there should be abundance, is in variety of vegetables and a knowledge of their possibilities. The nutritive value of our common vegetables like cabbage, carrots and parsnips, can be increased by a judicious addition of milk, eggs and butter. The cabbage can be served with a salad dressing, the carrots with a white sauce and the parsnips after boiling can be sliced, dipped in butter, and fried in the salt pork fat. These taken in turn with the salt pork and potatoes, and a good pudding, will make a substantial meal. Again, have some fried apples with the salt pork and a dish of macaroni and cheese. The macaroni is cheap and appetizing when carefully cooked. It is first put into boiling salted water and cooked tender—a half hour or less—then it is drained, and rinsed with cold water, and cut in convenient pieces. A buttered pudding dish is then filled with alternate layers of the macaroni and chopped or grated cheese, perhaps a cupful of the cheese to a quart of the cooked macaroni. Season with salt and pepper, fill the dish with milk, and cover with bread or cracker crumbs mixed with a little melted butter, and bake in a moderate oven for nearly an hour, or till the macaroni absorbs most of the milk. The cheese will supply the proteid matter lacking in the fat pork. Boiled rice or macaroni in tomato sauce is another inexpensive food which is easily prepared.

The salt fish can be varied by combining it with milk and eggs in several different ways.

How are milk soups made?

The various soups known as cream of this, that and the other thing are usually about half milk and half meat or vegetable stock, slightly thickened with flour which has been blended with fat. For example, the tough, flabby portions and white leaves of a bunch of celery might be cut in small pieces, mixed with a sliced onion, covered with cold water and cooked until much of it can be rubbed through a strainer. To this juice and pulp is added an equal portion or even more of hot milk. For thickening a quart of soup slightly, one ounce of butter and one rounding tablespoonful of flour should be cooked together in a small saucepan until frothing, then add a little of the soup and beat until smooth, and then mix with the whole. Season with salt and pepper. For a thicker soup use twice as much flour and butter, though the butter may be decreased slightly. However, if we use skim-milk for the soup, as we may, the increase of butter is desirable. Such soups can be made from almost any vegetable, varying the thickening according to the thickness of the pulp of the vegetables. Bean and pea soup require less flour, but a little will keep them from becoming watery on top. A corn chowder can be made much like a fish chowder from fresh or canned corn with pork fat, onion and potato. Such soups are excellent for supper on a cold night, and give an opportunity to turn skim-milk to good account.

ANNA BARROWS.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

A Market for Chinch Bugs.

The Youth's Companion tells how a man who kept a little store in a western town was one morning approached by a farmer who owed him a small account, with a plea for an extension of time, as the chinch-bugs were eating up all the crops.

"Chinch-bugs! Nonsense!" said the the storekeeper, roughly. "I don't believe there's a chinch-bug within a mile of you."

"The chinch-bugs are there by millions."

"Millions! I'll tell you what I'll do. I'll give you a dollar and a half a gallon for every gallon of the bugs you'll bring me."

"Done!" said the farmer.

A day or two after he drove back to the village with a ten-gallon can tightly covered. This he unloaded from his wagon, and rolled carefully into the general store.

"What have you got there?" asked the merchant, suspiciously.

"Something for you."

"What is it?"

"Chinch-bugs," said the farmer. He lifted the lid and disclosed a mass of the hideous insects, wriggling and squirming.

"There's ten gallons of them," he continued. "I take it you owe me fifteen dollars. That will just about square my little bill, and I'll thank you to give me a receipt."

"Cover it up for goodness' sake, before any of 'em get away!" roared the unhappy dealer.

But he wrote the receipt so justly forfeited.

The story came out in the papers, and for months thereafter the storekeeper received letters asking for the latest quotations on the price of chinch-bugs, and inquiring how many he was prepared to take.

However, he had nothing to regret, for, as he said, the experience was worth a thousand dollars to him in advertising.

WHEN you write advertisers mention THE R. N.-Y. and you will get a quick reply and "a square deal." See our guarantee 8th page.

THE plague of lamps is the breaking of chimneys; but that can be avoided. Get Macbeth's "pearl top" or "pearl glass."

The funnel-shaped tops are beaded or "pearled"—a trade-mark. Cylinder tops are etched in the glass—"MACBETH PEARL GLASS"—another trade-mark.

Our "Index" describes *all* lamps and their *proper* chimneys. With it you can always order the right size and shape of chimney for any lamp. We mail it FREE to any one who writes for it.

Address MACBETH, Pittsburgh, Pa.

BROWN'S BRONCHIAL TROCHES

Fifty years of success prove these troches the simplest and best remedy for Coughs, Hoarseness, Bronchial and Lung Troubles.

In boxes—never sold in bulk.

A-CORN SALVE costs nothing to try. Send name and address on postal, and you will get a trial box by return mail.

Giant Chemical Co., Philadelphia.

TERRIFF'S PERFECT WASHER

SENT ON TRIAL at wholesale price. If not satisfactory money will be refunded. SOLD under a POSITIVE GUARANTEE to wash as clean as can be done on the washboard, even to the wrist- and neckbands of the most soiled shirt, and with far greater ease. Does not wear out the clothes. Economizes soap, labor and time. **AGENTS WANTED.** Exclusive territory given. Big money made. For terms and prices Address,

Portland Mfg. Co. Box 14. Portland, Mich.

No Money in Advance

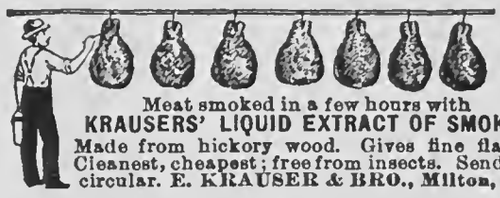
Our elegant New Jewel Drophead Sewing Machine possessing all the latest improvements, high quality and thorough workmanship. Shipped direct at $12.50, the lowest price ever known. 30 days' free trial. Money refunded if not as represented. Guaranteed 20 years. All attachments free. 125,000 sold.

$40.00 Arlington for....$14.50
$50.00 " " $17.00
$60.00 Kenwood " $21.50

Other Machines at $8.00, $9.00 and $10.50

Large illustrated catalogue and testimonials Free.

CASH BUYERS' UNION, 158-164 W. VanBuren St., B-343, Chicago



Meat smoked in a few hours with KRAUSERS' LIQUID EXTRACT OF SMOKE.

Made from hickory wood. Gives fine flavor. Cleanest, cheapest; free from insects. Send for circular. E. KRAUSER & BRO., Milton, Pa.

COE'S ECZEMA CURE, $1. Large sample mailed free. Coe Chem. Co., Cleveland, O

"WHAT FOOLS THESE MORTALS BE"—*Puck.*

to pay $40 to $60 for a Steel Range that does not cost over $12 at the Factory to build, the difference being profits and expenses of an Army of middlemen. Such folly no longer necessary, as we offer our

Hapgood "Anti-Trust" Steel Range

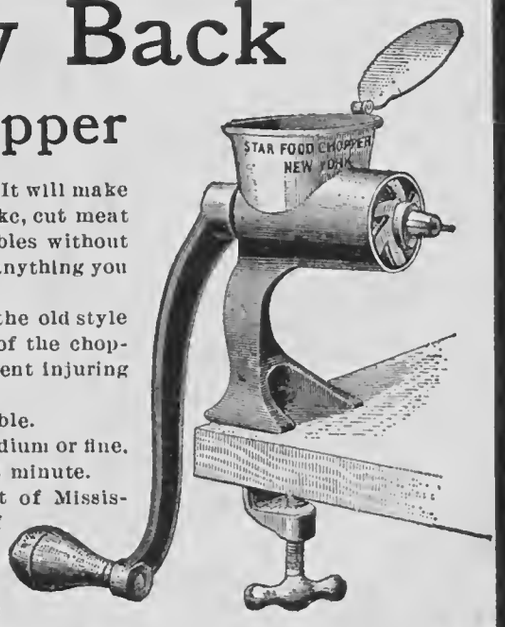
at one-half agents prices. Guaranteed for 5 years. Money refunded if not entirely satisfactory. Send for Big Free Catalogue of Sewing Machines, Buggies at Old Prices, Harness, Lawn Swings $3.75, and 1000 other things at half dealers prices. Reference this paper. Have your bank look us up. Address

HAPGOOD MANUFACTURING CO., Box 177, Alton, Ill.

The only mfg. company in the world in their line selling direct to the consumer.

Your Money Back

if the Star Food Chopper



is not just what you want and all you expected. It will make your mince meat, cut your raisins and citron for cake, cut meat for your sausages, chop poultry, fruit and vegetables without mashing, **and grind your coffee.** It will make anything you now make with a chopping knife and bowl.

The **Star Chopper** has many advantages over the old style machines, among which is a plate hinged at the top of the chopper to press the food into the machine, and prevent injuring or soiling the fingers.

Knives require no sharpening—simple and durable.

Three sizes of cutters for chopping coarse, medium or fine, furnished with each chopper. It chops two pounds a minute.

I will send a **Star Chopper** to any address, east of Mississippi River, express prepaid, on receipt of $1.25. If you are not satisfied, your money back.

Send for full description.

CHAS. D. BROWN, 24 Hudson St., NewYork.

MARKETS.

REVIEW AND OUTLOOK.

BUTTER is down one cent from last week, and business is dull for everything except the choice grades. There is a surplus of ordinary stock, which in some cases is being offered at cut prices.

GRAIN.—Wheat is 1½ cent above last report on account of Hessian fly damage and unfavorable news from the South American wheat belt. Corn is also a trifle higher. The rains and muddy roads in the corn States hinder the movement of the crop to market. Oats are firm, and the stocks in hand light. Trade in rye and barley is dull.

HOTHOUSE PRODUCTS. — Mushroom trade is dull, there being but little call for anything but the better grades. Western rhubarb and asparagus are doing very well. Few of the cucumbers received are good enough to reach top prices. Lettuce is also inferior. As a general rule hothouse products of low grades will scarcely pay for shipment.

The Week's Quotations.

WHOLESALE PRICES.

SATURDAY, JANUARY 12, 1901.

BEANS.

Beans, marrow, choice, per bu..	—	@2	60
Marrow, fair to good	2 45	@2	55
Pea, bbl., choice	—	@2	35
Red kidney, choice	2 42½	@2	45
White kidney, choice	2 60	@2	65

BUTTER.

Creamery, extra	—	@	24
Firsts	21	@	22½
Seconds	19	@	20
June, extra	21	@	21½
June, thirds to firsts	16	@	20
State, dairy, half firkins, extra.	21½	@	22
Half firkins, firsts	20	@	21
Seconds	17	@	19
Western, factory, fresh, fancy.	—	@	14
Fair to good	13	@	13½
Low grades	11½	@	12½
Rolls, fresh, choice	—	@	15

EGGS.

QUOTATIONS, LOSS OFF.

Penn. & State, fancy, doz	—	@	24
Western, firsts	—	@	23
Southern, average best	22	@	22½

QUOTATIONS AT MARK.

State & Penn., fancy	—	@	24
Average prime	22	@	23
Western, closely graded, fancy.	22	@	22½
Southern, fresh-gathered, fair to good	—	@	20
Refrigerator, Fall pack, good to choice	18	@	20
Western, refrigerator, common to fair	17	@	17½
Limed, Western, fancy	18	@	18½

FEED.

Spring bran, 100-lb. sacks	17 50	@17	70
Winter bran, bulk	17 50	@19	40
Spring middlings, 200-lb. sacks.	16 75	@20	00
Red Dog, to arrive	18 50	@19	50
Oil meal	28 50	@	—
Cotton-seed meal	25 75	@	—

EVAPORATED FRUITS.

Apples, fancy	6½	@	7½
Low grades	3½	@	4⅝
Peaches, Cal., unpeeled, boxes..	6	@	10
Peeled, per lb	13	@	18
Pears, Cal., per lb	5	@	10

GREEN FRUITS.

Apples, common, bbl	1 25	@	1 75
Baldwin, bbl	1 75	@	3 25
Greening, bbl	2 00	@	3 00
Ben Davis, bbl	2 00	@	3 00
Spy, State, bbl	2 00	@	3 50
Spitzenberg, bbl	2 50	@	4 00
Newtown pippins	1 25	@	3 50
Grapes, W. N. Y., Catawba, small basket	8	@	11
Almerias, bbl	3 00	@	8 00
Cranberries, Cape Cod, bbl	8 50	@	10 00
Jersey, bbl	7 50	@	—
Jersey, crate	2 00	@	2 50
Strawberries, Fla., qt	40	@	60
California, pint	30	@	50

GRAIN.

Wheat, No. 2, red, spot	82¾	@	—
No. 1, Northern Duluth	87½	@	—
No. 1, hard Duluth	92¼	@	—
Corn, No. 2, white, to arrive	48⅜	@	—
No. 2, yellow, to arrive	48¼	@	—
Oats, No. 2, white, in elevator..	32½	@	—
Rye, No. 2, West., c. i. f., N. Y.	57½	@	—
State & Jersey, c. i. f., N. Y..	53	@	—
Barley, feeding, c. i. f., Buf	48	@	50
Malting, c. i. f., Buffalo	62	@	67

HAY AND STRAW.

These quotations are for large bales. Small bales sell for 50 cents per ton less:

Hay, No. 1	90	@	—
No. 2	82½	@	85
No. 3	75	@	77½
Clover	70	@	75
Clover, mixed	80	@	82½
Straw, rye, long	85	@	87½

HOTHOUSE PRODUCTS.

Cucumbers, fair to choice, doz..	1 50	@1	75
No. 2, doz	30	@1	00
Tomatoes, choice, lb	20	@	30
Radishes, 100 bunches	2 00	@3	00
Mushrooms, lb	25	@	50
Asparagus, dozen bunches	4 00	@5	00
Rhubarb, dozen bunches	—	@1	00

GAME.

Wild ducks, Canvas, prime, per pair	2 50	@3	00
Red-head, 5 lb. avge. to pair..	1 50	@2	00
English snipe and Golden plover, per doz	2 25	@2	50
Rabbits, per pair	10	@	15
Jack rabbits, per pair	45	@	50

$5 for $4 Send us a club of four subscriptions with $4, and we will advance your own subscription one year free—the five subscriptions for $4.

COUNTRY-DRESSED MEATS.

Calves, veals, prime, per lb	10½	@	—
Fair to good, per lb	9½	@	10
Small, per lb	5	@	7
Buttermilks, per lb	6	@	8
Grassers, per lb	5	@	7
Pork, light, per lb	7¼	@	7¾
Medium, per lb	6½	@	7
Heavy, per lb	5	@	6
Rough, per lb	3	@	4½
Roasting pigs, per lb	10	@	12½
Pork tenderloins, fresh, per lb..	17	@	18

POTATOES.

Bermuda, prime, per bbl	4 50	@5	00
Bermuda, No. 2, per bbl	3 00	@4	00
L. I., prime, in bulk, bbl	1 50	@2	00
State & Western, round, 180 lb..	1 62	@1	87
Poor to fair	1 25	@1	37
Jersey, prime, bbl	1 25	@1	75
Sweets, Vineland, cloth-top, bbl..	1 75	@2	25
Other Jersey, cloth-top, bbl...	1 75	@2	00
Jersey, per d.-h. bbl	1 75	@2	00
Southern, bbl	75	@1	00

POULTRY—LIVE.

Fowls, per lb	—	@	11
Chickens, per lb	—	@	9
Roosters, per lb	—	@	7
Turkeys, per lb	9	@	10
Ducks, Western, per pair	50	@	70
Southwestern, per pair	45	@	55
Geese, per pair	1 12	@1	37
Pigeons, per pair	20	@	25

POULTRY—DRESSED.

Turkeys, nearby, fancy	12	@	—
Poor to fair	6	@	7½
Broilers, Phila., 4 lb. and under, per lb	18	@	20
Roasting chickens, Phila., selected, large	15	@	16
Phila., mixed sizes	12	@	13
Poor to fair	8	@	9
Fowls, Ohio & Mich., fancy, scalded	10	@	—
Western, poor to fair	7	@	9
Old roosters, per lb	—	@	6½
Capons, Western, large	13	@	14
Western, small & slips	—	@	10
Ducks, Ohio & Mich., fancy	12	@	13
Poor to fair	7	@	9
Geese, Md. & Del., prime	9	@	10
Md. & Del., poor to fair	7	@	8
Poor	6	@	7

VEGETABLES.

Onions, Conn. & L. I., wh., bbl.	3 50	@5	50
Conn. & L. I., red, bbl	2 00	@2	50
Conn. & L. I., yellow, bbl	2 00	@2	75
Bermuda, crate	2 50	@2	75
Squash, marrow, bbl	1 00	@1	50
Hubbard, bbl	1 50	@2	00
Florida, white, crate	75	@1	00
String beans, Fla., basket	75	@2	25
Turnips, Jersey, Russia, bbl	70	@	80
Peppers, Fla., carrier	1 00	@1	50
Celery	10	@	15
Egg plant, Fla., bbl	2 50	@4	00
Green peas, Fla., basket	1 25	@1	75
Spinach, Norfolk, bbl	60	@	90
Carrots, washed, bbl	75	@1	00
Lettuce, New Orleans, bbl	2 50	@3	50
Brussels sprouts, qt	4	@	10
Parsnips, bbl	75	@1	00
Cabbage, L. I., 100	3 00	@4	00
Tomatoes, Fla., carrier	1 00	@2	50
Chicory, New Orleans, bbl	2 50	@4	00
Beets, L. I., bbl	75	@1	00
Romaine, New Orleans, bbl	2 50	@3	50
Parsley, Bermuda, box	50	@1	00
Cucumbers, Fla., crate	2 00	@3	00

FURS AND SKINS.

Silver fox	50 00	@200	00
Red fox	1 75	@ 2	00
Gray fox	90	@ 1	00
Lynx	4 00	@ 6	00
Wild cat	50	@	60
Marten, dark	6 00	@ 10	00
Pale	3 00	@ 4	00
Skunk, black	1 30	@ 1	40
Half-striped	80	@	85
Long-striped	80	@	90
Striped	40	@	45
White	15	@	20

MILK.

New York Exchange price within 26-cent freight zone, three cents per quart.

BUSINESS BITS.

A LETTER from the Inspector-General of the Paris Exhibition dated November 9, 1900, highly compliments the Reliable Incubator & Brooder Co., of Quincy, Ill., on their interesting and instructive exhibit. It would seem that the Reliable people took the lead at Paris.

MORRILL & MORLEY advise fruit growers not to experiment with spray pumps. Both these men are large fruit growers and have done the experimenting for you on their own orchards. Write to Morrill & Morley, Benton Harbor, Mich., and learn about the Eclipse spray pump.

WE have had many letters from subscribers asking where they could buy the kerowater sprayer so often spoken of in THE R. N.-Y. We now refer all interested to our advertising columns, which contain an announcement of the manufacturer, The Gould Mfg. Co., Seneca Falls, N. Y.

MANY of the faults of driving horses are due to improper bits. A harsh bit in a tender mouth will impel the animal to do all sorts of antics, and many make the mistake of putting a harsh bit in the mouth of a hard-headed horse. The Imperial bit will control the most vicious horse with ease, and at the same time will not injure the most tender mouth. Write the Imperial Bit and Snap Co., 400 Wis. St., Racine, Wis.

INFORM yourself as to the needs and requirements of your fowls; read "How to Make Poultry Pay," by E. C. Stearns & Co., Box 20, Syracuse, New York. This valuable book is sent free of charge to all who apply for it, and the information therein is founded upon the experience of some of the best and most successful poultrymen of the day. Much information is given as to the value of green cut bone and the best manner of preparing it with a Stearns bone cutter.

THE most approved method of marking cattle, sheep and swine for positive identification is by use of Dana's white metallic ear labels, as years of successful use by thousands of the best breeders and farmers and over 40 recording associations has thoroughly proven. The owner's name or address and consecutive numbers appear on the Dana labels; their application is easy, their permanence assured. For sample or agency write to C. H. Dana, West Lebanon, N. H.

INFORMATION is wanted about hand hay pressing. During the late war I bought and had pressed with hand presses (and horse) several hundred tons, sold to the Government. We would get from three to five tons pressed a day, according to the men working. Good hand presses can do a very good job. If the hay is in barns or sheds it can be pressed at odd times.

Marietta, O. S. S. T.

The price of cows to come fresh between now and April 1 is about $30 for fairly good animals, and from that up. There have been a good many culls sold cheap, but good ones have brought good prices. I was raised on a farm and have been farming for myself more than 50 years, and have never seen so continuous a drought during a whole growing season as the one just passed. The first real wetting to start springs and streams was about December 1. In some localities only a few miles away conditions have been very much better.

E. Masonville, N. Y. W. I. B.

SKIM-MILK CALVES.—A writer in the Pacific Rural Press praises the Holsteins for feeding calves. He says: "A short time ago I sold a grade Durham and Holstein calf (sire a purebred Holstein), raised on skimmilk and a little oil meal, which brought me $9.50 at 8½ cents per pound when six weeks old. I tried to repeat the experiment with a better-bred Jersey calf, and did well to have it come out alive. That is where the virtues of the Holstein come in play. They are docile and easily handled, good feeders, and lack the daintiness and nervousness of the Jerseys; they respond wonderfully to good treatment."

WHEN you write advertisers mention THE R. N.-Y. and you will get a quick reply and "a square deal." See our guarantee 8th page.

Asthma Can Be Cured.

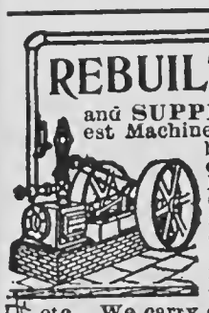
Statement of a Noted Physician.

The astonishing statement that Asthma can be cured, coming from so well-known an authority as Dr. Rudolph Schiffmann, will be of interest to sufferers from Asthma, Phthisic and Hay Fever. The Doctor's offer, coming as it does from a recognized authority, who during a practice of over 30 years has treated and cured more cases of Asthma and its kindred than any living doctor, is certainly a generous one and an innovation in this age of countless fraudulent nostrums. Believing that the honest way to sell a remedy is to let those who would buy convince themselves of its merits before purchasing. Dr Schiffmann has authorized this paper to say that he will send a free trial package of his remedy, "Schiffmann's Asthma Cure," to any sufferer who sends his name on a postal card before March 10th. This remedy has cured thousands of cases that were considered incurable. Being used by inhalation it reaches the seat of the disease direct, stops the spasms instantly and insures sweet and refreshing sleep. A free trial package will convince the most skeptical. Those desiring to try a free sample should address Dr. R. Schiffmann, 349 Jackson Street, St. Paul, Minn

Oldest Commission House in New York Est. 1838.
Butter, Cheese, Eggs, Pork, Poultry, Dressed Calves Game, etc. E. B. Woodward, 302 Greenwich St., N.Y

JELLIFFE, WRIGHT & CO.,
Produce Commission Merchants,
BUTTER, EGGS AND POULTRY,
284 Washington Street, New York.
Dressed Meats: 22, 24 and 26 Grace Avenue, West Washington Market.
Live Stock: Union Stock Yards, foot of West 60th St.
Refer to Irving National Bank.

REBUILT MACHINERY



and SUPPLIES at Bargain Prices. Largest Machinery Depot on earth. We buy buildings and plants; among others we bought the World's Fair, the Omaha Exposition, the Chicago Post Office, and other structures. We rebuild machinery of all kinds, and sell with binding guarantees. Boilers from $25 up; Engines from $35 up; Steam Pumps from $15 up, etc. We carry complete stock of General Supplies, such as BELTING, SHAFTING, HANGERS, PULLEYS, IRON PIPE, IRON ROOFING, HARDWARE, VALVES & FITTINGS, PLUMBING MATERIAL, etc.
Will send free, our 250-page Catalog No. 57
Constantly buying entire stocks at Sheriffs' and Receivers' sales.
Chicago House Wrecking Co.,
W. 35th & Iron Sts., Chicago, Ill.

Wants, For Sale or Exchange

FOR SALE—Traction Engines and Thrashers, 2nd hand, cheap. F. A. Booth Co., Stanley, N. Y.

WANTED—A position as overseer on a fruit or dairy farm, by young married man, German. Good references. Address Box 70, North East, Pa.

Farm Managers, Gardeners, Buttermakers, etc., always on hand. No charges to employers. Write us. Rural Science Agency, Durham, N. H.

WANTED—Party to ship me fresh Butter and Eggs weekly. Address JAS. F. MARBARGER Drchersville, Schuylkill County, Pa.

Valuable Fruit Farm and Country Home, desirably located. Bargain. F. A. CHAPMAN, City Building, Wellsburg, West Va.

As Manager on Poultry Farm by a practical man of large experience. CAPABLE, care The Rural New-Yorker.

FOR SALE—Farm of 247 acres, five miles from Battle Creek, Calhoun County, Mich. Good buildings, barn and improvements. H. B. McGRAW, 917 Williamson Bldg., Cleveland, O.

WORKING FOREMAN wanted March or April 1, on a farm of 200 acres; one who understands care of live stock. Give age, number in family, experience and wages expected.
Address H. P. A., care of this paper.

WANTED.—A horticulturist of large experience, desires to engage with a commercial orchard dist or company expecting to plant largely of peach, apple, or pear. Would engage with a railroad or other corporation needing a man of this kind. SAM T. KENYON, 823 Galia St., Portsmouth, O.

FOR SALE.

An Ohio Farm of over 200 acres, one of the best in Wayne County, Ohio; good grain and stock farm; none better; about 20 acres of No. 1 timber; good buildings; good fruit; two orchards; tenant house; fish pond; gravel soil. On state road, two miles from railroad, and town of 1,000 and 2,000 inhabitants; near school and church. Price, $13,500; time given; int. 6 p.c.
F. A. LEISER, Room 516, Everett Bldg., Akron, O.

GLENN RANCH,

Glenn County, California,

FOR SALE IN SUBDIVISIONS.

This famous and well-known farm, the home of the late Dr. Glenn, "the wheat king," has been surveyed and subdivided. It is offered for sale in any sized government subdivision at remarkably low prices, and in no case, it is believed, exceeding what it is assessed for County and State taxation purposes.

This great ranch of 40,000 acres runs up and down the western bank of the Sacramento River for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

F. C. LUSK,

Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, of Chico, Butte County, California.

Jacks for Sale.

A fine lot of No. 1 Jacks, two to seven years old, 14 to 16 hands high, extra well bred and guaranteed. Come or write at once.
J. BAKER, Lawrence, Ind.
8 miles northeast of Indianapolis, 1½ mile from Traction line.

Horse Owners Conjure By It.

A moment's investigation make luminous the fact that these words are full of potent meaning—that this ointment is as different from the harsh, gritty and poisonous substances called remedies, as day is to night.

VETERINARY PIXINE is as smooth as oil. It's absorbent, penetrating, antiseptic healing power is absolute. It is the only pharmaceutical, scientific veterinary ointment. It cures scratches, speed cracks, grease heel, mud fever, sores and skin disease of years standing, that resists every known treatment. It is guaranteed; money back if it fails.

2 oz., 25c.; 8 oz., 50c.; 5-lb. pkge., $4.

Includes expensive 1901 Almanac and Manual of Information. Handsomely illustrated. Invaluable for a lifetime. Not a patent medicine book.

At all Druggists and Dealers, or mailed postpaid

TROY CHEMICAL CO., Troy, N.Y.

COOK YOUR FEED and SAVE Half the Cost—with the PROFIT FARM BOILER
With **Dumping Caldron.** Empties its kettle in one minute. The simplest and best arrangement for cooking food for stock. Also make **Dairy and Laundry Stoves, Water and Steam Jacket Kettles, Hog Scalders, Caldrons, etc.** Send for circulars.
D. R. SPERRY & CO., Batavia, Ill.

The Premiums.

The contest closed on January 15. Clerks are making up records, and club-raisers will get their checks as soon as the records are complete. Here is the list for last week:

Jan. 7. Jay E. Allis, New York.
Jan. 8. Jay E. Allis, New York.
Jan. 9. Mrs. C. B. Curtis, New York.
Jan. 10. Jay E. Allis, New York.
Jan. 11. Jay E. Allis, New York.
Jan. 12. Mrs. C. B. Curtis, New York.

We yet have liberal rewards for those who get up clubs. Send for them. Four names and $4 get your own paper free, the five for $4. Do not worry if that date on label is not changed promptly. We are a little behind with book work on subscriptions, but every remittance received is entered up daily, and the credits will appear on label shortly.

THE RURAL NEW-YORKER.

Market Briefs.

PICKED UP HERE AND THERE.

THE APPLE MARKET, for anything except the better grades, is weak, and conditions favors buyers. Some of the choicest cold-storage stock is held at prices above quotations, but such cases are exceptional, and $2.50 is the top notch for ordinary ice-house apples. I have noticed a good many Newtown Pippins. Fair-sized ones retail on the fruit stands at three for five cents, and the quality at this season of the year is excellent. While some of the earlier varieties have already lost their fine flavor, the Newtown is now at its best, crisp and juicy. It would be a great convenience to city buyers who have no place to keep a barrel of apples, if good fruit could be had in half-barrels or other small packages, but the retail grocer would rather buy in barrel lots and sell to his customers by the peck or half-peck at a big profit, and the trouble seems to be that dealers in the markets put a prohibitive price on the small packages. A bushel box of apples was offered to me recently for $3, nearly as much as a barrel could be bought for. No extensive trade in apples in boxes or kegs can be worked up without the coöperation of the retail grocer, and he is not going to coöperate in anything that will cut off his profits.

HEAVY DRAFT ON CHARITY.—A big strapping young fellow, with a pitiful put-on whine, recently asked me to buy him something to eat. As he appeared healthy, and fully able to do a day's work, I concluded not to interfere with hunger in its worthy effort to remind him that he who will not work shall not eat, the case being, so far as could be seen, one of pure laziness. Anyone with plenty of bone and muscle can earn enough money in this city so that he need not suffer from hunger. A person who would refuse to divide up with a cripple or helpless or unfortunate one in real distress, is lacking in that quality of human sympathy which would give him any right to expect mercy from others; but it is no kindness to give a healthy lazy man either money or food. Some would never work unless they felt the gnawing of hunger or the need of a new coat, and until they reform, such persons are of but little use to a community. It is sometimes hard to tell just who should have help, and probably better to err on the side of generosity by helping now and then an imposter, but in cases of glaring fraud a positive good may be done to the beggar by refusing him.

BOOM IN TIN HORNS.—It is not everyone who is honored by having a tin wedding on his first birthday, but this is what New York did for the new century. On New Year's Eve there were dozens of peddlers with bags, baskets and armfuls of tin horns, and they sold like hot cakes to the people who were on their way home from business, and wished to be prepared to celebrate in the orthodox way by cutting the midnight air up into bias pieces. For 10 cents a horn two feet long could be had, loaded with oceans of "come-to-dinner" music. The manufacturers had been thoughtful enough to make the horns with wooden nozzles, so that they could be operated without cutting the mouth on the tin. A crowd gathers around Trinity Church, where the chimes are rung a short time before midnight, and at the same time the horn blowers do their best to drown all other sounds. This time the special exercises in the City Hall Park drew the biggest crowd, and a brand of pandemonium was let loose there that discounted all previous efforts. There were times when probably 10,000 tin horns were in full blast at once. Men and women who ordinarily would not think of doing an undignified act on the street, blow their horns in each others ears, and in general act like a lot of wild school children. Of course, these things are all nonsense, but perhaps a little nonsense once a year is a good thing for people who are shut up in stores and offices most of the time; and this method of celebrating New Years is certainly a good thing for the tin horn people.

NOTES ON SUNDRY PRODUCTS.—The linseed-oil market is unsteady, with a downward tendency. Dealers are selling as low as 52 cents per gallon in Boston, and there are indications that a 50-cent rate may not be far off. All sales are small, as buyers are waiting until solid bottom is reached. Animal oils are very firm, and any improvement in the demand is likely to result in a rise in price. Prime neatsfoot brings 50 to 52 cents wholesale, and prime lard oil, 65 cents. Crude sperm oil brings 55 cents; the finest bleached Winter, 64, and bleached Winter whale, 48. . . . . Turpentine trade is dull, both here and at the South, 40 cents per gallon being the top figure named here, and 37 the highest for Wilmington and Savannah. Wholesale prices on tar and pitch are $2 and $1.75, respectively, per barrel, and coal tar in car lots sells for $4 per barrel. . . . . The trade in copper sulphate for use in treating Potato blight is reported to be greatly increasing in Ireland. Drug firms here are receiving numerous requests for quotations from dealers in that country. . . . . White lead ranges in price from 5¾ cents to 12, according to quality; prime white barytes, used largely as a substitute for white lead, $20 per ton, and pumice stone in lumps, five to six cents per pound. . . . . Business in domestic hides is reported quiet, and tanners are not showing any disposition to take large quantities. Top price for the finest native steers is 11¾ cents, and branded hides, 10 to 10¾ cents. Hemlock leather runs from 24 to 26 cents, and oak, 29 to 34, wholesale. Goatskins from Mexico and Brazil bring from 44 to 48 cents per pound. . . . . Rubber trade is quiet, and buyers, particularly shoe manufacturers, are not laying in heavy stocks. The open Winter thus far in many sections has put a damper on the shoe trade. The finest Para rubber brings 87 to 98 cents per pound. W. W. H.

THE GROUT BILL AT WASHINGTON.

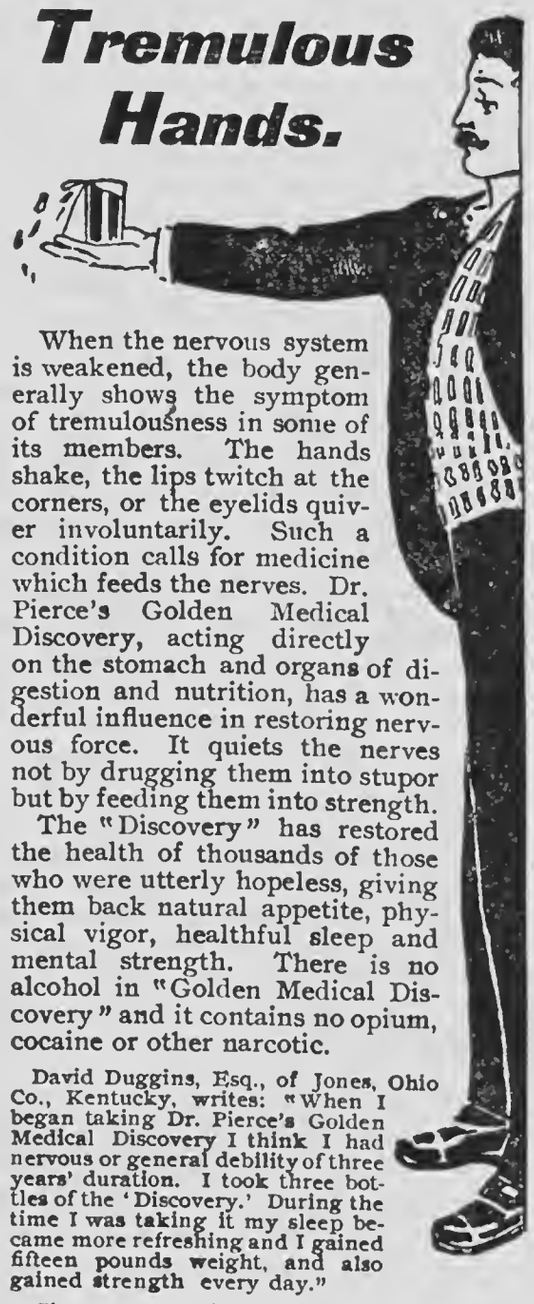
Arguments For and Against It.

The Committee on Agriculture and Forestry, of the United States Senate, has been listening to arguments for and against the Grout Oleomargarine bill for several weeks. It is seldom that a bill receives the attention from a committee of either House that has been bestowed on the oleo bill by this committee. Hearings have been almost continuous from day to day since the measure was put in the hands of this committee. Of course, it is not necessary that every member be present at each hearing, as the arguments are printed, and read before the final vote is taken to report the bill to the Senate. But the committee has listened with great patience to the various interests, and it would seem that everything that could be said on the subject had been heard before the hearings were closed on January 8. The purpose of the oleo interests has been to delay the hearings, and keep the bill in committee as long as possible in the hope of preventing a vote on it during this session of Congress. If they could accomplish this the whole work would have to be gone over again next year in the House, and in the meantime, oleo would be made in imitation of butter and sold as butter with the advantage of another year's profits in the pockets of the manufacturers. The committee cut short this little scheme by closing the hearings on January 10, and it is confidently hoped now that the bill will be reported to the Senate some time this month, and that it will be promptly considered by that body.

During the first week of January, George L. Flanders, of Albany; J. H. Kracke, of New York; J. Brown Richardson, of Lowville, and W. A. Rogers, of Watertown, appeared before the committee from New York State in support of the bill. Last week another delegation consisting of Mr. Kracke, Chas. H. Royce, of Rhinecliff, and John J. Dillon, of New York, appeared in support of the bill. The hearings were closed on Tuesday by arguments in favor of the bill by Chas. G. Knight, of Chicago; Dairy Commissioner H. C. Adams, of Wisconsin, and Secretary of Agriculture Wilson, of Washington, D. C. The oleo interests were represented mainly by paid attorneys of the manufacturers and cotton-seed oil interests From their arguments I am forced to the belief that they have made out a very poor case Their arguments were not only weak but inconsistent. Every man whom I heard on the oleo side contradicted himself over and over before he left the floor. Their main contentions are that the proposed law is unconstitutional, that they cannot sell oleo except when colored yellow, that the law is intended to kill their industry for the benefit of the dairymen, and that if this bill becomes a law dairymen and creamerymen will form a trust to advance the price of butter to the consumer. Some of their arguments would make a farmer smile at the blissful ignorance of the speakers. One contended that the farmers' wives made butter in their bedrooms; this same speaker, who claimed to represent labor unions, insisted that he ate oleo in preference to butter, and insisted that all laboring men wanted oleo when they could get it. He thought the only trouble was that farmers would not know what to do with their cows if the people were allowed the free use of oleo. Another claimed that workingmen in Pennsylvania towns asked for butter at the store and winked one eye when they wanted oleo. Another claimed that the butter was an imitation of oleo, and perhaps the most amusing of all was the serious way a Chicago oleo employer read a "black pepsin fraud" circular and offered it as an argument against the Grout bill. It was like a thief asking to have the laws against stealing annulled because a bunco man had attempted to sell a gold brick.

Those who appeared for honest butter simply contend that it is a fraud on the consuming public to mix up cheap fats and color them in order to sell them for butter. While butter is generally colored to preserve a uniform appearance, there is no deception; but on the other hand, oleo is colored in order that it may be sold for butter. Therein is the deception and the fraud. Those who spoke for honest butter called attention to the fact that ice cream is eaten and relished when in its natural light color, or when colored chocolate, pink, or strawberry. Why not adopt one of these colors for oleo? There is but one answer; it could not then be sold to a consumer who thought he was buying butter at butter prices. But the game is up. The Grout oleo bill will become a law. D.

Tremulous Hands.



When the nervous system is weakened, the body generally shows the symptom of tremulousness in some of its members. The hands shake, the lips twitch at the corners, or the eyelids quiver involuntarily. Such a condition calls for medicine which feeds the nerves. Dr. Pierce's Golden Medical Discovery, acting directly on the stomach and organs of digestion and nutrition, has a wonderful influence in restoring nervous force. It quiets the nerves not by drugging them into stupor but by feeding them into strength.

The "Discovery" has restored the health of thousands of those who were utterly hopeless, giving them back natural appetite, physical vigor, healthful sleep and mental strength. There is no alcohol in "Golden Medical Discovery" and it contains no opium, cocaine or other narcotic.

David Duggins, Esq., of Jones, Ohio Co., Kentucky, writes: "When I began taking Dr. Pierce's Golden Medical Discovery I think I had nervous or general debility of three years' duration. I took three bottles of the 'Discovery.' During the time I was taking it my sleep became more refreshing and I gained fifteen pounds weight, and also gained strength every day."

Free, on receipt of stamps to pay expense of mailing *only*, Dr. Pierce's Medical Adviser, 1008 pages. Send 21 one-cent stamps for book in paper covers, or 31 stamps in cloth binding to Dr. R. V. Pierce, Buffalo, N. Y.

RHEUMATISM.

The Dr. Von Post great Holland remedy, "QUICK RELIEF," in capsule form, QUICKLY CURES RHEUMATISM IN ITS WORST FORMS. No free doctors. No free samples. No free humbug, but an HONEST and special quick relieving remedy, as thousands will testify. Don't wait and suffer. The price is $1 per hundred, or send 25 cents in silver and get 25 capsules for trial and be convinced.

JOHN H. POST, Deep River, Conn.

Are You Deaf??

All cases of DEAFNESS or HARD-HEARING are now CURABLE by our new invention; only those born deaf are incurable. HEAD NOISES CEASE IMMEDIATELY. Describe your case. Examination and advice free. You can cure yourself at home at a nominal cost.

International Aural Clinic, 596 La Salle Ave., Dept. 157 CHICAGO.

The Forcing of Greenhouse Plants

The profits of a Greenhouse depend largely upon forcing rapid growth and early maturity of everything in it. This is best done by the judicious use of

Nitrate of Soda

in combination with other agricultural chemicals. *Study its properties; understand its uses* Full information and pamphlets free by addressing JOHN A. MYERS, 12-O John Street, New York. *Nitrate for sale by fertilizer dealers everywhere.*

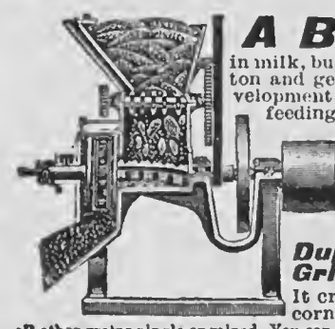
Write at Once for List of Dealers.

GINSENG $10. in plants prodnce $4,069.10 in 10 years. Book telling how to grow it.4c. Lakeside Ginseng Gardens, Amber, N.Y.

For Sale—1,000 bu. Clover Seed @ $6 to $7 per bu.; 500 bu. Crimson Clover Seed @ $5 per bu.; 2,000 bu. Cow Peas @ $1.25 to $1.75 per bu. J. E. HOLLAND, Milford, Del.

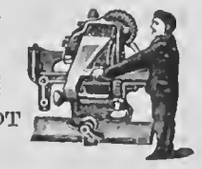
How to Grow Chrysanthemums Only 25 cents. 82 pages well illustrated chapters on Feeding, Training, Seed-Saving and cultivation through the year Published by AMERICAN GARDENING, 136 Liberty St., New York

A MILLION dollars saved by the use of the **PEERLESS MILLS.** Unrivalled in capacity and quality of work. Will grind ear corn and all grain to any degree of fineness. Will make family meal or feed. Agents Wanted Everywhere. Send for free circulars, prices, etc. W. J. ADAM, JOLIET, ILL.

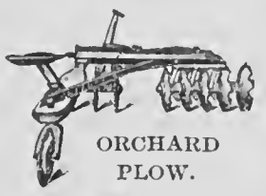


A BIG GAIN in milk, butter, beef, pork, mutton and general growth and development is the sure result of feeding ground feed. It not only pays better, but it saves about 40 % of the feed. The best way to grind feed is with the **KELLY Duplex Grinding MILL** It crushes and grinds ear corn shucks and all. Grinds all other grains single or mixed. You can make the feed as fine or coarse as you please. They grind fast and easy. Catalogue free. THE O. S. KELLY MFG. CO., Dept. M, Iowa City, Iowa.

$2.50 CASH will buy the BEST **DUTTON** Knife Grinder EVER MADE.



$5 CASH Buys a $10 ROOT CUTTER at the **CUTAWAY HARROW CO.** Higganum, Conn.



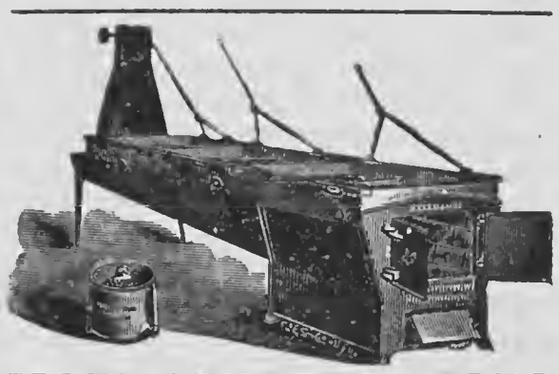
ORCHARD PLOW.

CLARK'S Double-Action CUTAWAY HARROW.

EXTENSION HARROW.

PLOW

Send for circulars



MAPLE EVAPORATORS

Most Durable, Most Economical, Cheapest.

Syrup Cans and Sap Pails.

McLANE-SCHANCK HDW. CO., Linesville, Pa.

Also, Mfrs. of the "Sunlight" Acetylene Gas Machine

STEEL ROOFING THE ONLY TOOLS YOU NEED.

5000 Squares **BRAND NEW STEEL ROOFING** Bought at Receivers Sales, sheets either flat, corrugated or "V" crimped. Price per square of 10 x 10 feet or 100 square feet ..... **$1.75** No other tool than a hatchet or hammer is required to lay this roofing. We furnish FREE with each order sufficient paint to cover, and nails to lay it. Write for Free Catalogue No. 57 of general merchandise bought by us at SHERIFF'S and RECEIVER'S SALES. "Our Prices are ONE HALF of others." CHICAGO HOUSE WRECKING CO. West 35th and Iron Sts. - Chicago.

Live Stock and Dairy

THE BREEDERS' WAYSIDE.

Silage and Abortion.

Is abortion contagious in a herd of cows? If so, what can I give to prevent it? Does feeding silage have anything to do with it?
Cayuga Co., N. Y. J. C. O.

I will answer the last part of the question first, by saying that silage will not cause abortion. There is no doubt about that. To be sure, abortion may occur in herds where silage is being fed, but that is only an incident. Contagious abortion is due to the occurrence of a disease germ prevailing in the stable. Only extreme cleanliness and special medical treatment will cause the disease to disappear. The stable should be thoroughly disinfected with crude carbolic acid or chloro-naptholeum, about the barn, and especially the stalls and manure trenches. The cows also need special treatment. They usually abort at five or seven months pregnancy. After an abortion the parts should be washed off and syringed out with a two-per-cent solution of chloro-naptholeum. This treatment, however, should be conducted under the direction of a competent veterinarian, which I am not, and it requires unceasing labor to get rid of this trouble. C. S. PLUMB.

Value of Corn Fodder.

Can you tell me the feeding value of a ton of dry corn fodder, stalks stripped of the leaves and husks? I have often heard that the bare stalk would be worth more alone than the leaves and husk. J. H. S.
Bernhart, Pa.

Chemists for many years have been studying the composition of the corn plant in its various parts and stages of development, so that now we can have a fair idea of what there is of value in the crop. Of course the real value of a food lies in its digestibility, and that is ascertained by studying the effects of the digestion of animals on the foods, or by means of artificial digestion experiments, in which pepsin is used in that connection in the laboratory. Several years ago Prof. Patterson, of the Maryland Station, made a study of the corn plant, in which he brought out the following facts: One acre of Indian corn yielded of digestible food, in the different parts of the plant, as follows: Ears: Dry substance, 1,530 pounds; protein, 157 pounds; carbohydrates, 1,343 pounds; fat, 30 pounds. Topped fodder: Dry substance, 450 pounds; protein, 10 pounds; carbohydrates, 422 pounds; fat, five pounds; ash, 13 pounds. Blades: Dry substance, 197 pounds; protein, six pounds; carbohydrates, 193 pounds; fat, four pounds; ash, 14 pounds. Husks: Dry substance, 426 pounds; protein, six pounds; carbohydrates, 414 pounds; fat, two pounds; ash, four pounds. Stubble: Dry substance, 569 pounds; protein, six pounds; carbohydrates, 545 pounds; fat, 13 pounds; ash, five pounds.

The dry substance referred to is that part of the plant digestible after absolutely all moisture has been removed. The protein, of course, is the most valuable portion, and the value of feeding stuffs is largely dependent on the amount of this present in them. In reporting on his work, Patterson states that the corn husks or shucks contain 72 per cent of digestible matter, the stubble or butts 66½ per cent, the blades or leaves 64.2 per cent and the stover (stalks) 55 per cent. There is more digestible matter in the corn fodder from one acre than in the ears from one acre. The stover from one acre yields as much digestible matter as do two tons of Timothy hay. At both the Pennsylvania and Georgia stations similar experiments were conducted, and conclusion arrived at much the same as at the Maryland Station. Out West, where corn is grown in enormous areas, the people are beginning to appreciate the great value of the stover. Each Fall and Winter great quantities are shredded and fed. For two Winters at the Indiana Station we have been keeping five horses on shredded fodder and grain in a small way, and feeding no hay. The horses have done more or less hard work, and thrived on the food, and we have been much pleased with it. Every bit of our 20 acres or so of corn fodder is shredded or cut up and fed out to horses, cattle and sheep. To be sure, there is some waste of the more pithy parts, but the stock relishes the feed greatly. Our people should feed more fodder, and they would gain thereby. Indian corn is the greatest farm crop grown in America. Corn is King!

C. S. PLUMB.

THE CONTENTED COW.

No, we do not pretend to say that the scene pictured on the first page is an ideal milking scene. Your expert breeder will prove without any trouble that the cow has not the true dairy shape, that her udder is too small, and that she cannot give a large yield of high-testing milk. Some good farmer will stand up and say that it's all a mistake to feed a cow while you are milking, and some professor of domestic science will say that the milking is not done in a sanitary manner. The young woman who is milking ought to have something over her head, and her dress is all wrong for the barnyard—besides, what is Grandmother doing out there when she might be at work indoors? In spite of all that these critics may say this picture illustrates one great foundation principle of successful milking. Everyone, including the cow, is comfortable and happy. The person who coined the phrase, "the milk of human kindness," must have been a dairyman, for the first principles of milk production are based on love and kindness. A contented cow is the milker for you. The cow in the picture may be a scrub so far as her breeding goes, but she is thoroughly happy and contented—willing to give down all the milk she can make up. The scientists and the sanitarians may improve her surroundings and ward off germs, but unless they copy the good nature and contentment which she now shows their labors will have been in vain.

A BOTTLE PIG.—One of our readers, Lovell Lea, of British Columbia, sends us the picture shown at Fig. 16. He says this is one of the ways they have of raising pigs in British Columbia. This little pig was hurt when it was only a few days old. Mr. Lea's sister said she would try to raise it on a baby's bottle. The pig soon learned to take its milk in this way, and is now as large as any of the others in that litter. We are glad to get this picture, because there has been a good deal of talk, first and last, about the chances of raising little pigs in this way. Dr. Jordan, of the New York Experiment Station, once invented a plan for feeding such pigs. He had a tin trough with a number of rubber tubes, and it is said that the little pigs learned to take their nourishment in this artificial manner. One thing is pretty sure, whenever there is a weak or ailing young animal on the place it pays to turn it over to the women folks for care, for they are far more likely to give it the attention that it needs than any of the masculine members of the family.

OLEO MORALS.—One of the best speeches on the oleo question was made by Congressman Cousins, of Iowa. Among other good things he said: "A hair in the butter used to be regarded as an awful thing, but now statesmen would defend it on constitutional grounds, holding that the ingredients of hair are harmless and that its trade between States should be unrestricted."

There has been considerable stock sold off here on account of short hay crop, but as far as I know by observation it has been mostly young stock and culls from the dairies. Most farmers have sold their surplus stock, keeping dairy cows, owing to high price of butter and cheese. I think it would be a hard matter to pick up a desirable lot of cows at $25 to $30. Most farmers have already disposed of stock enough so that they can winter what they have on hand. W. J. M.
East Randolph, N. Y.

EVOLUTION.—The following story of a famous restaurant in New York is told by a writer in Recreation: "The proprietor keeps several traps set on the roof of the building he occupies, and keeps the roof and the traps well baited with cracked wheat, or other food that English sparrows are fond of. Once or twice a day one of the waiters goes on the roof, takes the birds out of the traps, wrings their necks, and a few hours later they are served up to the gourmands as reedbirds at 50 cents each. The transformation from a street scavenger to a nicely browned reedbird is a form of evolution in bird life which Darwin probably never dreamed of."

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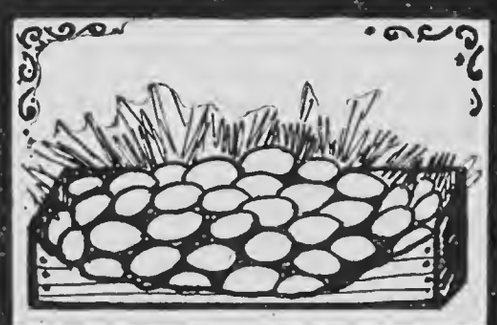

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In these days of cheap production it becomes necessary to make every by-product bring in its little revenue in order to make farming pay, and a farmer should be the greatest financier in the world. As we run a small dairy, and retail butter to customers in a city near by we have a hand separator and, of course, have a quantity of sweet skim-milk which, in past seasons, had been used to good advantage in feeding calves and young pigs. Last Summer, as we had no need of it for either, it became a question what to do with it until we hit upon a good article, in a dairy paper, telling how to make cottage cheese. We immediately began experimenting and in a short time succeeded in making a very good article.

The separated milk was set in tall cans, covered with a cloth, and left to sour. Just as soon as thick, for too long standing made bitter cheese, it was poured into a large milk pail, and this set into another vessel (ours was of galvanized iron, a 1½ bushel basket) containing water, and heated upon the stove, or oil stove, whichever was handiest. The milk was tested with a thermometer during its cooking, and only allowed to reach 110 degrees. It was stirred frequently to keep the heat even throughout the entire mass, also to break up the curd. If allowed to stand at 110 degrees very long the product was hard and dry, and no amount of working would make it a good article. When the cooking was done the mass was emptied into a cheesecloth bag to drain, the whey being saved and mixed with grain for pig feed. The bag was then hung up to drain over night. Next morning the cheese was taken from the bag and put upon the butter-worker. If well drained it contained many lumps, and the grains were of various sizes and very dry. After working—how much depended upon the amount of moisture left in from the draining—the cheese was transferred to a large butter bowl, weighed and salted, one-third of an ounce to one pound of cheese. Then with the hands it was manipulated much as is done with bread—until the salt was well mixed throughout. If not moist enough, cream was added until it was of a consistency which made it easily molded. The cream gave it also a faint yellow color; the color, however, was sometimes made for it by the addition of a small quantity of cheese color placed in the skim-milk when set to sour.

The last process was the forming into prints. This was done by means of a butter print in the pound size; the packing of print being done with a tablespoon. When molded, the cakes were done up in parchment papers, appropriately labeled with "Fancy Cottage Cheese" and the name of farm and proprietor. These pound prints found a ready sale among our various butter customers at 10 cents per pound, and we also gave them to a vegetable peddler to handle, in the same city. He found no trouble in disposing of them to his customers. The buttermilk also found a ready sale in like manner at 10 and 12 cents per gallon. Of course, to many this would not be very practical on account of the various tools we used in its manufacture, but as we already had them in connection with our dairy business it worked in very nicely. The trade in cheese only lasted during the Summer months and then was best during the earlier ones. In the warmer part of the Summer the souring of the milk had to be watched more carefully and less cream, if any, be used in the manufacture of the cheese, in order to make its keeping qualities good. In cool weather it would keep for three or four days, but in warm weather, unless kept on ice, fermentation would begin very quickly, and the cheese spoil in a day.

MRS. G. L. ROSS.

Lake Geneva, Wis.

A TALK ABOUT ROUP.

The fact that roup as an epidemic rarely if ever attacks the farmer's flock is significant and instructive. It belongs largely to the class of diseases which artificial conditions of the fowl have developed and stimulated. It is not inherited, and is not likely to appear in a sturdy, healthy bird. Anything in housing, feed or care that tends toward lowering vitality acts as a ready factor, where the constitution of the bird is ripe for or open to the assault. At the Rhode Island Experiment Station they recently yarded six late-hatched pullets and four vigorous, healthy hens with an extreme and a typical case of roup. The fowls fed, ate and slept together, also every morning had their eyes anointed with the exudation from the sick bird's eyes. The experiment extended over two months, during which time two of the pullets died (one of them sickening only at the end of four weeks). The other two showed slight symptoms of the disease about the eyes, but gradually recovered. None of the hens sickened. The first pullet that succumbed to roup was in a weak, debilitated condition. The experiment is important to us, mainly in proving the value of the rule of prevention over that of remedy.

Being embarked in poultry raising, and not contemplating shipwreck, it is well to realize that an epidemic means heavy loss and endless expense in time and labor, ending in very unsatisfactory results, and therefore to use every precautionary method to prevent disease from attacking the fowls. Along this line one finds use for quite a little common (or as some claim uncommon) sense, and put yourself in their place. Provided the stock is all right, they will stand quite severe cold in housing if given plenty of hearty food and exercise; beef scraps, corn, grain ,vegetables, good water and grit. But a current of air, a steady draft, on a roosting bird, is fatal in its results.

A case of roup, in its incipient stages, will be very much benefited by a warm dust bath such as recently described in THE R. N.-Y., in which is a good proportion of slaked lime. The hens exercise and kick the air full of lime, which is inhaled, and they cough out the mucus. Somehow it helps them quite a little, and also a few drops of tincture of iron in the drinking water assists in throwing off the disease. Where roup is well under way and has developed into an epidemic, the best authorities appear united in advice to kill and burn the sufferers, thoroughly disinfect and cleanse the premises, including buildings and furniture, and to give the fowls left a nourishing diet with exercise and a tonic. In the case under discussion, it is difficult to tell which is most injurious in its results—drafty housing, improper feeding or filth. Certainly the stress laid on the cleansing of infected quarters shows uncleanliness to hold no mean position of importance. The constitutions of birds that have had the roup are usually so weakened as to unfit them for breeding purposes; so it does not ordinarily pay to doctor them back to convalescence. Their eggs should neither be sold nor used for hatching. Given good health from the start—if well fed, not crowded, having plenty of sunshine and fresh air, fowls will not easily contract disease, and if roup ever gains headway in a poultry yard, the owner has only himself to thank for the discouraging outlook before him.

Chazy, N. Y. F. E. W.

WHY I KEEP LEGHORNS.—There are several reasons. I formerly thought raising meat and eggs should go together, and I found some profit in it, but as I increased my flocks the nuisance of broody hens became unbearable. I do not wish it understood that my Leghorns never want to sit, for many of them do, but they are easily cured, and they lay much better during the Summer and Fall than any others I have tried. They can be kept cheaper than large fowls, as they can be fed more corn, and corn is the cheapest feed to be had at this place. Large fowls, after they are one or two years old, become over fat, unless great care is exercised, while Leghorns seldom do, and can be kept much longer. They do not require so much house room. A house large enough for 40 Leghorns is none too large for 30 P. Rocks or Brahmas, and at the end of the year my cash account is decidedly in favor of Leghorns.

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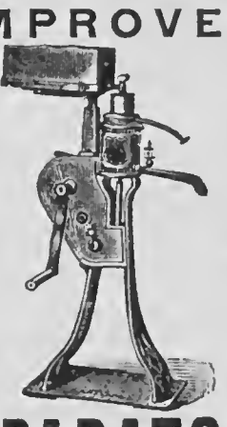

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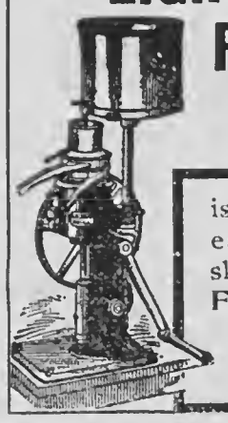

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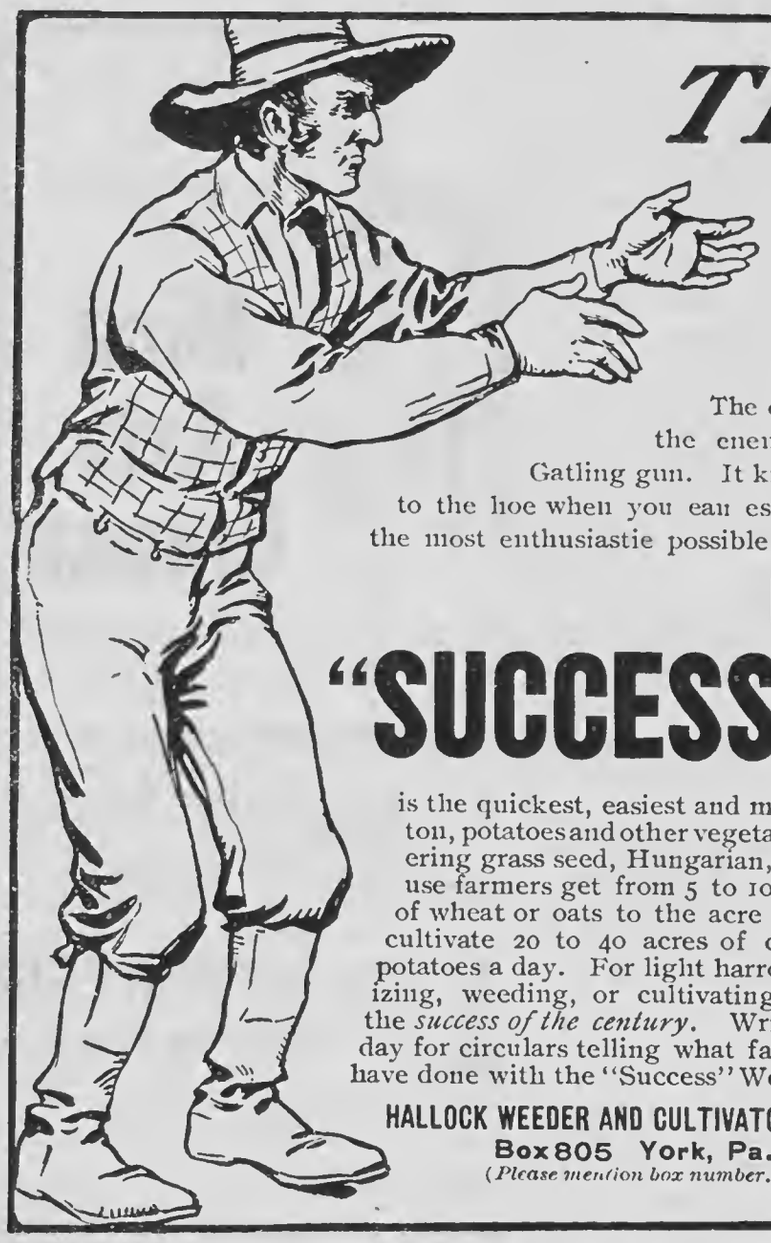

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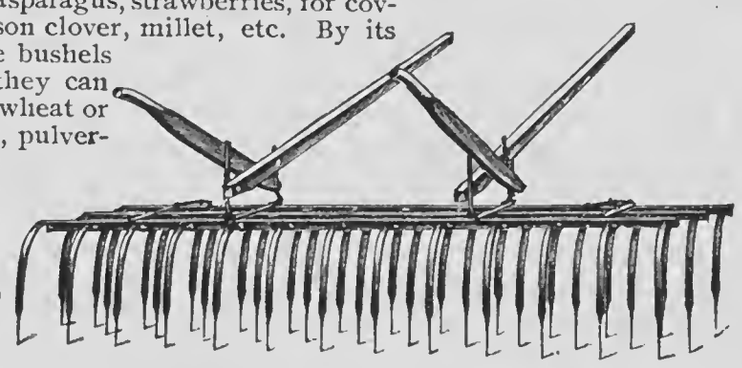

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We make them for transplanting plants, such as Cabbage, Tobacco, Sweet Potatoes, Celery, Sugar Beets, Turnips, Tomatoes, Strawberries; also used on Sprouts and in planting Potatoes. Absolutely guaranteed to do the work. Capacity 4 to 6 acres per day. Lightest, cheapest and easiest operated machine made.

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USED Any Place By Any One For Any Purpose

Stationaries, Portables, Engines and Pumps, Hoisters

State your Power Needs.

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Have conical shaped grinders. Different from all others. Handiest to operate and

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It saves four-fifths of the labor of hand sowing and one-third of the seed. Sows 6 to 8 acres an hour. Absolutely even distribution. Ask your dealer for it. Circulars free.

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COUNT NOSES

Take the verdict of your live stock, and we venture that it is overwhelmingly in favor of ground feed.

Scientific Grinding Mills

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For Farm and Garden **IRON AGE** Tools Save Time and Money

Iron Age tools more than double the work you can do in a day. They do better than hand work. They save you many dollars for labor in a season. They have been tried and found honest by two generations of farmers and gardeners so that the name **Iron Age** stands for all that is best in Seed Drills, Wheel Hoes, Riding Cultivators, Potato Planters, Horse Hoes and Cultivators. Don't do another season's hard work without **Iron Age** help. One of our novelties this year for garden and truck farm work is the **No. 15 Iron Age Single Wheel Hoe, Hill and Drill Seeder,** by far the best seed drill and single wheel hoe ever made anywhere. Not a single advantage of the separate tool is lost. Places seed in hills or drills, plows, rakes, opens furrows, covers, hills, hoes and cultivates. Write to-day for free copy of the new **Iron Age Book.**

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$18.50

for this **team harness,** cut from select oak-tanned leather, traces 6 ft. long, 1½ in. wide, with cockeye, 18-ft lines; Hook & Territ pads, pole and breast straps 1½ **Big Bargain** All kinds of single and double harness.

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For 12-16 BALL BEARING.

All steel disc harrow, easiest running and best made. 8 sizes, discs 16 or 20 in. in diameter. **Pay double you get no better.**

$8.50

for steel lever harrow; cuts 10 ft; 60 teeth, 2 sections; also 3 & 4 sections.

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Buys this Steel Beam Cultivator, plain, with 5 shovels. Spreads to 33 in.

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this 8-ft. steel mill; guaranteed easiest running & strongest made; pumping and power mills, 8 to 16-ft.; also tanks, pumps, pipe & all pumping supplies. We furnish complete outfits. **Prices all reduced.** *Catalog free.* **Don't fail to send for it.**

$28.75

is the price of our **Calumet Improved** check row planter with 80 rods wire. Never misses, drops in hills and drills. We challenge the world with this planter. Will ship it on trial in competition with all others. We have 95 styles of Planters and Drills for field and garden.

85 Cts.

Crank Seeder

Sows wheat, oats, grass seeds, etc. 4 to 10 acres an hour. Works perfect. Usually retailed for $3.

7½ ft. Land Roller, $14.90.

58c for Triumph corn planter

$10.50

for this **One-horse** corn, bean, pea and **Garden Seeder.** Drops in hills and drills. 12 ac. a day. Fertilizer extra. Handles all kinds of seed perfectly.

97 styles plows. Also scales, spray pumps, hay tools, carpenter tools, fanning mills, farm bells, etc.

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The "Planet Jr." line comprises also Wheel Hoes, Horse Ho... Wheel Cultivators, Orchard Cultivators, Celery Hillers, Markers, Lev... Potato Diggers, Sugar Beet Seeders and Cultivators, etc. Prices on all a... y reduced for 1901. Send for our 1901 "Planet Jr." Catalog. It tell... ut our goods. Shows by 16 full page photographic illustrations how they a... n this and other countries. We have already issued 350,000 and will issue more ... sary. We mail it free.

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(Ag 265K, 2660 Ag)

CORNELL UNIVERSITY
JAN 28 1901

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2661. NEW YORK, JANUARY 26, 1901. $1 PER YEAR.

A WESTERN HOG RAISER'S METHODS.

CORN, WATER, AIR AND PASTURE.

The Fine Art of Pork Making.

CORN AND WATER.—The average western hog-raiser is dreadfully "unscientific" in his methods, but he raises hogs, and lots of them, and usually makes plenty of money by the operation. The writer was reared on a farm, in a "hog district," in the great Middle West, where hogs are raised on corn, just plain corn and water (and, as the Editor suggests, plenty of fresh air), and nothing more, and never dreamed that they were ever raised in any other way, nor that there was other normal food for swine than corn. Once upon a time when visiting a farmer in southeastern New York, I was requested, in the absence of the farmer, to feed the "pig"—a 400-pound swill barrel, in a hog skin, on a board floor, in a little 4x8 sty. After searching long for the corn crib, I found a few well-preserved ears, which were fed to piggy, but this bloated eastern aristocrat positively refused to eat them! On the return of the farmer, great light was shed on the subject of pork-raising as practiced in the East and the West, and on the preservation of *seed corn!* That was 15 years ago, but the wonder expressed by those people is not yet dim in my recollection, and thinking that others might wish to know of the western method, it is here outlined.

A HOG FORCER.—Sidney Terwilliger, whose farm is within five miles of Madison, and within 1½ mile of a railroad station, is a fair example of the Wisconsin hog-raiser. Mr. Terwilliger tried "cow-punching" on the plains in the early days of the ranching industry, when the men who pursued this calling were liable at any moment to be themselves pursued by hostile Indians, intent on scalp-lifting. He now occupies a handsome modern residence in one of the prettiest suburbs of Madison, within easy reach of his 300-acre farm. I called on him recently for the purpose of getting facts in regard to present-day methods. He had but just returned from Chicago, where he had gone with a carload of hogs, and as the markets had been favorable for some time, the answers to my questions were naturally somewhat optimistic.

"How many hogs do you sell in a year?"

"From 175 to 225. I shall have about 220 this year."

"At what age do you aim to have the pigs ready for market?"

"From nine to 10 months. If properly handled, there is more money in a pig at nine months than at any later time. Mine will average 250 pounds at this age. I aim to have them ready in December or January. I am breeding later and later every year, and next year will have no pigs before May 1, as they start off better at this season, and with less trouble than earlier."

"What breed do you consider best for this 'forcing method'?"

"The Poland China; I have tried Chester White and Jersey Red, and crosses of each on Poland China, but I am breeding back to pure Poland China now. The Chesters are not prolific enough to be profitable, and the Jerseys are too heavy-framed, and require too long a time to mature; they are too slow in laying on fat."

"How many brood sows do you keep, and how are they fed?"

"I have selected 40 sows this year from the drove. These are fed but little corn now, but have the run of the steer-feeding yards instead. I figure on five pigs apiece. Sometimes as many as 16 are born, but five or six is the average raised. The sows, of course, have separate pens with board floors. Ground feed (corn and oats) and whole corn is the diet. The milk from 20 cows is fed, but this amounts to little. When the pigs are eight or nine weeks old, runways are opened, and the pigs are given all of the milk, but this amount, as you can imagine, furnishes little more than a good-sized smell for each one; but this, with good pasture, is all they get until new corn comes in."

"Don't you feed shorts?"

"None at all. I have not fed five tons of shorts in all the time I have raised hogs, 25 years. Corn and water is the diet, with plenty of grass."

NOTHING LIKE CORN.—This is the secret of it. Western farmers are accustomed to say that their pork is produced on corn and water alone, but forget the grass. Good pasturage all the Summer is the rule, with a liberal allowance of old corn. Late in August, or as soon as the growing corn has fairly well formed ears, "snapping" is begun. The ears are grasped near the end, and by a sharp, downward motion are easily broken from the stalk. The hogs do the husking, and do it well; if not overfed the softer husks and the cobs will often be eaten also. Acres of corn are fed by this method, and the stalks left standing, to be picked over later by cattle. Mr. Terwilliger, however, no longer "snaps" corn, but fences off a portion of the cornfield and turns in the drove. By this plan the labor of gathering the ears is saved. Later, as the stalks ripen and the husks open, corn is husked and fed direct from the field.

A "RAZORBACK" AND HER FAMILY. FIG. 19.

One of the typical and interesting sights of a western hog farm is the feeding. A two-horse load of corn, which means from 30 to 40 bushels of ears, is hauled direct from the field to the pasture or yards, into the midst of 200 or 300 squealing porkers. Until the teamster can secure his team and start shoveling, the din is something terrific. The scoop-shovel is soon set in motion and the great yellow ears are scattered over the field, and all is quiet except for the crunching and grinding of the kernels in 200 hungry mouths. Where the drove is as large as Mr. Terwilliger's, one man is kept fairly busy husking and feeding. No stated hours nor any given amount of corn is proscribed. As much is fed as will be eaten, and it is astonishing to see the quantity that will be consumed. There is no variety. Corn for breakfast; corn for dinner, corn for supper and corn at the numerous lunch hours. Only corn and nothing more—except grass and water, and as the season advances, grass is no longer available. At the close of the fattening period the porkers, when not eating, lie sleeping in the Autumn sunshine, turning corn fat into hog fat. Mr. Terwilliger, in common with other large producers, prefers to hire a car or cars, and ship his hogs, rather than sell to traveling buyers. From 60 to 70 250-pound hogs is the capacity of an ordinary stock car. Freight and stockyard charges are thus paid by the owner, but the gain in price over that offered by the buyer, is usually sufficient to insure a handsome profit when this system is followed.

THE DARK SIDE.—This is the bright side of the hog-feeder's picture, and it might be inferred from this that a fortune may be easily and quickly made producing pork for the Chicago market. It sounded easy as Mr. Terwilliger told it, and had I not known him for a lifetime I might have been induced to buy a farm and attempt to do likewise. Fifty-five thousand pounds of pork! Also 12,000 pounds of beef, besides several hundred pounds of butter and a few young horses to sell every year! Thousands of western farmers do as well, while thousands of others fail. It is the *man* and not the crops after all. I have not mentioned the hog cholera, the dreaded scourge of every farmer in the Northwest. Anxiously the drove is watched, and if a wheezy cough is heard or a porker refuses his feed, cold chills run down the owner's back, for he well knows what to expect, viz., instead of several thousand pounds of pork at $5 per 100, he will have in a few weeks a fine lot of fertilizer worth $5 per ton. In three townships of Dane Co., Wis., the loss has been estimated at $50,000 last Fall. When wheat raising failed in Wisconsin Mr. Terwilliger, in common with many others, possessed the foresight to go into this line of farming, and 25 years of careful study of breeds and methods have brought success. As the present generation of western farmers have shifted from wheat to corn and pork, so the next generation will without doubt shift largely to butter and cheese. The dairy cow is bound to divide honors in the future with the hog, but they will work well togetner.

FREDERIC CRANEFIELD.

Wisconsin Exp. Station.

R. N.-Y.—There is one very sure thing about the hog business. If Mr. Terwilliger undertook to feed and breed such objects as the one pictured on this page, Fig. 19, he would have a different story to tell. His corn would simply vanish into thin air, blown through the hog's throat in the form of squeals. The animal is a true "razorback" from the South. She can outrun a deer and eat more than an elephant. She was carried about from one fair to another to advertise a wire fence, and taught facts regarding livestock keeping. Here is one result of "natural selection." Inbreeding has reduced her vitality and given prominence to the parts of her carcass—such as nose and legs—which are of least service to man. She has also been left to select her food "naturally," and that means little of it when most needed. Yes, indeed, it is a long step from the stringy "razorback" to the meat-making Poland China, but there is hope for the grandchildren of this old sow! Could not she and her descendants be improved by feeding alone? Yes, to a great extent, but it would require long years to accomplish the desired results. The introduction of improved blood would be a surer and quicker method because this improved blood would bring with it inherited tendencies to produce better shape, larger size and ability to turn food into meat instead of motion.

RETAIL BUSINESS ON THE FARM.

Printers' Ink for Middleman.

Some of our western readers who are located on large farms, and do a wholesale business in grain and meat or wool, are apt to think that the little eastern farms, located in thickly-settled districts, are mere toys. They would be astonished if they could know how much some of these little farms produce. We have recently learned something about the methods employed in selling the products of Unkeway Farm, which is located at Babylon, Long Island. This place is on the south side of the Island—the Summer home of many wealthy people, and a vacation ground for many more. F. R. Townsend, the proprietor of Unkeway Farm, is a former business man, and instead of selling to peddlers and grocers he goes direct to the consumers. He has a printed list of the 51 articles produced on the farm. These lists are mailed to customers with the prices of articles marked in ink. For example, here is the list as it was sent early in December:

We quote prices to-day as follows:

Eggs, per doz	35
Chickens, roasting, lb	16
" fowls, per lb	14
" broilers, pair	1.25
Ducks, per lb	—
Asparagus, bunch	—
Artichokes, each	—
Beans, string, per qt	—
" lima, per qt	—
Beets, per qt	5
Brussels sprouts, per qt	7
Cabbage, each	8
Cauliflower	10 to 25
Celery, head	4
Corn, per doz	—
Cucumbers, each	—
Egg plant each	—
Kohlrabi, bunch	—
Leeks, bunch	5

Articles not marked are not on hand.

Lettuce, hothouse, head	8
Mushrooms, ¾lb. per qt	40
Okra, per qt	—
Onions, per qt	10
Parsley, bunch	5
Parsnips, each	2
Peas, per qt	—
Peppers, each	—
Potatoes, per peck	20
Pumpkins, each	—
Radishes, hothouse, bch	5
Rhubarb, bunch	—
Spinach, per peck	20
Soup vegetables, bunch	5
Squash, each	—
Sweet potatoes, per qt	5
Tomatoes, per qt	—
Turnips, per qt	5
Carrots, per qt	5

Fruit in Season.

Apples, per peck	25
Plums, per peck	—
Pears, per peck	—
Currants, per peck	—
Raspberries, per peck	—
Blackberries, per peck	—
Gooseberries, per peck	—
Peaches, basket	—
Grapes, per lb	—
Melons, musk, each	—
" water, each	—
Young roasting pigs, ea	3.50
Sausage meat, per lb	18

"How often are these statements sent out?" we asked.

"We send the marked quotation list every 10 days, and postal cards are included, printed with blanks in such a way that it is easy for customers to make their orders."

"Of course you aim to sell only first-class products?"

"We work hard to produce the very best article possible, and on no condition will we fill the order unless the articles are as good as the market affords. You will see that we offer 51 different articles from our farm, and we often have much difficulty in providing really first-class goods enough for our trade."

"Who do these circulars go to?"

"We send them to all prominent residents of our town, and to all those hiring or taking Summer cottages, of which there are many along the shore. We also send them to our friends and acquaintances in New York, and are constantly on the lookout for new customers."

"How and when do you deliver?"

"In our town goods are delivered at once if wanted. If not, they go out with our first delivery. Some of our customers give us orders for certain quantities every other day, or twice a week. Others change but little, and as soon as we learn the requirements of a family, we are safe in taking the goods to the door even without a positive order."

"How about goods for the city?"

"Friday is our shipping day, and with few exceptions our customers are willing to accommodate us. All our articles are packed carefully in hampers which are made especially for us. The express company returns the hampers free of charge."

"How large are these orders?"

"Here is a copy of one just delivered which will show about the character of the goods ordered:

BABYLON, L. I., DEC. 7, 1900.

Mrs. Blank.

TO UNKEWAY FARM

F. R. TOWNSEND.

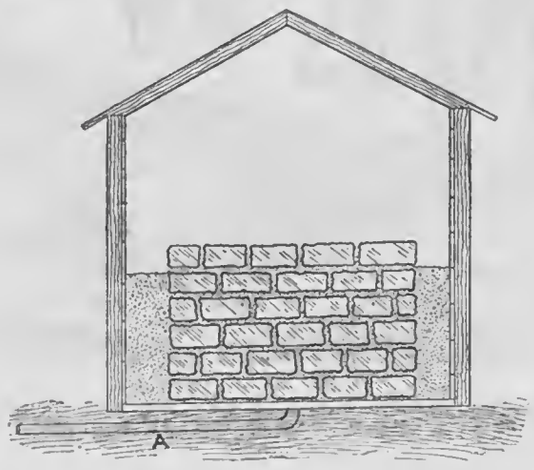
4 Dozen eggs @ 35c	$1.40
2 Chickens, 8½ lbs. @ 16c	1.32
2 Quarts of beets @ 5c	.10
1 Cabbage	8
4 Lettuce @ 6c	.24
6 Celery @ 4c	.24
1 Quart onions	.10
2 Parsley @ 5c	.10
4 Parsnips @ 1c	4
1 Peck potatoes	.20
6 Bunches radishes @ 5c	.30
1 Peck spinach	.20
1 Quart white turnips	5
1 Quart carrots	5
1 Soup vegetables	5
4 Quarts sweet potatoes	.20
2 Pounds sausage meat @ 18	.36
Total	$5.63

"How large is your farm?"

"We have under intensive culture about 13 acres, and about two acres devoted to the chicken department, about 2,000 square feet of glass and over 50 cold frames."

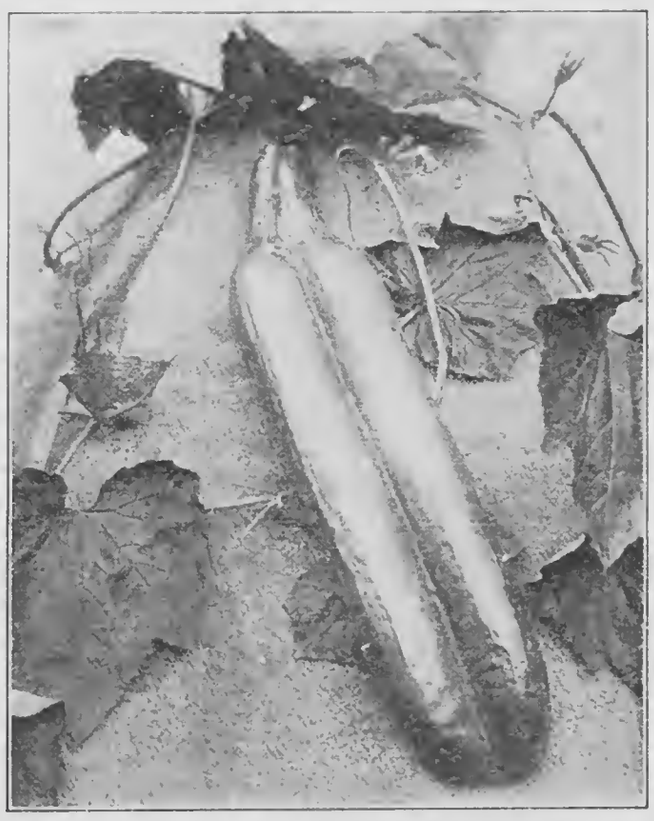
"What is the most profitable department of your business?"

"The fruit and plant department. We raised last year about 40,000 vegetable plants. We used many ourselves, and the remainder we sold. We could have sold many more. We also raise quite a good many



PROPERLY-PACKED ICE. Fig. 20.

flowering plants, palms, roses, etc. The following list will show what we now have growing: Twelve varieties of geraniums; one rose; four varieties of Fuchsia; eight Chrysanthemums, including Marguerite; 12 hardy roses; 12 tender roses; one Gesnera; one Yucca; three Hibiscus; one Croton; six ferns; two Dracænas; three carnations; eight palms, all our own seedlings, including Latania, Phœnix, Kentia and Cocos; two Agaves; two Aspidistra; 10,000 strawberry plants, including Sharpless, Gandy, Glen Mary, Beder



A TWIN CUCUMBER. Fig. 21.

Wood and Brandywine; 300 blackberries; 600 raspberries; 175 currants; 175 gooseberries.

"Do you supply flowers for family trade?"

"We supply many farmers' wives with small plants for their window boxes. For instance, we can supply the following list in two-inch pots for 25 cents, or four-inch pots for 50 cents: One geranium, one ice plant, one wandering Jew, one rose geranium, and one small palm. This would be the smallest order, and, of course, we handle them in much larger lots

A DOUBLE-BARRELED SILO IN NEW JERSEY. Fig. 22.

when desired. This is a good business, especially in a neighborhood like ours. We give a little instruction to those who buy these plants, especially with regard to watering and ordinary care. The farm is run in a strict business way, with accounts open with six different departments, with a regular set of books, so that we know just what each department brings in and also what it costs."

My experience in seeding Timothy is to plow the land in the Fall and seed Timothy alone. I have cut the next July two tons per acre. I sow about four quarts of seed per acre. M. L. S.

FILLING THE ICE HOUSE.

The sketch, Fig. 20, shows a cross section of our own ice house, with boards nailed horizontally on the inside of the poles. From 12 to 15 inches should be left between the ice cakes and the walls. Locate the ice house where good natural drainage may be secured. Tile may be laid, as indicated at A, to secure more adequate drainage if needed. Cut the cakes so as to break joints, say 18x36 inches, or 15x30, as conditions may require. It will be impossible to make the cakes fit together perfectly, no matter how expert the saw manipulator may be. On this account, we put in one layer, fit closely as possible, then shave over the upper surface of all the cakes with a carpenter's adze. The shavings of ice are swept into the crevices between cakes. When freezing cold, a little water is sprinkled over the whole surface to cement the layer solidly together.

As each layer is completed, the sawdust should be filled in around the sides, level with the top, and solidly tamped down. Allow no sawdust to remain on top of the various layers until the ice house is filled. Fig. 20 shows the sixth layer in and ready for the sawdust. Ice is preserved by being packed away from the air. As hot weather comes on the ice will settle some. Be sure to keep the sawdust tamped down around the sides frequently during early Summer, and see that no airholes form. When the ice is all packed in, cover with 10 to 15 inches of sawdust. Leave the gables open more or less to allow free circulation of air over the ice. I hope that this description, with sketches, of our own successful harvesting and storing of ice in a cheap pole-frame ice house, will encourage many farmers, who read The R. N.-Y., to decide to have some ice next season. And may they thoroughly enjoy, for the first time, the cooling benefits which accrue to the fortunate possessors of the congealed fluid. Next Summer write us how you like it.

J. H. BROWN.

A TWIN CUCUMBER.

Fig. 21 is a very good representation of a twin cucumber grown in England and reported to us by Mr. Charles J. Fox, Ontario, Canada. Abortive twin fruits are not uncommon, but it is seldom that one arrives at any symmetrical maturity, as the chances are all against the equal pollination and development of twin or multiple ovaries. As every cell in a growing plant is theoretically capable of indefinite segmentation or sub-division, there would seem to be ample opportunity to develop these monstrosities, but Nature generally confines her efforts to the perpetuation of the species in the most simple and direct manner, and twin fruits usually either fail entirely or develop in a lopsided manner. The cucumber represented is evidently one of the glasshouse or forcing varieties, which have been so educated by culture under highly-artificial conditions that the fruits, which are only enlarged and highly developed ovaries, are grown to maturity without the stimulus of pollen from the male flowers, and, in consequence, without the production of seeds. For this reason this class of cucumbers is more likely to develop a symmetrical twin fruit than most other plants, but it is rare to find so perfect a specimen. Mr. Fox omitted to say whether perfect seeds were found in this specimen or not. In case seeds were developed the subject of illustration is even more extraordinary, as an almost equal number must have been found in each of the twin fruits.

A LIFE-TIME SILO.—Noticing Mr. Cook's recent article on solid and substantial silos I am moved to send you a little sketch of twin silos recently put up by a large dairy company in New Jersey, shown in Fig. 22. These silos are of large capacity, being 22 feet in diameter and 30 feet high inside, and made of brick and stone throughout. The plan is that given by Prof. King in the Wisconsin bulletin on silos, with one notable exception. The doorway has no wooden frame, as given in the bulletin, but the door is clamped to the inside of the opening by strong rods, which pass to a timber across the outside. There is thus no woodwork to decay that cannot be easily replaced. These silos cost about $800 each, and are calculated to last a life time. C. O. U.

Plainsboro, N. J.

Crude petroleum is being used as a first coat or "priming" on weatherbeaten buildings. It is a wood preservative and makes good underclothing for a coat of paint.

In regard to hay press will say that I made one for hand power; two men can bale three tons in 10 hours; size of bale 48 x36x23 inches; weight from 125 to 180 pounds. M. L. S.

Cows have been pretty well picked up in this section, Chemung County, at prices ranging from $10 to $25 on an average. No doubt there are some throughout the county left, which could be bought at the prices mentioned, but no large amount, and I do not think they would be of extra quality. B. N.

Horseheads, N. Y.

ESSENTIALS OF STRAWBERRY CULTURE.

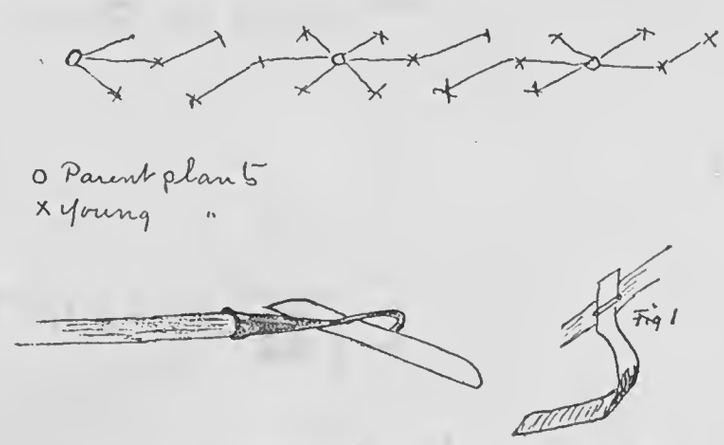
How It Is Done in Oswego Co., N. Y.

THE SOIL AND ITS CARE.—The soil in which the strawberry attains its greatest perfection in this section seems to be a deep, rich, clay sand loam mixed with small stones, originally wet but underdrained. Our soil contains large quantities of potash, chiefly in the form of silicate of potash, which we are told by the chemist gives up its properties very slowly; hence our soil is strong and lasting. On account of late Spring frosts the best results have been attained on hilltops and north and east slopes. Low lands are as a rule avoided, both on account of frost and character of soil, which being mucky or heavy clay is not congenial to strawberries. Fertilization is best done by preparing the land a year or two in advance by thorough tillage and the addition of something to make humus; if nothing better is at hand plenty of straw. For slow-starting varieties, a light application of nitrate of soda is of value, but great care must be taken in applying it, as it is very caustic. The fitting of the land is of the very highest importance. Nothing should be spared here, as upon this preparation the success or failure of the future crop depends. In short, it should be as finely fitted as an onion bed, and furrowed. The Meeker harrow is the best tool known for the purpose. Marking is done by a hand-marker made of a tough board of bass-wood, spruce, etc., 10 to 12 inches wide, ⅜-inch thick, about 12 feet long, fitted with a light pair of thills and little runners on the bottom of board at desired distances to mark the rows. A line is stretched along one side and one end of the field, and a guide-mark made. The marker is then drawn carefully across the field both ways, thus throwing it into squares. The utmost care is needed here to keep the rows straight and of uniform distance apart. This care is amply repaid during the season both in appearance of field and ease of culture. The distances vary from 2½ to three feet, according to varieties, individual taste and other conditions.

PLANTS AND SETTING.—The plants, which have been grown in beds separately for that purpose, and not taken up between the rows, as is the custom with some, are carefully lifted with the spading fork, earth shaken out, roots straightened, runners and old leaves pulled opposite way, and while yet in bunches in the hand the roots are shortened back to about four inches, and tops sheared back as closely to the hearts as can be done safely. This is a much shorter way than the old one of trimming each plant separately. The roots are then dipped in water and the plants placed in tight boxes; shoe boxes are good. *Never expose a plant to the air a single second longer than is absolutely necessary.* More plants are lost or seriously weakened in this way than any other way of which we know. The quicker the plants are dug and replanted the better the chances of success. For setting we use long-handled spades. The man carries on his back a market basket with a board cover and a wet cloth inside, in which the plants are put. He thrusts his spade deeply into the ground at the cross-mark, pushes the handle well forward, while the dropper boy, who has taken a small handful of plants from the basket, places one or two plants in the hole thus made. The spade man then removes the spade and steps close to the plant, thus securely firming it. Care should be taken that the roots are well spread out in a fan shape, and when planted they should be as deep as before digging, but no deeper. A dust mulch should be made at once about newly-set plants. This is very important.

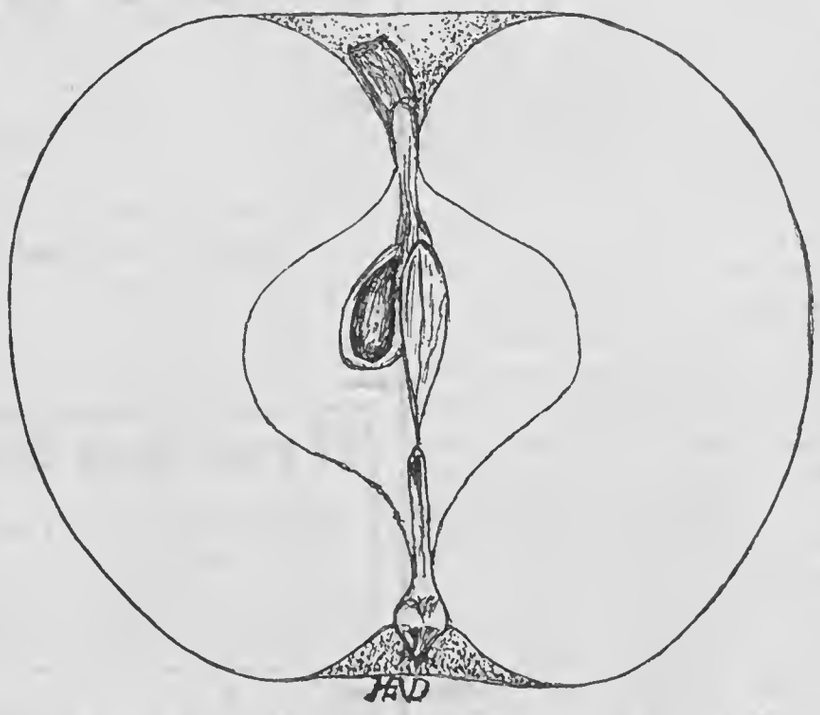
CULTIVATION AND TRAINING.—After-cultivation consists in keeping the soil well stirred to a depth of one or two inches but not deeper, and all weeds removed. A 14-tooth cultivator is a very fine tool if provided with three or four flat-cutting hoes like those shown in Fig. 23. These are made for us out of old wagon springs. They cut all thistles, dock and other weeds which may be left by the narrow teeth. Our experience has been that a strawberry plant should be as near 12 months old at the time of fruiting as possible. To attain this result, the runners must start early; consequently we set very early and encourage the plants to throw out runners at the very earliest possible moment. The largest, best and most fruit is always found on these early plants. The later plants are weak, short-rooted, and in many varieties partially or wholly barren, particularly those of the Marshall or Gandy type. The old rule was to cut off the first runners; this is now reversed, we cut off the later ones. We cultivate both ways frequently until the runners start freely, when we train lengthwise in the direction the rows are to be, placing the runners as shown at Fig. 23; those in front of the plant, as the bedder is working, to the left, those behind the plant to the right. This method prevents the plants from growing together in bunches and allows the extra plants to run out between the rows where they can be easily destroyed. Bedding is done by people on their knees astride of the row, using a homemade tool very like a wide putty knife. This bedding is, we think, the most important, though costly, part of the culture. Plants so treated are much larger and are far better rooted. We dare not omit it.

During the latter part of the season we use hoes like the one shown at Fig. 23, which are 12 inches wide and two inches broad. There is a beet hoe now made, which, though not quite so wide, will do nicely. This



BIG STRAWBERRIES; TOOLS AND CULTURE. FIG. 23.

hoe can be worked under the leaves and runners, doing better and quicker work than any tool we have. Autumn hoeing and weeding is very important, for if not done such weeds as chickweed, etc., may seriously injure the plants before Spring. If plants are found to be too thick, or rows too wide, we do not hesitate to thin out severely, as a strawberry plant too many is the very worst kind of a weed in a strawberry bed. Nature's time for mulching the strawberry is when the leaves from the trees have fallen and are blowing about. We can make little mistake



THE PARAGON APPLE—FROM LIFE. FIG. 24. SEE PAGE 54.

in following Nature. In covering with straw, which is our only covering here, great care should be taken that it is free from Timothy grass seed, which is one of the worst things to get into a bearing bed, as it is so fine it cannot be weeded in the Spring, and quickly forms a sod. We use from three to six tons of straw per acre, spreading it from a one-horse two-wheeled cart, with wheels from an old mower, the axle of which is five feet long. This cart runs on the outside of two rows, while the horse walks between them, thus doing no harm. In this article we have tried to touch upon a few of the more important parts of strawberry culture. In our experience of over 20 years, each year impresses us more firmly with the fact that strawberry culture consists, in common with all the other higher divisions of horticulture, of an intelligent and strict attention to a mass of what the ordinary reader would consider unimportant details. If these details are not fully carried out, success rarely results.

F. G. TICE.

Oswego Co., N. Y.

THE HIRED MAN'S SIDE.

Establish a reputation for hiring good men, paying good wages, and paying promptly.

Give your man just as much time on Sunday as is possible. Give him occasionally the use of a horse. A half holiday when fishing or hunting is good, will make him work more cheerfully, especially overtime.

Do not talk about other help, lest your present hand think you are picking him to pieces to other people.

Provide a clean room and a clean bed free from vermin. If it is impossible to give each man a separate room provide separate beds and something in which he can lock his things securely.

Set a good table, have meals served promptly, and try to provide food for which the hired man shows a preference.

Try to have his clothes washed clean, well mended and returned promptly to his room. In his room have private toilet facilities, and a pin cushion on which are several needles kept threaded with linen thread, a box of pants buttons handy, and a large brass thimble.

If he is suffering with a cold or complains of other ailments, such as chilblains or chapped hands, offer him remedies from the family medicine chest free.

Give him a chance to bathe in a warm kitchen once a week at least, with a large wash-tub.

The women folks and children do well to give their orders through the head manager of the farm, for most men dislike to try to follow instruction of more than one master.

Do not expect your hired man to take an interest in your crops, your stock and your general welfare unless you take enough interest in him to observe all and every one of these rules.

J. J. G.

FIGHTING THE PEACH BORER.

Life on a California Fruit Ranch.

I expected to write you about the results of our last year's treatment of the Peach borer by this time, but other work has occupied our time, and we have not been able to examine many trees, but as far as our observation extends the result is very encouraging. The treatment that I refer to was the application of lime, salt and coal tar to the trunks of the trees, and extending down to the roots. This was applied to our orchards in the "Willows," about 70 acres, and to all varieties of trees alike, including apple, apricot, cherry, peach and prune. Just as soon as we get at it again I will write you fully, and if the remainder of the orchards show up as well as the four or five acres that have been uncovered, I shall be very much gratified in being able to give to the fruit growers of the United States a pointer that will be of use to them in fighting this great pest. We treated about 100 apricot trees here on this ranch with several handfuls of salt put in a depression immediately about the trunk, and allowed to dissolve and wash down with the rain. No good results followed this treatment, as the borers were found there as badly as anywhere else. We have now hunted out the borers from all apricot trees on this ranch, and have applied the lime, salt and tar mixture. It is early to do this, but we wished to put Canker-moth traps on the trees, and were compelled to put on the wash first, as the traps when on would interfere with the work.

Some of your readers may wonder what we are doing on the ranch at this time of the year. As we have about 20 men to keep busy we should have accomplished something in the past two months. Before the rains came nearly the entire force was at work digging borers; 200 acres of fruit trees have been examined, and the borers dug out. All of these trees except peaches and almonds have wire moth traps about their trunks. Part were put on in 1899, and part in November, 1900, but all had to be examined to see if they were in perfect order. The moths begin to ascend the trees ordinarily about December 1. At this time we are encouraged in finding very few moths in the traps, but there are some there, and also a few have passed through or over, and we have found a few eggs in the trees. Many of the moths, in fact, nearly all, are barren of eggs. We are hoping that this pest has run its course, and that we will not need the army of men and the barrels of molasses and tar and the sulphur and flour that were in evidence in the orchards last April.

We have also dug up about 400 cherry trees, or about one-fifth of the cherry orchard, these trees having succumbed to the very dry weather of the past two or three Summers. These trees are dug out and will be cut up in four post lengths, the smaller branches being bound in bundles, and all will make fuel for the engine house. Large holes are dug, about 3½x3½ feet, and prune trees will be set therein immediately. We have also put in since the rains have softened the earth about 200 acres of barley and wheat. Our crew in the grainfields consists of three five-horse gang plows, two four-horse harrows, one three-horse harrow and one seeder, two-horse. One four-horse team worked on a harrow part of the time, and on a seeder whenever needed to even up the work and keep near to the plows. Rainy days there is wood to cut from broken Live-oak trees in the park, or about the ranch, or Blue gum trees in the grove that was planted about 10 years ago and is now growing into wood faster than it is needed. The teamsters have harness to oil and mend and other odd jobs indoors. To-day four men are shoveling over about 40 tons of prunes, and rearranging a lot of dried peaches and other fruit in the fruit warehouse.

H. G. K.

Edenvale, Cal.

THE weather last Fall and Winter so far has with us been pleasant. Farmers got their work well done. Hay and straw hold their price well up; $16 to $20 per ton. I never had apples keep as well as this year. Eggs are very scarce, and hard to be obtained, and yet the price has fallen to 28 cents per dozen. Other products remain about the same.

M. H. J.

Madison, Conn.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Top-Grafting Apple Trees.

D. W. D., Hickman, Ky.—I want to top-graft about 200 14-year-old apple trees this Spring. Is it too late to cut scions?

ANS.—No, it is not too late to cut scions for grafting up to the very day they are to be set, provided they are not injured by the severity of the preceding Winter. This can usually be told by the discoloration of the inside of the twigs, the damaged ones being brownish next the bark. H. E. VAN DEMAN.

Early Ohio Grape.

P. B. T., Visalia, Ky.—Can you tell me anything about the faults and good points of the Early Ohio grape for vineyard planting for market in the Ohio Valley? Is it vigorous, productive, free from rot? Does it hold to the stem, and not crack, and is it a fair table grape?

ANS.—Early Ohio is one of the very earliest grapes; being about one week earlier than Moore, which has long been the standard of earliness. It has a vigorous and productive vine and seems to be remarkably healthy. The fruit is quite exempt from mildew and rot. The bunch is large, the berries of medium size, black and adhere tenaciously to the stem. The flavor is good, being much better than that of most of the early grapes. It is a good variety for early market. H. E. VAN DEMAN.

Some Apples for Connecticut.

W. H. K., Bethel, Conn.—I intend setting out an apple orchard the coming Spring. What varieties would you recommend for this section? My idea is to set out mostly Baldwins. What other kinds would you recommend? How about the York Imperial and the Gravenstein, also McIntosh? Would they be good kinds for standard trees? I expect to set out about two acres in the Spring, and five acres in another year. I have an idea that I will set out my orchard like Ralph S. Eaton, of Nova Scotia, only I will set my standard trees 40 feet instead of 33 feet as Mr. Eaton does, and when I get my fillers all in my rows of trees will be 20 feet apart. Do you think 40 feet too far? I will use peach, plum and some early-bearing trees for fillers. How would Ben Davis do for temporary trees? Would the Yellow Transparent apple be a good standard? What sized trees do I want for apples, peaches and plums?

ANS.—While Baldwin is a very popular market apple it has the fault of overbearing at times, and then failing for several seasons in succession. I would not advise planting all of this or any other variety. York Imperial is too little tried north of Pennsylvania to enable us to say positively whether or not it would be advisable to plant it commercially in Connecticut. All that I would now say is to give it a test by top-grafting, that fruit may be produced as soon as possible. It is one of the standards from Pennsylvania to Colorado. Gravenstein is a very good apple in every way, so far as a Fall variety can be, but would not be so valuable for market as one that would be a true Winter variety. McIntosh is good in color and quality, but it is not a late keeper, being much like its parent, the Fameuse, but somewhat better in size and color, and some think in keeping and in resistance to Apple scab. I would advise planting both of the latter but sparingly. Sutton is more likely to be a profitable apple for Connecticut than any of those already mentioned. Rome Beauty is worthy of being tested in that section. Forty feet apart is not too great a distance for permanent trees. Peach trees as fillers are often quite injurious to the apple trees between which they are set, because they grow more vigorously and are apt to stunt them. They also require different treatment of soil to some degree; and in spraying the apple trees there is danger of some of the mixtures being hurtful to the peach trees, because the wind will naturally carry some of it on to them. The latter is true of plum trees. My own practice is to plant only apple trees in the apple orchard, after considerable experience and observation with peach trees as fillers. Yellow Transparent would make a good filler, but there is not likely to be profitable market for large quantities of the fruit. Ben Davis may be profitable there as a filler, but Connecticut is too far north for its proper development, and I think it of doubtful value. Wagener would be my preference, as it is an early and heavy bearer, and a large red apple of good quality and a good keeper. Apple trees two years old and about five feet high are the proper age and size, and such as I would plant. Peach trees should be one year from the bud, and plum trees may be either one or two years, but they should be from three to four feet high. H. E. VAN DEMAN.

Root Galls on Raspberries.

N. G. H., Stratford, Conn.—I noticed in issue of December 29 the article by F. H. Ballou referring to Prof. Selby, of the Ohio Experiment Station, and his paper on the root gall of the red raspberry. I partly set out a patch of Loudon last Fall, and will finish setting in the Spring. Of those I have dug up, 10 per cent had root galls, and nearly every gall had a few small brown worms, which from the little notice I gave them, looked like the small worms we see so plentiful in chip dirt. I set out only good plants, which are on new ground, and should be pleased to hear the best way to keep the gall in check, or get rid of it.

ANS.—The small, brown worms which you observed on the root galls of your Loudon plants are not responsible for the mischief. It is my experience that the most careful selection of plants will fail to prevent the introduction of this serious disease into the new plantation. Like the black-knot of the plum, which brought such destruction a few years ago, one may carefully prune away every trace of the trouble from a plant, only to be rewarded by a more deadly attack in a vital point apparently unaffected at the time of examination. It is to be hoped that, like the black-knot scourge, this discouraging feature of red-raspberry culture will eventually run its course. F. H. BALLOU.

The Velvet Bean in Maryland.

A. H. H., Rayville, Md.—Will the Velvet bean do all right in northern Maryland? I wish to grow it in my orchards. If you think it will give good results will you give full particulars?

ANS.—We do not feel like advising readers to plant the Velvet bean north of Georgia. We have grown it two years and last year the season was so long that the crop produced seed. The vines were not much larger than our Lima bean vines. Cow peas are better for orchards. They are hardier, will make more growth on poor soil, and are easier to work under. We know that the Velvet bean is a great success in Florida, but for the North we do not advise it.

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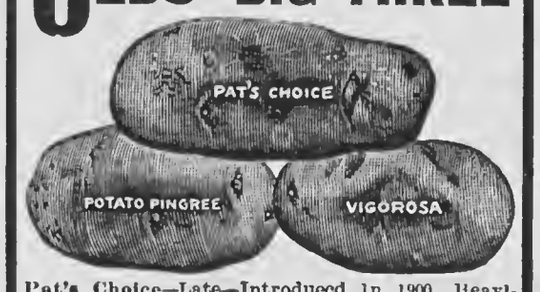

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Treatment for Potato Scab.

W. H. H., Letcher, S. D.—I have heard that at the Ames (Iowa) Agricultural College they treat their seed potatoes to corrosive sublimate, the same as wheat is treated to bluestone for smut, spreading the tubers out and sprinkling the corrosive sublimate over them until they are thoroughly wet. Is such treatment effective? Is the solution used any stronger than for soaking? Will formalin do as well as corrosive sublimate?

ANS.—We do not treat potatoes in the way mentioned in your letter, although we have made experiments with potatoes with bichloride of mercury, corrosive sublimate and formalin. In our experiments the usual methods of soaking were used. L. H. PAMMEL.

Iowa Exp. Station.

Facts About Root Gall.

F. E. B., French Creek, W. Va.—I have lately purchased some Cuthbert raspberry plants that are badly infested with root gall. Can I safely set these in my patch of healthy plants? Will you give information as to cause and prevention of Raspberry root gall?

ANS.—If the raspberry plants purchased by you are so badly affected by root gall they will surely carry the trouble with them into the new plantation. If they be worth planting at all, by all means set them as far as possible from your healthy patch, and rigidly quarantine them. A perfectly healthy plantation of red raspberries is an exception in our present day—especially in Ohio—and you are fortunate if you have one. When once affected the most critical selection of plants will fail to keep the disease out of the prospective plantation. I am somewhat surprised to hear of the Cuthbert being so badly affected; it is generally considered to be more exempt than other varieties. So far no remedy has been found for this trouble. Peach trees planted on same ground will contract it. F. H. BALLOU.

The Emerald Gem Melon.

B. G. R., Oronoque, Conn.—Is there any better kind, all things considered, than the Emerald Gem muskmelon? What is the best way to get rid of the blight, or curled leaf as some call it? Does the quality of the ground have anything to do with the flavor of the melon? If so, what is the best soil for a fine-flavored melon? Is phosphate or barnyard manure preferable? What is the best way to get the fruit early? I have raised these melons for a number of years, with very varying success. For the last two years they have been good for eight or 10 days, and have then grown comparatively tasteless. Is there any way to insure their flavor through the season? Do you think this loss of flavor applies to all melons, or can it be that the Emerald Gem is run out?

ANS.—The Emerald Gem muskmelon is considered by most eastern growers to be the highest in quality, but it is small in size and often cracks badly before ripening. We have succeeded better with the Paul Rose, and find the quality almost as good, and the size and keeping qualities much better. The very destructive leaf blight of melons has not been well studied, and no effective remedy is known. It can best be avoided by early planting and stimulating culture. A light, well-drained soil produces the best melons, other conditions being equal. The secret of melon-growing seems to be to keep the soil filled with decaying vegetable matter, and for this purpose there is nothing better than rotted barnyard manures. Chemical fertilizers are useful to give the young plants a start, but can seldom be depended on to carry the plants to maturity. Use stable manure in the soil, and chemicals in the hill, or later as a dressing. Early melons can be had by starting the seeds in three or four-inch pots, under glass, and carefully planting them out as soon as the weather is sufficiently warm. The loss of flavor is common to all varieties some seasons, and depends greatly on weather conditions. The Emerald Gem has certainly not run out. As tested by the writer on Mr. Burpee's Fordhook trial grounds the last two seasons it was still ahead of all others in quality.

A Cement Floor.

J. T. H., Chambersburg, Pa.—I wish to build a general-purpose house for washing, butchering, preparing produce for market, etc., the building to have cellar for vegetables, so it is necessary to have a floor that will keep water from dropping through. Is there anything better than cement? How can I make it?

ANS.—While it is not at all difficult to lay a cement floor it is well to have the advice and assistance of a local mason. The main thing is to get a good foundation of broken stones or bricks at least six inches deep. The cement can then be mixed dry with its bulk of coarse, sharp sand, or fine gravel. Add water and mix very thoroughly until it is a soft uniform mortar. Pour over the foundation, tamping down well until it fills all crevices between the stones. In about 24 hours another thinner coat may be smoothly spread over the surface, making everything level. Cover with hay or straw for several days to avoid too rapid drying and cracking. There is nothing better than cement for the purpose.

Chance for a Small Greenhouse.

F. B. C., Eugene, Ore.—I am situated three miles from the county seat, population about 4,000; State university located here. I commenced gardening here nine years ago, without any knowledge of the business; now have a nice home and a fine trade, both retail and wholesale. Would you advise the taking up of the flower business along with the other, and should I try cut flowers or plants, or both? There is no one doing this kind of work near here. I have about 5,000 square feet under glass, and could add more if it would pay. I am 40 years old, have good health and used to hard work; can hire a man for $200 a year, he to board himself; I to furnish house and vegetables. What are my chances for success?

ANS.—It is a difficult and often thankless task to advise in regard to local business conditions, but we think F. B. C. is well justified in venturing into the production of flowers and ornamental plants for his customers, provided he has a liking for the business. It will be safest to begin in a small way, with popular and easily-grown plants, and such flowers as carnations and violets, which do not demand as high temperature and costly equipment, as the more exacting roses. There is often more satisfaction and profit in a small local florist's business than in more expensive metropolitan establishments, where competition is so keen that only the highest class of products is salable at all. While the immediate demand is not likely to be great your excellent local conditions should develop a growing trade.

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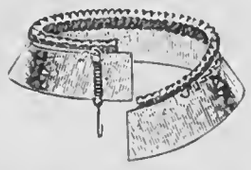

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R. M. KELLOGG, Three Rivers, Mich.

THE PARAGON APPLE.

For several years past there has been confusion in the minds of most pomologists, and among the nurserymen as well, regarding the identity of the two apples now properly called Paragon and Arkansas, both seedlings of Winesap, one originating in Tennessee and the other in Arkansas. While they are perhaps equal in all essential points they are distinct in individuality. The Arkansas is also called Arkansaw, Mammoth Blacktwig and sometimes Paragon. The latter synonym was given by mistake, many of us thinking at one time that the Tennessee variety had been taken to Arkansas and by mistake renamed. Many trees of the Arkansas have been sold by the nurseries under the name Paragon, which was done because of this mistaken idea. Not long since I was shown in Kentucky a number of apples from a tree that came direct from the stock of the true Paragon tree in Tennessee. I selected one of these, and have made a life-size drawing, Fig. 24, and a written description as well. This variety is of medium size; oblate conic in shape; has a short stem, is much like Winesap in color but darker and not so distinctly striped, being a dull, dark, mixed red, with almost no appearance of stripes; the flesh is yellow, not very juicy but of good, firm yet fine texture; has a small and nearly closed core; perfect seeds; pleasant subacid flavor and good quality. It keeps about the same as Winesap. The tree is of much better shape than its parent, being more upright and regular in habit. The Paragon is worthy of trial where the Winesap is popular. The original tree was found by Dr. W. L. Moores growing in the orchard of Maj. Rankin Toole, near Fayetteville, Tenn., 30 or more years ago.

H. E. VAN DEMAN.

THE IDAHO PEAR—BLIGHTED.

At the time of its first introduction it was thought by Prof. Budd and many others that the Idaho would prove to be blight-proof or more nearly so than almost any other variety of pear. Unfortunately such has not proven to be the case. Until about four years ago the blight was practically unknown in this section of the country; when it made its appearance the Idaho was the first victim to its ravages. The blight came in a virulent form; the peculiar odor emitted by the blighted foliage could be distinguished quite a distance. Thousands of the trees were dug up the past season; it now looks as though there would not be any left in a year or two more. This is very much to be regretted, as the fruit was very fine; I think the most valuable pear we had, not only as a fresh fruit, but also for canning, and especially for drying. Three years ago, at the Spokane (Wash.) Fruit Fair, which is the leading fruit exhibit in the Pacific Northwest, there were more plates of Idaho pears on exhibition than of all other varieties combined. They were sent in from all the different sections of country. Thousands of the trees were planted all over the Northwest, and had it not been for the scourge of blight the fruit would have been in such abundance that it could have been shipped east by carload lots. The quality of the fruit has continued equal to the best specimens ever sent East. I think those I had the past season would have weighed about 20 ounces on an average, while occasional specimens weighed over 30 ounces. While I regard it as a great misfortune to lose so fine a fruit from the list of pears I do not know anything that can be done to stop the ravages of the blight, especially when it is so virulent.

Idaho. JOHN H. EVANS.

THE Idaho pear has gone out of date in this part of the country. The leading pears here are Bartletts and Winter Nelis.

Oregon. R. P. G.

The Sutton Apple.

Can you inform me concerning the merits of the Sutton apple? Also, whether it is a desirable variety for either market or home use? G. E. H.

South Framingham, Mass.

Sutton is an apple that originated at Sutton, Mass., many years ago, and has been tested quite extensively in some of the more northern States and in Canada. It seems to do well there, as the tree bears well and has no serious faults. The fruit is of medium size and roundish in shape. The color is red and yellow, mixed and striped, making a very attractive appearance. The quality is very good, being a pleasant subacid. It keeps about as well as Baldwin where the two are grown in the same locality. It is good for both home and market purposes. H. E. VAN DEMAN.

Stayman's Superior Apple.

I write to inquire about an apple that I planted in 1893, called Stayman's Superior, which bore the past year for the first time. The tree is quite irregular in growth, with a low, wide spreading head, and limbs which are inclined to point to all parts of the country. The fruit is of full medium size, deep blush-red in color and with fine-grained, juicy, very rich, high-colored flesh, that is as exquisite in taste as that of any pear. It has not proved an early bearer with me, and I would like to inquire what others know about it. In tree it agrees fairly well with Stayman's Summer as described by Downing in his First Appendix, but mine is an October apple and differs in many ways from the other in fruit.

Illinois. BENJ. BUCKMAN.

This is one of the seedlings originated by Dr. J. Stayman, of Leavenworth, Kan., and, I believe, from seed of Winesap, which it resembles in habit of growth. It is rarely found, even in the most extensive experimental orchards of the country. Just how it will behave in the country at large is not known, and any further information concerning it will be prized by many.

H. E. VAN DEMAN.

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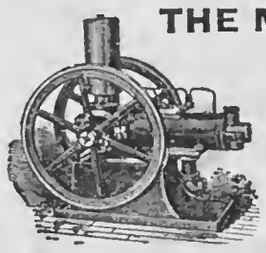

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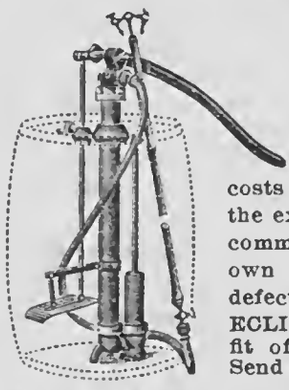

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but what USERS SAY, that TELLS the STORY.
L. B. Robertson, Receiver,
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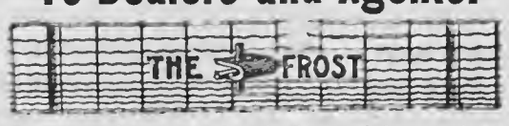
To Dealers and Agents.



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HOPE FARM NOTES.

SHREDDED FODDER.—I spoke last week of our Leslie or St. Albans corn shredder. We have a good supply of dry cornstalks. They were cut and cured properly, and I feel sure that they are worth, ton for ton, half as much as good Timothy hay. The horses did not eat them well. They nibbled off the leaves and upper stalk, and left the long butts untouched. I don't think we realized over 40 per cent of the feeding value of the stalks, and the manure gave us the backache every time we looked at it. After much thought I decided to get a shredder. This machine is adjustable—that is, you may, if you like, put in a regular knife-head which slices or chops up the stalks in the usual way. If you wish to shred, this knife-head can be taken out and another put in its place. The shredder consists of a number of small sharp teeth. If you were to put small sharp chisels at the ends of your fingers, and then claw at the fodder sharply with the palms down you would give a fair imitation of the work of this shredding cylinder, which runs at the rate of 1,000 revolutions per minute, and fixes those stalks so that they take very little stock in themselves when they feel the touch of those fingers.

ALL BROKEN UP.—We were able to hire a portable steam engine. A big "barrack" behind the barn was full of husked fodder. Charlie fastened the shredder to the barn floor, put on the belt, ran his eye over the whole outfit and said: "Get up!" There was a hiss and a groan, and off they went. A big bundle of tall, thick cornstalks lay on the table. All through the Fall this bundle had been lying in the barrack bragging that no live animal on Hope Farm was man enough to destroy its identity. Other bundles had been carried into the barn, and a few days later they came out of the back door to the manure pile—a little stripped and bruised, but still—*stalks*. These old veterans called over to their friends in the barrack, "Never touched me! Wait till we get on his manure fork!"

So the big stalks on the table of the shredder had no fear until they began to move. Then they surely thought something had hit them. A big fluted roller caught them and hauled them along to where a whirling shower of keen, narrow knives pounced upon them and tore them so that even the cornfield crows would despise them. There was a roar and a shriek, and out they dropped so smashed and mangled that when the few fragments reached the manure pile their former comrades failed to recognize them. It was about as practical a change as it would be if you buried a big stalk in the ground and grew a young, tender one from it. With 60 pounds of steam the engine made play with the cutting knife-head. With 80 pounds the shredding cylinder made her puff! The difference in power was shown in the fodder!

CORN HAY.—The shredder worked so well that the boys kept on until the entire barrack was emptied. It filled a big box stall and three other small ones, besides a big lot on the barn floor. It may not all keep—but we will have a chance to find out! We use a bushel basket for feeding; the stuff is really too fine and silky to handle with forks. The horses now eat over 85 per cent of the stalk—that is, they handle more than twice as much as they did when the stalks were fed whole. The orts are now chiefly the pith and the lower part of the stalks, which were damaged by rain in the barrack. We have begun feeding waste beet molasses along with the shredded fodder. This molasses is very thick and heavy. We mix it with water and pour the mixture over the stalks. I am not yet able to tell what value to put on such molasses. We have fed no hay thus far, and do not expect to feed any up to April.

CRUDE PETROLEUM.—We get numerous letters like the following:

On page 832 Prof. H. E. Van Deman says that more than 25 per cent of crude petroleum is dangerous to fruit trees. Bulletin 14 of the New Jersey Experiment Station says use it clean. N. W.

The facts are that "crude petroleum" varies considerably. Some of it may be used clear without damage, while other samples would kill the trees if it were not diluted. The safe way is to have the oil tested, for there is a reliable test that will show when the oil is dangerous. I know about this, because your humble servant happens to be an office holder. Yes, I know, the people of Bergen County defeated me last Fall by a great majority—but "you can't keep a good man down." The Governor of New Jersey evidently knows an expert when he hears about him, for I have been appointed San José scale commissioner. I have the tools for testing the oil, and after I have tried some experiments of my own I will attempt to tell about it.

BELATED COW PEAS.—A friend in Pennsylvania sends these questions:

Please tell me, if you can, whether Black cow pea seed on the stalks standing in the ground at this time will grow if taken care of now? They were ripe before the frosts came and were left in the ground through carelessness. I do not wish to go to the expense of harvesting if the seed will not grow. My idea is those that have not came in contact with the ground would be all right, but the others I am afraid are partly rotted. C. D. G.

We are in much the same boat. A large share of the Black cow peas were never picked. Many of them have shelled out and are, of course, worthless. Some are still in the pods—held up from the ground. They look plump and clean, but I doubt whether they will make good seed. Our test is to pick a few, dry them carefully and then see whether they will sprout. They may be planted in a flower pot with a house plant, or put in a germinator. This can be made by placing two sheets of moist blotting paper between two dinner plates. Put the cow peas between the pieces of paper and cover with the plates. If any fair proportion of the peas sprout it will pay to pick them. We doubt whether the Blacks will sprout. The Whippoorwill pea has a very hard thick pod, and is more likely to be alive.

WINTER JOBS.—I have had a number of suggestions about profitable jobs for the Winter. I don't know whether they are all tested or not. Here is a new idea:

In regard to profitable Winter labor on farm, spoken of in Hope Farm Notes, please accept the following suggestion for what it may be worth: A few acres planted to witch hazel might be worth trying. The seed could be bought of Thorburn, of New York, the plants set about six feet apart each way, and in a few years would be ready to be cut, bundled up and sent to the factory where the oil is distilled. The sprouts from the stumps would probably be big enough to cut the next Winter, and each succeeding Winter you would have work that would require no special skill and that would bring cash returns.

That seems sensible, but I am not familiar with crops of that sort. I have heard of farmers who distill these essential oils, and if there are any such among our readers I wish they would tell us about it. Surely the extract of witch hazel is soothing and wonderfully healing. Perhaps the work of extracting it from our loafer fields would heal the face of the farm and sooth the gall of the mortgage on my pocket nerve. I will look that scheme up. It evidently beats broom corn! Still another scheme for Winter jobs is suggested by a Cape Cod man as follows:

One of THE R. N.-Y. hobbles is the disposition of the old dairy cow. Of course, if you have a cow that for sentimental reasons you refuse to make into beef, all right. But an old cow may make decent beef. I always have mine butchered—killed one December 8; sold something over three-fourths to neighbors, and have now just put away a piece of round or chuck frozen hard to try to keep frozen through next thaw. I think you could solve the problem of Winter work by picking up old cows in Fall—new milkers or otherwise—feed them fat and take the milk as you go along. When the milk will no longer pay for feed, butcher and dispose of best you can. If no better way make into mincemeat and so find a market for unsalable apples.

I have heard of this before, and feel quite sure it would work. If sheep could be bought at fair prices I think they would pay better, for the butchers will take such small carcasses. Cows have been very cheap the past season in some of the dairy districts of New York State. At one time I thought of buying several, but gave it up for good reasons. While old cows do not make the best of beef they may be fattened so as to make fair quality. The beef business in our part of the country is entirely controlled by the dressed-beef trust! I don't know about the justice of a family that eats as few pies as the Hope Farmers selling "pie timber" to others! H. W. C.

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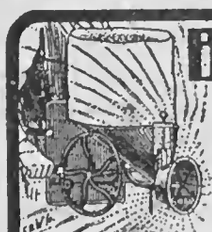

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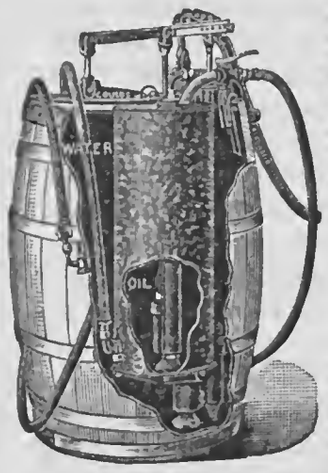

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THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, JANUARY 26, 1901.

LAST Fall we called on farmers to report the figures which buyers were offering for apples. The result was a mass of information which told the story and helped stiffen prices. Now we want at once the figures offered by canning factories for peas and other vegetables. Send us as soon as possible a statement of what the canners offer, and a sample contract. The situation is such that these facts and figures sent right at this time will enable us to help the growers—especially those who plant peas. Get together, farmers! Let us have these facts at once!

*

A PORTABLE thrashing engine was recently used in rather an unusual way by a New Jersey florist. The 60-horse-power boiler used in heating burst, and it was impossible to heat the greenhouses. A steam engine belonging to a thrashing outfit was brought into requisition, steam being supplied by a one-inch pipe running from the dome of the engine, and connecting with the large main of the greenhouses. The main return pipe was disconnected from the damaged boiler to allow exhaust steam to pass out. By this means frost was kept out of the houses until the boiler was repaired. Why not thrash Jack Frost as well as old straw?

*

IT is easy to point out the advantage of direct dealing between farmer and consumer. In many thickly-settled places it seems all wrong to pay a tribute to the peddler or the merchant when the farmer lives within a few miles of the people who eat what he produces. Some farmers like a retail business, but most of them seem to prefer a wholesale trade, except for such things as eggs and butter. Most farmers who have become experts at producing crops cannot afford to stop and peddle out their goods. At least they think so, but are they right or wrong? Mr. Townsend, whose methods are given on page 50, appears to have an original plan of selling.

*

ON page 8 THE R. N.-Y. made some statements about the use of oxygen which are wrong, and we desire to correct them. It is said that the French have devised some cheap method of separating the oxygen from the nitrogen as it exists in the air in a mechanical mixture. Oxygen promotes combustion. When it is present fuel burns with a fierce blaze and great heat. The oxygen itself does not burn, and will not add to the world's supply of fuel. It may, perhaps, be used to make fuel burn more rapidly, and will possibly save heat by giving a more perfect combustion. It will not, however, with our present knowledge of chemistry, add to the world's supply of fuel, and we regret that our statement gave that impression.

*

A CERTAIN farmer was once made chairman of the political organization in his township. It was a close campaign, and many of the township chairmen were called to headquarters to see the State chairman; among others our farmer friend was called. The question of distributing "literature" came up. There was one pamphlet in particular advocating a policy which this farmer felt sure was positively against the interests of country people. To his surprise the State chairman said that he was opposed to this measure personally, but that it was a good party policy to advocate it. Here was a man talking and writing with all his power in favor of a plan which he knew would result in trouble and injustice to many country people! The worst of it was that this man knew that he deliberately deceived thousands of honest, simple-minded men who had such confidence in him that they accepted his suggestion as a political command! Suppose that man had spoken just what he believed—fearlessly and without dodging! His party would probably have rolled over him and buried him from view, yet the world would have been better for it. "Statesmen" are apparently much like other persons—perhaps "more so." They believe in advancing their own interests first of all.

*

OSWEGO County, N. Y., is famous for the strawberries which are fruited late in the season. The growers try to produce large, firm, high-colored berries that will stand long shipment. F. G. Tice is unquestionably one of the best growers in Oswego County. He can not only grow the fruit, but he can tell how to do it. That is why we asked him to write one of those "essential-principle" articles which we have promised. What we ask you to remember is that back of the 1,000 words which Mr. Tice has written stand several million little details which he has carefully attended to year after year! The next "essential-principle" article will discuss currants and their culture. It is written by W. N. Scarff, of Ohio, who had so much confidence in fruit growing that he borrowed every dollar he could raise to invest in fruit land.

*

SOME of the men who keep a pig in a little box or pen where the poor porker wallows in mud and lives on soup may open their eyes at the story of western hog-raising, told on first page. The western farmer is usually a man of large ideas—he grows crops on a large scale, and is used to methods which Eastern farmers call "liberal" or wasteful as they wish to speak politely or bluntly. We are apt to say that western farmers need to study some of the saving, smaller methods of the East. That is true, but it is no less true that many eastern farmers need to let out their belts and follow some of the larger practices of the West! In this matter of hog-raising, for instance, the eastern farmer will do well to take an ax, knock down his small pen, and let the hogs out into a field where he sowed rape, sorghum and other grazing plants. All the hog wants is a fair chance!

*

THE Indiana Appellate Court recently decided a case involving the death of three cows caused by their experimenting on a diet of coal. Nelson Bart owns a large farm near Fort Wayne. A ditch was ordered across his pasture, and Freemont Sprangle, the contractor, who was working on the ditch, brought to the pasture a large amount of machinery, including a lot of coal and coal-oil waste. Sprangle's men were boarding with Bart, and one of them, at the dinner table, gave out the information that Bart's cattle were eating the coal. This was commented on as a very astonishing circumstance, but Bart still left the cows in the pasture. A week after two of them were found dead and the third dying. On cutting them open their stomachs were found packed full of coal. "It looked," said Bart, "as if it had been hammered in." One of them had also partaken of a liberal supply of coal-oil waste, which was found wadded with the coal. Bart sued Sprangle for negligence in leaving the coal within reach of the cows. The jury gave him a verdict for $150 for the value of the cows. This judgment the Appellate Court affirmed.

*

SECRETARY of Agriculture James Wilson has declared in favor of the Shipping bill which provides large subsidies for American ships. He says that farmers need better freight service to foreign countries and gives instances to show where important freight has been delayed. He then says that from every point of view we should not depend on foreign ships, but that Americans should carry American freight. We agree with the Secretary, though we know from experience that it often pays better to hire some one else to carry your produce than to do your own hauling. If Mr. Wilson wishes to give the farmers real advice he should not stop with what they already know, but go on and tell us why the rich ship builders and steel makers need help from the Government. That is the point to be discussed. Why should the farmers be taxed to support a class of people who are better able to provide for themselves than most business men? Mr. Wilson is quoted as saying that he "knew from correspondence that there is a practically universal sentiment among the farmers in favor of the bill, and that those who are against it are mainly those who do not understand what advantages the bill will bring to the farmers." Our experience and observation indicate just the reverse of that statement. The farm papers of the country are outspoken against the bill. The few farmers who talk to us in favor of it seem to have an idea that it is a party measure which will make their party stronger with certain rich men, or in certain localities. There are many farmers who now see in their own business the results of former indirect taxation schemes. Here is their question, Mr. Secretary—perhaps you will answer it. Why, if our manufacturers can outdo the world on machinery and material, do they not build their own ships without help?

*

HERE is a letter from a subscriber who writes what thousands think:

We note your advice to snow United States Senators under with letters giving our wishes in regard to oleo legislation. Would they ever reach the eye of the Senator? Would not the omnipotent private secretary consign them all to the waste basket and say nothing about it? I know that all classes in this vicinity are very anxious to have the Grout bill made the law of the land, and if our Senators ignore our wishes and interests the time will surely come when they will hear from us.

The impression that Senators do not see communications from their constituents seems to be a common error. The idea was expressed before the Senate committee during the hearing on the oleo bill by one of the oleo men. Senator Proctor, chairman of the committee, corrected him, saying that all such communications received attention, and while they could not remember the details of each letter, they always knew in a general way from such letters what the people want. There never has been a time in this country when farmers followed up these matters as they do now. The result is that never before did their wants receive so much consideration. One advocate of oleo in the hearing referred to told the committee that it was not the farmers, but other meddlesome individuals who were asking this law. He said: "You know, Senator, that farmers have no time to leave their plows and their cows and follow up legislators." "I know," promptly replied Senator Allen, of Nebraska, "that they come pretty close to it at times." The Senator knew more about that subject than the lawyer who was earning his fee talking for the oleo frauds. It is the farmers' duty to let their Senators know that they do want this bill. Have no fear that your letter will not be read. A politican may not tell the people what he honestly thinks about them, but he is very glad to learn what they honestly think about him.

*

BREVITIES.

THE ROGUE'S PARADE.

Drum! Drum! Here they come, Fraud, Fake and Buncombe!
Ho! Ho! There they go. Led by Oleo!
See him strut and hear him crow!
"What do I care for law, you know?
Honest butter's on my track,
But the boodle's at my back!
What care I for honest right?
Greasy dollars win the fight!"
Next come lightning rods—they drag bills in wads!
See that canning shark? Now farm shins will bark!
Ah! There! patent churn! Sign his card, you'll learn
That the sig. you wrote—turns up as a note,
Here's commission merchant thief
Sucks you dry and then in grief
You can only grunt and groan,
He skips out for parts unknown.
Toot! Toot! Better scoot!
Here comes Uncle Public Wrath,
See his gun? There'll be fun!
When through you he cuts a swath! W. W. H.

NOT much use for a snow shovel yet!

TRY Alfalfa, but don't get crazy over it.

A CHECK book removes one bait for a burglar.

THOSE rules for the hired man's treatment on page 51—are they fair?

THE French mushroom crop is said to amount to $2,000,000 annually.

MAN puts his mind to most ignoble uses when he goes hunting 'round to find excuses!

IT'S a case of "roast" beef when an institute man gets his tongue after a scrub.

HAVE you noticed any difference in varieties of asparagus as to their liability to rust?

ALL a good man has a right to ask for is a fair chance. The oleoists had a fair chance to be honest!

THE way to make a boy "cranky" is to work him on an old-fashioned grindstone and hold down hard with the ax.

DON'T expect too much from the Grout bill. It will never feed your cows for you, or enable you to make clean butter from dirty milk!

WHICH section of country will come out ahead—the one in which labor is skilled and high-priced, or the one in which it is poor and cheap?

A KANSAS paper suggests this subject for debate at a local literary society: "Should a farmer invest his money in life insurance or cabinet organs?"

FLORISTS are somewhat disturbed by the rumor that the price of window glass will be increased again 15 per cent during January. The beneficent glass trust appears to be flourishing merrily.

THE growth of Water hyacinths in the St. John's River, Florida, is again causing difficulty by blockading navigation, and the Government will be asked to aid in the removal of the plant.

IF my horse reaches two feet into my neighbor's field and steals his grain I must pay for it. If his tree sends its roots over into my field for 10 feet and steals the plant food which I meant for my corn, must he pay for that?

Events of the Week.

DOMESTIC.—Fire broke out in the Eric Basin, on the water front at Brooklyn, N. Y., January 9, starting on the steamer Idlewild. It spread to surrounding shipping, and the damage is over $500,000. . . . The overdue Alaska steamer Tillamook was hemmed in by ice in Saldova Bay, Cook Inlet, and finally wrecked. She had 50 passengers on board, and a steamer was sent to rescue them. . . . A smallpox epidemic at Murray, Iowa, has caused the closing of schools and churches. A portion of the town is under quarantine. . . . Gates Mills, O., is entirely cut off from the outside world by a smallpox quarantine. January 8 there were 40 cases, and it was feared that the medical resources of the village were unequal to the situation. . . . A panic caused by a cry of fire during a theatrical performance in a hall in Chicago, January 12, caused the death of four women and two children, who were trampled to death. Many other persons were injured. . . . The United States Supreme Court, January 14, made a decision in the Neely extradition case. The Court held that Neely was subject to extradition, and must be surrendered to the Cuban authorities; that Cuba is foreign territory, our only purpose in the war with Spain being to free the Cubans from Spanish domination. . . . Alvord, the defaulting New York bank official who embezzled $620,000, has received a sentence of 13 years imprisonment.

CONGRESS.—The United States Senate January 10 made considerable progress with the Army Reorganization bill. The committee amendments were disposed of, and those providing for the appointment of Generals James H. Wilson, Fitzhugh Lee and Shafter, to be Major Generals of the regular army and retired, prevailed, despite bitter opposition from Mr. Pettigrew. An appeal was presented by Mr. Teller, of Colorado, from more than 2,000 persons in Manila, urging the Government to cease its operations against the Filipinos. The appeal was so unusual in form that Mr. Hawley, of Connecticut, objected to its publication as a document, and declared that it was treasonable denunciation of the Government and an attack upon our soldiers. . . . In the House January 12, Mr. Pearson, of North Carolina, introduced a bill empowering the Secretary of Agriculture to purchase land suited to the purpose of a national forest reserve in the Appalachian Mountains, within the States of Virginia, North Carolina, South Carolina, Georgia, Alabama and Tennessee, not to exceed in extent 3,000,000 acres. Five million dollars is appropriated for the purpose. . . . The House Committee on Post Offices and Post Roads, January 15, practically completed the Post Office Appropriation bill, the total of which will be about $122,748,000. The item for rural free delivery is increased from $1,750,000 to $3,500,000. No provision is made for pneumatic tube service. The Naval Appropriation bill, completed in committee January 15, carries $77,000,000, an increase of $11,000,000 over that for the present year. Two new battleships and two cruisers are provided for, but no additional submarine vessels are recommended at present.

GENERAL FOREIGN NOTES.—The recent blizzard throughout Russia stopped all traffic on several railways, and the poor in many outlying districts are nearing starvation. All business in Odessa was stopped for several days, and prices of provisions advanced 500 per cent. Some of the trains were blocked in the snow for six days, and the passengers suffered much distress, some of them being frozen to death. . . . An explosion in a hat factory near Manchester, England, January 14, killed 10 persons. . . . The Italian steamer Leone was wrecked near Corsica, January 14; 15 lives lost. . . . Venezuela has seized two steamers belonging to the Orinoco Shipping Company. They sail under the British flag, but the majority of the stock is owned by Americans, and it is believed that the aggression is the result of the controversy over the asphalt beds, and is part of a plan to dispossess the American holders of the concession by force. The Colombian government recently seized a British vessel under similar circumstances, but paid $30,000 indemnity when visited by the gunboat Pheasant.

FARM AND GARDEN.—The Montana State Arid Land Commission has let a contract to L. D. Beary, of Helena, for a 50-mile irrigating canal, intended to reclaim 33,000 acres of land located in the northern part of Lewis and Clarke counties, of which Helena is a county seat. The contract price is $412,000, to be paid in bonds which are to be secured by the lands sought to be reclaimed, and the work must be completed within three years. The contractor also agrees to place settlers upon the lands. Work on the canal will be commenced next May.

At the annual meeting of the American Beet Sugar Association at Detroit, Mich., January 9, the association adopted a resolution earnestly protesting against any form of reciprocity that would sacrifice protection to the domestic sugar-growing and manufacturing industry. It was also agreed to protest against the suspension of duty on Russian sugars, and especially in the face of reports by Government experts that Russia pays a sugar bounty.

At the meeting of the Illinois Dairymen's Association at Aurora, Ill., January 8, a resolution indorsing the Grout bill was the first business considered. About 300 dairymen from Illinois, Wisconsin and Indiana were in attendance. Among the speakers were C. P. Goodrich, president of the Wisconsin Dairy Association, Prof. T. L. Haecker, of the Wisconsin State dairy school, A. H. Jones, of Robinson, Ill., State Dairy, and Food Commissioner, G. A. Wilmarth, president of the State Farmers' Alliance, and Prof. Davenport, of the Illinois Agricultural College.

The thirteenth annual meeting of the Illinois Swine Breeders' Association convened at Taylorville, Ill., January 8, about 150 members being in attendance.

The Illinois State Pigeon and Pet Stock Association opened its seventh annual show at Bloomington January 10. Among the principal exhibitors were T. H. Ayers, Hoopeston, Cochins; George Attig, Chenoa, Black Langshans; W. E. Nesbitt, Bloomington, Bantams; C. A. Axline, Wenona, Brown Leghorns; John Brey, Neola, Ia., Buff Wyandottes; Ora Ethell, Bloomington, Buff Rocks; George Eyre, of Buckley, Barred Rocks; F. H. Jackson, Rutland, bronze turkeys; J. F. Hulva, Bloomington, Minorcas; W. C. Mootier, Gibson City, Pekin ducks; Joseph Vogel, Benson, white Holland turkeys.

The annual meeting of the Arkansas State Horticultural Society will be held at Little Rock, January 30-31.

The fourteenth annual convention of the Kansas Dairymen's Association was commenced January 8 at Topeka, with an attendance of 300. The topics of the principal papers were devoted to creamery systems, methods of feeding, butter-making machinery, keeping dairy accounts and grades of milch cows best suited to Kansas herds. An interesting description of dairying in Denmark was given by A. M. Larson, of Kansas City.

A meeting of the Mississippi Valley Apple Growers' Association was held at Quincy, Ill., January 10. It was the sense of the meeting that drastic measures should be taken to exterminate all pests which had contributed largely to the recent failures of the fruit crops in that part of the country, and especially so where Illinois was affected. It was ordered that a special committee of four, consisting of Henry C. Cupp, of Fall Creek, president; James Handly, of Quincy, secretary; Homer D. Brown, of Hamilton, and C. H. Williamson, of Quincy, should be appointed to coöperate with the Illinois State Horticultural Society, and also to make special efforts in the work of securing an appropriation from the State Legislature for the purpose of providing means of eradicating all of the general orchard pests. A resolution was also adopted condemning the existence of the English sparrow, and petitioning the State Legislature to continue the standing of the statute which offers a bounty of two cents on the head of each sparrow killed.

The meeting of the Illinois State Dairymen's Association at Aurora closed January 10, the following officers being elected: President, Joseph Newman, Elgin; vice-president, J. H. Biddulph, Providence; secretary, Geo. Caven, Chicago; treasurer, H. H. Hopkins, Hinckley. Directors, Joseph Newman, John Stewart, Elburn; R. I. Murphy, Garden Plain; J. H. Buddulph, F. A. Carr, Aurora. H. Nolan, Hinckley, scored the highest on butter, 97¾. He gets $25 and a gold medal from the Elgin Board of Trade. G. Herman, Manhattan, scored second, 97½; F. E. Barrett, Union, third, 97; Otto Bloyer, Elkhorn Grove, fourth, 96¾. Two hundred and ten dollars will be divided pro rata among those who scored 93 or better. J. H. Biddulph, of Providence, Ill., scored highest on cheese.

The annual meeting of the New York State Association of County Agricultural Societies and the State Association of Union or Town Agricultural Societies was held at Albany, January 17. The organization of County Agricultural Societies elected the following officers: President, D. W. Jenkins, Central Bridge; second vice-president, Philip Keck, Johnstown; secretary, G. W. Harrison, Fort Edward; treasurer, A. E. Brown, Batavia. The Union Agricultural Societies elected president, George I. Wilber, Oneonta; vice-presidents, J. B. Wilton, Dryden; H. C. Wallace, Sandy Creek; F. A. Wickers, Hemlock; Ferris Reynolds, Walton; Delbert Dinehart, West Copake, and William Wallace, New York City; secretary, G. B. Harmon, Brockport; treasurer, D. C. Dow, Cobleskill.

As we go to press we are informed that the Grout bill will be favorably reported by the Senate Committee on Agriculture, and its success may now be considered secure.

WHAT ABOUT THE POTATO CROP?

The Commission Men Talk.

There are no potatoes in the farmers' hands in our section of the country, and very few dealers have any quantity stored. No doubt good stock will bring much better prices later. The present market of jobbers is 55 cents for good stock. PLETSCH & SUTTON.

Columbus, O.

We have been out through Ohio, Michigan and Indiana, and have had considerable talk with the farmers, and do not think that they have any large quantity of potatoes on hand. We should think that the prices would be considerably higher in the Spring than they are now.

Providence, R. I. HUMPHREY & CORNELL.

The closest estimate we have been able to make on the potato crop is that one-half of the crop is still in the hands of the grower. We do not anticipate higher prices until after March. If anything there may be a slight drop, but it will only be temporary we think.

Denver, Col. THE DONALDSON & HOWARD COM. CO.

The stock of potatoes in farmers' hands is about as usual, and we do not anticipate any high prices this Spring, unless something unusual should happen in the meantime, so that part of the crop would be destroyed. We think that the market will be liberally supplied with potatoes until the new crop comes in.

Cleveland, O. THE KELLY CO.

The larger part of the trade here had expected to see a 60 to 65-cent market here for potatoes by this time, but our local market has only reached 50 cents so far. It was pretty thoroughly understood early that the late plantings of late potatoes came out very light, but weather has been too mild to put the price where it should be. STRANGE & NOKES.

Cleveland, O.

Our impression is that about 30 per cent of the potatoes are still held by the farmer, and about 10 per cent by the potato merchant. In this part of the country the growers all have their supply in full. There are some potato merchants who carry a few carloads each, which they are holding for better prices in Spring, but it is our judgment that between 30 and 40 per cent are still held for sale. JOHN A. SALZER SEED CO.

La Crosse, Wis.

Maine had a fine crop and growers hold about one-half of them. At present they are shipping to the South and Southwest large quantities for seed, as they do every season. New Hampshire had about one-half crop, and has sold most of them. The crop of Massachusetts was small, and very few are held at present. We have received some foreign potatoes, and should the price hold to 75 to 85 cents per bushel there will be lots shipped here. LAWRENCE & CO.

Boston, Mass.

The stock of potatoes in the farmers' hands is large. The farmers are speculators this year, both on seed and table stock. The same may be said of the dealers in localities where the crop was good, but in many localities where large crop was raised in 1899, last Fall's crop was a failure, and they are shipping in potatoes from other sections where they are in larger supplies for their present use. We do not look for any higher prices in the Spring. GAMBLE-ROBINSON COM. CO.

Minneapolis, Minn.

The supply of potatoes in this market is moderate, and prices are steady for a good quality at around 50 cents per bushel. Our supplies are drawn very largely, and up to this time this season almost exclusively, from the States of Ohio, Michigan, Wisconsin and Minnesota. Ohio has become quite a potato producer, but this year the crop was much below an average, and it has been largely disposed of. In the other States named, or through the northwestern field, the crop was understood to be large, the quality up to an average, and the movement to market restricted through a scarcity of cars during the early shipping season. The quantity from this territory still to come forward is understood to be large enough to meet all demands during the remainder of the season, and the outlook does not favor advanced selling prices. SOMERS, BRO. & CO.

Pittsburg, Pa.

Notes from Potato Growers.

There is about one-half of the potato crop in the farmers' hands. J. A. THOMPSON.

Livingston Co., N. Y.

I believe about 50 per cent of the potatoes are marketed; that would leave about 50 per cent unsold. The local market to-day for general stock is 30 cents per bushel.

Mears, Mich. W. M.

I should think about 50 per cent of crop is in farmers' hands unsold. It is the opinion here that seed potatoes will be higher this Spring than last. G. B. P.

Ontario Co., N. Y.

There are few potatoes in the hands of farmers' in this county; not enough for home use. They are selling here at 60 cents per bushel, but I think seed will be $1 for common stock. T. C. HEATH.

Armstrong Co., Pa.

I do not think that there is 10 per cent of the potato crop in the hands of producers in this section. Prices of seed are 15 to 20 per cent lower than last season. Earlies will be short. GEO. H. COLVIN.

Lackawanna Co., Penn.

The potato crop throughout this county is almost all sold; very few in farmers' hands at present. I think seed potatoes will be high this Spring. It will depend largely on stock unsold in other sections. D. F. L.

Washington Co., N. Y.

One-half of the crop (which was a light one) is still on hand; those who were obliged to sell sold last Fall, and those who could hold their crop have them yet, and are holding for 60 cents per bushel. Carload price now is 50 cents per bushel. Judging by the crop of the country prices must advance before Spring. As to seed potatoes, good stock will be scarce, and will bring good prices.

Waterloo, N. Y. G. A. B.

The general impression is that there is not over 25 or 30 per cent of the potato crop held by our farmers, and this is being gradually worked off in our local market. From present conditions there will be less acreage planted the coming Spring than in the past, which was above the average. With few exceptions the crop was very light the past season. C. B.

Mercer Co., N. J.

Shipments have been liberal from all points where cars were furnished, and buyers have had more trouble in securing cars than potatoes. Where there is storage the bulk of crop in potato sections is in the hands of buyers. This is especially true of northern points, and the demand for potatoes has exceeded supply of cars at all places. I have had larger inquiry and more urgent demand for stock for immediate shipment from dealers and buyers than before in years. My opinion is that there will be an advance over present prices, and whether advance will be sharp or not will show by February.

Eaton Co., Mich. W. E. I.

From the most careful estimates, we find fully 50 per cent of this year's potato crop is marketed, in this section. Owing to the most severe drought ever experienced in this part of the country, there was not more than half an average crop. However, the stock, as a whole, is smooth and nice, with no signs of rot whatever. At this writing, the outlook is favorable for a greater demand for seed potatoes this season than last. There has been a fair demand for southern seed, which is nearly all shipped. From various indications, especially in the West, we venture to predict that the price of seed will rule higher this year than last. HILER BROTHERS.

Steuben Co., N. Y.

Good Roads in New York.

I believe if all tax assessed upon the people was paid in cash, and put into the hands of a competent man in each town, or part of town, as he might be able to oversee, and properly expended in the improvement of the roads, we would need very little increase of taxes to secure good roads. The road commissioners of each town should, on petition of the best and most responsible men of the political parties, be appointed by the county judge, very much as the wheel path commissioners are chosen. Each commissioner should be known to be a good, responsible and competent man, who would give a bond sufficient to cover double the amount of money given into his hands, and should not have too large a territory to look after. The idea is to take the selection of the road commissioners out of politics, as in many cases under the present system they are elected by the town's money, and by votes of the lowest element, those who pay no taxes, not even a poll tax.

These men many times appoint the path-masters from the same element, and this system has resulted within a few years, in two districts near my home, in not having a single man called out to work the roads. Other years money has been collected upon the assessments to the amount of $50 or $100, and to my certain knowledge only a small part of the amount expended upon the roads. Aside from that, favored ones in the district would escape either in whole or in part, the payment of their road tax. It seems to me all the legislation we need is sufficient to carry out something in line with the above, making the penalties for "crookedness" so severe that no official will dare do aught but his duty. Commissioner Todd, of the town of Eaton, Madison County, by the system of collecting the tax in cash and expending the amount under the supervision of honest men, has accomplished a grand work on the roads in his town.

Oneida Co., N. Y. J. T. THOMPSON.

Woman and Home

From Day to Day.

We don't get anything to eat at our house any more—
There's never any common dish comes through the kitchen door;
For ma and all the girls is workin' like they was machines—
A-makin' "Dainty Dishes" from the fashion magazines.

They give us dabs o' this an' that, with names we can't pronounce,
With sprigs o' stuff around them all, just like a little flounce.
A stalk or two o' spinage takes the place o' "mess o' greens"—
We're eatin' "Dainty Dishes" from the fashion magazines.

The groc'ry bill's a-hummin' now—I tell you it's a sin;
We got to buy the dainty stuff an' things to cook it in.
I'm blamed if I'll call bean soup any "consummay de beans!"
But it's in the "Dainty Dishes" in the fashion magazines.

I want a steak—I want it quick—I'm hungry as a hoss—
I want it with thick gravy—no new fangled kind o' sauce;
An' listen kerful an' you'll know jest what the ol' man means—
I want no "Dainty Dishes" from the fashion magazines.

—Baltimore American.

*

ISABELLA fox is one of this Winter's furs. It is white Alaska fox dyed a creamy tan blending into a deeper brown stripe, rather suggestive of stone marten. This latter beautiful fur is much imitated, wolverine being dyed (or blended, as furriers say) into an excellent imitation.

*

STOCK collars, or neckers, as shop slang describes them, of fine white cashmere are seen this Winter in a variety of shapes. Their advantage is that they may be washed, while more perishable materials may not. Panne makes many handsome stocks, but it is extremely perishable, not only soiling quickly, but also wearing rough. The cashmere stocks are usually trimmed with many rows of machine stitching.

*

THE editor of the Kansas City Journal says he is going to quit talking about the erudition of Boston people. One day recently a plain farmer from Smith County left off plowing long enough to come in and tell the editor that he had plowed up some crinoids belonging to the paleozoic or mesozoic age, as well as some silurian trilobites and brachiopods. That must be a university-extension farmers'-reading-course farmer. Still, hasn't a farmer a better chance to become acquainted with trilobites and brachiopods than the man who sells hardware over a city counter?

*

THERE are many things a man may do better than a woman, but dressing children is not one of them. The New York Sun illustrates this fact in the following little happening:

When they came on the car the other day everybody wondered what made the small girl look so queer. A nice-looking man was leading her by the hand, and she would have been nice-looking, too, if it hadn't been for her bonnet. It was the strangest bonnet seen in many a day. A deep and full ruffle fell into the child's eyes, while a stiff, shelf-like projection stretched out over her neck. She was uncomfortable and the man was oblivious. After a while a plump and comfortable mother of two could endure it no longer. She leaned across the car and said something to the man, who began to smile. He untied the bonnet and put it on the other side up. The ruffle developed into a little cape and the shelf into a poke bonnet, and the transformation was complete.

"You see, her mother wasn't around and I——," he began.

"Of course you did," smiled back the mother of two.

A LITTLE trifle sold at a recent fair consisted of a small vial, dressed in a quaint little silk gown, a Shaker kerchief, and a silk hood. Attached to it was a card inscribed: "What is this for? If you guessed its use you might take it; if not, you must buy it for five cents." No one ever guessed it, and

3713 Girls' Blouse Costume
4 to 12 years.

everyone wished to try, so a large number were sold. After the sale was over the purchasers were informed that the vials were for broken needles, and were to be suspended from the sewing table by a loop of ribbon. The little silk hood, which was lined with batting, was pushed back when necessary to remove the cork, and broken needles or pointless pins put into the bottle.

*

AT Cleveland, O., a fraudulent "employment agency" has been gathering in a fat living for its proprietors for several years. The law could not touch it, but it has secured plenty of money from working women, and prospered on the ill-gotten wealth obtained under promise of securing employment for its victims. Finally a young woman who had paid $2 to the "agency," in the effort to find work, took the law into her own hands. She collected 50 other women who had been similarly treated, and marched to the swindling office. The women raided the establishment, carrying off everything movable, and compelling the proprietor to flee for his life. The police declined to interfere, and the general verdict is that the swindler deserved the treatment given him.

*

LAST week Miss Anna Barrows, editor of the American Kitchen Magazine, made some suggestions concerning the farmer's bill of fare, and how to make the best of our food materials when they are restricted in variety. Miss Barrows has been speaking at farmers' institutes, and she finds the women eagerly interested in any ideas that will aid them in doing their work well, or in making the best of food materials at hand. The lack of variety in vegetables on the farm is often referred to, and is a serious disadvantage. With plenty of vegetables one can make much of limited materials, and it is a short-sighted policy which ignores the home garden. Why not consider this matter now, and decide upon a plan for the coming Spring? If the seeds are procured early so that they are on hand, and all plans laid for the garden, it is less likely to be neglected than if set about hurriedly, at the last moment.

The Rural Patterns.

The blouse in combination with a gored skirt makes a simple costume much worn and much liked by little girls. The tasteful model illustrated is made from dark red serge, with bands of black velvet edged with narrow gilt braid and a shield and collar of gilt-embroidered red panne. The skirt is cut in three pieces, the gored front and circular sides, and is joined to a body lining that is snug and closes at the center back. The shield portion is faced into the lining and the standing collar is seamed to the neck, so that all closes together. The blouse is separate, with shoulder and under-arm seams, and opens at the front, where it is provided with buttons and buttonholes. Both back and fronts are plain across the shoulders, b ι slightly full at the waist, where the blouse pouches over the belt. The right side laps over the left in double-breasted style, the rounded points being decorated with gold buttons, and the neck is finished with a deep collar that is round at the back and square at the front. The sleeves are two-seamed and nnished with turn-over flare cuffs. To cut this costume for a girl of eight years of age five yards of material 27 inches wide, 2⅜ yards 44 inches wide, or two yards 50 inches wide, with ⅜ yard 18 inches wide for shield and collar, will be required. The pattern No. 3713 is cut in sizes for girls of 4, 6, 8 and 10 years of age. Price of pattern 10 cents.

The Eton jacket illustrated shows the fashionable kaiser or military collar, now very popular. The model is made from black cheviot with self-faced revers, and collar finished on the inside with velvet and rows of narrow gold braid, and is closed by means of handsome smoked pearl buttons; but black

3715 Double Breasted Eton.
32 to 40 in. bust.

velvet, melton and beaver in brown and tan, dark blue and red are all correct for the separate wrap, and the various suiting materials are used when the jacket matches the skirt. The fronts are cut with single darts, but fit snugly to the figure. The back is seamless and finished in a rounded bat-like extension below the waist, and is joined to the fronts by wide under-arm gores that extend well back to form side backs and give a slender, tapering effect to the figure. The sleeves are two-seamed, snug, without being tight, and are cut in modified bell shape, so allowing the jacket to be slipped on and off with ease. At the neck is the military collar, with pointed ends that can be hooked over close or left free, as preferred. To cut this jacket for a woman of medium size four yards of material 21 inches wide, two yards 44 inches wide, or 1⅝ yard 50 inches wide, will be required. The pattern No. 3715 is cut in sizes for a 32, 34, 36, 38 and 40-inch bust measure; price 10 cents from this office.

Rural Recipes.

You may breathe a pious blessing
Over viands rich and good,
But a blessing with long faces
Won't assimilate your food;
While a meal of bread and herring,
With a glass of water clear,
Is a feast if it's accomp'nied
With the blessing of good cheer;
Knowing something funny, tell it;
Something sad, forget to kneil it;
Something hateful, quick dispel it,
At the table.

—Boston Bcacon.

Bacon Fraze.—Beat four eggs very light; add one-half cupful of milk, one tablespoonful of flour and one saltspoonful of pepper; lay eight or nine thin slices of bacon in a hot frying-pan; when slightly brown, turn and pour over them the prepared batter; brown on both sides and serve on a hot platter.

Poached Eggs and Celery.—Arrange carefully poached eggs neatly on rounds of hot buttered toast. Fill in the center of the dish with a pint of celery cut into inch lengths and cooked in boiling water until tender, then stirred into a cupful of cream sauce. Serve very hot.

Creamed Liver.—Cut one pound of calf's liver in inch-square pieces and cover with cold water; add one teaspoonful of lemon juice and one whole clove and simmer gently for one hour; add one-half teaspoonful of salt after half an hour; pour off water and add one-half pint of rich milk or thin cream; mix a heaping teaspoonful of flour with one tablespoonful of butter and add as soon as the milk or cream boils; add one-fourth of a teaspoonful of salt, a pinch of white pepper and let boil up once. Serve on small squares of crisp toast.

Maryland Oysters.—Sprinkle gradually three-fourths pint of Indian (corn) meal into one quart of boiling water, previously salted with a large teaspoonful of salt; allow it to boil half an hour. Drain one pint of oysters of their liquor, and stir them into the mush; allow 10 minutes longer, then pour the mixture into a square mold or a baking-powder can which has been wet in cold water. Cut in neat slices in the morning and fry.

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Bird Neighbors in Elmville.

It was just 4 o'clock in the morning when Miss Clarissa Steele crept quietly downstairs and out at the side door. She stood for a moment on the broad stone step and took a long, free breath, then she went down the gravel walk and into the street. She turned away from the village, and, as if with a definite object in view, walked swiftly toward the fields and hills to the north.

It was only since April that Elmville had taken a lively interest in birds. It had known vaguely that there were birds within its borders—English sparrows, an oriole or two, and out in the country crows, perhaps a few jays. This limited ornithological knowledge had satisfied Elmville, and when it heard that in Boston it was the thing to rise early, take one's opera glass and go "birding" it had smiled indulgently. That, however, was two years ago and Elmville was 200 miles from Boston. A hundred miles a year was quite fast enough for a fad to travel toward Elmville, but when it finally arrived it was received with enthusiasm.

The little village suddenly awoke to the fact that there were birds in its trees of which it had never dreamed, and birds in its fields and pastures whose very names it had never heard. It began to talk wisely of vireos and warblers, red-starts and flickers. Quiet folk who had known of birds all their lives suddenly found themselves in great demand. This popularity might have turned their heads had it lasted long enough, but when it was discovered that there were questions which they could not answer they were promptly made to know their proper places and to feel like impostors who have been found out.

The newly-aroused interest in birds took different forms. There were some who made up parties and took long walks in the woods, where they talked and laughed so loudly that all the birds fled before them. This class enjoyed the bird walks greatly and went every week. Then there was young Mrs. Goodnow, who had seen more birds than anyone else in town, but who could not tell the song of a rose-breasted grosbeak from that of a cuckoo, declaring naively that she did not care anything about the noises the birds made. Others wondered how she could know so many birds when she did not have her ears to help her, but then she had a very fine pair of field glasses and unlimited time. There were the two elder Misses Steele, who contented themselves with looking from windows into the tops of the elm and maple trees which grew about their their home, and there was their sister Clarissa, who on this beautiful June morning, was out in the country at a little after 4 o'clock.

It was 7 o'clock when she walked up the path to the side door. She was tired and very hungry, but she was also happy and had a quantity of bird news to tell her sisters. Breakfast was ready and a delicious odor of hot coffee came out to her through the screen door, and she went in eagerly. She hung her hat in the entry, then passed on to the dining room.

Usually she greeted her sisters with a cheery good morning, but this time she had hardly crossed the threshold before she was aware that something was wrong. A quick glance at Elinor and Caroline showed her that it must be something very wrong indeed. Her heart began to beat faster and all the happiness seemed suddenly to have gone out of the morning. She looked timidly at her sisters and they stared at her in stony silence.

"What is the matter?" she asked, tremulously.

"I should not think you would need to ask that question, Clarissa Maria," Elinor said in a hollow voice.

"No, I should not think so," echoed Caroline.

Now it was only about once in three years that she did anything bad enough for them to call her Clarissa Maria, and at that moment she felt that life was too full of bitterness to be borne. She sank weakly down in a chair and waited.

"To think," began Caroline, in a tone of sadness and reproof, "to think that you should disgrace us, and not only us, but the good name of our family, by making your pretended interest in birds an excuse for going out mornings and carrying on a flirtation—"

"A scandalous flirtation," interrupted Elinor.

"Yes, a scandalous flirtation with Deacon Upton."

Clarissa started to her feet with a little cry. "I—I never did," she gasped, while the color rose in her face.

"You saw him this morning. You don't deny that, I suppose, though I don't know," and Caroline shuddered.

"Yes," said Clarissa, eagerly. "I did see him. It was down in Mr. Ames' meadow, but he was on one side of the river and I on the other, and we just stopped to speak about birds for a minute."

Elinor smiled sardonically. "And then," she said, "he kissed his hand to you—not once, but several times, and you—"

"You kissed your hand to him," finished Caroline, as Elinor paused and seemed unable to go on. "Yes, Clarissa Maria, you kissed your hand to him. We know it because Sally Porter was on the hill and heard your voices and saw you do it."

"Oh!" cried Clarissa, her face lighting up, "he did not kiss his hand to me. How could you think he would be so silly? He was just showing me how to call the birds around. You just put your fingers to your lips and make a smacking sound, so," and she illustrated, "and somehow it makes the birds come."

The elder sisters looked skeptical. "That is a very ingenious excuse," said Caroline, coldly. "And how do you explain your conduct?"

There were tears in Clarissa's eyes now. "I just tried to see if I could do it," she said, with a little sob.

"Well," said Elinor, "I don't know how many people will believe you. You know what Sally Porter is like. You'd better eat your breakfast and start right out and see and explain to all the people she has told the story to. Come sit down, things will be stone-cold."

"I—I don't want any breakfast; I'm not hungry," and Clarissa went out of the room with her handkerchief held to her eyes.

An hour later Elinor tried Clarissa's door and found it locked. "You'd better come down and eat something," she said, but there was no answer and she went away.

An hour after that she came again. This time she shook the door vigorously. "Clarissa," she called in a subdued tone, "come downstairs at once. Deacon Upton is here and wants to see you."

"Oh, I can't!" cried Clarissa, in a frightened voice.

"You must," said Elinor, emphatically. "He says he will wait any length of time but he will see you."

When Clarissa entered the parlor Deacon Upton rose to meet her.

"Good morning, Miss Steele," he said. Then both remembered that they had met before that morning and there was an awkward pause. She looked down at the carpet and he looked at her.

"I think, Miss Clarissa," he said, desperately, when the silence had become unendurable, "I think that you have heard the same thing that I have." He felt that he had expressed himself vaguely, but she understood and nodded her head without looking up. She tried to keep her lips steady, but she could not prevent the tears from coming. When the deacon saw them they seemed to give him the courage of desperation.

"I cannot express to you my regret that I was the cause—the innocent cause—of giving you pain. I would do anything in my power for the privilege of living over this morning and omitting that scene. But only on your account, remember," he went on, impetuously, "only on your account. For myself, I would not care who knew or saw. I would not be content with merely kissing my hand to you, either, and I would be willing to—er—do it on the green in front of the postoffice in sight of everybody."

Clarissa was looking at him now, and the deacon moved his chair nearer. Her eyes made him think of drowning violets, and he had a strong desire to save them.

"Clarissa," he said, "did you ever want something very, very much, but, knowing that it was far beyond your reach, after a time almost forgot that you wanted it, and deceived yourself into thinking that you were happy without it? Did you, Clarissa?"

She nodded.

"Well," he went on, "that has been my experience, and this morning something happened that brought it all back to me, and—oh, Clarissa! I don't see how I can live without you any longer."

She was silent for a moment, then she said softly, "I don't think you will have to."—Chicago Record.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

Staining Floors.

There is an excellent stain for those who cannot afford hardwood floors, says a writer in the Chicago Inter-Ocean. It is inexpensive and easily cared for. First, if there are cracks between the boards they must be filled before the stain is applied. You can use putty for this purpose. The stain is linseed oil and burnt umber, in the proportion of a tablespoonful of the burnt umber to a pint of oil, or a little less oil if a lighter shade is desired. Apply with a paint brush, rubbing it in well. A second coat after 10 days will give better results. The preparation for the floor (which is very necessary) is to get it perfectly clean, so that the paint will adhere firmly and not show an uneven or clouded appearance. I always had my floor wiped up with a warm cleansing suds of pearline, as the washing powder is not so strong, and the traces of soap or lye will injure the stain that follows afterward. In wiping up the dust after staining it I used a damp cloth, or an oiled cloth. Try a little of the stain upon a piece of wood before painting the floor, so as to get the right color. An oak stain is made by mixing a pint of boiled linseed oil, a gill and a half of turpentine, three tablespoonfuls of whiting. Some prefer the oak, but I like the rich brown color of the burnt umber stain best.

I HERE part forever with all the cynical and saturnine. I do not want to live on the same street with them in Heaven. They will always be singing out of tune, and searching for fractures in the amethyst and finding fault with the country. Give them a world to themselves where they can have an eternity of pouting, a sky full of drizzle-drozzle, an owl in each tree to hoot away the hours and a kennel of snarling rat terriers to nip the robe of every angelic intruder.—Christian Herald.

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"	"	Yellow.	"	"	Orange Pink.
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"	"	Violet.	"	"	Scarlet.
"	"	Striped.	"	"	Pure White.

One Packet of each, THE MAYFLOWER Magazine until 1902, (devoted to Flowers and Gardening, Elegant Cuts and Colored plates), and our Great Catalogue, all for 30c.

Our Catalogue for 1901.—New Century Edition—Greatest Book of Flower and Vegetable Seeds, Bulbs, Plants and New Fruits, 152 pages, 500 illustrations, 12 colored plates, will be **mailed free** to any who anticipate purchasing. Scores of Great Novelties.

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MARKETS.

REVIEW AND OUTLOOK.

EGGS are down three cents from last report, but with a brisk demand and advices of light receipts on the way, the market is firm.

POTATOES.—Trade is poor all around, and the market has a surplus of low-grade stock, which has to go for $1.50 or less. Prices on the better qualities are firm. Sweets and Bermudas are dull.

DRESSED POULTRY.—Receipts continue large, and dealers are complaining of dull trade, particularly on turkeys and fowls. Choice chickens are firm, a good many of the packages of poultry now coming in are showing the effects of the recent warm weather, and have to be disposed of at once.

GRAIN.—Wheat has dropped three cents. The crop in Argentina is estimated at 105,000,000 bushels, and this will allow a surplus for export of anywhere from 50,000,000 to 70,000,000 bushels. Corn is weak. There is not much activity in the oat market here, but light stocks in western markets brought up the price a trifle. Rye and barley are dull.

The Week's Quotations.

WHOLESALE PRICES.

SATURDAY, JANUARY 17, 1901.

BEANS.

Marrow, choice, per bu	—	@2	60
Marrow, choice to good	2 45	@2	55
Red kidney, choice	2 42½	@2	45
White kidney, choice	2 60	@2	65

BUTTER.

Creamery, extra	21	@	—
Firsts	20	@	20½
Seconds	18	@	19
June, extra	19	@	19½
June, firsts	17½	@	18½
State, dairy, half firkins, extra.	19	@	19½
Half firkins, firsts	17½	@	18½
Seconds	16	@	17
Western, factory, fresh, fancy.	13½	@	14
Fair to good	13	@	—
Rolls, fresh, choice	14	@	—

EGGS.

QUOTATIONS, LOSS OFF.

Penn. and State, fancy, doz.	—	@	21½
Western, firsts	—	@	20½
Southern, average best	—	@	20

QUOTATIONS AT MARK.

State and Penn., fancy	—	@	21½
Average prime	20	@	20½
Western, closely graded, fancy.	—	@	20
Southern, fresh gathered, fair to good	18	@	18½
Refrigerator, Fall packing, good to choice	18	@	18½
West. refrigerator, April packings, choice, to fancy	17½	@	—
Common to fair	16	@	16½

FEED.

Spring bran, 100-lb. sacks	17 50	@	17 75
Winter bran, bulk	16 50	@	19 00
Spring middlings, 200-lb. sacks	16 50	@	20 00
Red Dog, to arrive	18 25	@	18 75

EVAPORATED FRUITS.

Apples, fancy	6½	@	7½
Sun dried, quarters	3¾	@	4½
Apricots, boxes, lb	7½	@	14
Peaches, California, unpeeled boxes	6	@	10
Pears, California, per lb	5	@	10

GREEN FRUITS.

Apples, common, bbl.	1 25	@	1 75
Baldwin, bbl.	1 75	@	3 00
Greening, bbl.	2 00	@	3 00
Ben Davis, bbl.	2 00	@	3 00
Spy, State, bbl.	2 00	@	3 00
Spitzenberg, bbl.	2 50	@	4 00
Newtown pippins	1 25	@	3 50
Grapes, W. N. Y., Catawba, small basket	8	@	10
Catawba, case	75	@	1 15
Almerias, bbl.	4 00	@	8 00
Cranberries, Cape Cod, bbl.	8 50	@	10 00
Jersey, bbl.	7 50	@	—
Jersey, crate	2 00	@	2 40
Strawberries, Florida, qt.	30	@	50

GRAIN.

Wheat, No. 2, red, spot	79¾	@	—
No. 1, Northern Duluth	84¾	@	—
No. 1, hard Duluth	89½	@	—
Corn, No. 2, white, to arrive	47	@	—
No. 2, yellow, to arrive	46¾	@	—
Oats, No. 2, white, in elevator.	32½	@	—
Rye, No. 2, Western, c. i. f., N. Y.	57	@	—
State and Jersey, c. i. f., N. Y.	54	@	55
Barley, feeding, c. i. f., Buffalo.	48	@	50
Malting, c. i. f., Buffalo	62	@	67

HAY AND STRAW.

These quotations are for large bales. Small bales sell for 50 cents per ton less:

Hay, No. 1	90	@	92½
No. 2	82½	@	85
No. 3	75	@	77½
Clover	70	@	75
Clover, mixed	77½	@	82½
Straw, rye, long	82½	@	85

HOTHOUSE PRODUCTS.

Lettuce, choice, 3½ to 4½ dozen to case, dozen	75	@	90
Cucumbers, fair to choice, doz.	1 25	@	1 50
No. 2, dozen	30	@	1 00
Tomatoes, choice, lb	15	@	25
Radishes, 100 bunches	3 00	@	—
Mushrooms, lb.	10	@	40
Asparagus, dozen bunches	—	@	6 00
Rhubarb, dozen bunches	1 00	@	—

COUNTRY—DRESSED MEATS.

Calves, veals, prime, per lb	10½	@	11
Fair to good, per lb	9½	@	10
Common to medium, per lb.	8	@	9
Small, per lb.	5	@	7
Fed, per lb.	6	@	8
Barnyards, per lb.	5	@	7
Lambs, choice, per head	8 00	@	10 00
Poor to fair	4 00	@	6 00
Pork, light, per lb.	7¼	@	8
Medium, per lb.	6¾	@	7¼
Heavy, per lb.	5½	@	6½
Rough, per lb.	4	@	5
Roasting pigs, per lb.	10	@	12½
Pork tenderloins, fresh, per lb.	—	@	17

POTATOES.

Bermuda, prime, per bbl.	4 00	@	4 75
No. 2, per bbl.	3 00	@	3 50
Long Island, prime, in bulk bbl.	1 50	@	1 87
State and Western, round, 180 lb.	1 50	@	1 75
Per sack	1 50	@	1 65
Long, 180 lb.	1 50	@	1 62
Jersey, prime, bbl.	1 25	@	1 62
Sweets, Vineland, cloth top, bbl.	2 00	@	2 25
Other Jersey, cloth-top, bbl.	1 75	@	2 00
Jersey, per d.-h., bbl.	1 75	@	2 00
Southern, bbl.	75	@	1 00

POULTRY—LIVE.

Fowls, per lb.	—	@	10
Chickens, per lb.	—	@	9
Roosters, per lb.	—	@	6
Turkeys, per lb.	8	@	9
Ducks, Western, per pair	50	@	70
Southwestern, per pair	45	@	55
Geese, per pair	1 12	@	1 37
Pigeons, per pair	25	@	30

POULTRY—DRESSED.

Turkeys, O. & M., mixed, fancy, scalded	10	@	10½
Poor to fair	6	@	7½
Broilers, Philadelphia, 3 to 4 lb. and under, per lb.	18	@	20
Roasting chickens, Philadelphia, selected, large	15	@	16
Fowls, Ohio & Mich., fancy, scalded	10	@	—
Western, poor to fair	8	@	9
Old roosters, per lb.	—	@	6½
Capons, Western, large	13	@	—
Western, mixed weights	11	@	12
Western, small and slips	—	@	10
Ducks, Ohio & Mich. fancy	11	@	12
Geese Western prime	—	@	8

GAME.

Wild ducks Canvas, prime, per pair	2 50	@	3 00
Mallard, per pair	75	@	1 00
English snipe and Golden plover, per dozen	1 50	@	2 00
Grass plover, per dozen	1 50	@	2 00
Rabbits, per pair	10	@	18
Jack rabbits, per pair	40	@	45

VEGETABLES.

Onions, Conn. and L. I., white, bbl.	3 50	@	5 00
Conn. and L. I., red, bbl.	2 00	@	2 50
Squash, marrow, bbl.	1 00	@	1 25
Hubbard, bbl.	1 50	@	1 75
Florida, white, crate	75	@	1 00
Turnips, Jersey, Russia, bbl.	70	@	80
Peppers, Florida, carrier	1 00	@	1 25
Celery	10	@	60
Egg plant, Florida, bbl.	2 50	@	4 00
Green peas, Florida, basket	1 25	@	2 00
Spinach, Norfolk, bbl.	65	@	1 00
Carrots, washed, bbl.	75	@	1 00
Lettuce, New Orleans, bbl.	2 00	@	3 50
Florida, ½-bbl.	1 00	@	3 00
Brussels sprouts, qt.	4	@	10
Parsnips, bbl.	75	@	1 00
Cabbage, L. I., 100	3 00	@	4 00
State, ton,	14 00	@	18 00
Tomatoes, Florida, carrier	1 00	@	2 50
Parsley, Bermuda, box	1 25	@	1 50
Cucumbers, Florida, crate	2 00	@	3 00

FURS AND SKINS.

Silver fox	50 00	@	200 00
Red fox	1 75	@	2 00
Gray fox	90	@	1 00
Lynx	4 00	@	6 00
Wild cat	50	@	60
Marten, dark	6 00	@	10 00
Pale	3 00	@	4 00
Skunk, black	1 30	@	1 40
Half-striped	80	@	85
Long-striped	80	@	90
Striped	40	@	45
White	15	@	20

MILK.

New York Exchange price within 26-cent freight zone, three cents per quart.

SEEDS.

Clover seed, N. Y., good to choice, bu.	5 70	@	6 30
Toledo, for March delivery, bushel	7 22½	@	—
Timothy, per 100 lb.	4 50	@	5 00
Cottonseed, Memphis, bulk, ton.	12 00	@	—
Flaxseed, whole, cleaned	6 50	@	7 00
Cottonseed meal, ton	25 75	@	—
Linseed oil cake, ton	27 50	@	—
Meal, sacked	28 00	@	—
Celery seed, lb.	7	@	7¼
Hemp, Russian, lb.	2⅝	@	2¾
Millet, lb.	1⅞	@	2
Mustard, English yellow, lb.	6¼	@	7
Rape, German, lb.	3⅜	@	3½
Sunflower, lb.	2⅜	@	2½

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BUSINESS BITS.

THE Frazer axle grease is the standard axle grease of the world. Use it and save your horses and wagons. One greasing will last two weeks.

E. B. WOODWARD, 302 Greenwich street, New York, furnishes game associations with live quails and rabbits for breeding purposes. He has orders from State game commissions for a large number of live rabbits. Any who can supply them should write him for particulars.

THE Cahoon broadcast seeder has been before the farming public so long that many of our readers are familiar with its good points. It sows from six to eight acres an hour, and distributes the seed so evenly that one could say it saves its cost every hour. Write to Goodell Co., 14 Main St., Antrim, N. H., for full information.

A FIRST-CLASS poultry supply store has been established at 38 Vesey Street, New York. It is under the management of Adin G. Pierce, the well-known expert incubator operator and poultryman. The new store is owned by The Star Incubator Co., of Bound Brook, N. J., and carries a full line of Star incubators and brooders, Lincoln flint-coated roofing, Franklin lice killer, Star Specifics, bone-cutters, etc.

ANYONE interested in quick and economical farm and garden work should obtain a copy of the Iron Age Book for 1901 by writing to the Bateman Mfg. Co., Box 102, Grenloch, N. J. Improvements are shown in this catalogue in the well known standard line of "Iron Age" implements, and a number of new tools are introduced, including a combined pivot and fixed wheel riding cultivator, a combined fertilizer distributor and seed drill and a combined single wheel hoe and seed drill.

AMONG the many good machines now on the market for grinding grain for stock purposes, we know of none which stands out more prominently than the Improved Quaker City grinding mill. It is manufactured by A. W. Straub & Co., of Philadelphia, Pa., and is handled in the West by The A. W. Straub Co., of Chicago, Ill. The mills crush and grind ear corn alone, or mix other grain with it at the same time The reader will observe the double hoppers, and this is the object of their use. The reduction is very gradual, easy and thorough. Small-grain hopper is equipped with automatic Shaker feed, which insures evenness of the resulting meal or feed. They are easy to adjust and regulate, and in grinding shelled corn alone can be set so as to produce the finest family meal. Write to the nearest office for catalogue, circulars, prices, etc.

Institutes in New York State.

Fishers, Ontario	Feb.	1- 2
Lockport, Niagara	"	1- 2
Salt Point, Dutchess	"	1- 2
Akron, Erie	"	4- 5
Red Hook, Dutchess	"	4- 5
Sharon Springs, Schoharie	"	1- 2
Esperance, Schenectady	"	4
Quakers Street, Schenectady	"	5
Phelps, Ontario	"	6- 7
Batavia, Genesee	"	6- 7
East Greenbush, Rensselaer	"	6- 7
Altamont, Albany	"	6
Marion, Wayne	"	8- 9
Attica, Wyoming	"	8- 9
Wayville, Saratoga	"	8- 9
Seneca Falls, Seneca	"	11-12
South Bethlehem, Albany	"	7- 8
Arcade, Wyoming	"	11-12
Argyle, Washington	"	11-12
Lodi, Seneca	"	13
Franklinville, Cattaraugus	"	13-14
East Hartford, Washington	"	13-14
Farmer, Seneca	"	14-15
Ludlowville, Tompkins	"	16
Olean, Cattaraugus	"	15-16
Fort Ann, Washington	"	15-16
Little Genesee, Allegany	"	18
Lewis, Essex	"	18
Scipioville, Cayuga	"	18-19
Bolivar, Allegany	"	19
Reber, Essex	"	19
Genoa, Cayuga	"	20-21
Cuba, Allegany	"	20-21
Chazy, Clinton	"	20-21
Mooers, Clinton	"	22
Locke, Cayuga	"	22-23
Angelica, Allegany	"	22-23
Chateaugay, Franklin	"	23
Newark Valley, Tioga	"	25-26
Perry, Wyoming	"	25-26
Putnam, Washington	"	25
Glens Falls, Warren	"	26-27
Groton City, Tompkins	"	27
Gainesville, Wyoming	"	27
Beachville, Steuben	"	28
Greenfield Centre, Saratoga	"	28
Cincinnatus, Cortland	Feb. 28; Mch.	1

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The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

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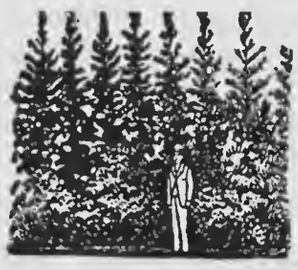

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THE RURAL NEW-YORKER.

Market Briefs.

PICKED UP HERE AND THERE.

LARGE PROFITS.—A dividend of 8½ per cent has just been made to the stockholders of the North German Lloyd Steamship Company, although the company suffered a loss of $1,250,000 through the fire in their dockage at Hoboken last year. Another German line running to the Far East, has declared a dividend of 10 per cent.

DRIED CURRANTS.—Early in the season the crop in Greece promised to be unusually large, but later unfavorable weather and plant diseases cut the crop down to about one-fifth of the previous estimate. Naturally prices went up to extravagant figures, ranging at present from 9¾ cents to 11 cents wholesale. At these rates trade is light, and their place will be taken largely by other dried fruits.

BUTTER is down three cents from last week, and the drop has caused considerable activity among the buyers. Prices are now within reach of exporters, and there is a fair amount of trade in fresh creamery and June creamery for this purpose. The best creamery is scarce, but there is quite an accumulation of inferior grades. Some choice factory in small tubs is being taken by local trade at 14 cents, but there is no great demand for this.

LUMBER FIGURES.—Saginaw, Mich., lies in one of the largest lumber-producing sections in this country. The output for the past year, however, is said to be the smallest in 25 years. The entire cut of the mills for 1900 aggregates 213,000,000 feet. More than half of this was pine; about one-third hemlock, and the remainder hardwood. The largest output of shingles was 10 years ago, when nearly 305,000,000 were turned out. Last year only 11,500,000 shingles, and 28,000,000 lath were made.

SHIPBUILDING FIGURES.—Reports for the year just past show that in the yards of Great Britain, there were launched 854 vessels, aggregating 1,500,000 tons. This is an increase of nearly 100 vessels over the previous year, though the tonnage is about 20,000 tons less than for 1899, showing that during that year the average of size was somewhat greater. These represent the output of 96 shipyards in the United Kingdom. In the United States steam vessels of 144,450 horse-power were constructed, the largest output being from the Cramps, of Philadelphia.

A COLD WEATHER CRANK.—One evening during a severe cold snap, when most people felt like drawing their heads down into their coats and getting indoors as soon as possible, I heard one man saying to another on the street: "This is bracing air; just what people go to the Adirondacks for; yet now that it is right here, they stay in the house. My son has been sickly, and I took him out for a long walk this afternoon." If the son does not have pneumonia, it will not be his father's fault. Very cold air is not harmful to those accustomed to being out of doors and breathing deeply all the time; but delicate people and those spending most of their time in the house, should be cautious about breathing deeply in extremely cold air. The lungs are not accustomed to it.

MUSHROOM conditions, for any but the best, are unfavorable, and low prices prevail, some going for 10 cents per pound. This is a business that can be overdone, and there is no doubt that too many have gone into it. Comparatively few people care for mushrooms. In most cases the taste must be cultivated. Others have a prejudice against them as food on account of the fatal mistakes some have made in eating varieties that were not wholesome. A man who was considered one of the best authorities on mushrooms in this country lost his life by eating a variety which he was sure was all right. Cautious people take the ground that, if those who have made mushrooms a study for years are liable to be deceived, their only safe way is to let them entirely alone. Probably there is little danger from those sold in large markets, however, as they are raised year after year from the spawn of well-known varieties. Another reason for the low prices is the hand-to-mouth way in which they are peddled out. The majority of mushroom buyers would pay 50 cents per pound about as quickly as 25 cents, as they are usually considered luxuries rather than necessities. If growers would select a few specialists in large cities to handle their crop, instead of sending to everyone, the mushroom trade could go through regular channels, and such disastrous price-cutting be avoided. As it is, a merchant here who has nothing but a chance trade for anything in this line, receives a few baskets. None of the regular buyers come to see him, for they don't know he has them, and the quantity is too small for him to spend much time looking after a buyer. They stand around for a time until stale. Then one of those market scavengers, who is always looking after cheap stuff at cut prices, comes along; he makes an offer, and gets them for little or nothing. The same lot sent to some one who had a regular trade in mushrooms would have been disposed of quickly, reached the consumer in good shape, and brought a good price.

W. W. H.

THE EXPERIMENT STATIONS.

Boiled Bits of Bulletins.

FEEDING TRIALS.—Bulletin 45, of the North Dakota Station (Fargo), gives the result of hay and grain experiments. Brome hay (from Brome grass) gave as good results as Timothy when fed to horses. It was shown that when oat straw is fed to horses, 25 per cent more grain is needed than when good hay is fed. Barley did not give as good results as oats when fed to horses. It was shown that ear corn made an excellent grain for the working team, 77 pounds of corn giving as good results as 100 pounds of oats. Bran and shorts mixed also gave as good results as oats.

THE BROWN ROT.—In Bulletin 50, of the Georgia Station (Experiment), this disease of peaches, plums and other fruits is well described and pictured. The loss from this disease is very heavy—worse in wet seasons. It is a fungous disease and spraying with Bordeaux Mixture and destroying affected fruit seem the best preventives.

CLOVER SEED IMPURITIES.—Bulletin 47, of the Nevada Experiment Station (Reno), gives an excellent account of the impurities and adulterations found in clover seeds. Seeds of the various clovers are pictured, as are those of the weed seeds often mixed with them. It is said that little chunks of stone or pebbles are sometimes colored and sold as Red-clover seed. The bulletin tells how to test such seeds.

CRUDE PETROLEUM AND SCALE INSECTS.—Every fruit grower in the North and East will be interested in Bulletin 146, of the New Jersey Station (New Brunswick). Dr. J. B. Smith gives the known facts about petroleum as an insecticide in plain and simple language, and the whole pamphlet is worthy of careful study. We shall give a full synopsis of it later, but it would be well for fruit growers to send for a copy. We feel confident that petroleum will prove a valuable insecticide.

STRAWBERRY ROOT-LOUSE.—Bulletin 49, of the Delaware Station (Newark), describes this root louse, which has caused great damage in some parts of the South. A very interesting account of the life history of this remarkable insect is given. Ants carry the young insects about, and herd them on the roots, where they secrete a sweet substance of which the ants are very fond. Prof. Sanderson thus describes their work:

"Until the last week in April, but few ants are seen in an infested bed. About this time, however, they are quite numerous, busily carrying the young aphids from the leaves down to the roots of the plants, where are colonies of a dozen or so, rarely more than one colony upon a plant. These colonies consist entirely of young, being unaccompanied by mature females, showing that they had all been carried to the roots by the ants. The ants will be found more active in spots where the soil is dry and sandy. The ants are solely responsible for carrying the lice to the roots, as up to the time of the ants' appearance no lice are to be found on the roots. By the middle of May the work of the ants is much more evident. At that time by plunging a trowel under many of the plants, a hollow space may be felt directly beneath the crown. This space usually consist of an ants' nest, containing eggs and larvæ. Radiating from these nests, or irregularly under other plants, the ants' burrows may be found going in all directions among the roots. The ants continue to care for the aphids throughout the season. When one plant becomes overcrowded the aphids are carried to a neighboring plant, and in this way the ants are almost entirely responsible for the spread of the aphids throughout a bed as well as for carrying them to the roots of the plants."

He says that the ants carry the Corn root-louse in much the same way. Thus, old cornfields or melon fields where they have been abundant are usually full of ant hills, and strawberries planted after them are sure to suffer. Bisulphide of carbon injected into the ground near the plant will kill the lice, but the safest treatment is to clean the plants before setting. This is done by dipping them in kerosene emulsion or fumigating with cyanide of potassium. The bulletin also describes the destructive pea-louse.

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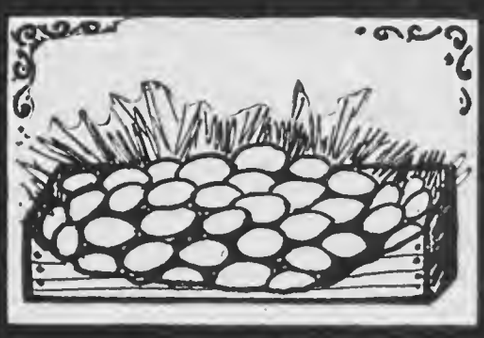

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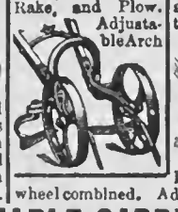

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Live Stock and Dairy

THE BREEDERS' WAYSIDE.

Slaughterhouse Offal for Pigs.

I have had a proposition from a neighbor who runs a slaughterhouse. He slaughters about 10 animals a week. He wishes me to furnish pigs, to feed on offal; he furnishing the lumber to build the pen, and I do the work and have one-half of pork when slaughtered. How much grain would be required to keep and properly fatten four pigs in addition to slaughterhouse refuse? Would there be enough gain to pay for the labor of taking care of them? The slaughterhouse is about one-eighth of a mile from my house.

Mohegan, N. Y. F. C. C.

Now stop a bit and think! Every year animals are killed in slaughterhouses that have contagious diseases in a more or less degree. Apparently healthy-looking cattle have tuberculosis and pigs have cholera and worms of various sorts. Pigs fed offal from animals suffering from such diseases or parasites, by all probability will contract the trouble more or less. To be sure, the butcher will often say this is not so, but it is, nevertheless. Without question every day animals are being killed and consumed that are diseased. Frequently the butcher is not clever enough to notice the trouble, and then plenty of cases occur where the butcher thinks it not of enough consequence to pay any attention to them. Yet a lung may have sacs of consumption pus in it, that will not be seen, which if eaten by a pig will cause it to contract the disease. No, my friend, don't feed slaughterhouse refuse. That stuff should be cooked and made into fertilizer, but not fed to healthy pigs. If thoroughly cooked up to the boiling point for awhile, it might be fed safely, but that will not be a desirable operation for feeding purposes. Feed nice sweet grain and then your pigs, if of the right sort, will gain fast enough to pay you a profit, even if you do buy feed. But you would better let some one else go partner with the slaughterhouse and disease.

C. S PLUMB.

Pasturing Pigs on Rape.

How early in the Spring can rape be sown? What is the best variety, and how soon can it be cut or pastured for pigs in a favorable season? Do the pigs relish it at first, or do they have to acquire a taste for it? I have some purebred Poland China pigs that I wish to try on rape and a little grain. W. B. W.

Goldens Bridge, N. Y.

Rape may be sown broadcast or drilled in in the Spring, just as soon as severe frosts are over and the ground becomes suitable for working. Rape belongs to plants of the cabbage class, which are quite hardy and stand considerable frost. The past Fall we had a few rape plants on a field that had been pastured in the Summer, and they were subjected to repeated severe frosts and not affected at all. After the sun came up they looked just as bright, green and succulent as ever. Dwarf Essex rape is the standard variety, and can be depended on. Be sure to get this. Considerable Bird rape seed has been sold in this country, and this is not at all the thing, producing a plant quite unsuited to the purpose. In a favorable season on rich land perhaps rape will be fit for cutting on a small scale in six weeks or even less, just to give the pigs a taste, but two months will be better. Much, however, will depend on circumstances. Last year at Purdue we planted on April 27 and turned in pigs on the rape on June 12, which is 46 days. In my experience pigs do not take so quickly to rape as do sheep, but no difficulty, however, is met with in educating them to its use. A bunch of pigs put in a patch of rape soon learn that it is good, and act accordingly. If, however, it is cut and thrown in a pen, it will not be relished in any such way as when secured by tearing from the plant fixed in the field. The writer has fed both sheep and pigs rape as pasture and rape cut and placed in yards in which they were enclosed, and the cut rape was never eaten with the same relish as the uncut. When cut it wilts more or less, and, besides, it is easier to tear a leaf or twig from a plant firmly fixed in the ground, than it is to get mouthfuls from plants that have lost their anchorage. The only real satisfactory way to feed pigs rape is by pasturing. Turn them on to the pasture gradually, an hour the first day, longer the next, and soon they will do all right for the day. If they are put on full rape feed at once cases of bloat of a serious character may occur.

C. S. PLUMB.

Hoops on a Tub Silo.

How many hoops should be used on a tub silo 12 feet in diameter and 30 feet high? What size, and round or flat? Will it pay to apply some cheap preservative to the inside? If so, what? What would be the probable cost of the hoops?

Hamburg, N. Y. C. W. P.

A tub silo 30 feet high should have seven hoops. The first hoop at the bottom should be about one foot from the base; the next hoop three feet higher, then the spaces between hoops may be 3½ feet, four feet, 4½ feet and five feet. Hoops should be of ⅝-inch round steel or iron. We would not recommend any preservative whatever. If any is used it may be hot coal tar. The hoops will probably cost about five cents per foot.

L. A. C.

"Animal" Incubators

We have printed some strange reports about natural and unnatural incubators. Last year a thrifty woman claimed that she used her consumptive husband to hatch out a setting of eggs. The poor man was too sick to get out of bed, and his temperature was unnaturally high. The eggs were packed close up to him in the bed and, in due time they hatched, thus saving the cost of an incubator! The latest, however, is found in the following newspaper statement:

MARTINSVILLE, Ind., December 27.—John McDonald, three miles south of Mahalasville, has on his premises 12 stands of bees. The tops of the beehives are so constructed that they receive the proper amount of heat for incubators. These tops are filled with eggs and all that is to be done is to see that the eggs are turned in order to have a fine brood of chicks. He experimented last season with good success, and this year has his hives made about two feet square, so that more eggs can be accommodated, and is going into the business on a large scale. It is claimed, and has been satisfactorily demonstrated by Mr. McDonald, that bees furnish exactly the required amount of heat for the hatching of the eggs.

USING INCUBATORS.—I have used an incubator seven years, and would not like to go back to the old way of hatching with hens. I think if the chicks hatch out on time, as they should if the incubator has been run properly, they are just as strong as when hatched by hens. If there are any weak ones you are more likely to raise them with a brooder, as hens are liable to kill them in the nest. To beginners I will say that they cannot expect to do more with an incubator than with hens. Eggs that will not hatch well under hens will not do so in an incubator. I would study the directions sent with the machine very thoroughly, and follow them as nearly as possible; at the same time I would set some hens to hatch chicks at the same time as the incubator, thereby testing the eggs, and the incubator should hatch accordingly. MRS. J. A. S.

A COW REPORT.—Here is a report of eight cows from January 1, 1900, to January 1, 1901. Two of these are heifers; came in about May 1, 1900. Amount sold from said cows:

2,399 pounds butter	$608.51
Calves	17.34
730 quarts milk, 5 cents qt	36.50
25 quarts cream, at 25 cents	6.25
Manure, 70 loads	35.00
Total	$703.60
Cost of feeding:	
Grain	$160.00
Cornstalks	40.00
7 tons corn fodder	35.00
4 tons hay, $12 per ton	48.00
Salt	.50
Total	$283.50
Profit	$420.10

I think the skim-milk will pay for the work. J. K. L.

Elnora, N. Y.

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Dr. D. Jayne's Expectorant certainly does go directly to the root of all Throat and Lung troubles. There is abundant evidence of this in its sixty-two years' record of cures.—*Adv.*

Sore Shoulders

sore neck, sore back, &c., resulting from collar, saddle or harness gall and chafing, and all forms of canker, callous, &c., are instantly relived and cured with

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Dr. S. A. Tuttle. Wolcott, Vt., July 15, 1899.
Dear Sir:—I had a horse that had two bunches on his shoulder, caused by wearing a new collar. Less than one bottle of your Elixir cured it after six months' standing. L. W. FISHER.

Cures also **curb, splint, contracted cord,** all forms of lameness and **colic,** distemper, founder, pneumonia, &c.

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A man can easily make money selling eggs if he can but get the eggs. He can get the eggs sure—twice as many, if he will feed his hen on Green Cut Bone. No better way to prepare it than with

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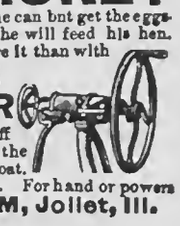

It cuts on the shear plate principle. Takes off a fine **ribbon** like piece, easily consumed by the chicks or fowls. No sharp splinters to injure throat. Turns easily. Only ball-bearing cutter made. For hand or power. Catalogue No. 38 free. **W. J. ADAM, Joliet, Ill.**

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if suffering from an enlargement can be quickly put on his feet. No need to blister or fire. The enlargement will be quickly absorbed by

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Brooke Meadow Farm has for sale Mammoth Bronze Turkeys. Young toms weigh 25 pounds; hens, 15 pounds. Single birds, $3; pairs, $5; trios, $7. JOHN H. JANNEY, Brighton, Md

For Sale—10 S. Wyandotte hens and 1 cockerel for $12; 11 B. Leghorn hens and 7 cockerels, $15; 13 L. Brahma hens and 3 cocks for $20; 10 B. Rock hens and 1 cock for $12. Good breeders; purebred; satisfaction guaranteed.
DR. S. C. MOYER, Lansdale, Pa.

Muddy Creek Herd of Hereford Cattle.—100 head of bulls, cows and heifers for sale. Write for price Come and see me. S. W. Anderson, Asbury, W. Va.

ONE grandson and one granddaughter of Exile of St. Lambert, sire of 86 tested cows. Solid color. Heifer, five months; bull, seven months old.
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Curb Swelling on Horse.

I have a mare seven years old, weighing about 1,400 pounds, that has a bunch on the curb joint, about the size of a hen's egg, cut into in the middle lengthways, and it is quite soft. She is not lame. What treatment is required? C. C. C.

Potter Co., Pa.

Blister with following ointment: Cerate of cartharides ointment, one ounce; biniodide of mercury, one dram, mix. Repeat the blistering two or three times, if necessary, applying a new blister after the scabs from the previous blister have been entirely shed. Do not apply any wash or grease to the blistered surface, but simply allow the scabs to form and shed naturally.

Poll Evil in Horse Cured With Salt.

A neighbor had a horse with poll evil. He tried medicine at $1 a bottle, and it got worse. A friend advised the use of common fine salt, worked down in the tumor or sore. The result is that the horse is cured. I see the animal every day, so know it is a fact. C. S. L.

Oronogo, Mo.

It is quite possible that this case of poll evil may have been cured by the use of common salt. There are a great number of remedies that are reported to have cured poll evil or fistula at some time or another, and yet but very few of them have proved reliable in the treatment of poll evil. Salt might prove effectual in an exceptionally mild case, but in most cases it would undoubtedly prove to be too mild in its action. Very much more depends upon the *method* of using the remedy, than upon the remedy itself.

Horses with Sore or Scabby Lips.

Three of our horses and many of our neighbors' horses are troubled with sore lips. Small scabby sores form as large as a cent, and the horse stops thriving; appetite is good. R. D. B.

Cottons, N. Y.

This affection, which appears occasionally both in horses and cattle, is due to some unknown cause. It does not appear to be contagious, but rather due to some climatic condition, or to something in the feed. Sponge the lips two or three times daily, preferably after eating, with a solution of borax or chlorate of potash. If there are raw sores or ulcers, touch them with a camel's-hair brush dipped in a solution of 10 grains nitrate of silver in an ounce of soft water. Keep the solution in a well-stoppered bottle, and in the dark. Feed on a soft, laxative diet, such as bran mashes, boiled flaxseed gruels or roots sufficient to keep the bowels moving freely. If there is constipation give pint doses raw linseed oil daily until relieved.

Chronic Cough in a Horse.

I have a horse seven years old that has a cough of about two years standing; it is not very hard or very frequent. Sometimes I notice him cough two or three times a day; some days not at all. He looks well and feeds well; give 10 to 12 quarts of oats per day, and about 18 pounds of good hay. He had a light attack of inflammation of the lungs two years ago. His wind is perfectly good; had him examined by veterinary, who calls it a chronic cough, and said he needed physic, but as he is working every day I could not give that, so he gave me salicylic acid to give a tablespoonful every morning. I have given him three doses, but have no confidence in it, as a veterinary work I have says it is used for rheumatism. What I am afraid of is that the cough may run into heaves if not stopped. The veterinarian said that there was nothing wrong with the horse's lungs. I had one horse get the heaves from a neglected cough, and do not wish to have another the same. The last-mentioned horse is being treated with arsenic. The veterinary claims that by constant use of it the horse will not show the heaves at all; is that so? F. P. R.

St. Sophie, Quebec.

Give a small teaspoonful of following cough paste three or four times daily: Powdered opium and solid extract of belladonna, of each one ounce; nitrate of potash, four ounces; powdered extract of licorice, eight ounces; strained honey (about eight ounces), sufficient to form a thick paste; mix. Administer after eating, by rubbing on back teeth and tongue with a paddle. If there is a nasal discharge at any time, or a discharge when coughing, steam the head for 15 to 20 minutes daily, at night. This is easily done by cutting the bottom from an old flour sack, placing one end of the sack over a bucket of boiling water, and the other end over the horse's nose. Add a tablespoonful turpentine or pine tar to the boiling water just before steaming. Rub the throat from ear to ear with ammonia liniment, sufficient to blister quite severely, and repeat monthly for two, three or four months, as may be necessary. If there is no improvement after four to six weeks' treatment, try a course of arsenic. Give one large tablespoonful Fowler's solution of arsenic once daily in the feed for three to five days, after which increase the dose to two tablespoonfuls once daily, and continue for a month longer. Arsenic will relieve most cases of the heaves; and in cases not too chronic or far advanced it will sometimes help the animal so that it will show no symptoms of the disease. But when thus relieved, the symptoms will reappear as soon as the animal is improperly used or improperly fed and watered. Arsenic will relieve but not cure the disease.

Worms in Horses; Contagious Distemper in Cats.

What remedies are advised for blackheaded white worms in horse? What treatment for sore eyes, sneezing and discharge from nostrils in cats? It is contagious, as kittens get it, and only live to be a few months old. How treat the mange and worms in cats? I find a sure cure for lice on cats, as I cured four after trying tobacco, insect powders and sulphur. Dissolve one-quarter pound of hard soap, Ivory or other, dissolve in two quarts of water, add one pint of kerosene oil and pump the mixture back into itself while hot; this is diluted with twice its bulk of water before use, and used while warm. Put in tub, hold animal in, and wet hair through to the skin; do not get it in their eyes. It takes off lice and leaves the animal's hair soft and clean; is good for all hairy animals.

Grand Rapids, Mich. S. J. P.

Oil of turpentine is one of the most effectual remedies for intestinal worms both in the horse and cat. For the horse, give two to three ounces turpentine well shaken up in a pint of raw linseed oil and a quart of milk. For the cat, one-half teaspoonful in two or three spoonfuls of milk. The turpentine is most effective when given on an empty stomach after a fast of at least 12 hours, and followed in two or three hours by an active physic (one ounce best aloes and ginger for the horse, and a large teaspoonful castor oil for the cat.) The kerosene emulsion is a very effective lice eradicator on any animal. It can also be used to advantage on the mangy cats. For the distemper in the cats, steam the head two or three times daily, over boiling water, to which has been added a few drops of carbolic acid. Internally, give 10 to 15 drops three or four times daily, of a mixture of an ounce each compound tinctures of cinchona and gentian. Feed mainly on a bread and milk diet. If there is constipation give a teaspoonful castor oil. A warm comfortable bed, and pure air are very essential.

Poultry Show at the American Institute

A poultry show and meeting of the Farmers' Club of the American Institute was held at the Berkeley Lyceum Building, New York City, January 9. The exhibit of fowls and appliances was very limited, but the quality was excellent. Competition with the many local exhibitions held at this season tended to reduce the number of exhibitors. In the discussion brought out by the addresses the following points were made: The most profitable flocks do not exceed 25 to 30 fowls. With extra care 50 can be kept together with good results. One successful poultry farm was described where 2,000 White Leghorn fowls were profitably kept in flocks of 40 to 50. The owner and a helper do the work, and are kept pretty busy. Long houses, 12 to 14 feet wide, are excellent, but every second partition should be solid, in order to limit disease and parasites. Hens should each earn $1 per year over all expenses, and under favorable conditions they can return a profit of $2. Light well-drained soils are always best for poultry. Heavy clay and all damp soils are really unfit for poultry runs, but can be improved by frequent spading or plowing. Use plenty of whitewash about the coops, containing a good per cent of carbolic acid. All perches should be sprayed or washed with kerosene at intervals of two weeks or oftener. Poultry work is monotonous to those who have no love for chickens. The capacity of manufactured brooders is generally much over-estimated. It is dangerous to crowd too many young chickens in them. There should be a circulation of air under the hover, and no corners for the chickens to pile up in. There is an immense aggregate value in the myriads of small well-kept flocks scattered over the country, but large flocks do not always pay so well. It is best to start in a small way and build up gradually. Birds for exhibition are best raised by hens, as it is Nature's method. Incubator fowls are just as good for layers and market purposes. Hens like pursiane, plantains and ragweed; grass and clover are the best green feeds. W. V. F.

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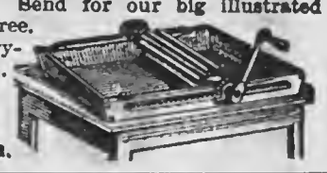

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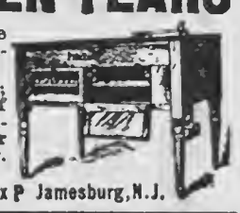

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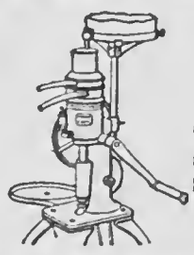

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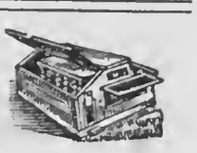

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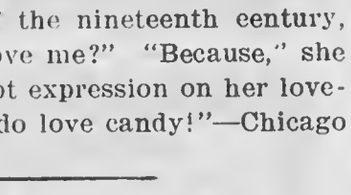

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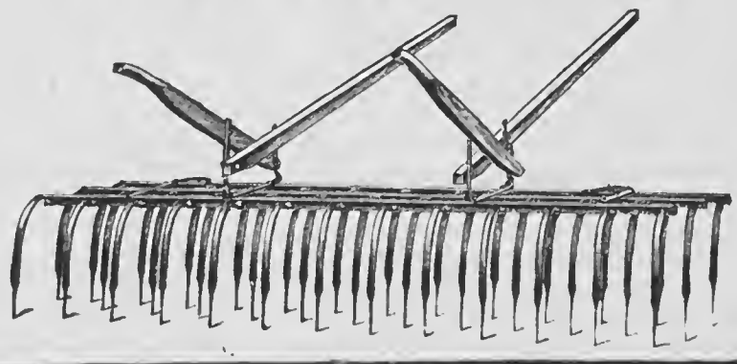

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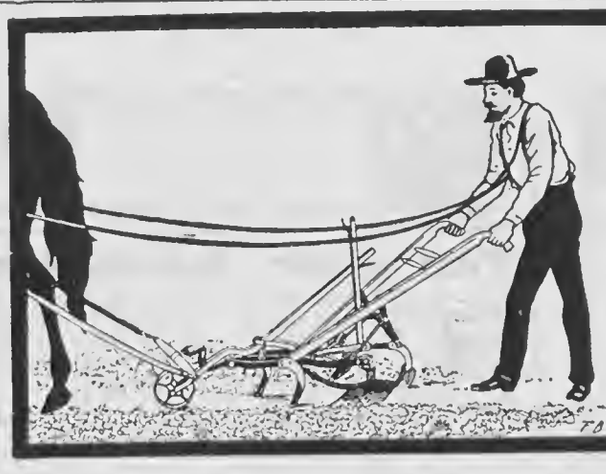

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2662. NEW YORK, FEBRUARY 2, 1901. $1 PER YEAR.

A COUNCIL OF PEACH KINGS.

THREE VIEWS OF A MOUNTAIN PEACH.

An Attempt at Mind Reading.

In recent issues of THE R. N.-Y. I tried to give some idea of the coming importance of the mountains of Maryland and West Virginia as a peach-growing section. The fruit produced on the mountains is not as large as that in some highly-cultivated orchards, but it is remarkably firm and highly colored, and delicious in quality. During our visit to the orchard of E. A. Pry—which, by the way, overlooks the battlefield of Antietam—our party missed J. H. Hale and Roland Morrill. They were finally discovered in a corner behind the packing shed under the hypnotizing influence (and camera) of George O. Brown, of the Baltimore Sun. I feel sure that R. N.-Y. readers will be interested in the picture. Here are three "captains of industry"—men who have "done something"—who will be gratefully remembered by those who follow them. At the right sits Mr. Pry. He is the only fleshy man I saw among those mountains. Mr. Pry has changed a mountain wilderness into a profitable peach orchard. We happened to catch him in his working clothes. The others wear their Sunday-go-to-meeting togs, but they are quite able to shed their soft raiment if necessary and hustle with peaches. In the center stands J. H. Hale, of Connecticut—a familiar figure to many of our readers. What a living example of hustle and grit, bull-dog courage and nervous energy! Whipped a dozen times, in the opinion of everyone except himself, he has made his way to the front with the largest bearing peach orchards in the world. At the left is Roland Morrill, still another type of man. He has dug his way up from poverty slowly, powerfully; led by a sublime faith in the final success of one who will do his work thoroughly and well. They may well be called "peach kings." Pry has conquered a mountain wilderness, and Hale has mastered a New England pasture and an old Georgia cotton plantation. Morrill has worked on high-priced land, and made his peach trees pay higher rent than human tenants could. Surely men who master the forces of nature in this way are the true kings for America.

Here are three distinct types of men—each a master in the art of peach-growing! Could we but read their thoughts as they sit there facing the sun of that crisp September day, what a story we would have! The face mirrors the mind, and perhaps we can tell from the expression of these men what their thoughts are. Mr. Morrill holds a mountain peach—a fruit that is destined to change the markets of a continent. Mr. Pry is watching it with confidence, affection and pride.

"There it is," he is saying silently, "you can see how cheaply we produce it, how fine and firm it is, how safe we are from frosts up here, and you know the vast tracts suited to peach culture. What about it?"

Mr. Morrill, the thorough, careful cultivator, knows these things and has weighed them well. These thoughts are in his mind: "I can grow larger peaches which will sell for twice the price of this, and yet this means real competition in the markets of the country. This is the peach for the million. I can only compete with it by using the most thorough culture and care. When these mountain ranges are turned into orchards the flood of peaches rolling down these hills will sweep away the careless men who are satisfied to stop short of the best!"

Hale, the optimist, has flashed the situation through his keen brain. His story is told in his face: "Yes, that is a beautiful peach—cheaply grown with unlimited chance for development. Yet we can grow just as good peaches on the New England hills, where we are within driving distance of the best markets of the country. These hills are too far back from the railroad. The long haul over these mountain roads will cost too much. Very nice! Very nice! But New England peaches are just as good and nearer market!"

So the three men are thinking out their great problems as they sit in the sun. It is truly a council of peach kings. H. W. C.

Mr. Stringfellow Prunes the Poet.

The recent poetical criticism of my methods (page 24) was so entertaining that I hope the author will give us another effusion, and take for his subject the mammoth peach tree alluded to in THE R. N.-Y. some time ago. I will refresh his memory by giving the main points. It is 27 years old, two feet in diameter, stands in a yard midway between house and barn, and has never been cultivated so far as known. It has never missed a crop of fine peaches, is healthy and vigorous, and good for many years to come, though never irrigated by anybody's sweat and has never caused anybody to "hustle and jump," or "kick dust through the long Summer day." He might incidentally bring in the fact that nobody has yet claimed the $25 I offered for pointing out, anywhere in the United States, its equal in size and productiveness, grown by the expensive and laborious methods he so wittily advocates. This tree was grown strictly according to the Stringfellow m thod, except the fertilizing and mowing, and as the laws of Nature are uniform, like results following like causes and conditions, I leave it to your readers to choose between my natural and lazy method, as demonstrated by this peach tree and thousands of other chance seedlings over the country, and his unnatural and expensive method, which never gives more than one good crop in three years, and kills the orchard in 10 years or less time. But remember, I have nowhere advised the neglect he satirizes. Short roots set in firm ground, clean, shallow culture for several feet around the trees, with heavy fertilizing of this circle, and several mowings of the middles during the growing season, leaving clippings on the ground, constitute the Stringfellow method, so-called. If the poet wishes proof of the results obtained by me through this method, if he will write to J. C. Glover, station agent at Hitchcock, Texas, he will learn that I grew heavy crops of pears every year, and in 1894 shipped 10,000 bushels from 1,500 10-year trees, and then sold the orchard for $20,000.

H. M. STRINGFELLOW.

R. N.-Y.—Brother Stringfellow should remember that poets are accorded considerable license in their efforts to make ideas measure and rhyme. We regret to say that figures and facts often give the poet mental dyspepsia. The best theme for a poet in connection with the Stringfellow method would seem to be the fact that so much hustle and cultivation robs both trees and men of the calm and satisfactory maturity which natural conditions alone can provide. Mr. Stringfellow's orchard is a strong indorsement of his system of planting.

An Experiment in Turf Culture.

I have no doubt that the Stringfellow method of planting trees would be a success, even in turf culture, if the supply of moisture could be kept up during the entire growing season to the amount that we find in the land in the Spring, or when the land is frequently cultivated, but if it is covered with grass, and no mulch is used about the young small trees, the growth will be very small indeed. My experiments, to which you refer, were not at all like the Stringfellow method, though I did plant in turf land. I started out with the proposition that there are in Massachusetts tens of thousands of acres, of little value for other purposes, upon which we find apple trees growing, and where this land is rich and naturally moist, or where an abundance of fertilizer is applied or dropped by numerous cattle in search of the fruit, the trees grow vigorously, live a long time, and produce large crops of highly-colored fruit that is of the best quality, and keeps well, and that we should utilize this land, which may be bought at from $2 to $20 per acre. Such sections of the State as the hills of Franklin and Hampshire counties are noted for their apples, of fine flavor and keeping qualities, and such fine orchards as those of Dr. Jabez Fisher, of Fitchburg; Jonathan Eames, of Sherborn, and Moses Palmer, of Groton are illustrations of success in growing apples in turf culture. This experiment was quite extensive (over 30 acres), including not only the apple, but the pear, peach, plum, cherry and grape, and while the results have not been entirely satisfactory, they have been as good as I could expect, owing to conditions that I could not control, i. e., to my distance from the work (60 miles), and too small a capital. Mr. Kinney, of Worcester, has summed up the situation with the expression, "fishing with too long a pole." The apple, pear and cherry trees have made a good, though not large, growth; the plums have been a total failure, and the grapes only a partial success.

Among the objections to this method of turf culture is the large number of borers. Both the round-headed and flat-headed borers attack the young trees. Other insects and fungous pests are not more numerous than in cultivated land. Woodchucks do much harm to young trees, and in very dry seasons the

A COUNCIL OF PEACH KINGS—MORRILL, HALE AND PRY. FIG. 27.

growth is much less than it would be in thoroughly cultivated land, but this last condition may be more or less overcome by cutting the grass and undergrowth several times, during the early part of the Summer; this may be done very cheaply with a mowing machine if the land is not very rocky. The advantages are the very low cost of the land, and the trees can be trained very close to the ground, so that thinning, spraying and harvesting can be done at a much less cost than with trees trained high enough to cultivate under. After an experience in growing the large fruits for nearly 40 years, under a great variety of conditions, and having seen many of the large orchards and fruit-growing sections of the country, I have no doubt but that more profit can be made from an orchard in strong land thoroughly cultivated from the start, that it will make a larger growth, come into bearing earlier and produce more and larger fruit than under turf culture, unless, under the latter condition, the land is strong and moist, and much more fertilizer is used than upon that under cultivation. The extra cost of cultivation, however, will largely offset this extra cost of fertilizer.

On hillsides, or sloping land that washes badly, I have found just as good results obtained by cultivating strips from six to 10 feet wide between the rows of trees as when the whole surface has been cultivated. I am inclined to look with favor upon the Stringfellow method of pruning for small trees from ⅜ to ½ inch in diameter for planting; cutting back the root severely and the top to a stub, or quite down to the ground. With peaches especially, I feel sure that better trees will be produced from a single shoot coming from near the ground than from one or more branches starting out on a stock two or three feet from the ground, and perhaps this may apply to the other large fruits, but not to the cherry. S. G. MAYNARD.

Mass. Agl. College.

R. N.-Y.—In asking northern fruit growers for an opinion regarding the Stringfellow method of planting fruit trees we have been told repeatedly of an experiment tried by Prof. S. T. Maynard, of Massachusetts. In order to put the facts before our readers we have asked Prof. Maynard for a statement, which he gives above.

THE PROPER CONDITIONS FOR CURRANTS

The Hillside Beats the Valley.

FAILURE IN THE VALLEY.—We do not claim to be experts in currant culture; however, we grow lots of them and can tell how we do it. We live in a valley, through which winds a small creek; grand land for wheat and corn, worth $100 per acre for such purposes. Here it was we began growing fruit, without experience. We planted a general line of small fruits, but will dwell on this only so far as it touches on the currant. We planted an assortment of varieties including Fay, North Star, Wilder, White Grape, Pomona, Red Dutch, Versailles, Victoria, Cherry and Lee's Prolific. At two years old we had a magnificent growth of wood, and everything looked encouraging for a great crop of fruit. After blooming freely we began to notice that the bloom was setting but little fruit, and the bunches were very imperfect; many having only a few scattering berries. This was a great disappointment, and we were unable to account for it; however, we expected that the next year the plants would redeem themselves, but not so, for year after year we experienced much the same results This lowered our enthusiasm considerably, and we finally had to abandon the enterprise entirely, cut down our bushes even with the ground, and used the plantation as a stool bed for growing currant cuttings, each year cutting the young growth even with the ground for propagating wood. We attributed our failure to late frosts and cold winds, which affected the tender bloom of the currants, located as we were in the valley, susceptible to frosts that bloom on the higher ground would have escaped.

A HILL FARM.—Looking southward across the valley, just one mile from our home, is located a farm on a very sharp elevation, towering high above the valley and surrounding farms. The nature of this soil too is altogether different from that of the valley. This farm was at that time not considered an extra good one, as farm land generally was valued in the community. The soil is red clay and gravel loam, with several of the fields on the south approaching a white clay. The owner of this farm was doing a little work with small fruits; had planted a few acres at about the same time that we began, and among other things he had a small plantation of Cherry, Fay and Red Dutch currants. Those bushes did not receive the attention that we gave ours, and in a few years they even stood in a stiff Blue-grass sod; yet they bore fruit year after year even in this neglected condition. The bunches were filled with berries to the tip ends, and showed no sign of the trouble we experienced. There were many things about that little currant plantation that were of interest to us, and we watched it closely. A frost that would knock us out entirely in the valley would do but little or no damage on the elevation. This man seldom failed to grow a crop of fruit, and his wagons went to market day after day with loads of fruit when he often had absolutely no competition. The owner of this farm gave us a special invitation to come over and see his fruit. After showing us around carefully over the entire farm of 144 acres, to our surprise he announced that he was going to sell the farm. We bought it then and there; mortgaged to the last dollar everything we owned to make first payment. Perhaps this was not a wise course. We would not advise anyone to do it; yet we

FARMER WILSON (of the Agricultural Department): "Why, you never saw a 'gold brick' shaped like this!"

PLAIN HOER AND SOWER: "No, that's a fact, Mr. Secretary. But all the same that's just what it is—'a gold brick.'"

—PHILADELPHIA RECORD.

wanted that farm to grow fruit upon. We knew its value for this purpose.

CURRANTS AND TREES.—No sooner was the deed transferred than we began plowing and preparing to plant fruit of all kinds. Now it was that the desire again to grow currants came back, and there was no use putting it down. We plowed in December 10 acres of clover sod on the highest point of the farm, and planted in early Spring, and this time we did grow currants, and see no reason why we will not continue to grow them there for years to come. With practically the same varieties and culture as we gave the former plants with no results, we now are able to grow about 150 to 200 bushels per acre. In making this last plantation we have endeavored to make the

PROF. EDWARD B. VOORHEES. FIG. 29.

conditions as near the ideal for the currant as we could. The currant is a fruit that requires partial shade and a cool moist soil for its roots. Can you not remember currant bushes standing along some neglected garden wall or fence, that year after year produced a crop of fruit, untrimmed, uncared for and neglected, yet it bore abundantly? The fence held the moisture and broke the direct rays of the sun; kept the roots cool and furnished sufficient fertility for growth. With these facts in mind we planted our commercial currant plantation. To give them partial shade we planted cherry trees 30 feet apart each way, planting in the currant rows so as not to interfere with cultivation. The currants are planted six feet one way and three feet the other, in check rows, so we can cultivate both ways and reduce hand labor to the minimum. These trees not only furnish the desired amount of shade, but are a great protection against cold winds and late frosts. They check the drying winds of Summer, which so rapidly drink up the surface water in the soil. We are aware that the trees require for their growth both fertility and moisture, and must draw from the same source as the currants, yet we are positive that the great good they do more than outweighs the evil. Notwithstanding the advice from high authority not to plant trees among small fruits, with us we will continue to do it so long as we get the results we now do.

ESSENTIAL POINTS.—We trim our plants so as to keep an open head, and the bush symmetrical in form. For fertilizers we use good stable manure spread evenly over the surface, with an occasional dressing of wood ashes. In these shaded orchards our pickers delight to work. We allow each one a small box to sit on, with a carrier holding 69 baskets for their fruit. After a hard morning's work in the hot sun gathering strawberries or raspberries, such a change is a delightful rest to them. The three essential points successfully to grow the currant as our experience presents to us, are elevation to avoid frosts in Spring. partial shade, and a cool moist soil. Varieties of course must be governed by the markets, as some markets want the larger currants, as Fay, Cherry and Red Cross, while in other markets the smaller varieties sell as well as the larger ones, and produce much larger quantities per acre. It has been an interesting study to us to watch the behavior of plants on these two farms. Not only in currants, but in other small fruits as well. Some of our most profitable varieties on the Hill Farm are failures in the valley, and many varieties that do not do so well on the heavy clay thrive and are profitable in the lighter and warmer soil of the valley. W. N. SCARFF.

Ohio.

A PRACTICAL SCIENTIST.

We are glad to show our readers in Fig. 29 the picture of a man who combines in a high degree the qualities of the skilled scientist and the practical farmer. Prof. E. B. Voorhees is the director of the New Jersey Experiment Station, and has just been elected president of the Board of Agriculture—the famous farmers' association of his State. Prof. Voorhees is a Jerseyman by birth and education. A farmer's boy to begin with, he was educated at Rutgers College at New Brunswick, where the Station is located. He is by profession and education a chemist, yet both laboratory and farm at the Station show how science has been made "soluble" and brought into those common farm operations which are familiar to farmers. For example, a first-class herd of dairy cows supply milk which is sold at retail in the city of New Brunswick. The problems involved in feeding, milking and caring for the milk provide the opportunity for scientific investigations which are of great value. Prof. Voorhees has demonstrated on this farm of 70 acres the great possibilities of feeding large numbers of cattle on a limited area by growing a succession of crops on the soiling system. Here one may see large fields of Alfalfa, cow peas, oats and peas, corn and other fodder crops following one another in a complete round of feeding. This succession of fodder crops is so successful and complete that THE R. N.-Y. expects to report it this year, and follow it through the season from early rye to late Crimson clover. Prof. Voorhees has been remarkably successful in filling the Station with strong men. It is probably the strongest collection of practical scientists to be found at any station in the country. Naturally we are glad to show our readers the face of such a man, for he who organizes on permanent lines an institution like the New Jersey Station deserves well of his fellowmen.

Wanted! Plant Medicine in Small Packages.

I wish to follow up your answer to T. C. C. in December 8 issue. I find one great trouble in using Bordeaux and other insecticide solutions, is in their preparation. It seems that those to whom we look for information and instruction along this line go upon the theory that these preparations are only for professional fruit growers and gardeners. I used last year a preparation of Bordeaux put up in one pound cartons, and with good success, except in its preparation for immediate use. The one pound was to make a solution of 50 gallons, and with the few vines and fruits that I desired to spray I did not care to use more than from five to 10 gallons at a time. I undertook to divide the packages, but I found it unsatisfactory. What I want to say is that if the preparation could be put up in doses or one-eighth, one-fourth or one-half pound, etc., or in bottle solutions to mix with five, 10 or 15 gallons of water for immediate use, it would go a long way, in satisfying and accommodating the amateur, and those who have a few vines and trees for family use. You see, when it comes to dissolving six pounds of copper sulphate in so much water, and six pounds of lime in so much water, and the two to 50 gallons of water, unless a fellow is an expert, and fully prepared for it, he is downed on the first round. I know, of course, the cost of preparations as I suggest would be more than otherwise, but it would greatly simplify the use of them, and I believe with as good results.

Indiana. W. S. Y.

The above suggestions concerning the trouble and loss in handling liquid fungicides in small quantities by amateurs and home gardeners are worthy of careful attention from manufacturers. The increasing necessity for their use is evident to all, but the trouble of making up small quantities of the solution is so great in proportion to the visible good they do that the operator soon grows disgusted. Dry preparations, such as Leggett's Fungiroid, are excellent in their way, but do not replace fresh Bordeaux Mixture in effectiveness. If some one will place a concentrated mixture on the market in quantities sufficient to make up five to 10 gallons ready for spraying, it is quite certain to meet a welcome from amateurs and small growers.

A SERMON ON THE SHORT-HORN.

"Like Produces Like."

FIXED TYPES.—In studying animal development and the various influences and effects of breeding, no law became more closely demonstrated to early breeders than the one that "like produces like." Bakewell 125 years ago demonstrated this law to his satisfaction, and ever since then thinking breeders, in season and out, have been impressed with its truth. In fact, in a general way we all of us are impressed with it, whether stockmen or not. Friends call to see the new baby, and "How he does resemble his father," is a common expression. You meet Calvin's 18-year-old son for the first time, and at once you begin to search for resemblances. That is simply illustrative of the habits of people. We institute comparisons, and first of all in family relationship. We naturally expect, "like father, like son," and the same application comes in with farm animals. Circumstances, however, affect cases. If you will stop to consider a minute, you will be impressed with the fact that with wild animals the type is very fixed. Red foxes vary but little in type and description; only in minor things. The same applies to partridges, red deer, crows, prairie dogs, black bears or anything else. In fact, these wild things breed so uniformly alike that scientists have been able to classify them so accurately that no matter where found, by the aid of a printed description, they are able to determine them if they perchance have not seen them before. An American robin by accident found in central Russia, is determined with ease by a Russian ornithologist, who has access to descriptive works on ornithology, though never having seen it before. To what is this due? To the fact that wild things have reproduced themselves from generation to generation under very similar condition, and so have highly intensified uniform breeding. Prepotency is the power of an animal to stamp or impress its character in a high degree in its offspring, and in wild animals prepotency has it highest average development. Foods, mating and climate are less variable with the wild beasts than the domesticated, and they are accordingly more uniform in type.

WHEN MAN CONTROLS.—With domesticated animals we have a different condition. Man usually mates the sexes, attends to the feeding and controls the other conditions of life to a large degree. Animals of widely different temperaments, or of different constitutional forces are perhaps mated. Opposites, or positive and negative are joined, and the result is uncertainty. Well-established forces in one generation become unsettled in a second, while a third makes a bad matter worse, for here is where the bad results of cross-breeding most often show themselves. Now I have jumped from the one extreme to the other, from the well established uniform type, to the indefinite, hit-or-miss type. What I wish to impress is this: Nearly all of the breeds of to-day are the results of long persistent breeding, in which opposites perhaps have played their part, but where a master hand and mind has also played his. Certain things were sought for, and other things denied. The noble Short-horn is the result of what history tells us is a combination of the cattle along the River Tees, in Yorkshire, with some Dutch blood from across the Channel, and probably something else. But the Collings and Bates and Booth and Cruikshank worked without ceasing to develop a breed type that should be prepotent and uniform. And so for over a century during the generations, some men have sought to produce Short-horns that would come up to their ideals. These ideals had much in common. All the great breeders have sought for superior constitution, rapid growth, a maximum of desirable meat and a minimum of offal. Broad backs, deep well-sprung ribs, square bodies well covered with flesh, hard fine bone, great feeding capacity, placid temperament—these all men unite on as desirable and all-important. The more men have succeeded in breeding such a type, the more carefully this has been attended to from generation to generation, the more uniform have been the results. And so by casting aside undesirable animals, or those lacking in prepotency, and holding only to the best that represented the type, breeds have been raised to superior levels. It is through such a course of development and breeding that has been evolved such a beautiful Short-horn cow as that shown in Fig. 30. This magnificent beast of Aaron Barber's is no accident. Note the grand constitution shown in the great depth and thickness of body at the shoulders, and the deep prominent breast and stylish carriage of head, expressive of the best in the Short-horn character. Further, note the level and undoubtedly broad back and full hind quarters with the short legs and small amount of waste in the blocky body. The pedigree of this highly-developed beef type will unquestionably include numerous progenitors celebrated for high qualities and prepotency. One may stand off and look at such as she and say without hesitation, "This is breeding!"

WHY NOT CROSS-BREED?—A few weeks ago the writer was on the programme of a farmers' institute to discuss the subject of "Crossbred vs. Purebred Live Stock." Late in the discussion of the subject, after various persons had spoken of crossing this and that breed, one man arose in the back of the hall and said, in substance: "I know that for a great many years breeders who knew more than I can hope to, spent time and effort in developing certain breeds of live stock that have just the qualities I want. They have created the highly-developed Jersey cow for milk, the Short-horn or Hereford for beef, the Berkshire or Poland-China for pork. Now why should I try to create something different, when I know that these men really have produced the things I want in these or other breeds?" That man gave the correct, intelligent expression. Why should he want to cross two different breeds? He should not unless he is a very exceptional student of the laws of inheritance and breeding, and has some well-defined, reasonable policy in mind that may be continued experimentally for generations. Rather the breeder should very carefully learn what the true capacity of a breed is, what it has done and may accomplish. If one will work with animals representative of good specimens of our common breeds of to-day, he will not be likely to be dissatisfied with results. But he must select his stock with caution and judgment. He should ever have in mind this law, that "like produces like." If he is to use breeding males owned by neighbors, he should not be influenced by the service fee, but by the relative merits of sires. If he is to buy, he should first seek the type and style of animal needed for the herd, and then talk price.

A CHAMPION SHORT-HORN COW. FIG. 30.

A SHORT-HORN SERMON.—This beautiful Short-horn cow teaches a sermon in good breeding. That beauty of form means high ideals, the result of superior mating in parents, grandparents, great grandparents, etc. No doubt, old Amos Cruikshank looked with pride on individuals of his in the pedigree of this cow a half century ago, for this cow shows ancestry, and ancestry means breeding, at least of some sort. We do not have these facts in mind enough. Remember that long legs, narrow backs, thin chests and poor quarters reproduce just as well as the very best type, and also do not forget that it costs just as much, yes, more, to feed one of these undesirable sorts, as it does the better one. I wish to illustrate that fact. We have at Purdue University two Hereford cows of the same general type and character as this Short-horn cow. These animals have inherited from past generations a great tendency to flesh production. They always feel mellow and plump to the touch. No matter how poor the pastures, these cows never get thin, as farmers ordinarily consider thinness of flesh, and in spite of this fact these two cows are the easiest keepers in our barns. They require less digestible food, and less grain to keep up a good condition of body fat, than anything else we have. This in a marked degree. And their calves, which have always been sired by superior males, have inherited the same characteristic easy-feeding qualities. It is simply another illustration of "like produces like." Whenever our breeders are duly impressed with this great truth, then will the average herd and flock of America begin to take its proper place in our live stock economy, and not till then. All the rest is guesswork.

Indiana Exp. Station. C. S. PLUMB.

ARGUMENTS FOR APPLE BOXES.

The Box as an Apple Package.

Regarding the apple-box question, the principle issue would seem to be facility in marketing. Will the apple box better enable the producer and consumer to save what the wholesaler and retailer now pocket, which is in many instances almost the whole hog? Will the box enable the grower to deliver direct to city homes, and cannot this be brought about by means of the small advertising columns in the city dailies? The apple barrel is economical, and this point is much in its favor. In New England towns emptied flour barrels generally may be had for 10 to 15 cents each. If these are swept out carefully and stored properly, not more than through one season, they answer the same purpose as new barrels, costing three times as much. If apples are to be stored over Winter in a cellar the small amount of flour which inevitably remains, in spite of all attempts at cleaning, speedily decomposes, and becomes a prolific source of rotten fruit. But the cellar for apples may be regarded as out of the question. The farmer is hopelessly behind the times who does not keep them above the ground in some room or building which is kept just barely at the freezing point. If this is over a non-freezing cellar, and three or four apples on the top of each barrel becomes half frozen during the successive cold snaps, the conditions are just right. Under these conditions an old barrel is as good as a new one. Now, who is going to furnish the farmer with so good an apple package, at so satisfactory a price, I would like to ask? If all the miscellaneous groceries came in boxes of uniform size and style, free from all advertising legends and labels, say of one bushel each, and three of these came as cheaply to the farmers' hands as one barrel, the matter would be much simplified. I would rather nail up three boxes than head up one second-hand barrel, and do the job properly for shipment. Will some enterprising manufacturing grocer come to the farmer's aid by sending out all products in neat boxes of uniform and approved size, free of all advertising matter save cards easily removed? The active demand for the empty package should stimulate the retail grocer to use his influence in their direction. It is apparent, the economy in having boxes destined to become fruit packages, made and distributed from large centers and cost of delivery among farmers already covered. Economy is the order of the day. The trusts practice it; indeed, they exist for this sole purpose if we may credit their assertions. And I am confident that the question of first cost of the package to the producer, penny-wise and pound-foolish though it be, must for a long time to come dominate with the masses.

Massachusetts. F. W. PROCTOR.

Convenience of the Package.

I agree with THE R. N.-Y. in regard to the apple box in preference to the barrel. The box that I would prefer would be a bushel box with a division in it, the same nature as the California fruit boxes, not a seven-eighth, but a bushel. The California boxes hold more than a bushel; I suppose they count for shrinkage. Among some disadvantages of the barrel, in packing by the fruit grower sometimes they are faced on the bottom, in case that end be opened, then the apples are poured in, falling a distance of two feet. Some are soft and are bruised, and soon there is a bad apple ready to contaminate the whole barrel. A barrel is too heavy for one man to lift; he can roll it on end, but that does not always put it where it is wanted, and it is often the cause of words bad enough to spoil the apple. It is unhandy to get the bottom apples out unless the barrel is turned over, and sometimes it falls to the lot of the housewife who has bought the barrel of apples. A box of apples is usually handy, packed in a close space easier handled, and at market with the lid torn off a customer can with a few digs see into the heart of the box, and the seller need not fear to meet the buyer again. Some persons would like to have a bushel or a half bushel of apples to suit their circumstances; the box would be a great accommodation. We used to have nothing but 60-box berry crates. They have disappeared fast; small dealers all prefer the 32-box crates. Bushel peach crates are getting scarce; the half bushel baskets are in the lead. Customers want to look over as much of their goods as possible before buying, and so we all do in everything.

P. S. PEASE.

Van Deman's Fruit Notes.

ALL SORTS OF QUESTIONS ANSWERED.

Trimming June-Budded Trees.

L. P. L., Pennsylvania.—In setting June-budded peach trees can they be trimmed back to form a head the first year, or should they be allowed to grow one year before being cut back? Head wanted 2½ feet from ground.

ANS.—June-budded peach trees are usually so small that their tops are about the right height at which to form the main branches. Unless there is some exceptional circumstance there need be no delay about starting the top. My plan is to head peach trees lower than 2½ feet; I think 1½ to two feet plenty high.

Pruning Cherry Trees.

M. B. M., Pine Bush, N. Y.—A nursery firm told me to trim cherry trees in the Winter. My neighbors told me to cut the grapevines down out of the cherry tree after the leaves dropped, which was done. Was this right?

ANS.—The best time to prune cherry trees is in the early Spring, just before the leaves start. During the severe weather of Winter is not a good time, but in the mild weather of that season it will do very well, if there are no very cold spells following. It is not the proper thing for grapevines to entangle themselves among the tops of cherry trees.

Wounded Elm and Maple Trees.

S. J. P., Grand Rapids, Mich.—We sawed off the lower limbs from some elm trees 10 inches in diameter when in leaf, in 1899; last Summer the sap ran from the places. We put on thick paint and bound on cloth, yet they bled until frost came. Our maple trees split open from the cold of two Winters ago. They are split to the heart and the wood is weatherbeaten. Will it kill them, or will the wounds grow together? What publication is devoted to growing vegetables under glass, or partly so?

ANS.—It is no wonder that the sap ran from the wounds made by sawing off large branches from the elm trees, and this is something that should never be done to any tree unless absolutely necessary. These scars, and those made by the splitting of the maple trees, may heal over in time, if they are not too large. About the only thing that can be done in such cases is to paint the raw surfaces and trust to nature to do the rest. I think the agricultural experiment station at Lansing, Mich., has a publication for free distribution on gardening under glass.

York Imperial Apple.

E. H., Brayton, N. Y.—What do you think of the York Imperial apple for northern and eastern New York? Could you give a short history of this apple, habits of growth and size, color, shape, keeping qualities, demand in market, etc.? It was recommended to my brother last Winter in western New York. We could not find the trees in market, but found some scions in Pennsylvania, and as it was late in the Spring when I sent for them, there were only a few that lived. I grafted them into a young tree about one inch in diameter, and have a fine lot of scions on that tree; they grew very well. Would it be advisable to graft into native trees, and to set out a young orchard of this sort? We have been setting Ben Davis, R. I. Greening, Wealthy, Wolf River, Northern Spy, Baldwin, etc. R. I. Greening grows to perfection here with us. One young R. I. Greening we had set seven years had eight bushels of picked fruit besides what blew off.

ANS.—The York Imperial apple tree has a very good habit of growth, being thrifty, sturdy and forms a round head. It is about as hardy as any of our good varieties. The fruit is medium to large in size; flat but irregular, rhomboidal or lopsided shape; yellow, well covered with striped and mixed red; of very good quality; and is in good demand in the markets of Europe as well as in America. How it will do when grown in New York is yet to be seen, but it may prove quite a success. My advice at the present time is to try it in a small way all over that State. The trees are being propagated by many of the nurseries now. Good nursery trees are so cheap that it would not be profitable to graft seedlings on the farm and set them into an orchard, nor would such trees be satisfactory when planted. The varieties mentioned as having been planted are very good for New York, except Ben Davis, which is not very suitable for that climate because it does not reach its proper state of development.

Cherries in New York State.

N. J., Walton, N. Y.—What varieties of cherries would you advise planting for market in this locality? I have 50 Montmorency set two years ago that seem to be doing well. I have thought of planting quite largely of Windsor, but am not certain that it would be profitable or hardy enough to stand our climate. Hardly any fruit is grown about here, so I do not have the experience of others to guide me.

ANS.—It is well proven that Windsor and all other sweet cherries are less hardy than the Montmorency and others of the sour class, and where the climate is severely cold it would be unwise to plant the former. Richmond, Philippe and English Morello are other good kinds that are hardy, but they are tart in flavor.

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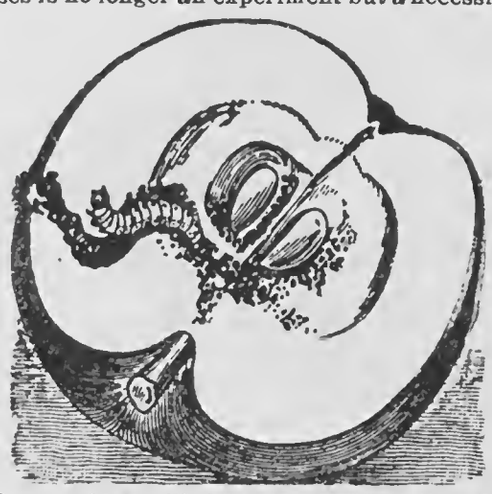

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Apples for Vermont.

M. W. S., Fairlee, Vt.—What is the best late keeping red Winter apple for the middle belt of Vermont, east and west? What are the best three varieties? Ben Davis thrives here, but is of inferior quality. Baldwin and R. I. Greening winterkili, and Northern Spy is a slow grower. How are Arctic, McIntosh, Sutton and Canada Baldwin with Wagener as a filler, where a filler is desirabie? Fameuse does weii, but spots badly and bears but every other season.

ANS.—Such an apple as is desired would be a boon indeed. Ben Davis is out of its rightful territory in central Vermont or any other equally northern latitude. Arctic, Sutton, McIntosh and Canada Baldwin have been so little tested there that it is impossible to say at this time how they will do there, but they are worthy of testing. Wagener will be very good as a filler if it proves hardy enough, which I believe is the case. Hubbardston might be a good one, and it would be well to try it.

H. E. VAN DEMAN.

Whip Grafting; Palmer Greening Apple.

F. P. B., Ayer, Mass.—1. I never saw any grafting done, but I whip-grafted some small trees iast Spring by the directions in your paper. I tied the smali branches together with soft string and waxed them. Is there anything to be done to them next Spring? I was not sure that they would grow, so I grafted the smali side branches. They grew finely. Will it be ali right to cut off the main branch back to the branches I grafted? The trees are four years oid. 2. We have an apple growing here that is one of the finest Winter appies I know. It is called the Palmer Greening. The Massachusetts Experiment Station calls it Washington Royai (Paimer Greening). Can you tell me of a nursery that seiis the trees? I have a dozen cataiogues, but none of them advertises it. One agent here toid me that he had an order iast Spring for 700 trees, but couid not get them. One farmer toid me he had never sold a barrel for less than $2.50 and some as high as $5. 3. Are there any plums that are curculio-proof, and where can I buy them?

ANS.—1. The proper way to graft is to first cut off the main branches and set the scions in them. Without seeing the work as it is done it would be impossible to give positive advice as to the cutting off of the main branches above the small grafts. If they are likely to make good substitutes for the main branches this may be done, but if they are not then it would be better to graft these main branches next Spring by the cleft method. 2. Washington Royal is an apple that is rarely grown in any of the nurseries. Scions might be furnished to a reliable nursery and trees propagated especially for those who want them. Undesirable trees might be top-grafted with this variety and fruit soon obtained. 3. So far as I know there is no such thing as a variety of plum that is absolutely curculio-proof. The Japan and American types are nearly so. Abundance, Burbank, Wyant and Surprise are of this character. H. E. VAN DEMAN.

Spraying Peach Trees; Wood Ashes.

J. H. C., Gillett, Pa.—I have a young orchard of 250 peach trees, and they were set iast Spring; they made a fairiy good growth last Summer, and have no disease that I know of. Do you think they would need spraying in the Spring? If so, at what time, and with what soiution? I have a lot of unieached wood ashes that I would iike to apply as a fertiiizer. How much would you appiy to each tree, and when? The soii is not poor nor very rich.

ANS.—There is nothing to be gained by spraying peach trees that have only been planted one year, and are apparently healthy. If peach trees are attacked by San José scale spraying with whale-oil soap, or kerosene emulsion may be resorted to during the Winter, when the trees are dormant, with good effect. If an orchard has had a severe attack of curled leaf one year, Bordeaux Mixture thoroughly applied early the next Spring, before the buds have opened, will have a tendency to prevent a recurrence of this trouble, but the foliage of the peach is so easily injured by the various spraying solutions that more harm than good generally results from spraying the trees when in full leaf. Unleached wood ashes may be applied to peach trees with good effect at any time, and in almost any quantity (from a quart to a half bushel per tree). If applied early in the Spring just when the frost is coming out of the ground, the Spring rains will dissolve the potash and wash it down immediately where the roots can get it, and the trees will be more apt to get the full benefit than if used at any other time. In applying any fertilizer it should be scattered in a circle a little larger than the spread of the branches, as that is where the feeding roots are to be found; it should never be piled around the trunk of the tree. GABRIEL HIESTER.

Strawberry "Rust" and "Blight."

A. G. W. Reidenbach's Store, Pa.—What is the difference between Strawberry blight and Strawberry rust? How is bilght distinguished, and is there any remedy?

ANS.—Strawberry "leaf-blight," "leaf-spot," or "rust" are interchangeable terms for the same disease, caused by the fungus Sphærella fragariæ. It usually first makes its appearance on the new leaves, about the time the fruit sets. Reddish spots a fraction of an inch in diameter appear, and soon these spots have a nearly round white center. This disease is readily held in check by spraying with Bordeaux Mixture and, where badly diseased, it is a good plan to mow off the old foliage, then to remove and destroy it. Applications of Bordeaux Mixture should be begun as soon as growth starts in the Spring, and non-bearing plants may treated throughout the Summer, the plants being sprayed at intervals of three or four weeks. Bearing plantations will derive much benefit from a treatment made when growth starts in the Spring, and from another made when the first blossoms open. It is advisable to reset beds often and to be particularly careful with the spraying of the seed plants. The plants should not be sprayed during the bearing season. M. V. SLINGERLAND.

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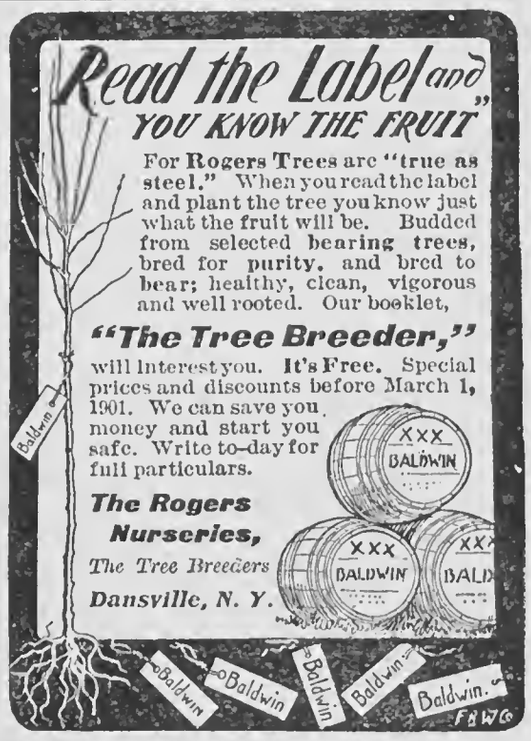

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Ruralisms

NOTES FROM THE RURAL GROUNDS.

THE KUMQUAT AGAIN.—Many letters are being received inquiring where plants of the kumquat may be had. Trees suited for pot culture are grown and offered by the Glen St. Mary Nurseries, Glen St. Mary, Fla., and J. L. Childs, Floral Park, N. Y.; P. J. Berckmans Sons, Augusta, Ga., and Reasoner Bros., Oneco, Fla. There may be other nurseries importing or growing this interesting plant, but they have not come to our notice. Strong grafted trees are offered at prices ranging from 45 to 75 cents each, according to age. These trees can usually be potted in a seven or eight-inch pot, and should bear as soon as established. The hardy orange stocks on which they are grafted have naturally a short annual season of growth, and are inclined to remain dormant during Winter no matter how warm and stimulating the temperature in which the plants may be kept. One must not be disappointed if the trees break into growth very slowly after being potted, as new rootlets are first formed. The Otaheite orange is now offered in almost every plant catalogue at an average of 25 cents each. J. Y. P., Hudson, N. Y., who has been long instrumental in advocating the Otaheite orange for window garden purposes, writes that it may be readily propagated by anyone, as cuttings of firm wood root very readily in moist sand. This we have found to be measurably correct, as properly-selected cuttings are quite certain to grow, but they require a period of eight to 10 weeks to form roots, and need quite uniform conditions of temperature and moisture during the interval. The kumquat does not propagate readily from cuttings, and grafting or budding on congenial stocks seem the only practical ways to increase it. F. H., Ludlow, Vt., writes as follows concerning the likelihood of seedling oranges perpetuating the good qualities of their parents:

> You stated recently that seedling oranges are usually worthless. This is wrong, as seedling oranges are almost always excellent and many of the old Florida groves, before the freeze, were seedlings. Mine was set out that way as late as 1884, and I only changed it over to get it into bearing quicker. See also Thomas's fruit book.

The writer has examined many thousands of seedling orange trees in the West Indies, Central and South America and is free to say that very few produced any fruits agreeable to the taste. Possibly they were about as good as their own seed parents, but the same may be said of the seedlings of our pome and stone fruits. Seeds from selected fruits of choice varieties may give rise to as good or better fruits than the trees from which they were taken, but long experience has shown that the fruits of seedling trees vary too widely in essential qualities to be of practical value, except to the seeker after new varieties. The slowness with which seedling Citrus and other fruit trees come into bearing is perhaps the strongest reason for budding or grafting varieties of known excellence on them, as the bud or scion will come quickly into bearing, being part of a plant of mature growth.

SOMETHING ABOUT CARNATIONS.—The Winter-blooming carnation has come to be the most important commercial flower grown in America. While not bringing the high prices asked for roses, the aggregate number grown and sold is astonishingly large, and an immense area of glass is used for their production. There are probably more comfortable little incomes derived from carnations by careful growers than any other strictly ornamental plant. Lately much capital has been invested in the production of carnation blooms on a large scale, and there has been created a veritable boom in this dainty plant which is called by its admirers the "Divine flower." A wealthy capitalist was reported to have paid $30,000 for a striking new variety last year. He named it after his wife, Mrs. Thomas W. Lawson, and it made a great sensation on its first appearance on account of its large size and fine deep pink color, but has failed to meet the expectations of the growers, as it produces too many short-stemmed blooms. The sale of another new scarlet variety for $5,000 has just been announced. This is supposed to be a purely commercial transaction, the love of notoriety not being a factor. The purchasers are propagators who expect to make a profit by selling the plants. These prices probably represent high-water mark, and are doubtless much above the intrinsic value of any plant novelty. The list of varieties now grown is appallingly large, and new additions are being made weekly. The number of growers who are hybridizing and raising seedlings is certainly larger than those interested in the breeding of all other plants combined. This great activity is quite certain to produce results of permanent value, though the lot of most of these expectant originators may not prove a happy one, as the real improvements are few and failures many. The forcing carnation has been brought to its present state of comparative perfection within the last 25 years, though the type from which they were developed originated in France in 1840 by crossing the early and late-blooming varieties then cultivated, producing for the first time a constant or everblooming class. So many factors go to make up a practical forcing carnation now that many attractive varieties, each possessing distinctive features, are quickly discarded because they do not meet all requirements. The carnation wanted must be not only large and perfect in form, pleasing in color and highly fragrant, but must possess a resistant calyx which will not easily burst, stiff, long stems that carry the blooms gracefully erect, and must be an early and persistent bloomer, under fair growing conditions. Carnations are sold by the dozen or hundred, and a constant supply is needed. No other flower so well meets the wants of persons of moderate means, as they are very lasting as well as beautiful and fragrant. In almost every batch of seedlings, even when grown from the most highly-developed parents, individuals will occur reverting back in form and color to the single wild flesh-colored pinks grown by the Greeks 2,000 years ago and mentioned in writings long before the Christian Era. The carnations most widely grown at the moment seem to be William Scott, pink; Daybreak, blush; Flora Hill, white; Jubilee, scarlet and Pingree, yellow, although these standards are rapidly giving way before the hosts of new varieties pressing for recognition. One or all may be superseded by another season.

THE WINTER RHUBARB.—As previously noted, several clumps of rhubarb were placed in each of two cellars on the Rural Grounds December 12, to grow or force for Winter use. Each lot, consisting of five four-year roots, was covered with moist soil on the earth floor, in a place where the light is dim. One cellar is heated at the point where the rhubarb is planted to a fairly constant average of 55 degrees; the other is unheated and barely escapes frost in severe weather. The clumps showed signs of breaking into growth in both cases the last of December, and on January 20 the first stalks were ready for use, having reached a length of 14 inches in the warm cellar, while the cool lot has made but a trifling advance, being only two or three inches high. A plant of Burbank's new Crimson Winter rhubarb planted December 20 in a large pot in the greenhouse started at once into growth, and now has stems a foot long. It is already distinct in appearance from the ordinary kinds, but the plant is too small yet to develop its full characteristics.

W. V. F.

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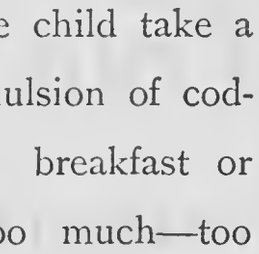

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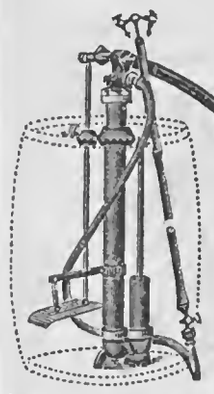

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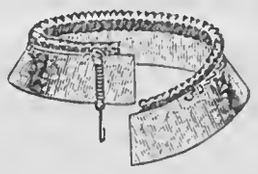

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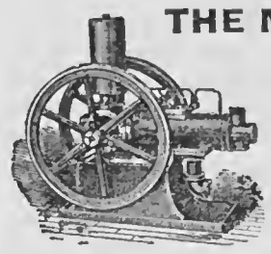

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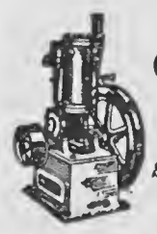

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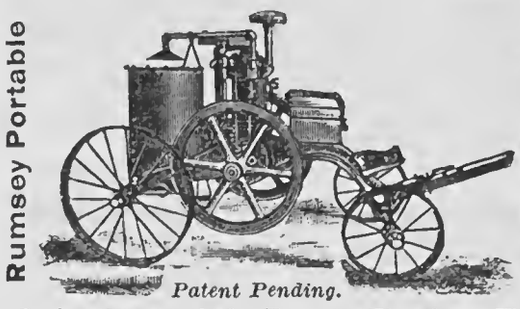

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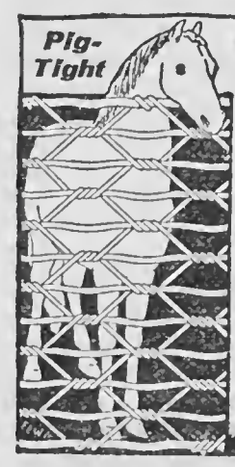

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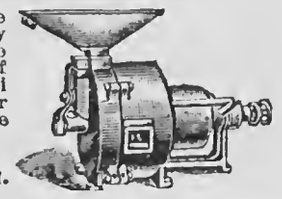

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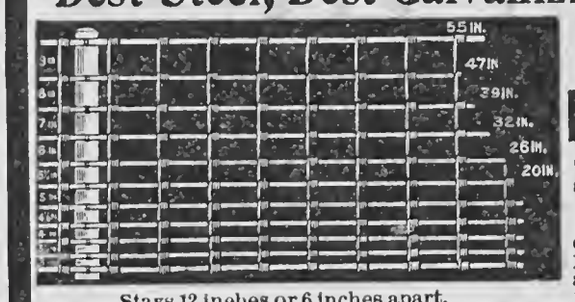

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HOPE FARM NOTES.

HOUSEHOLD MATTERS.—One would think it should be a long jump from a discussion of piety to a talk about pie-eating, but I don't know—after reading this letter. It really looks as though some of these good people regard pie-making as one of the essential forms of right living:

In your Hope Farm kitchen statistics you have named no pies. Now, if I were a betting woman, I should not be afraid to bet you would be glad to have 365 of those pies that the man gets down in Pennsylvania. You say you "like puddings better!" You remind me of the maxim, "Sour grapes hang high." My men folks like pies; they like them so well that they offer to pare the apples in the evenings, so that they can have more pies. If a hired man should tell me he didn't like pie I should know something must be wrong. Doesn't your mouth water to think how nice a piece of appie pie would taste, made in an old-fashioned deep yellow dish, such as our grandmothers used to make? Don't your women make bread? Don't you know that biscuits are a great cause of dyspepsia, and the worst things you can eat or give children to eat? I suppose you feed your folks on oatmeal cooked about half an hour or less! I believe oatmeal and biscuits as bad for children as plain cakes and pies. I find that if you want your hired man to work, he can't work on oatmeal; it will not stand by him until noon. When I get very tired my husband doesn't settle into the big soft chairs, or the boys either, after supper. They wipe the dishes for me. Don't spend any more time figuring on those dishes. Take a towel and see how long it will take you and those boys to help the women folks to get them done. Then you can all sit down, and enjoy the evenings together, as we do.

MASSACHUSETTS FARMER'S WIFE.

Mouth water! Why, I much prefer baked apples or apple sauce to all the apple pie you can bring along! I don't want my fruit jailed in a cell of flour, butter or lard. I was born and raised in the old Bay State, and know what a good pie is, but now the craving is all out of my heart and tongue, and I am no longer a slave to *crust!* My judgment is that average pie crust brings one much nearer to a dose of medicine than a biscuit. Yes, the Hope Farmers make bread—over 10 loaves a week! It so happened that during the April when we took notes the bread was bought of a baker. Of course we have something besides oatmeal to eat! As for dyspepsia we will match doctor's bills with any family or families averaging 12 persons—and the red color in the cheeks of the Bud, Graft and Scions isn't hand-painted either!

DISH WASHING.—Somehow those kitchen statistics seem to have struck home. Here is a man from Michigan with a new scheme:

In Hope Farm Notes you bewail the drudgery of the women of the household in having to wash the supper dishes year in and year out, and figure out how many acres of earthenware and miles of knives and forks have to be washed and wiped in a year, but you suggest no remedy, unless we are to infer that the old man ought to rise in his mightiness from his easy chair and take a hand. I'll tell you how we manage the supper dishes; we don't wash them, but merely turn the plates till morning and eat breakfast from them. Of course, we leave no messes to be cleaned up. It is a mighty poor calculator who can't measure his capacity with his eye—mind's eye. By this scheme my wife saves at least half an hour every evening, and in the 20 years we have been married this would amount to a whole year. Think of the books, etc., she can read instead of standing on her feet and washing acres and acres of dishes for an entire year! And we do not have a monopoly of this labor-saving device. There are others, and they are not called poor housekeepers either. F. X. C.

I am not ashamed to say that I once had to wash and wipe dishes for a living. I claim to be an expert at this business, but I never heard of this labor-saving scheme before. I would like to know how the cups and glasses are turned inside out so as to hold liquid. I think our folks would rather wash twice. Of course your humble servant shakes the towel at times. S. R. Divine has invented a dish drier that seems like a fine thing. It is a rack of light wood with a flat pan at the bottom. The dishes are placed in the rack and well soused with *hot* water. They dry quickly, while the water runs out of the pan. Such dried dishes have a gloss or polish. It always seemed to me that a towel rubbed bacteria in rather than wiped them out.

FARM NOTES.—All our animals except the hens have had the waste molasses and all like it. It is certainly a useful and cheap feed. The old horses in particular show that it has sweetened life for them a little. . . . I never expect to see one patch of Crimson clover again, and it is my own fault. It was seeded in the orchard after oats, and made a good start. It looked so nice that in November I told the boys to turn the horses in to nibble it. The weather turned warm and muddy. As is usually the case, the stock left everything else and made for the clover. They grazed it close and tramped and pounded it in so that it now looks dried enough. It makes a fellow feel like a criminal to know that he is responsible for the ruin of clover! . . . Those Winter oats are still alive. They look about as thrifty as the rye—which is a surprise to me. . . . A cold snap struck us January 19. When the mercury sank to four degrees at nightfall we thought of our tussle with frozen pipes last Winter. We found the exposed point and protected it, just as a man who takes cold in the throat will buy a scarf or turn up his coat collar. We were taking no chances, though, and so we turned on the windmill and let it pump water into the tank until bed time. This stirred up the water and raised the temperature so that no harm was done. A couple of pigs in a small outdoor house suffered until we tacked a fertilizer sack so that it hung down in front of the door. This kept the wind out. . . . We are selling out the last of the cabbage, which kept quite well above ground in an old chicken house. The pile in a fence corner, covered with corn fodder, has not been touched. H. W. C.

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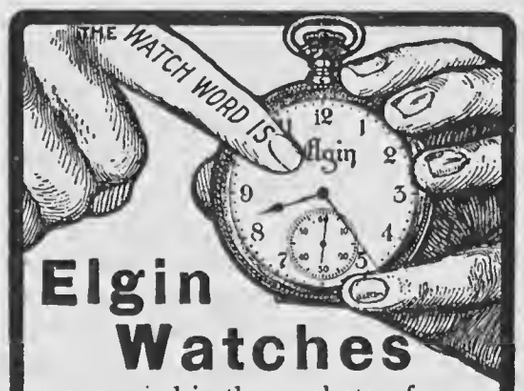

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and bugs, worms, blight, etc., will have no terrors for you. Best construction, perfect agitators, no scorched foliage. We make all sizes and styles. Free Book on Spraying. Agents wanted.

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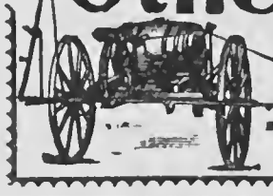

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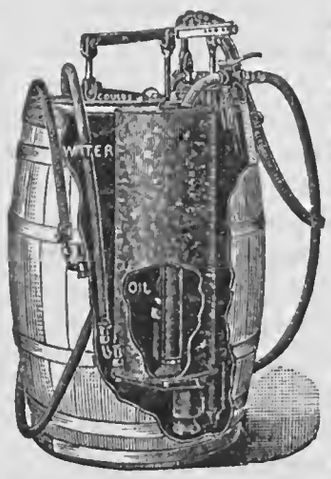

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Remittances may be made in money order, express order, personal check or bank draft.

THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, FEBRUARY 2, 1901.

WE wish again to remind our old friends that a club of four names with $4 will secure a renewal of the club-raiser's subscription for one year—the five names for $4. There are many subscriptions expiring now this month. Why not take an afternoon and work up a club in your neighborhood? We have other inducements for those who take an interest in the matter. For one new name we will send you any one of these books:

Celery Growing and Marketing	1.00
Landscape Gardening, Long	.50

For a club of four, any of these books:

Horses, Cattle, Sheep and Swine, Curtis	$2.00
First Lessons in Agriculture, Gully	1.00
Practical Farm Chemistry, Greiner	.75
The Spraying of Crops, Lodeman	1.00
The Nursery Book, Bailey	1.00
Fertility of the Land, Roberts	1.25

The books are sent post-paid. They are cloth bound, and the best and latest books on these subjects. This is an opportunity for young men or old to get books.

*

THE use of clover as feed and fertilizer extends back for over 2,000 years—yet there are still farmers who know little about it. In parts of the West "clover farming" is a regular feature of agriculture. The clover, in rotation, keeps up the fertility of the farm, and provides for the manufacture of meat or milk. Somehow, of late years, the agricultural writers have stopped talking about clover—as though the time had come to lay this good friend aside with the dust-covered relics of old days. We are glad to announce an "essential-principle" article on "clover farming" by L. N. Bonham, of Ohio.

*

SECRETARY Gage went before the Senate Agricultural Committee with an argument against the Grout bill. In the report of his remarks we are told:

> He explained that many of the inspectors were not experts and could not detect oleomargarine without analysis. He also said that there was not adequate force to see that the oleomargarine law was carried out in every particular. He pointed out that there were 4,000 dealers in Chicago, and that it would be impossible to watch them all. The collection of the revenue was the main object of the department.

That is just the point we have often made. After the oleo gets out of the factory it is impossible to tell what becomes of it all. It is certainly easier to tax it in 17 factories than to watch it in 17,000 stores!

*

SOME remarkable statements about the power developed in the modern locomotive are made by George H. Daniels, of the New York Central Railroad. He said, among other things, that a single locomotive hauled a passenger train of 15 cars from New York to Albany, a distance of 143 miles, in three hours and 15 minutes. This train weighed 1,832,000 pounds, and was 1,212 feet, or nearly one-fourth of a mile, in length. The rate at which the train traveled was 44 miles per hour, which was the regular scheduled time. Another train weighing 608,000 pounds was hauled from New York to Buffalo, 440 miles, in eight hours and 15 minutes, an average speed of 53⅓ miles an hour. It is wonderful to think how the modern locomotive has been developed. But here is another side of the problem which is worthy of consideration. A single miner working with his ordinary tools in a coal mine may haul out, ready for use, five tons of coal. That represents the force of a man working with ordinary tools; yet half of that day's work placed in a modern engine will haul this enormous train from New York to Albany. It is a striking illustration of the increase of power produced by the application of concentrated force. Compare the labor of the man in digging coal, and the wonderful power of that coal when placed in the engine, and we have an illustration of what may be done with skill, economy and proper management in any department of life. Think what a powerful force the boiler calls to life from the slumbering coal! Man is master over material things, as he is able to arouse and control the slumbering forces of Nature!

*

ILLINOIS is to have a seed-corn inspector, who will visit all the reliable seed-corn growers of the State, and report on the work done. The inspector will decide the seed value and market condition of corn held by each grower. The work will be under the supervision of the Illinois Seed-Corn Growers' Association, the matter being discussed at the meeting of this society, recently referred to in THE R. N.-Y. A. D. Shamel, instructor in farm crops at the State University, has been chosen as inspector. Since so many agricultural interests are founded upon the corn crop, Illinois shows far-seeing wisdom in this system of inspection.

*

To what extent did the war in Africa benefit the trade of this country? One would expect that with a great army to feed England would require great stores of extra food, and that this food would be sent to Africa without unloading. The results are surprising. Here are some figures showing our total exports to Africa during the past 10 months of 1899 and 1900:

	1899.	1900.
Agricultural implements	$313,242	$182,575
Horses	10,910	1,762,617
Corn	349,626	526,569
Wheat	605,386	529,075
Wheat flour	1,126,458	639,993
Cotton cloth	437,101	219,428
Steel rails	502,988	438,569
Boots and shoes	126,865	105,693
Canned beef	461,899	412,446
Hams and pork	31,993	25,619
Lard	177,944	162,250
Butter	2,061	1,592

Thus with the exception of horses the war has hurt rather than helped our trade with Africa. There probably were extra shipments of food direct to England in consequence of the great drain upon that country, but these figures knock the force out of the old argument that war makes a permanent market for the farmer!

"GOD made the country; man made the town!" That quotation, with variations, is frequently heard, and it is as true now as ever. The town is a selfish place, and ever has been. Men who grow up amid brick and stone lead an artificial life. Competition is fierce, life is hard and intense, there are few opportunities for the calm reflection and settlement which the human heart and mind require. The average townsman who has only his head and hands—all perhaps imperfectly trained—is constantly under the lash, and it is no wonder that middle life finds him cynical and unhappy rather than hopeful. We do not pretend to say that all country people can show in their lives and characters what our modern business system has squeezed out of the town dwellers. There have been in the past, and there always will be, farmers who fail to grasp their opportunities, and others who are by nature unfitted for country life. Yet when this is said, we believe that history will show that in the past, great moral reforms—events that have ennobled and dignified mankind—have usually been organized and started by what we call country people. We think that the people of the town have followed rather than led in public enterprises which demanded personal sacrifice and self-denial. The nation that deliberately feeds the town upon the just share of the country home will surely die.

*

IF horticulturists would fight the San José scale in their orchards as hard as they fight about it in their conventions the insect would soon vanish from the earth. At the Western New York Horticultural Society President W. C. Barry prevented a discussion on the subject by a personal appeal which was, to say the least, in bad taste. He referred to the work done by his father, and actually refused to accept another term as president unless the Society would agree not to discuss the matter of fumigating nursery stock. Mr. Barry doubtless desired a peaceful meeting, and he without doubt felt that a fierce discussion would injure or break the Society. He gave the impression, however, of using the powers and political machinery of a politician to cut off a fair and open debate. THE R. N.-Y. firmly opposes such methods. The people are modifying their views regarding the scale and fumigation, and this is no time for the nurserymen to adopt such methods in order to keep fruit growers quiet. The Society finally agreed to ask for an appropriation of $25,000 with which the Commissioner of Agriculture will enforce the present law. Let this law be honestly enforced, and if it does not answer let us have one that will do the work. The nurserymen must not get the idea that they are the only ones to be considered in this matter. The fruit growers have far more at stake, and any effort to stifle their views at public meetings should be sternly condemned.

*

A CERTAIN farmer whom we know has made a success in fruit growing. He has spent time and money, and learned some things which are worth almost as much to him as a patent would be in some lines of trade. One day a merchant, in a nearby town, drove out to the farm and left this word for the farmer: "The next time you come to town I wish you would come to my store! I want to talk with you about business." The farmer went out of his way to call at the store, and found this "business" proposition waiting him:

"Now Mr. Farmer, I expect to set out about 500 fruit trees next Spring, and I want you to tell me what varieties to buy, how to set them and how to take care of them. Tell me the whole story! . . . Thanks! Have a cigar?"

The farmer gave the information. He got home so late that his chores dragged and his wife scolded him. As he milked the last cow this thought ran through his mind: "Suppose I had sent word to Mr. Merchant that I wanted to see him at the farm on business. He comes expecting to sell a good bill of goods and I say to him:

"I think of opening a store out here so as to get the trade of my neighbors. I want you to tell me where to buy my goods, how much you pay, and all your trade secrets of buying and selling. Thank you for the information! Have a drink of spring water!" One can imagine the language of the merchant at such a proposition, yet why is one thing worse than the other? Why do people seem to think that all the trade secrets of the farmer should be made public property? Why does the storekeeper fill his pockets with apples in the farmer's orchard, yet look as black as a thunder cloud if the farmer takes a peanut out of the basket on the counter? If you will answer these questions, we will vote you the wisest man of the age.

*

BREVITIES.

When pie plant gives the first good mess,
With nice hot biscuit, I confess,
Our folks feel good. Pop says, "I guess
You orter have a bran-new dress."
"An' you a coat," I sez, "no less!"
He sets down there with little Bess,
An' tosses her with fond caress,
An' sum o' his ol' tenderness
Outside his good ol' heart will press
An' paint his eyes an' face! Yes, yes!
I know our folks will always bless
The day that pie plant gives first mess.
An' it's jess so with sparrergrass,
An' every other garden sass.
When peas an' greens an' onions pass,
With all the others of that class,
I jest set down my work an' say,
"I do now humbly bless the day
That showed our folks the certain way
To make the kitchen garden pay."
An' while *I'm* made o' livin' clay
That garden is a-gonter stay.

DON'T waste live words on dead issues.

THERE'S both room and company down foot.

THE motive is not always father of the method.

A SIN! A SIN! Not to have eating apples in the bin!

YES, we deride a hobby when we have to get off and walk!

THINK of a man striking 40 without knowing what his forte is.

SOME people must dig out facts, and others must rub them in.

YES, the true catty comb is the tongue—it has catacombed many a character.

WE need plum trees that know how to grow into good shape. Most of them are too bunchy or too straight.

WE would like to see the pardoning power taken away from the Governor and put in the hands of the State Legislature.

NO, my friend, you will never hatch out the money needed to remove the reputation of a patch by sitting down upon it.

"SPITZ" is the name we used to have for the Esopus Spitzenburg apple. "Spits" might do as a name for a Ben Davis out of place.

AN old retired farmer who has lent some money to two other farmers, sends their subscriptions, because he says he will be surer of his interest, if they read THE R. N.-Y.!

THE Mississippi Apple Growers' Association, in convention recently, adopted a resolution condemning the existence of the English sparrow, and petitioning the Illinois Legislature to continue the bounty of two cents a head on each sparrow killed. Do fruit growers generally hold this view?

Events of the Week.

DOMESTIC.—Five men were killed in a freight wreck on the Grand Trunk Railway, near Norway, Me., January 18; four locomotives and many cars were destroyed. . . . . The management of the Wabash Railroad has adopted a rule which prohibits the use of intoxicants by employees before reporting for duty or while on duty. . . . . The White-Shotwell feud at Corbin, Ky., has resulted in three persons being killed, many hurt, and a store wrecked by dynamite. . . . Near Goshen, Ind., January 18, four children were burnt to death in a burning house, while their parents were at the barn milking. It is believed that the fire was caused by a lamp exploding. . . . Disaffected Creek Indians near Eufaula, I. T., are maltreating and killing peaceful Indians, who have appealed to the Government for protection. . . . The city council of Omaha, Neb., has offered a reward of $5,000 for Pat Crowe, dead or alive, irrespective of his connection with the Cudahy kidnapping. This makes the total reward offered for his capture $18,000. . . . Fire destroyed the business portion of Ellsworth, Mich., January 20.

GENERAL FOREIGN NEWS.—Victoria, Queen of the United Kingdom of Great Britain and Ireland, and Empress of India, died at Osborne, Isle of Wight, January 22. She was born at Kensington Palace, London, May 24, 1819, being daughter of the Duke of Kent, fourth son of King George III., and was baptized as Alexandrina Victoria. She ascended the throne June 20, 1837, succeeding her uncle, William IV., and was crowned June 28, 1838; married February 10, 1840, Prince Albert of Saxe-Coburg Saalfeld, her first cousin to whom she had been informally betrothed from infancy. She was the mother of four sons and five daughters; six of her children survive her; became a widow December 14, 1861, and is succeeded by her oldest son, her second child, Albert Edward, Prince of Wales, born Novembr 9, 1841, her oldest child being Victoria, Empress Dowager of Germany. The new sovereign will be styled Edward VII. He married Alexandra, daughter of the King of Denmark, and has three daughters and one son, George, Duke of York, who becomes heir apparent, but does not succeed to the title of Prince of Wales. It is no exaggeration to describe the late Queen Victoria as the best beloved and most deeply reverenced monarch who ever occupied the British throne, her simplicity and purity of life, deep piety and constancy in family affection endearing her to all her subjects, and compelling the respect of those opposed to her by radical or political antagonism.

FARM AND GARDEN.—Efforts are being made by the producers of vaccine to have the Agricultural Committees of Congress omit from the forthcoming Agricultural Appropriation bill further provision for vaccine made and distributed by the Government.

The National Live Stock Association, in session at Salt Lake City, Utah, January 17, adopted a memorial to be sent to the United States Senate, protesting against the Grout bill, which is denounced as class legislation.

In an action for damages by a purchaser of seed guaranteed to be good, but which proves to be entirely worthless, the New Orleans "Democrat" says the Supreme Court of North Carolina, in the case of Reiger vs. Worth Company (37 S. E. Rep., 217), holds that the measure of damages is the amount paid for the seed, the amount expended in the preparation of the soil for the crop, and also reasonable rent for the land.

The French government has conferred the decoration of the Legion of Honor upon Byron E. Huntley, president of the Johnston Harvester Company, this being in recognition of Mr. Huntley's services in introducing improved agricultural machinery into France.

A severe setback has been given the beet-sugar industry in Minnesota by Attorney-General Douglas's decision that the beet-sugar bounty law of 1895 is invalid, following the refusal of the State Auditor to issue a warrant for $20,000 claimed by the Minnesota Beet-Sugar Company. The opinion is based on the principle that the people cannot be taxed for the benefit of a private enterprise.

WESTERN N. Y. HORTICULTURAL SOCIETY.

A GREAT MEETING.—The wisdom of the move to admit people to the convention hall only on presentation of the membership ticket acquired on the payment of $1 was proved by the great number of persons of both sexes in attendance at the opening of the forty-sixth annual meeting at Rochester, N. Y. The hall was more crowded during the entire first day than at any time before, while admittance was free to the public at large. The Society now stands on a firm footing, financially as well as otherwise, and seems far greater and stronger than ever, with every likelihood of a further rapid growth. The only discord developed in the proceedings came as an echo of last year's clash of interests of nurserymen on one side and fruit growers on the other. Wm. C. Barry, the president, esteemed and beloved by every member, refused a renomination and reëlection for the office, which he has filled so admirably since his father's death, except on the condition that the Society drops all further discussion of the matter of legislation concerning the fumigation of nursery stock before its delivery to the planter. Mr. Barry has seldom made a serious blunder in presiding over the Society; but whether his course in this affair was altogether the wisest he could have taken, is open to question. It seems that a committee, properly appointed, and which has spent $500 the past year, should have a chance to report, even if the further discussion of the matter is dropped.

A PEAR BLIGHT.—Albert Wood's paper treated on a new form of Pear blight, which Prof. Johnson, of Maryland, considers identical with the blight so prevalent in Kieffer orchards in Maryland and other southern points. The first symptoms are seen in a peculiar metallic luster of the foliage, or portions of the foliage, and in an affection of the bark on the southeast side of the tree's body. Mr. Wood has tried to check the spread of the disease by spraying with Bordeaux Mixture and whale-oil soap. Prof. Johnson states that they have been able to save the tree on appearance of the first symptoms by banding the tree body after the bark has been scraped off, with cotton and soaking this in a two-per-cent solution of formalin or formaldehyde. Prof. Beach, on the other hand, is by no means satisfied that the blight observed by Mr. Wood is the same as described by Prof. Johnson, and thinks it may be a new manifestation of an old disease, something similar to the Apple canker, a parasitic fungus which finds ingress through the bark, and is slow acting, not likely leading to the death of the tree.

THE ARSENITES.—It seems strange that an apparently so valuable insecticide, as green arsenite, after being advertised and spoken of for some years, should have found so few willing experimenters that only two or three in the large congregation of horticulturists were willing to report on it. Prof. Beach states that green arsenite is a definite chemical compound, but that green arsenoid, under which name it is now being offered, is simply a trade name for a private mixture. He speaks well of green arsenite, however, as being lighter than Paris-green and more easily kept in suspension. Mr. Mann, of Niagara County, used 25 pounds of the arsenoid in 1899 with very satisfactory results, but found the same compound less reliable in 1900, when he used 100 pounds. The writer has used green arsenoid last year for the Potato beetle and slug, and some other insects, with so much satisfaction that he would always use it in place of the heavier Paris-green, with its irrepressible tendency to settle to the bottom, if assured of the same quality as the 1900 sample. Mr. Treadel, of Ontario, tells of white arsenic, which he can buy at six or seven cents a pound, and which, if used properly, does not seem to burn the foliage of trees. J. S. Woodward favors arsenate of lime or soda, as being just as good as Paris-green, and much cheaper. Soda is more soluble, lime a little cheaper. Mr. Bogue says he first cuts his arsenic with potash before adding it to the other mixtures.

SOD OR CULTURE.—The question from the question box, "Why are apples larger and higher-colored on trees in sod than on cultivated trees?" brought a revival of the old discussions on the value of cultivation. Mr. Hooker admits the fact of apples in sod being of higher color, but not of being larger. With the heavy foliage and the full fruiting of cultivated trees, the apples on the under side were green as grass. In sod, the trees have made slower growth, had less fruit and less foliage, and consequently the apples were of higher color and better keeping quality. Notwithstanding this, he is not in favor of sod. Mr. Woodward is again provoked to come out in favor of pasturing apple orchards with sheep—sheep enough to keep the ground bare as a floor, and to be in need of feeding—and sees better results from this way of managing the orchard than from the best of cultivation. J. H. Hale, in a later discourse on peaches, however, demolished the sod theory by asking: "Can you name any crop one can grow that will do better without than with good culture, or any crop that you can hurt by too much cultivation?"

POINTS ON VARIETIES.—That was a happy illustration given by Prof. F. A. Waugh when he stated that the selection of varieties is like matrimony. You may pick out a wife, but it is very questionable whether all the neighbors would wish to make the same choice. It is really so with varieties of almost all fruits and vegetables. Everyone has his special favorites and varieties which he can manage better than other varieties. Only two grape varieties were named in answer to the query: "What is the best early grape, considering hardiness, productiveness and quality?" They were Green Mountain and Worden. Prof. Waugh has experimented with the Abundance plum, and finds that under ordinary circumstances it is not self-fertile. In especially favorable locations or weather conditions it may sometimes bear when standing alone. Mr. Hale says that the time to trim peaches is whenever you get ready, but he prefers the period from February until the buds begin to swell. According to Mr. Hale, the white-fleshed peaches are best for eating purposes, the yellow ones for canning. For home use, he would plant Mountain Rose, Champion, Oldmixon, Stump, and Fox, which will cover a peach season of seven weeks.

When slaking lime for Bordeaux Mixture Prof. Beach says his practice is to pour a little water on the lime, then gradually adds more in moderate quantities, enough to prevent the burning of the lime, but not so much as to drown it. He wants a creamy paste, and to keep this covered with water until used.

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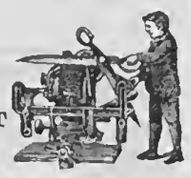

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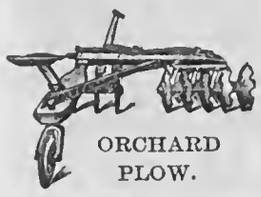

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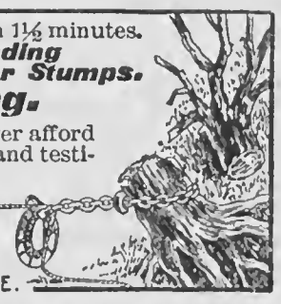
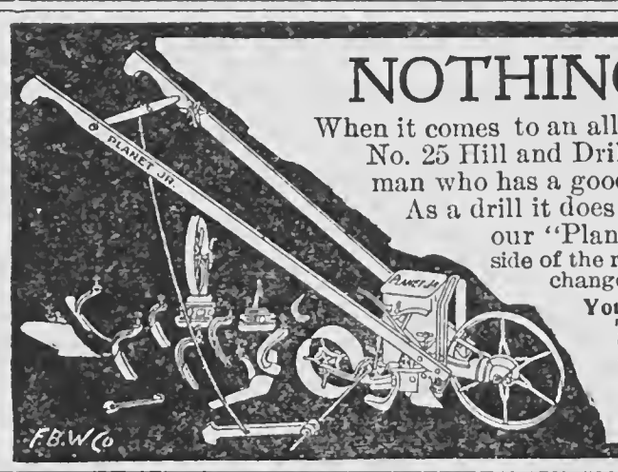


MILNE MFG CO., 860 8th ST. MONMOUTH, ILL. ADDRESS MILNE BROS. FOR SHETLAND PONY CATALOGUE.

NOTHING CAN COMPARE WITH IT.



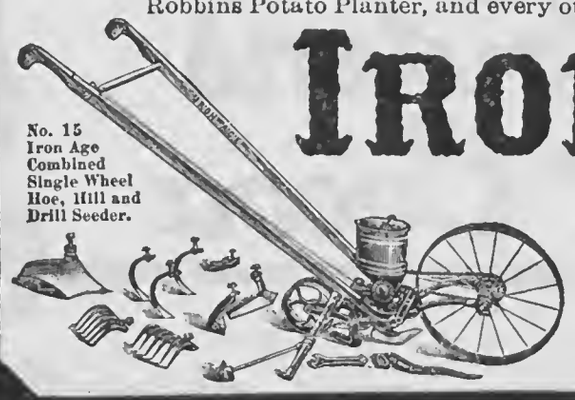
When it comes to an all-round handy and useful garden tool, nothing compares with this "Planet Jr." No. 25 Hill and Drill Seeder and Double Wheel Hoe, Cultivator and Plow. It is made to fit the man who has a good sized garden, yet not quite enough to justify owning a separate wheel hoe. As a drill it does all our famous "Planet Jr." No. 4 does. As a wheel hoe it is identical with our "Planet Jr." No. 12. Has 11½ in. wheels, cultivates between the rows, or on each side of the row, throws dirt to or from the row, hills up, plows, marks out, etc. Easily and quickly changed from one to the other. We give this tool the strongest possible recommendation.

You should have one of the 350,000 copies of our new 1901 catalogue. It is better than ever. Tells all about our full line of Seed Drills, Wheel Hoes, Horse Hoes, Cultivators, Harrows, Two Horse Cultivators, Sugar Beet Seeders and Cultivators, and our reduced prices for 1901. Illustrates by photographic views how they are used at home and in foreign countries. We mail them free.

S. L. ALLEN & CO., Box 1107V, PHILADELPHIA, PA.
Two Gold Medals at Paris Exposition; Highest Award.

Coax a Crop the Right Way

Thousands who have used the **Iron Age** implements will tell you that every one is an investment that never fails to pay. Since our works were established in 1836, every year has shown progress. We have steadily improved our Seed Drills, Wheel Hoes, Riding Cultivators, Horse Hoes, Cultivators, Improved Robbins Potato Planter, and every other one of the



No. 15 Iron Age Combined Single Wheel Hoe, Hill and Drill Seeder.

IRON AGE Farm and Garden Implements

Iron Age Pivot Wheel Cultivator.

A new implement this year, and a wonder, too, is the new **No. 15 Iron Age Combined Single Wheel Hoe, Hill and Drill Seeder** which combines the best seed drill and single wheel hoe ever produced. Each is complete in itself; they combine with perfect unity and can be changed instantly from one to the other. This excellent tool fills every need in handling seed and soil. It places the seed in hills or drills, plows, rakes, opens furrows, covers, hills, hoes and cultivates. All the **Iron Age** labor savers are fully described in the new **Iron Age Book**, which every successful farmer should keep within reach. **It's free.** WRITE TO-DAY.

BATEMAN MFG. CO., Box 102 Grenloch, N. J.

Woman and Home

From Day to Day.

Should some great angel say to me to-morrow,
"Thou must retread thy pathway from the start,
But God will grant, in plty, for thy sorrow,
Some one dear wlsh, the nearest to thy heart."

This were my wish: from life's dim beginning
Let be what has been! wisdom planned the whole;
My want, my woe, my errors, and my sinning,
All, all were needed lessons for my soul.
—Ella Wheeler Wilcox.

*

DR. Wiley, of the Department of Agriculture, has this to say about domestic economy:

The health and happiness of our people depend more upon the kitchen than they do upon women's rights conventions, equal suffrage socleties and mothers' congresses. If pure foods, well cooked and well flavored could be placed upon the tables of every dining-room in the United States today, the death rate of our people would be decreased, their happiness secured and the divorce courts be freed of a large portion of their burdens.

*

A SUBSCRIBER in Louisiana asks for a recipe for entire wheat bread. One pint milk, scalded and cooled, one tablespoonful sugar, one teaspoonful salt, one-half cupful yeast, about five or six cupfuls whole wheat flour. In the morning mix in the order given, and knead until smooth and elastic. Let rise till light, about twice its bulk, shape into loaves, allow it to rise a little longer, and then bake a little longer, and in an oven not quite so hot, as for white bread. Whole-wheat bread rises more than white bread, because the flour contains more gluten. Sometimes we make a sponge with white flour, in the same proportion as for ordinary bread, and then thicken and knead with the entire-wheat flour.

*

CHENILLE boas are one of the newer neck-dressings this Winter; they are much more becoming than the plain ruche of Liberty silk, the chenille making a very becoming velvety frame for the face. The full silk ruche is edged with chenille and the ends in front are long clusters of the same material, which fly about like the snaky tentacles of an octopus. Sometimes they are long enough to reach the knees, and are slightly knotted together. It is quite possible to freshen a partly-worn ruche of Liberty silk or mousselaine de soie by edging it with chenille and putting the long chenille ends in front. Black is, of course, the favorite for street wear, but for evening use the chenille boas are seen in all sorts of delicate colors.

*

LAST Summer a domestic-science expert at the University of Chicago published conclusive tables showing how a family might live and grow fat on an allowance of $1 a week for table expenses. These dietetic theories were carefully studied by an economical citizen of Chicago, who sought to introduce a 15-cent-a-day bill of fare into his own family. The results were not what the college expert expected. The housekeeper, perhaps unscientific, was unable to keep within the prescribed limit, and the family disputes that ensued had to be settled by the neighbors and the police, the ultimate outcome being the removal of the frugal citizen to a dungeon cell, while his family was fed by the neighbors. We hardly feel competent to sort out a moral to fit this particular case, but it would seem wise to remind domestic experimenters that all great reforms work slowly. One of our friends is at present studying the arrangement of a succulent and satisfying dinner for four persons, to cost 60 cents in all. When we last discussed it he had decided on pork and beans, but felt uncertain as to a soup, a salad, and a dessert to be supplied within the limit, he being of the masculine persuasion, and somewhat inexperienced in household affairs. What do our readers think about it? Do you ever figure the exact cost of the family meals?

*

THE Chrysanthemum bow is now a favorite hair ornament. It is a fat, bunchy pompon of narrow ribbon, composed of innumerable loops, with four swallow-tailed ends standing up among them. Both gauze and satin ribbons are used, the much-worn velvet being a little too thick for this bunchy bow. Black or

3710 Blouse with Aiglon Stock.
32 to 40 in. bust.

white are the favorites, though colors are also called for. Alsatian bows are also revived, some being quite small, while others are almost large enough for evening bonnets, sometimes with a flower or two tied in the loop. The little velvet bows with upstanding loops are becoming to most women, but they have been vulgarized by those who insist upon wearing them all day, both in the house and at business, whereas any hair ornament over and above pins and combs must be regarded as part of a ceremonious toilette, and therefore only suitable for evening. Ornamental combs or pins are permissible, so long as not too showy, because they are necessities, whereas the bow is a superfluous ornament.

The Rural Patterns.

The blouse made from the ready tucked silk, mousseline, cashmere or other fancy material is much in vogue, and has the great merit of requiring the minimum of labor. The model illustrated is designed to meet just such a need, and includes the fashionable Aiglon stock and the deep girdle, both of which features are found in the best imported models. As shown the foundation is taffeta in biscuit color, the flaring portion of the stock velvet in the same shade, the collar white Liberty, and the tie of black velvet. The girdle is of the same material as the waist, and is held by handsome gold buttons, while tiny ones are used in the flaring portion of the stock. All-over lace, net and all the list of similar materials are suitable, or any soft woolen stuff can be tucked before cutting, if preferred. The foundation for the blouse is a fitted lining that should be well boned, but the waist proper includes shoulder and under-arm seams only. Both lining and outside material close at the center front, but separately, and the opening in the waist is rendered invisible by the tucks. The girdle is fitted to the figure and held in place by short bones, and the blouse drops slightly over the top. The sleeves are cut with broad upper and narrow under portions, and are finished with circular cuffs that flare becomingly over the hands. The Aiglon stock includes the plain portion that fits the throat, the flaring sides and the tie, and is finished separately from the waist. If desired, the plain portion only can be used, or the stock can be made of a contrasting color and worn with various waists. Black and white, white and gold, and many other combinations are worn, and as the stock itself is an up-to-date feature it can be made to do the double duty of finishing the blouse and serving as a separate pattern to be used with other waists. To cut this blouse for a woman of medium size 4⅛ yards of material 18 inches wide, or 2½ yards 32 inches wide, with ¼ yard of bias velvet and ¼ yard of silk for flaring portion of stock and tie, will be required. The pattern No. 3710 is cut in sizes for a 32, 34, 36, 38 and 40-inch bust measure; price 10 cents from this office.

WE cannot excuse the gloomy and sad-faced Christian. If he be one of Christ's followers the spirit of Jesus, of love and trust toward God, will make all life cheerful, and move his heart to perpetual songs of praise and thanksgiving.—Thomas Hill.

WHEN you write advertisers mention THE R. N.-Y. and you will get a quick reply and "a square deal." See our guarantee 8th page.

YOU would like the lamp-chimneys that do not amuse themselves by popping at inconvenient times, wouldn't you?

A chimney ought not to break any more than a tumbler. A tumbler breaks when it tumbles.

Macbeth's "pearl top" and "pearl glass"—they don't break from heat, not one in a hundred; a chimney lasts for years sometimes.

Our "Index" describes *all* lamps and their *proper* chimneys. With it you can always order the right size and shape of chimney for any lamp. We mail it FREE to any one who writes for it.

Address MACBETH, Pittsburgh, Pa.

Most Farmers Know

that their crops are largest and richest when the plants and trees have been cleansed and nourished with

B. T. Babbitt's

Pure Potash or Lye

Made by

B. T. Babbitt, New York.

Sold by grocers and druggists everywhere.

BROWN'S BRONCHIAL TROCHES

"The best preparation for colds, coughs, and asthma."
MRS. S. A. WATSON, Temperance Lecturer.
"Pre-eminently the best."
REV. HENRY WARD BEECHER.

Pain you to walk? Corns? Remove them with A-CORN SALVE. Trial box for nothing. Giant Chemical Co., Philadelphia

TERRIFF'S PERFECT WASHER

SENT ON TRIAL at wholesale price. If not satisfactory money will be refunded. SOLD under a POSITIVE GUARANTEE to wash as clean as can be done on the washboard, even to the wristand neckbands of the most soiled shirt, and with far greater ease. Does not wear out the clothes. Economizes soap, labor and time. AGENTS WANTED. Exclusive territory given. Big money made. For terms and prices Address,
Portland Mfg. Co. Box 14. Portland, Mich.

LADIES do you ever get tired Washing Dishes? Our Dish-Drier will save you half the time and labor. Sent by express for $1. Your money back if dissatisfied. Send for circular. S. R. Divine & Son, Loch Sheldrake. N.Y.

Meat smoked in a few hours with KRAUSERS' LIQUID EXTRACT OF SMOKE. Made from hickory wood. Gives fine flavor. Cleanest, cheapest; free from insects. Send for circular. E. KRAUSER & BRO., Milton, Pa.

No Money in Advance

Our elegant New Jewel Drop-head Sewing Machine possessing all the latest improvements, high quality and thorough workmanship. Shipped direct at $12.50, the lowest price ever known. 30 days' free trial. Money refunded if not as represented. Guaranteed 20 years. All attachments free. 125,000 sold.
$40.00 Arlington for....$14.50
$50.00 " " $17.00
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Other Machines at $8.00, $9.00 and $10.50
Large illustrated catalogue and testimonials Free.
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SEED DUE BILL FREE

To get new customers to test my Seeds, I will mail my 1901 catalogue, filled with more Bargains than ever and a 10c Due Bill good for 10c worth of Seeds for trial absolutely free. All the Best Seeds, Bulbs, Plants, Roses, Farm Seeds, Potatoes and many Novelties at lowest prices. Ginseng, the great money making plant. Giant Prize Tomatoes, 2 to the foot, Pan American Oats, sent out free to farmers, and two Free Passes to Pan American Exposition, Buffalo, N. Y. are offered. $2,635.00 in cash premiums. Don't give your order until you see this new catalogue. You'll be Surprised at my bargain offers. Send postal for catalogue to-day. It is FREE to all. Tell your friends to send too.
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Are You Deaf??

All cases of DEAFNESS or HARD-HEARING are now CURABLE by our new invention; only those born deaf are incurable. HEAD NOISES CEASE IMMEDIATELY. Describe your case. Examination and advice free. You can cure yourself at home at a nominal cost.
International Aural Clinic, 596 La Salle Ave., Dept. 157 CHICAGO.

van Houten's Cocoa

contains more digestible nourishment than the finest Beef tea. For Breakfast, Luncheon, or Supper, it is unequalled.
Sold at all grocery stores—order it next time.

Rural Recipes.

The vulture eats between his meals,
And that's the reason why
He very, very rarely feels
As well as you and I.
His eye is dull, his head is bald;
His neck is growing thinner;
Oh, what a lesson for us all
To only eat at dinner.
—From "A Bad Child's Book of Beasts."

Spanish Hash Pie.—Prepare pie paste in the usual manner, cut into large round cakes size of a large plate. Have in all about four. Place a tablespoonful of lard in a frying pan, fry the cakes one at a time on both sides, spread each rather thick with cooked hash. Cut the pie in the usual way and serve at once.

Paprika Chicken.—This is a favorite Hungarian dish, appetizing at all seasons, but especially in the Summer, when the appetite is languid. Cut a nice tender chicken into pieces as for a fricassee; flatten a little, such pieces as need it. Season each piece with salt and pepper, and dredge it lightly with flour, while you fry a minced onion in two tablespoonfuls of butter. Lay the chicken in the butter and onion, cooking for 20 minutes, so it will be evenly and thoroughly done. Take up the chicken and stir an even teaspoonful of salt and a very scant teaspoonful of paprika, or half a scant teaspoonful of good mild cayenne pepper of any kind. Add last of all a cupful of rich cream. Make some dumplings of a pint of sifted flour, two teaspoonfuls of baking powder, a saltspoonful of salt and butter the size of half an egg; moisten the dumplings with a cupful of milk, and drop them over the sauce. Let them cook well, covered for 50 minutes, when they will be well puffed up and light. Pour the sauce around the chicken and make a circle of the dumplings. If the dumplings are steamed over the cream sauce so they do not sink into it they will be lighter.

Potato Pancakes.—These are favorites with our German friends. One egg, three cupfuls of grated potatoes, three tablespoonfuls of flour, three-quarters of a teaspoonful of salt, one scant cupful of sweet milk. Mix well and fry in a spider in one-half inch of fat. These cakes should be a rich brown. Serve with syrup.

Apple Kisses.—Select six small, smooth apples. Pare, cut in half and remove the core. Mix one-half a cupful of sugar with one-third cupful of butter. Place this mixture between the halves of the apples. Place in a baking dish with a little water and a teaspoonful of vanilla extract. Bake till apples are soft. Serve with their own juice for sauce.

Crackling Dodgers.—Scald one pint of cornmeal with one scant pint of sweet milk in which has been dissolved one teaspoonful of salt. Add one cupful of cracklings, mix well, cover and let get nearly cold; then add two beaten eggs. Now wet the hands and pat the dough into little "dodgers." Bake in a well-greased biscuit pan until a rich brown.

Baked Spanish Onions.—This is a good supper dish at this season. Select three large-sized onions; peel and cut them up and down into slices about quarter of an inch thick; sprinkle each slice on both sides with a pinch of salt and pepper. Melt one ounce of butter in a baking dish and place in this the seasoned slices of onion. Bake half an hour.

Cocoanut Snaps.—Grate and dry the cocoanut in the oven. Do not brown it. When dried use 1½ cupful of it. Cream one ounce of butter, one ounce of lard, a pinch of salt and one cupful of sugar together, then add the stiffly-beaten whites of two eggs. Next stir in two tablespoonfuls of the cocoanut milk, 1½ cupful of cocoanut, a teaspoonful of vanilla and lastly eight ounces of sifted flour in which one teaspoonful of baking powder has been mixed. Knead as little as possible and use additional flour to roll out with. Flour the board, roll out a small quantity at a time, roll very thin and cut with a round cutter. Place in a greased baking pan about three-quarters of an inch apart, first sprinkling cocoanut on top of each cake. Bake in a hot oven. Put in an airtight tin box when perfectly cold.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

Storiettes.

An Accurate Comparison.

"An old countryman I used to know when I was living in south Georgia," remarked a college professor apropos of sudden changes in the weather, "was in at least one respect a very remarkable character. To a casual listener he appeared to be a fluent and unconscionable liar, yet when you came to scrutinize any of his statements closely it was impossible to catch him in the slightest deviation from the truth. One day in early Spring we had an unusually severe fall of hail, and next morning while driving down the road with a friend we happened to encounter the old fellow at his gate. 'Well, Uncle Bob,' I said, that was a pretty bad hailstorm we had yesterday.' 'I should say it was,' he replied. 'You just oughter seed some of the stones that come down in my back yard.' 'How big were they?' I asked. 'Bout as big as watermelons,' said he. 'Well, we've caught him in a whopper at last,' chuckled my friend as we drove on. 'No, we haven't,' I groaned. 'As usual the old rascal has secured all the advantage of a fine, large lie and at the sime time has adhered rigidly to the truth. Look at that vine.' An early watermelon vine was festooning the roadside, and here and there it was studded with minute green spheres about the size of gooseberries. My friend made no comment. I never tried to catch Uncle Bob again."—Boston Beacon.

Neighborly Kindness.

Mrs. Potter is a woman of sterling worth and simple piety, but she has a way of expressing her opinions which sometimes gives offense to sensitive people. A neighbor's daughter, an excellent but unusually plain young woman, was about to be married, and Mrs. Potter went to see her a few days before the wedding.

"Well now, Mary Ann," said Mrs. Potter, as she sat looking at the bride-elect, "it's a good thing you and James have decided not to wait any longer. Both of you are getting on, and besides that, nobody knows when a man may be turned aside from the path of duty by a pretty face. What is your wedding gown to be, my dear?"

"White silk," responded poor Mary Ann, endeavoring to look comfortable.

"Ah, my dear, white's pretty trying, I think," said Mrs. Potter, faithfully, "though of course it's common for brides to wear it, and all things considered, looks don't matter much in your case. Of course James realizes that the Lord doesn't judge by outward appearances, and he's chosen the better part and decided to do the same."

"Yes'm," said Mary Ann, with due meekness.

"And besides," added the comforting visitor, with a smile of great benevolence, "if you were to wear a color, Mary Ann, it would look to any stranger that might happen in to the church as if you'd been married before, and it's better to sail under your own flag at times like this, no matter if 'tis unbecoming, for, of course, you aren't a widow, though there's been plenty of time for you to be."—Youth's Companion.

A GOD-SEND TO ALL HUMANITY.

Remarkable Invention of an Ohioan that Guarantees Perfect Health, Strength and Beauty to Every User, and Cures without Drugs All Nervous Diseases, Rheumatism, La Grippe, Neuralgia, Blood and Kidney Troubles, Weakness, and the Most Obstinate Diseases, by Nature's Method of Steaming the Poisons Out of the System.

Ministers and Those Who Have Used It Declare It to Be the Most Remarkable Invigorant Ever Produced, Better than Any Treatment at Hot Springs, Sanitariums or Health Resorts.

A prominent business man of Cincinnati has invented a Vapor Bath Cabinet that has proven a blessing to every man, woman and child who has used it, and as many of our readers may not know of its real comfort and blessings, we illustrate it in this issue.

Our recent investigation of this remarkable invention was so very satisfactory we have no hesitancy in indorsing the same as just what all our readers need.

It is an air-tight inclosure, a rubber-walled room, in which one comfortably rests on a chair, and with only the head outside, enjoys at home, for 3 cents each, all the marvelous cleansing, curative and

invigorating effects of the famous Turkish, Hot Vapor, Hot Air or Medicated Vapor Bath, with no possibility of taking cold afterwards, or in any way weakening the system.

Hundreds of well-known physicians have given up their practice to sell this Cabinet—such eminent men as Emerson McKay, Detroit, who has already sold over 700, and John C. Wright, Chicago, who sold 125 last month.

Thousands of remarkable letters have been written the makers from users, some of which, referring to

Rheumatism, La Grippe, Kidney Troubles,

will be interesting to those who suffer from these dread maladies. W. L. Brown, Oxford, O., writes: "My father was down in bed for months with rheumatism; this Cabinet did him more good than $50 worth of drugs. It cured my brother of neuralgia and sleeplessness, with which he had long suffered, and his wife of la grippe in one night." G. M. Lafferty, Covington, Ky., writes: "Was compelled to quit business a year ago, being prostrated with rheumatism and kidney troubles, when your Cabinet came. Two weeks' use cured me; I have never had a twinge since." Rev. George H. Hudson, Okemos, Mich., says: "I gave up my pastorate on account of nervous prostration and lung troubles; my editor so highly recommended your Cabinet, I tried it; from that day I have steadily grown better; am now well; nervousness gone; lungs strong; am a new man." Mr. Simon Tompkins, a retired capitalist of Columbus, O., 1031 Broad St., says: "I am satisfied it saved my life. I was taken down with a hard cold, which developed into a dangerous case of pneumonia. The first Bath relieved me and I quickly recovered. It is far superior to drugs for curing la grippe, colds, inflammation and rheumatism." Hon. A. B. Strickland, of Bloomington, writes that the Cabinet did him more good than two years' doctoring, entirely cured him of catarrh, gravel, kidney trouble and dropsy, with which he had long been afflicted.

Hundreds of Ministers

write, praising this Cabinet. Rev. H. C. Roernaes, Everett, Kan., says: "It is a blessing; made me full of life and vigor; should be in use in every family." Rev. J. C. Richardson, N. Fifth St., Roxbury, Mass., was greatly benefited by its use, and recommends it highly, as also does Prof. R. E. P. Kline, of Ottawa University, who says: "I find it a great benefit. No Christian should be without it." Hon. V. C. Hay, St. Joe, Mo., writes: "Physicians gave me up to die; was persuaded by friends to try this Cabinet, and it cured me. I cannot praise it enough." Rev. Baker Smith, D. D., Fairmont, N. J., says: "Your Cabinet rids the body of aches and pain, and as cleanliness is next to godliness, it merits high recommendation."

Congressman John J. Lentz, Hon. Chauncey M. Depew, John T. Brown, Editor "Christian Guide"; Rev. C. M. Keith, Editor "Holiness Advocate," as well as hundreds of clergymen, bankers, governors, physicians and influential people, recommend it highly.

Physicians are unanimous in claiming that colds, la grippe, fevers, smallpox, consumption, kidney trouble, Bright's disease, cancer—in fact, such

Marvelous Eliminative Power

has this Cabinet that no disease can gain a foothold in your body if you take these hot Thermal Baths weekly. Scientific reasons are brought out in a very instructive little book issued by the makers. To

Cure Blood and Skin Diseases

this Cabinet has marvelous power. Dr. Shepard, of Brooklyn, states that he has never failed to draw out the deadly poison of snake bites, hydrophobia, blood poison, etc., by this Vapor Bath, proving that it is the most wonderful blood purifier known. If people, instead of filling their system with more poisons by taking drugs and nostrums, would get into a Vapor Bath Cabinet and steam out these poisons, and assist nature to act, they would have pure blood, and a skin as clear and smooth as the most fastidious could desire.

The Important Feature

of this Cabinet is that it gives a hot vapor bath that opens the millions of pores all over the body, stimulating the sweat glands, drawing out all the impure salts, acids and effete matter, which, if retained, overwork the heart, kidneys, lungs, and cause disease, debility and sluggishness. Astonishing is the improvement in health, feeling and complexion. The first bath makes you feel like a new being; 10 years younger.

With the Cabinet, if desired, is a

Head and Complexion Steamer

in which the face, head and neck are given the same vapor treatment as the body, producing the most wonderful results; removes pimples, blackheads, skin eruptions, cures Catarrh, Asthma and Bronchitis.

O. C. Smith, Mt. Healthy, O., writes: "Since using this Cabinet my Catarrh, Asthma and Hay Fever, with which I have been afflicted since childhood, has never returned. Worth $1,000 to me. I have sold hundreds of these Cabinets. Every one was delighted. My wife finds it excellent for her ills."

Whatever

Will Hasten Perspiration

every one knows is beneficial, but other methods are crude and insignificant, when compared to the convenient and marvelous curative power of this Cabinet, known as the new 1903 style

Quaker Folding Thermal

Bath Cabinet. We find it to be a genuine Cabinet, with a real door, opening wide, as shown in cut. When closed it is air-tight; handsomely made of best, most durable, water-proof goods, rubber lined. A heavy steel frame supports it, making it a strong and substantial bathroom within itself. It has top curtains; in fact, all the latest improvements.

The makers furnish an excellent stove with each Cabinet, also valuable recipes and formulas for medicated baths and ailments, as well as plain directions. It folds flat in 1 inch space, when not in use; easily carried; weighs but 10 pounds.

People don't need bathrooms, as this Cabinet may be used in any room, and bath tubs have been discarded since this invention, as it gives a far better bath for all cleansing purposes than soap and water. For the sick room its advantages are at once apparent. There have been

So-Called Cabinets

on the market, but they were unsatisfactory, inconvenient, simply cheap, flimsy affairs.

After investigation we can say the Quaker Cabinet made by the Cincinnati firm is the only practical article of its kind, and will last for years. It seems to satisfy and delight every user, and the

Makers Guarantee Results

They assert positively, and their statements are backed by a vast amount of testimony from persons of influence, that this Cabinet will cure nervous troubles, Debility, Purify the Blood, Beautify the Skin and Cure Rheumatism. (They offer $50.00 reward for a case not relieved.) Cures the most obstinate cases of Women's Troubles, La Grippe, Sleeplessness, Neuralgia, Malaria, Headaches, Obesity, Gout, Sciatica, Eczema, Scrofula, Piles, Dropsy, Blood and Skin Diseases, Liver and Kidney Troubles. It will

Cure the Worst Cold

with one bath, breaks up all symptoms of La Grippe, Fevers, Pneumonia, Consumption, Asthma, and is really a household necessity. Gives the most

Cleansing and Refreshing Bath

known, and all those enjoying health should use it at least once or twice a week, for its great value is its marvelous power to draw out of the system all impurities that cause disease, and for this reason is truly a Godsend to all humanity.

HOW TO GET ONE

All our readers who want to enjoy perfect health, prevent disease, or are afflicted, should have one of these remarkable Cabinets. Space prevents a detailed description, but it will bear out the most exacting demand for durability and curative properties.

Write the only makers, The World Mfg. Co., 2821 World Building, Cincinnati, O., and ask them to send you their valuable illustrated Book FREE, describing this invention and these remarkable Baths. The price of the Cabinet is wonderfully low, only $5.00, complete, with heater, directions and formulas; also Prof. Gering's No. 2 Guide Book, health and beauty, free. Head attachment, if desired, $1.00 extra, and it is indeed difficult to imagine where one could invest that amount of money in anything else that guarantees so much health, strength and vigor.

DON'T FAIL TO WRITE TO-DAY

for full information; or, better still, order a Cabinet; you won't be disappointed, as the makers guarantee every Cabinet, and agree to refund your money after 30 days' use if not just as represented.

We know them to do as they agree. They are reliable and responsible; capital, $100,000.00.

The Cabinet is just as represented, and will be shipped promptly. You can remit safely by express, P. O. money order, bank draft, or certified check.

Don't fail to send for booklet, any way.

$150 a Month and Expenses.

This Cabinet is a wonderful seller. More than 20,000 were sold last month by agents, and the firm offers special inducements to both men and women upon request, and to our knowledge many are making from $100 to $150 every month, and expenses. Don't fail to write them.

MARKETS.

REVIEW AND OUTLOOK.

BUTTER trade is dull. Receipts of all but extras are large. There is but little call for June creamery, and the same is true of State dairy. Exporters are handling a little factory at 13 cents or under.

DRESSED POULTRY.—Receipts are liberal and the demand slow. The only scarcity is in fancy chickens and small hen turkeys. The proportion of coarse chickens and ordinary fowls is large, and they are not wanted. The stock of capons is also large, and in light request at 13 cents for the top figure.

FRUITS.—Apples are not selling very well, but holders of extra cold-storage goods express considerable confidence in the future of the market. Since the holiday rush was over, cranberry trade has been dull. The Florida strawberries received are inferior, having a good many green spots, and the price has dropped to 25 to 30 cents.

The Week's Quotations.

WHOLESALE PRICES.

SATURDAY, JANUARY 26, 1901.

BEANS.

Marrow, choice, per bu	2 55	@	—
Fair to good	2 45	@2	50
Medium, choice	2 25	@	—
Red kidney, choice	2 40	@2	45
White kidney, choice	2 60	@2	65

BUTTER.

Creamery, extra	—	@	22
Firsts	21	@	21½
Seconds	18	@	20½
Lower grades	16	@	17
June, extra	19½	@	20
June, firsts	18	@	19
State, dairy, half firkins, extra.	20	@	—
Half firkins, firsts	18	@	19
Western, imitation creamery, best	17	@	17½
Lower grades	13½	@	15
Western, factory, June packed, fancy	13	@	13½
Low grades	11	@	12½
Renovated butter, fancy	17	@	18
Rolls, fresh, fair to choice	11	@	14

EGGS.

QUOTATIONS, LOSS OFF.

Penna. and State, fancy, doz.	20	@	20½
Western, firsts	—	@	20
Southern, average best	—	@	19½

QUOTATIONS AT MARK.

State and Penna., prime	20	@	20½
Western, fresh gathered, firsts.	—	@	19½
Southern, fresh gathered, fair to good	—	@	18
West., fresh gathered, dirties	—	@	17
Refrigerator, Fall packing, good to choice	17	@	18
Refrigerator, common to fair.	16	@	16½

FEED

Spring bran, 100-lb. sacks	17 50	@17	75
Winter bran, bulk	16 50	@19	00
Spring middlings, 200-lb. sacks	16 50	@20	00
Red Dog, to arrive	18 25	@17	75

EVAPORATED FRUITS.

Apples, fancy	6½	@	7½
Low grades	3½	@	4⅝
Sun dried, quarters	3¾	@	4½
Apricots, boxes, lb.	7½	@	14
Peaches, California, unpeeled, boxes,	6	@	10
Pears, California, per lb.	5	@	10

FRESH FRUITS.

Apples, common, bbl.	1 25	@1	75
Baldwin, bbl.	1 75	@3	25
Grecning, bbl.	2 00	@3	00
Ben Davis, bbl.	2 00	@3	25
Spy, State, bbl.	2 00	@3	50
Spitzenberg, bbl.	2 50	@4	50
Newtown pippins	1 25	@3	50
Grapes, W. N. Y., Catawba, small basket	8	@	11
Catawba, case	75	@1	15
Almerias, bbl.	4 00	@8	00
Cranberries, Cape Cod, bbl.	8 50	@9	50
Jersey, bbl.	7 50	@	—
Jersey, crate	2 00	@2	40
Strawberries, Florida, qt.	25	@	40

GRAIN.

Wheat, No. 2, red, spot	80	@	—
No. 1, Northern Duluth	94	@	—
No. 1, hard Duluth	97¼	@	—
Corn, No. 2, white, to arrive	47⅛	@	—
No. 2, yellow, to arrive	46⅞	@	—
Oats, No. 2, white, in elevator	32¼	@	—
Rye, No. 2, Western, c. i. f., N. Y.	57	@	—
State and Jersey, c. i. f., N. Y.	54	@	55
Barley, feeding, c. i. f., Buffalo.	48	@	50
Malting, c. i. f., Buffalo	62	@	67

HAY AND STRAW.

These quotations are for large bales. Small bales sell for 50 cents per ton less:

Hay, No. 1	90	@	92½
No. 2	85	@	87½
No. 3	75	@	77½
Clover	70	@	75
Clover, mixed	77½	@	82½
Straw, rye, long	82½	@	85
Oat	55	@	57½

COUNTRY—DRESSED MEATS.

Calves, veals, prime, per lb.	—	@	11
Fair to good	10	@	10½
Small, per lb.	6	@	7½
Fed, per lb.	6	@	8
Lambs, choice, per head	8 00	@10	00
Poor to fair	4 00	@ 6	00
Pork, light, per lb	7¼	@	8
Medium, per lb.	6½	@	7
Heavy, per lb.	5	@	6
Rough, per lb.	4	@	5
Roasting pigs, per lb	9	@	12
Pork tenderloins, fresh, per lb.	17	@	18

$5 for $4 Send us a club of four subscriptions with $4, and we will advance your own subscription one year free—the five subscriptions for $4.

POTATOES.

Bermuda, prime, per lb.	4 00	@4	75
No. 2, per lb.	3 00	@3	50
Long Island, prime, in bulk, bbl.	1 50	@1	87
State and Western, round, 180 lb.	1 50	@1	75
Per sack	1 50	@1	65
Long, 180 lb.	1 50	@1	62
Jersey, prime, bbl.	1 25	@1	62
Sweets, Vineland, cloth-top, bbl.	2 00	@2	25
Other Jersey, cloth-top, bbl.	1 75	@2	00
Jersey, per d.-h., bbl.	1 75	@2	00
Southern, bbl.	75	@1	00

POULTRY—LIVE.

Fowls, per lb.	—	@	10
Chickens, per lb.	—	@	8
Roosters, per lb.	—	@	6
Turkeys, per lb.	—	@	8
Ducks, Western, per pair	50	@	70
Southwestern, per pair	45	@	50
Geese, per pair	1 00	@1	50
Pigeons, per pair	25	@	30

POULTRY—DRESSED.

Turkeys, Ohio & Mich., mixed, fancy, scalded	10	@	10½
Western, young hens, fancy.	10	@	10½
Western, old hens	—	@	9
Western, young toms, prime.	8	@	9
Old toms	—	@	8
Broilers, Winter, under 2 lb. to prime	30	@	—
Phila., 2½@3 lb., pair, lb.	25	@	—
Roast. chickens, Philadelphia, selected, large	15	@	16
Western, dry packed, prime.	10	@	10½
Fowls, State and Penn., good to prime	10	@	—
Ohio & Mich., fancy, scalded.	10	@	—
Old roosters, per lb.	—	@	6½
Capons, Western, large	12½	@	13
Western, mixed weights	11	@	12
Western, small and slips	—	@	10
Ducks, Western, prime	10	@	12
Poor to fair	7	@	9
Geese, Western, prime	—	@	8

VEGETABLES.

Onions, Conn. and L. I., white, bbl.	3 50	@ 5	00
Orange Co., white, bag	2 00	@ 4	00
State and Western, yellow, bbl.	2 25	@ 2	50
Bermuda, crate	—	@ 2	25
Squash, marrow, bbl.	1 00	@ 1	25
Hubbard, bbl.	1 50	@ 1	75
String beans, Florida, wax, crate	1 00	@ 3	00
Turnips, Canada, Russia, bbl.	75	@	85
Peppers, Florida, carrier	75	@ 1	25
Celery	10	@	60
Egg plant, Florida, bbl.	2 50	@ 4	00
Spinach, Norfolk, bbl.	1 25	@ 1	75
Carrots, washed, bbl.	75	@ 1	00
Lettuce, New Orleans, bbl.	3 00	@ 6	00
Brussels sprouts, qt.	4	@	10
Cabbage, L. I., 100	3 00	@ 4	00
State, ton	13 00	@16	00
Tomatoes, Florida, carrier	1 00	@ 3	00
Beets, L. I., bbl.	75	@ 1	00
Okra, Havana, carrier	1 00	@ 1	50
Parsley, Bermuda, box	1 25	@ 1	50
Cucumbers, Florida, crate	2 00	@ 3	00
Cauliflower, Florida, basket	1 50	@ 2	00

HOTHOUSE PRODUCTS.

Lettuce, choice, 3½ to 4½ dozen to case, dozen	75	@1	25
Cucumbers, fair to choice, doz.	1 50	@2	00
No. 2, dozen	30	@1	00
Tomatoes, common to prime, lb.	15	@	30
Radishes, 100 bunches	1 50	@3	00
Mushrooms, lb.	15	@	30
Asparagus, dozen bunches	—	@6	00
Rhubarb, dozen bunches	—	@1	00

FURS AND SKINS.

Silver fox	50 00	@200	00
Red fox	1 75	@ 2	00
Gray fox	90	@ 1	00
Lynx	4 00	@ 6	00
Wild cat	50	@	60
Marten, dark	6 00	@ 10	00
Pale	3 00	@ 4	00
Skunk, black	1 30	@ 1	40
Half-striped	80	@	85
Long-striped	80	@	90
Striped	40	@	45
White	15	@	20

SEEDS.

Clover seed, N. Y., good to choice, bu.	5 65	@ 6	30
Toledo, for March delivery, bushel	7 35	@	—
Timothy, per 100 lb.	4 50	@ 5	00
Cottonseed, New Orleans, bulk, ton	13 00	@	—
Flaxseed, whole, cleaned	6 50	@ 7	00
Cottonseed meal, ton	25 75	@	—
Linseed oil cake, ton	27 50	@	—
Meal, sacked	28 00	@	—
Celery seed, lb.	7	@	7¼
Hemp, Russian, lb.	2¾	@	2⅞
Millet, lb.	1⅞	@	2
Mustard, English, yellow, lb.	6¼	@	7
Rape, German, lb.	3⅜	@	3½
Sunflower, lb.	2⅜	@	2½

MILK.

New York Exchange price within 26-cent freight zone, three cents per quart.

BUSINESS BITS.

IF you have choice hothouse lambs for sale, write Archdeacon & Co., 100 Murray St., New York.

ON January 14 the plant of E. W. Ross Co., Springfield, O., was partially destroyed by fire. Our readers are familiar with this firm as the manufacturers of the famous Ross feed and silage cutters. Arrangements have been made to rebuild, and all orders will be promptly shipped.

FOR 25 years the Roderick Lean Manufacturing Company, of Mansfield, O., has been making nothing but harrows and land rollers, giving its whole thought and attention to the production of the finest harrows and land rollers that it is possible to produce. We would recommend anyone interested in harrows and rollers to write to the Roderick Lean Company for their catalogue and further information.

THE smoke house always was a source of worriment, vexation and expense. When it catches fire let it go up in smoke. There's a better way to smoke meats. That is by using Krauser's Liquid Extract of Smoke. It is made from selected hickory wood. It is applied to meat with a brush or sponge. It contains the same ingredients that preserve meat that is smoked in the old way. It gives meat a delicious, sweet flavor and gives perfect protection against insects and mold. It is cheaper and cleaner than the old way. Information concerning its use, cost, etc., can be had by writing to the makers, E. Krauser & Bro., Milton, Pa.

THE friends of the Page Woven Wire Fence Co., of Adrian, Mich., will learn with great satisfaction of the company's being recapitalized at $1,000,000, every dollar paid in, and every share sold. The receivers have been discharged, and the company is again in possession of its entire property which includes the steel, rod and wire mills at Monessen, Pa., and its original Adrian plant. The management is not materially changed. The capacity for weaving fence will be quite largely increased, and the company hopes to be able to supply the Spring's demand as fast as it is called for. It seems as though the farmers and stockmen were really standing by them in their endeavor to furnish a fence not made by a trust.

A "WATCH" DOG.—The following story is told of a Brooklyn dog: The Rev. William Tappan, who conducts a mission in South Brooklyn, has an ugly bulldog named Watch which usually goes to church with his master and sits outside until the service is over. At Friday evening prayer meeting Mr. Tappan took for his text a portion of Scripture beginning with the word "Watch." As he announced the text the dog pricked up its ears. At a second and emphatic repetition of the text the bulldog dashed up the aisle and springing into the pulpit, jumped all over his master, interrupting the sermon until the animal was led outside of the chapel and tied.

COLLEGE AGRICULTURE.—In speaking of the advantages of the farmers' short course at the Kansas College (Manhattan), these statements are made:

"The college purchased half of a farmer's herd of hogs, taking a fair average of the lot. We fattened these hogs in 50 days, while the farmer, doing the best he could, marketed his in 110 days. We spent less for feed and had risk from disease for less than half the time. By feeding Alfalfa hay with grain to fattening hogs the college secured 868 pounds of pork per ton of hay fed. It pays to know what type of animal gives best results for feed consumed. In 1898 a scrub cow of the dairy type gave the college milk worth $40.37 above cost of the feed, while another scrub not of the dairy type yielded milk during the year worth $6.25 less than her feed."

COW PEAS IN OSWEGO CO., N. Y.—We use the Black and Whippoorwill. The results were not all we could hope for, but I shall try them further next year. They have done best for us on loose open soil; on clay soils their growth has been very poor. Our climate is moist and cool during the growing season, owing to lake influences—a condition probably not congenial to cow peas. A point against them as a cover crop for orchards is their tendency to go to pieces after frosts, and hence fail to give the soil the necessary protection against hard freezing. C. B. C.

Michigan.

R. N. Y.—By sowing the cow peas in drills we are able to sow rye in the Fall and thus secure a Winter covering. We have never recommended cow peas for rich land. They are best on light, open soils—the poorest parts of the farm.

CATARRH CAN BE CURED.

Catarrh is a kindred ailment of Consumption, long considered incurable; and yet there is one remedy that will positively cure catarrh in any of its stages. For many years this remedy was used by the late Dr. Stevens, a widely noted authority on all diseases of the throat and lungs. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all sufferers from Catarrh, Asthma, Consumption and nervous diseases, this receipe, in German, French or English, with full directions for preparing and using. Sent by mail by addressing, with stamp, naming this paper, W. A. Noyes, 847 Powers Block, Rochester, N. Y.

WE'LL PAY THE FREIGHT and send 4 Buggy Wheels, tire on, for $7.25. with axles welded and set, $10.60. All sizes and grades, ⅞ to 4 in. tread, steel or rubber tires. Write for catalogue giving instructions for ordering and how to obtain a Wagon Umbrella Free. Rubber tired Buggies $58. Buggy Tops $5.65. No. 2 Wheels for repair work, $5.50. Order at once to get these prices. W. R. BOOB, Center Hall, Pa.

Costs One Cent

to learn how to make DOLLARS. Our 20th Century catalogue will give you full information. Greatest weight, twice the strength, and three times the lasting quality of ordinary wire fencing.
The Frost Wire Fence Company, Cleveland, O.

For full information about this, also, best Horse-power, Thresher, Clover-huller, Dog-power, Rye Thresher and Binder, Fanning-mill, Feed-mill, Drag-saw, Land-roller, Steam-engine, Ensilage and fodder-cutter, Shredder, Root-cutter, Corn-sheller and Round-silo,
Address, GEO. D. HARDER, M'f'r, Cobleskill, N.Y.
☞ Please tell what you wish to purchase.

Wants, For Sale or Exchange

Farm Managers, Gardeners, Buttermakers, etc., always on hand. No charges to employers. Write us. Rural Science Agency, Durham, N. H.

Valuable Fruit Farm and Country Home, desirably located. Bargain. F. A. CHAPMAN, City Building, Welisburg, West Va.

WANTED.—A horticulturist of large experience, desires to engage with a commercial orchard company expecting to plant largely of peach, apple, or pear. Would engage with a railroad or other corporation needing a man of this kind. SAM T. KENYON, 823 Galia St., Portsmouth, O.

For Sale—FARM. A Grand Bargain. One of the finest 160-acre farms in the State. 2 miles from Muir, and 4 miles east of Ionia. Price, $40 per acre. For further particulars address ED. B. HAMILTON, Muir, Ionia Co., Mich.

Do You Want to SELL YOUR FARM or Country Property? We will find a buyer for you no matter where located. Write description and selling price and learn our up-to-date method. NATIONAL REAL ESTATE CO., Morrison Block, ITHACA, N. Y.

FOR SALE.

Eight Grade Ayrshire Heifers, from excellent cows and registered sire, from 14 to 22 mos. old. $175 if taken at once. A. G. Wilson, 86 Court St., Binghamton, N.Y.

WINTER WORK. Farmers, Agents, take orders for my Seeds at home. Make big money. Get your own seeds free. New plan, quick sales, fine outfit. Write to-day. Frank H. Battles, Seed Grower, Rochester, N. Y.

Barns of Plank save timber and cash. Best, cheapest, strongest. 4,000 in use. Book for stamp. SHAWVER BROS., Bellefontaine, Ohio

How to Grow Chrysanthemums Only 25 cents. 82 pages well illustrated chapters on Feeding, Training, Seed-Saving and cultivation through the year. Published by AMERICAN GARDENING, 136 Liberty St., New York

Blanchard's White Leghorns.—The leading strain of heavy layers. Cockerels for sale. Eggs for hatching. Ill. cir. free. H. J. Blanchard, Groton, N.Y

Wanted—LIVE WILD RABBITS. Any number. Ship quickly. E. B. WOODWARD, 302 Greenwich St., New York.

MONEY IN BEES and how to get it is told in GLEANINGS IN BEE CULTURE, a handsome illustrated semi-monthly magazine, employing the best experts on the subject. Sample and valuable book on Bees and Bee Keepers' Supplies free to all who mention this paper. The A. I. Root Co. Medina, O.

BOYS AND GIRLS I want a bright boy or girl to help me in each place. Write me for particulars, stating distance & direction from post-office. L. M. Loveless, Baldwinsville, N. Y.

Oldest Commission House in New York Est. 1838. Butter, Cheese, Eggs, Pork, Poultry, Dressed Calves, Game, etc. E. B. Woodward, 302 Greenwich St., N.Y

SPRING LAMBS AND CALVES.

We have a large sale for

Choice Lambs, Calves, Poultry,

and HOTHOUSE PRODUCTS for the Spring Trade. Consignments are solicited and top prices guaranteed for fancy stock.
ARCHDEACON & CO., 100 Murray St., New York.

JELLIFFE, WRIGHT & CO.,
Produce Commission Merchants,
BUTTER, EGGS AND POULTRY,
284 Washington Street, New York.
Dressed Meats: 22, 24 and 26 Grace Avenue, West Washington Market.
Live Stock: Union Stock Yards, foot of West 60th St.
Refer to Irving National Bank.

A
POULTRY-HOUSE COVERING

should be a protective. To be protective, it must be absolutely proof against weather, water, heat, cold, draughts, acids, alkalies, etc., and

PERMANENTLY AIR-TIGHT.

P & B RUBEROID ROOFING

IS proof against all these elements; IS permanently air-tight, and IS a protective, keeping the poultry warm and dry.

IT IS EASILY APPLIED.

Ruberoid users do more talking about Ruberoid than we do. A pleasant Ruberoid experience makes them say the nice things about it that we like to hear but modestly refrain from saying.

THE STANDARD PAINT COMPANY,
Offices: 100 William Street,
Warehouse: 81-83 John Street,
NEW YORK.

Market Briefs.

PICKED UP HERE AND THERE.

A HANDY SIGN.—West Side banana and some other fruit men have a novel scheme for making a sign that is cheap and attracts attention. They take a large paper sack or ordinary white grain bag, stuff it full of hay, paint the name of whatever specialty they have for sale on the outside, and hang it up beside the door, or over the sidewalk from the awning frame or permanent roof. It can't fail to draw attention, and is easily renewed if any changes are required.

OLD CANE FOR SALE.—A man came into this office with a real curiosity in the shape of a heavy oak cane with a carving representing a snake wound around it. His story was that it was brought over from England in 1754, used by George Washington for a time, and, after being hidden away for about 100 years, had come into the possession of the present owner. No doubt it was an old timer, and he was probably sincere in his story, but the absence of any definite proof made it worthless as a relic. If an affidavit signed by George Washington and attested by some Virginia notary had been attached, it would have been different. He had tried to dispose of it to museums and other curiosity places, but without success. Also he had made a mistake by having it cleaned and varnished, and putting a new gilded head in place of the horn handle. Old things should be left in the condition in which they are found. Buyers do not wish them to look new. It is enough to wipe off the dust and dirt. The same applies to old coins. It is a mistake to clean them with chemicals.

MUSIC AND PHILOSOPHY are served up with lunch in a little eating house on Chambers Street in this city. The building is a three-cornered wooden affair, about 12 feet long and six feet across in its widest part, stuck in an angle formed by two other buildings. The customers sit on stools in front of a shelf, and, as it is on a busy street, a surprising number of people eat there every day. Truckmen, who have to be out long before daylight in Winter, stop a few minutes for coffee and a sandwich as an addition to the early breakfast they had at home; and it is so handy that dozens of people who are away from their usual lunching place and feel hungry, stop for a few minutes. The place is kept by two men, one about 60, and the other 20. In the evening, when the young man is in full charge and there are few customers, he gets out his violin, and hauls Beethoven, Bach, Mendelssohn and others over the coals. Yankee Doodle and such things are beneath his notice, and he has no use for music that is not well peppered with notes having three or four or more ears on a stalk. The other partner is not much on music, but is ready to tackle anything in the line of politics, philosophy, social matters, religion, or current events. Having traveled widely as cook on shipboard, and done considerable reading, he has a large amount of information on hand. This he diffuses in an off-hand way upon his customers through one corner of his mouth, the other being used to hold a clay pipe.

SPRING LAMBS.—The season for these commences with Christmas, but comparatively few are received until the middle or latter part of January. These lambs ought to weigh 30 to 35 pounds or more, and there is no use in sending inferior ones to market. Choice lambs that will weigh up to the figure given above are now selling at $9, and the best cuts will cost the consumer anywhere from 40 to 75 cents per pound. One dealer told me that he had received some that weighed less than 20 pounds, and it is very hard to sell them at anything like a fair price. If a lamb is not growing as he ought, a little extra care will often push him along up to the head of the line, whereas if left to fight for himself with the stronger ones, he will always be a runt. In dressing for this market, the feet and head must be removed, in order to comply with a city law. In cold weather it is necessary to cut them open only to the breast bone, but as the weather gets warmer they should be opened nearly to the head in order to prevent them from spoiling. They make the finest appearance when spread wide open with sticks crossing on the back. The whole carcass should be wrapped in clean muslin and then covered with bagging. It will pay to take all this extra care, as the lambs go to high-priced buyers, and the general appearance often makes the difference of $2 or $3 per head. It will not do to send last Summer's lambs with the expectation that they will pass for hothouse animals. Buyers are critical, and an old lamb will sell for just what it is worth and no more.

W. W. H.

I HAVE never fed silage to hogs. I have fed some common Red clover to my brood sows, and was very well pleased. I like it much better than feeding so much corn.

Michigan. O. B. R.

PENNSYLVANIA STATE HORTICULTURAL ASSOCIATION.

The forty-second annual meeting of the Pa. State Horticultural Association was held at Harrisburg, January 21 and 22. The attendance of members was very fair, and many interesting papers were read and earnestly discussed. There was quite an exhibition of apples, which as a rule were highly colored and of excellent flavor. The York Imperial largely predominated, and many really fine specimens were shown. It is to eastern Pennsylvania what the Ben Davis is to the Southwest. It is large, handsome and a good keeper, as grown near its place of origin in York County, Pa., but does not thrive so well in the West and North. Several new seedlings of promise were shown by growers. The fruit exhibited, however, generally showed lack of care in culture and selection. In the discussions following various papers on fruit growing in the State it was brought out that Pennsylvania is now nearly at the foot of the list of fruit-growing States, but that all the commercial fruits can be grown to great perfection under the varying conditions of soil and climate within the State. Pennsylvania apples are noted for their high flavor, and the State produces twice as many varieties as any other. The State should be carefully mapped out to grow quality fruits, as the topography is too diversified for uniform results.

Much interest was shown in promoting legislation for the benefit of fruit growers, and the creation of a Division of Horticulture under the State Department of Agriculture. Bills for this purpose, and for the purpose of eradicating the Pernicious scale and other destructive insects, as well as diseases of trees and nursery stock were read and endorsed for presentation to the Legislature. Prof. W. G. Johnson of the Maryland Experiment Station, on invitation, made an earnest plea for a drastic scale law, such as is now in force in his State, but the Pennsylvanians seem to realize the annoyance and danger of too much officialism in matters concerning cultivators of the soil, and do not care for such a severe law. The spraying of fruit trees and plants was discussed with interest. Mixtures must be freshly made, when old they are dangerous to the plants and difficult to apply. Preparation should be made by pruning and opening up the trees. A half-inch hose is much better than the ordinary ¾-inch size for spraying, as it is lighter and more flexible. The trees must be dry, as moisture renders the spray ineffective. Trees should be open enough to let sunlight through, or a dense spray cannot get through. Winds hinder spraying to some extent, but they cannot be avoided, and a thorough spraying on the windward side will often cover the branches effectively. Spray pumps are handy to have, and may be used for whitewashing and window washing. Spray with a fungicide, like Bordeaux Mixture, before buds open; with fungicide and an insecticide like Paris-green after bloom. Never spray while bloom is open, and do not use arsenicals on stone fruits, as it nearly always injures the foliage. Bordeaux Mixture must be weak if used on stone fruits, as foliage is more sensitive than the apple or pear.

Some root galls were shown, taken from peach and apple trees. It is advised that trees should not be replanted where destroyed by galls, as it seems to be infectious, spreading from one species to another within the family of the Rosaceæ, which includes most of our fruit-bearing plants. Not much interest was shown in a proposed fruit-package law, and the discussion was short. Many interesting papers were read and addresses made on subjects of more local interest. Dr. Edge, for 25 years Commissioner and Secretary of Agriculture of Pennsylvania, gave a most interesting talk on Horticultural Observations on a Tour Around the World. The address was very entertaining, but there was mighty little horticulture in it. Prof. John Craig, of Cornell Experiment Station, gave an address on Decoration of the Home Grounds, illustrated with many fine lantern views. He was followed by Prof. W. G. Johnson, of the Maryland Station, with an extended series of views of the great peach orchards of America. The Association will meet at Bloomsburg next year. All the present officers were re-elected. A review of Dr. Groff's most interesting paper on Fruits and Vegetables of Porto Rico will be given in a subsequent number of THE R. N.-Y.

W. V. F.

STRAWBERRY PLANTS.—Referring to the article on "the new strawberry culture," page 863, I have practiced this method in a modified way for several years, whenever it is not convenient to plant early in the Spring. I find the plants do much better when dug early, as soon as they can be in the Spring, and heeled in as Mr. Farmer deseribes, until such time as the land can be put in good shape for planting, and the weather is propitious. I cut the roots back to three inches instead of four or five, and find that they throw out small roots all along the old ones, which I think is natural for them, as the roots of strawberries spread out instead of going down to any great depth; and, besides, it is easier work setting, same as a close root-pruned tree. Do not set too deep in trench, or keep in trench over three weeks.

W. S. W.

Minnesota.

A NUMBER of farmers in this section have thrashed their corn this Winter. A common thrashing machine is used. By this method the corn is shelled and cleaned, and the stalks shredded. One farmer thrashed out over 100 bushels of shelled corn in 10 hours.

S. E. T.

Shelburne, Vt.

His Wife Insisted

And he thought he'd humor her, no doubt. The result shows that a man rarely loses by following his wife's advice. Those who suffer from obstinate cough, bronchitis, weak lungs and ailments in general which tend to consumption, will find speedy relief and perfect cure in the use of Dr. Pierce's Golden Medical Discovery. It cures ninety-eight per cent. of those who give it a fair and faithful trial. It purifies the blood, heals the lungs and builds up the body with firm flesh instead of flabby fat. The "Discovery" contains no alcohol, neither opium, cocaine, nor other narcotics.

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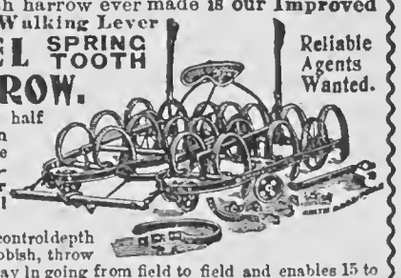

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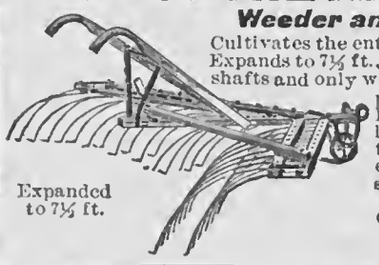

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THE TUNIS BREED OF SHEEP.

Mr. Clark Allis, of Medina, N. Y., has been known as a "Dorset man" from his success with the Dorset in producing early lambs. He now wants to be known as a Tunis man, as the last-named breed has finally beaten the Dorsets on his farm. Among other things he says:

"I have about 200 grade ewes, and turned a fine Dorset ram, one year old, and a Tunis ram, three years old, into the flock in May. The Dorset was boss, but when the lambs began to drop most all were Tunis. The best day's work was 10 lambs, and seven were Tunis. The Tunis lambs, both half and pure bloods, are red or spotted, and look like Water spaniel dogs. I went to the lot one night and in the dark I thought I had found a litter of skunks, but it was only six little red Tunis lambs. The best lamb I ever saw (and I have seen several, for I shipped nearly 800 last season) was a spotted Tunis grade we killed December 14, 1900, and its tail was just one chunk of fat after the skin was off, and nearly as big as my wrist. This lamb brought $1 more than the best Dorset. This is the first crop of grade Tunis I have ever seen. The Tunis, both rams and ewes, are very gentle and kind, and at the Brockport Fair, where I showed them, a wool expert said the wool was different from anything he had ever seen raised in this country, like some of the grades that are imported at a stiff price."

Mr. Allis sends some pictures of the lambs which are, unfortunately, too dim to engrave. One picture shows a white lamb with a red skin. The red lamb died—the skin was put on a white one, and the ewe at once accepted the substitute.

NORTHERN CATTLE AND TEXAS FEVER.

As to the proposition of a Michigan reader of THE R. N.-Y., on page 21, to take a herd of Holstein cows into one of the Gulf States with the intention of doing a dairy business in the South, this plan will certainly fail from a business point of view, because almost all of the adult cattle will probably die of Texas fever within the first year. I understand, however, that some dairies in New Orleans are managed successfully by stocking them with northern cows only, and that these are brought down by boat, and never become infected with the germs of Texas fever. This method should not be attempted by one who has not lived some years in the South, and who does not know how to avoid the cause of fever. It occurs to me that your reader's best plan will be to immunize all his animals under two years old, while they are on the farm in Michigan. To do this he should have a southern-raised cow or steer at his farm to supply the infected blood for inoculation. From the jugular vein of this animal draw the blood into a hypodermic syringe of the ordinary pattern, and immediately inject into each of his young cattle one to two cubic centimeters hypodermically. This will cause genuine Texas fever in the animals in about 10 days. The danger of death is not great if the bowels are kept open. The most practical way to do this is to graze the animals on young stuff—say young wheat. Any tendency toward constipation should be promptly met with a pound of salts dissolved in warm water. The attack usually begins about the tenth day after inoculation, and ceases about the eighteenth to twentieth day. Nothing further is noticed until about the thirtieth day after inoculation, when the fever will rise again, and take a course very similar to the first attack. The results of these fevers are several, viz.: loss of flesh, a deadening of the hair, and in some case an arrest in growth.

After some time, say three or four months, repeat the inoculations, using two to five cubic centimeters of blood. This work should be done only when there is green feed available. The animals must be very warmly housed during cold weather, because the fever thins their blood, and they are likely to suffer from severe cold. Having done this, inoculate all the young calves every few months, and they will probably be reasonably safe against the fever contracted in the ordinary way in the South. No danger whatever exists in allowing the animals to associate together on the farm in Michigan. By proceeding in this way your reader could in a few years build up an immune herd, and then he could move South without great interruption in his business. The old cows cannot be moved South to advantage. The Texas and Missouri experiment stations have made a special study of this problem, and their experiments embrace over 2,000 fine cattle, which have been subjected to the process, with a mortality of less than 10 per cent. It is not advised that one who knows nothing of the nature of Texas fever attempt this on a large scale, but he should try a few animals at a time, say 10, and familiarize himself with the disease before going South.

M. FRANCIS,
Veterinarian of the Texas Exp. Station.

DEATH IN PAINTED SILAGE.

I inclose a clipping from the Garrettsville (O.,) Journal that will be of interest, and importance to the readers of THE R. N.-Y.:

The loss to H. B. French from painting the inside of his silo with lead and oil, whereby six of his cows were poisoned and died, is considerable, and may amount to $1,000. His silos contained the product of 15 acres of corn, which will probably have to be removed and lost; will require a large amount of labor, also in scraping off paint. It will be a warning to farmers not to paint the inside of their silos with lead, as the acid takes off the paint and poisons the contents.

Just think of raising and caring for 15 acres of corn, of harvesting and storing in a silo, only to kill his own cows. Just think also of digging out and carting off the remainder of the silage. And yet this man was hardly blamable. He was only using the utmost caution to preserve (as he thought) the inside of his silo, and make it still more airtight. But what a mistake one may make when he thinks he is doing right! It should be a warning to others.

Ohio. A. R. PHILLIPS.

R. N.-Y.—We are sure that the best authorities have again and again advised farmers not to paint the inside of the silo. Some have suggested a smear of gas tar, but lead paint has not been suggested by anyone who has really studied the matter.

FEEDING CANNERY WASTES.—I find the by-products of the canning factory of considerable value. Last Summer we drew many tons of peavines home, and put them in our silo. They tided us over the drought. In the Fall we find that our cattle give fine results on the fresh corncobs and nothing else. We purpose the coming season, if possible, to fill our silos with peavines and use them in the Winter as a substitute for part of the corn silage. We last year had 17 acres of sweet corn for the factory. This brought us $340. We also filled our silo with the stalks, which will feed our herd of 18 cattle for six months. Our crop of corn last year was somewhat shortened by the dry weather.

Auburn, N. Y. F. H. K.

SHREDDED SILAGE.—Replying to C. R. W., regarding the value of cut or shredded corn silage, I find no difference in the feeding value. I have had experience with silos and silage since 1885, and the past two years have used the shredder in filling, and find that my silos will hold more tons of feed than they will with the silage cut. A good point in favor of the shredder is that the silage lies closer and excludes the air better. I find, however, it requires eight horse-power to a shredder to do the same amount of work as six horse-power to a cutter. J. S. W.

Whiteford, Md.

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Prepared by Dr. Earl S. Sloan, Boston, Mass.

A LIVELY DAIRY MEETING.

Connecticut Cow Owners Meet.

The Connecticut Dairymen's Association has nearly reached its majority. Its twentieth annual meeting was held in Hartford, January 15-16. The attendance was unusually large, and a goodly proportion of those present were young men under 30 years of age, which is an encouraging sign of the times. In his annual address, President J. B. Noble stated that the Association existed solely for the practical side of dairying. Successful field meetings have been held at various farms, and a number of dairy institutes. Market is good for first-class creamery butter, as western competition is not increasing. Many in the West have gone back to beef breeding, as prices have increased, and beef growing is easier than dairying for the lazy farmer. Cost of production must be lowered, but quality must be maintained. There is a good opportunity on the back farms to raise milch cows for the retail milkmen.

John Gould, of Ohio, gave an illustrated lecture, "Does Dairy Temperament Have a Type?" Mr. Gould said that the farmer is better versed in all other live stock upon the farm than he is with the cow, which is expected to make his money. He illustrated his talk by a dozen oil paintings and said that the Connecticut farmer should stop mixing breeds and stick to one breed to get profit out of his dairy. Mr. Gould then gave a descriptive picture of the type of cow that devotes all her energy to the making of beef, and contrasted her with the cow that devoted her energy to the making of butter, which instead of showing a pound of four-cent beef for the feed energy has a pound of butter at 20 cents instead. The best type of dairy cow, said Mr. Gould, is the one that in conformation is harmonious to the running horse. The characteristics of the running horse in conformation were detailed by Mr. Gould, and then with the aid of the paintings he showed these characteristics in the cows which were known to devote their energy and nerve force to the making of milk and butter. Mr. Gould said that he did not champion any breed of cows, but in order to get the required amount of nerve power and energy he thought that the proper cow for the dairy should be bred along Jersey lines. He advocated that the mixing of breeds be stopped. The farmer must stop adding new influences to his herd and endeavor to get the influences in the herd cut down to as few as possible, and have them work in harmony. The farmer should have a special cow for special purposes. He should decide the kind of a herd he wanted and then follow line breeding and stop heterogeneous breeding. If the cow gives 3,200 pounds of milk a year we pay $5 a year for associating with her, but if she doubles the quantity she pays $25 a year for associating with us. The production of milk is the product of the stimulation of nerve force.

Dr. N. S. Mayo, of Connecticut Agricultural College, talked on The Health of Dairy Cows. He emphasized the fact that as the boy is father to the man, so the calf is mother to the cow. We should start with healthy calves, and keep them so. Give them plenty of pure air, plenty of exercise, and keep them in the sunshine. In the words of a popular hymn: "Let the blessed sunshine in." Fresh air and sunshine are the greatest enemies of disease, while darkness breeds disease. Don't breed too young. In reply to a question from Mr. Hoard, Dr. Mayo said that heifers should not calve until three years of age. Gov. Hoard maintained that at that age they were very likely to lose the milking tendency, and to be beefy. Grow up the calves separate from the cows; have a different barn. Most cases of human tuberculosis have been started before 21 years of age. If we can raise the calf and have her perfectly healthy at maturity we are well on the right road. Cows should have separate stalls, and if watered in the barn separate basins. Stables should be thoroughly cleansed twice a Winter with disinfectants, and whitewashed. This in addition to the careful daily cleaning. Cows coming into such stables will think they have a new lease of life. Mangers should separate so that one cow cannot slobber in her neighbor's manger. Separator skim-milk was said to be better for calves than that set in pans. Calves in Connecticut are fed too much, and not often enough.

Dr. Jordan, of the Geneva Experiment Station, gave a sharp, witty address on the Commercial Relations of the Farmer. He showed how the farmer had departed from the days of old, when everything he needed and used was produced on his own farm; he now buys almost everything. This is often to his own detriment. Dr. Jordan said that the farmer should know what he is buying, and its value. Buy on its merits alone, not on testimonials. Don't believe any of them. Have nothing to do with them. He carefully and fully explained the difference between the two great classes of feed by-products; those wherein the residue is a better food than the original grain, such as the gluten meals and feeds, cotton-seed meal and linseed meal, and the foods which are so poor after the parts the manufacturer wishes are taken out. Among this class are the different varieties of oat feeds and feeds using proprietary names. These are fixed up to dispose of some product which could not be sold on its own merits. The basis of many of these is oat hulls. They are having a big sale, but are not worth what they are usually sold for. Better let them alone, as the simple statement of their analysis doesn't represent their contents, and one of these foods may have a fair amount of crude protein, but much protein and carbohydrates that are indigestible. Mixed feeds are also uncertain quantities and liable to contain insoluble refuse from the mills. H. G. M.

BEET SUGAR PULP.—I am not authority regarding the feeding of sugar-beet pulp, as I have never fed it, although only 35 miles from the beet sugar factory. I have given the matter some consideration. I would have to haul the pulp three miles up grade from the railroad, and as the feed contains a great deal of water, there is much objection to doing this. The freight on so much water is also quite an item. It is claimed that silage can be provided for from $2 to $3 per ton. If so there can be little profit in paying $1 a ton for pulp, paying the freight for any considerable distance, and doing a lot of hard, disagreeable work in handling and feeding, to get a feeding stuff of less than half the feeding value of silage. I have no doubt about the profit of feeding the pulp by those who are rightly situated, and whether a person is rightly situated or not he must decide for himself.

H. H. L.

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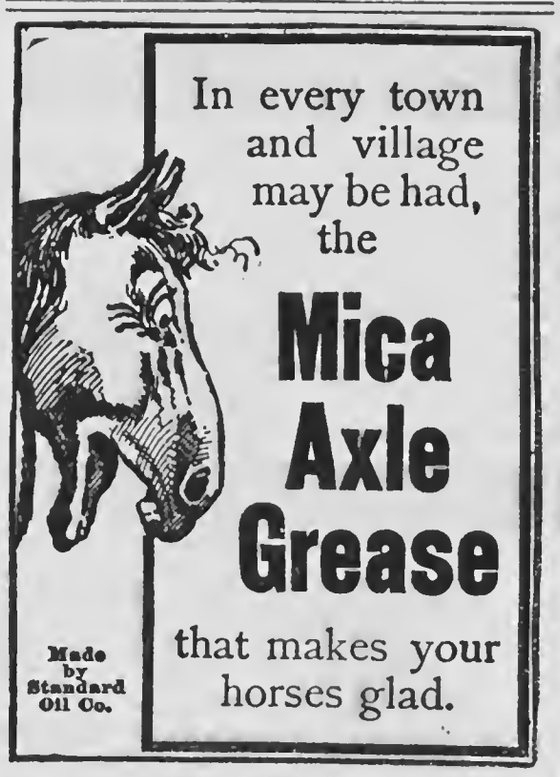

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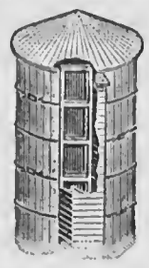
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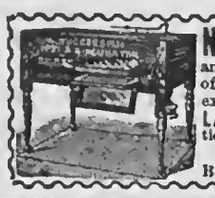
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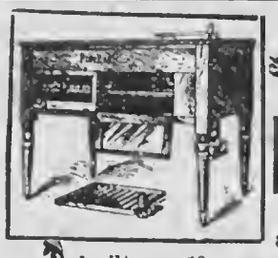
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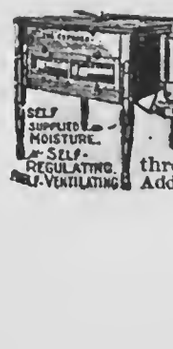

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"Mamma, I heard somebody to-day say that matches were made in heaven." "I believe that is true, Willie." "Well, do they want matches if there's going to be no night there?"—Australasian.

"If you'll split some wood I'll give you a good meal," said the lady of the house. "Excuse me, madam," haughtily returned the wanderer. "I never begin breakfast with a chop."—Philadelphia Record.

Good Man (sadly): "Ah, my son, you have been to the circus; it pains me greatly that one so young should have crossed the threshold of iniquity." Bad Boy: "But I didn't cross no threshold; I crawled in under the tent."—Gaiety.

"Who was Esau?" asked the Sunday school teacher, who was testing the Biblical knowledge of her pupils. "Esau," replied the prompt scholar, "was the man who sold his birthmark for a pot of massage."—Pittsburg Chronicle-Telegraph.

A school board inspector once asked a class of children if any of them could tell him what an epidemic was. No answer. "Well, let me prompt you. An epidemic is anything that spreads. Now, what's an epidemic?" "Jam, sir," replied a boy promptly.—Brooklyn Life.

Mabel: "That young Huddleston has asked you six times to marry him, has he? I wouldn't feel irritated over that if I were in your place. You ought to look upon it as a high compliment." Maud: "That's all right enough, but I don't like the idea of his making a continuous performance of it."—Chicago Tribune.

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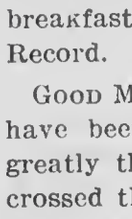

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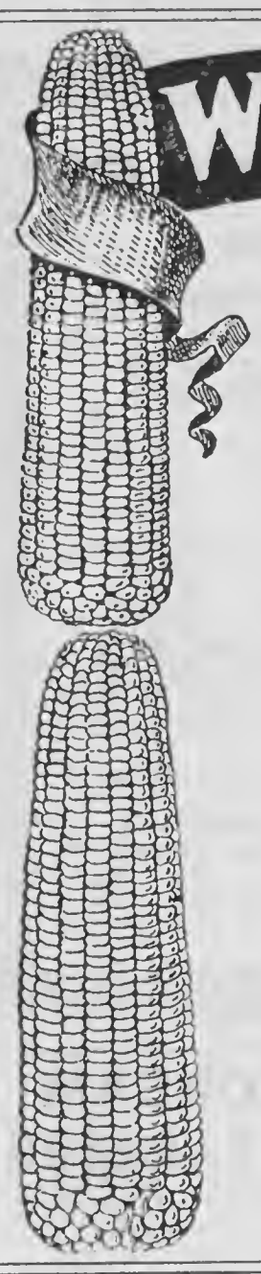

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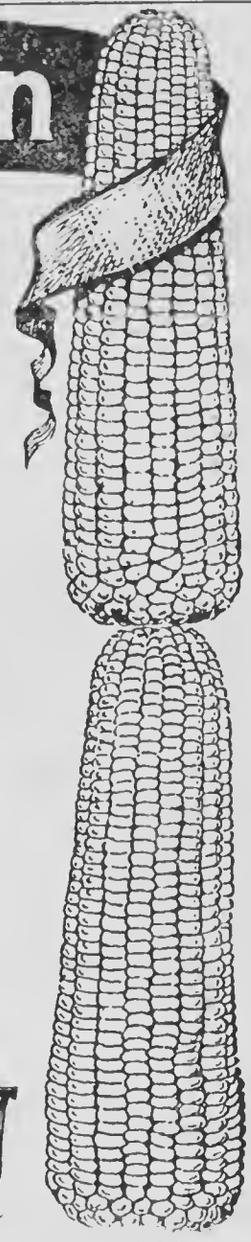

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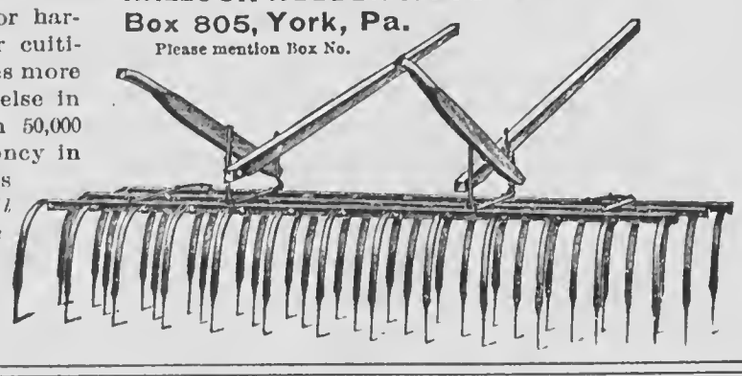

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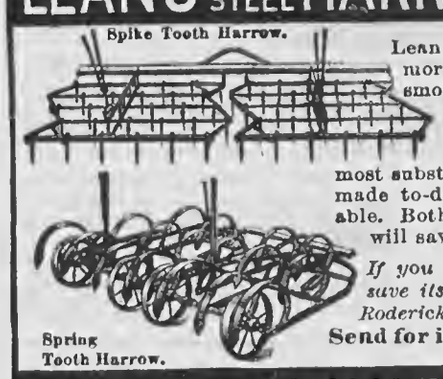

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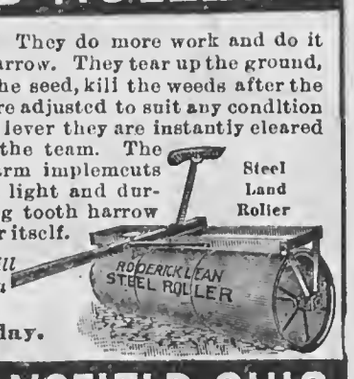

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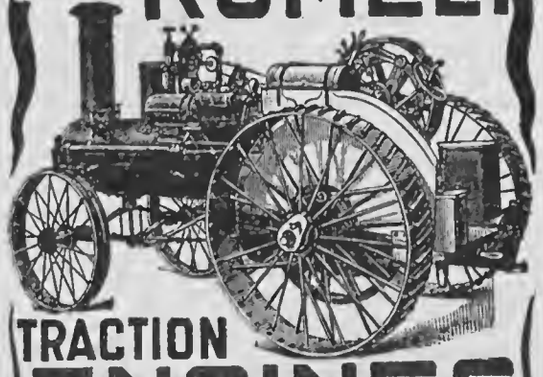

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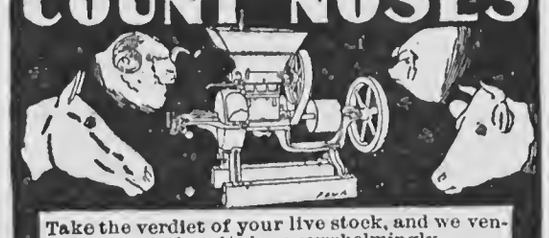

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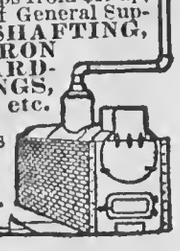

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2663. NEW YORK, FEBRUARY 9, 1901. $1 PER YEAR.

ESSENTIAL PRINCIPLES OF PLANT GROWING

THE BABY TOMATO VINE AT SCHOOL.

Water and Air in its Education.

FIRST REQUIREMENTS.—The essential features in growing early vegetable plants, such as tomato, pepper and egg plants under glass, as I see it after nearly 20 years' practical experience, are as follows: First, location of the beds; after several changes I have found that a moist bottom, with natural or artificial wind-break (natural preferred) is the most desirable place to set the frames. Second, seed is of vital importance. Be sure you have good seed of whatever plant or variety you wish to grow, and this is best obtained by selecting your own from the ideal plants in the previous season's crop. Too much care cannot be exercised in this direction. If looking solely to earliness select with that end in view. If trying to raise fancy stock of any kind this would be the first thing one would do, and seed in vegetable life is just as important as it is in animal life, and the returns are much quicker. Third, growing the young plants. This is usually done in the ordinary hotbed, with stable manure for bottom heat, and the ordinary 3x6-foot hotbed sash for covering. Sow the seed in drills four inches apart, in not less than five inches of good garden soil, covering one-half inch deep, and firm the soil on top. I do this by rolling with a hand roller. As soon as plants begin to break ground give plenty of air, to insure a short, stalky growth. If the manure and soil used in the seed bed are fairly wet when the bed is made no more water will be needed till after transplanting. To insure good stalky plants the temperature should be from 50 degrees for night to not above 80 degrees during the day. A high temperature induces a tender, slender growth, and is to be avoided at all times if possible. At the end of five weeks from day of sowing the seed the plants should be ready to transplant to the cold frames, as they are usually called. These are of two classes, one for such as cabbage, lettuce, etc., and one for tomatoes, peppers and egg plants; it is the latter class that I wish to describe here. They are made by placing about two inches of barnyard manure in bottom of frame, put on at least five inches of good garden soil, that has previously been composted with a liberal amount of old fine manure (cow manure preferred); have this thoroughly mixed and made fine before putting on the bed. Be careful to get it on evenly if you wish uniform growth of plants; rake level, mark off in checks the desired width. I usually mark mine for early tomatoes and egg plants five inches each way, and pepper plants two and three inches each way. Fig. 32 shows a group of hotbeds situated on my place, made as I have described.

MR. HULSART'S HOT YARD IN NEW JERSEY. FIG. 32.

TRANSPLANTING.—No one can tell another person on paper how to transplant; this must be learned by seeing it done or studying it out. I usually transplant my tomatoes twice (but not my pepper and egg plants) and think it pays me to do so, but as there is a much larger army of growers that believe in only one transplanting, saving that extra labor and expense, I purpose to deal with only one in this article. We will call the seed bed the primary department, and the transplant bed the grammar and high-school departments, Now we have the plants promoted from the primary to that of the grammar and high-school departments and a great deal depends on the "principal" in these departments. If transplanting has been well done, the plants will show signs of new growth in about six days or a week. As soon as new growth is noticed, a liberal amount of fresh air is not only advisable, but absolutely necessary, and at the end of two weeks from time of transplanting the sashes should be removed entirely on all clear still mild days, recovering again towards night, according to the day and temperature. Keeping the sashes on continually makes a tender succulent plant, that will not stand transferring to the field, as early as one that has been treated as suggested above.

WATER.—This is another of the essentials in plant growing; a liberal application when needed is far better than numerous waterings that only wet an inch of the soil on top, inducing shallow rooting, which is wrong. This is why I have found moist bottom ground the best on which to place the frames; it insures a certain amount of capillary attraction, and lessens the labor of artificial wetting. Trim the leaves a little when the foliage becomes dense enough to shade the whole ground, as shade causes the plants to spindle. I am speaking now solely of tomato plants, as pepper and egg plants do not need trimming; on the contrary, it seems to do them a positive injury, and will do the same to tomato plants if done too severely. Remember always that when you cut the leaves from any plant you are taking away a part of its lungs. Six weeks is about the proper time for a plant to be in these departments of our school; then, like the child who has finished school, it is ready to be launched on to the world, and if proper conditions and training have followed it till now, nothing short of success should be expected. The future crop depends on the young plant's constitution.

To sum up: Sow good seed (in this latitude) last week in February in drills four inches apart, do not let seedlings stand thicker than three to the inch; air freely and do not let them get more than four inches high by April 1 (and half that height is sufficient if you are going to transplant twice), when it will be time to transplant to the cold frames. Shade lightly for a few days after transplanting if sun is bright, or until plants catch fast; air as much as weather will permit, taking sashes off as mentioned. Make waterings as near nature as possible. Trim to let in sunlight, but as sparingly as possible, all this done with judgment. By May 10 you will have plants that will do their best in the field if natural conditions are fairly good. Fig. 33 shows well-grown plants ready for setting.

C. C. HULSART.

Monmouth Co., N. J.

R. N.-Y.—On page 365 of last year's volume we told about Mr. Hulsart's "hot yard," a picture of which is shown on this page. The "yard" consists of a collection of long hotbeds. It is located in a rather low place, away from the winds, with a natural wind-break which shuts off heavy gales. Water is very necessary for the plant babies, and this is supplied from the barrel shown in the picture. At the time of our visit there were about 50,000 plants in the yard. The largest ones were being delivered in the shape shown at Fig. 33. In taking them out the soil was cut into squares with a sharp knife, and then the squares were lifted out on a fork as shown in the picture. When finally set in the ground these squares were cut again, so that each plant had its little block of soil. When this is set in a hill, and the earth packed up around it, the plant barely waits an hour in its growth. Of course this plan of handling pays only with the very earliest plants. Mr. Hulsart's system aims to induce earliness, and to promote rapid and vigorous growth, in which it is most successful.

STATISTICS OF AN APPLE ORCHARD.

In estimating probable yields from an orchard of apple trees there are many elements of uncertainty. Adaptability of variety to location, cultivation, including pruning and fertilization as well as care in securing and disposing of crop to best advantage, are ever causes of variable results. Besides, the last few years have been marked by far greater care in each of the above named particulars in the treatment of orchards everywhere; therefore better results may be expected than have been attained heretofore. We have trees now fruiting that were top-worked about 55 years ago. They stand along a fence bordering a field that was used for a succession of farm crops, including hay and pasturage. The last 15 years a vineyard has occupied the land. This has been regularly and carefully cultivated. On the other side of the fence the conditions are almost identical. These trees of Westfield Seek-no-further (now known in market as Seeks) have been regular croppers, and the quality of the fruit of uniform fair quality; yielding on the average from three to four barrels of marketable fruit a year. An orchard of mixed varieties, set about 45 years ago, 33 feet apart, was cultivated till it had been in bearing seven or eight years; then used as a hog pasture. It shows a great difference, owing to difference of varieties. Gravenstein, Greenings and Baldwins have made large growth, and have cropped well, usually every other year. Early Harvest, King and Dominie trees have not made such vigorous growth. King has generally matured only a light crop. The fruit of Early Harvest has been very imperfect, while Dominie is inclined to overcrop; fruit generally of fair quality. Some trees have been removed, and other varieties set in. The Gravenstein, Greening, Baldwin and Dominie trees have probably averaged three barrels each every bearing year.

An orchard of 150 trees, set 40 feet apart in 1891, of Fall and early Winter varieties, has been carefully pruned and ground well cultivated since it was set. In 1898 most of the trees bore some fruit. Last season there was probably an average yield of half a barrel on each tree, but the gale of September stripped the trees of some varieties. Wealthy and Boskoop held on fairly well, while Pound Sweet, Twenty Ounce and Gravenstein were nearly all blown off. Some crab apple trees set in 1894 had fine crops last year. They appear to come in bearing sooner than most varieties of apples. From my experience I judge that most kinds of apple trees, if well cared for, will begin to yield paying crops in from seven to 10 years, and that an orchard 20 years old well cared for should yield from seven to eight barrels a tree on bearing years. We have not yet been able to be sure of a crop every year. There is no doubt that orcharding has become so popular that in a few years it will be difficult to dispose of a full crop at remunerative prices. Then fewer varieties that are perfectly adapted to the location will be most profitable to the grower. W. D. BARNS.

Orange Co., N. Y.

LATE TO MATURE.—I cannot expect very much from a young apple tree until about 15 years old, and at 16 years of age I have had 80 Greening trees average three barrels to a tree, and one or two had seven barrels each at that age. All of my bearing trees are set 33 feet each way, making 40 trees per acre. I have 10 acres of trees 30 years old that average three barrels to a tree each year, 100 of them Greenings and 300 Baldwins; but these trees are too close, and I have set my young orchard 40 feet one way and 37½ feet the other, with the trees in the second row, half way between the trees in the first row, so the trees are really 40 feet from each other in any direction. The Greenings bear a little earlier than the Baldwin.

Ontario Co., N. Y. T. B. WILSON.

HOW VARIETIES DIFFER.—The type of an orchard is so modified by environment, that only approximate answers can be given. With good care and tillage Ben Davis trees should bear a moderate crop at six or seven years, Baldwin at eight, Spy at nine or 10. Within 20 years from planting Baldwin, and perhaps Spy, should give an aggregate yield exceeding Ben Davis, and averaging at 20 years a crop of five to 10 barrels per tree every alternate year. In general practice this yield is the maximum to be looked for, one orchard with another, where trees average 40 to 50 per acre. After 20 years the size and quantity of the fruit may be kept up only by careful fertilization, tillage and pruning on our average light soils. The above answers apply to standard varieties, selected exposure and soil, and expert care. No other conditions are likely to pay expenses commercially in the near future. The market more and more is calling for the best grown selections of old, standard varieties, and the superseded and newer unknown kinds are generally grown at a loss. With ordinary farmers' care the Spy comes into bearing at 15 to 20 years, and is seldom profitable. The Baldwin endures more abuse, yielding at 10 to 12 years, and Ben Davis rather earlier, though in our latitude the latter is unprofitable except with high culture. WM. H. HART.

Dutchess Co., N. Y.

CHESTNUT FARMING IN PENNSYLVANIA.

For the past few months an item about as follows has been going the rounds of the daily papers:

E. W. Warner, of Williamsport, Pa., is the owner of probably the oddest farm in Pennsylvania, says the Chicago Inter-Ocean. It is a chestnut farm, located in the mountain district of northeastern Lycoming County, near the Sullivan County line. The original saplings or sprouts were culled from a wide area of chestnut thicket, trimmed into shape, then grafted with the American sweet chestnut, a native nut of Pennsylvania. The result has been marvelous. This year was the third bearing season for the trees, and some of the nuts were astonishingly large, some of them measuring more than an inch across and growing as many as seven in a burr. The flavor of the nuts, it was feared, might be impaired by their size, but the kernels are as fine and sweet as the choicest Pennsylvania chestnut picked up in the fields. In order to preserve the trees from bearing prolifically, and thus endangering the growth of the tree, Mr. Warner went through his orchard when the burrs began to form and whipped off at least one-half of the fruit.

Several years ago we visited the hillside at Marietta, Pa., where H. M. Engle had grafted many natural sprouts to Paragon chestnut. They were then very promising, but within a year or two the weevils injured the nuts so as nearly to ruin the enterprise. We wrote Mr. Warner for the facts about his grove, and he replies that the report is quite correct. He has 2,000 trees, not of course in rows, but here and there as the stumps grew. Mr. Warner also says:

As regards the Chestnut weevil I anticipate no serious trouble from it, as the insects are confined to certain geographical zones or belts. According to my experience and travels of more than 20 years as a

TOMATO PLANTS ALL READY. Fig. 33.

geologist and mineral expert, throughout the mountains of the various States of the Union, I find that on certain slopes and at certain altitudes where the chestnut grows well and bears the finest nuts, the weevil is not known. Such weevil-proof belts exist in many places in the mountains of Pennsylvania, and to these commercial chestnut growers must go if they wish to succeed at the business. As regards native or extra large chestnuts, Nature has been planting and the forests growing them for hundreds of years. It remains for man to find these large and special nuts, and propagate them by grafting. A friend of mine some time ago told me of a wild seedling that he gathered nuts from, and which took but 40 chestnuts to fill a quart measure, which is about the size of the largest Paragon chestnut. As far as my experience goes as chestnut grower, I am quite well satisfied with the venture, and believe chestnut farming can be made to pay handsome returns, provided care and intelligence are used in grafting choice nuts in selected localities.

THE ART OF USING A BUCK SAW.

Standing behind a bucksaw and keeping it in motion is an art—sometimes an aching art, forsooth, as in the case of the laborer who said, "No, he didn't have the toothache nor the stomachache, but he did have the saw ache mighty bad." To do this, and yet work easily, requires an artful man. First let us look at the saw. Keep the teeth points sharp. Do not set the saw until it actually gripes in the log. The narrower the cut, with the saw running freely, the deeper goes each stroke—but keep the teeth points sharp. Touching up the teeth with a file every day is not too often. It pays. You rest yourself and saw wood fast while filing. As to the actual work of sawing, changing from one set of muscles to another is restful, i. e., throwing the work from the arm and chest muscles to the back and abdominal muscles. Remember it is your weight on the down stroke, steadily applied, that cuts. In a large log, start with the arm motion, and when the saw is well started, put on your weight and see the sawdust fly. Never fret because the fire stick does not drop. Keep the saw sinking into the wood and it will drop. How about big sticks that you can just drag to the buck? Why not split them with beetle and wedges in the woods? You can split as fast as with an axe, and each stick is handled at least four times before it is cut up. More sticks to handle? Yes, but try it.

Always have a support for the small end of the stick—an old box will do—and be sure it is as high as the buck. If there is no support, the small end of the stick trails on the ground. During the first two or three cuts the weight is not balanced on the buck and you must hold the stick to its place with your knee and weight. In this cramped position, the muscular power is lessened, and some of the weight that should be used in cutting off the stick end is used up in this auxiliary work. In a good-sized stick put both feet on the ground—left foot under the buck—and get motion by swinging the body back and forth with some pressure on the downward stroke. Don't guess entirely at the stick lengths. Have a measure of the stove fire-box, and on big sticks use it. It may save a whole cut. When you begin to ache sawing, quit and split. RICHMOND CONKLIN.

FARM LIFE IN A COLD COUNTRY.

We have had good sleighing here since November 25. The snow came with some rain, so it is solid, like Spring snow. We draw hay down from barrack in upper field, on the crust, with a team. I think it pays to build hay barracks in distant fields, so we can hustle the hay in in a hurry, when we are haying, and then we draw it in on sleighs in Winter with little expense. I cut my wood in the Fall, and pile it in log lengths in the woods, and draw it on sleighs: have it cut into stove lengths with a two-horse power. I pay $2.50 per day for power and team, and one man, and I furnish three men, two to get the wood to the saw and one to throw it back after it is cut. We all have to hustle, as we cut enough in two days to last me a year (about 50 cords). We use circular saw, and can cut a log 14 inches in diameter by turning it. Small wood two or three inches in diameter we cut four to eight poles at a time. We have seasoned wood to carry us through 1901, and the wood we cut this Winter we will burn next year. I usually have it split and piled in the shed before Spring work comes on. Two cords of seasoned wood (seasoned under cover) will go further and give better satisfaction than three cords of green wood. I think wood will lose 20 per cent in value if left out doors. First have good ventilation in shed, and then pile wood in as fast as it is split (if not wet by rain). Then you will have seasoned, dry wood that is of good weight.

I have 150 hens, and they are on strike this Winter; very few eggs. I have not had much time to attend to them, and perhaps there are too many walking delegates among them. It is wonderful how the cattle and sheep mow away the hay this Winter. We had to feed about a month earlier than usual. Think of it, sleighing since November 25, and no doubt it will continue well into April! I make calculations over my hay daily. If the upper barrack will last until February 1 perhaps the big barrack by the road will carry me through March. Then will the one in Riverside meadow and the other one on the hill carry me through April until May 10? I fear not; 28 cattle, 31 sheep and a pair of horses get away with a lot of fodder every day. The pigs in their warm cellar seem to be enjoying the Adirondack Winter. We put in a lot of buckwheat straw and let them burrow into it. They are doing well on skim-milk, apples and a very little ground feed. We killed six this year; put hams and shoulders in pickle, found ready sale for sausage, loins and bacon, and have packed the thickest pork in barrels, more than we can use, but I always find ready sale for it; never had an ounce of salted pork spoil. The last snow drifted somewhat. The weather has turned colder again, but with three good fires in the house and plenty of dry wood we manage to keep comfortable. The foxes bark around us at night and keep "Pup Sir" racing up and down to drive them away. We draw up to the fire and read THE R. N.-Y. and our New York daily, toast our shins, and perhaps snooze a little before it is time to go to count the cattle and sheep and feed the horses before we go to bed. S. C. A.

Warren Co., N. Y.

BEARDLESS BARLEY.—A new beardless kind called the Success has given good satisfaction at the Dominion Experimental Farm, Ottawa, yielding as high as 51¼ bushels to the acre. As far as I can learn there would be no risk in sowing it as extensively as any of the bearded varieties.

Canada. J. J.

CORN FOR HORSES.—Years ago corn and rye were grown—never oats except in rare cases. Hence, horses were fed on corn until long after the source of supply had shifted to South and West. Thirty years ago the horses on stage line from Provincetown to Orleans (25 miles or more), were fed a grain diet of corn exclusively. Of course, it may not be an ideal diet, but a horse of quality will show it on corn as surely as on any diet. A lunkhead can't be made to show spirit by any diet whatever.

Cape Cod, Mass. A. L. S.

WHERE SUBSOILING IS BENEFICIAL.

Its Use in Stony Fields.

In the main I agree with the writers who gave their views on subsoiling on page 5 of THE R. N.-Y., but there are lands that would be materially benefited by the use of a subsoil plow properly handled. I have owned such a plow, and found it practicable to use it upon nearly the whole of my land under cultivation. There is a great deal of land in New England that has been plowed over and over again to a certain depth, the depth being determined by the ability of the plow used to get down into the soil. On lands free from small stones, whether sandy or clayey, a good plow may be made to go down according to the power of the team attached, but if the subsoil is as hard as a common road, made so in part by the treading of the team for a hundred years, and this subsoil is also made much like a pavement by small stones that always throw the plow out of place every time it passes, no satisfactory seed bed can be made till this condition of things is changed. I have found nothing equal to a good subsoil plow for putting the land in shape for subsequent easy cultivation. The plow I used would run a foot deep without turning up any furrow or bringing any of the subsoil to the surface. It simply loosened the soil to the depth it was allowed to run, moving every small cobblestone so that any ordinary plow following it either immediately or ever afterward would hold its place, going under rather than being lifted out by the little paving stones.

When these subsoilers were first introduced it was expected that farmers would have a second team to follow the sod plow and stir up the subsoil at that time, or, using the same team, unhitch and change plows at each "round," but I found it a much better way for me to do the subsoiling in old ground that had been worked a year or more. I have subsoiled acre after acre in this way with a team of three horses abreast, with the reins over my shoulders, at about the same cost that would have been required for ordinary green-sward plowing. Were I preparing a field for nursery trees or an extra good garden I might cross-plow in the same way, thus tearing the soil more thoroughly, and loosening up the small stones even more completely. I usually followed the subsoil plow with a two-horse cultivator with strong teeth, and which would work the top soil as deep as necessary, hauling to the surface most of the small stones that the plow had loosened. All land that I have thus treated has been made much easier to plow in after years to the depth desired. I am not an advocate of very deep plowing for all land, but I want all cultivated land so that it can be plowed to an even depth with an ordinary plow, and I want the soil so free from cobblestones that the best tools for cultivation can be used without danger of breaking them. A subsoil plow should have a wheel in front under the beam to gauge the depth, and to aid the plowman in lifting out at the ends of the furrows. I used my plow a great deal in loosening up the soil when digging drains, thus saving manual labor with pick and bar. I expect very little sandy land would be improved by subsoiling, and I have no faith to believe that undrained clay would be permanently bettered by running a subsoil plow through it. But the soil of my farm was made easier to cultivate for all time, and without any injury to its quality or productiveness.

A. W. CHEEVER.

THE ESOPUS SPITZENBURG APPLE.

Thanksgiving Day is now weeks back in the old century, and further allusion to it will hardly be expected. But I trust it is not yet too late for a few comments upon the situation of the Hope Farm man alone in the old house on that night which he so aptly called "a trap for memories." It was a pleasant picture he drew for R. N.-Y. readers, as he looked out upon that damp moonlit valley, with the snapping wood fire blazing at his feet and "Grandmother's big nutcake within easy reach" there beneath those old wooden beams, in the shadow of four generations gone before. Strange noises he hears, and strange things come into his mind. Yes, who will doubt it? Spirit visitors wish him well, he says, but lament their inability to impart the real mystery and end of human life. So he thinks it all over for himself, and concludes that "human days are all too short for us to be properly thankful for the privilege of living and attempting to do our duty." I like his conclusion, and enjoy the whole picture. But lest I become too serious over the matter let me refer more particularly to what may have been my primary object in marking this article for immediate reference. He said he had "plenty of Baldwin apples near by." How sorry I was that he had nothing better in the way of an apple than the Baldwin! It was the only blemish in the the whole picture. How much I wanted to reach right down into my barrel (and the fruit is getting low down now) of Esopus Spitzenburgs, and hand over to him half a dozen of those glorious apples that grew right up here at the base of the Catskill Mountains. Yes, it was the very thing he lacked. I know that he knows just what a good apple means, because I've heard him talk about it in print. And this is the reason I want to extend to him my sincere sympathy even at this late date. Some people would be easily satisfied with the Baldwin apple, as they are with the Concord grape, the Duchess pear or the Egg plum, as the markets conclusively show; but not everybody. Is it right to be satisfied with inferior things when with the proper effort we can have the better? Contentment is indeed a most valuable attribute, and its lesson might well be studied more by the average mortal in this imperfect life, but to be content sitting down with folded hands is one thing, and being content standing up reaching out for something better is quite another.

If I remember rightly this Hope Farm man is a member of the Apple League. He likes apples, asks for them at hotels and restaurants, and eats them between meals, perhaps, as I do. Why I wouldn't give one of my Esopus Spitzenburg apples for half a dozen of the best oranges or any other fruit that can be named. And let me say here, I don't like this attempt to abbreviate the good old-fashioned name of this grand apple, calling it "Esopus," and either leaving off its characteristic title altogether, or italicising it as a mark of insignificance, as the American Pomological Society list now has it. My good friend Van Deman, of THE R. N.-Y., is doing this, and I wish he wouldn't. For the past year or more I have been trying to trace the precise origin of this princely apple. Mr. Brackett, the Government Pomologist, wrote me, telling how silent the record was on the subject and how anxiously he would await the information I was after. Well, I kept up the investigation until one day I received some rather careful data from a private source to the effect that the apple was of foreign origin. Of course it could not be proven, but the thing looked so dangerously authentic on its face that I abandoned further search then and there. But, of course, I don't propose to give up its domestic nativity, and I'll stick to Downing as my authority. It must have come to light here on the Hudson in this Esopus region. They can't produce such an apple outside of America. The trouble is if we don't plant it more than we have of late they'll begin to claim that we can't produce it any more here either, and that isn't true.

H. HENDRICKS.

WE want more information about silage cut with a shredder or "Blizzard." Does it pack closer in the silo? Does it heat less than when merely chopped?

DOUBLE-FLOWERED NASTURTIUM. FIG. 34. SEE RURALISMS, PAGE 88.

GRASS SEED AND NURSE CROPS.

Experience in Spring Sowing with Oats.

After reading what my friend George M. Clark has for years been saying about sowing grass seeds and corn, after reading what my other friend, A. W. Cheever, has to say on page 847 of last year's R. N.-Y., I am afraid I shall go right on sowing grass seed in the Spring with oats. I know my brother farmers will point the finger of scorn at me for acknowledging this, but perhaps if I tell them how I do it I shall not be ruled out for unprofessional conduct. Until well into the Winter my stable manure goes on to my meadows as top-dressing, and when I am disposed to plow a piece it is not exactly barren. When I plant corn and potatoes I use only commercial fertilizers, spreading broadcast for corn and dropping on the top of the hill or drill after the potatoes are covered. I am aware that this last seems like a queer wrinkle, but it won't hurt anyone to try two or three rows across a field, and watch them if blight strikes the field, and again at digging time. I intended to sow Crimson clover as a catch crop in my corn the past Summer, but I heard that it harbored the Pea louse, and as we had never had either I put it off. During the real Winter our manure is carted and piled, or rather dumped, 15 to 20 loads in a place, adjacent to the fields where we have had corn and potatoes, and when the ground is ready for sowing oats the manure is spread, about 10 loads per acre, and harrowed in with the oats. The grass seed is then put on, and a brush finished the work. Primitive, isn't it? But I think I can show more young clover to the acre than any of my neighbors, except one who followed my plan. We had an extremely dry Summer, and many have already plowed new seeded pieces, and sown rye, or will plow in the Spring. Curiously enough the best seeding of clover I have is on the driest part of the field. Had the oats not been the best I ever saw all over the field I should have thought the oats smothered the clover less, but under the circumstances I can only guess that on the dry knolls there was never much moisture, and the little plants sent their roots down so deep that when the oats were harvested the burning sun had less effect.

A part of the oats lodged and was cut early for hay, and as a little rain fell soon after a rank growth started up, and I wondered whether another year I would not cut all my oats early for hay. I shall watch that spot next Spring, but it grew a lot of corn grass that went to seed, and I am not sure that the stuff did not smother more clover than the oats. Besides that, I peeked over the fence at a field where a neighbor of mine cut the oats when green with a mowing machine. It looked so much nicer than my oat stubble that I was a little sorry for myself. He has since plowed that field and sown rye. He says that the machine cut so close that there was nothing to protect the young clover and grass, and the sun killed it all. We cut our oats when about half of the seed is ripe, or out of the milk, and being a lazy lot they are not thrashed. The bundles are cut twice so as to make three lengths of the straw, and fed to the horses.

We don't get five tons of hay per acre as my friend Clark does, but dry as the past season was, we had some lodge, and in wet seasons we are sometimes troubled quite a little that way. My farm is a light loam, with a gravel subsoil, giving thorough drainage. My father, when I was a boy, plowed in his stable manure with hoed crops, and always complained of having no rowen. When I suggested top-dressing he said it would be of no use, the land "was not natural grass land." It has been growing more and more into natural grass land for years now, and while Mr. Clark may be able to put on half a ton and take off five tons for a life time from an acre of ground, I am afraid it will turn out like irrigation.

I have built up almost all sorts of land, but deliver me from a piece that has been irrigated and grown, at first, big crops of grass, and then gradually run down until it is not worth mowing. Left to itself soil will not pump itself quite to death, but irrigation will assist it wonderfully. Mr. Clark's five tons must come from somewhere, and while I know him too well to doubt his faith in his plan, I lack faith in any plan that carries off by the cartload and puts back by the bagful. Man may cheat his fellow-man, possibly, and get rich at it, but sooner or later land will resent any attempt to cheat it, and the last state of the man who tries to do it is usually worse than the first.

Connecticut. R. S. HINMAN.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Tobacco and Lime for the Scale.

G. L. A., Vandalia, N. C.—Would a wash made of strong tobacco water and rock lime slaked in the water, so as to make a thick whitewash, kill San José scale?

ANS.—No, the mixture mentioned would be useless for Winter work. Whitewash will always kill a certain proportion of scale insects; but so small a percentage as to make it an unsatisfactory material to apply. Tobacco is very good as a Summer wash. J. B. S

Fighting the Asparagus Rust.

L. L., Factoryville, Pa.—I set last Spring 2,000 asparagus roots, and they came up and made a fine growth, but before frost the whole piece was as brown as a chestnut, and the tops dead. I suppose from what I have read in THE R. N.-Y. that it was the Asparagus rust. What would you advise me to do with it, plow it up and use the ground for something else, or can I fight the rust back and get a paying crop of grass?

ANS.—We would not advise you to surrender to the rust without a struggle. If your asparagus is one of the more resistant varieties, such as Palmetto or Argenteuil, the chance of success is better. Fertilize highly and cultivate well, so that much vigor may be stored in the roots before the rust again appears in August. Thorough spraying with Bordeaux Mixture both before and after the season rust may be expected to appear has been shown to be quite effectual, but is too expensive and troublesome a remedy for everyone to use.

Dandelions for Greens.

M. O. W., Scarsmont, Me.—What about raising dandelions for greens? What variety? Should they be covered in Winter? What is an average crop per acre, and what kind of soil will they do the best on? How much seed does it require per acre?

ANS.—Two varieties of dandelion are offered by leading seedsmen, the French Garden, which is about the same as the common wild root, and Improved Thick-leaved. The latter variety is new, and the seeds cost nearly twice as much as French Garden. The seeds are sown in early Spring in drills one-half-inch deep and 18 inches apart on thoroughly prepared and enriched land. If well cultivated and kept clear of weeds they will make strong roots that winter over without requiring protection. The leaves are ready to cut the ensuing Spring. They are often bleached by covering the rows with boards set on edge like an inverted V. We have no data concerning the average crop for an acre, nor the amount of seed required for the same area.

Air Tank for Bordeaux Mixture.

Reader (No Address).—A. I. Loop recently described his method of spraying by the use of air pressure. He speaks of air tanks. What are they made of, and will not Bordeaux Mixture corrode them?

ANS.—The "air tanks" referred to are common galvanized iron tanks. They are used for a variety of purposes, and are manufactured in large quantities in all the large cities. Any size from five to 400 gallons can be had, as different requirements call for many different sizes. Fifty-gallon tanks, costing about $15 each, seemed best for our use. We got them of the Bishop-Babcock Co., Cleveland, New York, Chicago. I don't think any serious trouble will result if simple copper solution is not used. A recent publication of the United States Department of Agriculture says that the corrosive action of Bordeaux is comparatively slight. We have not noticed any trouble from this cause. I believe I would rather use Bordeaux than common sulphate solution in almost any case. This device would do very rapid work in a vineyard, although we have never used it for the purpose. No serious trouble has ever been experienced in this grape belt. A. I. LOOP.

Home Mixture of Fertilizers; Charcoal.

G. F. W., Ashwillett, Conn.—How shall I mix a cheap homemade phosphate for potatoes or corn? Is charcoal dust good for a mixture put in with potash and other materials?

ANS.—You should send to Dr. E. H. Jenkins, New Haven, Conn., and obtain the fertilizer report of the Connecticut Station. A number of good home mixtures are given in this report. Here are a few of them—all made by good farmers:

Nitrate of soda.	Tankage.	Dried blood.	Acid phosphate.	Gr'nd bone.	Muriate of potash.
100	800	...	800	...	300
60	...	150	1,590	...	200
500	500	...	400	...	350
200	800	...	...	700	300
141	...	275	...	167	300

Other mixtures and substances are mentioned. It can be easily seen that a farmer must know what is needed by crops and soils before he can make a successful home mixture. We have not found it so easy to make a satisfactory mixture as some writers would have farmers believe. The charcoal dust has little real fertility, and will not take the place of wood ashes. It gives soils a darker color, and thus makes them better able to retain heat. Charcoal is one of the best absorbents. This dust put in the gutter back of the cows or mixed with the manure will pay well.

Soiling Crops vs. Old Pasture.

E. A. P., New Dorchester, Mass.—On my Pennsylvania farm I find poor prospect for pasture for next Summer. Is there any quick-growing grass or green fodder crop that I could plant early that would afford pasture or fodder for cows? In lieu of that, what would be the best chemical fertilizer to apply as a top-dressing to the pasture land, to help the growth of the grass?

ANS.—Oats alone or oats and peas sown at the usual time for this grain will give you good green feed. It will not pay to pasture them, for the stock will destroy more than they eat. You can cut the green crop and carry it to the stock. This is called soiling. The oats can be followed by fodder corn sown in drills. By sowing corn in this way every two weeks from the first corn planting up to July 4, you will have a good succession of green feed. We would not advise the use of fertilizers on ordinary pastures. We do not think it will pay. Nitrate of soda—250 pounds to the acre—will be most likely to start up the grass. Better put your fertilizer on fodder corn and cut that crop green.

Ten Good Agricultural Books.

P. J. S., Berwick, Nova Scotia.—Can you give me the names of 10 good popular books on agricultural subjects for reading by members of an agricultural society?

ANS.—A hard question. One should know what the readers have already studied, and what they most desire before advising. Of course such reading should include a good agricultural paper and the bulletins of the leading experiment stations. The following list will cover the ground, though it might well be changed to suit individual needs:

1. First Principles of Agriculture, E. B. Voorhees
2. The Soil.....F. H. King
3. The Fertility of the Land..I. P. Roberts
4. How Plants Grow.....S. W. Johnson
5. Principles of Fruit Growing.L. H. Bailey
6. Vegetable Gardening.....S. B. Green
7. Feeding Animals.....W. A. Henry
8. Milk and Its Products.....H. H. Wing
9. Economic Entomology.....J. B. Smith
10. Agriculture.....F. S. Storer

This is not by any means the cheapest list that could be named, and others might be better suited to certain individuals, but anyone who will carefully study these books may have a fair idea of the principles of scientific agriculture. If one lived in a section where chemical fertilizers are needed he should certainly study Fertilizers, by E. B. Voorhees. If stock feeding is to be made an object Forage Crops, by Prof. Shaw, and Soiling, by F. S. Peer, will be useful. The bulletins, and especially the annual reports of the experiment stations, should be not only read but studied carefully.

Clearing Land and Burning Brush.

I. R. F., Somers, Conn.—I have a large mountain pasture which is badly grown to brush, such as birch, huckleberry and fern. There are also some very good railroad tie trees which I do not wish to disturb at present, but it is of little use to cut the brush without burning. Will a fire damage the standing trees, and what is the law about burning pasturage where the adjoining land is a wood lot, and owned by others?

ANS.—One of the best ways to improve pastures that cannot be plowed is to cut and burn the brush each year. The amount of damage that will be done by burning the leaves and underbrush in a forest depends much upon the dryness of the material underneath, and the kind and size of the trees. I have known fires to run through forests of chestnut, where the trees were eight to 10 inches in diameter at the bases, and do very little damage. It is always better, however, to prevent fires from running over forest lands if possible. Neglect in burning brush, that leads to damage to adjoining property, will make the owner of the land, where the fire was set, responsible. If the one who owns the land where the fire is set, takes reasonable precautions, and yet the fire is carried to another man's land through the action of a whirlwind, probably no damage could be collected. C. S. PHELPS.

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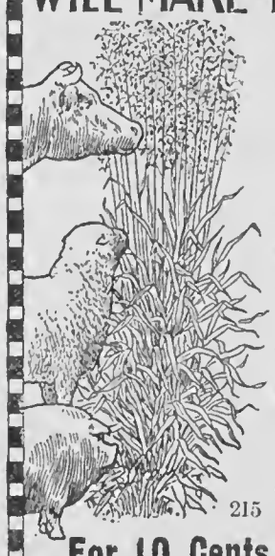
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EASY DRIVING FOR A HORSE.

Which is easier on a horse in a drive of 10 miles—a regular steady trot or a plan of driving fast for a while and then walking a short distance to rest?

USE HORSE SENSE.—Horse sense is probably not much unlike man sense. If you could ask the horse he would, no doubt, say, "Regulate my gait according to the lay of the road and the weight of my load." Try a 10-mile walk yourself. You would find yourself taking a slow gait up the grades, a steady gait on the level, and a faster gait down grade. Much depends, though, upon how and when the horse was fed before the drive. If he had just partaken of a full feed, I should give him a slow gait for the first few miles and a fast gait at the latter end, provided the lay of the road would permit. On the other hand, if the drive occurred just previous to feeding time the order would be reversed. So, then, if the good of the horse is to be considered, let the driver use a little "horse sense" somewhat after these suggestions. W. A. B.

Farmer, N. Y.

KEEP THEM GOING.—Ten miles is so short a distance that a horse which is unable to step off the distance with two persons in a buggy, in an hour, without distress or strain of any kind is unworthy of consideration as a roadster. My practice when making trips of 20 to 25 miles is to make about eight to 10 miles per hour, stepping them along smartly except when going down or up hill. I push them if in a hurry up grade at times, but never down, as I find that a horse will keep sound if given good care, even if pushed right along at a good smart gait, if allowed or made to go slow down hill or steep grade. Of course my horses are kept in hard-road condition and are naturally good road horses. A horse out of condition could be ruined in a 10-mile drive, and, if a driver is not a judge of condition, he had best let the horse take its own time unless a very ambitious one, when it should be held in check somewhat. My horses last me a good many years and stay sound, and some people call me a hard driver, but I don't think my horses consider their lot a hard one.

Vermont. C. A. CHAPMAN.

A DOCTOR'S HORSE.—Suppose we take a horse capable of traveling eight miles an hour; he would, I should say, accomplish a task set him, of say 16 miles, with greater ease by varying his gait, going more slowly on an up-grade or steep down-grade, and making up for the time thus sacrificed by putting on extra speed on the stretches of level road and moderately down grades. Some experienced horsemen go so far as to say that a horse will get over an equal distance with less suffering if the grade varies, than he would do if it were all on a dead level. This may be an exaggeration. It will, however, serve to illustrate the prevalence of the notion that the horse is helped by getting an occasional opportunity to move more slowly, or even to walk, although he may have to make up for the concession granted him by greater speed subsequently. But obviously there can be no fixed rule applicable in all cases, under all circumstances. Something will depend upon the kind of a horse, that is, on the way it has been trained, something on the weather, the road, direction of the wind, etc., something on the condition of his stomach, whether it be full or empty. If homeward bound and near the end of his journey it will probably do him no harm to keep right on without letting up. Some horses cannot be made to go fast and will yet keep up one steady jog. They take more after the tortoise than they do after the hare.

Canada. W. O. E.

LIKES AN OCCASIONAL WALK.—From my experience of six years as a commercial traveler, continually driving over all kinds of roads, in all kinds of weather, I would not trot a horse 10 miles without letting him walk several times in that distance, on any kind of roads. When driving I watch the horse closely and see if I am driving him as best adapted to his condition or manner of travel. If he is a heavy, clumsy-gaited animal I trot him short distances, and if he seems to swing his feet easily and steadily I see that he can trot longer than the heavy-gaited horse. I notice that there is a great difference in the way a horse is hitched. Let the harness fit neatly; have the tugs the proper length, and thills tight enough so he can handle the buggy easily—not too tight—but do not make the straps so loose that the rig will jerk and thills fly as high as his back. Fix the check-rein so as to hold his head easy for travel. I never use an overcheck rein. If the horse holds his head too low give him more oats, wheat bran or oil meal and the best of care when at barn, using comb and brush morning and night and his head will come up higher (and perhaps his heels, too). When starting on a long drive I give the horse plenty of time at the start or after each meal, then I know he is good all day. If a man thinks a horse can trot 10 miles without walking several times let that man start out and run one mile without a walk and then give his own opinion.

Pa. J. G. K.

Small Fruits in a Windy Country.

One of our readers now located in North Dakota sends us the following question: "What are the chances of successful small fruit growing in southeastern South Dakota, near Sioux Falls?" It seems to us like a hazardous undertaking to embark in fruit culture so far to the north and west; yet, there may be good openings there which we do not understand.

ANS.—I consider the chances favorable. By going into the business in the right way, most if not all of the small fruits can be successfully and profitably grown for market purposes in southeastern South Dakota. There are many sheltered nooks with some natural timber protection and groves, and shelter belts on the older farms that would afford good sheltered locations for the business to be found in near proximity to towns and railroads that I think very well adapted to the purpose. The greatest obstacles in the way are the dry winds that frequently sweep over the country, and the first requisite is to provide for protection against them by planting shelter belts or wind-breaks of trees or shrubs on the outer sides from which the winds come (generally the west and southwest). These are very quickly formed by planting the White or Gray willow. Evergreen belts would be better, but are not so quickly available and require shelter at the start. Even closely-planted rows of native plum trees (Prunus Americana), or the fast-growing varieties of the Siberian crab hybrids will answer the purpose well, and soon bring enough returns in fruit to cover the cost of care and cultivation. In large plantations in very exposed locations it would be beneficial to plant a single row of fruit trees rather closely (eight or 10 feet apart) about every 12 to 20 rods, according to situation. Soil should be chosen that is naturally fertile, of good depth, and that is not underlaid with loose gravel near the surface, and it should be well subdued by plowing and cultivating before the small fruits are planted. Where strawberries are to be grown they should be planted sufficiently far enough away from the outside belt on the windward side, so that they will not receive the banks of snow that otherwise would be piled upon them in times of severe storms. It is best to plant the rows six or more feet apart. That distance gives more room between matted rows for cultivation (hill culture does not succeed there); also to pile in windrows of straw or prairie hay for Winter protection, but only about two inches of covering should be placed over the plants. The windrow of straw or hay may be placed quite early in the Fall if there is ample moisture in the soil, but the plants should not be covered until Winter is about to set in. These windrows should be left until the picking season is ended, when they would better be removed and used for mulching trees or raspberry and blackberry patches, and the cultivation of the strawberries resumed. Without the wind-breaks it would be necessary to weight these windrows down with poles. They are a good protection, hold the light snows over the plants, and prevent excessive evaporation. Where this system of planting and arrangement is followed I think that if any pistillate varieties are grown it would be better to mix perfect varieties in the rows with them at the time of planting. Red raspberries will succeed very well if given Winter protection by bending the canes down and covering with earth and straw or other mulching over the top. The Turner and Loudon are hardier than the Cuthbert. It is more difficult to manage the blackcaps after the first Winter, and they need to be kept low by pinching back to cause bunching near the base of the canes. Rows of these may be planted outside of the strawberries and nearer to the wind-breaks, as they are less liable to be smothered by snowdrifts. Blackberries must have ample Winter protection by being laid down and covered with earth over Winter. All bush and bramble fruits would require liberal mulching through the fruiting season. I believe that an energetic young man who understands the business can find plenty of locations in that section where the business will bring better returns from the same amount of capital invested than he could in many localities that are considered more favorable for small-fruit culture. If in addition to suitable soil and shelter, water for irrigation in times of great drought can conveniently be had, success is almost assured. J. S. HARRIS.

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FACTS ABOUT PORTO RICO.

CLIMATE.—Prof. George B. Groff, Lewisburg, Pa., who spent two years in Porto Rico as Commissioner of Education, gave a most interesting address on the fruits and vegetables of that tropical island at the late meeting of the Pennsylvania State Horticultural Association at Harrisburg, Pa. The interior is mountainous, with an average elevation of nearly 2,000 feet. There is practically no swamp land, and the slopes are nearly all covered with rich black soil. The north coast is well watered, but the southern half of the island is subject to occasional droughts. There are over 1,300 named streams, but the course of most is very short. He described the climate as nine months June and three months August, though the temperature range is only from 75 to 96 degrees, excessive heat, such as frequently experienced in the North, being unknown. Constant sea breezes temper the whole Island, as the most distant point is scarcely 40 miles from the ocean. Nearly all the vegetables cultivated in the North are grown, some in very limited quantities, however.

VEGETABLES.—Asparagus was seen at one place, but the plants were small and the growth far from thrifty. It is not found in the markets except as imported in cans. Beans are extensively grown and form a staple food. Red beans of the kidney type are much preferred, as they cook easily and are considered more digestible; white beans are not liked. Some Lima beans are grown, but as they are not picked until nearly ripe the table quality is not good. One of the local varieties of beans grows on a small tree. A few beets are grown, but are not generally used. Carrots were not seen. Cabbages are highly prized. They do not head hard as in the North. Celery is grown in a small way for soup. Water cress is abundantly naturalized in the streams. Sweet corn is much grown, but is picked too old for best quality. Cucumbers are plentiful and good. Sugar cane is used extensively as food and is nutritious. The Caladium, more properly Colocasia esculentum, is used for food, but as commonly cooked is not very palatable. Ginger is now well naturalized and grows wild everywhere, but is not much used. Egg plants thrive well and are much cultivated. The natives bake, but seldom fry them. Lettuce is plentiful, but of low quality, as it is not carefully cultivated. Watermelons are scarce, small, and not very good. Onions and garlic much used for flavoring; they are not grown, but abundantly imported. Okra is much esteemed, and is eaten cooked as a vegetable and rarely used in soup. Parsley is occasionally grown as a soup flavoring. Peas thrive well, but are not picked until too hard. Peppers grow luxuriantly and are eaten green; not used as a condiment as in other Spanish countries. Sweet potatoes grow well, but are not as good as the Jersey product. Small varieties of pumpkins grow everywhere, and are much eaten, being used in soup as well as cooked like other vegetables. They are small and ill-looking, but of fair quality. Radishes of the small red type are plentiful but low in quality. Rice is the staple food of the natives, and is generally cooked like a vegetable and colored with annotto, which is also used to color milk and soup; never used to color butter, as with us. Rhubarb and squashes are not grown. Tomatoes ripen every day in the year. Native varieties are small and ill-flavored, but very productive. Good ones are being grown by Americans. Turnips grow well but are seldom planted. Many large woody yams and some Cassava plants are grown. They are poor eating. Northern seeds do not germinate nor grow well as a rule.

FRUITS.—The mountains are full of Citrus fruits, but they get no care, and are generally of poor quality, but some are good. Oranges can often be bought for six to eight cents a hundred. Lemons are plentiful but little used. One variety is very sweet. Dates and figs are not often seen. Bananas are very plentiful, and are found in many varieties. Together with rice they form the staple but insufficient food of many natives. Cocoanuts are plentiful near the coast, and the green nuts are always in demand, the liquid interior being used as a beverage. Chocolate has been largely cultivated, but is dying out. Coffee growing is still the main industry. One kind of breadfruit contains seeds that resemble large chestnuts and taste like them when boiled or roasted. Pineapples are numerous and of most excellent quality; better than those raised in Cuba and Florida. Many tropical fruits of minor and local importance were described. No northern fruits are grown. A few neglected grape vines were seen. Peach trees grow, but bear no fruit. No berries were seen but the Mayberry (Rubus eratægifolius?) introduced five or six years ago, is becoming naturalized, and is spreading rapidly. The berries are sometimes seen in market, and are much liked. W. V. F.

A Word About Cow Peas.

A. T. G., Dayton, N. Y.—Where can I get cow peas, and are they good to keep up flow of milk after grass has dried up in the Fall?

ANS.—Cow peas are offered by dealers and farmers in THE R. N.-Y. If you sow them expecting late Fall pasture you will be disappointed. They die at the first hard frost. We do not advise cow peas as pasture, though some farmers use them for hogs and cattle. We advise them for plowing under on poor land. Do not sow them too early. They are as tender as beans, and June 1 is early enough for your latitude.

$5 for $4 Send us a club of four subscriptions with $4, and we will advance your own subscription one year free—the five subscriptions for $4.

Potatoes—Early Ohio, Hebron, Rose, Fortune, Harvest, Bovee, Queen. Irish Cobbler, Good News, Stump the World, Thoroughbred, Uncle Sam. 85 kinds. C. W. Ford & Co., Fishers, N. Y.

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Mention this paper.

"Seeds—Northern Grown—Seeds"
For $1 we will mail, postpaid, 40 Large Size Packets of Choice assorted Vegetable Seeds and 1 oz. fine Strain Mixed Sweet Peas, as follows: 3 varieties Beet, 4 Cabbage, 2 Carrot, 2 Celery, 4 Cucumber, 1 Egg Plant, 1 Sage, 1 Leek, 3 Lettuce, 1 Muskmelon, 1 Watermelon, 2 Nasturtium, 2 Onion, 1 Parsnip, 1 Pepper, 1 Pumpkin, 2 Radish, 1 Salsify, 2 Squash, 3 Turnip, 2 Tomato. All Crop 1900. Money back if they do not give satisfaction.
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TREES and Plants at Wholesale Prices. Apple, Pear and Plum, $8 per 100. Cat. free. Reliance Nursery, Box 10, Geneva, N. Y.

Try the New Auto Strawberry. Largest and Best. 8,000 qts. to the acre. 1 doz. plants for $2. Other good kinds as low as $1.50 ℔ 1,000. Cat. free. Slaymaker & Son, Dover, Del

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A fine Plum of large size, maroon color, delicious flavor, ripens about the middle of September, or a month after the Abundance. Tree a young and profuse bearer. **Fine 2-year Trees for Sale.** Also a large stock of **Green Mountain** vines, 2 or 3 years old, as well as large quantity of other nursery stock. Send for catalogue. Address
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Everblooming Hardy Roses.
I grow them. Don't bother with little mail-size plants. Get strong three-year old field-grown BUSHES—vigorous and hardy! I have them. Try this half dozen—all perpetual bloomers: Mrs. John Laing, soft pink; Anna Diesbach, bright rose; Coquette des Alpes, finest white; Gen. Jacqueminot, crimson scarlet; Baron Bonstettin, dark velvet; Paul Neyron, largest and finest of all. Too heavy to go by mail. Big, strong bushes that will bloom profusely the first season. By express, prepaid, $2. Order to-day.
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Varieties: White, Green, Blue, Golden Vine and Hammond's Hog Food, also Cow Peas. **We are the largest growers in America,** Catalogue of Peas and all other seeds FREE upon request.
HARRY N. HAMMOND SEED CO.,
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Western Agents, Hennion & Hubbell, Chicago. Catalog, formulas free

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Will spray a 10 acre orchard per day. 100,000 in use. Satisfaction guaranteed or money refunded. Illd. catalogue free. Agts. make from $5 to $15 per day. New improvements. Free Trial. Mention this paper.
P. C. LEWIS MFG. CO., Catskill, N. Y.
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Is a guarantee of excellence. The public appreciates this fact. In 4 years we sold 320,000 Electric Steel Wheels and 30 000 Electric Handy Wagons. We make wheels to fit any wagon. Illustrated Catalog FREE.
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Sows all clovers and any other grass, no matter how chaffy. Sows 20 to 40 acres a day. Beats the wind and wet.
Special Hopper for wheat, oats, etc. Weighs only 40 lbs. LASTS INDEFINITELY.
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Eureka Potato Planter, $35.00
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EVERY FRUIT GROWER SHOULD READ R. M. KELLOGG'S NEW BOOK, ENTITLED
GREAT CROPS OF SMALL FRUIT
AND HOW TO GROW THEM. The author has grown the largest crops of fancy fruit ever produced on an acre. In his experimental grounds are **single plants which yield over FOUR QUARTS** each of fine large berries. His customers have done as well. This has been accomplished by SCIENTIFICALLY BREEDING **up plants** to a high fruiting vigor so they throw their energies to the development of fruit instead of useless runners. **The profit comes from a big crop of big berries** that sells at sight to regular customers. This book tells you all about how it is done. THE CHEAPEST PLANT is the one that will give you the best fruit and most of it. You can't afford to play **second fiddle** on the market by using scrub plants. The only stock of scientifically-grown thoroughbred plants in the country for Spring planting. Send your address at **once**, and get a copy of this book, and a revised edition for three years FREE. Address
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in large commercial orchards where the saving of time, labor and material is a necessity, to say nothing of having the spraying done in the right "nick of time" nothing equals
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—note the large **storage chamber** in front. A convenient pump operated by chain sprocket from rear wheel raises air pressure to 150 lbs. With 12 gallons of liquid in chamber this will work two Vermoral Nozzles 5 to 10 minutes at full capacity—enough to spray the largest tree. Automatic agitators keep liquid thoroughly stirred up. Brushes clean suction strainers automatically every instant. No burning or scalding of foliage. Sold complete as shown in cut. We make the
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Send for free catalog and opinions of people who used it last year.
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HOPE FARM NOTES.

FARM VALUES.—A friend in New York State has this to say:

I have been interested in Hope Farm Notes, especially the rocky fields, as I have worked at clearing off rocks by spells all my life, but not for fun. Whether it has paid in the end I don't know. Thirty-three years ago I commenced on the farm where I now live; have it pretty well cleared up, have built a house and barn that cost $3,500, and if forced to sell now it wouldn't bring what I paid for it, as land has fallen off nearly one-half in value here. It has always supported the family, which at times has been quite large, and paid running expenses, but whether it has paid my wife and self for all the hard work we have done, I don't know. But we have the home, and perhaps if we had done something else we might not have had anything, as we commenced life together with what I had saved in two years working by the month.

In many localities the value of farm property has come tumbling down. I bought Hope Farm at about the lowest limit, and it is actually assessed to-day for $1,000 more than I paid for it. Some farmers say that farm property does not pay interest. Years ago, when their farm was valued at $5,000, it gave them a living. Now when the value has fallen to $3,000 it still gives a living! The farm next me has recently been sold by the sheriff. It has supported the old farmer for nearly 50 years. Had he been able, 20 years ago, to look ahead and anticipate the present value of red Winter apples do you imagine that his farm would have reached the sheriff? No! No! I am obliged to admit that even the Ben Davis apple would have saved the farm. He farmed simply from year to year with no crop provision for the future. It is pretty hard for an old farmer to make out whether the farm has really paid wages to himself and his wife. I know this, that a home on a farm that is paid for and well improved is safer than one backed up by bank stock or town reputation. It is not so easy to turn into cash, but it is safer.

HAM CURING.—Some people may love a live hog, but most of us feel real affection for a dead one—after he has been cured of his bad qualities and turned into ham. Among the various cures mentioned by readers is the following:

I notice in Hope Farm Notes an allusion to curing hams. It reminded me of the method which a relative of mine has followed for many years, used before his time by preceding members of the family. That they follow it so long indicates that the results are satisfactory, and I know from many personal trials of the cured hams that they are unusually juicy and sweet. The treatment is this: Put in a large iron kettle a bushel or two of salt, heated until it is as hot as it can be made, just sizzling hot. The fresh hams, just cut from the pig, are put in this hot, dry salt, turned over and drawn around in it till the entire outside has been in contact with the salt for a few minutes. Then they are smoked and are ready for the table. They keep well and are fine-flavored. W.

That is worth trying certainly. This cold weather enables us to feast on spare rib and sausage and but little of our pork has been salted or smoked yet. Surely no one would think of following a practice of this sort for years unless it was a good one—yet sometimes habits are rooted into us so that it is almost impossible to pull them out.

"LIVING RIGHT."—The recent note from B. Briggs on the proper way to spend Sunday has stirred up more discussion than anything we have printed in a long time. People who believe as Mr. Briggs does, others who half-believe, some who say they don't believe in anything at all, and others who don't know what they do believe have been filling the Hope Farm man full of advice and suggestion. I feel as though the dogmatic discussion of 20 centuries had been boiled down and rubbed into my back. They come so thick and fast that the remaining years of what I may hope for as a natural life will be all too short to reconcile these various beliefs. I will give up the job until I get my farm paid for at least. To me it is a source of deep regret that good, right-minded people cannot come together on some fair basis of religious agreement. Of all men the farmer should have some deep and true religion in his heart. He is close to nature, and every day's experience must convince him that he, and what he calls his own, must bow to the will of some superior and mysterious power. To me it seems no more than reasonable that if the natural forces which decide our physical destiny are fixed and exact, the moral forces which have so much to do with personal good or evil must also have some fixed measure or law. But you can hardly expect a plain farmer to strike bottom when able and devout scholars have failed. I believe that the good Lord gives us the chance to work our salvation out of our own lives by *right living*. Some good people narrow it down and, as it seems to me, cramp themselves into various *forms* of worship. Others go to the other extreme and ignore all such forms, and have no patience with them. I wish the world would quit discussing forms and creeds, and get together on the foundation principles of Christianity.

STOCK MIXTURES.—A Jersey friend wants to know about the "lick ball" which our horses have:

Some while ago I noted in Hope Farm Notes mention made of salt balls for horses, in proportion of two parts salt, one part lime and one part wood ashes or charcoal. What kind of salt and lime is used, and how much water?

Charlie makes the ball as follows: Take two cupfuls of salt—either table or barrel—one-half cupful of air-slaked lime and four to five cupfuls of wood ashes. Mix them well and add enough water to make a stiff mud. Then bake in an oven until it is dry and hard. It can be made in a cigar box which gives it good shape and size. The barn tongue that licks this mixture will never tell a lie about it, but come for more. For sores on horses we like a mixture of one part carbolic acid and three parts of sweet oil. A mixture of equal parts ammonia and sweet oil made a good blistering liniment for old Franko's leg. To reduce the swelling we now expect to use biniodide of mercury, one dram, and cerate of cantharides ointment, one ounce, well mixed.

FARM NOTES.—The shredded fodder is keeping well, and the horses clean it up. I feel sure that the shredding added at least $3 per ton to the value of the stalks. I hear some complaints that this fodder does not keep well. We have had no trouble with it. . . . In answer to several questions I will say that our waste molasses came from the Binghamton beet sugar factory. We feed it to all stock except the brood mare. I call it a useful feed. Old Major startled me the other day by trotting up hill of his own accord—something he has not done in months. He was going away from home, too. Strange that cold molasses should warm up an old horse! . . . The chief work on the farm now is in clearing up two of those old "loafer" fields I have told about. The boys are cutting out the cedars and birches, and clearing the walls. The cow peas are left on the ground, of course. I hope to fill these fields with peach trees this Spring. They are well located for peaches, and the soil is too light for seeding down. Yes, I am going to give the Stringfellow method of planting a good trial on quite a large scale. J. H. Hale tells me that I shall only encourage a lot of lazy men to quit needful cultivation, and never get a first-class crop. Other good men tell me the same thing, viz., that this plan is O. K. for the South under certain conditions, but no good for our section. I suppose I should heed these wise men, but I am frank to say that Brother Stringfellow has so much faith in his scheme that some of it has run over into me, and I shall try one acre that way at least. . . . We still have a good supply of small potatoes, turnips and cabbage for the stock. How they do enjoy a "green" bite. What with shredded fodder, molasses and roots I never fed horses so cheaply before. H. W. C.

A FARM BENEATH THE SNOW.—I thought you would like to hear from the Adirondack Mountains, as we are situated in the very heart of them. Snow came November 9; there has been sleighing since, except about five days. The snow in the woods is three to five feet deep, so you see we do not have to sow cow peas for a cover crop. I will tell you what I sold off my 40-acre farm in the past year:

Milk sold, average 8¼ cows:

24,648 qts.		$1,339.17
Vegetables and truck		285.25
Net proceeds of hens		50.00
" " " pigs		20.00
" " " veal		3.00
Total		$1,697.42
Expense running farm	$200.00	
Feed and hay bought	190.00	
Implements	102.88	
Milk wagon	45.00	
Bowen fence machine, etc.	13.00	
Cutter harness	40.00	
Total	$590.88	$1,697.42
		590.88
Total		$1,106.54

I have made no account of boarding help or of any vegetables we use in the house, which is a good many, as we have a family of from six to nine most of the time. I think that is doing quite well. I have not figured in a new boy six months old, $1,000 at the least.

Tupper Lake, N. Y. READER.

R. N.-Y.—That is a good showing for the farm, but a very low estimate on that new boy.

SHADE TREES.—The Connecticut Station (New Haven), has issued an excellent bulletin in No. 131. The city of New Haven is noted for the beautiful old elm trees, which shade its streets. Many of these veterans are dying. The causes are old age, lack of air and water, or of plant food, mutilations, poisoning, insect enemies and electric currents. The Connecticut Station made a thorough investigation of these troubles and has gathered in this bulletin information of great value to those who love shade trees.

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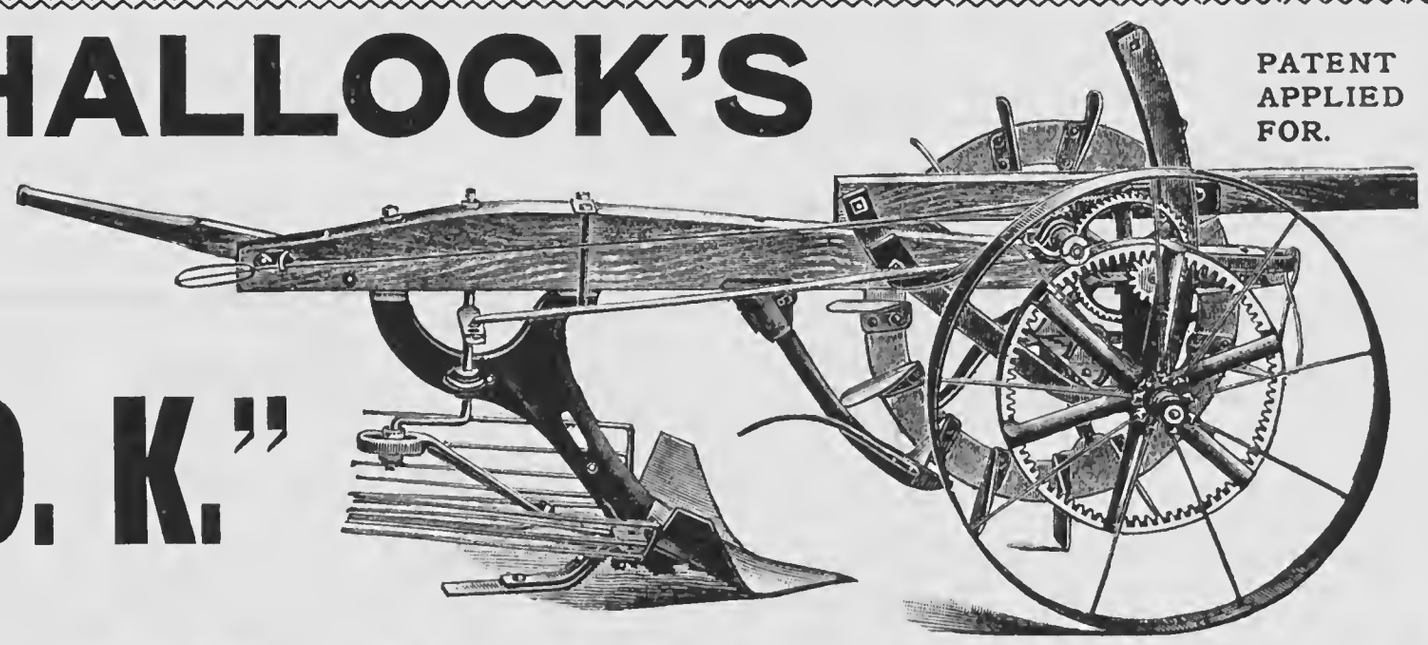
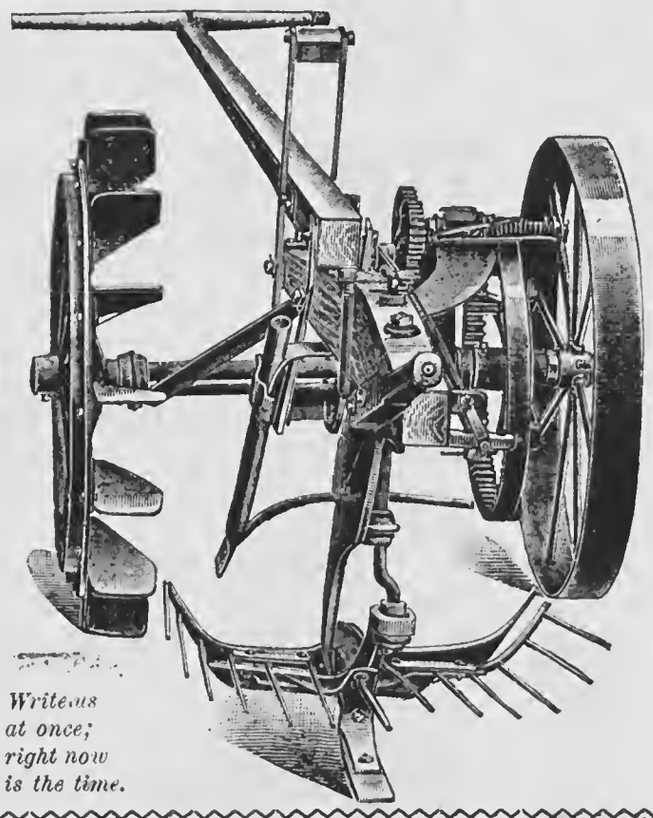
PATENT APPLIED FOR.

"O. K."



POTATO HARVESTER.



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POTATO GROWERS, this is the digger you have so long looked for, hoped for, longed for. The price is right, the draft is right (one team), easy to handle, strong and simple, every potato taken from its bed by the shovel, and every potato separated from the soil by the wonderful fork; dig every row straight as you go. In a word, it is hand work done with two horses.

OUR GUARANTEE. We guarantee the **O. K. Digger** to equal hand work. In other words, you dig a certain number of rows by hand, then dig an equal number with the **O. K. Digger,** pick up all potatoes in sight, then harrow, cultivate and plow, either or all; if **"O. K."** does not come out ahead, you are at liberty to reject it. We know just what it will do because we have followed it in a dozen fields in different parts of the country.

WHAT WE WANT. Correspondence with 60,000 potato growers before the winter is over, so we can tell them all about the digger and the **wonderful offer we make for quick orders and introduction.**

We know we have the digger you want. We know every potato grower who does not buy one will want his potatoes dug with one. This would mean profitable work for you if you had time for it, or could spare the digger.

D. Y. HALLOCK & SONS, Box D 805, York, Pa.

Please mention box number.

Ruralisms

NOTES FROM THE RURAL GROUNDS.

DOUBLE NASTURTIUMS.—Some time previous to 1890 a double flowering form of the climbing nasturtium, Tropæolum majus, was sent out by an English nursery, and introduced into this country by Peter Henderson & Co. It is a profuse-blooming variety of good constitution, sending out rather thick, short-jointed twining stems with bright green foliage, large clear yellow blooms, with a few orange streaks in the center. It thrives particularly well as a pot or window plant, and is very bright and cheerful. The flowers last much longer when cut than the single varieties. It does not form seeds, but is easily propagated by cuttings or "slips" in the usual manner. Since the yellow variety appeared two others, one with dark, glossy, maroon, double flowers, often catalogued under the name of Darkness, and a bright orange form called Herman Grashof, have been disseminated from Europe, and are occasionally seen in amateur greenhouses. Herman Grashof is somewhat delicate, and has about dropped out of cultivation, but Darkness is still listed whenever the propagators get up a good stock. No account has been given of the origin of these pretty and useful nasturtiums, but it is supposed that they are bud sports from ordinary varieties of the same colors. At pretty regular intervals since their introduction the yellow and dark varieties have been offered to the Henderson Company and other well-known plantsmen as startling novelties, by amateurs and growers who have worked up a small stock from a chance plant, and who are ignorant of its introduction to American horticulture. Fig. 34 shows a flower and foliage of the yellow form, which is on the whole the most desirable of the three varieties. It is a poor and badly arranged picture, and further reduced in effectiveness by the wilting of the flower before the negative was taken, but it gives some idea of the make-up of leaf and bloom. We think these double nasturtiums cheerful and desirable plants, both for garden and home decoration, and commend them to amateurs desiring pretty and easily-grown plants. They seem to have fallen out of the latest plant catalogues, but the yellow variety may still be had from the American introducers.

GREENHOUSE TOMATOES.—Our first Winter tomatoes were ready for the table January 12, as against January 3 of last year, and were beautifully colored. The plants are setting heavy clusters, and promise a larger crop than we have yet secured from a similar number, though maturity has doubtless been delayed by overfeeding at a too early stage. When well set with growing fruits they will bear constant stimulation with weak liquid manures from various animal sources, as well as dressings of wood or tobacco ashes and commercial phosphates or bone dust, every three or four weeks. Water must be freely given on bright days, as the immense leaves developed under these conditions are very active in exhaling moisture, and if the plant once flags some of the younger fruits are sure to be lost. We find pollination is practically certain if the petals of the open bloom are tapped once or twice every day with a light reed. There is a time in the development of every bloom when the pollen will fly out in a visible white puff if the petals are lightly switched, and this method seems more effective in favoring the perfect developments of the tomatoes, by fertilizing a large number of seed ovules, than the usual plan of striking the supporting strings, and thus indirectly jarring the blooms. Some growers find it profitable to catch the pollen from maturing blooms in a watch glass mounted in a wooden handle, and apply it to the stigmas of the younger flowers, claiming that larger fruits result from this excess of pollen. Where houses are specially arranged for tomato growing, it is practicable to get around among the plants and thus pollinate the individual blooms, but if only a few plants are grown they are likely to be kept in a position difficult of access, and the method of jarring the blooms with a light reed, as they successively open, is proving to be very effectual.

CHICKENS AND COW PEAS.—Our little field of cow peas bore a fine crop of ripe seeds, which were picked just before frost was expected. As sufficient frost to kill the vines did not appear until several weeks later, a considerable number of pods, immature at the time of picking, ripened up in good shape, and are still clinging to the vines. Within the last few weeks our chickens have discovered that these little black beans make palatable food, and spend their exercise hours in scratching open the tough pods. The result is apparent in the laying record; the combined effect of the protein in the beans and the necessary exercise in the open air has plainly been the means of transforming the fat in the hitherto rather sluggish older hens into eggs, just when they are most wanted. If we could be sure of always having such an open Winter it would certainly pay to grow a patch of cow peas in a convenient situation for the chickens to harvest at their leisure in Winter, but much rain or snow would make the pods too difficult to open, and probably injure the feeding value of the seeds. The beans, which are still quite dry within the pods, resemble dried apples in their capacity for swelling up after the fowls have eaten them, and the result is an urgent demand for water while the process is going on. Our flock of 25 consumed nearly two quarts of water after one of these dry feeds. This matter of abundance of pure, fresh water is as important in Winter as Summer, especially as much of the food eaten is dry and absorbent in character. The considerate poultry keeper will see that water, and not ice, is within the reach of his fowls even in the coldest weather. The cow peas are of the Early Black variety, from seeds secured from Hope Farm. Most of our readers know that the cow pea is really a species of tropical bean. The name is now too well fixed to change. W. V. F.

Native Plums in Wisconsin.

PART I.

The plum orchards at the Wisconsin Experiment Station now contain about 1,400 native plum trees. In addition to these there are nearly 1,000 trees from one to three years old in the nursery, many of which will be planted in permanent orchard rows next Spring. Of the total about 250 are named varieties, and the remainder seedlings; of the named varieties 200 bore last year. The best of the new varieties, those that bore for the first time last year, are Brittlewood, Bomberger, Etta, Freeman, Poole's Pride and Number 4. Brittlewood is a very large plum of excellent quality of the Americana species; skin only moderately thick; flesh tender and juicy; stone small and nearly free. From Theo. Williams, Nebraska. Bomberger is large, oblong, slightly tinged with purple on yellow ground; skin thin, tender and not at all harsh; flesh tender, sweet and rich; above the average in size and quality. Etta, large, nearly round, yellow striped and splashed with pale red; flesh, sweet and rich. A single small graft of one year's growth is the only specimen in the orchard, and it is hardly fair to form conclusions from this, but the fruit borne was very fine, attractive in appearance and high in quality. Freeman, very bright shining red; no bloom; skin thin and tender; flesh crisp, juicy and having a delightful aromatic flavor entirely unlike any other plum tested. This may not prove a valuable market sort, but is very striking in appearance and has a very remarkable flavor. Poole's Pride, a very good plum of the Hortulana type; better than Wild Goose or Pottawattamie; medium to large; skin thin and tender; flesh firm, sweet and rich. The last one of the list we are obliged to record simply as No. 4, as it was received from Prof. Budd with no other title. This is a cross between De Soto and an unknown Japan variety; large to very large, oblong, slightly pointed; resembles Abundance in shape and markings; skin thick but tender; flesh orange-colored, crisp, tender, juicy and rich with a decided Japan flavor; freestone; tree a poor grower, weak and drooping. Many other varieties fruiting for the first time, were also good, but these are the ones attracting most attention.

Among the older varieties, those that have borne two years or more, we note the following as especially good plums: Aitkin, De Soto, Hammer, Piper, Quaker, Springer, Surprise and Wyant. The Aitkin is only medium in quality, and a poor keeper, but is valuable as an early variety. Hammer is very productive and an annual bearer. Springer is one of the best mid-season plums in our collection. The Surprise is worthy of all the praise that it has received in regard to quality, but has proved a shy bearer here, with decidedly "off" seasons. Wyant must still be placed at the head of the list as the best native plum in our collection, hardiness, productiveness and quality all considered.

Other prominent varieties are American Eagle, Barnsback, Cheney, and North Star. American Eagle and Hawkeye are both very large, but poor in quality and decidedly unattractive when fully ripe, assuming a dull purplish color. Cheney is decidedly irregular in bearing, giving a full crop only about every third year, and then overbears. Barnsback is above the average in quality, and a perfect freestone. North Star closely resembles Surprise in all respects; in fact, about the only point of difference is in the shape of the pit. Like the Surprise, it is a shy and irregular bearer. The varieties that might well be dropped as too small and inferior to be of much value are: City Deep Creek, Honey Homestead, Old Gold, Peach and Speer.

Wis. Exp. Station. F. CRANEFIELD.

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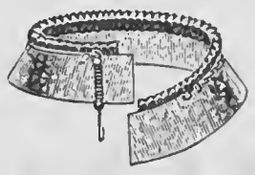

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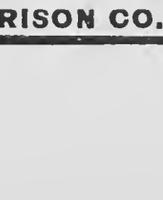

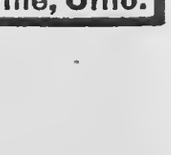

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THE BREEDERS' WAYSIDE.

Feed for Brood Sow in Winter.

Will Prof. Plumb give a good, and as cheap a ration as possible, for a brood sow during Winter, from breeding to farrowing time? Can a ration be made of middlings, ship stuff, or bran, cornmeal, oil meal, artichokes and potatoes? I have read quite a little, but am in the dark yet, for one will say oil meal is good; another will say it will cause abortion, and so on; what one recommends, another will find fault with. P. E. L.

Jackson, Mich.

I presume these sows in Michigan are bred to farrow very late in March or in April, so that the more careful feeding may have to be done in February and March. Up to the last month before farrowing I should feed a ration of half shorts and half cornmeal, and see that the sow has plenty of salt and ashes. If I had any roots, and P. E. L. suggests artichokes and potatoes, I should feed them to a limited extent. The potatoes will be most relished if boiled, but the unfrozen artichoke is an epicurean dish for the pig. Two or three pounds a day will do very well. I am a great believer in succulent food for brood sows, and we have fed our pigs both sugar beets and mangels at the Indiana Station for several Winters with gratifying results. We have had a root cutter, and so have fed cut roots, although it is not entirely necessary. The chief value of the roots lies in promoting a healthful activity of the digestive organs, and during lactation keeping up a milk supply. To go back to dry feed, shorts is very similar to bran in feeding value, but being finer ground, swine prefer it. Here is where one gets bone and muscle, and it should assist in creating strong pigs before birth. While we do not use oil meal, a small feed of it is advantageous. It promotes a healthful body condition, acting somewhat as a conditioner. If fed once a day in a small way, say one-fourth pound at a feed, no injurious results should ensue. Cotton-seed meal, however, should not be fed at all, to pigs of any sort, as repeated experiments have shown it to be injurious and even fatal to swine. In Winter the grain should be fed in a slop that has had the chill removed from it, and as farrowing time approaches, care should be taken to feed mainly shorts and some ground oats, and no cornmeal, and the sow's bowels should be free and natural in movement. At this time roots will come into appropriate use. I am a good deal of a believer in exercise, and a pig in Winter should be made to stir about and exercise, and especially a breeding animal, be it male or female. To crawl out of bedding to eat, and then get right back, promotes an inferior stage of vitality of offspring. A little good wholesome exercise in a feed lot for a half-hour or so is most desirable. Pigs so required to expose themselves will be less likely to take cold or suffer inconvenience in Winter, while their pigs will be stronger in consequence. If opportunity is given to root in the manure pile when the other stock is away, it will be good physical culture for the hog. C. S. PLUMB.

A LIVELY DAIRY MEETING.

Connecticut Cow Owners Meet.

PART II.

W. D. Hoard read a paper on a cow census. He had a census taken of all the cows in Ellisburg, N. Y., getting from each cow owner the number of cows kept, cost of feed, and the net returns of cows, etc. It was found that by the keeping of poor cows for the purpose, and improper feeding, that there was an annual loss of $25,000 to the town. He has since had censuses made of 100 dairies in Wisconsin, Iowa and Ohio, supplying creameries; the number of cows kept, breed, cost of keeping ration, stable accommodation and returns per cow and returns for each dollar's worth of feed. Farms right side by side were found where owners were losing constantly on cows, and their neighbors making a good profit. The second day's session was opened by a talk from H. B. Gurler, of DeKalb, Ill., on Milk for the Retail Trade. Mr. Gurler is 80 miles from Chicago, but described his business, which is making certified milk, which retails in Chicago at 12 cents per quart. On this farm everything is done with the idea of keeping dirt and filth out, rather than taking out dirt after it has got into the milk. Mr. Gurler advised the young men not to look too much for the dollar, but to the quality of what they sell; the dollar will come afterwards. He said that he carried on his business three years before any profits came. He believes in being modest in claims made, and then inviting the people to see the plan, and the fact that the dairyman is really doing more than he claims is a first class advertisement. His milk is all sold at a four-per-cent fat standard, so that it can be depended upon for physicians' use. The cream has 16 per cent fat, and sells at four times the price of milk. He believes that there is a good opening in many cities and towns for sanitary milk.

Prof. Hills, of Vermont, gave an interesting address on What Makes the Milk Test Vary? In this State, where the Babcock test is very largely used by all the co-öperative creamerles as the basis for cream buying, this is an important question, as dairymen bring it up at every Institute. Why does Smith's milk test differ from Jones's? Because of breed, individuallty, food, nervous excitement, environment, weather and period of lactation. Breed, because Jerseys and Guernseys give richer milk as a rule than other breeds. Indivlduality is equally important; families within breeds; some give richer milk than others. Food causes least varlations though still many farmers believe food affects fat production. Food affects quantity, but seldom if ever brings about a permanent change in quality. "We have in Vermont fed our cows on pure fat, but no permancnt change. We cannot persuade a Holstein to give Jersey milk." Nervous excltement affects cows, but usually only temporarily, unless the cause is permanent. Stage of lactation affects milk, as it is a well-known fact that cows farther along in milk give a higher per cent of fat. Experiment has shown that on the average the increase from calving to drying often approximates 1¼ per cent; that is to say, a milk testing four per cent at calving may test 5¼ per eent fat at stripping. The variation in test of same milk or cream at creameries is often caused by improper bottles or apparatus, or sometimes by dishonesty of rival ereamerymen who wish to take away each other's patrons. Duplicate samples tested outside or by disinterested parties will check this. Prof. Hills believes in weighing the samples of cream tested, especially in heavy separator cream; otherwise the thin-cream man may have a distinct advantage. Thick cream will not flow so readily in the pipette, and is not so heavy, and one is liable not to get the proper amount in the test tube. He believes all test tubes and apparatus should be examined by proper authorities to see that they are correct.

Officers for ensuing year are: President, H. F. Potter, Montonese; vice-president, F. H. Stadtmueller, Elmwood; treasurer, B. C. Patterson, Torrington; secretary, Geo. E. Manchester, Winsted. The creamery supply exhibit was good. I noted a model of the Green Mountain silo. The butter was scored by Mr. Bent, of Boston, and ran a little higher than last year; none below 90, 98½ being the highest. The attendance was large, especlally the first day, when the halls were crowded. H. G. M.

A "COW REPORT" EXPLAINED.

On page 14 the following report is given, showing how milk farming pays in Massachusetts:

March, 1900: Cows kept, 31 to 36; milked, 27 to 32; average, 30. Quarts of milk, 9,607, wholesaled at 3¼ cents, $312.22. Amount of grain fed to cows:

24 barrels corn and 36 bushels oats	$33.12
Grinding the same	2.40
3,950 lbs. gluten	46.65
3.100 lbs. mixed feed (bran)	29.45
Nine tons hay	130.00
Cornstalks	5.00
20 bu. small potatoes	4.00
Soft corn	3.00
Nutrltone (medicine)	.75
Salt	.25
Total cost of keeping	$254.62
Cost of keeping the herd good by trading cows	30.00
Total	$284.62
Balance In favor of the cows	27.60
Manure from cows	30.00
Total	57.00

No account was made of labor.

Out here in the State of Washington we should say that these cows are losing money. Two good men would be required to milk and care for those cows. If they get anything for their labor the cows are behind. A. W. T.

Washington.

The impression which this report gave to our Washington friend is just what I wished it to make on the farmers of our Grange, before whom I gave it, for at the time it was given there was much talk of a reduction in the price of milk. There are two ways in which to look at almost every question; take the same report and let us look it over together. In the first item of grain there are 24 barrels of corn, valued at $20.16; next the item of hay, $130, also cornstalks, small potatoes and soft corn valued at $5, $4 and $3 respectively, all of which were raised on the farm, and did not cost money out. These items foot up $162.16. Take that from $284.62, and we have $122.46, the actual sum which I paid out for cow feed during that month, and as I received $312.22 for the milk it follows that I had left at the end of month $189.76. To get the exact profit we must find out just what it costs to raise and harvest the hay, corn, etc. This I will leave each one to figure out for himself, but trust it would not cost all of the $189.76. I think my figures go to show that if a person has to buy both hay and grain at local prices there is very little profit in making milk, but if we raise our own hay, and perhaps part of the grain, there may be a little money in it.

R. N.-Y.—The farmer on the Atlantic coast usually finds a cow or some other live animal, the best customer for his grain and fodder. She gives him more than he could get elsewhere. On the Pacific coast the grain is usually sold to the dealers, and the methods followed at the other end of the country might not pay at all.

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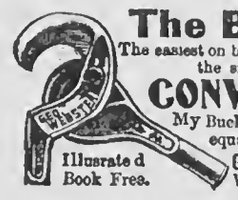

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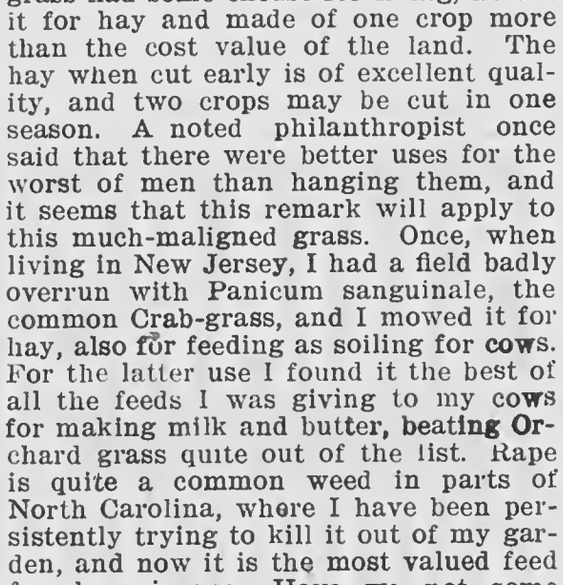
HORSE TALK BY AN OLD TIMER.

The warlike peoples of eastern Europe and Asia have long had the horse at his best, so far as intelligence, dash, spirit and other qualities desirable in a war-horse go. Xenophon lived about 2,300 years ago. He was an expert horseman, taking an active part in the expedition of Cyrus against his elder brother, the King of Persia. After his experience in war and public life, he seems to have retired to a quiet life in the country and devoted a part of his time to literary work. Perhaps something of interest in these days may be learned from this man's treatise on horsemanship. He gives some instructions as to how "a man may be least deceived in purchasing a horse." There is a bit of humor in that word *least*. Evidently horse deals then were not representations of crystallized honesty any more than now. He says that one should first look at the feet, for, "as a house without an adequate foundation is of but little use, no matter how fine the upper part, so a warhorse with badly-shaped feet is worthless, for none of his other advantages can be brought into action." Soundness of feet depends upon thickness or thinness of hoofs, and whether they are high or low before and behind, the high ones being best, as they protect the tender inside of the foot. A hoof that gives a hollow sound when struck is considered best. The bones of the leg should be thick, but not covered with fat flesh or large veins, for, when going through rough roads, the veins become distended with blood, and troublesome swellings of the legs result. Flexible knees are most desirable, as horses of this type are less liable to stumble. The arms should be large and fleshy, chest wide, and legs considerably separated, so that there is no danger of their striking when traveling. The neck should not lean forward like a hog's but be upright from the chest, and slender at the arch; the head bony with a small jawbone, and the inside of both jaws either hard or tender, for those with dissimilar jaws are hard to manage. Wide nostrils and prominent eyes render the horse more terrible in appearance (a point considered of especial importance in old-time warfare) and more vigilant. He should have high shoulder points, and broad and fleshy loins and haunches. In estimating the grown-up height of a young colt, he states that it is invariably true that the one with the longest shank bones turns out to be the largest. Though most of his rules for training refer to animals intended for use under the saddle, he gives some general principles. The foal must be made to understand that hunger, thirst and irritation are the result of solitude, and that food, drink and freedom from irritation are procured through men. Probably some misused work horses nowadays would reverse this, and prefer to take their chances in running wild. When the colt once learns this lesson, he has no dread of man. Then the groom should lead him through a crowd and make him approach all kinds of sights and sounds, teaching him by gentleness instead of harshness that whichever of these he dreads most is not dangerous. In judging a riding horse it is necessary to see how he receives the bit in his mouth, whether difficult to manage while riding, and if he can be stopped readily or turned quickly when going at full speed. However, an animal that cannot do all of these things perfectly may fail simply from lack of experience. Excessively timid horses should be guarded against, and also those that are fierce toward other horses or man. He thinks that the best stable floor is one in which tapering stones about the size of the hoof are placed close together. When not in use the animal should not stand by the manger all of the time, as he will go to his meals with better relish if he has been away from the feeding place for some time. All grooming ought to be done outside, and he considers it a good plan to have the outer yard covered with several loads of round stones, as standing on these part of a day gives him about the same exercise as going over a stony road. He protests against using the currycomb on the parts of the horse where the bones come near the surface, brushing or washing being the better plan. Hundreds of horses that suffer needless torture by being scraped on the head, backbone and legs by a rough currycomb handled by a still more rough human being, would appreciate the mode of cleaning suggested by Xenophon. The brutal treatment they receive is what makes many horses in such dread of being cleaned. Those that are not hurt needlessly enjoy this dry bath. There is a great difference in horses about this also, and those that are very nervous or thin-skinned should have most consideration. He believes also in allowing a horse to have his full mane and tail, as these were given him by Nature to help in removing flies and other troublesome things that he cannot get at in any other way.

SOME NOTES ON STOCK FODDER.

THE R. N.-Y. asks what price silage brings at an ordinary sale. Some time ago—I think about the time THE R. N.-Y. asked the question—a lot of silage was sold in Illinois for 60 cents a ton. A fair price, I think, for the seller, considering the difficulty and cost of moving it. I don't think I would have given that price for it, and moved it. In the same issue THE R. N.-Y. calls the cow an agrostologist; that is, an authority on grasses, scientifically speaking. My cows and mules when turned loose in a five-acre lot kept for an exercising ground chiefly, I notice are eating the bunches of the so-called broom sedge which have come up green and fresh after the mature grass has faded and dried, in preference to the Timothy and clover; the mules especially gnaw it down to the roots. In the Spring the sheep feed wholly on the first growth of this sedge in preference to all other grass. A farmer in North Carolina who came from a northwestern State, and bought an old run-down farm covered with the much-maligned Johnson grass, Sorghum Halapense, wrote me that after a good deal of trouble in trying to get rid of it, finding it to grow faster and more luxuriously the more he tried to kill it, thinking that such a persistent grass had some excuse for living, he cut it for hay and made of one crop more than the cost value of the land. The hay when cut early is of excellent quality, and two crops may be cut in one season. A noted philanthropist once said that there were better uses for the worst of men than hanging them, and it seems that this remark will apply to this much-maligned grass. Once, when living in New Jersey, I had a field badly overrun with Panicum sanguinale, the common Crab-grass, and I mowed it for hay, also for feeding as soiling for cows. For the latter use I found it the best of all the feeds I was giving to my cows for making milk and butter, beating Orchard grass quite out of the list. Rape is quite a common weed in parts of North Carolina, where I have been persistently trying to kill it out of my garden, and now it is the most valued feed for sheep in use. Have we not some uses for these persistent weeds which we are trying ineffectually to eradicate? Several years ago I got some of my fields here well stocked with the ox-eye daisy, and after years of unavailing work I gave it up and put my sheep in the field. Now in three years the field has not a living daisy in it, and the sheep thrived on it. H. S.



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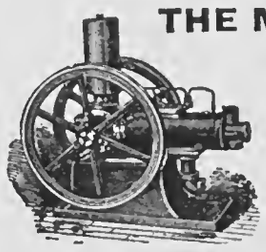
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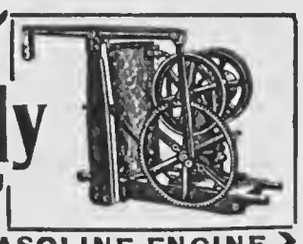
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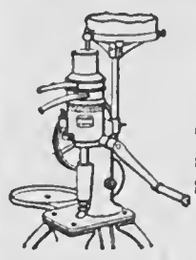
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The Chicken Yard.

HEN PARTNERS THAT PAY.

Ripe Results from a "Greenhorn"

I send you a transcript of my poultry account for the year 1900, which I think is a remarkably good showing. Poultry on hand January 1, 120; this was reduced by sales of old hens in the Summer to 80, the average number kept during the year being about 100:

Number of eggs laid	17,677
1,265 dozen eggs sold	$279.65
Poultry sold	40.39
Cash receipts	$320.04
Poultry consumed	13.00
Eggs used in family	10.00
Total	$343.04
Feed bill, which includes grain for horse, hog and two cows	169.52
Total	$173.52
Increase of flock	30.00
Value of manure	20.00
Profit on 100 hens	$223.52
To this should be added value of grain fed to horse, cows and hog, at least.	69.52
Total	$293.04

This shows a profit of nearly $3 per hen. My hens are White Wyandottes, and a cross of White Wyandotte hens with a White Leghorn cock. The lowest number of eggs laid was on January 5, 14; the next lowest was on November 7, when they only laid 20 eggs. The highest on any day was 83. The panic of 1893 closed the factory in Brooklyn, N. Y., where I was employed, and I came up here in northeastern Connecticut and bought a farm; being as "green" about farming as a man born and brought up in a city could be. None of the family knew how to milk, I had never plowed a rod, was 57 years old and slight of physique, but we have made a success of it. None of us would go back to the city to live if we could. I have built a cow barn, wood and wagon sheds, added a room to the house, built six poultry houses, planted 500 peach and plum trees, and wouldn't sell the farm for less than twice what I paid for it.

The above is written for the encouragement of the mechanic, clerk, salesman, who reads, in the eye of the manager or superintendent as he passes by him: "I guess it is about time to put a younger man in your place," and who has saved $1,000 or $2,000 to show him that a good living *can* be made by an industrious man on the cheap farms of New England. In this locality $700 to $1,000 will buy a good *supporting* farm, where a worker can make an independent living. Where, from lack of money, a heavy mortgage has to be carried a man is handicapped, and has to scratch much harder to pay interest and still make a living. I wish to add in closing that a large share of whatever success I have attained is due to the wise and careful management of the "Madame."

Willington, Conn. G. A. C.

The Guinea Fowl.

There are two varieties of Guineas, Pearl and White. There is no difference in their characteristics save in their color. The Pearl variety should be bluish-gray in color, each feather covered with white spots resembling pearls, hence its name. It should be free from any white, or partly white, feathers in any part of the plumage. The neck is covered with black hairs near the head and between that and the feathers is a soft down, of a light brown color, that glistens in the sun. On the top of the head is a horny spike that turns backward. The bill and legs are brown. The White variety should be a pure white in plumage with a yellow, orange or yellowish-white bill and legs, this being the only difference between them and the Pearl variety. Some birds of the Pearl variety have white feathers in the breast and wings, but are mongrels, being a cross between the two varieties. They are great foragers, and will pick up enough bugs and injurious insects more than to pay for themselves. They do not stand confinement well, and will not lay more than one-half as many eggs as if allowed to run at large. If fed regularly morning and night they will always be on hand for their share. They desire to roost in trees near the barn at night, but are most excellent guards either night or day; anything out of the usual astir, they will set up a great cry. They roost so high that they are out of the way of thieves or wild animals. In their wild state they will fight and drive other fowls, but if used kindly as other poultry, they will stay and feed with the other fowls without showing much of this pugnacious habit. But if any other fowl wish to fight, the Guinea cock is always ready for the fray and never comes out second.

The Guinea hen is a Spring and Summer layer and lays from 90 to 120 eggs yearly. They like a secluded place to lay in. When their nests are found, leave two or three eggs, or they will leave the nest for another place. I have had them lay in the nests with hens. Better set their eggs under hens to hatch, as the Guinea does not sit until too late in this latitude to have the young get grown before Winter. Besides, if raised by common hens they can be taken care of better, for they must be fed often, as the young eat but little at a time. Fifteen to 17 eggs can be set under a good sized hen and with good care all can be raised. Their eggs are small, but make up in quality what is lost in size. Their meat is excellent and has a gamy flavor. The cocks can be distinguished by their screeching noise, also by the spike on their head being larger, and by holding their heads higher. Their ear tubes are larger, and generally curl in a sort of a semicircle toward the beak. The hens make a noise that sounds like "too quick," and seldom screech. They are a profitable fowl for the farmer to raise. H. A. J.

Worcester, Mass.

OATS AND HENS.—I have seen so much in THE R. N.-Y. about feeding oats to hens, that I think I will have my say now. I have fed them for years, and think them a good feed, and no more likely to kill hens than any other grain. No matter what you feed, occasionally a hen will die. I think I get more eggs and lose no more hens than those who feed no oats. Last year I had 60 year-old hens and 30 pullets, and they laid during the year 11,468 eggs. The hens were fed a mash of two-thirds coarse bran and one-third cornmeal in the morning, and at night about three-quarters dry oats and one-fourth corn. In cold weather the mash is fed hot, and the oats and corn warmed. When the hens cannot run out, at noon a little cracked corn is scattered in the litter on the floor to keep them busy. They do not have any other kind of grain or meat, or any hen food. Warm water and ground oyster shells are kept before them all the time, and they have thick sour milk about every day. Whole apples are also given them two or three times per week. I do not think you can find a healthier or brighter lot of hens, and I shall keep right on with the oats.

Dover, N. H. W. E. R.

EGG EATERS.—Two Winters past I have had some trouble with hens that eat eggs. Along in December and January some hens will lay a few eggs, and in spite of all I can do they are as liable to place the egg on the floor as anywhere. Then if the hens are at all accomplished, as some hens are in almost every flock, they will quickly go at every egg they can find and eat it. The very best thing I have ever tried is to place earthen eggs about, and let the hens try their skill on them. But after they get a taste of real eggs it is pretty hard to discourage them. This year I placed the eggs about the floor early in the season, before the hens begin eating eggs. Of course I try to furnish such food as they need. This year I haven't had an egg eaten so far as I know. The generous "feed" of earthen eggs in season did the good work, I am certain. It is no matter now if some hen of perverse nature does deposit an egg on the floor; the others have had their ambition for egg-eating so blunted by those hard-shelled eggs that they don't molest any.

H. H. L.

LIME IN THE HENHOUSE.—There was a certain odor in one apartment of my henhouse that was disagreeable and, I feared, emanated from a source of danger. After trying the clearing-out method several times with little effect, I decided to use lime. Lime is a good cleanser truly, but I dislike to use it where there is much hen manure, for it will cause the manure to decompose, liberate its ammonia, and thus add to the nuisance besides spoiling the manure. By clearing away everything on one side away from the roost, and sprinkling air-slaked lime evenly over the floor, the odor was completely annihilated and the manure not injured. A friend who says he has no sick hens uses lime every day in his henhouses. He clears out all droppings every morning, and sprinkles in the lime. This, doubtless, is good for the hens, but, I fear, bad for the manure. To be sure, one keeps hens for what the hens pay, and not especially for the manure, but by careful managing the lime can be used to a limited extent with little injury to the fertilizer. H. H. L.

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"THE POLAR CREAMERY."

One of the Worst Fakes Yet.

There has been a salesman, traveling through this part of the country, selling what he calls Polar creameries. He says one can make butter in Summer same as Winter, and not use ice. He claims that the creameries are filled with a material that will prevent water from getting warm; they can be used in the kitchen, or out on the porch in warm weather. The price is $68, and the agent has sold quite a number, and claims that the buyers are getting them on trial for three months. Before he leaves he has them sign two articles of agreement and a note; still they are only on trial, and he takes a neighbor with him, who has bought one and is better known to the people than the stranger, and in that way he has made several sales. In two weeks after he makes a sale an inspector comes; he says to inspect creamery, but in my estimation he is inspector of the notes, and if a party is not reliable the machines are shipped away. I think the whole thing is a fraud, and that they are humbugging the people. He sold 10 while stopping with this neighbor. I have no thought of buying one. I feel sorry for some of my neighbors who did not understand, and feel that they are humbugged, as they say they all make the butter and milk taste, and if there was any way to get rid of the implement they would not buy at any price. B. S.

Clifford Co., Pa.

Have you any knowledge of the Polar creamery? It is a new thing in this territory, and I am afraid it is too good to be honest. It is to keep milk on the porch of the house, Summer or Winter, at the same temperature without ice. The agents say that the outside temperature of the air has no effect on it, as it is controlled by a nonconductor. J. L. M.

Elton, Pa.

We give our opinion of this on the editorial page. On the face of the claims made for it this "creamery" is a rank fraud. We are surprised that farmers who are in their right minds should buy any such thing. This plan of getting some "prominent citizen" to go around and play Judas with his neighbors is an old one. The country is full of humbugs just now, and most of them look fat. The latest thing we have heard about is a powder for taking the flavor of onion or garlic out of milk. Instead of putting this into the milk we are to put it into the cow—feed it in her grain! Why can't they let the cow alone, anyway?

PRIZE BUTTER IN NEW YORK.

The following reports are made by creamerymen whose butter scored high at the recent meeting of the New York State Dairymen's Association:

The butter exhibited at Watertown was made from milk delivered December 3, the larger part of it being two days milk delivered by 43 patrons; the cows are principally grades of different breeds, with quite a percentage of Jerseys. Twelve of our patrons have silos, and over one-third of the milk, I think, would be silage milk. I believe good silage is the very best of food for a milch cow. We separate our milk with two of Reid's improved long-spindle separators, and in the Winter Pasteurize the milk at about 160 degrees with Reid's Pasteurizer before separating, send the cream over a cooler, and cool immediately to about 70 degrees, then gradually to about 56 degrees, where it is held for 48 hours and then churned. A pure culture starter made from Hansen's lactic ferment is added to cream when we start separating. We use Thatcher's butter color. I believe the high scoring of the butter at this time of the year was due to Pasteurizing of the milk.

Chipman, N.Y. THOS. F. RUTHERFORD.

Our creamery was built and opened June 28, 1899. It is situated at Medusa, near the foothills of the Catskill Mountains. This is a very fine grazing country, although the farmers are not up-to-date in dairying. The herds are quite well mixed with Jerseys, as our tests will show, the butter fat averaging from four to six per cent. From two to 20 cows comprise the size of the dairies. During the Summer months we received milk from 75 patrons. Of these, only one feeds silage, which is one disadvantage to the creamery, as I consider silage the best feed for milk, quantity and quality considered. Badly-tainted or impure milk is rejected. The proper way for farmers to guard against tainted milk is by cooling and aerating as soon as it is drawn from the cow. The milk that made the butter scored at the convention held at Watertown was delivered to the creamery every other day, the butter being made on the last days of November. As we use Reid's improved Danish separator and Pasteurizer, the milk was Pasteurized, passing through the separator at a uniform temperature of 76 degrees. The cream passed over a corrugated cooler which cooled it down within two degrees of the water. The cream of this butter was further cooled down to a temperature of 45 degrees; then reheated to a temperature of 80 degrees. We used a ferment starter to ripen the cream, which takes from 12 to 14 hours, the cream being churned at the temperature of 45 degrees, taking about 45 minutes to churn. T. C. HARVEY.

Butter Left in Cream.

P. C. S., Katrine, Kan.—After I churn and take out the butter there are little particles of butter floating in the milk. What causes this?

ANS.—Either you are not churning quite long enough, or else your cream is not all of the same degree of ripeness. All cream to be churned together should be thoroughly mixed 12 hours before churning. The smooth velvety appearance of properly-ripened cream is not easily described. If you have succeeded in obtaining it, churn at such a temperature that the butter will come in from 30 to 40 minutes. The churn should be stopped when the butter is in granules about the size of Winter-wheat kernels, and the buttermilk has a thin bluish appearance. If the previous conditions have been right, there is a point at which the butter, although still in granular form, will float in a mass on top of the buttermilk. The buttermilk is then drawn off from beneath it, a wire strainer (50 meshes to the inch) being used to catch any granules that may come with it. The butter should then be washed with cold water; two or three washings will usually be sufficient. It is then ready for salting. J. A. F.

Ripening Separator Cream.

C. B. S., Stone Ridge, N. Y.—Does separator cream require any different process of ripening from deep water or pan-setting cream? I have a separator, and one of my neighbors has one, and I notice his butter and mine does not keep, but gets strong in a short time. I formerly used a creamery, and had no such difficulty.

ANS.—Separator cream requires the same process to ripen it as cream raised by the deep-setting or shallow-pan systems, and will, we believe, make equally as good if not better butter, when all other conditions are the same. Taking it for granted that the *utmost cleanliness* has been practiced without bringing a solution of the trouble, may be that C. B. S. has been overripening a part or the whole of his cream. All the cream to be churned together should be thoroughly mixed at least 12 hours before churning, in order that the lactic acid may be equally distributed throughout the whole mass. If too much lactic acid is allowed to develop, that is, if the cream becomes too sour, the casein may become firmly coagulated. Upon churning, this breaks up into minute particles, and becoming incorporated with the butter makes an excellent medium for putrefactive fermentations, which cause bad flavors. The lactic acid should not exceed fifty-eight one-hundredths per cent (.58) as determined by Farrington's alkaline tablets. To make a butter that will "stand up" well under adverse conditions of temperature, it seems to be necessary that the cream should be subjected for several hours to a temperature at least as low as 50 degrees Fahrenheit. In the deep-setting system this has already been accomplished when the cream is run off, but with separator cream the case is different, and it should be allowed to stand for several hours at a temperature of 50 degrees Fahrenheit before churning. All changes in the temperature of cream for butter-making should be made gradually. A thorough sterilization of all utensils with live steam, every day or at least as often as used, is to be recommended. J. A. F.

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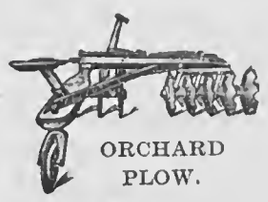

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Ailing Animals.

ANSWERS BY DR. F. L. KILBORNE.

Influenza or Acclimation in Horses.

What is the matter with my horses? They first become stiff in the legs and suffer from cramps, acting as though they are sore all over. They now stand with their eyes almost closed, and water and matter running from them. The horses were brought five weeks ago from Indiana to Oklahoma. Is it a common disease, or caused by change of climate? W. W. T.
Cloud Chief, O. T.

The horses appear to be suffering from influenza, or as it might be termed in cases of this kind, acclimation fever, brought on by the change in climate. If the horses are very sick, or appear to have much fever, it would be well to call a competent veterinary surgeon at once; if there is one available. Owing to the severity of some cases, and the complications that are liable to arise, severe attacks of the disease can be satisfactorily treated only under the personal direction of the practitioner. Mild cases require very little medicinal treatment. Good nursing, comfortable quarters, and a nutritious, laxative diet, such as bran and flaxseed mashes, with a little green food, is about all that is necessary. If the attack is more severe, with high fever and prostration, give one ounce each liquor acetate of ammonia and sweet spirits of niter with one dram fluid extract of belladonna in a half-pint of cold water, and repeat two, three or four times daily, according to the severity of the symptoms. If there is constipation give rectal injections of warm soapsuds several times daily, and pint doses of raw linseed oil, as often as may be necessary to keep the bowels moving freely. Unless the stable is very warm, the animals should be blanketed and the legs, if cold, rubbed and bandaged. If catarrhal symptoms develop, steam the head once or twice daily, adding a little pine tar or turpentine to the boiling water, over which the head is steamed.

Horse Out of Condition.

What ails my horse, and what will cure him? He is rather thin in flesh, slightly costive, drinks three times a day, but little at a time; does not go well on the road, going as though tired or lazy; eats well, two quarts oats and a moderate amount of hay three times a day. I do not work or drive him a great deal. Will poplar bark take the place of gentian or golden seal in horse medicine? H. L. C.
Winchendon, Mass.

Try the following powders: Powdered nux vomica and aloes, of each four ounces; powdered gentian, nitrate of potash and ginger, of each eight ounces, mix and divide into 32 powders. Give a powder in the feed twice daily. Should the horse refuse to eat the feed, mix the powder thoroughly with the feed, and then just before placing it in front of the horse, rub a little of the powder on his nose, when he will usually eat it without further trouble. No. The poplar bark will be more of an astringent, while the gentian and golden seal are bitter tonics.

Small Orifice in Heifer's Teat.

We have a fine young Jersey cow with her first calf, that gives promise of a good milker, but the orifice in the two front teats is so small that with all the pressure the stream of milk is no larger than a knitting needle. The two back teats are comparatively easy to milk, and we are compelled to let the calf milk the front ones. What remedy would you suggest?
Manchester, Va. H. E. H.

If a veterinary surgeon were available the most satisfactory method would be to have the orifice dilated or opened by him. In the absence of the veterinarian you can probably dilate the opening with a milking tube. Procure two milking tubes, and after milking the cow (with the tubes if you will), plug the tubes to prevent leaking of the milk, and insert a tube in each teat. Tie them in position with a piece of tape, to prevent their dropping out, and leave them until next milking, when you can either remove the tubes to milk the cow, or milk her with the tubes. Keep the tubes in the teats until the opening is sufficiently enlarged to milk as freely as desired. Do not leave the tube in the teat longer than necessary, because of the danger of causing the cow to leak her milk, by dilating the orifice too much.

Contracted Tender Feet on Horse.

What shall I do for a horse with tender and contracted feet? J. S.
Brooklandville, Md.

Blister the coronet all around the top of the hoof with ammonia liniment, and repeat two or three times at intervals of four to six weeks. Paint the hoof two or three times a week with a mixture of equal parts of pine tar and vaseline melted together. You would do well to have the horse shod under the personal direction of a competent veterinary surgeon.

FEEDING MOLASSES TO STOCK.

In the morning, after milking, we feed hay, and about 9 o'clock turn the animals out to drink, while cleaning the stable, then put them back, but if the weather is warm and very pleasant perhaps leave them out an hour or so, but not longer. We now scatter three scoopshovelfuls of beet pulp on to the hay, orts usually. We put enough hay in so there will be a peck to a half-bushel of orts in each cow's manger. We sprinkle on a pint or more of waste beet molasses thinned with about the same amount of water (as the molasses is very thick) to each cow, then scatter gluten, buckwheat middlings and wheat bran on it, and to the cows that are intended for beef add more or less cornmeal so that when they fail to give milk in paying quantity they will be good beef. To the dry cows coming in, and young heifers, we give mostly wheat bran; perhaps a little meal if they are thin. At night we turn out again for drink, clean the stable, and sweep the mangers, and if any orts are eatable give them to the horses. After milking feed hay again, then after supper give pulp, molasses and grain as in the morning, but a little more.

We have practiced this system of feeding many years, regardless of the kind of feed used. It requires considerable time, but I think it pays well for extra time spent in caring for cows. I will say here that in the Spring we keep our cows in the stable nights until the weather is warm all night, and turn out days until the flies get troublesome, when we change, turning out nights and keeping them in days. In either case we feed hay and silage until we have some kind of grass feed to cut, also feed some kind of grain through the year. We are feeding four horses whole straw, clean their mangers twice a day, cut the orts and take about one-half bushel of them and pour on nearly a quart of molasses and a little water; stir it, when every piece of straw will be sweetened, put on a quart of wheat bran and two quarts of rye, oats, barley and corn ground together, stir it in, and they eat every piece of it. As to the actual worth of the molasses, I am not able to determine yet, as we have only fed it about three weeks, but this I can say of it, that all of our stock like it, and will eat almost anything with it that otherwise they would not touch. Our cows are giving at the present time as much or more milk as any time last Fall or Winter, although the weather is quite cold.
Whitney's Point, N. Y. J. P. C.

HAND-RAISED PIGS.—The picture on page 35 of a hand-raised pig is very sweet indeed. Piggy looks so cunning, with such a charming curl to his tail, but it takes too much time if the Missy's time is worth anything. I raised six pigs once that were left motherless at three days old. We were young at farming, and fed the mother too much, and she crawled under the barn and died. My husband said, "Now I might as well kill the pigs too." I couldn't bear that, so I asked whether I could have them if I could raise them. "Why yes, take 'em along." I fed them with a spoon five times, being careful to hold their noses close to the basin of warm steaming milk. After that they would put their little noses in the milk and drink. I made them a pen near the back door, put in a pile of straw, and fed them five times a day and once in the night for four weeks. The night feeding was not very pleasant, as it was in the month of April, and I often dreaded to get out of a warm bed to feed them, but they fully repaid me when they went to market in December, being the finest pigs on the farm. HELEN.

LIVE stock is in good condition and doing well, but there are not as many cattle and hogs feeding as usual. Very little snow, but grass is looking well; wheat badly damaged by fly in the Fall.
Reading, Mich. E. A. D.

WE have never fed silage to hogs nor any stock. As to clover, we have fed plenty of the hay to hogs. While it will not take the place of grain, it assists in keeping the hogs in a good healthy condition, and also furnishes some nutriment. It is of the same use as grass, but not so succulent. J. H. DUXBURY & BRO.
Minnesota.

BOTTLE PIGS.—I was very much interested in your cut of the hand-fed pig. Several years ago I had left on my hands, by the death of the mother, eight pigs one day old. I had never heard of its being done, but thought I would try bringing them up by hand. They were put in a corn basket, kept in a warm place. For feeding I used the rubber from the end of a medicine dropper. I never saw anything grow faster, and it was actually a pleasure to put them on the floor at feeding time and see them follow me around. They all became fine porkers. J. R. S.

JERSEY CALVES.—Evidently the man who does not succeed with Jersey cattle and prefers other breeds is simply very narrow-sighted, or does not have the right kind of Jerseys. I have now four calves that I am raising on skim-milk and meal, that are six weeks old. They are good veals, and would realize me to-day $32, and I have before now sold veals under the same condition and age for $10 per head. I don't find my Jerseys dainty, kickers, etc., but are very docile, gentle and not at all nervous. My experience with Jerseys is that they respond to good treatment wonderfully. C. C.
Nunda, N. Y.

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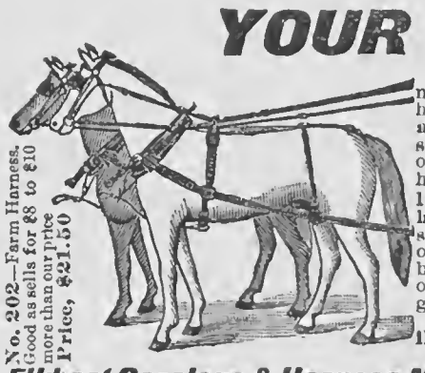
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THE RURAL NEW-YORKER,
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SATURDAY, FEBRUARY 9, 1901.

NEXT week we shall print a well-prepared article on Japan plums by H. O. Mead, of Massachusetts. Mr. Mead has studied the Japan plum at both ends of the country. He lives in the town where Luther Burbank did his first work, and he has visited Mr. Burbank in California. What he says about plums may be set down as solid and straight. Of course we have more of these "essential-principle" articles on the way.

*

THE New York Assembly passed a resolution favoring the Grout bill, but the Senate hesitated because State Senators "should not instruct National legislators!" Why not? These State Senators are supposed to be the servants or agents of the people. They are not supposed to create public sentiment, but to register and express it. Some very big men before now have lived to be thankful that they were "instructed" by very small ones!

*

GOV. ODELL, of New York, in his message to the Legislature, said that the work of detecting and slaughtering tuberculous cows should be taken from the State Board of Health and put in the hands of the Commissioner of Agriculture. That was one of the few suggestions he made about agriculture. The House has promptly passed such a bill, and the Senate will doubtless do the same. This is right. It should have been done last year. The cow should be put in the hands of her friends.

*

THE doctors appear to agree that insanity is a disease. Many forms of this mind disease are curable, but our observation is that comparatively few patients have a fair chance in public institutions. There are institutions for the care of the insane that are truly hospitals. Others are as truly jails. Life inside some of these great palaces is well calculated to take away the last hold upon reason which some poor, nervous wretch is attempting to retain. If the State really desires to *cure* the insane it should separate them into groups, and keep them in smaller companies on the farm as much as possible.

*

DURING the past two months, the newspapers have reported an unusual number of casualties caused by thawing dynamite or giant powder on a cook stove. In most cases the victims were farmers, who purposed using the explosive in clearing land, though some disastrous explosions occurred where the stuff was handled by men making a business of such work. The fact is that no powerful explosive can be regarded as "safe"; that is, it must always be handled with the greatest caution, and familiarity must never degenerate into carelessness. Such materials are often a great aid in clearing land, but their dangerous character must never be overlooked for a moment.

THERE is a new class of would-be farmers large enough to merit special attention. They are mostly men of middle age who are being crowded out of city jobs by the hard fist of competition. Many a man of 45 or older wakes up some day to find that he is considered "an old man," and that his job demands younger blood. Usually it happens that when such a man loses his grip in the city he cannot fasten it again, and the outlook is a hard one. Many of these men turn to the country as a last resort, and we receive many letters from such people asking what the chances are for them on a farm. There is so much of this appeal for help that we plan to print a series of letters giving the experience of some who have tried the country. One of these letters is found on page 91 by a man who has succeeded. There are some who fail—we hope to tell why.

*

WE are receiving a good many sample contracts offered by canning factories. The grower is certainly tied up with a tight knot in most cases. He seems to assume most of the risk. In the case of wild-cat canners he takes it all—and often gets nothing else. What we are most anxious to learn is the price offered for peas. There is every chance that canned peas will rise in price. If the canners get more for the peas, the grower should certainly share the increased price. The Green pea-louse will make the grower's risk greater than ever, while it means no extra risk to the canner.

*

ILLINOIS dairymen are much dissatisfied with the present law regarding inspection of cattle suspected of tuberculosis. They consider that the cattle should be appraised at full value at time of examination, the owner to receive full value if, after the animal is slaughtered, it is found to be healthy, and 75 per cent of the value if the disease is present; that no animal shall be condemned without the owner's consent, in writing, unless it shall be found diseased on examination, and that no animal shall be slaughtered without the owner's consent, after the State appropriation for compensation is exhausted. The dairymen feel that the present law is unjust and oppressive to them, and their concerted action seems the readiest way to a remedy.

*

No section of this country is so sadly in need of the fertilizing and civilizing influences of the dairy cow as the old cotton-growing States. The cow has saved whole counties in the North and West. Year after year of grain growing had exhausted the soil, and brought farming to a low ebb. Dairying gave the farms a new lease of life, and made them once more profitable. The dairy cow, with a wise man for a partner, means prosperity to any section naturally adapted to the production of forage plants. She means a constant and sure income, and after all the dollar is a mighty agent for civilization. The farmers of the cotton States need available fertility in their soil and available dollars in their pockets. The cotton bale rests too much on the fertilizer bag, and the lump of cotton money is badly melted before it reaches the grower. The dairy cow has found her place in a few southern localities, notably at Starkville, Miss. The more cow, the more corn, cotton, comfort and cash. That has been the invariable result. Why do we speak of this? Because the two Senators most active in opposing the Grout bill in the Senate committee represent the cotton States! It is hard to understand why such men should be willing to cripple an industry like dairying, which, if intelligently conducted, would add millions to the wealth of their section.

*

A LEADING peach expert, while lecturing on peach culture, was asked what varieties to set. "Don't plant Elberta!" was part of his answer. After the meeting a large peach grower said to the writer: "Elberta is the best selling variety I have! People call for them! If instead of the varieties he mentioned I had planted more Elbertas I would have made $2,500 more on last year's crop!" In Massachusetts a well-known fruit grower from a distant State said: "Don't plant the Baldwin apple. It is a back number! There are better varieties of red apples." A man who heard the advice said nothing, but did much thinking. He had in his desk at home commission returns for Baldwins which sold at $6 to $7.50 per barrel! How can such things be reconciled! In the case of the peach the expert may know that millions of Elbertas have been planted, and that within a few years the markets will be swamped with that variety. As to the Baldwin apple, in its native State it must be either a very wise or a very *un*wise man who would claim that he has a better red cheek! It all comes down to the fact that the man and the locality have more than anything else to do with varieties. General advice is useful, but, after all, the successful local orchard is the best object lesson.

*

AN evident fraud has come to our notice in Pennsylvania. It seems that an agent is traveling through the country districts selling what he calls the Polar creamery. The creameries are supposed to be left on three months' trial, but to begin with the would-be purchasers sign two articles of agreement and a note. The machine is guaranteed to keep milk at a low temperature, Summer or Winter, without ice, and regardless of whether it stands in kitchen or dooryard. This special and unique feature is claimed to be due to some substance which when mixed with water, regards with impunity the sizzling heat of the Summer sun or the chilling blast of an imported blizzard. Physicists do not know of a substance in this wide world that is an absolute non-conductor of heat. The claims made for this new Polar creamery would lead one to suppose that such a substance had been found, and not only found, but that its cost was such that it could be used in the manufacture of every-day apparatus. As the chief value of this new creamery is in keeping milk cool during warm weather, we would suggest to intending purchasers—if there be any such among the readers of THE R. N.-Y.—first, that they begin their three-months' trial about June 1, and second, that they sign no agreement or note until the trial has proved satisfactory. We cannot think that any intelligent farmer will be foolish enough to believe any such statements. It might be well to turn the light on some of those Polar agents by polarizing them with a bean pole.

*

WHAT has become of the Grout anti-oleo bill? The plan of the oleo men was to delay it in the Senate committee, but this did not work, for finally that committee reported favorably to the Senate. This report contained the following chunks of argument:

> The bill appears to be unanimously desired by the farmers of the country who are engaged in dairying, and has the earnest approval of the Secretary of Agriculture. Your committee has listened with interest to the representatives of the live stock interests and the cotton-seed oil manufactures, and is unable to see in this measure anything that can greatly injure either. The Secretary expressed the opinion before the committee that the dairy cow was a necessity to the restoration of the exhausted cotton lands of the South. We have heard some objection to this measure from organized labor, and while it is true that some laboring men may prefer as a matter of pride to consume oleomargarine that is yellow instead of white, yet your committee believes that while the pride of some may suffer under this measure, which will raise the tax in the colored and reduce it in the uncolored, a far greater number are now being deceived through the sale of oleomargarine as butter and at butter prices.

There you see the good effect of the thousands of letters that were mailed to Senators. The farmers of this country have been sticking millions of postage stamps upon their Members of Congress. Will the bill pass? We believe it will, if it can be brought to a vote. The Senators are wrangling over several important measures, and unless strong pressure is brought to bear upon them the Grout bill may be held back. Keep up the letter writing! Stick on the postage stamp! That is the best advice we can give now. If you have written once before, write again and ask why the Grout bill is not brought to a vote!

*

BREVITIES.

RURALETTES.

Hopeful his outlook—he perchance may grow
The man who dares to say "I do not know!"
But cursed is he, and great will be his fall
The pompous wretch who thinks he knows it all.

*

The politicians are on deck,
Would that the plague might take 'em;
With great pretense of statesmanship
They break laws when they make 'em.

*

The apple that carries a big fat worm
Into the mouth of your friend the eater,
May safely be labeled an evil germ,
Working his feelings to call you "cheater."

*

Show me the man who stands right up in church
And says he never, never "made a break,"
Or sought amendment for some moral lurch,
And you will find an angel or a "fake."

*

He talked for half an hour—told all he knew—
And then sat down? No, poor, inflated fool!
He told it o'er again—alas! 'tis true!
He's made his tongue a plaything—not a tool!

*

Your tongue may never reach your Congressman
Except by licking o'er a postage stamp;
Sometimes the blackest ink, well written, can
Illuminate his pathway like a lamp.

*

Seventeen manufacturers painting oleo,
Selling it for butter—see their wallets grow!
Five million dairymen, fighting for the cow,
Sticking on postage stamps—stick another now.

"HAND-RAISED pigs"—page 93.

A SHOE squeak is a song of the sole.

BEN DAVIS is not a favorite in Boston.

JACK FROST will give you freeze seed if he has his way.

DON'T plunge into plum culture. It's likely to be overdone.

THE strawberry crop from the Southern States promises to be very large.

THE growth of a peach tree is well controlled by the use of nitrate of soda.

OH, the snow—the beautiful snow—gives the grass seeding a much better show.

THE world seems to be filled with so-called "cures" and remedies for deafness just now.

THEY tell us that in shredded silage the grain is torn up and thoroughly mixed with the stalks.

WE know from experience that Mr. Hinman's plan (page 83) of feeding green cut oats in place of horse hay is a good one.

A FEW weeks since a Californian told us about his Winter work. Now read the doings of that cold country resident on page 97.

Events of the Week.

DOMESTIC.—A fire in Montreal, Canada, January 23, destroyed the Board of Trade Building and many places of business. The losses are variously estimated at from $4,500,000 to $6,000,000. . . . . O. B. Wilson was talking over a telephone in Alabama during a thunderstorm, and was struck by lightning and killed. Suit was brought for damages and settled by the payment of $1,800 by the telephone company. . . . . The Creek outlaws are terrorizing several white settlements in Indian Territory, and military protection is called for. . . . . Fire at Matawan, N. J., January 27, caused $100,000 damage. . . . . January 26, safe breakers robbed the vault in the headquarters of the Internal Revenue Department at Peoria, Ill., and secured all the documentary stamps in the vault. The extent of the loss is unknown, but may be anywhere from $50,000 to $1,000,000. . . . . A fire in a large crockery establishment in Chicago, January 26, caused a loss of $350,000. . . . . Fire at Des Moines, Iowa, January 29, caused a loss of $500,000. . . . . Alaska has been experiencing the coldest weather recorded since white men have inhabited the country. At Dawson, January 16, the temperature was 68 degrees below zero; at Forty Mile, 78 below. The average for the seven days ending January 16 was 58 degrees below zero, and all the time a dense fog hung over the entire valley. . . . . Three persons were killed on a farm near Vancouver, B. C., January 22, by an explosion of 13 sticks of giant powder, which had been placed in the oven of a cook stove to dry.

CONGRESS.—Representative H. C. Smith, of Michigan, January 25, introduced a bill for a National freight commission, and to fix, adjust and regulate freight rates. Strong efforts are making to induce Speaker Henderson to fix an early date for consideration of the Brosius Pure Food bill. The Consular and Diplomatic Appropriation bill, carrying something over $1,700,000, was reported January 25 by the House Committee on Foreign Affairs. It provides $20,000 for purchasing land at Pekin for the United States Legation. . . . . The Senate, January 26, discussed for three hours the subject of National irrigation, the text being an amendment to the Indian Appropriation bill providing for surveys looking to the construction of an irrigation dam and ditch for the watering of the reservation of the Pima and Maricopa Indians, on the Gila River, Arizona. . . . . January 29, the President sent a message to Congress recommending the appropriation of $100,000 for the payment of the claim of Spain for Sibutu and Cagayan Islands, in the Philippine Archipelago, in accordance with the terms of the treaty recently ratified by the Senate.

FARM AND GARDEN.—The fifth annual meeting of the Eastern New York Horticultural Society will be held in the Berkeley Lyceum Building, 19-21 West 44th Street, New York, February 13-14. The programme includes, in addition to regular reports, papers by Prof. G. Harold Powell, of Delaware; Dr. W. H. Jordan, Geneva (N. Y.) Experiment Station; W. H. Blodget, Massachusetts; Prof. John Craig, Cornell University; W. H. Hart, New York; Prof. A. G. Gulley, Connecticut Agricultural College; Prof. F. W. Card, R. I. Experiment Station. The officers of the Society are: President, James Wood, Mt. Kisco; vice-president, W. F. Taber, Poughkeepsie; secretary-treasurer, Chas. H. Royce, Rhinecliff, N. Y.

The twenty-ninth annual convention of the Wisconsin Dairymen's Association will be held at Mondovi, Wis., February 13-15.

The highest price ever paid for a Hereford cow was realized at a sale at Kansas City, Mo., January 24, when $3,700 was paid for Carnation, from the Dale herd of Clem Graves, Bunker Hill, Ind. The purchaser was Jesses C. Adams, of Mowequa, Ill.

The farmers around Solomon City, Kan., have united to fight the grain dealers by forming a stock company to purchase an elevator. Ninety per cent of the farmers of this locality have taken stock in the company. It is claimed that the elevators of Solomon, all controlled by a grain dealers' combination, fix the price of grain far under the market price.

The Michigan Legislature has given a favorable report on a bill prohibiting the manufacture and sale of imitation butter, this bill, however, not applying to oleomargarine sold in such manner as to apprise the purchaser of its nature. There was also introduced a bill providing that cakes of oleomargarine and the wrappers containing them be distinctly labeled, and that the sale of oleomargarine in bulk be prohibited.

Dairymen in mass meeting at Elgin, Ill., January 25 decided to raise a fund to be used in lobbying in behalf of a law regarding inspection of cattle suspected to be infected with tuberculosis. They wish the present law changed to appraisement of cattle at full value at the time of examination, the owner to be given full pay if, on post-mortem examination, tuberculosis is not found, and 75 per cent if the disease is present; that no animal shall be condemned without the owner's consent in writing unless it shall be found diseased on examination; that no animal shall be slaughtered without the owner's consent in writing after the State appropriation for compensation is exhausted. The agitation will probably be carried to the present Legislature. The meeting was largely attended. Joseph Newman, president of the State Dairymen's Association, occupied the chair. Addresses were made by E. J. Fellows, H. B. Farmer, G. Vannorman, C. D. Bartlett, Judge D. B. Sherwood, J. A. Russell and others. A committee was appointed from each town in the district to solicit funds.

Agents of the New York State Department of Agriculture recently discovered that oleomargarine was coming into the State in violation of the law. They traced shipments to Tupper Lake, where the Cornell School of Forestry is maintained, and they assert that they have ascertained that Superintendent Collins, of the School of Forestry, had ordered the butter and had passed upon the bills for its payment and sent them along to Cornell, where they were audited and sent to the State Comptroller for final payment. This was done, they say, in spite of the fact that in 1893 a bill was passed to prevent the use of oleomargarine or butterine in any State institution. State Senator Ambler says that if the allegations are true he will introduce into the Legislature a bill to put the State School of Forestry under the jurisdiction of the State Department of Agriculture.

The Yakima (Wash.) Woolgrowers' Association has elected officers for the ensuing year as follows: John Cleman, president; S. J. Cameron, secretary and treasurer. They are instructed to draft a bill to present to the Legislature providing for the payment of the bounty of $1 each on coyote scalps. The Association has appointed a committee to meet with the Cattlemen's Association to arrange for the proper allotment of grazing lands on the Rainier forest reserve in case the Secretary of the Interior permits grazing there this season. The range was opened last year, July 1, to 250,000 sheep and 11,000 head of cattle.

At the annual meeting of the Rhode Island Horticultural Society the following officers were elected: President, J. E. C. Farnham; vice-presidents, R. H. I. Goddard, Royal C. Taft, Joseph D. Fitts; secretary and treasurer, Charles W. Smith; librarian, Christopher R. Browne; botanist, Prof. W. Whitman Bailey.

The Canadian government has passed an order in council that exemptions from the San José scale act are authorized for nursery stock to be entered only at St. John, N. B.; St. Johns, Quebec; Niagara Falls, Windsor and Winnipeg, between March 15 and May 15, and October 7 to December 7, and at Vancouver from October 13 to March 15. All shipments made except in accordance with the above will be entirely at the risk of owners or shippers, and the packages must be so addressed as to enter at one of the ports mentioned above. The route by which they will be shipped must also be clearly stated on each package. As it is well known that well-matured and thoroughly dormant nursery stock may be safely treated, but that there is danger of serious injury to the trees if fumigated in the Autumn before the buds are thoroughly dormant, or in the Spring after the buds have begun to unfold, all stock which when received is immature or too far advanced for safe treatment will be refused entry and held at the shipper's risk.

WESTERN N. Y. HORTICULTURAL SOCIETY.

PART II.

SPRAYING TREES IN BLOOM.—Prof. Beach's explanations seemed to settle a heretofore much discussed question in favor of the beekeeper. By a special law, the experiment stations have been allowed to make experiments in this line in four different localities. The observed results are about as follows: In every case where a blossom is fairly hit by the Bordeaux spray, it is killed, unless fruit has already set. As the blossoms are in different stages of advancement, some already set, some just opening, etc., the yield of fruit is not diminished by spraying a full-blooming tree in any one day. In seasons of scant bloom the practice would be dangerous, as it might kill a large percentage of the blossoms, and thus reduce the yield largely. A very diluted Bordeaux Mixture prohibits the germination of the pollen grains which it hits. It is true beyond doubt that insects are killed, or many carry the poison home to kill the brood in the hives, by feeding on the sprayed blossoms. Some points are yet to be covered by investigation. Among the hundreds of fruit-growers present, only one or two seemed still to insist on the advisability of spraying trees in bloom. The fool-killer, in short, has the best of the bee-killer.

APPLES IN COOKERY.—Miss Anna Barrows, at the close of her excellent paper, hit the nail fairly and squarely on the head when she expressed her regrets at the great loss of apples last Fall, as they might have been transformed into useful and salable articles, such as marmalades, jellies, apple butter, etc., right in the orchards. This, in her estimation, would be much more profitable than either to let the fruit go to waste or attempt to send it to distant factories.

ON PEACH GROWING.—J. H. Hale's address, as usual, was full of good points. He says we do not any more believe in peach "belts," having found that peaches can be grown almost anywhere in the United States, a few extreme northern sections excepted. Success depends mostly on the man or woman, and on closest attention to the business. The land should be on an elevation, the ideal soil being a light, medium sandy loam. Plow one or two crops of clover into the soil, and prepare it as you would for any garden crop. Then plant and give high cultivation. For a cover crop he recommends a mixture of cow peas and clover. The frost kills the cow peas, and gives the clover room and strength. He gives the trees free rations of potash and phosphoric acid, and just as little nitrogen as will produce good healthy foliage. He prefers large trees for planting, and trims them rather close, but not as close as Mr. Stringfellow does. The new growth is cut back severely every season, the first season perhaps not as much as afterwards. In strong-growing trees, his practice is to cut the strongest shoots out entirely, and to leave the weaker ones for fruiting. This point he considers the most valuable in his address. Thinning the fruit to about six inches apart is most important. Borers are to be dug out in October, and again in May. Banking the trees up with soil in Spring will keep the borer out at that time. The earth banking is removed in July. As to the size of package, the largest one that he can get into the private door unbroken is the one he wants. Girls are employed to do the sorting and packing, as most fitted to pack honestly. Mr. Hale is nothing if not original. He believes that "music has charms," and claims that by hiring a band to play for his crew in the afternoons, he has been able to get 30 per cent more work out of them. Mr. Hale was fairly pelted with questions, and replied with his usual quickness and wit. Thus he told how he frequently cuts the whole top out of an old tree to make a new head. Cultivation is done mostly by a modern extension harrow. He names Carman as one of the most promising peaches in America, but not rot-proof as claimed. It is of delicious quality, and the tree a fine grower. Elberta is good at the South, but of poor quality. Triumph, if well grown, well thinned and thoroughly ripe, is almost a freestone, and a good early peach for home use, but not for market, as it is quite subject to rot.

ON ORCHARD COVER CROPS.—Prof. John Craig favors a mixture of equal parts of Mammoth clover and Alfalfa for covering apple orchards. Alfalfa, sown August 1, has made a root 28 inches deep by the following Spring. The plant grows up without stooling. The Mammoth clover spreads and covers the ground. But no good stand of clover can be expected unless by thorough preparation of the seed bed. The roller should be used after seeding. Hairy vetch also makes an excellent cover crop. It requires about a bushel and a peck of seed per acre. Oats make no good cover crop, as it draws too much moisture out of the soil. So do all other cereals, and they are not nitrogen collectors. Mr. Hale recommends a thick sowing of turnip seed for poor soil. It makes a good and quick cover crop. Hairy vetch is hardy, and can be sown up to to September 1. Seedsmen will furnish the seed as soon as there is a demand for it.

SHORT AND SUGGESTIVE.—As the best method to fight the Shot-hole borer it is recommended to prune off the ends of the twigs where the eggs are deposited, and burn the trimmings. The Elberta peach was named as the best variety for October. Basic slag or "odorless phosphate" finds little favor with Dr. Jordan. Where soluble phosphoric acid is wanted, he would not use it at any price. Chickweed seemed to find as many friends as foes among the fruit growers present. It may be useful as a cover plant in rich and dense orchards. It is a shade-loving plant, and is bound to grow in rich orchards, where it will do little damage, and serve to keep the soil loose. Mr. Hale recommends white lead as the best possible cover for tree wounds.

SOFT DRINKS.—In his paper on Food Adulteration, Dr. Jordan warns against the so-called harmless or soft Summer drinks. The syrups taken with soda water are often colored with aniline dyes. There is enough of such coloring matter in one glass of soda to color a piece of woolen cloth six inches square a bright hue. It may well be doubted that these soft drinks are absolutely harmless.

ARSENIC COMPOUNDS.—Dr. L. L. Van Slyke mentions some of the adulterations of Paris-green and other arsenical compounds. He criticises the present Paris-green law of the State, as it does not forbid the adulteration of Paris-green with white arsenic, which is soluble, and liable to injure the foliage. The arsenoids are more bulky, and more easily kept in suspension than Paris-green. The insecticide known as Black Death consists largely of sulphate of lime with a little arsenic. Peroxide of silicate is 90 per cent sulphate of lime and 1½ per cent of arsenious oxide. Bug Death consists of the oxides of zinc, lead and iron, and has no fertilizing qualities as claimed.

FRUIT AT PAN-AMERICAN EXPOSITION.—Mr. S. D. Willard states that the Society as such will not make an exhibit of fruits. The space will be limited, and there will be no money prizes. But the State of New York has now in cold storage 300 barrels of choice fruits, and will make a finer exhibit than any other State. Wm. Scott, the well-known florist of Buffalo, and superintendent of the grounds, says that the horticultural building on the Pan-American grounds, erected at a cost of nearly $200,000, is far ahead in architectural beauty of that in Chicago in 1893, and a wonder of color display. There will be plenty of fruit on exhibit from the day the Exposition opens. Mr. Van Deman will have a wonderful display of tropical fruits. There will be millions and millions of flowers, and specimens of almost everything in trees and shrubs; 15 acres are to be devoted to the floricultural display outdoors.

Prof. Stuart suggests the removal and burning of affected raspberry canes, by pinching rather than cutting, after the fruiting season.

NOTES ON VARIETIES.—The following strawberry list was given: Bubach, Glen Mary, Brandywine, Sample, Marshall and Clyde. Mr. Hale would exclude Marshall, also Bubach, and perhaps Brandywine, the latter on account of its inclination to rust. His choice would be, Sample, Glen Mary, Haverland, Clyde, Pride of Cumberland, Nick Ohmer or Morgan's Favorite. The following apples were named among newer varieties of especial promise, viz.: Rome Beauty, McClellan (for family); Sutton Beauty, Ontario, the last named a cross between Northern Spy and Wagener, and very good. The Wagener apple can be grown to perfection by spraying. If well grown, growers can get an extra price for them. In peaches, Mr. Hale names Triumph as the earliest yellow peach, sure to overbear and needing thorough thinning. It rots so terribly as to be a curse to the market. Nurserymen should not sell a tree. Waddell is of the North China type; a very early, white-fleshed fruit, the best first early. Carman is white-fleshed, very large, delicious, hardy in fruit bud, but rots badly; otherwise the finest peach in America. Iron Mountain, or Ford's Late, is a large and most delicious very late peach. Ripens in Connecticut about October 10. Among most reliable and profitable crops the apple was generally conceded to stand in the front rank.

T. G.

Corn the Business Crop.

Shredded corn fodder or corn hay is not known in this market as an article of commerce, although we believe that there are a larger number of corn shredders in the hands of farmers than formerly, the machines, however, being simply used to prepare the fodder for home consumption. I believe, owing to the fact that corn can be raised successfully in almost all parts of this and neighboring States, that the farmer should devote a large part of his attention to its cultivation. The fact must not be overlooked, however, that the very reasons which make it desirable for home consumption are the ones which make it least desirable as an article for sale in the general market. The only possible chance of success that general farmers of the East have is to take advantage of their nearness to the market and produce milk, and to do this successfully they should keep on their farms a larger amount of stock than the farm itself would be naturally supposed to support, and, of course, this would mean that they would have to buy a certain amount of food products from outside. Now, if they work on this theory, it is plain that the products which they buy should be those that are most concentrated, as in that case they pay relatively the least amount of freight, and have the least amount of expense in handling, and if they do this it also follows naturally that they should produce on the farm such products as furnish relatively the most bulk, and there is nothing that will answer this purpose better than corn, especially if used as silage, but for this very reason if the farmer attempted to sell his corn fodder, he would be working under a very decided handicap. The writer has for a number of years past raised corn on every acre of ground which he cultivates, and notwithstanding the ground has produced corn each year the crops have steadily increased. Our plan, however, is to raise a green crop in between each year, as for instance on a large part of the ground we have Crimson clover planted early in July, and on other pieces we start the last of March with oats and peas, followed by sweet corn for Summer feeding, and on others we have sweet corn ending with barley and peas, and on others we have rye and wheat planted in the Fall and cut green in the Spring, and then followed again with corn. In other words, we aim to raise all the roughage that the farm will produce, and have stock enough to consume it, and buy the necessary concentrated foods outside.

PAUL T. NORTON.

New Jersey.

Woman and Home

From Day to Day.

I'm mighty fond o' Winter, when the frost is lyin' gray
On the gardens where we frolicked with the flowers o' the May;
When they have the candy-pullin's, an' the cider's sharp an' sweet,
An' the music o' the fiddle makes a fidget in yer feet!
Then you'll find me shore
On the creakin' cabin floor,
A-dancin' ev'ry quadrille an' a-coaxin' 'em fer more!

I've got a friendly feelin' fer the Spring, so rosy dressed,
With the wind in all her ringlets an' the blossoms on her breast;
When the mockin' birds air singin', an' you hear the honey bees,
An' the robins an' the rabbits air as happy as you please;
Then you'll find me shore
Jest a-th'owin' wide the door
To the sunshine an' the singin', an' a-whistlin' out fer more!

An' then I like the season when the Summer comes along,
An' the drowsy, dreamful weather like a sigh that's in a song;
When the cattle bells air clinkin' on the dusty hill an' plain,
An' the lillies air a-holdin' of their silver cups fer rain.
Then I takes my ease
In the shadders o' the trees,
While the partridge in the medder whistles lively fer a breeze!

An' I like the Fall time, bretherin'—when the leaves air gold an' gray;
When all's so still 'pears like the wind had sighed itself away
From the scented shadders o' the night, an' from the sleepy day—
When, if you'd only listen, you'd hear all the angels—Say
Then you'll find me shore
Jest a-th'owin' wide the door
An' lettin' heaven come down to me an' askin' 'em fer more!
—Frank L. Stanton in Collier's Weekly.

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THE expedients of a flat dweller in some tiny city apartment would be regarded with consternation by many country housekeepers, accustomed to roomy houses. One woman told us that the deficiency in closet room caused her to keep most of her wardrobe in suit cases under her bed, while her rubbers and similar small articles reposed under her bureau. The homelier belongings of housekeeping were disguised in all sorts of unexpected ways, realizing this description of a suite in an apartment house, by a woman to whom it was a novelty.

"A suit," said Mrs. Herlihy, slowly, "is one o' thim places where the parloor is the bedroom, and the bedroom is the kitchen, and the closets is down in the cellar, and the bed is plannys—or organs, and—well, it's one o' thim places where iverything is something else," concluded Mrs. Herlihy.

*

WE read recently of a man who felt obliged to cook his own dinner, his wife and family being away, and as he was compelled to be at his place of business, some management was required. He was to have a boiled dinner, and would have it done to a turn, piping hot and ready to serve, at his home-coming. The meat, turnips and beets, therefore, which require a longer time, he put on before leaving the house. The potatoes and cabbage, needing less time for cooking, were put on the cover of the pot. Then he knotted a string through a hole in the edge of the cover, ran it through a loop suspended from the ceiling, and thence down to the sink. In the sink-hole he firmly stuck a candle, to which, two inches below the top, he tied the string. Last of all he lighted the candle and went to his business. In two hours, or about half an hour before he was to return, when it was time for the vegetables on the cover to go to their appointed place, the slowly descending flame burned the string, which released the otherwise unsupported edge of the cover, which dropped its burden into the pot and fell back where it belonged.

When the genius reached home, his dinner was ready.

*

THE meekest and most amiable of cows appears rather ferocious to one unaccustomed to cattle, suggesting unsuspected dangers, as this little anecdote from the Memphis Scimiter shows:

A little girl from Memphis, who has spent her life in the city, went out to visit her grandparents, living in the country, during the holidays, and, as usually happens in such cases, the little city lady displayed her ignorance. The little girl, soon after her arrival in the country, manifested great apprehension of being hooked by the cows about the place. One day her mother told her to go to a neighbor's home and

3695 Misses' Three-quarter Coat. 12, 14 and 16 years.

carry a message. The little girl started, but at the gate she encountered a cow, one of the mulley species.

In great excitement she ran back to her mother, crying: "Oh, mamma! there's a cow down there!"

The mother looked out of the window and saw the meek-looking bovine.

"Why, daughter, that's a mulley cow. She hasn't any horns and can't hook you."

"But, mamma!" exclaimed the child; "she hasn't any horns, but she might hook me with her pompadour!"

*

A NEW idea seen in the shops now is a set consisting of neck dressing and undersleeves to match, such as were worn by our grandmothers. They are made in lace, net, mousseline de soie and velvet, often with tinsel effects. From this one infers that the undersleeves are expected to remain in style for some time yet. Long scarfs of gauzy materials, going twice around the neck, with ends that fall almost to the knees, are to be a Spring fancy; many of them are edged with tiny quillings, and some with miniature flowers, little rosebuds or violets. A favorite stock, intended to go twice around the neck and then crossed in front, is made of five rows of half-inch ribbon, joined together as far as it encircles the neck, then left separate, so that there are 10 ribbon ends, each tipped with a gilt tag. The joins in the ribbon are often covered by gilt braid, or each alternate width is trimmed wth heavy insertion. Gold lace is very freely used in these stocks, and also gold spangles.

The Rural Patterns.

The three-quarter coat with box front and half fitted back is a favorite of the season for young girls, as well as for their elders, and means genuine warmth as well as style. The high, flaring collar fits snugly at the throat and widens to rest against the head. The revers are sharply pointed in Directoire style, and the back is shaped after the latest imported designs. As shown the material is beaver in a medium shade of castor, with collar and revers in velvet of a darker tone, trimming of bands and machine stitching, but all the shades of tan and castor are smart, and brown or blue can be substituted if preferred. The fronts are loose in box style and turn back to form the revers. The back is cut with side-backs and a center seam which curves gracefully to the figure. The side seams are open to the top of the stitching and so provide additional ease and freedom. The collar is cut in four portions high at the back and rounds off at the front. The sleeves are two-seamed and fit smoothly. Pockets, with laps, are inserted in each front and the coat is closed with handsome buttons and buttonholes in double-breasted fashion. To cut this coat for a miss of 14 years of age 2⅝ yards of material 54 inches wide will be required. The pattern No. 3695 is cut in sizes for misses of 12, 14 and 16 years of age, price 10 cents.

Russian styles continue in favor for small boys. The suit illustrated is of Russian green melton, with wide bands of braid overlaid by narrow strips of gold and is worn with a gold belt. The style is, however, equally adapted to cloth of different colors, to velvet, velveteen and corduroy; brown, blue, black, tan and red are all worn, and are held in equal favor with the green. Both fronts and back are seamless and fit smoothly across the shoulders, but are slightly loose below the belt to allow ample freedom for young legs. The left front laps well over the right in true Russian style, and the closing is effected invisibly beneath the trimmed edge. At the neck is a standing collar with rounded ends. The sleeves are laid in a wide box plait at the shoulders and tucks are stitched flat at the wrists to cuff depth. The trousers are fitted at the hips with small darts, are shaped with inside, outside and center seams, and closed at the sides. The lower edges are finished with hems or casings,

3721 Boys Russian Suit, 4 and 6 years.

in which elastic is inserted by means of which the leg portions are drawn in to give the baggy effect. To make this suit for a boy of 4 years of age 3⅞ yards of material 21 inches wide, 3⅛ yards 27 inches wide, 2 yards 44 inches wide, or 1¾ yard 50 inches wide, will be required. The pattern No. 3721 is cut in sizes for boys of 4 and 6 years of age; price 10 cents from this office.

Mrs. Fry's Rules of Living.

One of the most inspiring books we know is the life of Mrs. Elizabeth Fry, the English Quakeress who devoted herself to prison reform. Mrs. Fry laid down the following six rules of conduct, which, if obeyed, would revolutionize many lives:

1. Never lose any time. Time that is spent in amusement or recreation is not lost; there is a difference between play and idleness; but always be in the habit of being employed.
2. Never err the least in truth.
3. Never say anything ill of a person when you can say a good thing; not only speak charitably but feel so.
4. Never be irritable or unkind to anybody.
5. Never indulge yourself in any luxuries which are not necessary.
6. Do all things with consideration.

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HONORABLE THOMAS B. REED

Has a most interesting article in this week's (Feb. 9) number of

THE SATURDAY EVENING POST
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In which he treats of the declining influence of certain forms of public speaking, and its greater influence in other directions. Political, pulpit and after-dinner speaking are ably discussed.

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Housekeeping on a Business-like Basis.

The American Kitchen Magazine for January presented a valuable symposium on this subject, giving the views of a number of prominent men. Dr. Wiley, of the Department of Agriculture, whose name is familiar to readers of THE R. N.-Y., has this to say:

The first consideration to secure economical cooking is to have the best raw materials. Without this basis, successful cooking, either from the æsthetic, gustatory, or the economic point of view is impossible. The American people are entirely too careless in regard to the character of their foods. They buy according to habit, or the dictates of custom, or the claims of advertisers, without much reference to the excellence of the materials secured. There is very little difference between the cost of a really good article and a poor article of the same kind. The very best butter can be secured at a price very little above that of the ordinary; not meaning by "best" butter the fancy articles which command a high price more on account of their name and reputation than for their innate excellence.

The housekeeper is very apt to be imposed upon by the food adulterator. This is especially true with such substances as condiments. The spices and peppers of commerce often contain more flour than genuine condiments and sometimes they are wholly artificial. Oleomargarine is often disposed of as butter, although such a commercial transaction is illegal and exposes the persons engaging in it to heavy penalties both of fine and imprisonment. The market is full of self-raising flours which are mixtures only of ordinary flour with baking powders of different kinds. Table syrups and honeys are very frequently adulterated and the price of the genuine article is paid for glucose when honey is supposed to be purchased. A great many foods, especially of a condimental nature, contain preservatives, which, while in small quantities and taken at infrequent intervals may not be injurious to a healthy stomach, and yet often act in a very deleterious way upon the invalid or the child. While I am not personally opposed to the judicious use of preservatives, I think no food article should ever be sold containing a preservative, without bearing upon the label the character and amount of the preservative employed.

Even when foods are preserved by sterilization, they often develop poisonous properties when opened. This is especially true with meat, fish, etc. When such sterilized foods are opened, they should be at once consumed or in some way protected from contamination, since ptomaines are apt to be developed in such foods in poisonous quantities.

A Small Patriot's Idea.

There is a five-year-old boy on Massachusetts avenue who is of the blood of patriots. His grandfather was in both the Mexican and Civil wars and his father was also a Union soldier, consequently the little fellow has heard much "flag" talk in his short life and has exalted ideas of its "protective" qualities. He was the baby of the family till very recently, and occupied a crib bed in his mother's room. When the new baby came Harold was put to sleep in a room adjoining his mother's, and as he had never slept alone before his small soul was filled with nameless fears, which he was too proud to tell in full.

"It's mighty lonesome in here, mamma!" he called the first night after he had been tucked in his little white bed.

"Just remember the angels are near you and caring for you," replied mamma from the outer room.

"But, mamma," he objected, "I ain't acquainted with any angels and I'd be scared of them if they came rustling round, same as I would of any other stranger."

"Now, Harold, you must go to sleep quietly; nothing will hurt you."

"Can't I have the gas lighted in here?"

"No, mamma doesn't think it necessary, and it's not healthy."

There was silence for some time and then the small voice piped up again: "Oh, mamma!"

"Yes, dear."

"May I have grandpa's flag?"

"Why, what for? I want you to go right to sleep."

"Please, mamma!" and a small night-gowned figure appeared at the door. "Just let me stick the flag up at the head of my bed and then I'll go right to sleep. Indeed I will! You know the other night grandpa said at the meeting that 'under the protecting folds of the flag the weakest would be safe,' and I feel mighty weak, mamma."

He got the flag and when his mother looked in on him an hour later he was fast asleep, with a little fat fist under his red cheek, holding fast the end of the "protecting" flag.—Washington Evening Star.

A Salmagundi Party.

A writer in the Modern Priscilla thus describes a salmagundi party:

Cards fancifully inscribed with the word "Salmagundi," and each having a programme pencil tied to a corner with baby ribbon, were furnished to the guests. As the word itself created immediate interest, our hostess came to the rescue and explained that Salmagundi was originally a dish of mixed ingredients, named after its inventor, Lady Salmagondi, now applied to a miscellany of any description. The evening was to be composed of miscellanies, tests both of memory and the senses. A covered basket containing a butter plate, china egg, pencil, spool, and similar small articles to the number of twelve, had been previously prepared by the hostess. The lid of the basket was attached to the back. Beginning at the front of the lid two four-inch strips of cloth were fulled along each side of the back, the lower edges of the strips being fastened to the upper edge of the basket. When the lid was raised as far as the width of the strips would permit, a narrow slit was left for the hand. Each guest was timed one minute to feel the objects, then withdrew to write as many as could be remembered.

A box containing four bowls of finely graded shot was covered with a cloth fulled on to the back of the box, brought over the top, fastened securely on each side edge and caught in the middle of the front edge, thus leaving entrance for both hands, while concealing the contents effectually from view. Large numbers were sewed on this cloth over each bowl. The guests were to determine by touch the sizes of the shot, and place them in order of their size on the cards furnished. For instance, the largest size might be three, the next size one, the next size two, and the smallest size four.

While these tests were in progress, the rest of the company were engaged in feeling ten bundles to decide their contents. Metal objects had been loosely sewn in lawn before being wrapped in paper, to prevent any portion protruding from the package. Ordinary objects could easily be detected almost without touch. Care had been exercised in the selection. The objects used for this evening's entertainment were a small china doll, turnip, Dover egg beater, feather, bell, clothespin, buttonhook, shell, horn spoon, and cooky cutter. As a last test a card having ten pictures of objects, dog, horse, strawberry, and so forth, was passed to each guest for the space of a minute. All wrote from memory the result of their observation. When each member of the company had had an opportunity to try the different tests, the hostess read aloud the correct lists and awarded favors to the two who had been most successful. All were then requested to stand in a circle. A dozen small articles were thrown on the floor in the center, viz., a key, match, button, pencil. Each was urged to notice the articles, and at a given signal close his eyes while one was withdrawn. The one guessing the missing object first was allowed the privilege of being the next to draw something out. All articles were returned to the center before each withdrawal. This game was kept up briskly for a few moments, and before the interest abated refreshments appeared.

Rural Recipes.

Twin-Mountain Muffins.—Cream one-third of a cupful of butter; add gradually one-fourth of a cupful of sugar and one-fourth of a teaspoonful of salt; add one egg beaten light, three-fourths of a cupful of milk, two cupfuls of sifted flour and four level teaspoonfuls of baking powder. Bake in hot buttered gem pans about 25 minutes.

Soft Gingerbread.—Four tablespoonfuls of brown sugar, nine tablespoonfuls melted lard, one tablespoonful of ginger, one teaspoonful of salt, one cup common molasses, one cup boiling water in which is dissolved one teaspoonful of soda. Add flour enough to make a thin batter. Always stop adding flour when the batter seems a little too thin. Bake in slow oven.

Steamed Cranberry Dumplings.—Make the dumplings of good, prepared flour, which cannot fail to be light, using one pint of it; add a pinch of salt and mix with milk to a paste just stiff enough to drop by tablespoonfuls on the buttered steamer bottom; steam over boiling water about half an hour. Serve immediately; first carefully split the fluffy rolls open, lightly butter and put between a tablespoonful of stewed cranberry sauce (warm); pour over a foamy sauce made as follows: Three tablespoonfuls of milk, stirred into one beaten egg, a half-cupful of sugar and one teaspoonful of flour; beat hard and put into double boiler; pour on slowly a cup of boiling water, stir constantly until the sauce thickens, then add one teaspoonful of butter and one of strawberry flavoring.

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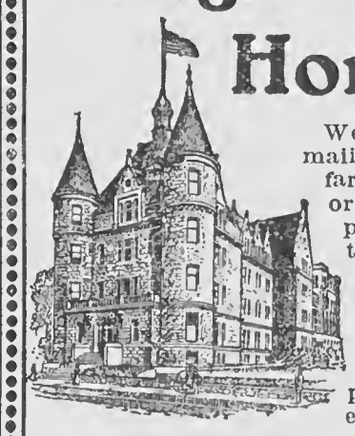

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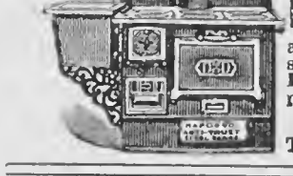

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MARKETS.

REVIEW AND OUTLOOK.

POTATOES.—There is a heavy stock on hand, and the market is very weak for anything but the best. Trade in Bermudas is light.

EGGS are advancing again. Though the receipts are large, there is no surplus, as speculators and the local trade are absorbing them about as rapidly as they come in. The supply of refrigerators offered is light.

HOTHOUSE PRODUCTS.—Mushrooms remain very dull. There is some asparagus from the West, which sells at high prices, some as much as $6 per dozen bunches. Choice lettuce is scarce. There is a fair inquiry for tomatoes and cucumbers of prime quality.

GRAIN.—Wheat has declined since last report. Advices from the northwestern provinces of India indicate an increase of 20 per cent in area and favorable conditions for seeding. There is some export demand for rye. Oats are steady with some speculative interest in western markets.

The Week's Quotations.

WHOLESALE PRICES.

SATURDAY, FEBRUARY 2, 1901.

BEANS.

Marrow, choice, per bu	—	@	2 50
Medium, choice	2 22½	@	2 25
Pea, bags, choice	2 25	@	—
Red kidney, choice	2 35	@	2 40
White kidney, choice	2 60	@	2 65

BUTTER.

Creamery, extra	—	@	22
Firsts	20	@	21½
Seconds	18	@	19½
Lower grades	16	@	17
June, extra	19½	@	20
June, firsts	18	@	19
State dairy, half-firkin, firsts	18	@	19
Seconds	16	@	17
W'n, imitation creamery, best	17	@	17½
Lower grades	13½	@	15
Western, factory, June packed, fancy	13	@	13½
Held, common to good	11	@	12½
Fresh, fancy	13½	@	14
Packing stock	11	@	12½

EGGS.

QUOTATIONS, LOSS OFF.

Western, firsts	20½	@	—
Southern, firsts	20	@	—

QUOTATIONS AT MARK.

State and Penn., prime	—	@	21
Western, fresh-gathered, firsts	20	@	20½
Southern, fresh-gathered, fair to good	—	@	19
West'n, fresh-gathered, dirties	17	@	17½
Refrigerator, early packed, good to choice	17	@	18

FEED.

Spring bran, 100-lb. sacks	17 25	@	17 50
Winter bran, bulk	16 25	@	18 75
Spring middlings, 200-lb. sacks	16 25	@	19 75
Red Dog, to arrive	18 75	@	—

DRIED FRUIT.

Apples, evaporated, fancy, lb	6½	@	7
Evaporated, prime, per lb	4¾	@	4⅞
Evaporated, common to good, per lb	3¼	@	3½
Sun-dried, State and W'n, qrs., per lb	3½	@	4½
Raspberries, evaporated, 1900, lb	18	@	20
Blackberries, 1900, per lb	6¼	@	7
Huckleberries, 1900, per lb	15	@	15½
Cherries, 1900, per lb	15	@	16

FRESH FRUITS.

Apples, common, bbl	1 50	@	2 00
Baldwin, bbl	2 25	@	3 50
Greening, bbl	2 25	@	3 00
Ben Davis, bbl	2 25	@	3 50
Spy, State	2 25	@	3 50
Spitzenberg, bbl	3 00	@	5 00
Newtown pippins	1 25	@	4 00
Grapes, W. N. Y., Catawba, small basket	10	@	12
Catawba, case	75	@	1 15
Almerias, bbl	5 00	@	11 00
Cranberries, Cape Cod, bbl	7 00	@	9 50
Jersey, bbl	7 50	@	—
Jersey, crate	2 00	@	2 30
Strawberries, Fla., qt	35	@	60

GRAIN.

Wheat, No. 2, red, N. Y.	80⅝	@	—
No. 1, Northern Duluth	87⅛	@	—
No. 1, hard Duluth	90⅝	@	—
Corn, No. 2, white, to arrive	47	@	—
No. 2, yellow, to arrive	46⅛	@	—
Oats, No. 2, white, in elevator	30	@	—
Rye, No. 2, Western, c. i. f., N. Y.	57	@	—
State & Jersey, c. i. f., N. Y.	54	@	55
Barley, feeding, c. i. f., Buffalo	48	@	51
Malting, c. i. f., Buffalo	62	@	71

HAY AND STRAW.

These quotations are for large bales. Small bales sell for 50 cents per ton less:

Hay, No. 1	87½	@	90
No. 2	85	@	87½
No. 3	75	@	77½
Clover	70	@	75
Clover, mixed	75	@	82½
Straw, rye, long	82½	@	85
Oat	45	@	50

HOTHOUSE PRODUCTS.

Lettuce, choice, 3½ to 4½ dozen to case, doz	75	@	1 00
Cucumbers, fair to choice, doz	50	@	2 00
No. 2, doz	75	@	1 25
Tomatoes, common to prime, lb	20	@	30
Radishes, 100 bunches	1 50	@	3 00
Mushrooms, lb	20	@	40
Asparagus, dozen bunches	—	@	6 00
Rhubarb, dozen bunches	40	@	75

HOPS.

New York State—			
1900, choice	19	@	21
1899, choice	15	@	16
1899, prime	12	@	14
1899, medium	8	@	12
Pacific Coast—			
1900, choice	18	@	19
1899, choice	11	@	15
1899, prime	11½	@	13
1899, medium	9	@	12

POTATOES.

Bermuda, good to prime, bbl	4 00	@	5 00
No. 2, per bbl	3 00	@	3 50
L. I., prime, in bulk, bbl	1 50	@	1 87
State & Western, round, 180 lb	1 50	@	1 75
Long, 180 lb	1 50	@	1 62
Jersey, prime, bbl	1 25	@	1 62
Sweets, Vineland, cloth-top, bbl	2 00	@	2 50
Other Jersey, cloth-top, bbl	1 75	@	2 00
Jersey, per d.-h. bbl	1 75	@	2 00
Jersey, per basket	75	@	1 00

POULTRY—LIVE.

Fowls, per lb	—	@	9½
Chickens, per lb	7	@	—
Roosters, per lb	—	@	5½
Turkeys, per lb	8	@	9
Ducks, Western, per pair	60	@	85
Southwestern, per pair	50	@	65
Geese, per pair	1 25	@	1 50
Pigeons, per pair	25	@	30

POULTRY—DRESSED.

Turkeys, O. & Mich., hens, fancy, scalded	10	@	10½
Ohio & Mich., fair to good	8½	@	9½
Western, old hens	—	@	9
West'n, young toms, prime	8	@	9
Old toms	—	@	8
Broilers, Winter, under 2 lb. to pair	30	@	—
Phila., 2½@3 lb. pair, lb	25	@	—
Phila., 3½@ 4lb. pair, lb	18	@	20
Roasting chickens, Phila., selected, large	15	@	16
Phila., medium grades	11	@	13
Pa., large, lb	11	@	12
Ohio & Mich., scalded, fancy	—	@	10½
Chickens and fowls, Western, mixed, fancy	10	@	—
Fowls, State and Pa., good to prime	—	@	10
Old roosters, per lb	—	@	6½
Capons, Western, large	12½	@	13
Western, mixed weights	11	@	12
Western, small and slips	—	@	10
Ducks, Western, prime	12	@	12½
Poor to fair	8	@	11
Geese, Western, prime	8	@	9
Western, poor to fair	6	@	7

VEGETABLES.

Onions, Conn. & L. I., wh., bbl	3 50	@	5 50
Conn. & L. I., yellow, bbl	2 00	@	3 00
Orange Co., white, bag	2 00	@	4 00
State & Western, yellow, bbl	2 25	@	2 50
Squash, marrow, bbl	1 00	@	1 25
Hubbard, bbl	1 25	@	1 50
Florida, white, crate	75	@	1 00
String beans, Fla., wax, crate	1 00	@	3 00
Green, crate	1 00	@	2 50
Turnips, Canada, Russia, bbl	75	@	85
Jersey, Russia, bbl	70	@	80
Peppers, Fla., carrier	75	@	1 25
Celery	10	@	60
Egg plant, Fla., bbl	2 00	@	4 00
½-bbl	1 00	@	2 00
Green peas, Fla., basket	1 00	@	3 50
California, box	1 50	@	2 00
Spinach, Norfolk, bbl	75	@	1 50
Baltimore, bbl	60	@	1 00
Carrots, washed, bbl	1 00	@	—
Unwashed, bbl	60	@	75
Bermuda, crate	75	@	1 25
Lettuce, New Orleans, bbl	4 00	@	8 00
Florida, ½-bbl	1 50	@	4 00
Charleston, basket	1 50	@	4 25
Brussels sprouts, qt	4	@	10
Parsnips, bbl	75	@	1 00
Cabbage, L. I., 100	3 00	@	4 00
State, ton	15 00	@	18 00
Tomatoes, Fla., carrier	1 00	@	3 00
Havana, carrier	1 00	@	2 00
Chicory, New Orleans, bbl	4 00	@	6 00
Beets, L. I., bbl	75	@	—
Florida, crate	—	@	75
New Orleans, 100 bchs	3 00	@	4 00
Bermuda, crate	1 00	@	1 25
Charleston, 100 bchs	4 00	@	6 00
Romaine, New Orleans, bbl	4 00	@	5 00
Bermuda, crate	1 00	@	1 50
Escarol, New Orleans, bbl	4 00	@	5 00
Okra, Havana, carrier	1 00	@	1 50
Florida, carrier	1 75	@	2 25
Parsley, Bermuda, box	1 00	@	2 00
Florida, crate	1 00	@	1 25
New Orleans, 100 bchs	3 00	@	3 50
Cucumbers, Fla., crate	2 00	@	3 00
Kale, Norfolk, bbl	85	@	1 00
Cauliflower, Fla., basket	2 00	@	3 00
California, case	1 00	@	3 00

FURS AND SKINS.

Silver fox	50 00	@	200 00
Red fox	1 75	@	2 00
Gray fox	90	@	1 00
Lynx	4 00	@	6 00
Wild cat	50	@	60
Marten, dark	6 00	@	10 00
Pale	3 00	@	4 00
Skunk, black	1 30	@	1 40
Half-striped	80	@	85
Long-striped	80	@	90
Striped	40	@	45
White	15	@	20

HERBS AND LEAVES.

Henbane, lb	12	@	15
Horehound	6	@	6½
Laurel	3¼	@	3½
Marjoram	9	@	12½
Wintergreen	—	@	7
Rose, red	1 00	@	1 10
Sage, picked	3⅜	@	3½
Savory	3¼	@	3½
Senna, Alexandria, natural	10	@	12
Garbled and sifted	18	@	25
Stramonium	7½	@	8

SEEDS.

Clover seed, N. Y., good to choice, bu	5 75	@	6 30
Toledo, for Mch. delivery, bu	7 40	@	—
Timothy, per 100 lb	4 65	@	5 00
Cottonseed, New Orleans, bulk, ton	13 00	@	—
Flaxseed, whole, cleaned	6 50	@	7 00
Cottonseed meal, ton	25 75	@	—
Linseed oil, cake, ton	27 50	@	—
Meal, sacked	28 00	@	—
Celery seed, lb	7	@	7¼
Hemp, Russian, lb	2¾	@	2⅞
Millet, lb	1⅞	@	2
Mustard, English, yellow, lb	6¼	@	7
California yellow	6	@	6¼
Rape, German, lb	3⅜	@	3½
Sunflower, lb	2⅜	@	2½

MILK.

New York Exchange price within 26-cent freight zone, 2¾ cents per quart.

BUSINESS BITS.

THE manufacturer guarantees the Lightning seed sower to sow broadcast 60 acres a day of clover or other small seeds. Write to W. J. Buss, 53 Day St., Golden, Ill., for full information.

GEORGE P. HAMMOND & CO., 34-36 Little 12th st., New York, will handle on commission your dairy goods, eggs, poultry, fruits or hothouse products. Drop them a line, stating what you have for sale.

"THE Light that Never Fails" is the claim made for the Angle lamp. These lamps are inexpensive, burn oil, and give a light equal to gas or electricity. A catalogue which explains all will be sent free to any reader of THE R. N.-Y.. Ask for Catalogue N. U. Address Angle Lamp Co., 76 Park Place, New York.

A GUN is quite a necessity on any well-regulated farm. A good gun is the only kind that is worth having, or safe to use. This does not necessarily mean a high-priced one. The name "Winchester" is standard everywhere, with sportsmen. A postal card will bring you a 164-page illustrated catalogue telling all about guns and ammunition. Address Winchester Repeating Arms Co., New Haven, Conn.

A RECENT note in the Melbourne (Australia) Leader describes a new ice-making and meat-packing establishment, the most modern in South Australia. The description says that special care has been used in the erection of the building, P & B Ruberoid being used throughout. The value of this material seems widely recognized; it is of especial value in farm buildings. Write concerning it to the Standard Paint Co., 85-87 John St., New York.

EVERY farmer should apply to the nearest McCormick agent for a copy of the most beautiful and artistic calendar ever issued free by any harvesting machine house, and obtain at the same time a catalogue of the machines manufactured by this company for 1901. Both the calendar and the catalogue are magnificent specimens, and demonstrate that the McCormick Company, after 70 years of success, continue to supply the agriculturist with the finest and most modern machines in the world.

DR. SLOAN'S Liniment will reduce a swollen tendon in a marvelously short time, and the way it will kill a spavin curb or splint is remarkable. Dr. Sloan has published a most interesting book entitled "A Treatise on the Horse." This book will be found valuable to anyone owning horses. It gives much information about the diseases of horses and advice as to treatment. Dr. Sloan's Liniment is a universal remedy for man and beast. The book is free for the asking. Write to Dr. Earl S. Sloan, Boston, Mass.

THE 1901 "Planet Jr." catalogue is now ready for mailing. This new catalogue is superior in every way to anything this well-known firm has ever put out. It is instructive from beginning to end, and it contains illustrations and descriptions of the entire "Planet Jr." line of garden and farm tools, and is thoroughly interspersed with handsome pictures. There are 28 half-page and two full-page pictures, reëngraved from actual photographs, illustrating the use of "Planet Jr." goods in this and foreign countries. If our readers would like a copy, S. L. Allen & Co., Box 1107 V Philadelphia, Pa., will take pleasure in mailing one free; write and ask them for it.

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Butter, Cheese, Eggs, Pork, Poultry, Dressed Calves. Game, etc. E. B. Woodward, 302 Greenwich St., N.Y

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Ten Sample Copies, separate issues, 10 cents.
Published at 136 Liberty Street, New York.

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Farm Managers, Gardeners, Buttermakers, etc., always on hand. No charges to employers. Write us. Rural Science Agency, Durham, N. H.

Valuable Fruit Farm and Country Home, desirably located. Bargain. F. A. CHAPMAN, City Building, Wellsburg, West Va.

WANTED—A farm of moderate cost, within 100 miles of New York. Must have good buildings, and be well watered. State full particulars, price and terms. Address J. H., care THE R. N.-Y.

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Do You Want to SELL YOUR FARM or Country Property? We will find a buyer for you no matter where located. Write description and selling price and learn our up-to-date method. NATIONAL REAL ESTATE CO., Morrison Block, ITHACA, N. Y.

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Billion-dollar ignorance, billion-dollar loss to farmers; extra farm implements, dead-shot land-killing acids, called fertilizers, a scientific land mortality; voodooism fetish worship, deep dead flat solid plowing; harrowing, harrowing, harrowing, everlasting harrowing; stamping, packing, rolling, brushing, marking, cultivating; cultivating, everlasting cultivating; smothering, choking, throttling, strangling, killing, causing dead, sour land, the home of the fungi, larvæ, potato bugs, blight, rust, rot, scab, Hessian fly, weevil, etc.; rusty, smutty grain, dead land, poor crops at treble cost Anti-farming plows, cut and cover, dry and warm the soil; no home for fungous pests, doubles values of lands and crops. Anti needs only the plows, seeders, corn-planters, chain, bush where a farmer can raise up to 25 or even 50 acres or more of good crops of grain in the season without dead-shot land killers, at about one-quarter cost as by Shoddy farming. Book special culture, also showing farm product, prices, labor, etc.; hook accounts by father and son from 1770 to 1842 inclusive; also 70 years observation farming. Price, $1. Advance sheet, one chapter. Anti-Farming, 10c.; four do., March first, 40c.; three do., April first, 25c. Book, 200 pages, issued May first. Persons returning leaflets and cash balance, and others wishing the book for cash, will on receipt receive the same postpaid.
H. E. PLUMB, Stevenson, Conn.

A New Country
"The Valley of the Platte" is the name of a booklet we have published, which describes a new country just opened up by the building of a railroad from Northport, Nebraska, up the valley to Guernsey, Wyoming. There are great opportunities in this district for farmers and merchants. A copy of the booklet, with a fine map of the country, will be sent free on application to P. S. Eustis, General Passenger Agent C. B. & Q. R. R., Chicago, Ill.

Cut Price Books

We have in stock some books that have not been recently advertised, and are likely to become shelf-soiled unless disposed of. Some are slightly soiled now. We are going to sell them at cut prices to dispose of the stock on hand. When any stock is exhausted, we will take it ont of the list. We give the number of each on hand, and regular price as well as cut price

		Regular Price.	Cut Price
30.	Camellia Culture	1.25	.50
12.	Annals of Horticulture. 1892	1.00	.40
30.	Celery Growing and Marketing	1.00	.50
150.	Cauliflower. Crozier	1.50	.50
100.	Cooking Cauliflower	.20	.10
100.	Fruit Packages	.20	.10
100.	Accidents and Emergences	.20	.10
100.	How to Plant a Place. Long	.20	.10
100.	Tuberous Begonias	.20	.10
80.	Canning and Preserving. Young	.20	.10
100.	Landscape Gardening. Long	.50	.25
50.	The New Botany. Beal	.25	.10
100.	Milk: Making and Marketing	.20	.10
100.	Fertilizers and Fruits	20	.10
50.	Fertilizer Farming	.20	.10
50.	Fertilizers and Fruits	.20	.10
40.	Ensilage and the Silo	.20	.10
100.	Chemicals & Clover. Collingwood	.20	.10
100.	Trees For Street and Shade	.20	.10
100.	Country Roads.	.20	.10
100.	Chrysanthemum Culture. Paper Morton	.60	.20
50.	Chrysanthemum Culture. Cloth Morton	1.00	.40

Some of the former books in this list have been all sold, and taken out of the list. The stock of some of these is quite limited as may be seen. When these are gone, no more are to be had at the price. Send in your order at once for what you want.
THE RURAL NEW-YORKER, NEW YORK.

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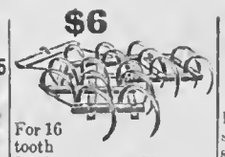
For 16 tooth **Spring Tooth Harrow.** Has steel guard and draw bar. Also 18 and 20 tooth at reduced prices.

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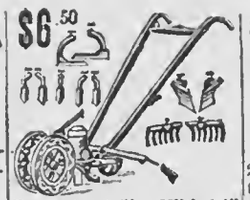
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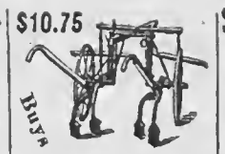
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Publisher's Desk.

Never before in the memory of the present management were so many farmers writing for sample copies of THE R. N.-Y., and sending their subscriptions direct one by one. This is, of course, gratifying, and we give a large measure of credit for it to those old friends who keep reminding their neighbors of the value of the paper, and for passing on to them samples and conveniences for sending orders and remittances. As an encouragement to old friends to put the paper into new homes, for a club of four names with $4, we will send the club-raiser's subscription for one year—the five names for $4.

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Strawberry Culturist is no longer published. Eastern Shore Farmer and Fruit Culturist is being sent subscribers in place of it.

THE RURAL NEW-YORKER.

Market Briefs.

PICKED UP HERE AND THERE.

FISH FIGURES.—As the result of 275 trips, fishing vessels brought into the port of Boston during December, 1,500,000 pounds of cod; 22,700 of herring; 1,032,000 of hake, and 1,600,000 of haddock. Smaller catches of other varieties brought up the total to 4,600,000 pounds, worth $115,000.

COTTON NOTES.—There were lively scenes on the Cotton Exchange in this city the last few days of January, on account of one of the biggest "corners" that the market has seen for over 20 years. The price for January delivery jumped at one time to 12¾ cents, and current prices for Middling Uplands and Middling Gulf are now 12 and 12¼ cents, respectively. Such figures are out of proportion to the price and demand for manufactured goods, and there will have to be some drop before spinners take hold to any extent. Reports from southern Texas are that plowing has commenced, and that the acreage will be larger than usual. Receipts at cotton ports for the week ending January 30 were 210,000 bales, an excess of 30,000 bales over the previous week.

MILK PRICES.—That benevolent organization, the New York Consolidated Milk Exchange, at its last monthly meeting, decided that it was paying one-fourth cent per quart too much, and voted to reduce the price to 2¾ cents. A consumer here who pays eight cents per quart for milk that will just barely pass the legal test, would like to know who gets the 5¼ cents difference between what he pays and what the farmer gets. It does not seem to him that it ought to cost twice as much to bring milk here and distribute it, as it does to produce and deliver it to the railroad station. He does not mind having all who handle what he buys get a living profit, but thinks that some one in the milk business is getting more than his share.

SELLING SAWDUST or chips from planing mills is quite a business here. Peddlers cart it around in wagons, and charge 25 cents for a bag holding about three bushels. It is used in butcher shops, saloons, restaurants and small stores where there is considerable running in and out, particularly in the down-town parts of the city, where the streets get muddy on a wet day. The sawdust sprinkled on the floor absorbs the sticky mud which is tracked in, and it is easily swept out and replenished three or four times a day if necessary. Also a good many people keep a stock of sawdust on hand for use in sweeping the house. When well moistened and sprinkled on carpets, the dust, which ordinarily would fill the air and settle on the walls and furniture, is kept where it belongs, on the floor, and swept out.

WOOL.—Sales in Boston for the last week of January are reported at 3,400,000 pounds, and the sales for the entire month, 9,600,000 pounds, a decrease in business of over 7,000,000 pounds for the same period last year. Prices on New York, Michigan and Wisconsin X and XX are 22 to 24 cents, and fine delaine, 26 to 28.

GOODS MISSING.—For some time importers have been complaining that articles were taken from their cases of goods while at the United States Public Stores in this city, for inspection by the custom house officials. The charges became so serious that new rules have been adopted, so that all employees who open cases and handle goods will be watched carefully. This close inspection would not be necessary but for the dishonesty of importers who try to bring in small dutiable articles free by putting them in the middle or a corner of a case of other goods, or by invoicing goods at less than their real value. This makes it necessary to have at the public stores experts who know the actual value of all sorts of imported goods, and in cases where anything wrong is suspected, all packages are emptied out, and the most careful examination made.

W. W. H.

NEW YORK POULTRY SHOW.

The twelfth annual exhibition of the New York Poultry, Pigeon and Pet Stock Association, was held at Madison Square Garden in this city during the week ending January 26. An improvement over previous shows was noted in the manner in which the exhibits were arranged. Formerly the incubators and brooders were shown in a room outside the main hall. This year the anteroom was used for song birds and pet stock. The incubators were in the auditorium, and as the young chicks kicked out of their shells, they must have felt quite at home in the atmosphere of crow and cackle around them. One feature of the show of general interest is the chorus of crows, the musical efforts of something less than 500 roosters, which salutes one as he enters the building. The astonishing thing is the volume of sound they make, which drowns out the harsh voices and makes the whole result quite melodious. The attendance was fair. There are always a lot of regulars who go to every show that comes along just out of curiosity, not that they know or care anything particular about horses, poultry, dogs or cats. Then, of course, the fanciers are there in full force to show their stock and make sales to regular or amateur poultrymen who are on hand looking for breeding stock or information. So far as numbers go, the Plymouth Rocks and Wyandottes appeared to be in the lead. Then came Leghorns, Langshans, Brahmas and Minorcas. Of course, all the standard breeds were represented, though some by only one or two birds. The show of Game fowls was large, and there were some strange-looking specimens of these long-legged savage fellows. One, a rusty red-and-white, had his recommendation tacked up in the cage to the effect that he did not confine his pugilistic efforts to his own tribe, but had thoroughly whipped a fox terrier, which had tried to interfere with him. The display of turkeys and water fowls was large, and there were some enormous Bronze gobblers, Pekin ducks and Toulouse geese; also a few white and a dozen Buff turkeys, and several wild turkeys. An odd-looking duck is the Indian Runner. It is medium-sized, brown and lively, as the name indicates. The pigeon exhibit numbered nearly 3,000 birds, and no one but a fancier would imagine that there were so many varieties. The New York Herald exhibited a cage of Homing pigeons with records of long journeys by land and sea. Among the oddities were specimens of curious fowls found in various parts of Asia. One of the most striking was the Manchurian Crossoptilon, from North China. His head is black, with the exception of a little red around the eyes, and two long white feathers starting under his throat curve upwards and stand over the top of his head like horns. His head resembles pictures of the evil one as artists usually represent him. Other novelties were black ducks, black swans, and the great Crown pigeon, a genuine dude, from Java. In pet stock there was a fine show of Belgian hares, rabbits and cavies, one of the latter being valued at $50. The display of cats was smaller than usual. A yellow and white short-haired one by the name of Ginger, appeared anything but gingery in disposition, as he rubbed against the side of the cage and tried to make friends with all who came along. The song birds in the anteroom attracted considerable attention, and the performances of some of the Belgian canaries, which had had special training, were remarkable. This show is worthy of a larger attendance on the part of out-of-town people within reasonable distance of New York. Anyone at all interested in the poultry business will find a day or two spent here each year time well invested.

W. W. H.

The Golf Girl

Is the type of the modern woman at her healthiest and best. She walks with an easy grace. She is a picture of perfect womanhood in the springtime of life. But generally the golf club is laid aside with marriage. A physical languor oppresses the once athletic girl. Exercise makes her back ache. She tires easily. Usually she accepts this condition as a natural thing, but it is unnatural. Marriage should add to woman's happiness, rather than subtract from it. If women understood how intimately the general health is related to the local health of the womanly organs, they would appreciate the fact that there is no need to suffer from weakness and backache. The use of Doctor Pierce's Favorite Prescription makes weak women strong, sick women well. It regulates the periods, heals inflammation and ulceration, cures female weakness, and puts the body in a condition of sound health.

Mrs. H. A. Alsbrook, of Austin, Lonoke Co., Ark., writes: "After five months of great suffering with female weakness I write for the benefit of other sufferers from the same affliction. I doctored with our family physician without any good results, so my husband urged me to try Dr. Pierce's medicines—which I did, with wonderful results. I am completely cured. I took four bottles of Dr. Pierce's Favorite Prescription, four of his 'Golden Medical Discovery' and two vials of his 'Pleasant Pellets.'"

Dr. Pierce's Pleasant Pellets cure constipation and its consequences.

Older Machinery.—Send for catalogue to Boomer & Boschert Press Co., 118 West Water St., Syracuse, N.Y

PAGE

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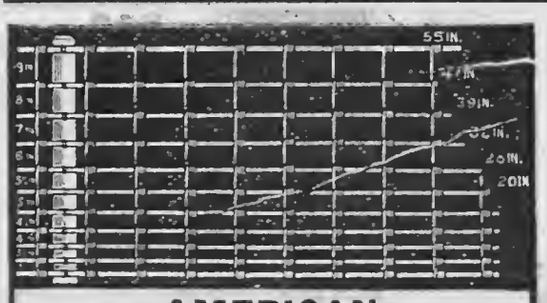

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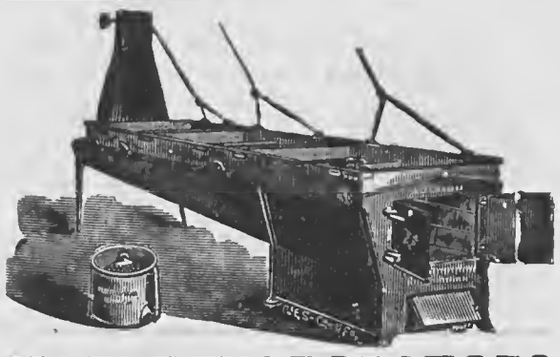

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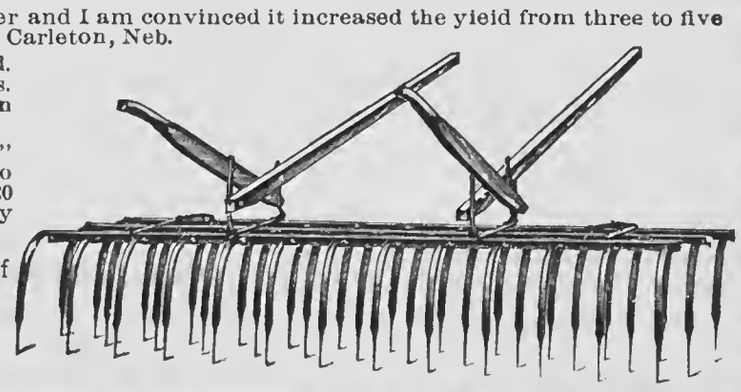

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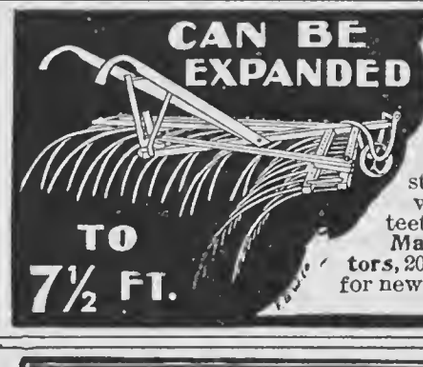

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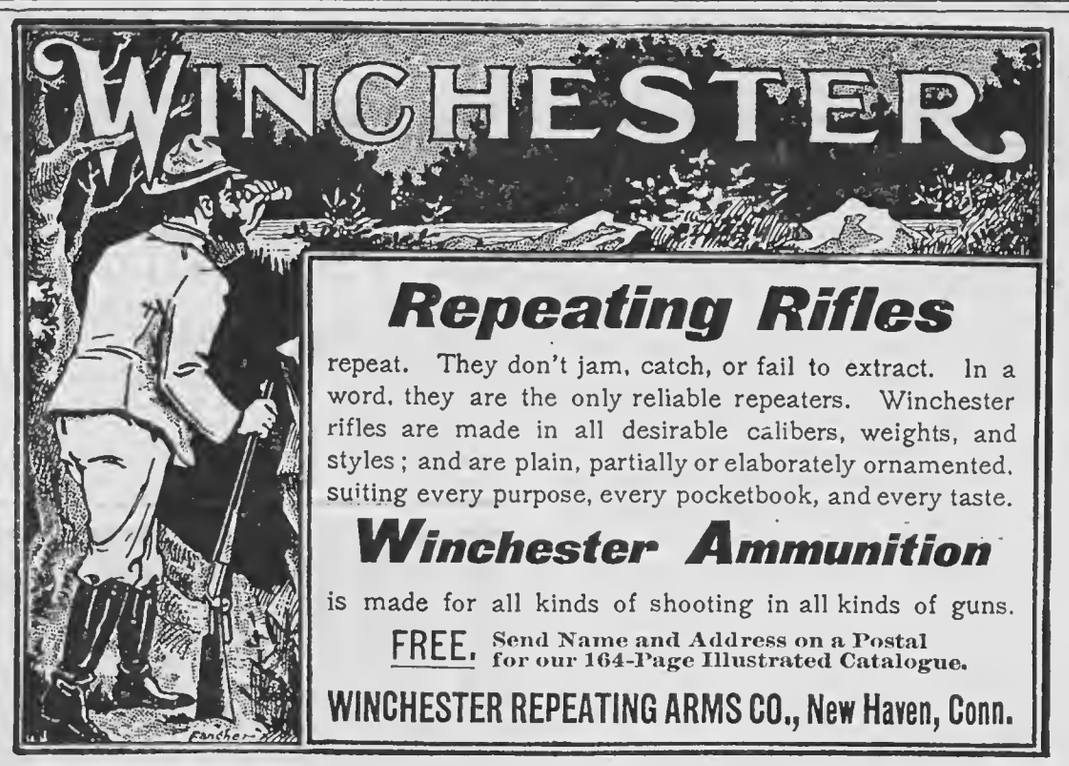

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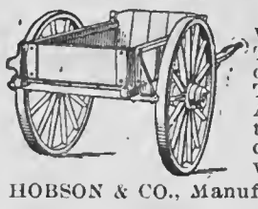
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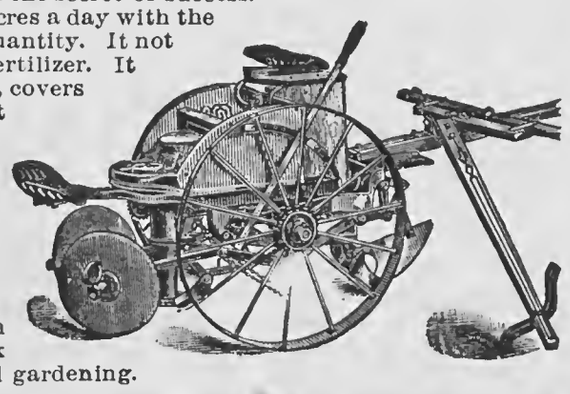

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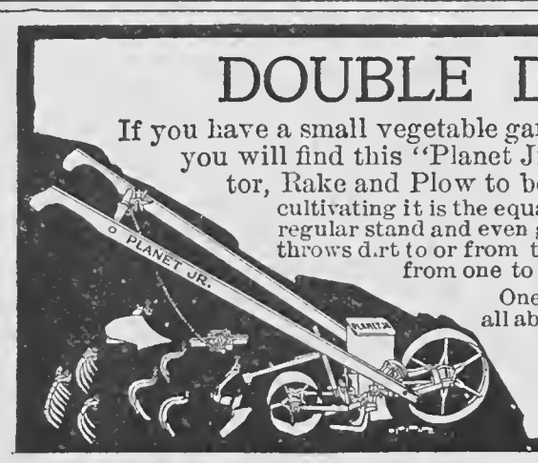

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2664. NEW YORK, FEBRUARY 16, 1901. $1 PER YEAR.

NEW YORK CITY FARMS AND FARMERS.

SQUATTERS ON MANHATTAN ISLAND.

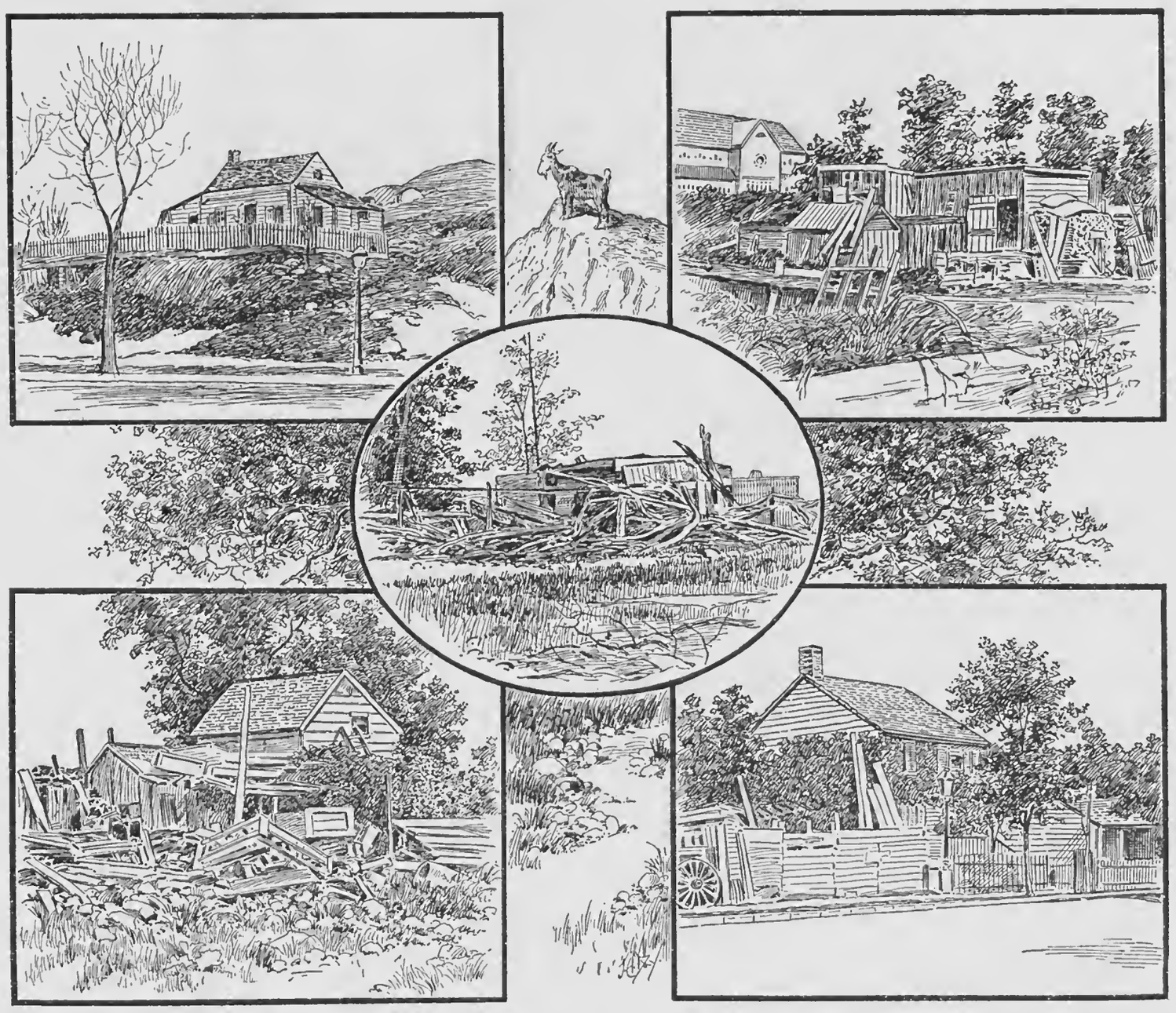
The Land of the Goat.

OLD NEW YORK.—There are people now living who can remember when New York was comparatively a small town, with cows pasturing below Canal Street. There was good hunting in the vicinity of Central Park, and one real estate man who bought land for building lots near where Fifty-third Street now is, was considered as taking a short cut to the lunatic asylum. His partner grumbled at such foolishness, stating that the town could not by any possibility grow so far out into the wilderness as that. Gold Street is said to follow an old cow path, and anyone who walks its whole crooked length will not doubt the statement. A man who owned a small farm in the vicinity of Park Row, where land is now so expensive that the aim in building is to take but little space for foundation, and as much sky room as possible, traded it for land on Long Island, that was less rocky and better adapted to farming. His grandchildren are still raising vegetables on the Long Island farm, and thinking hard things because of their grandfather's lack of foresight in disposing of what proved to be most valuable property.

SURFACE CHANGES.—Manhattan Island was originally hilly, swampy, rough and rocky. As the city grew, the hills were scraped into the low ground, and, with the exception of a strip along the upper west side, the Island is comparatively level now. Where new streets are laid out, an effort is made to avoid all sharp pitches, and make the grade from one point to a higher one as nearly uniform as possible. Because of this, people who live on old roads toward which the city has been gradually growing, find themselves in awkward positions, some on high ground, being left on the top of a pinnacle, from which it is necessary to have a series of steps to get to the street, and others whose houses are on low ground are shut out from the rest of the world because the streets on all sides have been filled in, in some instances so high as to be on a level with the chimney tops. These results are ridiculous to look at, if rather embarrassing to the owner. In any case he has no remedy except to rebuild, either filling in or lowering the foundation as the case requires.

A SQUATTER is a person who, finding a piece of land unoccupied, takes possession of it, either with the consent of the owner, or because of his indifference. Vacant lots on the edges of a city are not of much account to the owner until used for building purposes, and there is no loss to him in having some one put up a little shanty and live there temporarily. Some of the problems of the owners of lots in growing cities are to know when to sell or what to build, and some of this land is held for years, being taken by children as playgrounds, or occupied by squatters, while the owner is waiting to see from the way that the city is growing, what is the limit of price he may expect to get, or what sort of buildings may most profitably be put up on the land. The squatter style of living in many particulars is like that of the patriarchs. It might be considered romantic by some, but the sharp edges of the romance must be considerably ground off when a contractor comes along with his gang of men, tears down the shanty, and starts to blast the rocks and dig for a foundation.

SHANTIES.—The illustration on this page shows a variety of tumble-down buildings. Probably 40 or 50 similar shanties could be found on the upper west side of Manhattan Island, above 110th Street. A large part of this strip of high ground overlooking the Hudson River is owned by educational institutions, asylums, hospitals, and homes for unfortunates of various kinds. Within sight of Columbia College, St. Luke's Hospital, and the Sacred Heart Convent, are many of these shanties, making a striking contrast. Part of them are on land owned by the institutions, the authorities of which allow the squatters to remain pending the extension of the buildings or the sale of the lots. Some of these shanties have been very small on the start, and increased by additions until they cover as much ground as a fair-sized house. One of these is shown in the upper right-hand corner of the picture. In the background to the left is a large church. The outside of the shanty is a crazy patchwork of old boards, tin, tarred paper, etc., and half a dozen or more people live there. The picture in the center shows a most dilapidated state of affairs, and one would hardly expect to find it inhabited except by rats, mice and bugs, yet an old man keeps house in this primitive fashion, and lives quite comfortably with his two dogs. I have talked with him at times. He takes things philosophically, and seems to be thankful for even such a humble place that he may call home, something of a lesson to discontented brownstone-front dwellers. These squatters represent a variety of classes, some the roughest kind of tramps and do-nothings, begging or stealing their living, and loafing around out of doors in the warm weather; and others with regular employment, who prefer freedom from the responsibilities of renters and landowners, with the uncertainties of life of this kind, to the certainty of paying rent. None of them is a desirable citizen, and such a shiftless mode of living should not be encouraged.



SOME FARMHOUSES AND FARM SCENES ON MANHATTAN ISLAND. FIG. 37.

ANIMALS IN THE FAMILY.—Most of these people have one or more dogs, and often a few goats. The dog easily adjusts himself to all kinds of circumstances. He likes a square meal as well as anyone, and his ability to consume food resembles that of an old-fashioned fire-place for eating up wood; yet he can live on very little, and miserably poor stuff at that. The goat ought to be an authority on the food problem, for he has investigated it from the sides of poverty and plenty, and of all qualities from good to wretched. No doubt he prefers good pasture, and some vegetables and grain, with a few busnes as an appetizer, but he will exist on paper, banana peel, weeds and rubbish of various kinds. One point in his favor is that he is a healthy animal. He takes plenty of exercise, believes in pure air, and the pinnacle on which he stands in the picture is typical of his nature. Who ever heard of a goat having consumption? It is claimed that he is immune against tuberculosis germs. Goat's milk is said to be excellent for consumptives, and the flesh is recommended for those who are afraid of getting disease germs in beef or other meat. The goat population of New York County, according to the last census, is 226, and that of Kings and Queens counties, covering the suburbs of Brooklyn, 1,134. Of course most of these goats are on the outskirts of the city, but a few are kept in stables in the tenement districts, and last year one of these was running around on St. Patrick's Day with his horns painted green in honor of the occasion.

FARMING UNDER DIFFICULTIES.—Many of these squatters try to cultivate a little ground near their shanties. I remember one who, on a piece of rough land 100 feet square, with the ledge cropping out here and there, raised sweet corn, cabbages, potatoes, beets and other vegetables, which he peddled out at good prices, picking up quite a number of dollars in this way. During dry weather he had to carry water some distance to save the plants, and probably

did enough work to take care of an acre of good land, which would have yielded much more in proportion. To guard against thieves he kept two bulldogs, and also had to be on the watch much of the time himself in addition to the dogs.

HAVE THEIR TROUBLES.—Boys and rowdies are a great bother to people near large towns. Boys, particularly those who have not been well trained at home, are likely to make themselves obnoxious, and this is expected to a certain extent, but a big overgrown rowdy is an inexcusable nuisance. Around every village some of these may be found, and the city crop is unusually large. This genus is worse than the dog in the manger, for he won't stay in the manger. His idea is to torment somebody else, some weak and inoffensive body, of course, for he is too big a coward to trouble those who can defend themselves. The squatters suffer greatly from these pests, who seem to think that, as they have no real titles to their homes, they ought to be made as miserable as possible. Two women living alone in their own house on the outskirts of a city were tormented to an awful extent. The rowdies stole fruit and chickens, tore down the dooryard fence, and in the middle of the night would throw stones at the house, try to pry open the windows, yell and groan and do all manner of outlandish things. It is not surprising that the women were frightened. Their remedy was to alarm the neighborhood by blowing a horn, a proceeding somewhat suggestive of the end of the world to anyone who hears it for the first time. The neighbors then turned out with lanterns and went to the rescue, but, of course, the roughs got away before they could be caught. These night rescuing expeditions got to be a regular thing, and would have been amusing if it had not been for the real fright of the women. I knew of one young rowdy, however, who ran into justice with barbs on it. A large, muscular man was keeping "bachelor's hall" in a room over a wagonshed. Some of the smart town boys thought it would be a good scheme to torment him, so in in the evening they would go up the stairs, rap at his door and then run. They had played this trick twice one night and the man was waiting for them the third time. The instant the head one touched the door it opened; a long arm reached out into the darkness; and the rapper disappeared inside the room with a speed equaled only by that with which a toad gets away with a fly. Just what happened inside the fellow never understood. The floor, chairs, table and walls, went round and round and upside down. The performance ended by his entertainer throwing a pail of water on him and rolling him out the door. One lesson of that kind was enough for him. W. W. H.

EXPERIENCE WITH BEARDLESS BARLEY.

BEATS OATS.—I have sown the beardless barley for several seasons; with me it pays better than oats, because it yields as many bushels to the acre or more if sown on good ground; besides, it weighs more to the bushel. It makes a splendid dairy feed ground with equal parts of corn and oats; also for fattening hogs. It is considered an excellent feed for laying hens. This time of the year, when eggs are bringing 25 cents a dozen or more, I like to go every week to market with a good-sized basket. But it does not pay to sow Spring beardless barley on poor soil, because it grows and ripens in so short a time. It ripens three or four weeks before oats. If sown early it ripens before wheat. S. L.

Columbiana, Ohio.

BARLEY AHEAD OF OATS.—The query in a recent issue of THE R. N.-Y., "Is beardless barley worth raising?" would be read with considerable surprise by a majority of the farmers in this vicinity. More barley is raised here since the introduction of the beardless variety than before. Many farmers formerly did not raise this crop on account of the unpleasantness of handling it. The beardless variety is as pleasant to handle as oats. I know of no one who has abandoned the raising of this grain, while one seldom sees a field of bearded barley. In fact, I know of only one field in the neighborhood. I had the pleasure (?) of loading a part of this crop as it was being drawn to the machine. I imagine I see those long exasperating beards coming at me yet. Beardless barley will yield from 20 to 50 bushels per acre, depending upon the soil and season. One farmer raised 120 bushels upon two acres. This was counted an extraordinarily large yield. Soil that will produce 50 bushels of oats will produce from 35 to 40 bushels of barley. Comparing the value of the two crops per acre we have something as follows: 50 bushels oats at 20 cents equals $10; 40 bushels barley at 35 cents per bushel equals $14, or $4 in favor of the barley. The above prices were paid at the last harvest time. It is clearly evident that under favorable circumstances barley is a more profitable crop than oats. I intend to sow beardless barley the coming Spring to the exclusion of the latter crop. Being harvested about the time wheat is harvested, catch crops may often be sown, while after oats such a course would be impracticable. Many farmers failing to secure a wheat crop disk or cultivate the ground and sow barley. Being short and erect a good catch of grass and clover may be secured if a four-year rotation is desired. One more advantage is its superior feeding qualities when ground. There are no harsh, coarse hulls, which the pigs dislike so much in ground oats. To me it seems that the disposition of farmers to keep in the rut traveled by their predecessors accounts for the fact that a greater number do not sow this valuable grain. J. D. P.

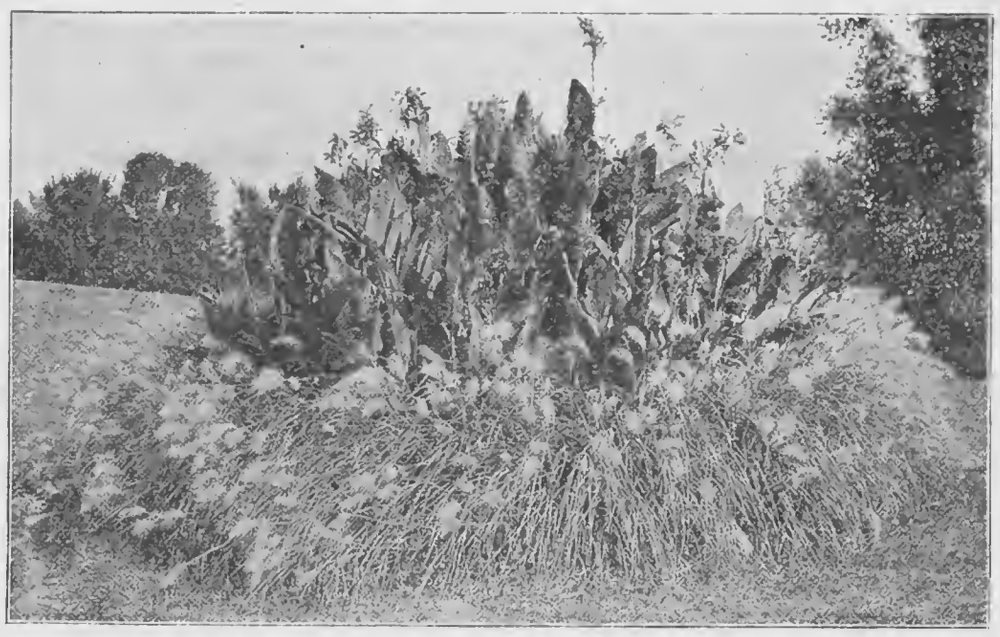
Archbold, Ohio.

BEARDLESS BARLEY HAY.—When you ask: "Is beardless barley worth sowing?" I suppose that you refer to common beardless barley. I have no figures to offer as to its productiveness, but have always considered it worth at least $2 more per ton for hay than the common bearded barley; also from observation it does not yield quite as much either hay or grain to the acre. We now have a beardless Chevalier barley that originated in this county. It does not, apparently, yield quite as much hay or grain per acre as the common Chevalier, but last year (1899) one of our fields containing 23 acres yielded 464 bags of nice plump barley, weighing 115 pounds to the bag. I consider good clean beardless barley hay unequaled by anything that we raise here, for horse feed. Farm or driving horses will do good work on this hay alone. We work and drive about 20 horses the year 'round, and for two years have not fed any grain with the hay, and the horses have never worked harder nor kept in better condition. The beardless Chevalier barley hay is an exceedingly pleasant hay to handle, and there are no beards to hurt the horses' mouths. When left for grain and thrashed the straw makes a valuable feed for dry cows, calves and idle horses and colts. H. G. KEESLING.

California.

FOR NEW ENGLAND.—My experience with beardless barley has not been altogether favorable. I had hoped much from it, as I found that common barley fed green caused a good deal of coughing among the cows. I do not know that the beards are really injurious, but I do not like to hear cows cough hard while eating it. The beardless variety is perfectly satisfactory as food when it will grow, but I never could get a large crop of it, nor would it stand up as well as desirable, but falls down and is difficult to mow. Another fault is that it is exceedingly difficult to thrash with flails. I presume that a thrashing machine would get the grain out from the straw, but these machines are all out of use in this section of the country, so if one wish to save one's own seed the flail has to be used. Beardless barley is hulless, like wheat and rye, but it does not as readily shell freely like these. I hope others have been more successful with it than I have, or may have found a variety that is more desirable. Barley seems to be almost indispensable as a green feed to grow and use late in the season. I have often mowed and fed it so late in the Fall that I had to wear mittens while cutting and carting it. A. W. CHEEVER.

Massachusetts.



CANNAS BORDERED WITH PENNISETUM. FIG. 38. SEE PAGE 108.

WHERE trash does not clog too badly, we greatly prefer the jointer on the breaking plow, since it turns the sod and trash and weed seed into the bottom of the furrow. This renders the planting and tillage easier and allows the use of the weeder. E. H. C.

THE "NEW" FARMER.—So the commission man wants a "new farmer!" Well, two years ago, when the western buyers were after New England apples, how did they do their packing? Top and bottom of barrel faced up, and the middle all small stuff—an object lesson for the amazed farmer! This told me by one who sold. J. W. B.

CROWDING APPLE TREES TOGETHER.

A New Plan for Large Crops.

CROWD THE TREES.—You will find it very difficult to gather statistics of an orchard, at the present day, that will give anything near what we may expect from one that is properly cultivated, fertilized and sprayed. I think, however, that in a few years there will be typical orchards bearing, when statistics may be had that will startle many of our farmers by the large yields and profits obtained from them. From what I have seen and learned, I am satisfied that apple trees of many varieties may be brought into full bearing at four years after being set into the orchard. I have seen apple trees the fourth year after planting out, bear one-half bushel of apples per tree. I once saw an orchard here in which 90 trees bore, the eighth season after being set into the orchard, 206 barrels of picked apples. These 90 trees were composed of Baldwin, Rhode Island Greening and Roxbury Russet, and were set 18 feet apart. I am not an advocate of large apple trees with tops spreading 30 to 35 feet, and going up into the air 25 to 35 feet; requiring a 30-foot ladder to gather the fruit, but prefer to set my trees 18 feet apart, using 135 trees per acre, and when the trees are four years old, and come into bearing, stop all other cropping and let the trees have all the ground to grow and mature their fruit. I would, however, fertilize and cultivate the orchard as I would for any crop.

CUT TOPS BACK.—By setting the trees 18 feet apart I have 100 trees more to the acre to bear from the time they are four years old and on. This makes the orchard itself pay a good profit for the land, and there is less reason or desire to crop the land with some other crop, as would be done with only 35 trees to the acre. These trees would bear for 15 years before crowding, when the top of every other tree should be cut back to as near the body of the tree as could be done, and not leave the limbs too large; the same as would be done if the tree were to be top-grafted. A new top of young thrifty growth would start out, which, of course, would need to be thinned out properly, and in three years, the trees would be in full bearing again, when the tops of those not cut back may be served in like manner. By this method of treatment the top would be kept young; the fruit be grown on young and thrifty wood, and the apples easily picked and trees easily sprayed over those low heads. When the trees crowd again, let the tops be cut back as before, or take out every other tree entirely. As money from the orchard is the object, thus planting the trees 135 to the acre and keeping the tops within a radius of about 16 feet, more apples will be taken from the orchard in 20 or 25 years, and at less expense per tree, than would be from the same ground with trees set 35 trees to the acre in 50 years, for there are 100 more trees per acre to bear fruit, and on thrifty, vigorous young trees.

BUSINESS TREES.—The above plan is for those who have made up their minds to go into orcharding for the profit there is in it, making it their business, and not a secondary thing. If the orchard cannot have the use of all the land, and proper feeding, cultivating, spraying and trimming, as well as thinning out the fruit when necessary, then go on the present system. Set the trees 35 to 40 feet apart, and get all you can from the land by putting it into grass or other crops. Those who thus plant their orchards and crop them, will be the ones who will proclaim aloud that orcharding does not pay, as thousands are shouting at the present time. There are many things on our farms needing great changes if profitably conducted, but there is nothing where a more radical change is required than in the present system of orcharding, as it is done on most of the farms, if profit is to be derived from it. A new departure must be taken if we would grow apples at a profit. Orchards should have no off years, but should bear every year an average of two barrels per tree, or 250 to 300 barrels of picked apples per acre should be annually gathered, after the orchard is five years old until 15 years old. After this, a much larger yield may be annually expected. Feed and cultivate the trees, and the trees will feed you. Apples raised from trees thus fed, cultivated, sprayed and thinned, will find ready market at very remunerative prices. Care should be taken in the selection of varieties, as some varieties are earlier and more abundant bearers than others. I have found Baldwin, Rhode Island Greening, Roxbury Russet, McIntosh Red, Jonathan and Hubbardston to be early, profuse bearers, and fine selling varieties. At the present day, success in orcharding is only reached by abundant feeding, thorough cultivation, timely spraying, trimming the trees and thinning the fruit. EDWIN HOYT.

Connecticut.

A TALK ABOUT JAPAN PLUMS.

The Essential Principles Boiled Down.

CONDENSED WISDOM.—Fifteen years' experience and time; money and thought spent watching and studying trees on plum roots or peach roots, in rich land, poor land, big holes, little holes; effect of severe thinning, no thinning, pruning, fertilizers, frost; trying to raise a profitable plum; boil down to a page or less for the benefit of the man with the plum fever. The Editor of THE R. N.-Y. does not ask much! First let me say to him who would invest money in Japan plums, think twice before investing capital which can be used at a profit with your present crops, for of all the fruits I raise plums pay the least. Yet there may be locations where they will prove a profitable venture, and every home should have a few. Learn to know a *good* plum, with a determination to raise it, for of all neglected cultivated fruits no fruit so poor, so worthless, which no market wants, can be so easily raised as Japan plums.

SOIL AND LOCATION.—They will grow on any soil not too wet, and in almost any location. But best results can be obtained by choosing a high, sunny, fairly dry location, with good frost drainage; good corn land we in the East might call it. Yet I have had better success with a poor sandy or gravel soil by fertilizing to meet the needs of the tree, than in a moist and rich one. A high location is a protection from Spring frosts, less danger from winterkilling, for with our changeable New England climate (13 below zero January 20, 7 A. M.; 41 above January 21) a location subject to 20 below zero has reached the danger point for successful plum culture; 15 below and a sudden change may cause loss. Location counts for him on the border line of successful plum growing.

TREES.—Choose good one-year trees four to five feet, budded upon *peach stock* unless by chance trees might be obtained budded upon Japan plum seedlings. Do not accept older trees as a gift. Set 13 to 16 feet apart; the poorer the land nearer the tree; this distance for those who will adopt severe pruning. For the grower who lets his trees grow, and takes what he can get, 20 feet may be near enough. On poor sandy or gravelly soil we have found large holes 18 inches to two feet deep, filled with top soil, a profitable investment. Set trees so that when the ground is level the plum wood shall be two to four inches under ground; the drier the land the deeper the tree. I might say right here that for the last 10 years we have set all trees deeper than recommended by the books. The tree stands firmer, is less liable to damage by wind, and in a measure grows upon its own roots. Trees of Abundance-Wickson type (upright growers) should be cut back for low tops 12 to 18 inches high; spreading varieties (Burbank type) two to three feet.

CULTIVATION.—Cultivate all the ground as early as it can be put into mellow condition. The man with the small orchard, who can raise at a profit crops which do not shade the trees (early potatoes, berries, etc.), can for the first two years more cheaply care for his orchard this way than any other. I never yet saw a young orchard injured by doing so. *But do not plant small fruits in a plum orchard.* We prefer to cultivate only the trees, and grow a humus crop to plow under. Yes, grow something, if only weeds and Witch grass. Then when trees begin to bear we reverse the cultivation; cultivate between the trees and allow a sod, what the plow and Cutaway harrow do not destroy, to grow around the trees. The trees are less liable to damage by winds, and of more importance to us; the base of tree is less liable to damage from freezing.

PRUNING; THINNING.—First grow the tree; this will require good judgment, as young trees require thinning of surplus branches, cutting back of previous season's growth, so as to form a fairly open, well-balanced top. When tree is large enough to bear fair crops of fruit severe pruning is adopted if tree is in proper shape. All of the previous season's growth is cut back to three to six inches, and surplus growth is cut out entirely, and as the trees grow older, all growth may be cut back to two or three inches. With this method and thinning of fruit we have been able to raise a crop every season. Japan plums must be thinned. After hiring 250 heavily-laden trees thinned by hand at a cost of nearly all the profits, and the loss of a large proportion of our large (two to 2½ inches in diameter) Burbanks by cracking, we have adopted a medium course. Our severe pruning has done a large part of the thinning. Then as fruit begins to grow we practice shaking. Don't get a lazy man for this job, but a strong, active one, for the tree should not be pushed back and forth, but given a quick, sharp jerk. Then after fruit is through dropping, trees are gone over by hand with the aid of more shaking, but the job is not done so nicely that no two plums may touch; yet as a rule we do not intend that they shall do so. If black rot appears this is picked by hand, and if much appears is done every day. We find this very important.

FERTILIZERS.—Not too much nitrogen, a fair amount of phosphoric acid, and plenty of potash; the average grower is in little danger using too much of the latter, especially if the sulphate is used. We find the double sulphate of potash and magnesia very useful at least part of the time. Use nitrate of soda only to keep the trees in a healthy condition, for many a yellow, half-starved tree may be brought back to a life of usefulness if horse power and perhaps a small amount of elbow grease is used as a help to the nitrate of soda. From a business standpoint it does not pay to doctor a sick tree. Yet it is better not to lose one's head over the yellows talk, and perhaps do more damage than the disease itself. Study your own conditions, and draw correct conclusions from your own experience, and ideas of value from that of others. Do not expect to learn it all from them, but attend strictly to business, give good care to your trees, and they may return you a small margin of profit.

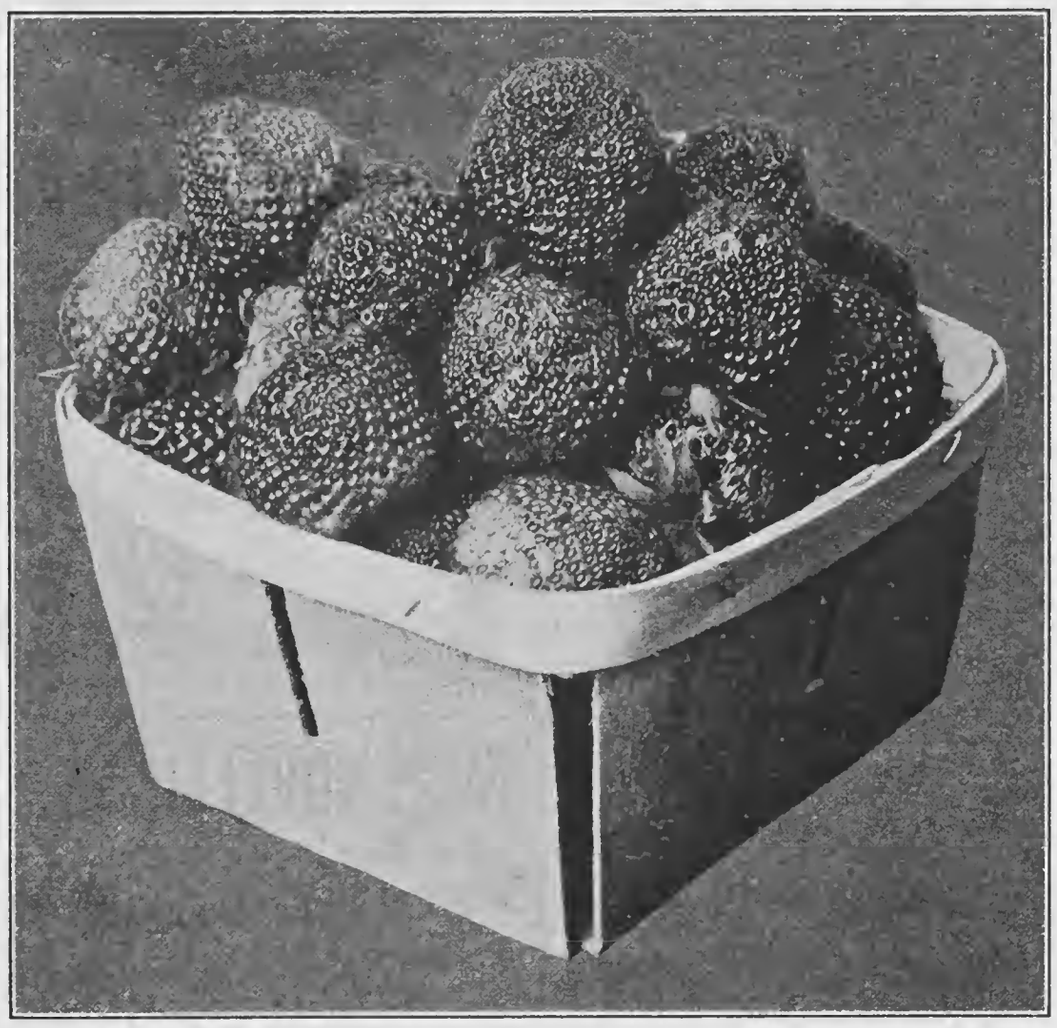
Massachusetts. H. O. MEAD.

NOTES ON CEMENT MIXING.

I have done an immense amount of cement work, and have also had an extensive experience in building, and my experience has taught me, with much bitterness, the fact that masons and carpenters are a narrow, contracted, one-idea class. They all keep in the same rut, and it takes a mighty sight of crowding even to get one of them out of it. Now anyone of fairly good sense can make a splendid sidewalk or barn floor with three inches of grout and three-quarters of an inch of top coat. These points only are necessary, and they are absolutely so: A firm, solid foundation, good fresh cement *thoroughly* mixed with gravel or sharp sand; the grout must be solidly tamped and the top coat must be put on the grouting within a few hours. It is best to do it at once. Two hundred pounds (one-half barrel) of Portland cement to 100 heaping shovelfuls of good gravel is ample for the first, or foundation coat, and three inches is ample of thickness. To save material this should be laid evenly, by gauge, over an even foundation. The top coat should be two parts of sharp screened sand to one of cement, and troweled down perfectly smooth, leaving not a single hole, however minute, by which water may reach the foundation and freeze there. It is generally more convenient to put the top coat on as the operator proceeds, and best that it is done then, but protected from the sun one can wait 24 hours before applying it. An inch coat of earth or sand should be applied as soon as the top coat has set or hardened enough to prevent the earth sticking to it, and it is best that this dirt or sand should remain there a week. This is done that it may dry slowly and evenly. Masons will tell you to use five to one, even three to one for grouting, and half and half and five to three for top coat, but I know that nine to one (with plenty of elbow grease) for grouting will last forever.

If the operator has more time than money, screen your gravel, use nine to one, mix it thoroughly, and then mix it a little more, and tamp it in the same manner. Cement sidewalks laid on the principal street of this city 30 years ago are just as good as when laid, showing absolutely no wear whatever. A cement wall can be made for one-half the cost of a stone wall; it will exclude all dampness, and last forever. Any man of sense can make it, too. In all my experience in building I have never found but one carpenter who knew how to hang a door, and I have never known a mason who knew how to top out a chimney. Stand over a mason and you can make him draw in the top of a chimney to a little more than half the size of its flue, but he'll never do it otherwise, and yet this is the only way a chimney should be topped. Your rule for cement floor on page 53 would make it cost four times more than necessary, and sand or earth is less expensive than hay and 10 times better, too. We make here street crossings of cement, which stand the heaviest traffic; also plain and ornamental window sills and caps, water tables and many other things. S. E. BARRY.

Indiana.



NEW STRAWBERRY MARIE. FIG. 39. SEE RURALISMS, PAGE 108.

SAND OR WINTER VETCH.

Of this genus of legumes there are numbers of species, but few of them have succeeded here in this country. The particular one to which I would call special attention (Hairy vetch, Vicia villosa) is a native of Russia, and was introduced into this country by the Department of Agriculture in 1886. It is a very hardy annual, usually remaining green during the entire Winter when left undisturbed, and where mulched by its own top of late Fall growth. To those unfamiliar with vetches it may be said that they are very much like peas, bearing slender leaflets, small stalks, small blue flowers and a small seed about the size of a No. 2 shot, and almost as round. This vetch is usually considered a Winter variety, but may be sown in the Autumn or Spring. If in the Spring, the last of April or first of May; if in the Fall it should be sown early, certainly not after the middle of September. The ground should be at least moderately fertile, and should have thorough preparation. The seed may be sown broadcast, or may be put in with a drill at the rate of 30 pounds per acre. If sown broadcast it should be harrowed once over to cover the seed. The plants grow very slowly for the first few weeks, and if sown in the Fall will not cover the ground before the following May.

After it is once well rooted, it grows much more rapidly, and if undisturbed will soon form a dense growth, covering the ground completely. It is relished by sheep, horses and cattle, but is regarded as especially adapted to sheep. Like other leguminous plants it is especially rich in albuminoids. It may be pastured, but I believe will be found more useful as a soiling crop. For this purpose it may be sown with oats, which will hold it up sufficiently to permit cutting with the mowing machine. It should be cut before or while in blossom, as the stalk soon begins to dry after the blossom has passed off. From the experience I have had with it I cannot think it more valuable than clover as far north as Ohio and New York. Our experience indicates that it will make a good Summer growth, will keep green during Winter if not pastured or cut too close in the Fall, but will not bear Winter pasturing in this latitude. For a sheep feed I believe it is superior, pound for pound, to any leguminous crop we can grow, but we cannot produce as large crops of it as we can of clover. Like other plants of its kind it is regarded as an excellent crop for green manuring, and from its manner of growth, on account of covering the ground so completely, there is good reason to believe that it is one of the best of the Pulse family for this purpose.

Spring vetch (Vicia sativa) is a variety very closely related to the so-called Winter vetch. Its habits of growth, color of flowers and general structure are almost identical, but in our experience it has not given as promising results as the Winter variety. Sheep breeders, especially those who breed and enter the show ring, might find the vetch a great help in giving variety of feed. It may fill a place to advantage in soiling, but as a general farm crop, I have not found it to work in with convenience in any ordinary rotation. J. FREMONT HICKMAN.

Ohio Experiment Station.

THE English Society for the Promotion of Kindness to Animals is endeavoring to have the protection accorded by the Geneva convention to those who tend wounded men on the field of battle extended also to those who tend wounded animals.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Do Curculios Crawl or Fly?

F. F. H., Decker, Mich.—How does the Plum curculio get into the tree? Does he fly or crawl? If he cannot fly I have a remedy which I intend to apply to the bark in a ring around the tree, which prevents all insects from going up it.

ANS.—Possibly a few Plum curculios crawl up into the tree, but they fly readily, and I think a large proportion fly into the tree; certainly most of them would if they met with an obstruction on the trunk when they were trying to crawl up. I doubt whether anything around the tree trunk would prevent one curculio in a hundred from "stinging" the fruit. M. V. SLINGERLAND.

Starting Peach Pits.

S. B. D., Jackson, Mich.—What is the best way to start peaches from pits, or, in other words, the process followed by nurserymen in starting peach pits?

ANS.—Peach seedlings are usually grown from selected pits collected as soon as the fruit is used, and kept in a cellar or some place where they will not dry very hard until late Fall, when they may be planted in rows, four feet apart, and three or four inches apart in the row. They should be covered about two inches deep. Many nurserymen prefer to bed the pits, or sow them very thickly over a prepared space of level ground and cover with about three inches of soil. The next Spring the sprouts are taken up with a trowel, when three or four inches high, and transplanted to the nursery rows for growth until the budding season. The pits can also be stratified in boxes of moist sand and exposed to frost during Winter and planted in rows next Spring.

Celery After Celery.

G. W. D., Farmville, Va.—I have a piece of flat land, soil of which is gray. It has been in celery two successive years. Will it be suitable to plant celery there again the coming season? The land has been heavily manured both years with farmyard manure and commercial fertilizer. I would like any information you can give me, both as to manuring and cultivating celery as a crop for market. My reason for asking about planting in the same place again is that this piece of land is more readily irrigated than any other on this farm, and our Summers are generally very dry.

ANS.—The custom of planting celery for many successive seasons in the same plot is quite general, and the soil is usually cropped with early peas, lettuce, or some quick-growing crop in the early part of the season in order to utilize it and keep the weeds down. It requires a highly-enriched soil to grow good celery, and when a plot is brought to a suitable condition it is safe to use it until positive disease appears. The fertility must be kept up by repeated applications of manure. The Celery blight, a most destructive bacterial disease, is apparently quite as likely to be communicated by germs floating as dust in the air as by soil infection.

Chestnut Culture in Pennsylvania

J. B., Huntingdon, Pa.—What is your opinion of central Pennsylvania soil and climate for European and Japan chestnuts? Will they grow and produce fine nuts on poor ground? Where do they thrive best, on high or low ground? Do they require cultivation? Do you know whether any large orchards pay?

ANS.—I have had no experience growing chestnuts in orchard for commercial purposes, although I have a number of trees growing in my grounds for home use. It seems to be conceded by men who have experimented extensively, that European, Japan and native chestnuts can be easily grown if grafted on young seedlings, and the trees planted where they are to grow when one year old. Each succeeding year in age adds to the risk in transplanting. At the recent meeting of the Pennsylvania State Horticultural Association in Harrisburg, the grafting of the finer kinds on sprouts growing from the stump in a chestnut clearing, was pronounced a failure by those who had tried it. The labor required to keep down the wild sprouts and the briars and underbrush, and the trouble of gathering the nuts on rough, rocky ground, usually costs more than the crop is worth. But the greatest drawback to success in commercial chestnut culture is the Chestnut weevil. No plan has yet been devised that will protect the crop from its ravages, and it is increasing in numbers every year. Until some preventive remedy for this pest shall have been discovered I do not believe chestnuts can be made to pay as an orchard crop. GABRIEL HIESTER.

Catarrh and Chilblain "Cures."

W. O. E., Whitby, Ont.—On page 20 I notice that for catarrh dry bicarbonate of soda is recommended to be used as snuff. That will upon trial be found rather painful, I think. In my opinion boric acid finely powdered will do better, because much less painful, and equally or more effectual. As a medication for chilblains I have found an application of a saturated solution of bisulphite of soda as good as anything. Prevention in this case is easier and better than cure. As a boy I had each Winter painful experience of this trouble until my mother provided me with a pair of shoes made with uppers of thick cloth with a rough nappy surface, after which I never had any more chilblains. Sawing cord wood when two men or man and a boy are available may be done to advantage with a large cross-cut saw. It is quicker, easier and not hard on the back.

ANS.—We have used the bicarbonate of soda for several years, always with good results. True, it is painful at times, but very effective. Another suggested remedy for chilblains is sent by A. H. M., Massachusetts, as follows: "Put about three-quarters of an inch of hardwood ashes in the bottom of the foot tub, just cover with hot water, have it a little hotter than one can stand at first, get the bottoms of the feet in it as soon as it can be borne at all, then as soon as they feel comfortable, add a little more very hot water and replace the feet. Keep them in the water—as hot as one can bear it—for 20 or 30 minutes. Rinse, dry thoroughly and then one is ready to retire. Very bad cases may need a repetition every other night for a week."

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Cow Peas and Bacteria.

C. W. M., Licking Co., O.—Last Summer, knowing that mulching material for berries would be scarce, I acted upon a suggestion in Hope Farm Notes, and in June sowed a patch of cow peas. We had a severe local drought, and the peas did not make much growth, but at about a foot high formed pods. A good rain came about this time, but this patch of peas did not grow afterwards. A small patch of peas sown on an old strawberry bed plowed down in July had not formed pods when the rain came, and the peas on this patch made a larger growth of vines than the earlier sown, yet neither patch made enough growth to make much mulching material. There is now every prospect that straw will be scarce another Fall, the wheat fields looking poor at this time, and I must be on the lookout for mulching material. On making an examination of the pea roots I cannot find any tubercles (knots or nitrogen traps), and the question arises, was the small growth of vine due to the variety, dry weather or lack of tubercles? The peas I sowed were to me an unknown black sort. What variety would you recommend for the latitude of central Ohio, to make the most mulching material? What method would you recommend to get the bacteria in my soil, that would put the "knots" on the pea roots? The land I had in peas is intended for potatoes in 1901, and I followed the peas with rye. Would it not have been better to follow with the Hairy vetch?

ANS.—Last Summer was rather a crusher with many who tried new plants, as the hot, dry weather was against any such experiment. Our experience is that cow-pea vines make a most excellent mulch for strawberries, when we can get enough of them to cover a reasonable sized area. This past year we have experimented with eight different kinds of cow peas; Early Black makes a vine 18 inches or two feet high, which runs perhaps three or four feet in a good season. When these vines are cut just as the pod forms, and before the leaves fall, they will make without doubt a good lot of vine growth for food or fodder, and will start a second growth. The Whippoorwill makes a larger vine, and this year matured seed of good quality in northern New Jersey. These two varieties are best suited to the North, as they are sure to make seed, and that is a desirable thing where one intends to grow this crop year after year, for the seeds are quite expensive. A variety know as Wonderful, and another known as the Red Crowder, made with us several times the vine growth of either Early Black or Whippoorwill, but matured practically no seed. If you want a vine that will mature take either Early Black or Whippoorwill; if you simply want vine growth for mulching or fodder, we would advise either Wonderful or Clay or Red In regard to the formation of the tubercles on the roots we found some singular things in our last year's experience. Where we planted the seed on poor ground, without any fertilizer, and without much care, the roots were practically alive with the tubercles. Where we used nitrate of soda, or put the peas on good ground, there were practically no tubercles at all.

We planted Soy beans for the first time last year. Having heard so much about soil inoculation, we determined to try to see what there was in it. For this reason we sent to Massachusetts and obtained 100 pounds of ordinary soil out of a field where Soy beans had been grown. We scattered this earth at the bottom of one row when the Soy beans were planted, while the adjoining rows had nothing of the kind put in the furrows. These rows were about 400 feet long. The only tubercles to be found in connection with those Soy bean plants were where that inoculated soil was put, and we are forced to the conclusion that the scientific men were right in saying that we introduced the bacteria to our soil when we imported that earth from Massachusetts. Our experience with the cow pea leads us to believe two things: First, that after a series of years these bacteria will come in of themselves, and produce the tubercles on the roots of the plants. This, however, will take more time than most people want to spend. We are also convinced that the bacteria may be introduced to the soil after the manner in which we brought Soy bean bacteria to the farm, namely, by bringing soil from a field where the plants had made the tubercles. We do not believe it would pay simply to broadcast such soil over the field. The way we would do, if we wanted to make haste, would be to plant one row of the cow peas in a drill about as one would plant beans. Get a peck, more or less, of soil out of some field where these cow peas had been grown successfully, put that at the bottom of this row, drop the seeds right on it, cover them over, and then let them alone except for occasional cultivation. Do not use any manure or fertilizer with them. The chances are that in the Fall one would find those cow-pea roots alive with tubercles, and another year by digging up the soil of that row and using it on a larger area, the bacteria would be introduced all over the farm, or at least wherever cow peas were sown. This thing was actually done at the Kansas Agricultural College with acres of Soy beans. A ton of the soil was originally brought from Massachusetts, and from it a number of rows were inoculated so that they got soil of their own in proper shape. This was drilled in with the Soy-bean seed about as we would drill in a fertilizer. This subject is one of great interest, although we have yet to demonstrate that it has any great practical value for us. All of us are benefited by trying a few of these things on a small scale, even though they do not always bring a barrel full of dollars.

Hen Manure and Chemicals.

A. S. A., Westboro, Mass.—I have seen much in THE R. N.-Y. about making a good fertilizer with dry hen manure and chemicals, and as my fertilizer bill is large, I should be glad of some way to cut it down. The fertilizer that gives me the best results has a guaranteed analysis of nitrogen, 3.30 to 4.12 per cent; available phosphoric acid, 8 to 11; potash, 7 to 8. Not knowing just how to figure these things out myself, will you put down the quantity of each needed in the following mixtures?: 1. Dry hen manure, superphosphate of lime, muriate of potash, nitrate of soda (if needed.) 2. Dry hen manure, pure ground bone, muriate of potash, nitrate of soda (if needed.) 3. Dry hen manure, dissolved bone black, murlate of potash, nitrate of soda (if needed.)

ANS.—Every year we have numerous questions about hen manure. Most people give this manure a higher value than it deserves. It is the strongest of our domestic manures, but not nearly as strong as Peruvian guano. Here is a table giving average analyses of the substances which you desire to mix. The hen manure analysis is an average of many dried samples:

Pounds in 100.

	Nitrogen.	Potash.	Phosphoric Acid.
Dried hen manure	2½	2	3
Acid phosphate	..	..	14
Nitrate of soda	16	..	..
Ground bone	3	..	25
Muriate of potash	..	50	..

This hen manure is supposed to be pure and well dried with plaster or road dust. After drying it is broken up, crushed and sifted through a fine wire sieve. A. S. A.'s standard fertilizer must contain 66 pounds of nitrogen, 160 of phosphoric acid and 140 of potash. The first mixture is hard to make because in order to secure the high per cent of phosphoric acid you must use at least 1,000 pounds of acid phosphate:

	Nitrogen.	Potash.	Phosphoric Acid.
1,000 acid phosphate	..	..	140
500 hen manure	12½	10	15
250 nitrate	40	..	..
250 muriate	..	125	..
Total	52½	135	155

By using 75 pounds less of the hen manure and 75 more nitrate you will bring up the per cent of nitrogen, but still be low on potash and phosphoric acid. The thing to help this out is fine ground bone. Here, for example, is a mixture:

	Nitrogen.	Potash.	Phosphoric Acid.
400 bone	12	..	100
300 acid phosphate	..	..	42
250 nitrate	40	..	..
250 muriate	..	125	..
800 hen manure	20	16	24
Total	72	141	166

This mixture gives you three forms of nitrogen and two of phosphoric acid. In theory the analysis is equal to that of the fertilizer A. S. A. has been using, yet, of course, we cannot guarantee that it will prove as effective for all crops. Hen manure varies greatly, and unless it is made very fine and thoroughly mixed it will not give uniform results. We feel sure that this method of drying, crushing and mixing hen manure with chemicals is a good one for the general farmer.

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Farm Crops in Orchard.

M. W. S., Fairlee, Vt.—Will it be best to grow some farm crop in an orchard of young apple trees while cultivating and growing them? If so, what crops are safest and best for the trees?

ANS.—Yes, it is well to grow crops of potatoes, corn, beans, squashes or something else that will require good tillage in an orchard while the trees are small. When they get five to eight years old this should be stopped. Red clover may then be sown, except for a space of four feet or so next the trees. This should be mown down and left to rot on the ground, and not taken off as hay. After about two years it should be plowed under, and the ground thoroughly tilled, without any other crop on it but the orchard trees.

Grafting Questions; Dwarf Trees.

A. R. B., Dexter, Me.—1. I would like to inquire if there is any way I can graft crab apples with anything, and make them live; if so, what stock is required? 2. I have a lot of different kinds of plum trees that have been set about three years. Can I top-graft them? 3. I wish to set a lot of dwarf pear trees this Spring. What kinds are best?

ANS.—1. The crab apples may be grafted on almost any of our ordinary apple trees. Thousands of them are budded and grafted on to common apple seedlings by the nurserymen. 2. Plum trees can be grafted with about the same certainty of success as with other fruit trees, but the work should be done earlier in the Spring than ordinary apple grafting, to attain the best results. 3. If Winter pears are desired the Lawrence is perhaps the best, but Angoulême is the most profitable of all pears grown as dwarfs. It is not a true Winter variety, but may be kept until Christmas in Maine.

Apples and Peaches for Michigan.

E. A. D., Reading, Mich.—I should like to know your opinion as to the best varieties of apples and peaches for home use, from earliest to latest, for southern Michigan. What do you think of the Mammoth Blacktwig apple?

ANS.—A good list of apples for family use in southern Michigan is about as follows: Early Harvest, Benoni, Primate, Fanny, Golden Sweet, Jefferis, Ramsdell, Fall Wine, Grimes, Jonathan, Red Canada, Wagener, Swaar and Stark. Some of the best peaches are: Triumph, Sneed, Bishop, Early Rivers, Mountain Rose, Elberta, Chairs, Fitzgerald and Heath Cling. The Arkansaw or Mammoth Blacktwig apple is a very good one for the region where the Winesap flourishes, but this is not quite true of Michigan. However, I have seen some good specimens of Arkansaw that were grown there. It is a dark red apple of medium size and fair quality. It keeps well.

Persimmons; Cherries; Chestnuts.

C. M. P., Bourbon, Ind.—1. Where can persimmon trees be bought, and what kinds shall I buy for planting in northern Indiana? 2. I have 200 cherry trees planted, all Richmond and Olivet, and wish to plant two more varieties, both sour, that will ripen later than Richmond, and will be suitable for planting here in northern Indiana. What varieties shall I plant? 3. What kind of chestnut shall I buy for planting here, and where can I buy the trees?

ANS.—1. There are almost none of the nurseries having stocks of grafted persimmon trees, from the fact that there is little call for them, and that they are hard either to bud or graft. Early Golden, Marion and Golden Gem are good kinds. Possibly the horticulturist of the Indiana Experiment Station at Lafayette may be able to direct the inquirer just where to get the trees. 2. Two good sour cherries for the date of ripening and region desired are Montmorency and English Morello. The former comes about a week after Richmond and the other about a month later. 3. Paragon would be a good variety of chestnut to plant. The trees should be set on light, well-drained land. They may be had of almost any leading nurseryman.

Russet on Baldwin Apples.

T. H. C., So. Framingham, Mass.—Standing in a row of Roxbury Russets I have a Baldwin apple tree. In gathering the fruit I found several of the Baldwins splashed with russet, in size from a 10-cent piece to nearly one-half the apple. Is this common?

ANS.—There is nothing unusual in a Baldwin apple having patches of russet on it, and I would not think there was any influence of the other variety in this case, nor in any others that might be likely to be observed. There are no well-founded cases of the effect of the pollen of one variety of fruit upon another of this character on record, so far as I know, but there are plenty of supposed cases.

The Culture of Dandelions.

Several Readers.—Is it true that dandelions are grown largely in this country in cultivated fields?

ANS.—The dandelion is but little grown in this country as a vegetable, other than in some parts of New England. Some of the market gardeners in the vicinity of Boston claim to have taken as much as $1,000 worth from an acre. The variety known as the Improved French Thick-leaved is the best and most generally grown. It is not at all particular as to soil or situation; in fact, it will thrive anywhere, but the larger profits are made in growing it on a heavy loam, with good tilth. The seed should be sown soon after May 1, but good results are obtained when grown as a second crop, the seed being sown as late as August 1. The soil should be finely prepared, as the seeds are very small, and the young plants, because of their dark color, are quite inconspicuous. Sow in drills one foot apart and cover thinly; roll the ground after sowing. In order to see where the rows are a little lettuce seed should be mixed with it, say two ounces to the acre. The lettuce will plainly show the rows. Cultivate in Summer so that weeds will not grow; upon the approach of cold weather, cover with any coarse litter and remove same in early Spring. One quarter of a pound of seed is sufficient for an acre.

C. L. ALLEN.

Asparagus Varieties and Rust.

My opinion, so far as experience qualifies me to judge, is that the varieties most subject to the rust are those to which large quantities of nitrogenous manures have been applied, thereby inducing a soft, watery growth. With dry weather following, the crop evaporates more water from the foliage than the root system can supply; as a consequence the plants become enfeebled and fall an easy prey to rust and similar diseases. On the other hand, the varieties most immune are those to which proper quantities of the mineral elements have been given, without unduly stimulating the crop. It seems to be generally conceded, I believe, that the spores of rust and many kinds of fungus will carry over, and reproduce themselves in the plants. I know this to be the case with asparagus and celery.

Pennsylvania. M. GARRAHAN.

We have noticed quite a marked difference in the varieties of asparagus for the last two years; the Palmetto is the least affected of all the varieties we grow; in fact, we have been bothered but very little with the rust yet on any of the varieties. We find that when planting asparagus seed following a peach nursery, we usually have better success, and are troubled with rust less than where planted on land full of vegetable matter; whether the growing of the crop of peach trees has anything to do with it I do not know. For planting in field culture we recommend the Palmetto above all others. The Argenteuil variety we do not grow, and do not know it.

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$1.00 ONIONS

This is the year to plant Onions. Present prices mean $200 to $500 per acre.

$1.00 SEED We have a special fine large stock at $1 per pound. Every seed 1900 crop, our own Ohio grown. IMPROVED LARGE YELLOW GLOBE, rich orange yellow, beautiful globe shape, big cropper, good keeper. Also, our Ohio-grown LARGE RED GLOBE, finest red on market. If to go by mail, add 10 cents per pound. **For Trial**—Pkt., 5c.; 1 oz., 10c.; 4 oz., 30c. Our beautiful annual of "True Blue" Seeds FREE on request. **Several New Tomatoes.**

LIVINGSTON SEED CO.,
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PALMER VERY EARLY STRAWBERRY
NEW CREATIONS.

We guarantee the Palmer to ripen from 5 to 10 days earlier than any other early berry; to be the largest best-shaped and most beautiful extra-early berry; to yield twice as much fruit as any other early on earth, and each berry to be a fountain of juice. We return your money paid for this wonderful early berry if it does not do as we claim the second year. We refer you to this paper to our honesty. List free.

T. C. KEVITT, Athenia, New Jersey.

Try the New Auto Strawberry. Largest and Best. 8,000 qts. to the acre. 1 doz. plants for $2. Other good kinds as low as $1.50 ₱ 1,000. Cat. free. Slaymaker & Son, Dover, Del

Pedigreed PEACH Trees, New Fruits and Berries. The Iron Mountain Peach (frost-proof), Harvest King Pear (blight-proof. One tree free). Champion Apricot (new). Everything for the fruit grower. My cat. free. Lindsley's Nurseries, Whitehouse, N. J.

"Seeds—Northern Grown—Seeds"
For $1 we will mail, postpaid, 40 Large Size Packets of Choice assorted Vegetable Seeds and 1 oz. fine Strain Mixed Sweet Peas, as follows: 3 varieties Beet, 4 Cabbage, 2 Carrot, 2 Celery, 4 Cucumber, 1 Egg Plant, 1 Sage, 1 Leek, 3 Lettuce, 1 Muskmelon, 1 Watermelon, 2 Nasturtium, 2 Onion, 1 Parsnip, 1 Pepper, 1 Pumpkin, 2 Radish, 1 Salsify, 2 Squash, 3 Turnip, 2 Tomato. All Crop 1900. Money back if they do not give satisfaction. **Northern New York Seed Co.,** Cape Vincent, N.Y.

POTATOES Sir Walter Raleigh and Carman No. 3 seed potatoes. These potatoes were raised in one of the best potato sections of Western New York and are first-class stock, free from scab or rot. Price for lots of 10 bushels 60c. per bushel. Write for car-lot prices.
LATIMER BROS., Arkport, Steuben Co., N. Y.

For Fifty Years

and more, we have grown and sold nursery stock. The largest nursery in New England or the East has been built up by our plan of growing only the best stock of varieties of known worth. Everything in fruit, ornamental trees and shrubs.

October Purple Plum and Green Mountain Grape our specialties.

Write for handsome catalogue free.

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New Canaan, Conn.

CANADA FIELD PEAS
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THE COMET $2 to $4
Double-Acting—Sprays from bucket or barrel 50 feet. New scientific principle. My free catalogue will make plain to you that I have the sprayer you want. Write to-day. H. B. RUSLER, Johnstown, O.

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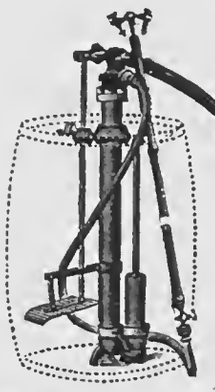
WM. STAHL, QUINCY, ILL.

Buy a Good Spray Pump



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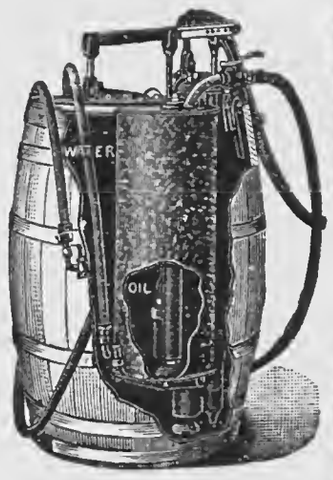

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When you read the label and plant the tree you know just what the fruit will be. THE TREE BREEDER (Free) will tell you why we say it, and the trees themselves will **prove it.** It also gives **prices, special offers and discounts for early orders.** We ask no more for **dependable trees** than others charge for the doubtful kind. No Catchpenny Schemes, no fake **wholesale** (?) prices, but **full value** in trees. The **Best Trees** for your money.

THE TREE BREEDERS.
THE ROGERS NURSERIES, Dansville. N. Y.

FUMIGATION WILL NOT COME BETWEEN YOU AND US, but we stand between you and danger when you buy **ROGERS TREES,** for we fumigate every tree you buy of us. It costs only 15c. to 50c. per 1,000 trees. You may run no risk without it, but it's surer when it's done. We belong to no nursery combine, we make our own prices, we grow our own trees and you will find it safe in every way to place your order to-day with THE ROGERS NURSERIES, **The Tree Breeders,** Dansville, N. Y.

HOPE FARM NOTES.

WITCH HAZEL.—Several weeks ago I published a note from a reader who advised us to plant witch hazel on our back fields, so as to make a Winter job of cutting the twigs to sell to the extractors. Here is a note from the other side:

"In regard to the witch hazel business, I think the man who has to plant the seeds, set the plants and wait for it to get big enough, would get tired of waiting, as it takes a large amount of small brush to weigh a ton, for which we get the sum of $4. Of course, small brush is worth more than large. I am a wagon maker and blacksmith; that is the only profitable part of the witch hazel business that I can see. There is a witch hazel mill, also a Black birch mill, within a few miles from here. Two years ago my brother hauled about 300 tons of witch hazel. We kept four horses instead of two; we got most of the brush off our own farm, but to be honest, I would rather shoe other people's horses and keep their wagons in repair to haul witch hazel than my own." L. E. W.

That puts a new face on it. I should say that our friend would better stick to his shop. I have written a number of large drug houses and manufacturers. They give little encouragement. It seems that bogus chemical mixtures are put on the market which injure the sale of the pure extract. As is the case with other things, the adulterators are injuring trade. The outlook for that Winter job is certainly frosted!

SILO OR SHREDDER.—The following sensible letter is at hand from a New York State man:

"I see that you have bought a shredder and cutter combined for your corn fodder. I have been anxious to hear from some one who has had experience with such a machine. It has been a question with me for some time as to which would suit my case the best, a silo or a shredder. I only keep from two to four cows, as the case may be; five horses and 50 sheep, besides some Angora goats, and, of course, hogs and chickens. While I think the silo all right for the dairy, is it profitable for the general farmer, including not only the expense of building, but also of refilling every year? While I believe everyone should be governed by circumstances and the contents of the pocketbook, yet it is often a question that puzzles one as to what is best for our own individual use, as regards the silo and shredder. I think there are cases where a tool works well and gives perfect satisfaction to one person; another gets disgusted and is in no way satisfied." O. B. M.

I do not feel competent to settle such a question. The silo men have some strong arguments, and I have listened carefully to them, yet, as I am situated, I do not believe that a silo would pay me. I have only three head of cattle. It must be admitted that the silo is most useful for supplying cow food. Some farmers feed it to horses and hogs, but I think the dry grain with roots and shredded dry stalks is better for these animals. In our country there is more profit in boarding a horse than in milking a cow, and I also believe that hogs pay us better. I think that a farmer should consider such things from the profit standpoint. How can I get the most out of my farm crops? If I had a large herd of cows, I think I should build a silo. If those cows were sold, I should let it stand empty. Not long ago I was in a Massachusetts farmer's barn. In one corner was a fine silo. When it was built the "tie-up" was full of cattle. It was found that peaches, plums and apples paid better than cows, and the latter were sold. Instead of buying stock to eat up the silage that farmer will turn the silo into a storage room for fruit, and it seems to me a very wise thing to do so.

GENERAL STOCK FOOD.—I want no quarrel with the silo men. Their work has proved a blessing to the dairymen of this country. It is my opinion, however, that shredded dry stalks with the dry grain will prove more satisfactory to the stock kept by the general farmer than will silage. We have not yet fed a mouthful of hay. The brood mare has oat hay once daily, but every other animal on the place has shredded stalks and waste molasses for roughage. The orts make good bedding. For grain we are feeding mostly bran and oats—reserving our corn until the horses begin the hard work of Spring. We shredded nearly two months' supply of the stalks at one time. We have been feeding about a month and the quality is still good. Of course, I understand that where one has a silo the work of cutting is all done at one time, while shredding means several different jobs. At Hope Farm I am satisfied that the shredded stalk is the cheapest roughage we can obtain for all our stock, and that it will enable us to sell hay, which brings $20 per ton!

THE HEN BUSINESS.—How are the Hope Farm hens doing this Winter?

So-so!

What does that mean?

Not as well as we might have made them.

How many hens have you?

There are now 52 old hens and pullets.

How many eggs do they lay?

From 10 to 15 per day the first week in February.

Why don't they do better?

Chiefly because they are too crowded. We had but one small house available, and they were all crowded into that. They have not had a fair chance.

Why not? We thought you pretended to be model farmers!

We have never pretended anything, and I must admit that our hens were neglected. Now, Charlie is trying to brace them up.

How are they fed?

In the morning he feeds a warm mash made of three parts wheat bran and one part ground corn and oats. The morning's mess contains a handful of oil meal and a small quantity of the condition powder made by Henry Holmes. At noon they get a small feed of damaged wheat, and at night whole corn. They have oyster shells before them all the time, and all the raw cabbage they want.

Do you call this ideal feeding?

No. There may be too much bran in the mash to suit some poultrymen, though we regard bran as being useful. I would like to feed more meat or cut bone, though the oil meal partly replaces it. If we had clover hay I would cut it and feed it steamed.

What breed are these hens?

A mixture. During last year we paid little attention to breeding. Other farm work was more important, and the hens did much as they pleased. We have Leghorns, P. Rocks, Brahmas, Wyandottes and Minorcas all jumbled together.

We thought you argued in favor of pure-bred stock?

So I do. This very flock of hens is a living argument in favor of better breeding.

What are you going to do about it?

Confess our sins and then get better hens. I hope to get eggs from well-known breeders of good stock. Then I want to select about 20 of our best hens, and cross them with good Wyandotte roosters. I like the White Wyandotte. I doubt whether Hope Farm is well suited to the poultry business on a large scale, as the land about the buildings is heavy and rather moist.

THE WEATHER.—We have certainly had an open Winter. February came in with a light fall of snow and a cold snap. On our hills the cold was not severe, but I heard reports of much colder weather in the valley. I thought this might be due to a difference in thermometers, so one morning I carried our thermometer along with me when I went to the train. It registered 13 degrees when I left home and gradually fell as I drove down hill, and at the railroad it stood at one above zero. That's what you get by living up in the air! Jack Frost went coasting that morning certainly. I was surprised to find such a difference in temperatures. This might occur on a still cold night, but it does not seem possible that windy weather could show anything like it. While the lighter sands in the valley can be worked in the Spring earlier than our heavy hillsides, Jack Frost attends to their case earlier in the Autumn and walks very slowly up the hills. We lose about 10 days in Spring and gain over two weeks in the Fall, and after some years at farming, I am convinced that the tail end of the season is freer from competition than the front end. The hills are good enough for us.

HOUSE CROPS.—The Madame's little brood is prospering this Winter. Our house is pretty well crowded, but the little folks find their way about. What a blessed thing it is for children to pass the early years of life on a farm! The boys had two little chests of tools at Christmas, and the objects they saw out and hammer together are certainly fearfully made. Grandmother teaches the little girls to sew, and with their school work their little hands and brains are kept busy. Life is reasonably "strenuous" for all hands at Hope Farm. Must be getting rich, eh? Well, hardly! There isn't much cash in our Winter's work, but we are starting one or two things which promise well. You can't take a farm and turn it into gold in a single year. It's a good thing you can't, or gold would become too common. Life in a farmhouse can be made dull and narrow enough, if one wills it so, yet great thoughts and true ideas of duty may flourish there, too. How should one try to live? I have had folks tell me that they worked and planned as though they expected to live forever, with no thought of death! Others say they live for to-day alone, with no thought for to-morrow. There you are!

NEAR TO NATURE.—Am I going on to give my views about that? I thank you—no! When I spoke of certain reflections made while sitting on that old stone wall, I stirred people up so that they haven't done coming at me yet. The following note was written by a Michigan man. I'll guarantee he has wandered off alone many a time to be refreshed and strengthened by the dumb sympathy of Nature. Just as our friend says, it is far better to have it out by yourself than to take it out of the family and make them all suffer—from the Madame down to the family cat:

"I take a lively interest in the Hope Farm man, and my sympathies have recently been enlisted in his behalf by the numerous criticisms, both just and unjust, which have been so lavishly bestowed upon him. I have sometimes felt in a critical mood myself, but just now I want to extend my hand in a brotherly grip, and that eternal stone wall is the foundation of this sympathetic demonstration. Now, I admire the man, who, when the clouds are hanging low (or had been, literally, in this particular case), can take himself off by himself and seek the solitude and comfort of Nature instead of laying the blame on his good wife, scolding the children, abusing the family horse or old cow, and raising Cain generally, as I imagine some of those pious critics have done at various forgotten times. I am aware that the Hope Farm man rather repudiates the idea that he had the blues, but the symptoms were certainly indicative of that affliction, and it is easy to find the cause of his ignorance.

"I suppose there is many a reader of THE R. N.-Y. who is having as hard or a harder struggle than H. W. C. Let me suggest the motto of a clerical friend: 'Do the best you can and then let 'er rip,' and if you do get the blues don't scatter them around the house or barn, but consign them to a stone wall, rail fence, or any old thing inanimate that is convenient, or write your troubles to THE R. N.-Y. and remember that 'Often for each other flows the sympathizing tear.'" S. D. P.

Amen! Amen! says the Hope Farm man. H. W. C.

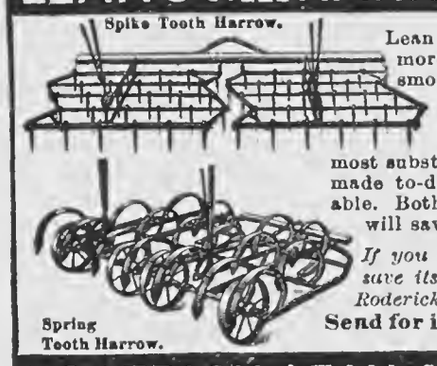
JUST THE WAGON.

for your farm, whether it be wet, sandy or side hill. Circulars free. It will cost nothing to investigate. May be just what you need. We sell metal wheels for old wagons.

FARMERS HANDY WAGON CO.,
Free Wagon for R0999. Saginaw, Mich.

WINCHESTER
"NEW RIVAL"
FACTORY LOADED SHOTGUN SHELLS
No black powder shells on the market compare with the "NEW RIVAL" in uniformity and strong shooting qualities. Sure fire and waterproof. Get the genuine.
WINCHESTER REPEATING ARMS CO., New Haven, Conn.

LEAN'S ALL STEEL HARROWS AND LAND ROLLERS.



Lean harrows make fat harvests. They do more work and do it more efficiently than any other harrow. They tear up the ground, smooth it for sowing, harrow in the seed, kill the weeds after the crop comes up. The teeth are adjusted to suit any condition of the soil. By a touch of a lever they are instantly cleared of trash without stopping the team. The most substantial and finest finished farm implements made to-day. Made entirely of steel, light and durable. Both the spiked tooth and spring tooth harrow will save enough in a year to pay for itself.

If you want a Land Roller that will save its price in a single season, get a Roderick Lean Steel Land Roller.

Send for illustrated catalogue to-day.

RODERICK LEAN MFG. CO. MANSFIELD, OHIO.

PERFECT CULTIVATION

—the kind that means perfect crops, presumes the use of some implement which will thoroughly break up the top soil crust, thoroughly uprooting every weed, and admitting the light, air, warmth and moisture.

KEYSTONE Adjustable Weeder & Shallow Cultivator will do it every time, for all crops and on all soils. Can be expanded to cover a sweep of 7½ feet, or narrowed down to 30 inches to be used between the rows. They are not like other weeders—**they are better.** Works where the straight frame weeder is incapacitated. No cumbersome shafts. Runs steady. Strong, springy, pliable teeth. Blunt points for tender, sensitive plants. Flat teeth with diamond points for heavy clay soils, if desired. **Booklet on Weeders mailed free.**

We also make 10 styles **Corn Planters,** 12 styles **Cultivators,** 20 styles **Corn Shellers**—hand and power, **Harrows, Field Rollers, Feed Cutters,** etc. Write for new **Catalogue C.**

Keystone Farm Machine Co., 1547 N. Beaver St., York, Pa.

Iron Age Implements produce early crops and large profits. The reputation of **Iron Age** tools has been built during sixty-five years of fair dealing, and *you run no risk* in buying any farm and garden implements stamped *Iron Age* — SEED DRILLS, WHEEL HOES, RIDING CULTIVATORS, POTATO PLANTERS, HORSE HOES AND CULTIVATORS, etc. Get the *free Iron Age Book for 1901*—a beauty—and read about all the

IRON AGE
FARM AND GARDEN IMPLEMENTS.

The cut shows one of our new tools — the IRON AGE COMBINED FERTILIZER DISTRIBUTER, HILL AND DRILL SEEDER. It distributes fertilizer and sows the seed in drills or drops in hills; also distributes fertilizer alone to growing crops. It is strong, simple and light running. The results of its use are shown in large and early crops. The fertilizer can be regulated and placed exactly where desired.

BATEMAN MFG. CO., Box 102, GRENLOCH, N. J.

Ruralisms

NOTES FROM THE RURAL GROUNDS.

SCALE KILLING.—How to control the Pernicious or San José scale has become an absorbing question in the minds of all fruit growers. It is realized that the pest is now widely distributed, and intrenched beyond all possibility of general dislodgment. The researches of the experiment stations have thrown much light on its life history, and a practical method of controlling its ravages seems to have been worked out in the use of petroleum. Just how to use this powerful agent, in view of conflicting reports of its action on living trees, is the vexed problem. J. H. E., Lewistown, Idaho, writes as follows:

In Rurallsms, December 29, it is stated that in early Mareh the trees now infeeted with the scale will be closely pruned and given two thorough sprayings with crude fresh petroleum, just as the buds show signs of starting. Now, for the benefit of some of your western readers, who are contemplating the use of crude petroleum for a like purpose, will you answer a few Inqulries in reference to the use of the petroleum? You mentlon using fresh erude petroleum. Does it lose in effieiency with age? Do you apply full strength, or as an emulsion? Is it applied warm or eold? If eold, is it not difficult to apply as a fine spray? What make of nozzle do you use? I observe in the same issue, page 873, in report of Ohlo State Hortieultural Soeiety, Prof. Webster, of the Ohlo Station, states in his report that "crude petroleum is indeed a dangerous weapon to use against it. It seems we have much to learn before we ean safely use it." I have read that when pure eoal oil is used for the same purpose, it should only be applied in clear weather. Might it not be the same in the use of the crude petroleum? If the sun were shlning the more volatlle parts would pass off more readily, and not penetrate so deeply lnto the bark.

SPREAD ALL OVER.—By "fresh" petroleum we mean the freshest we can get in the local hardware store, securing it, if possible, from a newly-received barrel or package. Two sprayings will be given in order to cover any areas left untreated by the first application. It has been demonstrated that petrolcum does not spread on the trunk or branches of a tree much beyond the area of its application, even during the hottest weather. A spot or strip of untreated surface, if sheltering live scales at the time of spraying, will continue to afford congenial lodgement and breeding conditions for the young, but the larvæ apparently find it impossible to effect a lodgement on the adjacent greasy area, and the treated portions have thus shown themselves to be immune to attacks of the scale until the end of the season, eight months at least. Untreated areas are easily seen a few hours after spraying, as the effect of the petroleum is to tinge the bark a blackish-brown, which persists until the storms of the succeeding Winter, when the color bleaches out to a rather light gray. A fair application of petroleum certainly kills every scale which it covers, and undoubtedly destroys many fungi, and insects other than the scale.

MAY KILL TREES.—It has killed many young trees also, and seems to be especially fatal when applied in midwinter to dormant trees. For this reason we prefer to spray in early April, just as the buds begin to swell, as the bark, being full of sap, is less easily penctrated by the light volatile oils contained in the crude or natural petroleum, and the activity of growth at that period quickly repairs any moderate injury to the living cells of the cambium, which might perish if exposed for months to the cold, dessicating winds of Winter. For the few trees treated on the Rural Grounds an ordinary greenhouse spraying bellows has proven efficient. The coming season we shall usc a Leggett churn sprayer, the nozzle of which is a modification of the Vermorel.

WHEN TO SPRAY.—Petroleum at temperatures above 50 degrees is very easy to spray from any nozzle, but it thickens and becomes difficult to handle at low temperatures. We would choose a bright "drying" day when possible, so that evaporation of the volatile constituents may be as rapid as possible. The actual destruction of the scales probably takes place very quickly, and the sooner the volatile oils are dissipated the less injury to the tree. Crude pctroleum, as pumped from the wells and marketed, is of uncertain and varying composition; the product from one district differing from another. When kept for a long time it becomes dark and heavy from the escape of the benzine, gasoline and kerosene oils and the concentrated vaseline, paraffin and heavy oils remaining are too greasy and choking in their effect for safe application to living trees. It is likely that experiments will be made to determine the safest and most effective combination, and it is possible that the petroleum insecticide of the future will be built up to a definite standard by synthesis, or putting the ingredients together. Our applications are made in full strength. There is always an element of uncertainty in an emulsion. It is troublesome to make, and very unstable, unless used immediately.

CANNAS AND PENNISETUM.—Fig. 38, from a cut kindly loaned by the Florists' Review, Chicago, Ill., shows a delightful bedding effect produced by two easily-grown plants. Cannas have now become so cheap that a dozen roots or plants may be procured for a trifle, and bedded out as soon as the soil becomes warm in a rich compost. The Pennisetum is sold under the name of Purple Fountain grass, P. Ruppelianum, and enough seeds can be had in a 10-cent packet to plant quite a border. They should be sown indoors about March 1, and the little plants transplanted two inches apart in shallow boxes of light soil and kept rather moist. They are quite hardy, and may be set out before it is safe to plant the Cannas. Place the Cannas 18 to 20 inches apart through the center of the beds, and the Fountain grass not over 10 inches apart around the border. The combination of silvery purple of the grass plumes with the dark green foliage and glowing red and yellow blooms of the Cannas is very pleasing. Purple or dark foliaged Cannas should not be used in this combination.

PLANTING GLADIOLI.—Village Smith, of Ohio, asks the following questions:

Do you know of anyone using a hand drill for planting Gladiolus bulblets? If so, what make was it? I have tried the Planet Jr., but it does not plant them thick enough; that is, the largest bulblets; it might work on the very small size, as they ean be sized by running through different sereens; a good hand drill would be a great labor saver if it would do the work properly, where one has about 300,000 bulblets to plant. How deep, how thick, how far apart the rows? How do you plant your bulblets?

We have never seen a drill used in planting the bulblets or cormels of Gladioli. They are assorted in two or three sizes by sieves, and scattered in a broad furrow, at least four inches wide at bottom, by hand. They may be sown at the rate of 50 to 100 per foot of furrow, and covered with three or four inches of mellow soil. This seems very thick planting, but experience has shown they grow much better than if strung out to greater length of row. It is well to plant only in freshly-made furrows, as the dry little cormels need all the moisture they can get to soften the hard shells. We plant in rows three feet apart, and cultivate entirely with a wheel hoe, but a small-toothed horse cultivator may be used to advantage.

W. V. F.

A NEW STRAWBERRY.—Among the new candidates for favor among strawberry seedlings is "Marie," which we understand is being offered by W. N. Scarff, of Ohio. Mr. Scarff tells us that Marie is one of a lot of seedlings grown in 1892 from seed of Crescent fertilized with Cumberland. Mr. Searff thinks that if you can get a berry that will give the yield of Crescent, with as large and fine fruit as Cumberland, you will reach near to the ideal in the coming strawberry. He gives the following description of this new berry, and we show at Flg. 39, page 103, a quart of the fruit as actually packed ready for shipment. We have not yet tested the variety. "Marie was grown from seed of Creseent fertilized with Cumberland in 1892. As a seedling it showed great promise. We planted for field eulture as soon as sufficient number of plants was obtained, and as yet have failed to deteet any weak points in either fruit or plant of this grand variety. The plants are good growers, making plenty of runners for a good crop and show no signs of disease. The blossom is imperfeet; season same as Bubaeh and Haverland. Equally as large as Bubach, Glen Mary or Brandywine, and yielding with any variety in our 40-acre fruit plantation; besides, it is the most attractive in appearance when picked and ready for market of any in our entire collection. The berries are round as a ball, dark crimson in eolor; flesh dark and quality first-class, holding up in size to the very last pickings."

THE experiment started a year ago by the Rhode Island Experiment Station to determine the result of individual selection of strawberry plants will be watched with considerable interest. Such a thing is very properly station work, for the market grower would find it a matter of much care, particularly with the method of matted row culture. J. W. B.

Everblooming Hardy Roses.

I grow them. Don't bother with little mail-size plants. Get strong three-year old field-grown BUSHES—vigorous and hardy! I have them. Try this half dozen—all perpetual bloomers: Mrs. John Laing, soft pink; Anna Diesbach, bright rose; Coquette des Alpes, finest white; Gen. Jacqueminot, crimson scarlet; Baron Bonstettin, dark velvet; Paul Neyron, largest and finest of all. Too heavy to go by mail. Big, strong bushes that will bloom profusely the first season. By express, prepaid, $2. Order to-day.

J. A. CALLISON, Rose Grower,
Grand View Station, Des Moines, Ia.

The Lincoln Pear

"The best pear we ever tasted" is what every one says about the Lincoln. Annual bearer, very hardy. Fruit large, solid, golden yellow, juicy and aromatic. Season, August and September. Very prolific. Handsome catalogue, free. Agents wanted. Introduced and sold under copyrighted label exclusively by

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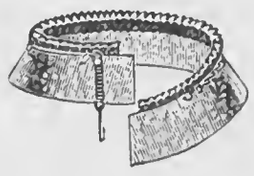

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Did you ever see 7 straight or circular rows of Pansies or Sweet Peas side by side, each a different color! If so, you know that the effect is charming. Did you ever see Childs' Giant Pansies and Sweet Peas, marvels in beauty and true to color? If not, you have not seen the best.

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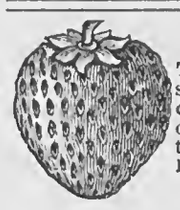

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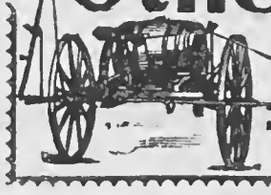

have increased 25 to 50 per cent. when they began to spray *the right way*—with the right sprayer, the PEPPLER AND CLIMAX SIX-ROW SPRAYERS. They will do as much for you. Read how they spray 30 acres a day, how they save ⅓ the poison, increase crops one-half, pay for themselves in one season. Catalogue contains spray calendar, formulas, etc. Sent free. I also manufacture the improved Riggs Plow and Riggs Furrowers.

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harvest. That's what you want. Careful seeding is the first step toward it. The best seeder is the popular

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It is best because it saves one-third the seed and four-fifths the labor of hand sowing; because it distributes the seed evenly; because anyone can use it and lasts a lifetime. Ask your dealer for it.

Goodell Co., 14 Main St., Antrim, N. H.

Live Stock and Dairy

THE BREEDERS' WAYSIDE.

What Breed Shall I Use?

A subscriber of THE R. N.-Y. up at Buchanan, Mich., simply fires a volley of questions at "some of the stock growers and breeders of cattle," o be answered through this paper. The undersigned will answer this letter in part now, and the rest later, and trusts that "some of the stock growers and breeders of cattle" will also answer the question brought out. A. R. H. says he has an ordinary farm herd, and would like to get a young bull to breed from, *so as to raise steers for beef*, that will bring top prices, *and to raise cows that can be sold for good milkers.* He wishes good-sized, quiet, gentle cattle, and prefers a mulley or hornless breed. Then he says: "How do the Short-horns compare with the Holsteins in milking qualities, and how do Holsteins compare with Short-horns in size and as beefers? Is there any strain of either of these that are mulleys? How do the Red Polled cattle compare with those mentioned?" Then he further says he would like to know what the good and bad qualities are of the different breeds that might suit his purpose, and how he could get a young bull without pay an exorbitant price, such as some breeders ask.

There are some things in a recent number of THE R. N.-Y. on improving a herd, that I should like to have our friend read over, for it has an application in this case. The breed question is not nearly so complicated as we are likely to think. One may be mighty sure of one thing, and that is, when a breed becomes abundant and common, it certainly possesses merits justifying its adoption, under favorable conditions. Consequently, the man who wishes to establish a type as shown in a breed, should do two things. First, he should read up on the merits and demerits of the several breeds of the general character he desires. Second, it will be time and money well spent to find out who breeds within reasonable distance from his home and go to see their stock and get such information as may be possible at these places. There are creditable herds of the different prominent breeds in nearly every State in the Union east of Nebraska and north of the Ohio River. As this farm herd is in Michigan, the chances are that it represents more Short-horn blood therein than anything else. There are strains of Short-horns, that come from milking stock, and there are purebred mulley Short-horns, and also Polled Durhams which are practically Short-horns. Logically, if his herd is largely of grade Short-horn blood, then the use of mulley purebred Shorthorn or Polled Durham bulls would be the proper thing. One thus might plan on good steers from such stock, assuming the bull used to be a good one. No other beef breed has more strength in milking, than has the Short-horn.

If a comparison is made with Holstein-Friesians, we find what is undoubtedly the heaviest milking breed in the world. The world's milk record is held by a Holstein, and there are many cows on record, of this breed, that produce 12,000 or more pounds of milk a year. However, this is not a breed that I should recommend for beef production compared with most of the other prominent breeds. The Holstein's great virtue lies in its milking capacity, and Holstein steers will not usually sell on the market for the highest prices, neither will they produce as high a grade of meat as the best market demands. None of the strictly dairy breeds will. They will not kill out as profitably to the buyer as the thicker-fleshed sorts, and that is why they bring the lower grade price. Holsteins weigh heavy enough, but they carry more offal than does the closer-bodied beef type .Holstein grade milkers, however, with first-class udders, should sell very well on the market near large towns, or in a creamery district, where milk is in strong demand. But if one is to take into account the combined values of steers and milking cows, I favor the Short-horn over the Holstein grades, as the more profitable of the two, for good grade Short-horn cows should be equally salable with Holstein cows, with the further advantage lying with the Short-horn steer.

The Red Polled breed is not extensively bred by farmers in America. Its merits, however, are great. It represents a general-purpose sort, for many Red Polled cows are very superior producers of high-class milk. The promoters of this breed have long advocated it for an all-'round type, to produce plenty of milk and make high-class beef. In the show ring, in dairy tests, and in the stable Red Polls have made excellent records. They lack the weight of Short-horns, and milk much the same in quantity as the better class of these, and in beef have ranked high. Steers from a Red Polled sire of size and quality, and good grade cows, should feed and sell well, while females from such mating, if well uddered, should be in good demand. The Red Poll grade steer, however, will probably not feed as fast or profitably as the more highly-developed Short-horn type, but the average Red Poll cow will be a better milker than the other. If I were to compare these three in relative order of merit, in profitable production, taking average specimens of each breed in high grade form, for beef, I should class them as first, Short-horn, second Red Poll, third Holstein; for milk, first Holstein, second Red Poll, third Short-horn. I have tried to make a fair statement relative to each breed. Each has its merits. No one is perfect. Local circumstances should influence one in what is used for grading up the herd. In any event, however, buy a first-class bull, of pure blood. First find the sort of animal you want, and then talk price. There are different opinions as to what is an exorbitant price. Yet that is not to be measured by one season of service. The get of a bull may be kept in the herd and affect the entire development up or down for years to come. That being so, one can hardly afford to let a comparatively small sum of money stand in the way of purchasing what is apparently the right sort of an animal. There is something more at stake than making a fresh cow, as some men figure. It is the uplifting or letting down of the character of our American herds, which, of course, means more profit or less profit, more credit in our possessions or less credit. Now, "what breed shall I use?" Every man must work out his own salvation on that question. But, if he is a keen student of animal life, and is capable of bringing out the best there is in his herd, and is with all sincerely interested in his work, he will probably succeed, no matter what herd he decides on. But if he lacks these then no breed will bring him success.

C. S PLUMB.

When to Ring a Bull.

I have noticed several articles at different times in THE R. N.-Y. on dishorning young calves with caustic. I have dishorned two calves successfully that way, and I expect to try it again next Spring on a bull calf. I wish to learn whether there would be any harm at that time in putting a ring in his nose? It seems as though it would be much easier than to wait a year, as many people do. C. L. B.

Saratoga Co., N. Y.

The placing of a ring in the nose of a young bull is often delayed until he reaches a size and disposition that require severe measures for control. Personally, I prefer to delay ringing a calf because the ring is no ornament, and it may be used before necessary, and unintentionally cause pain that may irritate and injure the disposition. Our bulls, as a rule, have rings placed in the nose at about 10 or 12 months of age. The nervous disposition of a dairy bull would perhaps require control measures quicker than the beef type. However, if one wished to there could be no special injury other than I have indicated, no matter what the age, although for looks' sake if for no other, don't hurry putting in the iron.

C. S. PLUMB.

Not one half the patients supposed to be suffering from Consumption really have that distressing disease—though ofttimes the symptoms from which they are suffering lead to it. Nearly every case of this kind Dr. D. Jayne's Expectorant would cure.—*Adv.*

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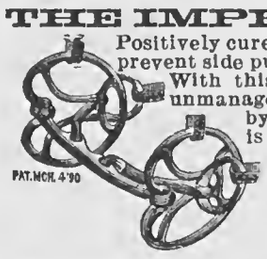
A Safe Speedy and Positive Cure

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. *Impossible to produce scar or blemish.*

Every bottle sold is warranted to give satisfaction Price **$1.50** per bottle. Sold by druggists, or sent by express, **charges paid**, with full directions for its use. Send for descriptive circulars.

THE LAWRENCE-WILLIAMS CO., Cleveland O.

THE IMPERIAL BIT



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Double Power V-BLADE cuts all round horn.

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C. H. DANA, 74 Main St., West Lebanon, N. H.

STOCK FEEDERS

listen to this and think before buying a feed grinder. There are thousands of **Peerless Mills** now in use. Grind ear corn and all grains fine or coarse. Make family meal or feed. We **WANT AGENTS EVERYWHERE.** Circulars, prices, &c., free.

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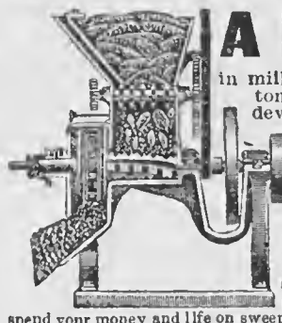
A Big Gain



in milk, butter, beef, pork, mutton and general growth and development is the sure result of feeding ground feed.

KELLY Duplex Grinding MILL

It crushes and grinds ear corn shucks and all. Grinds all other grains single or mixed. Don't spend your money and life on sweep grinders. Hire an Engine, if you don't own one and get something done. Catalogue free.

THE O. S. KELLY MFG. CO., Dept. M, Iowa City, Iowa.

THIS **BUCKEYE NO. 20** Triple Geared Mill

Fills exactly the needs of the feeder who wants medium coarse chop, and lots of it.

It is a strong, durable mill which crushes and grinds corn in any condition—large capacity and easy to operate. Two horses handle it with perfect ease grinding as much as 20 bu. per hour. We make a set of fine burs for this mill for grinding fine feed from shelled corn and mixed grains. While this mill is in no sense cheap, it is low in price. Don't buy a grinder of any kind until you send for circulars of this one and free catalogue S. We fully guarantee it.

Staver Carriage Co., 76th and Wallace Sts., Chicago.

Breeders' Directory.

Fowls of W. & Bd. Rock, W. & Bn. Leg., W. Wyan. vars., Eggs $1 & 1.50 26. Stamps. Mrs. J. P. Hellings, Dover, Del.

Blanchard's White Leghorns.—The leading strain of heavy layers. Cockerels for sale. Eggs for hatching. Ill. cir. free. H. J. Blanchard, Groton, N.Y

240 PURE BRED B. P. Rocks, Heavy-wt. prize-winning stock. Fine ck'ls $2 and up. Eggs for hatching. Write HOPKINS BROS., Bellaire, Ohio.

WYANDOTTES, Silver, White Partridge. Winners at Hagerstown, Philadelphia, New York and Chicago. Line bred for large egg production. Handsome Egg Record free. BEAVER HILL FARM, Beaver, Pa.

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Muddy Creek Herd of Hereford Cattle.—100 head of bulls, cows and heifers for sale. Write for price Come and see me. S. W. Anderson, Asbury, W. Va.

2 Granddaughters of Exile of St. Lambert, sire of 96 tested cows. Solid color. Dropped July 26 and Nov. 17, 1900. J. A. Herr, R. F. D. No. 4, Lancaster, Pa

FOR SALE—THOROUGHBRED HOLSTEIN BULL CALVES. Well marked and of best breeding. Will be sold at farmers' price. Write at once. W. W. CHENEY, Manlius, N. Y.

CHENANGO VALLEY STOCK FARMS, Greene N. Y.—Dutch Belted and Jersey Cattle; Dorset and Rambouillet Sheep; Poland-China, Jersey Red and Suffolk Pigs. Land and Water Fowls. Hens' Eggs, 60c. per dozen: 10 kinds; standard bred.

Do You Want a Holstein-Friesian Bull Calf? a Chester White Pig either sex, pair or trio? If you do, and want the best breeding at a fair price, write to-day to CHAS. K. RECORD, Peterboro, N.Y

HIGH-CLASS

Registered Jersey Cattle.

ROBT. F. SHANNON, Pittsburg, Pa.

150 DeHhurst Holsteins

for sale, including young Cows, Heifers and a great lot of BULL CALVES—several now ready for service—sons of "DeKol's Butter Boy", and the famous "Royal Paul" out of advanced Registry cows. Catalogue.

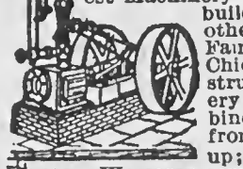
DELLHURST FARM, Mentor, Ohio.

SHROPSHIRE EWES

in lamb to imported Rams. Also a choice bunch of Ewe lambs. J. C. DUNCAN, Lewiston, N. Y.

TAMWORTH PIGS for sale. By a grandson of the imported boar Nimrod. Eligible to registration. 5 to 6 weeks old at $5 each. Write at once.

D. WELL. DIETRICH, Reading, Pa.



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HAMILTON & CO., Rosenvick, Chester Co., Pa.

FOXHOUNDS—Trained on Fox, Wolf & Coon. Pedigreed stock. Box 13, Vincennes, Ia.

Newton's Improved **COW TIE** Holds them firmly, draws them forward when lying down, pushes back when standing, gives freedom of head, keeps them clean

E. C. NEWTON CO. Batavia, Ill. Catalogue Free

WELL DRILLING Machines

Over 70 sizes and styles, for drilling either deep or shallow wells in any kind of soil or rock. Mounted on wheels or on sills. With engines or horse powers. Strong, simple and durable. Any mechanic can operate them easily. Send for catalog.

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and **SUPPLIES** at Bargain Prices. Largest Machinery Depot on earth. We buy buildings and plants; among others we bought the World's Fair, the Omaha Exposition, the Chicago Post Office, and other structures. We rebuild machinery of all kinds, and sell with binding guarantees. Boilers from $25 up; Engines from $35 up; Steam Pumps from $15 up, etc. We carry complete stock of General Supplies, such as **BELTING, SHAFTING, HANGERS, PULLEYS, IRON PIPE, IRON ROOFING, HARDWARE, VALVES & FITTINGS, PLUMBING MATERIAL, etc.** Will send free, our 250-page Catalog No. 57

Constantly buying entire stocks at Sheriffs' and Receivers' sales.

Chicago House Wrecking Co., W. 35th & Iron Sts., Chicago, Ill.

SOLUBLE LIVE STOCK SCIENCE.

What is Protein and Carbohydrate?

As regards food for cows, what is meant by "protein?" I look in the Standard Dictionary and, after getting the meaning of the word, I am as ignorant as ever. I assume it means the quality of food that will produce the most milk. Am I correct? Also carbohydrates; if a man is versed in chemistry these words may appear familiar, but I submit, if the average reader of your paper is supposed to know their meaning. I am not an ignorant person, and what farming I do is more for pleasure than profit, but take the average farmer who has never known anything but farming, and simply knows how to read and write; is he supposed to know the meaning of such words? Would it not be well to supply the meaning of such words as you publish an article, so we can read intelligently? READER.

The chemist and the cow find four groups or classes of substances in grains and fodders. Take, for example, a pound of wheat bran. Burn this bran so that every part of it that is combustible is burned up. There will be left about one ounce of ash, which represents the minerals. Now if we burn an animal weighing 500 pounds so completely that nothing is left that will burn or evaporate, we shall have about 40 pounds of ash, chiefly from the bones. The bones in the animal system can be built or renewed only by these ash elements in the food. The other parts of the food are of no value in bone-building. Young animals with growing frames require more of the ash elements than older ones. A failure to supply the ash elements in the food results in disease. Young stock fail to grow and thrive. Cows deprived of the necessary elements develop abnormal tastes. They will chew bones when they find them, drink filthy water, or eat disgusting food, or gnaw fences or other boards.

THE PROTEIN.—The muscles and tissues of the animal contain nitrogen, and in order to build new tissue, and to restore the wastes caused by work, food containing nitrogen must be supplied. The chemist, in picking apart a pound of bran, will find a class of substances containing nitrogen. There will be something over two ounces in the pound of these different substances, all of which are grouped under the name of protein or proteids. A simple name for this group of substances would be muscle-makers, since they are used for the production chiefly of muscular tissue. Unless this protein is present in the food, in proper quantities, the animal suffers, for it cannot replace the waste of muscular tissue, and in the case of the growing animal it cannot make new growth of fiber. In the case of the cow an extra quantity of protein is necessary, because the milk contains about as much of the protein as it does of butter fat, and unless this is supplied in excess of the demand made by the cow's system, she cannot give a large quantity of milk. The protein cannot be used to make bone. The ash elements alone can do that, but it is absolutely necessary for growth, for work, or the production of milk.

CARBOHYDRATES.—Continuing his investigations the chemist would find in a pound of bran nearly seven ounces of various substances like starch or sugar, which do not contain nitrogen. They differ from the protein chiefly in this respect. These substances are grouped together under the name of carbohydrates. A simpler name for them is fat-formers, because the formation of fat in the body is one of their chief uses. These carbohydrates are not used in making the bones or in making muscular tissue. From them the fat in the body may be produced, and they also serve as fuel. We all understand that in the living body there is constantly going on a combustion not unlike that which takes place with much greater fierceness in the stove which supplies our houses with heat. This combustion of the carbohydrates keeps up the animal heat, and really supplies "living steam" for the body. If the carbohydrates are not present in sufficient quantity the animal loses flesh, and lives for a while on the fat previously stored up in the body; there being little fuel in the food, the animal fires run down, and, of course, the animal suffers.

PURE FAT.—Chemists will also find nearly half an ounce of what is known as pure fat or oil in the pound of bran. This differs from the carbohydrates in the fact that it is a clear, pure fat, while the carbohydrates are the materials from which such fat is made in the body. All foods therefore contain these four distinct principles, each having its special purpose in the animal economy. The ash elements must be present or the bones will suffer, especially in the young and growing animals. The protein must be present, or the animal cannot maintain its strength. It will lose its vigor, and the cow, in particular, cannot give a large yield of milk. The food must contain carbohydrates in order to supply the necessary fat on the body, and provide fuel for the animal heat. The pure fat is not so absolutely necessary as are the other elements, yet a fair proportion of this fat should be present in every ration.

WHAT OF IT?—The ordinary farmer may ask: "Of what value to me is all this?" It can be made of great value to any man who feeds a single animal. After much experiment and study, the scientific men have decided that the proper ration for a cow giving milk should be divided so as to contain for each day's feeding about 2½ pounds of the protein, 12 pounds of the carbohydrates, and half a pound pure fat. The science of feeding consists in mixing our grains and fodder in such a way that this proportion of these elements will hold good. For example, a man not knowing anything about this matter might feed his stock largely on corn, corn fodder and Timothy hay. In order to obtain the necessary protein, to produce milk, muscle and growth, he would have to feed extra quantities of this ration, while by substituting wheat bran or linseed meal for a part of the corn, he could feed less of the hay, and save money by doing so. He would learn by studying the analyses of foods that his mixture of corn fodder and hay might answer well for fattening steers, but was not economical for feeding dairy cows. The chemist has picked apart all the well-known feeds and fodders, and with tables showing their analyses it is possible to put them together so as to give the proper balance of protein and carbohydrates in an economical way. For example, the following table shows the analyses of a few leading articles of cow feed:

	Pounds in 100. Muscle makers.	Fat formers.	Pure fat.	Ash.
Wheat bran	12	40	3	5
Corn	8½	60	4¾	1½
Oats	9	44	4¾	2¾
Mixed hay	3½	43	1	4¾
Clover	7¾	40	1½	6
Silage	1 1-5	12	½	1
Skim-milk	3½	5	¾	¾

These figures represent the digestible substances—that is, the proportion of them which a healthy animal may be expected to utilize. Making a "balanced ration" is not a mere matter of arithmetic, however. Wheat bran, linseed meal and silage have a laxative effect on the system, while cornmeal, clover hay, buckwheat and other foods have the opposite effect. It will be noticed that wheat bran and clover are very rich in ash elements. That is one reason why they are excellent for young animals.

Lice on Cattle.

What remedies may be used safely to relieve cattle infested with lice? SUBSCRIBER.

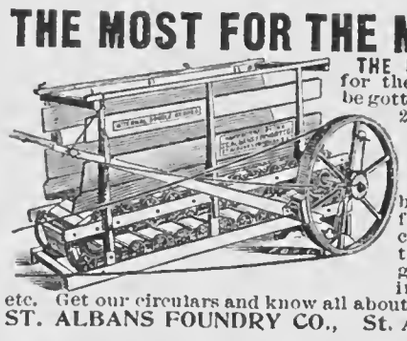
Rub the regions infested with the lice (most commonly the neck and shoulders) with one part kerosene well shaken up in about eight parts of sweet oil or cotton-seed oil. Repeat the application in a week or 10 days. Two or three applications, if thorough, ought to rid the cattle of most of their lice. The stable should be cleaned and scrubbed with kerosene and water, or whitewashed. During warm weather it would be easier and equally effective to use one part kerosene to eight parts water, or one part kerosene emulsion dissolved in eight parts water, and sponge the animals all over thoroughly.

Garlic Taste in Milk.

On page 92 reference is made to a powder which is to be fed in the cow's grain to prevent bad taste and odors in milk. Is it possible that these odors can be prevented in this way? READER.

We can see no reasonable grounds for the claim made, that a substance fed to cows would have any effect upon destroying the garlicky odor of milk. The flavors of foods, as a rule, are due to essential oils, and organic acids, which when taken into the stomach are absorbed by the system, and penetrate to every part of it. Hence the addition of any substance would not expel this completely, at any rate after the food was in the stomach. It might serve in part to carry off the gases, but that would not affect their complete removal.

THE MOST FOR THE MONEY.



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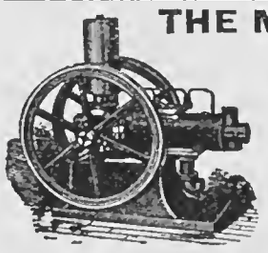

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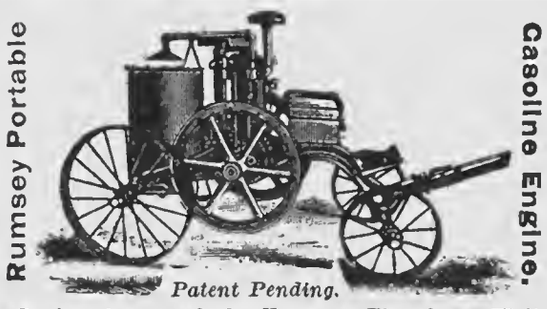

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The Improved United States Separator

Continues to Excel the DeLaval in Wisconsin the Same as it Does in the Other States.

NORTH FREEDOM, WIS., Jan. 21st, 1901.

A few weeks ago I decided to purchase a cream separator for use upon my farm. I had heard both the United States and the DeLaval machines highly recommended, so I decided to try both before buying. * * *

Friday, Jan. 18th, all hands were present, the DeLaval Local Agents and also the State Agent, while the U. S. man was alone and a stranger in the crowd.

The DeLaval Agents had laid considerable stress upon the fact that their machine could do much better work than the U. S., and especially when skimming cold milk at a temperature of 68 degrees, or when running at low speed; so we decided to test the machines on these points, as well as on milk at normal temperature. The following is the result of these tests:

Test No. 1. Normal Temperature. Regular Speed.

Separator,	Actual capacity.	Speed.	Temperature.	Cream Test.	Skimmilk Test.
U. S. No. 5	450 lbs.	50	80°	36%	.025
Alpha No. 2	405 lbs.	45	85°	27%	.04

Test No. 2. Normal Temperature. Low Speed.

U. S. No. 5	450 lbs.	42	88°	36%	.04
Alpha No. 2	405 lbs.	38	86°	27%	.05

Test No. 3. Cold Milk. Regular Speed.

U. S. No. 5	450 lbs.	50	68°	30%	.05
Alpha No. 2	405 lbs.	45	78°	22½%	.05

The machines used were both $125.00 machines, therefore the results speak for themselves. The U. S., with all the conditions against it, running a much larger capacity and a much heavier cream, and in the first test with the milk 5° colder than the Baby, proved superior in every test.

A great victory for the U. S., especially so as the test was run according to the wishes of the DeLaval representative. J. T. DONAGHEY.

Prospective buyers can draw but one conclusion from the above, namely:

THE BEST SEPARATOR ON THE MARKET IN EVERY SENSE OF THE WORD IS

The Improved United States Cream Separator

VERMONT FARM MACHINE CO., BELLOWS FALLS, VT.

The Chicken Yard.

THE VALUE OF GAME POULTRY.

We find the classes devoted to Game birds well filled at most exhibitions. For what purpose are these birds used? Are they valuable enough for eggs and meat to suit the needs of the farmer?

Indian Games are business birds. All surplus males are easily sold to market poultry raisers to increase both the quality and size of the chicks. An Indian Game male crossed with a flock of common hens will increase the size of chick easily one pound each, and besides, the appearance is very much better with the bright yellow skin and full, plump breast. The fighting Games I do not know much about. I have bred a small pen of Pit Games for the last three years, but do not find much demand for them; occasionally sell a male bird, but very few for fighting, although I seldom know what is done with them after they leave here. D. A. MOUNT.

New Jersey.

I can only answer regarding the standard Game, the pit bird I have never bred, and know nothing about. In the first place the Game as a table fowl is second to none; secondly, there is not a breed of fowls to-day of the sitting varieties that is superior to them as layers; thirdly, there is no variety of fowl known that is more hardy, and a better fowl to raise where they can have unlimited range; they are equally as good where confined in limited quarters. They are the most aristocratic in bearing and appearance of any fowl known; I can compare them with other fowls only by saying they have the same bearing toward other breeds that the finest American-bred trotter has as compared with the clumsy, cold-blooded Percheron horse with his sluggish nature. They are the finest-colored in plumage of any breed we have. This is my opinion of the standard Game, after having bred them and many other varieties of fowls for a number of years. I have nothing in my yard now but the standard Games, and have two different varieties, the B. B. Red and Red Pile. We all know that the Game is the oldest known domestic fowl in existence to-day. W. L. RACE.

Waterville, N. Y.

To Destroy Head Lice.

I have a flock of 150 pullets that are troubled with head lice, though not badly infested. The lice seem to be of a smaller variety than those that are found on little chicks. The flock is in good condition, and laying fairly well for the season. Can the lice be exterminated, and how? H. P. G.

Stratham, N. H.

Anoint their heads with equal parts of coal oil and lard, or coal oil may be used alone if carefully applied. It is instant death to all lice that come in contact with it, but if used too freely it will blister the fowls. Sulphur, tobacco dust, or any kind of very fine dust, will help rid fowls of the pests, but not so quickly and surely as will coal oil. J. E. S.

Care of an Incubator.

Will F. E. W. tell us whether she finds a ventilated cellar the best location for an incubator? How about turning and cooling eggs in such a damp, cold place? How long may chicks be safely left in the machine after hatching? E. A. C.

Cleveland, O.

Most incubators in the early part of the season can be run best in a room on the first or second floor, convenient to the operator. The changes of temperature at this time are not very great, and the fresh, sweet air of a sunny room is good for the young birds. Later on, when we have cool nights, hot, dry middays, a clean, ventilated cellar is best, as the changes in temperature are much less. It does not injure eggs to turn them in a cold room if the incubator is kept warm to receive them (as a hen would be on returning to her nest). The length of cooling must depend on the thermometer, which should not fall below 80 degrees. The hatch should be over for chicks on the twenty-first day. The trays may then be taken out and cleaned up. The chicks should be left in the machine till the close of the twenty-third day, the temperature being same as during early part of hatch. They are not to be fed or watered till placed in the brooder. F. E. W.

Wanted! More Pullets.

I am raising poultry for eggs, mostly Leghorns. Last Spring I raised 400, of which 300 were cockerels. Can you advise me how to hatch out more pullets? I use an incubator and feed chickens corn, bran, beef and bone, also green feed. R. S.

Long Island.

I think if you will increase the number of cocks in your breeding flock that Nature will maintain the equilibrium by furnishing the hatches with more pullets. It is claimed by some of the old-country poultrymen that eggs which show only an infinitesimal air space will produce cockerels; if tested out, the cockerels hatched will be very largely in the minority and the pullets greatly in excess. W.

Another Crowing Hen.

I have a short chapter to add to the history of the crowing hen. We have one, of some seven Summers, that is a cracker-jack. She is white in color, of mixed blood, and is kept both for pleasure and profit, and I am certain she lays more eggs in a year than any one of her relatives or descendants. She was two or three years old when we first noticed her propensity for crowing. We had no rooster at the time, and I suppose she felt called upon to supply the deficiency, being then the oldest member of the family, because of her honorable record as a layer and sitter. She then had spurs about an inch in length, they are now two inches long. I think her eggs are fertile, as we have had several hens since she commenced her career, who have been crowers, presumably her offspring. Her usual method of business is first to cackle, then lay an egg, cackle some more, and finish by flying on to the fence flapping her wings and crowing. Another eccentricity of this biddy is a habit of moulting in midwinter in a very independent way all by herself, and very thoroughly, shockingly so. S. D. P.

Greenville, Mich.

WEIGHT AND MEASURE IN FEEDING.

In institute work, in advising the use of coarse wheat bran in place of other wheat feeds, and the use of gluten feeds and meals in place of cornmeal or hominy chop, we always run against the farmer who says he can get more milk out of middlings and the bran that is full of flour rather than coarse bran. "Analysis doesn't trouble him! He is after results," and the same man can get twice as much milk out of cornmeal as wheat bran. When we question this farmer we almost unvariably find that he doesn't weigh his milk; he guesses at results. He also does an equal amount of guessing in his feeding. Ask him how many pounds of the different grains he feeds his cow, and he is equally up the stump. We find that he feeds by measure rather than by weight, and the large majority of farmers are just like him. They use a two or four-quart measure or basin when feeding, and when using different feeds they always compare measure, not weight. We have prepared a table to show such men that they ought to compare feeds by weight rather than by measure, as grains and feeds are all sold by weight. This table is an eye-opener to the man who has never given the matter any thought. We give some of it here:

Weight, one quart each.	lbs.
Coarse wheat bran	0.5
Coarse wheat middlings	0.8
Fine wheat middlings	1.1
Wheat, mixed feed	0.6
Gluten feed	1.2
Gluten meal	1.7
Cotton-seed meal	1.5
Corn meal	1.5
Linseed meal	1.1

When we examine the table we find why the farmer who feeds by measure gets such good results from fine floury middlings, and says coarse bran is no good. The farmer who feeds his cows four quarts of middlings twice a day is giving them nearly nine pounds of grain as compared with four pounds of coarse bran. If he adds to this two quarts of cornmeal each time he also gives them six pounds more of grain, while if he fed four quarts of gluten feed he would feed less than five pounds. The man who in picking up a sample of bran looks for lots of flour doesn't realize that he is buying starchy material that he can or does raise largely on his own farm.

Eight quarts of middlings and four quarts of cornmeal will weigh 14.8 pounds, and will furnish 1.5 pounds of digestible protein. Eight quarts of coarse bran and four quarts of gluten feed will weigh only 8.8 pounds, but will also furnish 1.5 pound digestible protein. The middlings and meal will cost about 15 cents, while the bran and gluten feed will only cost 8½ cents. We find lots of farmers feeding cornmeal, which is low in digestible protein, but is heavy. They cannot give a sensible reason why they feed it, only they always have. They don't know what it costs to produce a quart of milk, and often I am afraid they would rather not know. If they would study cost of milk, then study feeds and their digestible protein analysis, then feed using weight rather than measure as a basis, there might not be so much kicking against farming. H. G. MANCHESTER.

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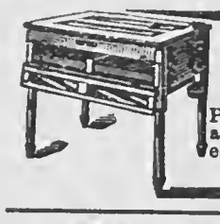

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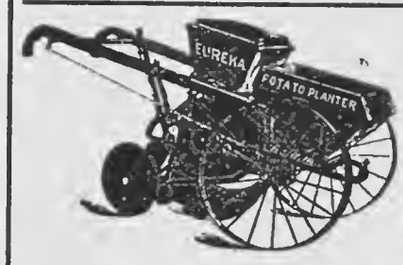

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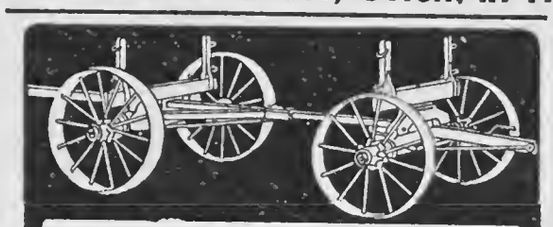

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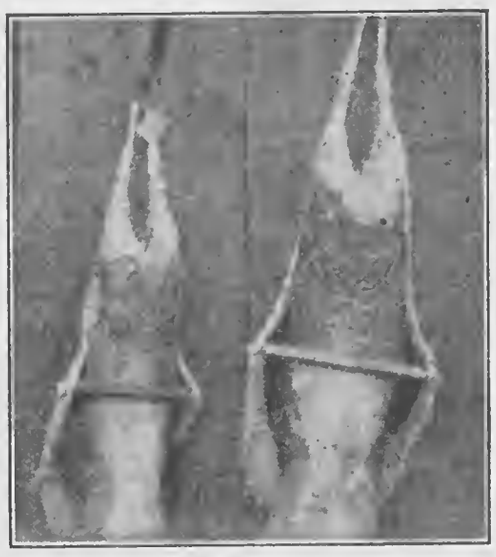
THE TUNIS BREED OF SHEEP.

Compared With the Dorsets.

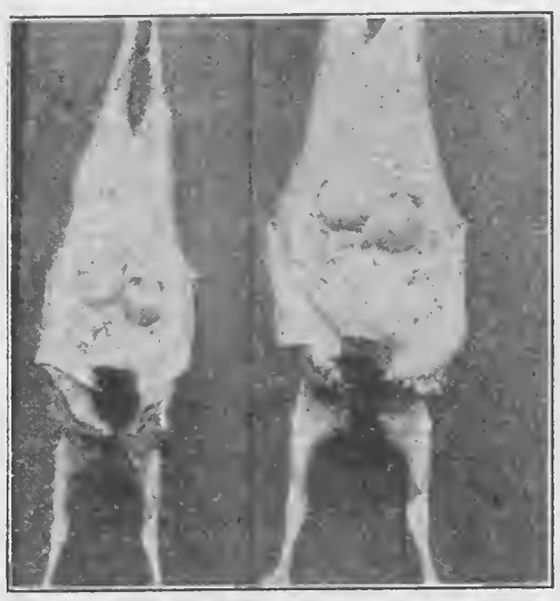
On page 78 Clark Allis, of Medina, N. Y., had a short note about his experience with Tunis sheep. On January 24 I went out to Mr. Allis's farm to see these sheep and their lambs. To one who has never seen a "lambery" the business of producing these woolly babies is very interesting. I am not going to try to tell how the business is done, for every visit I make to an expert in any line makes the fact clearer that high-grade success cannot be passed from one man to another on paper. It must, first of all, be in the man himself, and the man



BACK VIEW OF TUNIS LAMBS. FIG. 41.

must have the patience and industry needed to work it out.

Of course the most important thing about a "lambery" is to have the lambs born early, so that they may come to marketable size early in the Winter. Grades of the Dorset breed of sheep have been noted for this early habit. When Dorset rams are turned in with the ewes early in the Summer the chances are better that the lambs will begin to come early than would be the case with most other breeds. The great majority of the very early lambs which bring $9, $10 or $12 each have, I think, been Dorset grades—in fact, the Christmas lamb usually carries the Dorset trade marks. Mr. Allis says that he tried all breeds of mutton sheep that gave any promise of earliness, and finally became a "Dorset man"—that is, the Dorsets proved most profitable for his business. He finally heard of the Tunis breed. These sheep come from the north of Africa, and there are comparatively few of them in this country. It was claimed that their wool is of very superior quality and that they are precocious breeders. They belong to the race or family of fat-tailed sheep—the tail being broad and fat, and run-



HOW THE TUNIS DRESS. FIG. 42.

ning high up to the back. There is another family of fat-tailed sheep found in Siberia and Persia. During the Summer, when feed is abundant, the tail grows to a large size—a great mass of solid fat. In Winter, when food is scarce and the weather is cold, these Siberian sheep actually live partly on the fat stored up in the great tail, which is largely absorbed away.

Mr. Allis had no desire to make his sheep live on their tails, for the inmates of a lambery have grain before them all the time, but if there was anything that would give earlier, stronger, plumper or larger lambs than the Dorsets, he wanted to give them a chance. He bought a small flock of Tunis and turned the ram, with a Dorset ram, in with his flock of ewes. The Tunis ram would not fight, and the Dorset was easily the master, yet the majority of the earliest lambs were Tunis grades. Mr. Allis says that about the middle of last Summer he would have sold his Tunis for a song, and a poor tune at that. Their good qualities were not apparent. Since the lambs came, and especially since they were sold, he says he would not sell a single Tunis. He says he gave both breeds a fair chance, and gives the palm to the Tunis for good reasons. He was prejudiced in favor of Dorsets, and has no Tunis for sale.

1. A majority of the grade lambs showed Tunis blood, especially among the earlier ones.

2. The Tunis grades were stronger and plumper than those with Dorset blood. That was certainly true of those I saw, which were of about equal size.

3. The Tunis lambs sold, as a rule, for more money. The commission men and customers picked them out as best. I saw bills, commission returns and letters which show this. The fat tail of the little Tunis grades, instead of being an objection, was considered a delicacy, and added to the value of the carcass.

I do not wish to start any "boom" for the Tunis sheep. When the Dorsets began to show their value we did our best to make people acquainted with them.

HAPPY LITTLE STRANGERS. FIG. 43.

Mr. Allis has been raising early lambs for several years, and he gets the highest prices. I give his experience without argument. There are not many registered Tunis in the country. The danger of a "boom" is that a lot of poor scrubs or grades will be brought here by unscrupulous rascals and sold as pure Tunis. The trade in Dorsets was badly injured by just such methods.

The pictures show sheep and lambs at the Allis farm. Figs. 41 and 42 show how the Tunis grades dress, back and front. Fig. 43 shows the characteristic shape and color of the little Tunis as compared with Dorsets. Red or red and white is the Tunis color. Other Tunis lambs are shown at Fig. 44. The little fellow shown at Fig. 45 has deceived the old ewe. The red lamb died, but his skin was taken off, and put on a white one, and the fond and foolish sheep at once adopted the little stranger. H. W. C.

LEAVES AND HOGS.—Regarding your leaf-gathering enterprise, when we gathered leaves we made work of it in this way: Men and boys went to woods with wooden rakes, at odd times, and raked leaves in big heaps; if the weather was damp took team and wagon with double box, and loaded leaves right into wagon with oat forks. One man was in box to pack down leaves. If dry, leaves lay in heaps until a convenient time and damp day came. A load of leaves made a big pile when thrown into the pigpen, and how the porkers did enjoy working them over for acorns, pieces of decaying wood, etc. There was no play about this, but we secured the leaves by scores of loads. The underbrush was cleared out by working the same ground over year after year. The resultant fertilizer removed from the hogpen in the Spring more than paid for the work.

New Jersey. D. E. R.

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Sprayers. Mix thoroughly and make fine spray. No scorching. No rubber or leather valves—something better. Brush keeps strainer free. Book on Spraying and agents' terms free.
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THE "HARDIE"
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are the most powerful, easiest worked, most modern, simplest in construction and moderate in price. DON'T BUY A PUMP until you have sent for our catalogue "C" and treatise on diseases of fruits, etc., sent FREE. HARDIE SPRAY PUMP MFG. CO., Detroit, Mich.

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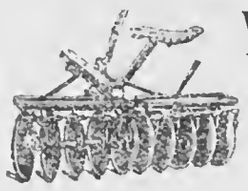
Leads Them All.

SEND FOR CIRCULARS. **The Peterson Mfg. Co.,** KENT, OHIO.



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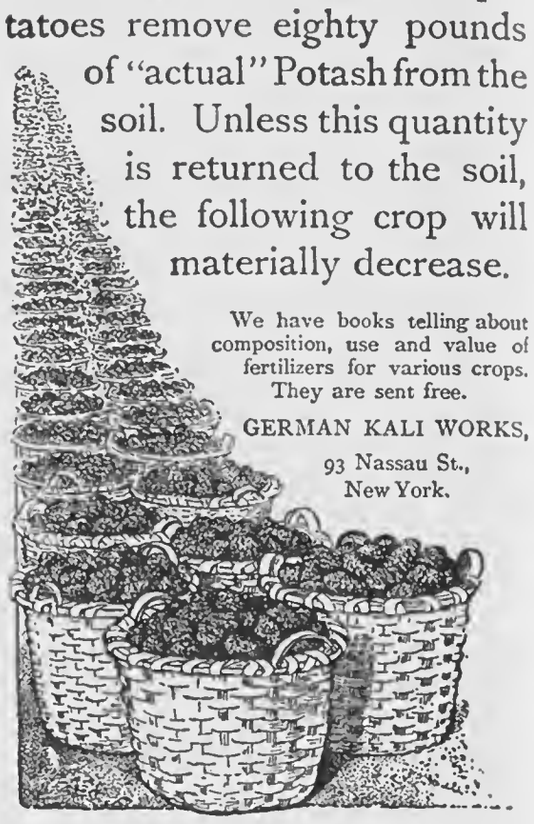

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Sugar Beets—

the largest yield per acre of the best and smoothest form, and very rich in sugar are grown by using

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as a fertilizer. Apply just when the beets are getting well started in the row. The results will surprise you. Send to **John A. Myers,** 120 John St., New York, for a free copy of book, *"Food for Plants."* Tells about this and much else of value. *Nitrate for sale by fertilizer dealers everywhere.*

Write at once for List of Dealers.

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WE'LL PAY THE FREIGHT

and send 4 **Buggy Wheels, tire on, for $7.25.** with axles welded and set, **$10.60.** All sizes and grades, ⅞ to 4 in. tread, steel or rubber tires. Write for catalogue giving instructions for ordering and how to obtain a Wagon Umbrella Free. Rubber tired Buggies $58. Buggy Tops $5.65. No. 2 Wheels for repair work, $5.50. Order at once to get these prices. **W. R. BOOB, Center Hall, Pa.**

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FORCE FEED, GRAIN and FERTILIZER Drill

Positively the neatest, lightest, and **strongest grain drill** on the market. Many points of superiority; it is **geared from centre.** Quantity of grain and fertilizer can be changed while in operation without the use of gear wheels. Accurate in quantity. A trial will convince. Agents wanted. Send for Catalogue F

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ACME PULVERIZING HARROW

Sizes 3 to 13½ ft.

ON TRIAL
To be returned at my expense if not satisfactory.

The best pulverizer and cheapest **Riding Harrow** on earth. We also make walking Acmes. The Acme crushes, cuts, pulverizes, turns and levels all soils for all purposes.

Made entirely of cast steel and wrought iron—**indestructible.**

Catalog and Booklet, *"An Ideal Harrow,"* by Henry Stewart, mailed free.
Free on board at New York, Chicago, Columbus, Louisville, Kansas City, Minneapolis, San Francisco, etc.
DUANE H. NASH, Sole Mfr.,
Millington, New Jersey, and Chicago, Ill.

PENNSYLVANIA WHEEL & LEVER SPRING TOOTH HARROWS

Have Proven Themselves the Best for all kinds of cultivation, on all kinds of land and in every variety of soil. Being all steel they are at once the lightest and strongest. They pull so light, too, having **swivel shoes** in front and three wheels behind. Rachet levers set the teeth at any angle—deep or shallow, or throw them clear out of the way in moving from place to place, or in clearing from rubbish. Wear the teeth closer than all others. Adjustable hitch. One, two or three sections. Send for **Large Illustrated Catalog** of Implements, Engines, Saw Mills and Threshing Machinery, **FREE.**

A. B. FARQUHAR CO., Ltd., York, Pa.

Ailing Animals.

ANSWERS BY DR. F. L. KILBORNE.

It May Be Tuberculosis.

We have a cow—our best save one—that has not been well for several months. She is poor in flesh, though possibly improving a little under very careful feeding. Her mess of milk holds out nicely—11 to 12 pounds per day. She is farrow. The better feeding increases the flow of milk. She sometimes makes a noise in breathing, and has at times a slight cough. The opinion of those who have looked at her seems to be that there is some trouble with the glands of the mouth, and once there was a slight swelling apparently just back of and under the jaw on right side. There is often an offensive odor from the breath, and I am not sure but there is a similar odor from the manure. It has been once suggested that there is tuberculosis, but from reading station bulletins, I hardly think so. Do you think it is a trouble with the salivary glands? What shall I do for the case? L. H.

New York.

The throat trouble you describe is very suggestive of tuberculosis of some of the glands of the throat. Such symptoms might, however, be due to a tumor or diseased growth, or to some other disease of the gland. I would advise having the cow examined by a competent veterinarian, and if the cause of the trouble cannot be otherwise ascertained, apply the tuberculin test for tuberculosis.

TUNIS GRADE LAMBS. FIG. 44.

Contagious Catarrh or Ophthalmia in Sheep.

1. What ails my sheep? Their eyes commence to run water as though they had got something into them, sometimes only one at first, but the other will soon be sore, and sometimes both eyes are taken at once. After about one week there will be a film over the eyes, and they are blind. The sheep appear well otherwise; there has not been any one of them that has got over it yet. 2. What will cure barn itch on cattle? S. W.

Vermont.

1. Confine the sheep in a comfortable, darkened stable, but where there is good pure air. Supply fresh drinking water daily, and feed some succulent food, such as roots, potatoes, apples or silage. Give each sheep two to four ounces (according to the size of animal) Epsom salts with one or two teaspoonfuls ginger, dissolved in a half-pint warm water, and administered by drenching. If the eyes are inflamed, a wet bandage can be tied over the eyes until the inflammation is reduced. Whenever the white film forms over the eye put two or three drops of a solution of two to three grains nitrate of silver in an ounce of soft water, and repeat daily. 2. For barn itch try treatment for lice frequently advised in these columns.

Horse Thin in Flesh.

I have just purchased a mare 10 years old, weighing 1,000 pounds, very thin in flesh. She should weigh 1,150 or 1,200. She is sound in wind and limb; eye bright, appetite first class; stools natural and seem to indicate good digestion. I see no indication of worms. I know nothing of her recent history, but the man who had her, a green horse from the West five years ago, sold her because she was nervous and he "could not keep flesh on her." He has the reputation of being "hard on horseflesh." I have only work enough to exercise her the next three months. What is the best course to pursue? She has commenced to shed her coat, and condition of bowels does not seem to indicate that physic is required. What grain shall I feed? I am using cornmeal; also giving her poplar bark green, which she eats freely. Is there any danger that such a horse cannot be put in good condition? E. D. G.

Massachusetts.

There are some nervous horses that will never put on much flesh, even with the best of care and feeding, and this mare is probably one of them. As a general tonic, give one of the following powders in her feed night and morning: Powdered gentian, ginger and nitrate of potash, of each eight ounces, powdered nux vomica, four ounces, Epsom salts, 16 ounces; mix and divide into 32 powders. I would suggest replacing one-half of the cornmeal by three parts of ground oats or bran and middlings, and one part linseed or oil meal.

Hog Cholera and Swine Plague.

Can the hog cholera arise in any locality spontaneously, or only by contagion? What is best to do after it is discovered to be in a herd? What are the proper precautions to prevent it? After one attack, will the animal be immune from a second?

Westover, Md. O. S.

The epidemics of swine disease in this country are now known to be due to at least two contagious diseases, known as hog cholera and swine plague. These two diseases resemble each other very closely, both in their symptoms and in their effect upon the animals, so that in most cases an autopsy, or even a microscopical examination, is necessary in order to determine definitely which disease is present. The two diseases may appear independently, or as is very commonly the case, both appear in the same outbreak. The hog cholera is not known to arise spontaneously, but is always due to the introduction of the specific germ into a herd from an infected herd or locality. The infection may be carried by any animal having access to diseased animals or their products; by water or by straw or other litter blown from one yard to another. The characteristic lesions of hog cholera are hemorrhages, particularly in the spleen, lymphatic glands, and in the subcutaneous, submucous and subserous connective tissues; and ulceration of the mucosa of the cæcum and upper portion of the colon, or larger intestine.

The swine plague, unlike the hog cholera, may under favorable conditions arise spontaneously. The germ of swine plague is normally present in the air passages of nearly all swine, but in a mild or non-virulent form. Under certain conditions this mild form of the germ may acquire sufficient virulence to cause an outbreak of the disease, which may be spread by contagion from one herd to another, as in hog cholera. The characteristic lesions of swine plague are inflammation of the lungs, inflammation of serous membranes, and congestion or inflammation of the intestines. One attack of either disease usually protects the animal from a second attack. For the prevention and treatment of the disease, I would advise you to send to the Bureau of Animal Industry, United States Department of Agriculture, for Farmer's Bulletin No. 24 on hog cholera and swine plague. Should an outbreak of either disease occur in your vicinity I would suggest that you write Dr. D. E. Salmon, Chief of the Bureau of Animal Industry, Washington, D. C., for the serum treatment of hog cholera and swine plague.

A WHITE LAMB WITH RED COAT. FIG. 45.

WHEN you write advertisers mention THE R. N.-Y. and you will get a quick reply and "a square deal." See our guarantee 8th page.

In every town and village may be had, the **Mica Axle Grease** that makes your horses glad.

Made by Standard Oil Co.

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(Sold with or without Elevator.)
For Every Variety of Work.
Have conical shaped grinders. Different from all others. Handiest to operate and LIGHTEST RUNNING.
Have them in 7 sizes—2 to 25 horse power. One style for windwheel use. (Also make Sweep Feed Grinders.)
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SILOS
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WILLIAMS MFG. CO., KALAMAZOO, MICH.

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and its possibilities under the Silage system—being the theme of
"A BOOK ON SILAGE"
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for your **FARM WAGONS**
any size wanted, any width of tire. Hubs to fit any axle. No blacksmith's bills to pay. No tires to reset. Fit your old wagon with low steel wheels with wide tires at low price. Our catalogue tells you how to do it. Address
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THE STUDEBAKER
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affords exceptional inducements to any one contemplating purchasing. For illustrated descriptive circular, including a copy of the Studebaker Grand March, or a Studebaker Farmers' Almanac, FREE, Address STUDEBAKER BROS. MFG. CO., Box J, South Bend, Indiana.

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IS THE STANDARD
STEAM PUMPS, AIR LIFTS,
GASOLINE ENGINES
WRITE FOR CIRCULAR D3
THE AMERICAN WELL WORKS
AURORA, ILL. - CHICAGO. - DALLAS, TEX.

THE BEST BUGGY THAT COMES DOWN THE PIKE
When you buy a vehicle you want one that you can be proud of. At the same time you want to buy it at a reasonable price. The famous
Split Hickory Vehicles
are sold to you direct from the factory, at a saving of ⅓ of the price charged by dealers or agents. Moreover, the Split Hickory Buggies and Carriages are built right in every particular. Every little detail is correct. There are dozens of special features about them, which add to their beauty, comfort, safety and durability—features found on no other make. Post yourself on quality as well as prices. Send for our free illustrated book on vehicles—it puts in black and white things you ought to know. We can save you money on harness, too. We ship on approval and guarantee satisfaction. Don't keep it if you don't like it.
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KEEP THE MONEY
that you intend to spend for a drill until you inquire into the merits of our
Improved Low-Down Pennsylvania Force Feed Fertilizer Grain Drill.
Sows all kinds of grain, corn and peas in any quantity per acre. Puts on any kind of phosphate, damp or dry, 60 to 700 lbs. per acre. Sows timothy, clover and other grass seeds either in front or behind hoes. Low down—easy to load. Easiest draft known to drills. Send for Farm Machinery, Engine, Saw Mill and Threshing Machinery Catalog—Free.
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No. 3034 Buggy. Price $38.30 with leather quarter top.
Our complete illustrated catalogue, showing many styles of high grade vehicles, harness, robes, blankets and horse equipments, with detailed descriptions of each, mailed free. Write for it and learn how cheaply you can buy when the jobber's and dealer's profits are cut off.
THE COLUMBUS CARRIAGE AND HARNESS CO., Box 772, Columbus, O.
No. 240. Single Strap Buggy Harness. Price $7.95.

No. 376. $48.00. Different from the ordinary buggy, is our latest style for 1901. We use **Long Distance Axle** with bell collar which keeps out all dust and mud, runs 1000 miles without reoiling. **Combined Quick Shift Shaft Coupler and Anti-Rattler,** so you can change from shaft to pole in one minute. With this attachment you never have any rattle. **Wheels and Gear,** every stick of timber used **guaranteed** to be the very best of second growth hickory. Every forging and bolt the best Norway iron. (Wheels furnished any size.) **Body** 20,22 or 24 in. wide, 55 in. long. Spring cushion and back.
Trimmings. We upholster the seat and back cushion with a fine **green velvet** with gold figure, or **whip cord** with high wings on end of seat cushion, and line the top with a special light color top lining to match the seat trimming. The edge of top lining is pinked, the back stays of top are pinked on edge and center stiched, a special design with thread to match top lining. We use a light color carpet for bottom and side panels of body, (or when desired will use leather or dark broadcloth trimmings and dark lining in top with dark carpet to match.)
Nickle Mountings. We furnish nickle dash rail, nickle rail over back of seat cushion, nickle prop nuts, nickle seat handles, nickle hub bands. **We paint** to match trimmings, or will paint any color to suit purchaser. **We take** special pains with this buggy to see that it is fitted with trimmings, paintings, and everything to match.
We have no agents, but sell direct to you at wholesale prices and save you the middle man's profit. **NO MONEY.** We ship subject to examination without any money with order, and if you are not satisfied in every way, and do not feel that we have saved you money and given you a better buggy than you could have bought elsewhere for any thing like our price, return to us and we will pay all freight. **We warrant** every buggy for **2 years** and **guarantee safe delivery. Do you want,** or are you interested in any way in a vehicle or harness of any kind? If so **send for our new free vehicle Catalogue.** We have all styles at prices that will interest and save you money.
MARVIN SMITH CO., 55-57-59 Jefferson Street, Chicago, Illinois.

The Rural New-Yorker

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Name and address of sender, and what the remittance is for, should appear in every letter.

Remittances may be made in money order, express order, personal check or bank draft.

THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, FEBRUARY 16, 1901.

MR. Manchester touches a vital point on the pocketbook nerve (page 111) when he shows the difference between weight and measure in feeding grain to cows. This same mistake runs all through business. We get into the habit of comparing things with the eye, which is only a half comparison at best. It is an old saying that "the master's eye makes the fat ox," but the master's scales will fatten both ox and pocketbook.

*

IN connection with the article on New York farming a few stock statistics will be interesting. The last census taken found 5,548 cattle, 75,809 horses, 637 mules, 4,077 sheep, 1,482 swine and 226 goats on Manhattan Island. The remarkable feature of this is that 226 goats can make such a remarkable showing. Let a stranger travel through the upper part of New York and he will surely report thousands of goats at large. The census man could find only 226. Give us 226 men as tireless and "numerous" as New York goats, and we will agree to move the world.

*

SOME of the so-called farmers' organizations of this country are useful chiefly as illustrations of what such things ought not to be. This is not true of the Connecticut Pomological Society, which is, in many respects, a model. It is controlled by the fruit *growers* and is conducted in their interests. The nurserymen have a fair showing, but the growers come first—as they should. The influence of this Society has been remarkable. It is recorded in the orchards all over Connecticut, especially in the quality of the fruit. Yes, the horticulturists of dozens of other States might well take this Society for a model. Perhaps, though, they would have to import a few Yankees in order to build it!

*

THE Senators who make up the minority of the Senate Committee on Agriculture say that the Grout bill is a menace to a legitimate industry. Let's see about that. There are 17 manufacturers of oleo, and about 5,000,000 people who depend more or less upon the cow for their living. The 17 make their money by coloring cheap fats in imitation of butter, and selling this product at a price which is based on the belief that it is pure butter fat. As at present conducted, the most profitable and important feature of the oleo business is the deception attempted and practiced by those who make and sell it. The Grout bill will, as we believe, do more to break up this fraudulent and deceptive business than anything yet proposed. The true "menace to a legitimate industry" comes with the defeat of the Grout bill.

*

SOME men who are invited to talk before conventions and institutes imagine that their reputation is going to carry them through rather than hard work. We have in mind now a man with a National reputation, who traveled hundreds of miles to address a dairy convention, but instead of having his subject fully prepared, and a systematic line of thought to offer, seemed to wait for the spirit to move. We heard him tell, just before his address, some reporters who were after points that he "hadn't the least idea what he should say. Nothing written out," etc. We think he was right. The inspiration theory didn't work; the talk was ragged and dry, and instead of enthusing his audience and adding to his reputation, our opinion is he will not be invited again. The class of farmers who attend dairy conventions are of the higher grade, students and readers of dairy literature. "Patent matter" or anything second grade will not fill the bill. To give an audience new ideas, or old ones in new form that will set their minds at work and make them better farmers, is worthy of the highest encomium, but it requires careful preparation and a good solid foundation first of all. The "I-feel-above-you," or "I-know-it-all" spirit discourages, but the "I'm-one-of-you" and "humbly-but-very-cheerfully-trying-to-help-you" spirit lifts up at once.

*

IN Maine paupers are cared for at public expense on town farms. In a certain Maine town a pauper applied to the authorities for help. He had four children. The selectmen carried the children to the poor house in a wagon, while the pauper himself *rode there on his own bicycle!* That must indeed be a flourishing section, where even the paupers are able to own bicycles. Two reasons were given the writer for the fact that in most rural districts of Maine there were few very rich people and still fewer very poor ones. These reasons were—Prohibition and apple culture. It was stated that the wheelman mentioned above was a pauper by heredity. Both his father and grandfather before him spent part of their lives in the poorhouse. It is perfectly safe to say that the intelligent production of first-class red apples will bring general prosperity to any rural section of New England.

*

SEVERAL weeks since Prof. Phelps told us how the proportion of protein in hay was increased by the use of extra nitrogen in the grass. Other experiments show much the same thing. The Tennessee Station tried some experiments with corn, using various mixtures of chemicals. The corn grown where no nitrogen was used gave an average of 10.88 per cent of protein. Where nitrogen was used the average was 11.66 per cent. This fact, that the composition of our grains and fodders can be changed by the use of soluble nitrogen, is an important one, especially for dairymen. The man with a good corn crop is well provided with carbonaceous food, whether he shreds the dry stalks or puts them in a silo. It is the payment for the protein that empties the pocketbook, and if by using soluble nitrogen we can add one or more per cent of protein to our rough fodder, it is the best of business to do so.

*

LAST week we printed a news item to the effect that oleo had been bought by agents of the New York School of Forestry and paid for by the State. We desire to state that this has nothing to do with the College of Agriculture at Cornell, which is wholly distinct from the College of Forestry. The two colleges are not connected in their business organizations. We are informed that the oleo was bought by some one connected with the Forestry College in ignorance of the law. It was supplied to contract woodchoppers in the Adirondack forest, and the purchase was a blunder—not a crime. We make this statement because some have gone so far as to say that Cornell University favors the use of oleo. That is too absurd to be considered for an instant. Such a thing could not possibly occur in the College of Agriculture, and the University will make the matter right promptly and effectively.

*

WHAT have our scientific friends to say to the man who, on page 110, frankly says that he does not know what "protein" means? Here is an intelligent man, evidently, with a good library, who balks at one of the most important terms used in discussing scientific agriculture. The experiment-station men have dug out a vast number of important facts connected with stock and plant feeding. They have published these facts in what seems to them clear and simple language. It is clear enough to the 10 per cent of farmers who follow such things, and study them. It is evidently not so clear to the 90 per cent who are not naturally interested, but who may need the information even more than the others. We think that the scientific men have been more successful in digging out facts than they have been in rubbing them in where they belonged. Strictly speaking, it is probably not their business to attempt to do this rubbing in. They have pretty well done their duty when they finish digging out the truth.

*

AT this season, a painful sight to every horse lover is the straining effort of the business teams to get up the gangway from the New York ferryboats. The combination of heavy gales with falling tide drives the water out of the river, and although the ferry piers are floating, rising and falling with the water, the variation is often so great as to cause a mountainous slope of the gangway. Here the heavily-laden horses strain and tug, too often cruelly lashed by brutal drivers. It is a noticeable fact that, among these teams, small private owners do not appear to give the same care and kindness to their animals as big business firms. One would think that the small truckman or dealer whose horse is his working partner, and to whom the animal represents much of his capital, would treat this faithful worker with extra kindness, but more often it is the hired teamster who is seen encouraging his horses in a hard place, and using moral suasion rather than the whip. The fact is that brutality to any working animal does not pay, and a brutal driver is always a losing investment. That may explain the situation, for the hired driver who injured his horses would be discharged or docked.

*

WE find people who are disposed to make light of the San José scale. Some go so far as to call it a "scarecrow," got up "to give the entomologists something to talk about." These people probably never saw a tree or shrub that has been killed by the scale! There are many such—in fact, within the next few years thousands of trees will be as dead as posts from the attacks of this little insect. The question as to whether nurserymen should be compelled to fumigate their nursery stock before delivering it has now reached the point where most horticultural societies decline to discuss it through fear of a quarrel between nurserymen and growers. This seems to us a very short-sighted policy. We think there is no question but that nursery stock thus fumigated is safer to plant, but we frankly confess our doubt as to the wisdom of a compulsory law. Just now there is hope that spraying with crude petroleum will prove an effective remedy for the scale. The trouble is to find a grade of petroleum that will not injure the trees, and a pump that will spray it properly in a mechanical mixture with water.

*

BREVITIES.

RURALETTES.

Why are some people always found
Behindhand in the race?
They hide their talents in the ground
And then forget the place.

*

"Full many a flower is born to blush unseen
And waste its sweetness on the desert air"
Because no seedsman "boomed" it with an "ad."
And sent it running upward to "Get There."

*

If you do not love your work,
Even though you never shirk,
Though you toil unceasingly
You a slave will ever be.

*

"I love you!" 'Tis the highest compliment
That ever reached a woman's ear, I say;
When 20 years of married life have sent
The wrinkles chasing o'er her face; and gray
Into her hair. Then, if her husband can
Honestly say "I love you," 'tis the best
Tribute that can be wrung from any man,
And she who hears the words is truly blest.
For packed within them is a human life,
With all its longings, hopes and dreams and fears,
With which an honest man may crown his wife
Queen of her sex; in spite of wasting years!

NO one has a right to a wrong opinion.

LET frost get at the potato bin if you want to raise tuber kills.

TO err is human; to keep on erring after you know better is inhuman.

IT looks as though the evaporated raspberry might have another inning.

NO dairyman will lay up treasure who buys by weight and feeds by measure.

NO, snow is not a perfect "cover crop" for an orchard. Get something to grow.

THE more your orchard ground is tilled, the more with humus it should be filled.

WHAT are the most prominent parts of speech? With many speakers—wind and I.

ONE thing helps empty out the milker's pail. The edge upon the milker's finger nail.

WE feel sure that the waste molasses from beet sugar factories will prove a very useful stock food.

HOW is a man's self esteem pruned into a shapely and useful tree? By the judicious use of an honest wife's tongue.

THINK of a man who is not thorough enough to raise a good crop of potatoes imagining he can succeed with ginseng!

A NEW Porto Rican law now in force increases the internal revenue tax on oleo from two cents to 10 cents per pound.

THE recent death of Schuyler Worden removes another man whose works live after him—the Worden grape and Worden Seckel pear.

A GOOD woman is a crown to her husband! Correct, and if she does her duty her conversation will also be a cross at times.

IT has been found that when milk is held for 10 minutes in a closed vessel at 140 degrees, the bacillus or germ of consumption is killed, while the milk is not injured.

THE Oregon Experiment Station finds that a hot air temperature of 200 degrees, held for 10 minutes, will destroy the smut spores in seed oats. This gave better results than soaking in blue vitriol or formalin, or in hot water.

THE NEW YORK STATE GRANGE.

PRESIDENT'S REPORT.—The New York State Grange held its twenty-eighth annual session at Poughkeepsie, N. Y., February 5-8. The regular sesslons were held under the fourth degree of the Order, but an open session was held Tuesday night, and during a part of the session Wednesday afternoon. State Master E. B. Norris read his annual report the first day. In reference to Grange work he earnestly urged the organizatlon of Pomona Granges. If the County Granges are in a state of activity he claimed that there would be no dormant subordlnate Granges. The farmers are realizing that the Grange offers the best and most progressive ideal of coöperation, and that its advanced methods of instruction, both socially and educatlonally, place it preëminently in the front of all farmers' organizations. He also urged the lmportance of the degree work in the councils. In the matter of taxation and legislation, he said that the zealous aetivity of the members sometimes lead into labyrinths of entanglement that it becomes diffieult quiekly to emerge from. Let the Grange, he said, study well all the bills that are presented, and if any are found praetical, indorse them, and leave nothing undone to push them to a speedy passage. There is no one thing so hard to solve by legislation as an equitable tax bill that shall do justice to all classes. He spoke a good word for the Department of Agriculture, for the farmers' institute, and for the State Fair under the present management. He referred also to the injury done the dairy interests of the State by the fraudulent imitation of dairy products, and spoke a word in favor of the Grout bill. The adoption of free rurai mail wiil, he said, rank as the one grand achievement of the Grange. It was adopted in spite of the opposition of the political managers of both parties, but the trial proved to the Post Office Department that it was not oniy a great boon to the Amerlean farmer, but also a saving of money to the Department. He indorsed the action of the National Grange in its opposition to the Subsidy bili, because farmers' products have to go into open competition with the world, and he did not believe in their contributing a penny for the ship-builders' trust. He opposed the proposition to irrigate western lands at Government expense, and uttered a word of eaution against the trusts. He also made a vigorous protest against the expenditure of $62,000,000 by the State on the canal.

SECRETARY AND CHAPLAIN.—Secretary Giles made a very satisfactory report on the condition of the Grange; 14 new Granges were organized, and one reorganized during the year, and severai others are under way for organization. There are 524 Granges now in the State; 44 counties are represented, 29 of which have Pomona Granges. Jefferson County stands at the head, with 32 Granges and 4,875 members. Steuben has 31 Granges, Chautauqua 28, with 3,679 members. Wayne has 16 Granges, with 3,028 members; averaging 200 members to the Grange. Oswego has 30 Granges, with 3,087 members. Wolcott, Wayne County, has the largest subordinate Grange, with 759 members. The total membership of the State is 49,029. Treasurer's report was equaliy satisfactory; showing a balance on hand of $13,897.33. The second day was largely taken up by reports of subordinate officers. J. E. Knapp, Ceres, of Denmark, made an interesting report, principally dealing with the advantages of the Grange. Mrs. W. W. Streever, Pomona, of West Milton, recounted the progress of the Grange, and dealt with rural matters generally, and among other good things said that while the farmers are always cautious, they never will let caution interfere with legitimate progress. Lady Assistant Steward, Mrs. W. W. Ware, of Batavia, told of some excellent charitable work done by the Ladies' Aid Society in connection with the Stafford Grange. This Grange appropriates $3 a month, and the money is used by the ladies in making clothing for the poor and needy. Overseer Geo. A. Fuller, of Philadelphia, made some good suggestions for Grange work, and gave some strong advice to farmers generally, the main feature of which was "push." Chaplain A. H. Dewey, of Manchester, made a report of his year's work. He made a point from Bible history to show that the righteous men and women of the Old Testament times were the original Grangers. Steward Chas. A. Mann, of Breakabeen, insisted that it was everybody's business to bring into the Grange farmers who would be benefited by the Order. He urged that wherever farmers' institutes, or farmers' gatherings be held, the teachers and children of the public schools should be invited, and programmes required for their entertainment. The boys and girls of the present are to be the Grangers of the future, and he wanted to start their education for the work now. Assistant Steward J. J. Bell, of Deposit, claimed that the Grange is now only in its infancy, and that this organization will enable the farmers of the country to exert a united influence for the benefit of just legislation. Gatekeeper M. J. Harding, Hornelisville, and Mrs. W. H. Buckley, of West Groton, reported on their respective duties.

SCIENTIFIC AGRICULTURE.—Dr. W. H. Jordan was the principal speaker at the open session Tuesday night. He talked principally on the scientific side of agriculture, and repeated the plea that he has made in other parts of the State, and before other bodies of farmers, for the teaching of primary elements of agriculture in the common schools of the State. Some things that the Doctor said about agricultural papers were apparently misunderstood by some members of the audience. It is true that after discussing them, he said that some of them were not worth what they cost, but this did not, to our mind, imply a condemnation of all, but rather a suggestion for discrimination in the selection of them. There are some papers with agricultural titles that every thinking farmer, as well as Dr. Jordan, knows are agricultural only in name. We suppose that Dr. Jordan, in talking on the subject, would say that there are experiment stations that are hardly worth what they cost, and literature often issued from these stations that is not worth what it costs, but he would not on that account condemn all experiment station work nor all experiment station literature.

CANAL MATTERS.—The latter part of Wednesday afternoon session was occupied by James Wood, of Mt. Kisco. His subject was the proposed $62,000,000 State canal, and he gave some arguments against the propositlon that will be rather hard to dispute. In part, he said that Governor Roosevelt has thrilled and pleased the people of the State by a proposed retrenehment and reduction of State expenses, but the proposition for an enlarged canal is so tremendous as to make insignificant any reduction that could possibly be made in State expenses. The bill is a misnomer. There is not a lock on the old canal, nor a bank along it, nor a bridge across it that can be utilized in the new proposition. The real purpose is for a new canai. To say that it is an improvement of the old one is a deception. Judging by the past, $62,000,000 is only a basis to start on, and by the standard of other experiences it must be expected that it will cost anywhere from 50 to 250 per cent more.. The eommission already intimates that it will probably require $100,000,000, and it can safely be estimated that it would eost in the neighborhood of $200,000,000 before compieted. Every man who was bold enough to oppose the proposition, he said, is charged as being in the employ of railroads, and he wanted to make it clear on the start that for himseif he never was employed by any railroad, never expeeted to be employed by any railroad, has always paid his fare when traveling on the railroad, and never asked for or received a pass for riding on any railroad. He then reviewed the progress made in transportation facilities, starting with the bundle of furs carried on the backs of the Indians to the first shipload exported from Yonkers in this country across the water. Next eame the pack-horses, then the wagons over the State roads, then the canals, and finally the railroads. The Erie Canal was completed in 1825. The first railroad of the State was built three years afterwards and ran from Albany to Schenectady. In 1842 the line was completed from Albany to Buffalo; in 1851 to New York. The railroads do practically ali the transportation now. The Erie Canai reached its maximum of transportation in 1880, yet in 1882 it abolished tolls and made the canal free. That is, free to the owners of boats, but the taxpayer has been paying the toll ever sinee. Every man who pays a dollar of tax helps pay that toll. We pay $2,500,000 of canal toli every year. The farmers are paying their share of this in order that the western grain may be shipped into the eastern markets to compete with the product of the New York State farmers. This is what has helped reduee prices of farm products, and has taken 50 per cent out of the value of farm lands. The farmer of the East is paying the freight on the other man's product, thus helping the other fellow to drive the New York farmer out of the market. Then he went on to show that the handling of freight by the railroads is simply a "survival of the fittest." The canal only transported 2,145,000 tons of freight last year; the railroads 40,000,000. The competition between railroads, he said, has compelled them to employ talent to reduee the cost of the transportation. This cost is only one-third of what it was in 1870. He quoted from a report of a committee which investigated this matter for the English railroads, beeause in this report there could be no purpose of falsifying the figures. This showed that in 1855, the cost of transportation over the New York Central was 3.72 cents per ton per miie. In 1899 the cost of transporting one ton one mile had reduced to .59 of a cent. Advocates of the canal claim that this is because the eanal forced the reduction; but referring to the same report it is shown that in 1882 the average rate over the railroads of the United States for transporting one ton one mile was 1.236 of a cent. In 1898 the same average was .75 of a cent per ton. A further proof that the canal had nothing to do with this reduction is shown from the fact that in 1865 the average cost of passenger transportation over the New York Central was 2.026 cents per mile. In 1899 the average rate per mile was 1.82 cents. It could not be claimed that the canal had caused this reduction, simply beeause the canals carry no passengers. The railroads, he said, have made the first reduction in freights, and the canals were obliged to follow. He ridiculed the idea that 5½ per cent of the total tonnage carried by the canal couid have any influence on the cost of transportation. He went on to show besides that since 1882 the railroads of the State had paid into the State Treasury $40,000,000 in taxes, while during this time the taxpayers of the State had paid to the canals $2,700,000, without including the $9,000,000 which he was first inclined to say had dropped into the ditches, but which on second thought he revised to say, went into the pockets of designing politicians, and this, he insisted, was the key to the whole situation. It was not that the men behind this proposition cared for the canal, nor for the reduction of rates, but for the pickings they could get out of such an enormous appropriation. He disposed of the argument that the progress made by the State of New York over other States since the Revolution was traceable to the canal by showing that the canal was not built until 1825, and that in the census of 1820 New York State had already taken the lead of other States in the Union. To the claim that we need the canal in order to build our industries of the State, and especially the iron industries. he showed that if the iron ore were shipped through the canal entirely free it would build up no iron industries along the route of the canal, because of the expense of getting coal in these sections. The iron industries must always be located where there will be the least expense in getting the ore and coal together. New York and Buffalo, he said, were the only sections of the State that were calling for the canal, and in his analysis of the situation he failed to find any very good reason why the people and business men of those cities should make any demand for it. There are not to exceed a hundred men employed on the canal located at Buffalo, and for every ton transported over the canal during last year the City of New York paid $1.19. If the people of the City of New York understood the situation they would be as much opposed to it as the farmers now are. There was certainly no question about the feeling of the farmers on this subject. There was not a delegate from any county in the State that favored the proposition.

RESOLUTIONS were introduced condemning the barge canal scheme; one favoring the election of United States Senators by a vote of the people; others in favor of the postal savings banks, and one opposed to the Subsidy bill; one favoring the giving of elective franchise to taxpaying women; another opposing the bill allowing saloons to remain open nights and Sundays at the Pan-American Exposition at Buffalo; one opposed the repeal of the law relatlng to instruction on the effects of alcohol in public schools; another in favor of repealing the Saturday half-holiday; one favorlng a law to prohibit the stopping of trains on railroad erossings. The resolution was introduced lndorsing the actlon of Governor Odell in reducing State expenses; another eondemning fake and immoral shows at county falrs, and one indorsing the administration of Commissioner Wieting, and recommending his reappointment. D.

EVENTS OF THE WEEK.

DOMESTIC.—January 31 an explosion in a cigar-box factory in New York City caused a eostly fire, the loss amounting to $1,500,000. Three persons were badly injured, and the blaze lighted up the whole city. It is supposed that the explosion was caused by fine cedar sawdust. . . . . At Baltimore, Md., January 31, the burning of a zoological show killed 50 lions, 20 bears, and more than 200 other wild animals. The property loss was $200,000. . . . . January 31, the health officers discovered 19 cases of smallpox among Italians in New York tenement houses. New cases continue to be reported nearly every day. . . . . The explosion of a lamp in a dwelling at Milwaukee, Wis., February 2, eaused the death of six persons. . . . . At Pittsburg, Pa., February 2, one person was killed and five others made seriously ill by eating pork said to be doctored with some preservative. . . . . At Petroleum, W. Va., a disastrous railroad wreck occurred January 26, six trainmen being killed. . . . . The Secretary of the Interior has requested the Secretary of State to correct, through United States representatives, reports circulating in several foreign countries, that the United States Government is offering $10,000 to men who will marry Indian squaws. Scores of letters accepting this alleged offer have been received from France and Germany and one from Russia. . . . . A big business building at Pittsburg, Pa., collapsed February 4, and flames completed the work of destruction, the damage amounting to $200,000. . . . . An explosion of gas and dynamite in a mine near Scranton, Pa., February 4, killed one man and injured others. . . . . An express car on the Pennsylvania Railroad was rifled between Philadelphia and New York February 3, the robbers securing about $4,000. . . . . Two persons were killed and three fatally injured in a hotel fire at Binghamton, N. Y., February 5. . . . . The Masonic Temple at Toledo, O., was burned February 5; loss $150,000. . . . . The centennial anniversary of the installation of John Marshall, of Virginia, as Chief Justice of the United States, was commemorated February 4 in Washington. In the presence of the President and his Cabinet, members of the Senate and House, the diplomatic corps and other distinguished guests, an oration was delivered by ex-Attorney-General Wayne MacVeagh. Chief Justice Fuller presided and made an address. . . . . In Chicago, 250 saloon keepers were arrested February 4, charged with keeping their saloons open on Sunday.

CONGRESS.—The House passed the Agrienitural Appropriation bill January 31. The feature of the day's proceedings was a revival of the anti-polygamy crusade, and a sharp passage between Messrs. King, of Utah, and Landis, of Indiana. The latter secured the adoption in Committee of the Whole of an amendment provlding that no money should be paid to the Agricuitural College in Utah untii the Secretary of Agriculture was satisfied that no trustee or teacher in the institution practiced polygamy. The amendment was afterward stricken out in the House. . . . . January 31, the Senate passed the Army Reorganization bili. . . . . The House, February 4, passed the Senate bill to create a commission to adjudicate the claims of United States citizens against Spain, which the Government of the United States assumed by the treaty of Paris, after having amended the bill so as to refer the claims to the Court of Claims. . . . . The Army appropriation bill, making provision for the army under the plan of reorganization recently enacted, was completed February 4 by the House Committee on Military Affairs, and reported by Chairman Hull. It carries approximately $118,000,000, as against estimates of about $130,000,000, made by War Department officials. The total of army appropriations, general and deficiency, last year, was $119,000,000. Chairman Hull says the present bill will be ample, and will not entail a deficiency measure later. The contingency appropriation of $1,000,000, to "meet emergencies constantly arising," was struck out by the committee.

PHILIPPINES.—Fierce fighting has been occurring in the Island of Leyte. In Luzon fighting continues, and quantities of arms are being seized. . . . . In the Province of Iloilo, 50,000 Filipinos have sworn allegiance to the United States.

FARM AND GARDEN.—Schuyler Worden, the originator of the Worden grape and Worden Seckel pear, died at his home in Oswego County, N. Y., January 20, aged 90.

The horticultural commissioners of Orange Co., Cal., have instituted a quarantine against Florida and Louisiana nursery stock on account of the alleged prevalence of an insect known as the White fly (Aleyrodes Citri) on the stock.

Heavy snow throughout Kansas February 2 will benefit the wheat greatly, as the State has been swept by drying winds for four weeks.

Great bush fires are causing appalling loss to farmers in Australia. While the thermometer stands at 115 to 120 in the shade, and deaths are frequent from heat apoplexy, hundreds of families have been burned out. Many marvelous rescues were made. One man in a farmers' wagon drove 169 persons from the fire circle and sure death three miles to a river, where they all remained immersed with their mouths and noses only above water until the fires had passed over them. Miles of grain have been destroyed, and great droves of sheep and cattle have perished.

ADVICES from Pittsburg state that the price on cut nails has been raised five cents per keg, making the rate to jobbers now $2 per keg in car lots. This is due to the recent advance in wire nails.

Woman and Home

From Day to Day.

OLD HYMNS.

There's a lot of music in 'em—the hymns of long ago—
And when some gray-haired brother sings the ones I used to know,
I sorter want to take a hand! I think of days gone by,
"On Jordan's stormy banks I stand and cast a wistful eye!"

There's a lot of music in 'em—those dear, sweet hymns of old—
With visions bright of land of light, and shining streets of gold;
And I hear 'em singing—singing, where mem'ry dreaming stands,
"From Greenland's icy mountains to India's coral strands."

An' so I love the old hymns, and when my time shall come,
Before the light has left me, and my singing lips are dumb,
If I can hear 'em sing them then I'll pass without a sigh
To "Canaan's fair and happy land, where my possessions lie."

—The Cooking Club.

*

THE Kansas City Star offers an eloquent plea for a return to good old-fashioned mush or hasty pudding in place of the modern food cereals now so freely purchased. After recalling the fond recollections awakened by thoughts of fried mush and syrup, regret is expressed that under the false plea of hygiene, the comfortable and substantial dishes of a more sincere and genuine age are replaced by preparations that are anæmic and trifling. Says the writer:

Shredded biscuits and Scotch oats, indeed! Are these cereal impostures to nourish the manhood and womanhood of the twentieth century in the United States of America? Perish the thought! Out with such a paltry desertion of finer and stronger ideals? Away with such hospitality to enfeebling innovations! Throw away the stew pan! Hang on the mush pot! Let the blaze burn clear and strong, and wield the ladle with a hearty good will. Shake off the enervating influences which came in with the abandonment of "hasty pudding" and get down to first principles!

*

JOHN WESLEY said: "I no more dare to fret than I dare to curse or swear." Many a good woman, to whom profane or irreverent speech is a horror, falls into the habit of nagging fretfulness, without ever regarding this vice as anything more than a trifling failing. Yet home happiness has been wrecked, and families disorganized, by nothing more than the perpetual worry of one complaining and fretful person. Not only

3717 Seven-gored Tucked Skirt, 22 to 30 in. Waist.

does this disposition ruin the happiness of those around; it surely poisons the character of the person giving way to it. A familiar proverb says that the good die young; we take this to mean that the good remain young until the end of their days, whether that come in childhood or old age. A serene and peaceful mind, free from strife and envy, will keep one young to the end of a long life, and one may say that the cheerful, like the good, die young, even when they exceed three score and ten.

WASH fabrics in all sorts of brilliant and striking styles now crowd the city stores. Domestic materials seem much handsomer than before, giving the beau-

3696 Tucked Blouse, 32 to 40 in. bust.

tiful colors and combinations of foreign fabrics. Aureole batiste at 15 cents a yard suggests fine China silks, one especially dainty being a small all-over design in white on a gray background. Sea Island dimities, also at 15 cents, are really lovely, especially in coral patterns, such as our grandmothers wore in barége. Dimity rayée, which costs 18 cents a yard, has stripes of satin effect, all the rest of the surface being covered with a figure, scrolls, dots or flowers. Stripes simulating lace in pattern are used a good deal, a figure like black Chantilly insertion being seen between two-inch stripes of turquoise blue, coral pink or old rose, the color being spattered with circles or dots. Of course there are plenty of very handsome high-priced wash fabrics, but one may find a surprising list of dainty and attractive materials between 10 cents and 25 cents a yard. We have very little trouble with fading in laundering our Summer garments, but they are washed at home with some care, and always dried in the shade, the latter being, we think, quite an important point.

*

WE recently published, at the request of a reader, a recipe for entire-wheat bread. Mrs. Gesine Lemcke, of the New York Cooking School, gives the following recipe, which differs slightly from that previously suggested: Put one pint of lukewarm water in a bowl, add one yeast cake broken into pieces, one teaspoonful of sugar, let stand until the yeast floats on top, then add two pints of whole wheat flour, half a teaspoonful of salt, two tablespoonfuls of sugar and a half ounce of melted butter. Mix all together into a firm dough; knead it on a board, adding some fine wheat flour, until it does not stick to the hands; return the dough to the bowl, cover, and let rise to double its size; then mold it into a loaf, put in a pan, let rise again until light, and bake one hour in a medium hot oven.

The Rural Patterns.

Skirts tucked in groups are still in favor, and are likely to be freely used in thin materials during the Summer. The model illustrated is the very latest that has appeared and combines all the newest features. As shown it is made of wool crêpe in cadet blue, but is suited to all materials; cloth, silk, cashmere, crêpe de Chine and the entire range of available stuffs. The skirt is cut in seven gores. The tucks, which are a half-inch in width, are laid at the straight edge of each side and back gore, there being six groups in all, three at each side. They are stitched and pressed flat to the point indicated, below which they are left free to fall in soft folds to the floor. The upper portion of the skirt is fitted closely and smoothly, but it flares stylishly as it falls below the knees. The fulness at the back is laid in double inverted pleats that meet over the center seam. To cut this skirt for a woman of medium size 8⅝ yards of material 21 inches wide, 5¼ yards 44 inches wide, or four yards 50 inches wide, will be required. The pattern No. 3717 is cut in sizes for a 22, 24, 26, 28 and 30-inch waist measure; price 10 cents.

A blouse of finely-tucked material is a favorite style; as illustrated it is of satin Aiglon in pastel blue with cuffs of panne in a deeper shade and is worn with tie and belt that match; but both silk and wool crêpe are admirable, soft-finished taffeta and satin régence are much liked, as are all the softer silks, while mousseline and Liberty are always lovely. The foundation for the waist is a lining fitted with single darts, under-arm, back and shoulder seams. The waist proper is laid in fine, evenly-shaped tucks, allowance for which is made in the pattern, and is arranged over the lining with slight easy fullness at neck and shoulders in front, closing at the center front, where the tucks conceal the fact. The sleeves are modeled after the latest style, and are arranged over a smooth fitted lining. The outer portions are tucked to a few inches above the wrists, where they fall free and form puffs that are tacked to the lining which ensures a perfect adjustment. At the wrists are bands finished with pointed ends that lap over and hook into place. To cut this blouse for a woman of medium size 4⅞ yards of material 21 inches wide, 2¼ yards 44 inches wide, or 2⅛ yards 48 inches wide, will be required. The pattern No. 3696 is cut in sizes for a 32, 34, 36, 38 and 40-inch bust measure, price 10 cents from this office.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

Wanted

Farmers whose lands do not pay to apply

B. T. Babbitt's

Pure Potash

or Lye

to their trees and plants, and to report, as all its users do, that this excellent potash has wonderfully improved and increased fruit-bearing and vegetable raising.

MADE BY

B. T. Babbitt, New York.

Sold by grocers and druggists everywhere.

TERRIFF'S PERFECT WASHER

SENT ON TRIAL at wholesale price. If not satisfactory money will be refunded. SOLD under a POSITIVE GUARANTEE to wash as clean as can be done on the washboard, even to the wristand neckbands of the most soiled shirt, and with far greater ease. Does not wear out the clothes. Economizes soap, labor and time. **AGENTS WANTED.** Exclusive territory given. Big money made. For terms and prices Address,

Portland Mfg. Co., Box 14, Portland, Mich.

A REMARKABLE INVENTION

BY AN OHIOAN.

A prominent business man of Cincinnati has invented a new Vapor Bath Cabinet that has proven a blessing to every man, woman and child who has used it, and as many of our readers may not know of its real comfort and blessings, we illustrate it in this issue.

This cabinet is an air-tight, rubber-walled room, in which one comfortably rests on a chair, and with only the head outside, enjoys all the cleansing,

Open—Ready For Use.

curative, beautifying and invigorating effects of the famous Turkish Bath, Hot Vapor or Medicated Bath at home, for 3 cents each, with no possibility of taking cold or in any way weakening the system.

These baths have truly marvelous powers, far superior to soap and water; celebrated for producing glowing faces, fair skin, bright eyes, elastic figures and perfect health to all men and women who make them a weekly habit, and this invention brings them within the reach of the poorest person in the country.

Clouds of hot vapor or medicated vapor surround the entire body, opening the millions of sweat-pores, causing profuse perspiration, drawing out of the system all the impure salts, acids and poisonous matter of the blood, which, if retained, overwork the heart, kidneys, lungs and skin, causing colds, fevers, disease, debility and sluggishness.

Astonishing is the improvement in health, feeling and complexion by the use of this Cabinet, and it seems to us that the long-sought-for method of securing a clear skin, a good complexion, of retaining good health, curing and preventing disease without drugs, has certainly been found.

The makers inform the writer that more than 600,000 of these Cabinets have been sold, and showed letters from thousands of users who speak of this Cabinet as giving perfect satisfaction.

A. B. Stockham, M.D., of Chicago, editor of "Tokology," recommends it highly, as also does Congressmen John J. Lentz, Hon. Chauncey M. Depew, Rev. C. M. Keith, editor "Holiness Advocate;" Mrs. Senator Douglas, Rev. James Thoms, Ph.D., pastor First Baptist Church, Centreville, Mich.; Rev. J. C. Richardson, Roxbury, Mass.; Rev. H. C. Roernaes, Everett, Kansas; John T. Brown, editor "Christian Guide," and thousands of others.

Ira L. Gleason, prominent citizen of Hutchinson, cured himself of rheumatism and his friends of colds, pneumonia, fevers, grippe, blood, skin and kidney diseases, and made $2,500 selling this Cabinet in a little more than 12 months. Mrs. Anna Woodrum, of Thurman, Iowa, afflicted 10 years, was promptly cured of nervous prostration, stomach and female troubles, after medicines and doctors had failed. She recommends it to every woman as a God-sent blessing. O. C. Smith, of Mt. Healthy, Ohio, was cured of bad case of catarrh and asthma, and says: "It was worth $1,000 to me. Have sold several hundred cabinets; every one delighted." O. P. Freeman, an aged railroad man, afflicted 17 years, unable at times to walk, was cured of kidney troubles, piles and rheumatism. Thousands of others write praising this Cabinet, so there is absolutely no doubt of it being a device that every reader of our paper should have in their homes.

This invention is known as the new 1903 style, Quaker Folding Vapor Bath Cabinet, and after investigation we can say that it is well, durably and handsomely made of best material throughout, has all the latest improvements, will last a lifetime, and is so simple to operate that even a child could do it safely. It folds flat in one inch space when not in use; can be easily carried; weighs but 10 pounds.

It Is Important to Know

that the makers guarantee results and assert positively (as do thousands of users) that this Cabinet will clear the skin, purify and enrich the blood, cure nervousness, weakness, that "tired feeling," and the worst forms of rheumatism (they offer $50.00 reward for a case not relieved). Cures Women's Troubles, Neuralgia, Malaria, Sleeplessness, Gout, Sciatica, Headaches, Piles, Dropsy, Liver, Kidney and Nervous Troubles and Blood Diseases.

In Operation.

It cures the worst Cold in one night and breaks up all symptoms of La Grippe, Fevers, Pneumonia, Bronchitis, Tonsilitis, and is really a household necessity, a blessing to every family. To please the ladies a Head and Face Steaming Attachment is furnished if desired, which clears the skin, beautifies the complexion, removes pimples, black-heads, eruptions and is a sure cure for skin diseases, Catarrh and Asthma.

All Our Readers Should

have one of these remarkable Cabinets in their home.

Don't fail to write to-day to the World Mfg. Co., 2823 World Building, Cincinnati, Ohio, who are the only makers, for full information, valuable booklet and testimonials sent free, or, better still, order a Cabinet. The price is wonderfully low, only $5.00 for Cabinet complete, with stove for heating, formulas and plain directions, also Prof. Gering's $2 Guide Book health and beauty, free. Head Steamer, $1 00 extra. You won't be disappointed, as the makers guarantee every Cabinet, and will refund your money after 30 days' use if not just as represented. We know them to be perfectly reliable; capital, $100,000.00, and to ship properly upon receipt of your remittance.

Don't fail to send for booklet anyway.

$100 Monthly and Expenses.

This Cabinet is a wonderful seller for agents, and the firm offers excellent inducements to both men and women upon request.

Millions of homes have no bathing facilities, so this is an excellent chance for our readers. To our knowledge many are making $100 to $200 per month and expenses. Write them to-day.

Sunshine

Have you had a kindness shown?
Pass it on.
'Twas not given for you alone—
Pass it on.
Let it travel down the years,
Let it wipe another's tears,
Till in Heaven the deed appears,
Pass it on.

President-General, Mrs. Cynthia Westover Alden.
Headquarters, No. 96 Fifth Avenue, New York.
Society Motto—"Good Cheer."
Colors—Yellow and White.
Flower—Coreopsis.
Society Song—"Scatter Sunshine."

THE TASK.

It matters not if great or small,
The task for which a soul is fit;
The splendid duty placed on all
Is that of nobly doing it.
And the accounting is the same
To Him who sets all tasks address'd,
If we can say, with truthful claim—
"Master, this is my best."

The homely task, in lowly ways,
If faithful and of purpose true,
It is as certain of God's praise
As that the proudest soul shall do.
O, not the task counts in His eyes,
But the glad strength in service press'd,
And the firm heart which joyous cries—
"Master, this is my best."

—St. Louis Republic.

Sunshine welcomes as a new member our friend Mignonette, a sorely-tried shut-in. She married at the age of 18, her husband studying for the ministry. Owing to his delicate health the young couple decided to settle on a farm. Six months after marriage the young wife was stricken with scarlet fever, and spinal trouble resulted, prostrating her for all time. Physicians have long since pronounced her incurable, and Mignonette has become cheerfully resigned. Since 1876 she has lain here, suffering agony untold—but a busy worker among the afflicted, sending out rifts of sunshine whenever possible. She directs the household and is the center of the home. A year ago her physician decided that she must give up writing and she is unable to reply to letters. With folded hands she lies quietly happy, even to be raised on a pillow being too painful to be indulged in. Though forbidden to write letters herself, she is very glad to hear from anyone who may send her a cheering note or light reading matter. Her address is Mrs. George H. Miller, Bridgehampton, N. Y. She is much loved by all who know her, for her sufferings do not make her forget words of cheer for others. When duties seem many, and pleasures few, it is well to think of the many shut-in sufferers who must endure not only constant pain, but also enforced inaction and the inability to help others. "They also serve who only stand and wait."

Rural Recipes.

From the kitchen to the dining-room
there's flour on the floor;
And imprints of floury fingers are upon
the pantry door.
Divers shattered egg-shells nestle in the
cushion of my chair,
And the odor of vanilla impregnates the
atmosphere.
But I'm not surprised or puzzled, these
are signs I can't mistake;
They are things to be expected when
Jemima bakes a cake.

—Leslie's Weekly.

Browned Mackerel.—This is a new and very nice way to cook mackerel. Freshen two fish by soaking over night, wash in fresh water in the morning and squeeze over the flesh side the juice of one-half a lemon. Lay one of the fish skin side down in baking dish and cover with dressing made of one cupful bread crumbs, one tablespoonful butter (scant), pinch of pepper, a little grated lemon peel and one-fourth cupful of cream. Lay the other fish on dressing, skin side up, and baste well with hot water and melted butter. Run into a hot oven for 20 minutes, then cover with bread crumbs, dot with bits of butter and put back in the oven till nicely browned. Carefully dish without disturbing the layers and serve with thin lemon slices and parsley as a garnish.

Buckwheat Shortcake.—This is a seasonable dish for cold weather. Two cupfuls of nice sour milk (freshly churned buttermilk is the best), add half a level teaspoonful of soda (more if the milk is very sour) and a level teaspoonful of salt; sufficient buckwheat flour to make a very stiff batter. Pour this into a buttered tin and bake immediately for about 30 minutes. Serve with butter and maple syrup.

Vanity Pudding.—Soak one-half ounce of gelatin in a cupful of water for 20 minutes, then bring to a boil. Remove and add a pint can of cherries and their juice. Set aside till beginning to harden, then add the well-beaten whites of two eggs. Make in the morning and put in a very cold place till dinner time. Serve with whipped cream and sponge cake.

Golden Johnny Cake.—Heat to scalding point one pint of sweet milk; while hot stir into it one teaspoonful butter, one teaspoonful white sugar and three-fourths of a cupful of steamed squash out of which all water has been pressed. Sift together two cupfuls cornmeal, one cupful flour, two heaping teaspoonfuls baking powder and a scant teaspoonful salt. Add to this, gradually, the milk and squash, as soon as it is lukewarm. Bake in one greased pan, or in gem pans if preferred. If it seems stiff a little more milk may be added. Bake in a quick oven. Meal varies so that it is hard to give the exact quantity.

Reprieved.

It was a mournful little procession which filed out of the barn and took its way along the lane toward the pasture. First came Azariah, with the old musket. Then followed Thad, leading a horse, tall, gaunt and aged; and in the rear, with a shovel over his shoulder, plodded old Benjamin Heminway, the owner of the farm. No one said anything, but all three of the men glanced furtively at the house, and Thad carefully steered old Prince around some outcropping ledges where his shoes would have been likely to make a noise. When they reached the pasture they halted.

"I s'pose we might's well pull his shoes off," suggested Azariah.

"Yes," said Thad. "Three of 'em's nearly new, and the other ain't much worn. I brought the hammer along."

He handed it to his brother, who took it and began to pry off the old horse's shoes. While the group was occupied with this task a voice broke in upon them. A little old lady had come quietly up the lane, and now stood nervously twisting her apron and regarding them with reproachful eyes. The men dropped the hammer and the two shoes they had removed, and stood silent and shamefaced.

"Father," said the old lady, laying her hand on her husband's arm, "you know how I've felt about this all along. The more I think of it the wickeder it seems. I just can't stand it!"

"There, now, mother, don't take it so hard. It ain't pleasant, I know, but what's a body goin' to do? He's past any kind o' work, an' it costs somethin' to keep him. Besides, the boys are all the time complainin'—"

"Well," broke in Thad, "we have to cut up all his fodder an' take milk to him every day, an' he's forever gettin' into the cornfield or the garden."

"Thaddy, it ain't what he is now but what he's been that I'm thinkin' about," said the boy's mother. "You don't remember, as I do, how he worked here on the farm year after year, an' how willin' an' gentle he always was. You don't think of the time when your father had the mail contract, and old Prince traveled his 40 miles a day, week in an' week out, Summer an' Winter; or the day when the limb fell from the tree on the mountain road, an' knocked your father senseless in the bottom of the sleigh. How long would he ha' lived in that cold, and where would you or any of us be if Prince hadn't brought him home?"

Thad was idly kicking a hole in the sod with the toe of his heavy boot, and Azariah shifted the musket uneasily from his shoulder to the ground. The old lady went on:

"Father, old Prince has done his share to help us pay for the farm. He wouldn't owe us anything for board if he lived 50 years longer, but if he's got to be killed because you think we can't afford to keep him, I've got something to say. Here's $18. It's my butter money, an' I've been savin' it to carpet the parlor with, but never mind; I'll pay for Prince's keep while it lasts, and there'll be more when that's gone."

A crimson flush crept into the old man's sunburned face. "Stop, mother, stop!" he said. "I'm a selfish brute, an' I'm ashamed of myself, but I ain't so mean as that! Old Prince has earned the right to good fodder an' good care the rest of his life, as you say, an' he shall have it, if he lives to be a hundred! Thad, Az'riah, you go put him into the four-acre clover lot; an' if either of you ever pester me again 'bout killof him, I'll take one o' them new tug straps an' make you dance livelier'n Prince ever did when he was a four-year-old."—Youth's Companion.

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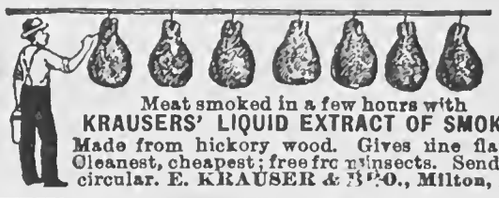
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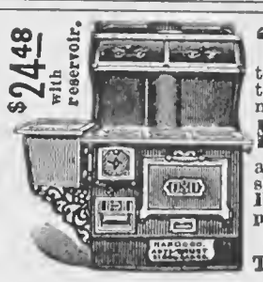

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MARKETS.

The Week's Quotations.

WHOLESALE PRICES.

NEW YORK, FEBRUARY 9, 1901.

GRAIN.—Wheat down one cent, and heavy selling by large holders. Corn weak, visible supply increased. Oats active. Rye and barley dull.

Wheat, No. 2, hard, N. Y.	79⅞	@	—
No. 1, Northern Duluth, spot..	86	@	—
No. 1, hard Duluth, spot	89⅜	@	—
Corn, No. 2, white, to arrive	47⅝	@	—
No. 2, yellow, to arrive	46⅝	@	—
Oats, No. 2, white, in elevator	32¼	@	32½
Rye, No. 2, Western, c. i. f., N. Y.	57½	@	58
State & Jersey, track	56	@	57
Barley, feeding, c. i. f., Buffalo.	48	@	51
Malting, c. i. f., Buffalo	62	@	71

BEANS.—Buyers show but little interest in domestic marrows. Red kidney dull and easy.

Marrow, choice, per bu	2 47½	@2	50
Marrow, fair to good	2 40	@2	45
Pea, bags, choice	2 25	@2	27½
Red kidney, choice	—	@2	35
White kidney, choice	2 60	@2	65

SEEDS.

Clover seed, N. Y., good to choice, bu	5 75	@6	30
Toledo, for M'ch delivery, bu.	7 20	@	—
Timothy, per 100 lb	4 65	@5	00
Red Top, lb	10½	@	—
Cottonseed, New Orleans, bulk, ton	13 00	@	—
Flaxseed, whole, cleaned	6 50	@7	00
Cottonseed meal, ton	25 75	@	—
Linseed oil, cake, ton	27 50	@	—
Meal, sacked	28 00	@28	50
Celery seed, lb	7	@	7¼
Hemp, Russian, lb	2¾	@	2⅞
Millet, lb	1⅞	@	2
Mustard, English, yellow, lb.	6¼	@	7
California, yellow	6	@	6¼
Rape, German, lb	3½	@	3⅝
Sunflower, lb	2⅜	@	2½

FEED.

Spring bran, 100-lb. sacks	17 25	@17	50
Winter bran, bulk	16 25	@18	75
Spring middlings, 200-lb. sacks	16 25	@19	75
Red Dog, to arrive	18 75	@	—

HAY AND STRAW.—Market dull and barely steady. Number 2 and clover mixed 2½ cents down. These quotations are for large bales. Small bales sell for 50 cents per ton less:

Hay, No. 1	87½	@	90
No. 2	82½	@	85
No. 3	75	@	77½
Clover	70	@	80
Clover, mixed	70	@	82½
Straw, rye, long	80	@	85
Oat	50	@	55

MILK.

New York Exchange price within 26-cent freight zone, 2¾ cents per quart.

BUTTER.—Market in good shape. Buyers active. Creamery unchanged from last week. State dairy firsts up one cent; also fresh western factory.

Creamery, extra	—	@	22
Firsts	20½	@	21½
Lower grades	16	@	17
June, extras	19	@	19½
June, firsts	18	@	18½
State, dairy, half-firkins, finest.	19	@	20
Half-firkins, firsts	17	@	18
Fall made, finest	16	@	17
Fall made, seconds	15	@	15½
West., imitation creamery, best.	17	@	17½
Lower grades	14	@	15
West., factory, June packed, fancy	13	@	13½
Fresh, fair to good	13½	@	14
Low grades	11	@	13
Renovated butter, fancy	17	@	18
Rolls, fresh, fair to choice	11	@	14

CHEESE.—Market a little excited owing to reported heavy operations by speculators.

State, small, Fall made, fancy..	—	@	12
Full cream, small, choice	11½	@	11¾
Full cream, large, choice	—	@	11
Large, common to fair	9½	@	10¼
Light skims, small, choice	8½	@	9

EGGS.—One cent up from last week. Receipts liberal, but cold weather in producing sections will materially lessen shipments for the next few days.

QUOTATIONS AT MARK.

State & Penna. prime	—	@	22
West'n, fresh-gathered, firsts	—	@	21½
Reg. packing, fair to good	—	@	20½
Ky. & Tenn., closely graded, f'y.	21	@	21½
Average, prime lots	21	@	—
Southern, fresh-gathered, fair to good	20	@	20½
Western, fresh-gath'ed, dirties.	18½	@	19
Refrigerator, early p'kd, good to choice	18	@	19

POTATOES.—Best Bermudas 50 cents barrel higher. State and western unchanged.

Bermuda, good to prime, bbl.	4 50	@5	50
No. 2, per bbl	3 00	@3	75
L. I., prime, in bulk	1 50	@1	87
State & Western, round, 180 lb.	1 50	@1	75
Long, 180 lb	1 50	@1	62
Jersey, prime, bbl	1 25	@1	62
Sweets, Vineland, cloth-top, bbl.	2 00	@2	50
Other Jersey, cloth-top, bbl.	1 75	@2	00

VEGETABLES.—Cabbage dull. Celery active. Tomatoes scarce and higher.

Onions, Conn. & L. I., white, bbl.	3 50	@6	00
Orange Co., white, bag	2 00	@4	50
Bermuda, crate	2 00	@2	25
Squash, marrow, bbl	1 00	@1	25
Hubbard, bbl	1 25	@1	50
Turnips, Canada, Russia, bbl	75	@	85
Celery	15	@	75
Egg plant, Fla., bbl	2 00	@4	00
Green peas, Fla., basket	1 00	@3	50
Spinach, Norfolk, bbl	75	@1	00
Carrots, old, bbl	60	@1	00
Cabbage, L. I., 100	3 00	@4	00
State, ton	13 00	@16	00
Tomatoes, Fla., carrier	1 00	@3	00
Parsley, Bermuda, box	75	@1	50
New Orleans, 100 bunches	3 00	@3	50
Cucumbers, Fla., crate	2 00	@3	00
Cauliflower, Fla., basket	2 50	@3	50

HOTHOUSE PRODUCTS.—Lettuce in fair demand. Cucumbers and mushrooms dull. Western asparagus firm.

Lettuce, choice 3½ to 4½ dozen to case, doz	75	@1	00
Cucumbers, fair to choice, doz.	1 50	@2	00
No. 2, doz	75	@1	25
Tomatoes, common to prime, lb.	20	@	30
Radishes, 100 bunches	1 50	@3	00
Mushrooms, lb	20	@	40
Asparagus, dozen bunches	—	@6	00
Rhubarb, dozen bunches	40	@	75

DRIED FRUITS.—Trade slow for evaporated apples, and cut prices reported on lower grades.

Apples, evaporated, fancy, lb.	6½	@	7
Evaporated, prime, per lb	4⅝	@	4¾
Evaporated, poor to good, lb.	3	@	4½
Sun-dried, State & Western, qrs., per lb	3¼	@	4¼
Raspberries, evaporated, 1900, lb.	19	@	20
Blackberries, 1900, per lb	6¼	@	6¾
Huckleberries, 1900, per lb	14½	@	15½
Cherries, 1900, per lb	15	@	16

GREEN FRUITS.—Apple receipts light, owing to cold weather. Some stock frosted, and sold at cut prices. Cranberries in light demand. Florida strawberries dull.

Apples, Newtown Pippin, bbl.	1 25	@4	00
Spitzenburg, per bbl	3 00	@5	00
Spy, State, per bbl	2 25	@3	50
Ben Davis, per bbl	2 25	@3	50
Baldwin, fancy, per d.-h. bbl.	3 00	@3	50
Baldwin, average, prime	2 25	@2	75
Greening, fancy, per bbl	2 50	@3	00
Greening, good to prime	2 25	@2	50
Winter sorts, poor to fair, per d.-h. bbl	1 50	@2	00
Grapes, W'n N. Y., Catawba, per small basket	8	@	12
W'n N. Y., Catawba, case	75	@1	25
Cranberries, Cape Cod, good to choice, per bbl	8 50	@9	50
Cape Cod, common to fair, bbl.	7 00	@8	00
Jersey, prime, per bbl	—	@7	50
Jersey, fair to extra, crate	2 00	@2	30
Strawberries, Fla., fair to fancy, per qt	25	@	40

LIVE STOCK.—Steers dull. Bulls and fat cows in good demand. Veal calves firm. Sheep and lambs steady for better grades. Others dull.

Native steers, per 100	4 50	@5	15
Bulls	3 00	@4	25
Fat cows	3 00	@4	00
Calves, choice veals	5 00	@8	75
Barnyards	3 00	@3	50
Sheep, common to prime	3 00	@4	50
Lambs	5 00	@5	90

COUNTRY-DRESSED MEATS.—Calves plenty and dull. Prime lambs scarce and higher.

Calves, veal, prime, per lb	—	@	11
Fair to good, per lb	10	@	10½
Small, per lb	6	@	7½
Fed, per lb	7	@	8
"Spring" lambs, fancy, each	11 00	@	—
Poor to prime	5 00	@10	00
Pork, light, per lb	7¼	@	8
Medium, per lb	6½	@	7
Roasting pigs, per lb	9	@	12
Pork tenderloins, fresh, per lb.	17	@	18

LIVE POULTRY.—Receipts light and prices up two cents. Fowls and fattened ducks and geese in best demand.

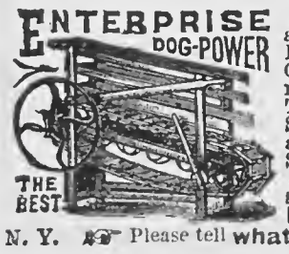
Fowls, per lb	—	@	11
Chickens, per lb	—	@	9
Roosters, per lb	—	@	7
Turkeys, per lb	9	@	10
Ducks, Western, per pair	60	@	90
Ducks, Southwestern, pair	50	@	70
Geese, per pair	1 25	@1	62
Pigeons, per pair	25	@	30

DRESSED POULTRY.—Weather favorable for trade. Light receipts and reported small shipments indicate better prices. Prime hen turkeys wanted for fancy trade.

Turkeys, W'n, young hens, fcy.	10½	@	11
Mixed hens and toms, prime	9	@	10
Western, old hens	—	@	9
W'n, young toms, prime	8	@	9
Old toms	—	@	8
Broilers, Winter, under 2 lb. to pair	30	@	—
Roast chick., Phila., selected, large	15	@	16
Roasting chick., Phila., medium grades	11	@	13
Chickens and fowls, W'n, mixed, average, best	9	@	10
Fowls, State & Pa., good to prime	9½	@	—
Ohio & Mich., fancy, scalded	9½	@	—
Old roosters, per lb	6	@	6½
Capons, Western, large	12½	@	13
Western, mixed weights	11	@	12
Ducks, Western, prime	12	@	12½
Geese, Western, prime	9	@	10

FURS AND SKINS.

Silver fox	50 00	@200	00
Red fox	1 75	@ 2	00
Gray fox	90	@ 1	00
Lynx	4 00	@ 6	00
Wild cat	50	@	60
Marten, dark	6 00	@ 10	00
Pale	3 00	@ 4	00
Skunk, black	1 30	@ 1	40
Half-striped	80	@	85
Long-striped	80	@	90
Striped	40	@	45
White	15	@	20



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	Regular Price.	Cut Price.
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12. Annals of Horticulture, 1892	1.00	.40
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100. Cooking Cauliflower	20	.10
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100. How to Plant a Place. Long	.20	.10
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80. Canning and Preserving. Young	.20	.10
100. Landscape Gardening. Long	.50	.25
50. The New Botany. Beal	.25	.10
100. Milk: Making and Marketing	.20	.10
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100. Chrysanthemum Culture. Paper Morton	.60	.20
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Market Briefs.

PICKED UP HERE AND THERE.

FEEDING A MULTITUDE.—In the tenement sections of New York, where as many as 2,000 people live in a single block, a new problem, how to distribute food enough so that all may get at it, comes up. It is easy to store in a small barn sufficient hay to winter 50 sheep, but suppose the flock is increased to 5,000, and there are no other storage buildings near and no places for haystacks? These people must be fed and clothed. Left to themselves their merchants have taken the common sense way of dividing up their goods into small quantities and selling them on the streets.

BACKWOODS AND CITY.—When a pioneer struck out into the wilderness the question of a market did not trouble him much. He had little to sell except skins from his hunting and trapping. He bought meat with powder and bullet; raised all the vegetables and grain needed for himself and family; and, unless attacked by disease, was independent of others. In thinly-settled sections where farmhouses are a mile or more apart, people are still to a large degree independent. In country towns they must buy nearly everything except the product of a chicken yard, a small garden and a cow. In larger towns the garden, chickens and cow are done away with, and everything is bought. In parts of great cities like the Fifth or Madison avenue residence districts of New York, houses are not crowded, and there is no difficulty in supplying them with food. The corner groceries and meat markets with their delivery wagons attend to this all right.

AN EAST-SIDE MARKET.—The Essex Market district below Grand Street is a good place to study this question. There is no large building with stalls in which the goods can be displayed. The sky is their roof, and their wares are arranged in carts or stands along the side of the streets. Within 10 blocks I counted over 600 carts, about 100 being baby carriages fixed over, revised and improved, in all degrees of repair or dilapidation. One had a box, and on top of this a second box loaded with two bushels of onions. Another held two crates of green peppers. Over 200 carts and stands were stocked with dry goods, comprising ready-made garments, second-hand linen collars, bolts of cotton and woolen cloth, and remnants and ribbons in tangled heaps. Also on some short blocks there are as many as 15 dry-goods and clothing stores. Bread and cake, fish, fruits, cheese and sausage are sold from these carts. Of course it cannot be expected that stuff left out of doors in this way, unprotected from the dirt of the street and hands of the buyer, should be clean. These people are not clean. How can they be, with their limited accommodations for washing?

HOW MARKETING IS DONE.—The common way is to go around with a basket here and there, picking out what is wanted. In one basket I saw bread, apples, potatoes and onions, and the woman was looking at some ribbons as a finisher. Another used her apron, in which was more than a peck of stuff, and she was ending up her purchases with a few eggs. I counted 125 fish peddlers. Their stock was in hand carts and boxes. One man had a novelty—live fish in a tub of water. When a customer came, he dipped the fish out with a basin having a perforated bottom, and weighed them thus. A customer stopped in front of a potato stand. He seemed in doubt as to the quality of the tubers, so the woman at the stand bit a piece out of one and invited him to do the same. A meat peddler had a lot of tripe in a washtub. Some of the tripe hung over the edges of the tub, and an old cat was vigorously chewing on one piece. Red peppers and onions are used in large quantities, and a man with a lot of garlic on a string around his neck goes about calling: "Plenty garlic! Plenty garlic!" As may be supposed, there are, in warm weather especially, odors superior in strength at least to attar of roses. One illustration will be enough. A garbage cart man brought out of a store a tub two-thirds full of rotten eggs, and poured them into the cart. People who have to live in such an atmosphere are wise to eat plenty of onions. One might think that, where so many people are crowded together, there would be a large number of fights, or at least quarrels, but there seems to be very little friction. People move around and run into each other, but take it good-naturedly. I saw one apple peddler whose cart was upset, but instead of getting wrathy he scratched around and picked up his stock without making any extra fuss.

W. W. H.

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Native Plums in Wisconsin.

PART II.

The fruiting season of the native plums may extend over a period of three months. The Aitkin, Cheney and Le Duc were the earliest, followed by the majority of the varieties mentioned, as well as many others, classed as mid-season plums. The Wyant follows these, and lasts until the late varieties of the Miner type come in, such as California, Champion, Decker's Seedling, Rose A., etc. Probably the most valuable lesson taught by the variety test is this fact, viz.: That every collection should contain a number of late varieties of this type. Long after the Americanas and Chicasaws were gone, the orchard was still reddened by the scattering trees of the varieties named. Later still than these to fruit were several trees of unknown origin, probably Myrobalan seedlings, that bore large quantities of small, bright red, shining fruits in the greatest abundance, that remained on the trees until heavy frost, and after being picked, they remained in good condition for several weeks. While the behavior of the named varieties has been a matter of great interest, the study of the seedlings has been intensely interesting and profitable work. Plums have been found in the seedling orchard excelling in many points any named variety in our collection. The most surprising fact in connection with the seedlings is the fact that the majority are good plums, as good as the parents, and a very large percentage are better than the parent varieties. In this connection the seed-bearing parent is meant, as all are undoubtedly crosses, the lack of self-fertility in the native plums having been quite fully demonstrated. Many of the seedlings showed strong evidence of a Japan cross; in fact, the best seedlings were Americana varieties with Abundance or Burbank markings. It would be unwise, however, to lay great stress on this, the first crop of the seedling trees, as further developments may necessitate a revision of opinions.

The orchards are mainly located on land that had been infested, for an indefinite period, with Quack grass. The extermination of this has proved one of the most difficult problems that we have been called on to solve. Partly on account of this pest, and partly for experiments in other directions, the main part of the orchards has been repeatedly and heavily mulched with marsh hay. There is no doubt as to the value of this method of culture, the mulched trees having made a remarkable growth of wood, as well as producing enormous crops of plums of excellent quality, while the trees not mulched made but little growth, and the plums borne were small and lacking in juiciness. The high degree of culture induced by this method possibly accounts, in a measure, for the excellent showing of the seedling orchard. It is probable that the experiment of mulching will be extended to include the entire plantation. The main objection to this plan is the danger from fire in dry weather. Four rows, 72 trees, of the new commercial orchard were destroyed by fire last Summer, and it was only by heroic efforts that the remainder was saved.

One of the faults of the native plums is the tendency of most varieties to overbear. In order to have fruit of good size and quality it is usually necessary to thin it. During the second week in July the fruit was thinned on all trees that appeared to be overbearing. At this time the plums were more than one-half grown, and the work probably could have been done earlier with greater profit. It is better, however, to thin late than not to thin at all. Of two trees of Hammer that were overlooked at the first thinning, and were breaking down with fruit, one was thinned September 1 after the fruit had begun to color; on September 15 a marked difference could be noted in the size of the plums in favor of the thinned fruits. The plums that were pulled off ripened on the ground, and were salable as "seconds."

The earlier plums were marketed in berry boxes, and the later in baskets holding one-sixth of a bushel. The berry boxes will probably be discarded in future in favor of the baskets. Only very choice plums suitable for dessert use can be sold in this shape for a price large enough to be profitable. The bulk of the crop was sold at $1.50 per bushel, wholesale prices, or 25 cents a basket. These sold at retail for 35 and 40 cents a basket. The price might as well have been held up to $2 a bushel, as the demand far exceeded the supply at all times. Early plums have not been in so great demand as the mid-season and late plums.

F. CRANEFIELD.
Wisconsin Experiment Station.

A TOUGH PROBLEM.—A subscriber sends us this little note: "I asked a man yesterday to subscribe for THE R. N.-Y. He said he did not take much stock in these papers; one of his neighbors wanted him to take one he liked, and gave him a sample. The first thing he read was how many kernels of corn to plant in a hill, and he had been planting corn for 50 years, and up went his nose. What can one do with such a man?" Keep right at him! Tell him the world needs his information, for he seems to know it all. It is no sign that a practice is right because a man has followed it for years! Age may fatten wrong!

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can be named in the single word—*dyspepsia*. It is the one disease, which more than any other, affects the American people. It is common to all classes and all conditions. It makes life miserable. It mars family happiness. It interferes with business and pleasure alike, and it discounts a man's usefulness just as much as it discounts his happiness.

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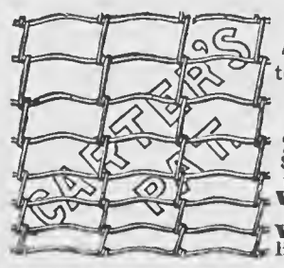

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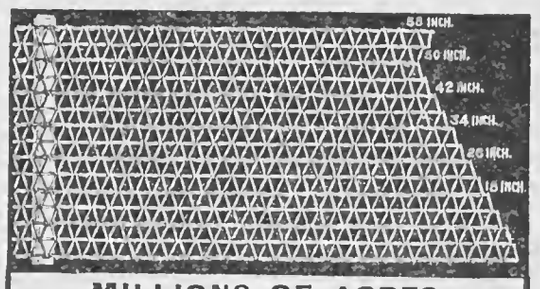

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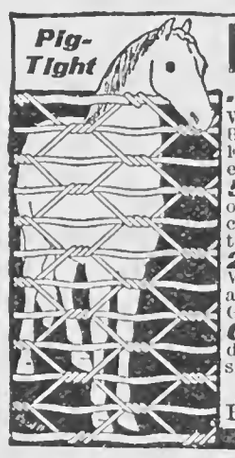

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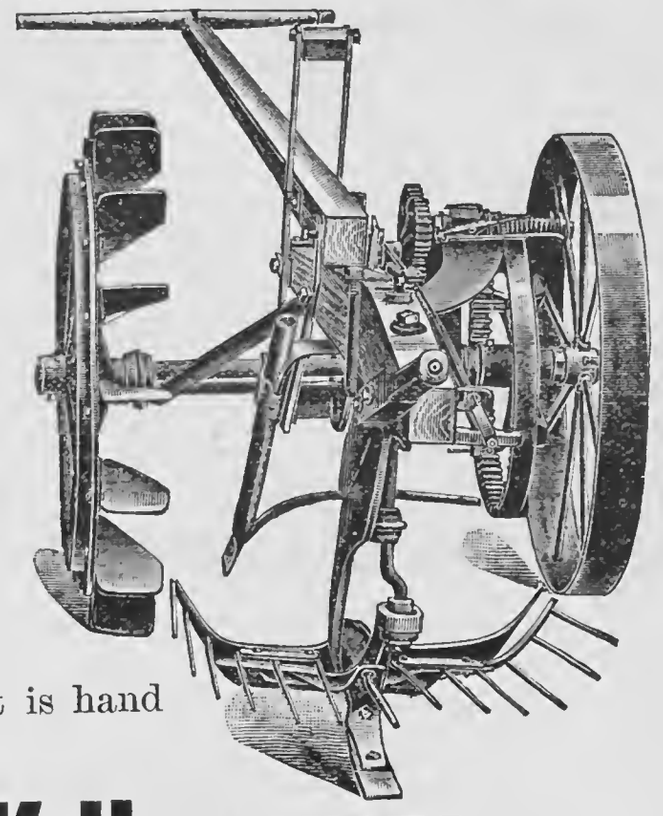

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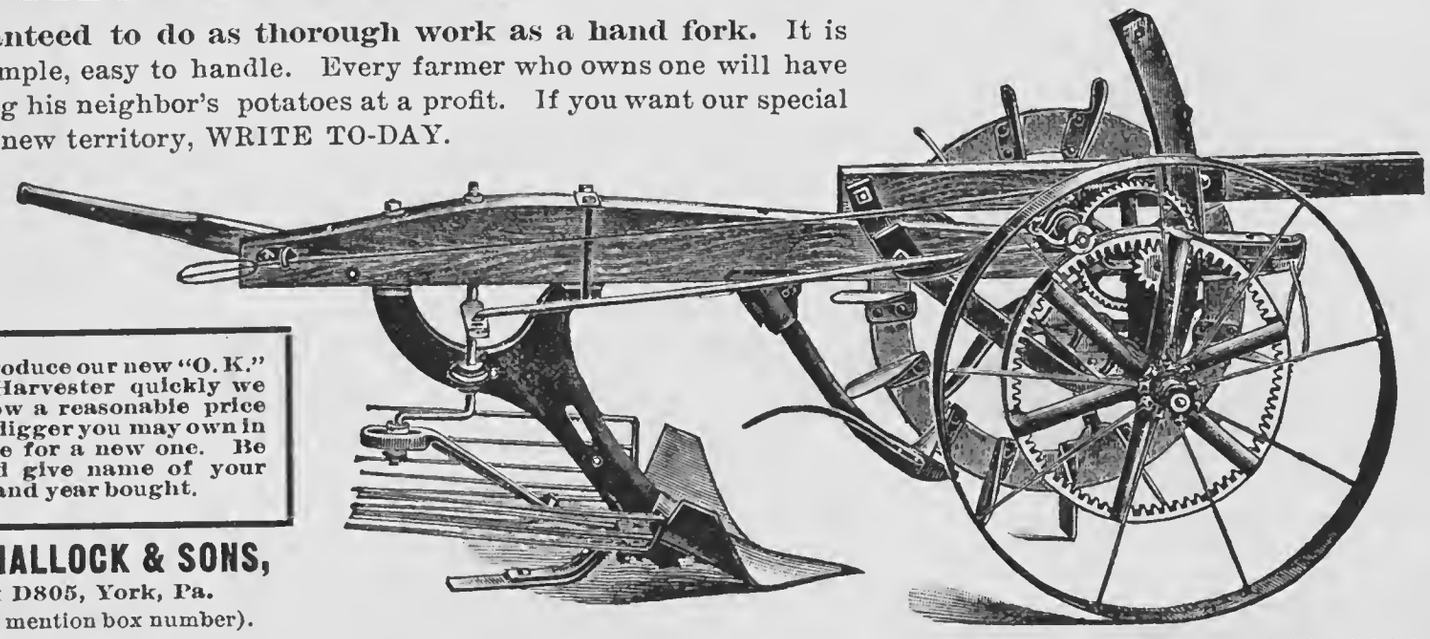

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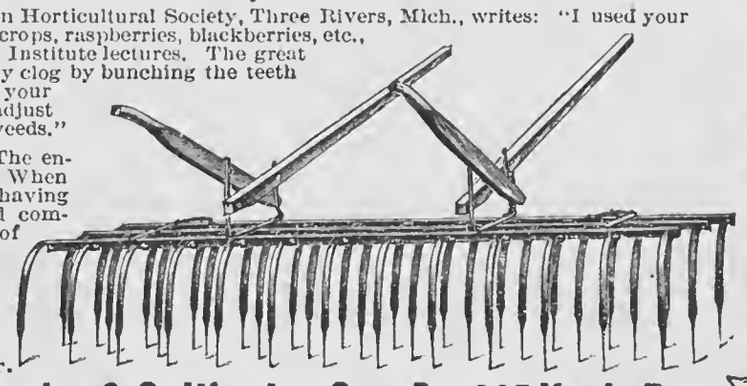

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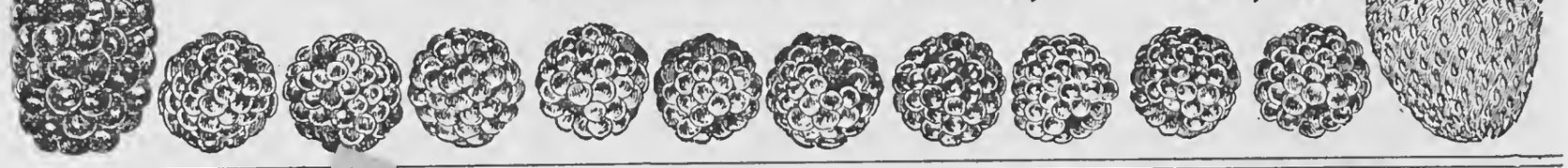

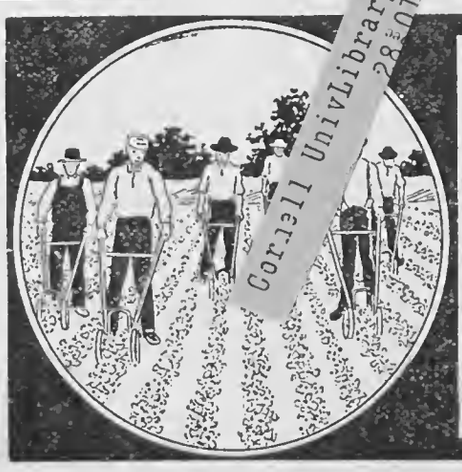

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2665. NEW YORK. FEBRUARY 23, 1901. $1 PER YEAR.

SAN JOSE SCALE AND CRUDE PETROLEUM

A GREAT INCREASE OF THE SCALE.

Facts About the Use of Petroleum.

SCALES INCREASING.—The demand for Bulletin No. 146, of the New Jersey Experiment Station, treating on the above subject, has been so great that the edition is completely exhausted. Since the work was published much additional information has come in, and a very large number of oil samples have been received from all parts of the eastern oil territory. In no previous year in my experience has the scale bred so rapidly, late in the Fall, as in 1900. Ordinarily, while breeding does not cease by the middle of October, it is so much lessened that the condition then existing may be fairly recorded as that in which the tree goes into the Winter. In October, 1900, larvæ swarmed in countless multitudes, and continued to increase, favored by the warm, dry weather, far into November. In fact on my experiment trees, larvæ were yet active far into December. The result is a much greater infestation and a greater spread than in previous years. As an example I may cite a peach grower in Hunterdon County, N. J., who offered $1 to anyone who could show him a scale in his orchard in August. In October he had no lack of infested trees, and in January he told me that the increase had been so great that he feared that many of the trees were doomed; so utterly coated with scale were they. A tree on my own place offered a similar example; only a little scaly in midsummer, it was not only coated in December, but the entire inner surface of the bark and bast was purplish red. Of course I might have checked this by timely spraying, but I preferred to let things go as 99 out of 100 fruit growers would do under similar circumstances.

SOME RESULTS.—As a result of this abnormal season many fruit growers did not get the results from spraying that they should have done. The inevitable few left-overs placed matters in much the same condition that they were the year before; a discouraging feature, to say the least. Those who successfully used crude oil were in much better position than those who used soap or other mixtures, provided the mixture was strong enough. For instance, in Hunterdon County, N. J., at an experience meeting, one grower informed me that he had used a 15-per-cent mechanical mixture in the Winter of 1899-1900, and had then, January, 1901, as much scale as he had the year before. The man sitting next to him had used a 25-per-cent mixture liberally and had practically no scale left. A correspondent from Lakeside, O., who has published his experience elsewhere, wrote in November that he had "used the kerowater sprayer, set for 25 per cent of crude oil, and sprayed from April 6 to April 20 at intervals, as weather would permit, on peach, plum, apple and pear trees. May 12 and 13 used 15 per cent of oil on above varieties of trees, and May 17 and 18 used 10 per cent of oil on peach, plum and apple trees with no bad results, except the loss of about one per cent of foliage on last dates. I am unable to find any live scale on trunks or large limbs, where 25 per cent of oil was used; but there were some spots on some trees that were not hit with the oil, and that left live scale to multiply; but they are all on these spots, and on this season's growth of outer branches. All trees treated with fish-oil soap, two pounds to the gallon of water, still have the scale scattered all through them, probably as many as before treatment with the soap. I have arrived at this conclusion after this year's experience: I can keep the scale in check at least, if not wholly eradicate it with crude petroleum at little expense; but with fish-oil soap we can spend all the money and time we have a mind to, and have the scale as long as we live. Think I am safe in saying we can kill more scale with $25 worth of crude petroleum than with 100 worth of fish-oil soap. My brother used undiluted oil on a block of two-year-old peach trees and it killed them."

THE BABY PRIMROSE (PRIMULA FORBESII). FIG. 48. SEE PAGE 128.

DIFFERENCE IN OIL.—The last sentence was not so satisfactory; but I secured, as the result of correspondence, 13 one-pint samples of Ohio crude oils, not one of which reached 40 degrees, while the majority ranged between 35 degrees and 37.5 degrees. All were black or dark oils, and none of them compared with the Pennsylvania or West Virginia green or amber oils in fluidity. They were unfit for use undiluted; but can be safely used in a 25-per-cent mixture. Of course, when my bulletin No. 138, which was followed by these gentlemen, was published, neither I nor anyone else had any idea how important for its effects upon the tree was the specific gravity of the oil. From Martinsburg, W. Va., I heard in December: "I advised the test here on the Janney orchard, which was the worst infested. They have showered it with crude oil, have checked the scale and hurt no tree. Where the work was thorough the scale was eradicated."

A correspondent writing from Hammonton, in south Jersey, late in November, stated that he had used five barrels of crude oil the previous Winter, undiluted, and mostly on Bartlett pear trees in February. "I did not harm a single pear tree; but think it improved their growth, especially in one young orchard, that has not been growing as well as I thought it ought to under the cultivation that I have been giving it for three or four years. Last Summer the trees made the most growth of any season. We were told here four or five years ago by a young man traveling through the country lecturing on the scale, that the San José scale would not move over one inch in the whole Summer season. One year ago last Winter (1898-'99) when I went over my pear orchard, trimming and cutting out dead wood, I watched for scale, and did not find above a dozen trees that were infested, and those I treated with potash whale-oil soap. Last Winter (1899-1900) when I went over them again, I was greatly surprised to see the rapid progress they had made in one year. Many of the trees were literally covered, and they had scattered all over the orchard of about 1,200 trees to such an extent that it was not safe to undertake to pick them out, but to spray thoroughly; I holding the nozzle myself. I only made one application, and now find but very few scale. I painted a few peach trees with some of the same petroleum that I sprayed the pear trees with, and it killed several of the trees. Mr. G. tells me he painted his young peach trees with crude petroleum and did not kill a tree."

I obtained from Mr. G. a report of his proceedings as follows: "Herewith I send inclosed two pictures of peach trees. No. 1 will be two years from the nursery, in my orchard of 200 trees set November 22, 1898; treated last Winter with crude petroleum by brush and brushed thoroughly. No. 2 is one-year-old, cut back to a stick set last November, was treated at the same time and in the same way. The branch on the right is seven feet long and was pinched to retard growth." I secured a sample of the oil that had killed the peach trees mentioned in the first report, and found it decidedly below requirements as to specific gravity; but as it had been standing for almost a year it may have lost by evaporation. These reports from the same place, on applications made in apparently the same way, with opposite results, are confusing, and point to the possibility of factors not yet known, which influence the action of the oil. Reports

of good and bad results should therefore be as detailed as possible, that the reason for such results may be determined.

SOME GOOD RESULTS.—There is danger when a man is too successful, as was a correspondent in Swedesboro, N. J.; he wrote in December: "My experience was, wherever I used it last Spring there was a marked difference in the vigor of the tree. The foliage acquired a dark green, observable at quite a distance, and which difference was greater as months passed by. It did not cease there; but the fruit gave an equal response. It is true that the oil was applied so late that the buds were in some cases injured, thus causing a smaller number of fruit to remain on the tree than there would have, otherwise; still, in no case were the trees so healthful and the fruit so good as where they were sprayed. I finished trimming my peach trees to-day, and my attention has been continually called to the marked difference in the quantity and vigor of fruit buds, and also healthy fruit spurs. From my experience for peaches I think that the oil should be used in February." My difficulty with this man is to prevent him from oiling everything he has on the place, irrespective of whether there is scale or not. Nevertheless his conclusion concerning the time for treating peaches is nearly correct. February or early March is the best time. Finally comes a New York experience, from Poughkeepsie, dated December 14: "I used 250 gallons of crude oil last April, 20 per cent to 25 per cent, with kerowater pump, on 1,000 apple trees 10 to 17 years old, large and thrifty, without harming a single twig. A wholesale slaughter of scale followed, and there is certainly not one-tenth as much scale in my orchard as a year ago. Success depends upon careful distribution with the right nozzles, pumps and men. I used a double Vermorel with orifices a little enlarged, so as to do rapid work with large trees." Now a word further, concerning apples: Ordinarily they are resistant to applications of poisons; but with crude oil the results have in some cases been more unsatisfactory than with peaches. Some growers have killed certain varieties which with others have not been in the least harmed; while the varieties that one treated safely were fatally injured by another. Pears stand the oil with almost uniform safety.

ADVICE.—Crude petroleum is a new thing; it is an exceedingly effective insecticide, and in my own hands has been entirely safe on all kinds of trees. To fruit growers generally my advice is use it boldly but carefully. Never treat a tree that does not need it, and never waste the oil. If you are in the least doubtful concerning your oil, or the man who is to apply it, use it in a mechanical mixture. Personally, on all trees to be treated by myself, I would apply it undiluted. The 25-per-cent mixture has proved successful in so many hands that it seems almost as efficient as the undiluted oil, and I have no record of injury from such a mixture. It must be recollected, however, that it is the *oil* which is the killing agent. There must be oil enough to cover every part of the tree; the water serves merely to spread the same amount of oil over a greater surface. If you spray a pint of crude oil undiluted on one tree and two quarts of a 25-per-cent mechanical mixture on another of the same size, you have done exactly the same thing, and the results should be similar. If it needs a pint of oil to cover the tree well you must put that much on, either with or without water; otherwise you will not get the desired result. I admit that the average man can do more even work with two quarts than with one pint and will be less likely to put on an excess.

In using the mechanical mixture keep the pump going as steadily as possible, as at every pause there is a tendency for the oil and water to separate in the hose, in the pump and in the air chamber. Every new start is apt to be either clear oil followed by clear water, or the reverse. Hence, it is better to waste a little going from tree to tree than to stop down every time, and risk putting on too much oil or ineffective water. To oil buyers in the Southern States the caution as to grade of oil is especially addressed. A sample which has just reached me from Alabama has a specific gravity of only 32.5 degrees, and looks almost black, as if from an asphaltum base. The Texan gusher, which has been recently developed, produces an asphaltum-base oil and some of that may have got into the southern market. It may be good, but I know nothing of it, and it should be employed experimentally only. JOHN B. SMITH.

New Jersey Exp. Station.

POTATO SEED-BALLS.—I have been able to save some seed from Rural New-Yorker, Carman No. 2, and Sir Walter Raleigh potatoes. I had a piece of ground on which the snails ate up all the beans I planted, and was replanted to these potatoes mixed, as I had supposed my plantings were over. About 50 feet of the four rows were in the shade of large oak trees; 300 feet more of the rows received no shade. While many imperfect balls formed on the 300, only perfect balls were found under the shade of the trees; about a dozen fully developed ones. I have about 20 seedlings from these varieties grown last year; all show the true type. Some of them produced tubers the size of peas before the plants were three inches high in the seed pans. S. T. W.

Oregon.

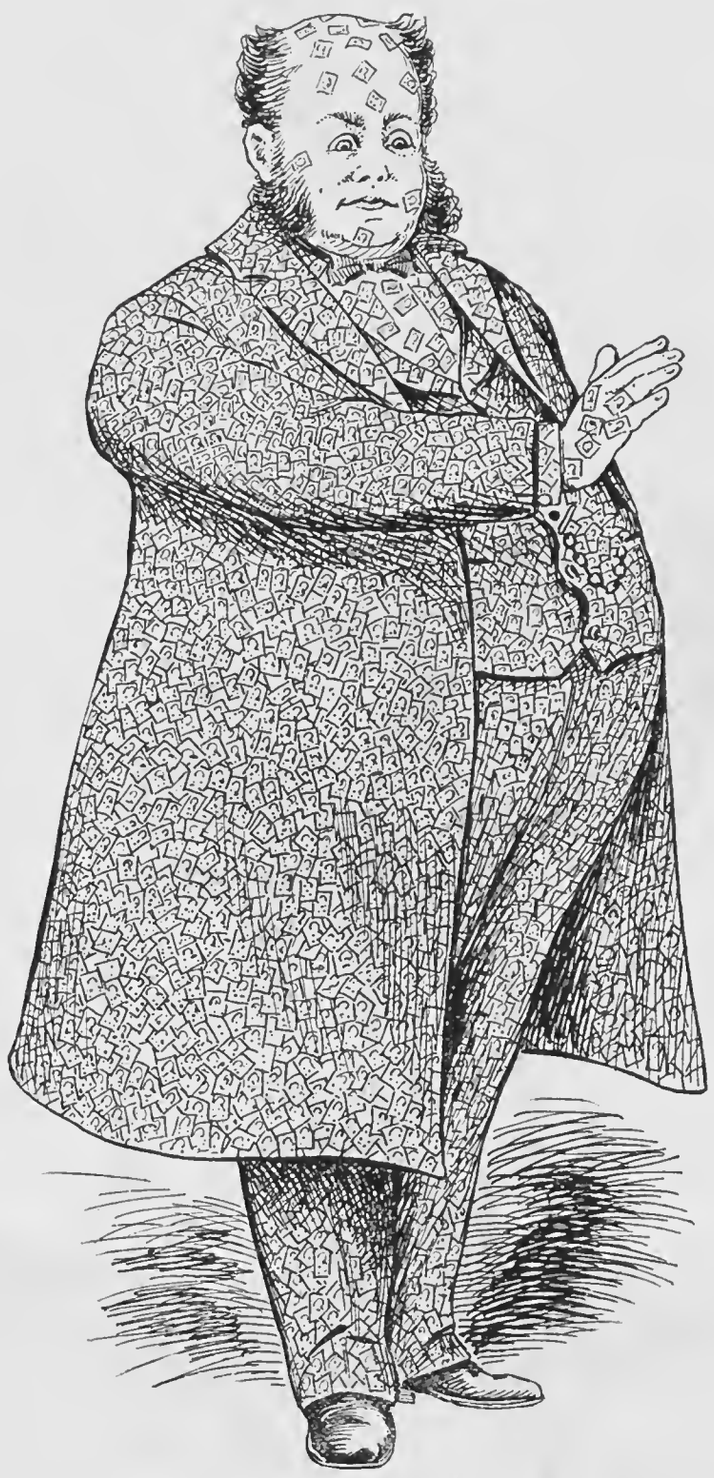
CLOVER FARMING.

MANAGEMENT OF CLOVER IN THE MISSISSIPPI VALLEY.

The Great Value of the Plant

PART I.

ITS HISTORY.—It would seem that clover as a feed and fertilizer has been discussed and experimented with so long, and over so wide a range of territory, that little new could be said about it. It was used in England nearly a hundred years before any of the cultivated grasses, and even then it was an old plant, having been used by the Greeks and Romans more than 2,000 years ago. I have been using it in my rotations for more than a quarter of a century in the Miami Valley. In that time we have tested Medium Red, Mammoth, Alsike, Crimson and Alfalfa, and have seen waste lands overrun with Melilot for miles around a farm of a German, who brought the seed from Germany 22 years ago. Of all these varieties we have found the common or Medium Red, the most satisfactory. It makes a liberal growth of top and root, and has a larger per cent of leaves and branching stems than any of the other varieties, excepting Alsike. It makes better hay than any other for this reason, and there is less waste in feeding. As a fertilizer it has no superior, since its chemical constituents are practically the same in all, and the Medium covers the ground more evenly than the Mammoth, but not so heavily when in full growth. It suits our rotation, of clover, corn and wheat, better than the Mammoth, as we use it for pasturing hogs, cattle and sheep, and for making hay and seed.



"THE BRAND OF THE POSTAGE STAMPS!"

How the average Senator looked after the honest-butter letters began to come from farmers.

The Mammoth makes a heavy growth, and if one has stock enough to pasture it evenly before the middle of June, and then allow it to mature the seed, it is a superior crop for increasing the fertility, as it shades the ground so long, and casts so many leaves to rot and favor nitrification, and with the stems and root-growth there is added an immense amount of vegetable matter, as much as is needed to turn under for any future crops in a rotation of three or four years. But it matures the seed so late that the weeds have matured seed, which fact makes clean farming more difficult than where we use Medium Red clover. The Medium Red is cut for hay in June, and the weeds of early Summer are destroyed, whereas the Mammoth cannot be so handled.

CLIPPING CLOVER.—To promote clean farming, and to increase the branching growth of the Medium Red it has been our custom since 1875 to run the mower over the wheat or barley stubble in August or September before weeds have had time to mature seed, after the grain had been harvested. The grass-board is taken off the mower, and it is set to cut within three or four inches of the ground. The weeds, stubble and clover tops are thus evenly spread and left as a mulch that adds to fertility. This process thickens up the clover, making it more branching, and cleaner for hay or pasture the coming season. As a rule, we never pasture the clover the first year, as our late Summer and early Fall is usually dry, and taxes the young clover on thin places. Occasionally, where wheat is cut late, and the weather hot and soil dry, young clover perishes on thin land. But this is rare, if the seed is sown early, and the land is in good condition. Where a soil is lacking in a sufficient supply of humus, it dries more readily and the young clover is short of moisture. Barley is the best crop for clover to follow, as it comes off in June, when we are likely to have showers. One good shower after harvest, will generally insure the young clover from damage, while a few days of intense heat and drought after wheat, rye or oat harvest will greatly damage the young clover. At such a time farmers are usually short of other pasture, and few can resist the temptation to turn all their stock into the stubble. They see their mistake the following Spring, if not sooner, when the clover has failed to survive the Winter.

TIME OF SOWING.—As to time of sowing clover I do not think there is any sure time, although it may be called a very reliable crop if good seed is sown on good soil any time between February and April. Early seeding favors deeper rooting before dry, hot weather. In fact, I have found that clover will grow at any time on good soil, where the supply of moisture is ample. The presence of plenty of moisture in early Spring makes this the most reliable time. It is with Red clover, as with Crimson, necessary to consider well the conditions of soil that favor germination and growth. I have sown Crimson clover at seven different times in the season, and find it a very sure crop, sown the latter part of June, as the soil moisture is then ample to favor germination and strong rooting. Common Red sown beside it does as well, whether sown in June, July, August or September, but sown later than August neither gets strong enough, even in very favorable seasons, to survive the Winter, and both are almost sure to fail if the season is dry and hot. Success with clover means a sufficiency of moisture.

SOIL MOISTURE NEEDED.—Because of the need of moisture we must put the ground in tilth to retain moisture. Farmers have so long trusted to getting the seed covered by the frost or rains that they have not given it as good a chance as they have their oats, wheat and barley. This trusting to nature to cover the seed has led to the custom of sowing only in the freezing and thawing season. Talking with a friend about my tests of Crimson clover and the prime requisite of success, he said that the same is true of our old friend, Red clover. He asked why we cannot sow Medium Red clover after we lay by corn, and have clover to turn under the next Spring. I told him that we can if we secure the moisture and then cover the clover seed. He has since tried it, and claims that clover thus tried is as sure a crop as wheat or barley. Just how deep clover will bear covering I do not know, but to get a stand in June or July it is as necessary to cover Medium Red as Crimson, and for the same reason. So valuable is clover for feed and improvement of soil, that we can afford to give the seed a better chance than is customary. Why our Medium Red clover does not grow as well in New Jersey, Delaware and other States where Crimson clover does well is, I suspect, partly due to shortage of moisture in the surface soil. We find it harder to get a good stand on soil that is so sandy that the surface dries quickly. On such soil harrowing with a Thomas harrow, and then rolling after seed is sown, secures a stand, where failure is almost certain without it. I think farmers too often expect too much of clover. They want it to grow and make rich land where wheat, barley, oats and even beans will not grow. Such soil is as truly wheat-sick and oat-sick as "clover-sick." If on such a soil wheat is secured, it follows fertilizing and thorough cultivation. To secure a stand of clover we can afford to give as much care to preparation for it as we give for wheat. L. N. BONHAM.

Butler Co., Ohio.

SOUTHERN VEGETABLES.—Of late years the business of raising early fruits and vegetables in the South for shipment to northern points in Winter and Spring has been on the increase, and it is probable that, if careful methods of marketing are used, the business might grow to much larger proportions without danger of overloading the northern markets. It has been found that farmers' associations in the South, when handled by men of common sense and business ability, have been a material help in solving the marketing problem. The main point seems to be to furnish good stuff and make connections with honest, hustling dealers in the distributing markets. Honesty and intelligent work at both ends of the line are necessary. Most of the failures may be traced to poor produce, faulty methods of packing, or lack of care in selecting selling agents in the North.

THE INDIVIDUALITY OF PLANTS.

The season of Spring planting is approaching; seeds and plants for the year's work must soon be obtained. Whence shall they come, and what shall they be? To select varieties possessing the characteristics which we seek, and which are adapted to our own conditions, is important. Something more is important. All plants of a variety are not alike. In vegetables and grains, which reproduce themselves from seed, there is constant intermingling of plant with plant, tending to induce variation in the offspring. With fruit plants, propagated by the bud in some form, it would seem that this tendency should not hold. If every plant of a given variety is in one sense a part of the parent seedling, separated from that parent, why should it not maintain all the characteristics of the parent? Observation shows that it does not do so. Plant substance is not unchangeable; it responds in greater or less degree to varying conditions of environment. The plant subjected to a dry climate must adapt itself to that climate or perish. Propagation from that plant carries with it something of the acquired characteristics. Scions from a tree growing in a soil so heavy and rich as to induce unfruitfulness may transmit something of that characteristic to a tree grown under better conditions. Heredity and variation, or the attempt of the plant to adapt itself to conditions, are thus two factors which may work in opposition. Improved conditions may improve inferior plants. Heredity will tend to prevent that improvement. Unite the two factors by selecting plants from a parent possessing the desired qualities and giving it better conditions and progress should be rapid, since the two forces act in unison instead of in opposition.

On the grounds of the Rhode Island Experiment Station, in the Summer of 1900, five plants of Kansas raspberry were selected as the fruit began to ripen. The plants chosen were the five most desirable ones in the field, so far as the eye could determine. A record of the fruit obtained from these plants was kept. One plant yielded 648 grams of fruit and another yielded 1,130 grams. On the plant which gave the lowest yield the fruit averaged 1.13 grams in weight; on the other plant it averaged 1.33, on a third, yielding 1,117 grams, the average weight was 1.43 grams. If such variations appear between plants chosen as the best it is evident that there must be much greater differences between the best and the poorest plants in the field. This difference may not all be due to the individuality of the plant, but much of it must be. Certain it is that everyone would rather have plants produced from the one which bore the higher yield of larger fruit than from the one which bore the lower yield of smaller fruit.

Reports of strawberry plants kept in 1899 showed equally marked variations. To illustrate, one plant of McKinley produced 239 grams, another 661, more than 2½ times as much. One plant of Glen Mary produced 286 grams, another 756, again more than 2½ times as much. One plant of Crescent produced 121 grams, another 601, nearly five times as much. Recent studies of the wilt disease of cotton, made in the South, show remarkable results in securing plants resistant to the disease by selecting seed from parents which resisted. Similar attempts to secure potato plants resistant to blight, made in Rhode Island, have shown less remarkable but decided results. The lesson from all this is obvious. To secure the best results the offspring of the best individuals should be planted. The poultryman or stock-breeder knows that breed in itself means little; he must know the pedigree and characteristics of the animal within that breed. Should the plant-grower do less?

FRED W. CARD.

ABOUT THE NEW STRAWBERRY CULTURE

Mr. Farmer's plan of "trenching in" his strawberry plants I fear might not answer if the early Summer happened to be very dry. I should not like to postpone setting for two or three weeks, even if my plants had a nice bunch of new roots, and after last year's experience I do not feel sure of these new roots starting out. After setting my piece I put out a number of hundreds in just the manner described by Mr. Farmer, expecting to use them for filling in after the White grub had dined. They were in fairly moist land, and stood up well, but when I examined the roots I was surprised, for there was little or no new growth. This was later in the season than Mr. Farmer would have kept them for setting out, being perhaps July 1 to July 10. I considered them worthless, and left them where they were the entire season. None died, and quite a number of runners were sent out, but, of course, nothing was expected in their crowded condition. I should have thought myself unfortunate indeed if I had been obliged to use such plants. I am quite sure air did not get among the roots, as the soil was pressed hard. I neglected to state that they were set out about May 23, which is a week or 10 days later than we usually finish setting. This may be of some importance, though I considered them at the time excellent plants. J. W. B.

Massachusetts.

DIGGING AND PITTING POTATOES.

The farmer who has several acres of potatoes to dig late in the Fall is often confronted with a scarcity of help. Sometimes an early freeze ruins a portion of the crop. Many potato growers plant late varieties about the first week in June. This allows the small tops to take on new growth after the Fall rains, and the tubers generally are larger, and of a

HERMAPHRODITE WHITE WYANDOTTE. Fig. 49.
See Page 133.

better quality. In this section late planting of late varieties usually insures a much larger yield. With good loamy soil, fairly fertile, and having good machinery to handle the business, potato growing is no more intricate or laborious than corn culture. Although some of our soil is a heavy clay loam, we have grown a good crop of potatoes on our farm each season for several years. Years ago we put in but a small patch each season for family use. But little attention was paid to keeping out all the weeds, and frequently the bugs would get the start of us. In fact, we used to secure three crops from one planting of seed potatoes—more potatoes, weeds and bugs. From several years' actual expericnce we find that the late varieties pay best on our farm, but as we dig late in the season it precludes the possibility of seeding the patch to wheat; and we doubt whether it would pay to sow rye, as the growth during the following Spring would be too small for plowing under for corn. Of course we do not plant potatoes on the same patch two seasons in succession.

When ready to dig last October, we arranged to expedite matters as much as possible. We used four horses abreast on the digger, and another team on the truck to distribute the empty crates to the pickers, and haul the crates of potatoes to the pits. We would not try to do without the bushel crates. We have a good supply added to from time to time, and use them for handling both corn and potatoes. The empty crates are distributed to the pickers from the truck in such a way that each picker finds one almost at his elbow when wanted. Each crate, when full, is left right where it stands; thus the pickers have little lifting to do while picking up. Two men load the truck

HARVESTING AND PITTING POTATOES. Fig. 50.

from each side as the team is driven through, and no full crate is carried more than a few feet before depositing on the truck platform. We put our potatoes in pits, made in the field. Our plan is to sell the crop late in the Fall to customers in our city. However, we pit the potatoes as though they were to be buried all Winter. The picture, Fig. 50, shows one pit filled and ready to cover with straw and earth. A good layer of straw, and about four inches of earth are put on each pit as soon as filled. No chances are taken by leaving the potatoes exposed, even a single night.

In order easily to keep a record of the number of bushels dug, we empty just 50 crates in each pit. We are particular about digging the pits, making a conical pile of the potatoes and properly covering them. Arrangements are made for ventilation in the top, and a flat board prevents water from running in during a storm. The ground about the pits must also allow good surface drainage. Fig. 50 shows just how we manage it. One team and two men, with the low-down platform truck and bushel crates, can store away potatoes as fast as the four-horse digger and 10 men can dig and pick up the potatoes. At such a time we work with a rush, and each man must do his full share so long as the job lasts. We enjoy such work. I drove the four-horse team, and dug the potatoes as fast as the team could walk. A dozen men could not keep up with the digger when everything worked smoothly. We have grown Carman No. 3 and R. N.-Y. No. 2 almost exclusively for several years. For the last three seasons we have sold our potatoes to private customers in Battle Creek, delivering in lots of five bushels or more, right at the customers' doors during a certain week, just before Winter sets in. Customers like to get their potatoes when they are laying in their regular Winter supplies for cold storage in the cellars. We believe in advertising, and, the week before we are ready to deliver we insert a small advertisement in one or two of the leading daily papers. We give variety and quality of the potatoes, guaranteed free from scab, and state the price and time of delivery at customers' doors. No single order is filled for less than five bushels. We could have disposed of twice our last season's crop here in the city at a good price. Orders for nearly 400 bushels were telephoned in the first two days.

Michigan. J. H. BROWN.

R. N.-Y.—The only excuse we have for printing an article on digging potatoes at this time is to show farmers how these pits are made. Now, while many potatoes are rotting or sprouting in warm cellars it is well to know how others manage. The best time to print an ice-house argument is in July.

PROF. I. P. ROBERTS AND THE SILO.

His Private Opinion Publicly Expressed.

Prof. Roberts is quoted as saying that if he did not have a silo he would not build one. I wish to know whether this is true, and if it is, what is the reason for the statements? What he would do without a silo?

Fair Haven, N. Y. F. S. N.

The recent statement by Prof. Roberts at a New York dairy meeting that having no silos one would raise silage corn, cut and wet it as fed, is what I want explained. Why does he recommend it? What facts has he in support of it? Our own practice is two cartlo ads cut corn stover, one cartload silage corn. Wet dry fodder with 15 to 18 gallons of water, then add silage and let stand about six hours or more. We do this on account of having only one silo, and many cows. The above quantity is for one day. I object to the time and cost of wetting.

Burton City, O. A. H.

At the recent meeting of the New York State Dairymen's Association, held at Watertown, I did say that if I were going into the dairy business personally I would not build a silo. The chairman of the association cut off the discussion almost immediately, and I was not allowed to explain this statement. It seems to have created quite an interest. As to the variety of corn to be used that was not correctly reported. Yes, I believe in the silo most thoroughly, but what I had in mind, but did not have an opportunity to express, was something like the following: I would run a dairy so that the products of it would not come into the fierce competition which now prevails in the sale of ordinary dairy goods. I suppose that with but few exceptions the milk of the State of New York does not average one cent per pound to the producer and to start an individual dairy in competition with milk at this price would, in my opinion, not be as wise, or as pleasant or as profitable as to produce dairy goods that, either in the form of milk, cream, butter or cheese, would not come into competition to any great extent with the great mass of dairy products put upon the market. I might say also that I have my particular private likings for a certain kind of cow, but if I should express my private opinion publicly I presume all the bulls of Bashan would be after me. If I were to go into the dairy business I would try to reach out for better quality, greater skill in marketing, and thus aim to escape the fierce competition. To do this I would cater to the wants and even the prejudices of those persons who have plenty of money and are willing to part with it if their special notions can be gratified. I would make the dairy stable as nice as are those of the Walker-Gordon Laboratory Company. I would have cows that give rich milk, or I would separate a part of the milk and fortify the other part so that the milk would contain anywhere from six to 10 per cent of butter fats. Those who are able to pay for fortified or rich milk do not care to buy three-per-cent milk. At least this is my experience. I would have the herd examined frequently, and I would display prominently a bill of health of the herd signed by some well-known veterinarian. I would have physicians visit my dairy. In brief, I would not feed silage because milk might be produced which would not reach the highest standard. I would aim to keep the air in the stable as pure and as free from taints of every kind as possible. I would do all these things because it would be more pleasant and I believe more profitable, to produce the highest possible class of goods, and seek the customers who have the disposition and money to pay a high price for them. If I were so situated that I could not reach this higher market and had to go on in competition with the million, then I would conduct a dairy on quite a different plan. I. P. ROBERTS.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Van Deman's Fruit Notes.

ALL SORTS OF QUESTIONS ANSWERED.

Stayman Apple; German Millet.

H. S., Lynchburg, Va.—1. Would you advise planting 500 Stayman apples instead of Winesap? Winesap does well here, but has so many small apples not fit for market; if the Stayman is larger I think it would take its place. 2. How many times can German millet be cut in one season, sown on good bottom land, if sown about June?

ANS.—1. Yes, I would not fear to plant Stayman instead of Winesap anywhere that the latter is a good variety, because there seems to have been sufficient experience with the two, side by side, in various places, to prove that the Stayman has all the good points of Winesap, and is larger in size of fruit, although some think the color is not quite so deep a red, and the tree is much better in style of growth. 2. Millet will make only one crop from the same seeding. It is strictly an annual plant.

Grafting English Walnuts.

H. B. S., Ohio.—Which of the native nut trees that are hardy in Ohio would make a suitable stock for grafting the English walnut? Is there a way of keeping nuts more than one year, so that they will taste fresh? Has the cold-storage plan been tried?

ANS.—None of them, unless it might be Black walnut or butternut. The Persian (English) walnut is quite tender in Ohio, and should a graft be made to grow it would probably soon die. The planting of nuts of some of the more hardy varieties of this species might prove somewhat successful. A few bearing trees are to be found in the Eastern States where these nuts might be obtained in the proper season. Yes, the cold-storage plan has been tried and found to work very well. The only objection is the cost of holding them so long. The eggs of the Chestnut weevil will not develop into worms under such conditions, and nuts of any kind will not become rancid if kept cold.

Fruits for Massachusetts.

C. H. P., Stockbridge, Mass.—I would like a select list of the best varieties of fruits for this section, for home use, to cover the season. Apples, six Summer, six Fall, 12 Winter; cherries, three sour, three sweet; plums, eight varieties; pears, six Summer and Fall, three Winter; grapes, two black, two white, two red; currants, two red, early and late, one white, one black; gooseberries, three varieties; peaches, two or three varieties; raspberries, three red, succession, three black, succession; blackberries, three succession; strawberries, three to six.

ANS.—The following will probably be a good list of apples for family use in Massachusetts: Summer, Early Harvest, Williams, Primate, Benoni, Fanny, Golden Sweet; Fall, Jefferis, Lowell, Fall Wine, Ramsdell, Ortley and Fall Pippin; Winter, Grimes, Jonathan, Sutton, Swaar, Esopus, Huntsman, R. I. Greening, Roxbury, Hubbardston, Tolman, Romanstem and Newtown Spitzenberg. Cherries: Sour, Richmond, Montmorency and English Morello; sweet, Choisey, Tartarian and Windsor. Peaches: Early Rivers, Elberta and Reeves. Plums: Clyman, Bradshaw, Imperial Gage, Golden Drop, Abundance, Burbank, Wickson and Hale. Pears: Tyson, Madeleine, Howell, Belle Lucrative, Bartlett, Sheldon, Lawrence, Easter and Nelis. Grapes: Black, Campbell, Concord; white, Winchell, Niagara; red, Delaware, Brighton. Currants: Fay, Wilder, White Imperial, Black Naples. Gooseberries: Houghton, Downing, Raspberries: Red, Miller, Loudon and Columbian; black, Conrath, Kansas and Cumberland. Blackberries: Early Harvest, Eldorado and Minnewaska. Strawberries: Tennessee, Carrie, Warfield, Clyde, Glen Mary and Gandy. The above lists are not declared to be perfect in every respect, but the varieties named are among the very good ones for both quality and reliable bearing, although not the heaviest bearers in all cases.

Lime Spray for Peach Trees.

F. B., Covington, Ind.—Will you give the formula for lime spray for retarding the bloom on peach trees; also, when to apply it for best results?

ANS.—Five to 10 pounds of good fresh lime to a barrel of water will make a mixture of sufficient strength to whiten the branches. About March is the time to do the spraying, as the whitewash is likely to be washed off by rains, and the later it can be done to prevent the starting of the buds the better.

Peach Questions.

G. Y. H., Romulus, N. Y.—Will peaches grow on persimmon stock with good success? Are the quality and color of the Arctic peach good? Do you know anything about the Markham peach?

ANS.—No, there is not the slightest possibility of peach buds or grafts growing on persimmon stocks. The Arctic peach is a variety I never saw, and do not know of the existence of it. Nor do I know anything of a variety called Markham. It would be well to look very carefully into any statements that may be made by anyone who may be offering to sell varieties of the peach under these names.

Trellised Fruit Trees.

A. L. J., Idaho.—Can you tell me whether, in Idaho, apples and pears can be grown on each side of a path, to form a hedge, trellised to grow horizontally? High winds and late frosts make fruit growing very difficult on the plains. Is it likely to be more successful if the branches are trained horizontally?

ANS.—I do not know where the writer lives in Idaho, but as I have been about all over that State within the last month and in many orchards of the apple, pear, peach, plum, etc., I have failed to see where they could not be grown with as much success in the ordinary way as elsewhere in the United States. On the plains of the great Snake River Valley there are many orchards near the middle of it, and I have not seen one that was not successful, except that I have been told that late frosts sometimes injure the blooms. The winds are sometimes strong in the Summer, but not to a destructive extent. An arbor of trees as suggested would be of little value, I believe, and usually needless. But one might be made by careful training if it was desired, by simply tying the young branches to a trellis.

Budded or Grafted Apple Trees.

G. H. A., Dover, Del.—Will you give us the truth about grafted and budded apple trees? The itinerant tree peddler is making his rounds, seeking whom he may devour. In trying to hook the writer he made the statement that he would rather pay $1 per tree for budded trees than take grafted trees as a gift. We contended that there was no material difference, and if both were well grown would as soon plant one as the other. Who is right, and why?

ANS.—So far as I have ever tried, or seen others try both budded and grafted apple trees I know of no material difference in favor of either. There are too many millions of root-grafted trees in successful bearing to warrant the statement that they are not good. The argument has been advanced that in the central and western States there are very many of the young trees which have been propagated by grafting that are now failing while yet quite young. This is true, and it is from climatic causes. They bear earlier and much more heavily than in the East. Budded trees are doing the same, and show equal signs of early death or failure. I am at this time in western Washington, and have just been in Idaho and Oregon, where these conditions prevail, and know from observation on the ground, and I have often seen the same elsewhere.

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ASPARAGUS ROOTS—1 and 2 year. Millions of them. Five best kinds. Vineland Bush Sweet Potato. A true Jersey Yellow Sweet Potato without vine. All other Vegetable Plants in season. I. & J. L. LEONARD, Iona, N. J.

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Hardy sorts, Nursery grown, for windbreaks, ornament and hedges. Prepaid, $1 to $10 per 100—50 Great Bargains to select from. Write at once for free Catalogue and Bargain Sheet. Local Agents wanted.
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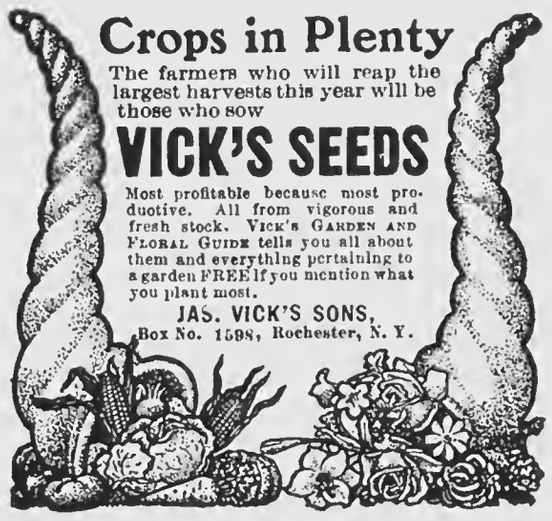

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JOHNSON & STOKES, SEEDSMEN, PHILADELPHIA, PA.

Crops in Plum and Cherry Orchard

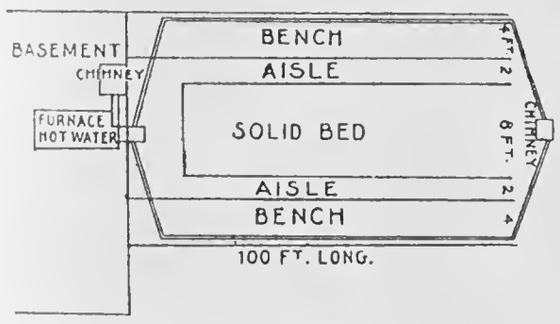
J. W. H., Payne's Depot, Ky.—I have a young plum and cherry orchard set in 1898, where I have cultivated strawberries between trees for two years. The trees have not borne any fruit yet, and are now in a sod of berry vines and grass. What is the best cultivation for a crop of plums and cherries, the crop between rows of trees being a secondary consideration? I have intended, unless advised otherwise, to plow the vines and grass under this Spring and cultivate in corn or potatoes. The trees were not cultivated last year after berry harvest (June), but made enough growth without it, and being in strong soil would make good growth this year, but whether they will make a crop next year without any cultivation I don't know. How shall I manage it for best results in fruit?

ANS.—The plan that I would follow would be to plow shallow early next Spring, and thoroughly cultivate the land all Summer. If the ground is rich enough to produce a good crop of potatoes without injuring the trees it might be as well to plant it as not to do so, but the cropping of orchards of any kind when the trees have attained bearing age is questionable. It would be little loss to omit the potatoes, and might be a decided advantage to the prospective crop of plums and cherries.

Greenhouse Heating.

M. T. W., Sandy Hill, N. Y.—I have a greenhouse 20x100 feet, even span, now heated by hot water; this is not satisfactory, and I want more heat. Will vitrified tile, laid as indicated by double line in Fig. 52, prove satisfactory? I wish to retain the present hot water system and save the heat that escapes now through chimney by carrying smoke through tile under the benches to the opposite end of greenhouse. Is it practicable? How high and of what diameter should the smokestack be? Would tile on one side only of larger caliber (eight-inch) be better than two lines of six-inch as shown in Fig. 52? Practical information is much desired. Should they be laid on the ground or board, or supported above ground, to allow circulation of air around them?

ANS.—It is quite practicable to conduct the smoke and heated gases of combustion through tile to the farther end of greenhouse and thus secure more heating surface. One eight or even 10-inch tile laid on cold side of house would be much more effective than two six-inch tiles, which would soon choke up and cause irregular draft. The stack



TILE FLUES IN GREENHOUSE. FIG. 52.

should be at least 12 feet high to insure a good draft in a 100-foot house, and should have an inside area somewhat greater than the tile. The tile is best laid on an inclined plank supported by brick or stone piers. There should be a rise of at least three feet to the 100, from furnace to junction at chimney.

Cover Crops in Cold Countries.

F. H. A., Oakland, Me.—I have seen in your paper and others a good deal said about cover crops. Away up north here in Maine the ground is usually covered with snow from six to eight months of the year; will your so-called cover crops be of any benefit to us? If so, how are we going to get them? We usually get our harvesting done by the middle of October, and the ground freezes up by the middle of November.

ANS.—If we could be *sure* of snow for the length of time mentioned, there would be less reason for a cover crop than exists in fact. Not infrequently, however, the Winter snow cover is delayed until after January 1, when the ground may be frozen to a depth of two feet. The period of alternate freezing and thawing previous to the snowfall, and again in April, should also be provided for. Our own practice at the Experiment Station is to sow Winter rye, from about August 15 to September 1, and thus secure a heavy mat of leaves before the ground freezes. This again starts vigorously in the Spring, aids in drying out the soil, and when turned under about the middle of May, materially improves the soil texture. The best orchardists in Maine are coming more and more to recognize the benefits of spraying, tillage and cover crops.

Maine Exp. Station. W. M. MUNSON.

Black Beetles on Strawberry Plant.

Reader (No Address).—A small black flea beetle comes on my strawberry plants during the latter part of July. It punctures holes through the leaves, entirely destroying the plants, or weakening them so much that they make only a feeble growth. Is this what is called the Strawberry crown-borer? If so, what is the best remedy?

ANS.—Probably the beetles were not the adults of the grub known as the Strawberry crown-borer, for these beetles usually emerge and feed in August and later; they are unable to fly. But the beetles of one of the Strawberry root-worms are black and work on the foliage in July, often doing much damage; as their grubs feed on the fibrous roots of the plant, the combined work of the beetles and grubs would often result in killing the plants. This Strawberry root-worm is a difficult insect to control, on account of the underground habits of the grubs. Badly-infested fields should be plowed up soon after the crop is gathered. Old unused strawberry beds should not be left as breeding grounds for the pest. New beds should not be set with plants grown in infested beds. If the beetles are killed in July or August it will prevent their laying eggs for a crop of grubs to work the next season. It is said that thorough work with a Paris-green or other poisonous spray, beginning as soon as the fruit is picked, and making applications every week or 10 days as long as any beetles are to be seen, will greatly reduce the crop of beetles, and thus do much to control the pest for the next season.

M. V. SLINGERLAND.

Treatment for Potato Scab; Crimson Clover.

H. N. T., Providence, R. I.—What is the formalin, and what the sulphur treatment for potatoes? How much Crimson clover seed to the acre?

ANS.—Formalin is a liquid. Mix at the rate of half a pint in 15 gallons of water. Rinse the dirt off the potatoes, and then soak them in this mixture for an hour and a half. Then dry and cut. The object of this is to destroy the germs of the scab—which is a disease. The "sulphur treatment" consists in dusting dry flowers of sulphur over the pieces as the seed potatoes are cut. We cut into peach baskets, and scatter a handful of the sulphur over the cut pieces, shaking it well down. The sulphur not only kills many of the scab germs, but seems to preserve the seed, especially in cold, damp seasons when there is danger of rotting. We use 15 pounds of Crimson clover seed per acre.

CHEMICALS FOR FRUIT.—We are often asked whether there is any better mixture of chemicals than ground bone and potash for fruit trees. Where the soil is cultivated thoroughly three parts fine bone and one part muriate or sulphate of potash will answer. This is the simplest mixture, but not always cheapest and best. With old trees, especially where they stand in sod, one part nitrate of soda, one part bone, two parts dissolved rock and one part of muriate or sulphate will give better results. The nitrate is at once soluble, and will soak down below the grass. So will the potash and the phosphoric acid in the rock.

PEAR BLIGHT.—The reference in THE R. N.-Y. on page 73 to Pear blight as discussed at the Rochester meeting of Western N. Y. Horticultural Society should have been as follows: Prof. Johnson stated that the various diseases of the pear and other fruit trees were being studied in Maryland by Prof. C. O. Townsend, State Pathologist, and that an experiment had been made on his place with cotton and a two-per-cent solution of formalin upon a certain blighted pear tree, with, apparently, good results. While the experiments were not complete, he thought the results were promising, and that more conclusive information would soon follow Prof. Townsend's work.

For the land's sake, use Bowker's Fertilizers. They enrich the earth.—*Adv.*

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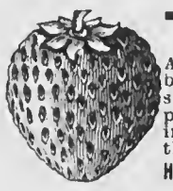

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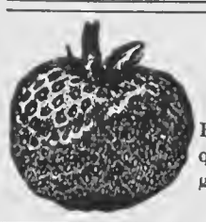

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SOLUBLE FERTILIZER SCIENCE.

How to Estimate Values.

Reader, Tioga Co., Pa.—A good many people are scanning the fertilizer catalogues with a considerable degree of interest, and those of us who used freely of them during the late drought, to no perceptible benefit, are alive to the word *interest*. Possibly, and very probably, we were not as intelligent buyers as it is possible for THE R. N.-Y. to make us. Hence, some questions. Years ago the formula was something like this: Nitrogen, two to three per cent; phosphoric acid, four to five per cent; potash, four to five per cent. At present the word "ammonia" has replaced the word nitrogen. When nitrogen is worth say, 15 cents per pound, what valuation shall we put on ammonia? Then we have the words "reverted" and "insoluble" as additions. When phosphoric acid is worth five cents per pound, what valuation shall we place on insoluble and reverted? The same answer is requested for potash. I have in my possession two formulas, one priced at $36 per ton and the other at $47.50; $11.50 per ton difference in selling price, and yet I could not find but about $6 difference in constituents. Can you give a good reason for this? A very much exploited $40 fertilizer of another company contained only $22.50 of value—said to be "as good or better than Mapes." I took the Mapes, and still am asking questions, as what I know would not fill a very large pamphlet.

ANS.—In its natural state nitrogen is a gas. It does not combine well with most other substances. Thus it makes the powerful or "kicking" part of most explosives, as it gets away from a combination as quickly as possible. In fertilizers it must be combined with other substances in order to be useful, and "ammonia" is a combination of nitrogen with another gas called hydrogen. The hydrogen hangs on to the nitrogen and holds it in place and form. It takes three parts of hydrogen to hold one part of nitrogen, and this proportion is always found in ammonia. Nitrogen weighs 14 times as much as hydrogen. Therefore, in one pound of ammonia there will be fourteen-seventeenths, 82.35 per cent, or 13.17 ounces of nitrogen. You should never buy fertilizer on the basis of its ammonia, but figure out the actual nitrogen. When nitrogen is worth 15 cents a pound, or .938 cent an ounce, a pound of ammonia containing 13.17 ounces of nitrogen is worth 12.35 cents, or fourteen-seventeenths of 15. There are three forms of phosphoric acid. The insoluble form is combined with lime in the proportion of three parts of lime to one of phosphoric acid. When sulphuric acid is added to the finely-ground insoluble phosphate it is "broken up"—that is, two parts of the lime are taken away by the acid, leaving only one part of lime to each part of phosphoric acid. In this form the phosphoric acid is soluble in water. When this soluble acid is put in the ground or near lime, it takes up another part of lime, making two for each part of phosphoric acid. This is called the "reverted" form. It is not soluble in water, but will dissolve in weak vinegar, which represents about the strength of the acids secreted by the roots of growing plants. In estimating the value of a fertilizer "soluble" and "reverted" are considered equal in value, and are called "available." In Pennsylvania, the chemists consider the "insoluble" phosphate worth two cents a pound. The rule in New England, New Jersey and New York is to figure only on the available phosphoric acid, and not consider the insoluble part.

The various forms of potash are all soluble in water. They differ in value somewhat, the basis of this difference being the fact that they do or do not contain a substance known as chlorine. This chlorine is a part of common salt, and when there is a certain amount of it present the chemist concludes that the potash comes in the form of muriate or kainit, both of which contain more or less salt and are not considered so good for crops like potatoes, beets or strawberries. The potash in these forms is considered worth half a cent less per pound than that in the sulphate or in wood ashes. Of course we must understand that it is not a mere statement of analysis that gives true value to a fertilizer. The different kinds or forms of nitrogen differ greatly in value. One man might use a large quantity of tankage or ground fish, and get a high per cent of nitrogen, but his fertilizer would not be worth nearly as much as another with the same per cent of nitrogen obtained by a mixture of nitrate of soda, bone, tankage, cotton-seed meal and sulphate of ammonia. In the case mentioned, of course we cannot say definitely without knowing how much of the nitrogen was from nitrates. Chemists are now giving these analyses, so that this point is made quite clear.

What Field for Alfalfa.

B., Cobleskill, N. Y.—We have two pieces of land plowed, each containing about five acres, and upon one we would like to sow Alfalfa; one piece is rather low and half surrounded by a brook, though not wet, and is of a mixed soil—a spot of black loam, a sandy streak, another of yellow clay, and so on. The other field is an ordinary dark soil, not very heavy nor yet light; upland, and facing the north. Which would be the better place for Alfalfa?

ANS.—If the hill field is in good condition we should prefer it for Alfalfa. This plant does not like "wet feet," and the field lying near the brook would be likely to prove too wet from overflow, or because the water is near the surface.

Planting Locusts for Posts.

R. S., Long Island.—Next Spring I wish to plant an acre of locust for posts. Will you advise me which is better to plant, the Yellow or Black locust? I have some White locust which the borers trouble badly. Would Yellow or Black locust be exempt from borers?

ANS.—The Black, Yellow and White locusts are merely varieties or forms of the same species, Robinia pseudacacia. The black and yellow forms are considered most resistant and are usually found in the driest places. If seeds or suckers can be had from these dark and dense-wooded types they would naturally be preferred for planting. All varieties of the common locust are attacked by borers, and a multitude of insect enemies. The Honey locust, Gleditschia triacanthos, is not troubled by insects to so great an extent as the Robinia, but is much inferior in lasting qualities as fence material.

Some Varieties of Gooseberries.

N. T., Carrollton, Ill.—What do you think about the following gooseberries, Keepsake, Industry, Red Jacket and Pearl? My soil is a deep rich loam with a clay subsoil. I have now Downing and Houghton, but I would like to have something larger. What do you think of Red Cross currant? Is it better than Cherry?

ANS.—Keepsake is one of the most promising European varieties for extensive trials in this country. It has only been offered here within the last few years, but has given evidence of suitability to our climate. The bush is vigorous and prolific, and the berries very large, and of tolerable quality. We have not heard of any commercial trials of the Keepsake. Industry bears fine red fruits of good quality, but as a rule is a feeble grower, except in a few favorable localities. Most of the bushes planted within the past 10 years are either dead or but little larger than when set out. Red Jacket or Josselyn is vigorous and prolific, fruit of fair size and quality, but the habit is too sprawling for an ideal gooseberry. Pearl is generally vigorous and wonderfully prolific. The berries are larger than Downing, and of good cooking quality. We would rather plant it for profit than any of the other varieties mentioned. We have seen no evidence to prove that Red Cross is a better market currant than Cherry. It is lighter in color, milder in flavor, and somewhat later in ripening, but otherwise the difference is not marked.

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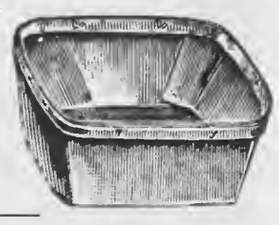
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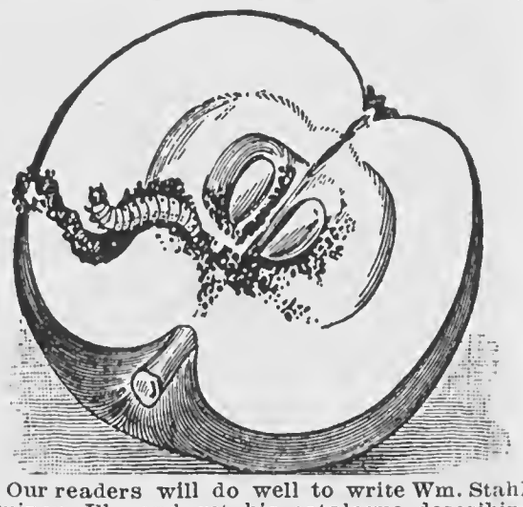
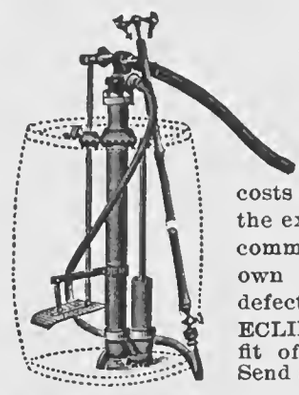
The question of spraying fruit trees to prevent the depredations of insect pests and fungous diseases is no longer an experiment but a necessity.

Our readers will do well to write Wm. Stahl, Quincy, Ill, and get his catalogue describing 21 styles of Spraying Outfits and full treatise on spraying the different fruit and vegetable crops, which contains much valuable information, and may be had for the asking.

Buy a Good Spray Pump

—don't experiment—costs money. We have done the experimenting—used the common spray pumps in our own orchards, noted their defects—then invented the ECLIPSE. You get the benefit of our experience free. Send at once for catalogue.
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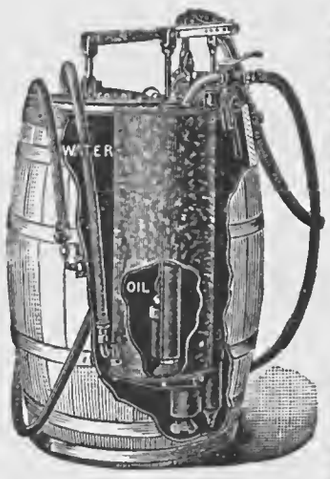

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HOPE FARM NOTES.

WIND POWER.—After 18 months of work, I am very well satisfied with our windmill and pump. Our wind records are not complete, but I do not think there have been a dozen days in all that time without wind enough for at least a few hours of pumping. Our tank has never been empty except when we cleaned it out, and there has been a constant supply of cold water at the barn and hot and cold water at the house. A reader wishes to know why we did not put up a power mill while we were about it, and thus do our own grinding, sawing, and other work. I thought of it at the time, but finally gave it up. I had the well drilled at a point away from the buildings where, if need be, it will be convenient for irrigating a large field. I hope some day to be able to own a power that can be moved about from place to place to do work on any part of the farm. For example, I would like to take the table saw right over to the woods and cut the stove wood there, or even shred the fodder right in the field. I would rather take the power to the work than to bring the work up to the power, and some day I hope to be able to do it. For such work as pumping, the small windmill is O. K. in our country.

WOMEN AND HORSES.—When I handed the following letter over to the Madame she said after reading it: "She is all right!" The Madame's opinion goes—*inside* the house at least—and so the letter goes also:

"I, too, wish to say a word to Hope Farm man. I think your estimate of the horse 'that officiates as a woman's horse' altogether too small; the interest on $15! Just think of it—90 cents! Now, if I were to estimate in dollars and cents the pleasure derived in one year from petting, harnessing and driving our horses, I know it would be greater than any of the items you mention; and I can hustle over an acre of dishes after dinner pretty lively if in antielpation of a horse to drive in the afternoon, and many times have left the dishwater to get cold and went to the door to say 'Hello' to the horscs as they came from the barn. You will say, Do you get repaid for all those mlles of travel? Certainly, when they put their noses in my face and say in their horse language by looks and actions, 'I like you!' Now, just give your women folks a chance to drive your horse that $250 wouldn't buy, and I'll bet a pie that they would do those dishes quicker or give you a chance to wash them while they go pleasure driving. But before they start be sure they know the difference between the breast collar and breeching In case of accident. All honor to the old horse. Feed him on molasses as long as he lives, and thc tears of the whole family on his grave when he dies, but a woman likes to drive a good horse as well as you. My husband never refuses pie, but doesn't kick if on a fine morning when the horscs are at leisure I go driving instead of mixing lard and flour for his dinner. There would be less chronic grunters among our women if they spent some of their leisure time in this way instead of on the sofa reading trashy novels. I do not yearn for a bicycle or automobile; a horse worth $150 hitched to a good buggy ls good enough for me, and when Hope Farm man estimates woman's pleasure in this line at such a small sum he runs against a snag."

FARMER'S WIFE FROM 'WAY BACK.

Now, I meant no disrespect to old Major when I rated him at $15. I was trying to get at the true or selling value of our stock, the value that pays bills. The old fellow wouldn't bring an offer of $5, but the Madame wouldn't let him go where he would be abused for $500. Frank, the horse I value at $250, is a big farm horse—stronger than a yoke of cattle, but not much good on the road. Our women folks often drive him, but he is better in front of a plow or a load of hay. I bought Nellie Bly hoping to have a horse that the Madame could drive, but the mare proved a llttle too frisky and timid at sight of a bicycle. No one should drive a horse until he knows how to harness and unharness. Grandmother and the Graft are the only Hope Farm drivers who have never done it—the Graft understands the *theory* of a harness. I like to have our women folks hitch up and drive, and Major, Franko and Nellie are always at their service, with Frank and Dan part of the time. I think that some women would be better off if they *walked* more, but riding is much better than "reading trashy novels." That is about the worst business a farmer's wife or daughter can be up to, when the world is full of strong uplifting books which would help and inspire them to nobler and higher living. Yes, yes, I ran against a big snag when I estimated the yearly value of a woman's horse at 90 cents. The fun our folks have out of old Major couldn't be bought for the legal interest on $1,500. This, however, does not pay taxes or interest.

PORK AND EGGS.—Both are in sharp demand in our neighborhood. Butchers will pay 8½ cents per pound for dressed pork, and eggs sell eight for a quarter. There are very few pigs for sale in our part of the country. I am more and more satisfied that there is good profit in pork. We do not sell now, because it pays us better to keep our pork for home use, but if I had 50 good pigs now they could all be sold to advantage before May. I do not mean to say that it will pay us to feed pigs in little pens on purchased grain. We never can compete with the West by bringing them grain here to feed, but we can do it by feeding the pigs through the Summer on rape, sorghum and cabbage, with a small amount of grain, and finishing them off on corn grown on what are now waste or loafer fields at the back of the farm. I have studied this thing hard for several years, and I am now satisfied that it is practical. I have started a good purebred herd of hogs, and we are building a hog-house so as to go at it right. As for eggs, in spite of all the talk about overproduction, people complain that fresh eggs are scarce. Hope Farm is not the best place for poultry, yet I think we could run a flock of 500 with some profit.

HOME NOTES.—The Madame had folded her napkin and proceeded to run her eye around the dinner table as a good housekeeper should. Surely it was a row of well fed and contented faces that came in view. The great platter of meat which Aunt Jennie had placed on the table was now but a pile of bones. The potato dish was empty, the Lima beans had vanished, and only a few crumbs remained on the bread plate, while the plum pudding was all out of plumb. Surely the wreck of that dinner was a glorious monument to the cook. "Well, now," said the Madame, "do you suppose that the new King of England enjoyed his dinner half as much as we have ours?"

Outside the snow was whirling and dancing with the fierce wind. It was a bitter day for man or beast to be abroad. It didn't take me long to make up my mind that I would rather occupy the chair at Hope Farm than sit on King Edward's throne. There may be those who envy his royal highness the job he has just fallen heir to. I am very much obliged to you, but I don't want even a corner of it. There is more happiness even in the mortgage on Hope Farm than in the sorrows and crimes that cluster around the Cape of Good Hope. . . . . We have had 10 days of good sleighing, with cold sharp weather. On a very cold windy morning I again carried the thermometer down hill. This time there was no difference. It was just as cold on the hills as in the valley. This is just what one might expect; on still nights the cold air settles in the valley while when the wind blows hard it is all mixed up—if anything, the hills are colder. . . . . The children have made much of the coasting, and the big folks have had a hand at it, too. There is a little hill on the road in front of the house. . . . . Our friend who writes about the "woman's horse" talks about "trashy novels." I would call such books "mental pies" with mighty poor crust. I don't want to hurt the feelings of the pie eaters and pie bakers, who have a perfect right to pile on the pie if they want to. I prefer the pure fruit and also the natural and true books. Those who must work for a living, and I have little use for anyone else, have no time to take from a busy life to read "trash." You may be surprised to hear an old farmer say so, but I believe that one may well read a selection of good poetry every day. I have read Whittier again and again in this way. Will this enable a man to raise more corn or know a good hog when he sees one? Perhaps not—though we call our fine sow a poem in pork—but it will raise the mind and soul—are they not worth more than corn? . . . . I have read the stories of those who claimed that tin cans and glass concentrated the rays of the sun and set things on fire. We have had such a case at Hope Farm. The children have three goldfish which swim about in a small glass globe partly filled with water. This globe stood in a sunny window when Grandmother saw smoke arising near it. Investigation showed that the sun's rays had been concentrated through that globe upon a small tape measure which lay on the window sill, and had actually set it on fire. It was easy to prove this by holding the hand where the light fell. I notice that when the globe is filled with water the heat is not nearly so strong. It is a most wonderful thing to the children that a jar containing *water* should be able to set things on fire. H. W. C.

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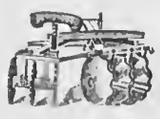

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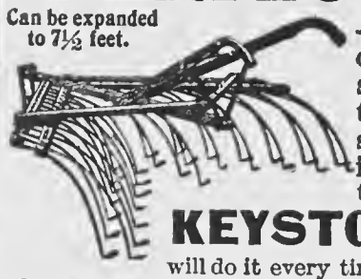

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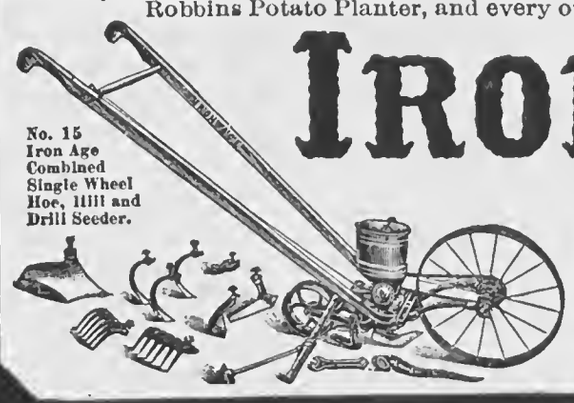

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Ruralisms

NOTES FROM THE RURAL GROUNDS.

Variety Test of Potatoes in 1900.

The following new varieties of potatoes were planted April 8 in a plot of loamy soil, in rather poor condition. The only fertilization was an application of two pounds of Mapes potato manure to each rod of drill, scratched in with a rake before planting. Three applications of dry Fungiroid were made during the growing season to ward off leaf blight; apparently with fair success. The season was locally a bad one, the average yield in the neighborhood not exceeding half an average crop. A fair cultivation was given, and no weeds were allowed to develop. Under such conditions only a light yield could be expected, but it is noticeable that the two standard varieties, Carman No. 2 and Rural Blush, planted for comparison, stood the severe test better than most of the new kinds. The "hills" consisted each of half a potato planted 20 inches apart in rows 40 inches apart.

CARMAN No. 3.—Hope Farm. Dug September 12; eight hills, 46 tubers; weight, nine pounds.

MIDDLE WEST.—Bovee. Dug September 12; three hills, six tubers; weight, one pound. White, smooth; quality good.

RURAL BLUSH.—Hope Farm. Dug September 12; six hills, 34 tubers; weight, 7¾ pounds. One of the best in quality.

EXCELSIOR JUNIOR, LATE.—Woolley. Dug September 12; two hills, 10 tubers, all small; rather dark red. Vines weak. blighted severely.

SURPRISE.—T. C. Heath, Tidal, Pa. Dug September 20; six hills, 24 tubers; weight, 5½ pounds. White, russeted, round and smooth; fine quality.

MUNN'S EARLIEST.—Name of sender lost. Dug August 10; five hills, 31 tubers; weight five pounds. Large, smooth, round, white; early and fine quality.

LATE BEAUTY.—Heath. Dug August 12; four hills, 24 tubers; weight, 4½ pounds. Smooth, white, shallow eyes, somewhat russeted; quality excellent.

IMPROVED NEW QUEEN.—Jerrard Co. Dug September 9; six hills; 38 tubers, 29 marketable; weight, four pounds. White, russeted, oblong; quality excellent.

KING OF MICHIGAN.—Flansburgh & Peirson, Leslie, Mich. Dug September 9; three hills, 20 tubers; weight, three pounds. Sturdy grower; sound, russet; good quality.

STEVENS.—Jerrard Co. Dug September 9; six hills, 59 tubers, 41 marketable; weight, six pounds. Strong grower and productive; ripens medium early; good quality.

THE Boss.—Bovee. Dug September 12; three hills, nine tubers; weight, two pounds; inclined to be prongy; strongly russeted. Vigorous grower, medium early; quality fair.

HEATH'S EXTRA EARLY MARKET.—Heath. Dug July 29; four hills, 22 tubers, 14 marketable; weight two pounds. Smooth and good quality; needs more fertility in soil.

NEW QUEEN.—G. W. P. Jerrard Co., Caribou, Me. Dug September 9; eight hills, 40 tubers, 28 marketable, weight 8¾ pounds. White, russeted; quality good; fine grower.

FOURTH OF JULY.—James Hoyt, New Canaan, Conn. Dug August 10; five hills, 38 tubers, 27 marketable; weight, six pounds. Large, round, white and early; excellent quality.

WHITON'S WHITE.—W. W. Whiton, Wakeman, O. Dug September 12; 10 hills, 66 tubers, 42 marketable; weight, 12 pounds. Round, white, slightly netted; highest quality. Growth vigorous; potatoes grow close together in hill.

EXCELSIOR JUNIOR, EARLY.—James Woolley, Dover, Ill. Dug August 9; four hills, 26 tubers, 16 marketable; weight, three pounds. Long, pinkish color; good quality; vines weak, tendency to scab.

MILLET'S SEEDLING.—J.W. Millet, Bismarck, N. D. Dug September 18; six hills, 42 tubers, 31 marketable; weight, nine pounds. Early, smooth, white; quality very good; vines strong and upright.

BOVEE'S BEST.—Marion Bovee, Northville, Mich. Dug September 12; three hills, 13 tubers, nine marketable; weight, two pounds. Smooth, white; shallow eyes. Vines rather weak; quality very good.

RURAL JUNIOR.—Woolley. Dug September 18; two hills, eight tubers, all small; weight, one pound. Red, smooth, vines blighted; quality very high. The Rural Junior was a sixth-crop seedling; the other two Woolley varieties were fifth-crop seedlings.

THE BABY PRIMROSE.—Under this name a very pretty, small-flowering primrose, Primula Forbesii, was extensively advertised two or three years ago by several mail-order nurseries. It has not met with sales at all commensurate with its value as a window plant. The pretty rosy-lilac flowers are most continuously produced during the Winter and Spring, and if kept in a moderately shaded position a good plant will bloom continuously for nine months or more. The foliage is good, and the graceful sprays of bloom are very useful for cut flowers. The Baby primrose may easily be grown from seeds, which should be planted during Winter in a pot or seed pan. The seedlings soon begin to bloom if potted off in small pots. Old plants produce a multitude of suckers, which may generally be detached with roots enough to keep them growing right along when replanted. Fig. 48, first page, is from a life-size photograph of an average young plant from the Rural Grounds.

AN EXTRAORDINARY HYBRID.—A reader of THE R. N.-Y. sends an account of an extraordinary plant he conceives to be a hybrid between the raspberry and the potato:

Three years ago I discovered the potato vines growing on a berry bush or root. I thought at first it was a potato growing among the wild bushes in the pasture. It is several rods from the potato field; I thought it strange, as potatoes in fields were little young plants, and these had blossomed. Looking closer I saw what it was. It blossomed and produeed potato balls (no berry taste) all Summer till very late Autumn. The next Spring I planted the seed of the plants; this is as unlike the berry as possible. These potato seeds sown about April 1 come up as soon as tomatoes, mostly a day or so sooner. They grow fast, and do not mind frost that will kill tomato plants. In July they were large, flourishing plants, smelling rank, like the real potato and blossoming and bearing potato balls. Late in the Fall I looked for potatoes; the roots are long and white, but no potatoes yet. One would pass these vines growing without a thought but they were potatoes, but on looking closer the stalk grows more viny, the leaves narrower, the blossom more slender, a beautiful purple with orange middle. The balls are red and disagreeable in taste, just like the real potato. I have saved and planted seed for two years with the same result. This potato is too wild; wants mixing again, I think, with the real potato. It might give a potato hardy as a cabbage or as a parsnip. I do not understand hybridizing, but if this is anything remarkable I am going to have some one who understands the art try to see what ean be done. S. C.

This description admirably fits the Horse nettle, Solanum Carolinense, one of the worst native weeds in the South and West. It sends up its prickly stems with the greatest persistence from the thick, hardy, root-stocks, and is quite as difficult to eradicate as the Canada thistle. The bright, orange red, tomato-like berries persist during the greater part of the Winter. We have advised our correspondent to destroy every trace of this obstinate pest before it gets a dangerous foothold on his farm. The idea of producing a hardy potato by crossing with a hardy berry does not seem so far out of the way when one considers the condition under which this plant was found, and manner in which it combines some of the characteristics of both plants. The Horse nettle is a close relative of the potato, both belonging to the same family, but the raspberry is a member of the Rose family, and has no affinity with the Solanums, though the prickers on this particular species give a slight resemblance.

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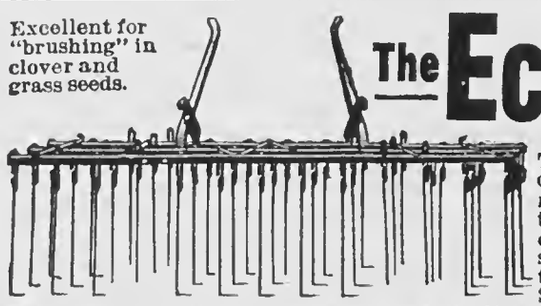

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T. J. DWYER & SON, Orange County Nurseries, CORNWALL, N. Y.

Live Stock and Dairy

THE ORDINARY BOVINE GENTLEMAN

As He Is.—With a large majority of farmers "purebred" is an animal seen under a blanket at the fair, or read about in an agricultural paper. As one travels through the country he finds poor stock, poor care and poor surroundings, while not one farmer in 50 has a purebred herd or flock of any kind, and some men will not yet give up the old idea of using the cattle to warm the air in the barnyard. We are sometimes told that it is just as easy to have a herd of purebred cattle, or flock of hens, or sheep, or drove of hogs, and thereby double our income; be that as it may, purebred stock will always be the exception and not the rule, and what right has a farmer with purebreds if he does not half take care of the so-called scrubs now on hand? Breeders of purebred cattle claim to consider the bull "half the herd;" the ordinary farmer looks on him as a "means to an end;" that of having fresh milkers at some season of the year. Bull calves are raised without much thought of past, present or future. They are poorly fed and cared for, and at the age of one year are pronounced "good ones" by the owner, even though not large enough for service until 18 months or two years old. A little pen picture of an actual experience will quite forcibly illustrate the question in hand. Father and I started one day in the latter part of March to purchase a good yearling bull for service the coming Summer. We made many inquiries, and looked upon animals of varying size, shades and condition; we were finally told of a young farmer (not an old man, mind you) about five miles north, who had a good yearling bull that he was very anxious to sell. So away we drove, eager to obtain the coveted "good one." We found the young man at home, made known our errand, and were told that what he called a good yearling was for sale. The barn had burned the previous Summer, so we went to a large shed some distance from the house, where the cattle and young stock were kept for the Winter. As the door was pushed open I shall never forget the sight that met our eyes. First inside the door stood the so-called bull, but the name was a misfit. I was never more taken down in my life than at the sight of that little weazen-faced, long-haired, scrubby, manure-covered runt. He was not too large for a stout man to carry. His rear end was elevated on a mound of manure, while his front feet were at low-water mark. There was no floor in the shed, and 12 or 14 cattle and young stock were fastened in stanchions, standing in the soft filth and mud, with their sides plastered, for no straw was in evidence anywhere and the stable (?) had not been cleaned in weeks. That sight is indelibly inscribed on memory's page. We climbed into our sleigh too full for utterance, for the young man said he would take $15 for the bull. We have often spoken of our adventure hunting bulls in the wilds of Oswego County. This is an extreme picture, but it can be duplicated in miniature without much canvassing. I was in a young farmer's basement stable but a few days ago, where it was too dark even to see the cows with the door closed, and the manure had not been thrown out in at least three days; the cattle were eating wheat straw, yearlings no larger than the October calves in our basement, while their general appearance was that of stunted little dwarfs.

As He Might Be.—The average farmer with a small herd cannot expect to handle his stock as the breeder of purebred cattle might do; yet it will pay him to give them good serviceable care. The method that I shall outline applies to heifer as well as bull calves until six months old. If you do not pay any attention to the rules governing selection as laid down by the fancy breeder of pedigree, you can at least choose a good straight bull calf from one of your very best cows. And now let me introduce a little note in regard to teaching him to drink. Do not let him suck the cow. Following a law of nature, the little calf reaches upward with his head and nose, and if he obtains his first drink of milk in that way, you have a double task marked out to get his head down into a pail. I am not theorizing, but speak from actual tests. I take a calf away from the cow almost immediately, when possible; leave him until he is hungry, and can stand up all right; place him in a corner where he can't back up, and despite the holy horror of "such brutal treatment" as some have written, I straddle his back, with an attendant if possible to hold the pail of freshly drawn milk, with one hand on the calf's head and the fingers of the other hand at the end of his nose, gently force his nose into the milk, letting him have his head when he struggles. Some smart calves will take the milk at once, while with others it is necessary to put a finger into their mouth and let them suck once or twice to get started. I have never failed to make a calf drink almost immediately. Do not overfeed him; better leave him a little hungry.

When one week old take time to put caustic potash on his horns. It will only bother you a few minutes, and will be a satisfaction while he stays with you. Tie him short, hold his head firm, shear the hair from the embryo horn, and moisten by wetting the finger. Wrap a stick of caustic in paper when it comes in contact with the fingers, rub it on the little horn bulb until it becomes red, and the job is done. How simple, and yet so many neglect it! When your calf is about three weeks old begin to put a little dry bran and meal, mixed half and half by weight, into his mouth by hand immediately after he drinks, and it takes but a few days for him to learn to eat it from the measure held in your hand, and from that to a box tacked up on the side of his pen. Don't give him too much. Feed him regularly, raise him through the Winter if you can. If you raise him in Summer, and wish to make a nice one keep him in the barn all Summer, loose in a pen; feed him regularly and well. Give him skim-milk if you have it. We have had bull calves raised in this way that at eight months old were called splendid yearlings by all who saw them. But all this is lots of fussing. Yes, yes, and that is where the profit is made on stock, my friend. Such a bull will be ready for service from the beginning of his second year, and nine times out of 10 will be better than a two or three-year-old. We have always let the bull run with the herd; have never kept him confined in stanchions, but tied with rope when in the barn. A two-year-old bull running with the herd, usually has altogether too much spirit for the good of the fences or the safety of the attendants, and especially so if fed grain. Not so with the yearling. Don't forget his little mess of meal, and he will come into the barn with the cows, and to his place, like a hungry boy to his seat at the dinner table. When the "bully boy" is 18 months old, sell or kill him and raise another. H. S. Wright.

Onondaga Co., N. Y.

R. N.-Y.—But why be satisfied with "average?" We are satisfied that it pays to pay more money for a bull calf of good breeding, raise him about as Mr. Wright describes, and keep him at least three years. Good dairy bull calves, a little off in color, but with good pedigrees, may now be bought at fair figures. Are they not worth more than those who are simply "out of a good cow?"

Shredded Silage.—R. M. Welles, of Pennsylvania, agent for the Blizzard cutters or shredders, sends us a sample of silage which is fine and sweet. This silage came from Wayne Co., N. Y., where W. M. Lawrence used a Blizzard in filling silos for neighbors. Just now there is some question about silage which is shredded or torn rather than cut. Mr. Lawrence writes:

Some are complaining here because the silage is cold, and does not heat up and keep warm like that cut with other machines; but I know my cows eat it better, and there is no corn passing through them unmasticated (undigested) as there was before. What do you think is the reason for our silage being so cold? Is it because it is finer and more compact?

To this Mr. Welles replies:

Yes, that is the reason. I know that Blizzard silage was often finer, and settled quicker and packed better than prepared by other machines, so that more could be put into any given space in a day. This very close packing seals up the cut material from the air like canned fruit, does not pass through the vinous or souring fermentation and keeps sweeter and better.

When you write advertisers mention The R. N.-Y. and you will get a quick reply and "a square deal." See our guarantee 8th page.

"Stick to the bridge that carries you safe over." For more than sixty-two years Dr. D. Jayne's Expectorant has done that for thousands of sufferers from Lung and Throat troubles.—*Adv.*

KILLED-DEAD.

You know that the horse buyer knocks off $50 or more for every lump or blemish on a horse. Get full value for your horse—don't have any lumps. Cure him with

Tuttle's Elixir.

It is guaranteed under a forfeit of $100, to cure any case of *horse ail, curb, splints, contracted cord, callouses, thrush, etc.*

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TUTTLE'S FAMILY ELIXIR cures rheumatism, sprains, bruises, etc., Kills pain instantly. Our 100-page book, "Veterinary Experience" FREE.

Dr. S. A. TUTTLE, 30 Beverly St., Boston, Mass.

Beware of so-called Elixirs—none genuine but Tuttle's. Avoid all blisters, they offer only temporary relief if any.

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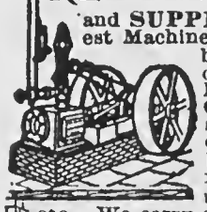


and SUPPLIES at Bargain Prices. Largest Machinery Depot on earth. We buy buildings and plants; among others we bought the World's Fair, the Omaha Exposition, the Chicago Post Office, and other structures. We rebuild machinery of all kinds, and sell with binding guarantees. Boilers from $25 up; Engines from $35 up; Steam Pumps from $15 up, etc. We carry complete stock of General Supplies, such as BELTING, SHAFTING, HANGERS, PULLEYS, IRON PIPE, IRON ROOFING, HARDWARE, VALVES & FITTINGS, PLUMBING MATERIAL, etc.

Will send free, our 250-page Catalog No. 57

Constantly buying entire stocks at Sheriffs' and Receivers' sales.

Chicago House Wrecking Co., W. 35th & Iron Sts., Chicago, Ill.

Don't Waste

corn and other grain by feeding it whole. 40 per ce t more value may be recovered from the grain if it is properly ground.

BUCKEYE Feed Mills & Power COMBINED crush and grind corn and cob and all other grains perfectly and supply power for other purposes at the same time. Send for free catalog S.

STAVER CARRIAGE CO., 16th and Wallace Sts. Chicago.

None Better Made.

Breeders' Directory.

Fowls of W. & Bd. Rock, W. & Bn. Leg., W. Wyan. vars., Eggs $1 & 1.50 26. Stamps. Mrs. J. P. Heilings, Dover, Del.

Blanchard's White Leghorns.—The leading strain of heavy layers. Cockerels for sale. Eggs for hatching. Ill. cir. free. H. J. Blanchard, Groton, N.Y

240 PURE BRED B. P. Rocks, Heavy-wt. prize-winning stock. Fine ck'ls $2 and up. Eggs for hatching. Write HOPKINS BROS., Bellaire, Ohio.

WYANDOTTES, Silver, White Partridge. Winners at Hagerstown, Philadelphia, New York and Chicago. Line bred for large egg production. Handsome Egg Record free. BEAVER HILL FARM, Beaver, Pa.

2000 FERRETS. First-class stock. Some Trained. New price-list free. N. A. KNAPP, Rochester, Lorain Co., O

Muddy Creek Herd of Hereford Cattle.—100 head of bulls, cows and heifers for sale. Write for price Come and see me. S. W. Anderson, Asbury, W. Va.

2 Granddaughters of Exile of St. Lambert, sire of 96 tested cows. Solid color. Dropped July 26 and Nov. 17, 1900. J. A. Herr, R. F. D. No. 4, Lancaster, Pa

FOR SALE—THOROUGHBRED HOLSTEIN BULL CALVES. Well marked and of best breeding. Will be sold at farmers' price. Write at once. W. W. CHENEY, Manlius, N. Y.

Do You Want a Holstein-Friesian Bull Calf? a Chester White Pig either sex, pair or trio? If you do, and want the best breeding at a fair price, write to-day to CHAS. K. RECORD, Peterboro, N.Y

HIGH-CLASS Registered Jersey Cattle. ROBT. F. SHANNON, Pittsburg, Pa.

150 DeHlhurst Holsteins for sale, including young Cows, Heifers and a great lot of BULL CALVES—several now ready for service—sons of "DeKol's Butter Boy", and the famous "Royal Paul" out of advanced Registry cows. Catalogue. DELLHURST FARM, Mentor, Ohio.

TAMWORTH PIGS for sale. By a grandson of the imported boar Nimrod. Eligible to registration. 5 to 6 weeks old at $5 each. Write at once. D. WELL. DIETRICH, Reading, Pa.

Reg. P. Chinas, Berkshires and O. Whites, Choice Pigs, 8 weeks old, mated not akin. Bred Sows and Service Boars. Poultry. Write for *hard times prices* and free circular. HAMILTON & CO., Rosenvick, Chester Co., Pa.

JACKS FOR SALE. A few choice ones left. Will sell at a bargain for next thirty days. Write for prices. JOHN BAKER, Lawrence, Ind., 8 miles northeast of Indianapolis.

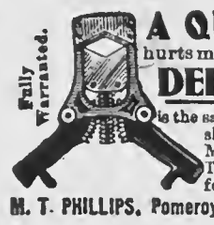
BELGIAN HARES—I offer for sale some of the choicest strains of pedigreed Belgians. Also some fine domestic stock. MRS. F. A. DALEY, Preble, N. Y.

THE CHAIN-HANGING Cattle Stanchion

The most practical and humane Fastener ever invented. Gives perfect freedom of the head. Illustrated Circular and Price free on application. Manufactured by O. H. ROBERTSON, Forestville, Conn.

NO SPAVINS

The worst possible spavin can be cured in 45 minutes. Curbs, splints and ringbones just as quick. Not painful and never has failed. Detailed information about this new method sent free to horse owners. Write today. Ask for pamphlet No. 34. FLEMING BROS., Union Stock Yards, Chicago, Ill.



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A QUICK, SHARP CUT hurts much less than a bruise, crush or tear DEHORNING Done with the KEYSTONE KNIFE is the safest. Quick, sharp cut. Cuts from four sides at once. Cannot crush bruise or tear. Most humane method of dehorning known. Took highest award World's Fair. Write for free circulars before buying. M. T. PHILLIPS, Pomeroy, Pa., (Successor to A. C. BROSIUS).

Be Kind to Stock by humanely dishorning them only with the quick, smooth cutting Convex Dishorner. I also make the Bucker Stock Holder, one of the best aids to dishorning, and two other styles of Dishorners, one for calves. Every approved appliance for this work. Send for FREE book. GEORGE WEBSTER, Box 64, Christiana, Pa. Western trade supplied from Chicago.

YOUR HORSE—— 50c and $1.00 a Bottle.

if suffering from an enlargement can be quickly put on his feet. No need to blister or fire. The enlargement will be quickly absorbed by

Sloan's Liniment.

Nothing like it to cure a sore tendon, or to kill a spavin, curb or splint. This remedy is known to more drivers and horsemen than any other liniment, because it does the work by its *penetrating* qualities.

Prepared by DR. EARL S. SLOAN, Boston, Mass., U. S. A.

Sold by Druggists and Dealers generally.

SALE OF ANIMALS.

What Amounts to a Warranty?

Animals are personal property and subject to all the laws governing such property. The sale of an animal must be completed by delivery to make it valid against the rights of third parties. The rule of "Caveat emptor"—let the buyer beware—applies to the sales of animals, where there is no fraud, concealment or warranty. It is a maxim employed in the law to signify that when a buyer has required no warranty, he takes the risk of quality and condition upon himself, and has no remedy if he chooses to rely upon the bare representations of the seller. To this rule there are many exceptions which are of particular interest to the farmer or stock-breeder.

If a man sells a horse generally he warrants no more than that it is a horse; the buyer puts no question, and perhaps gets the animal the cheaper. But if he asks for a carriage horse, or a horse to carry a female or a timid and infirm rider, he who knows the quality of the animal and sells, undertakes on every principle of honesty that it is fit for the purpose indicated. The selling upon a demand for a horse with particular qualities, is an affirmation that he possesses these qualities. Where a horse is bought for a particular purpose known to the seller, a representation that he is "all right," relied on by the purchaser, is a warranty not only of soundness, but of fitness for the use intended. But one selling a horse as safe and kind and a good family horse was held not to be liable to the purchaser's wife for injuries received in driving where there was evidence that he supposed the horse was to be used exclusively by the husband in his business, and none to show that he expected the wife to rely upon his representations to the husband. On the other hand, it has been held that where producers and dealers in horses for breeding purposes sell one to a person who, to their knowledge, wishes him for such purposes, is an implied warranty that the horse is reasonably fit for such purposes; and that he is not prevented through illness, weakness or other infirmities from being able to exercise breeding qualities.

Where horses are described in a bill of sale as "sound and kind," this amounts to an express warranty, especially where the purchaser has the peculiar means of knowing the facts which the seller possessed. A representation made during the sale of mules that they were "all right" is a warranty of soundness. So, where the representation was that a horse was sound, straight and all right, just such a horse as the buyer wanted, this was held to be a warranty; and likewise where representations as to the age and soundness of a horse were made privately by an administrator to one who subsequently bought the horse from him at auction. If the seller says at the time of sale: "I never warrant, but he is sound as far as I know," this is a qualified warranty, and the purchaser may maintain an action, if he can show that the horse was unsound to the seller's knowledge. So an affirmation that the horse was not lame, accompanied by the owner's declaration that he would not be afraid to warrant him, was held to be a warranty. Where mares were described in a catalogue as "in foal to," "stinted to" or "served by" certain horses, these expressions were held to amount to a warranty. A public statement by a seller of horses at auction that all these that were not kind and safe to drive single would be specified at the time of sale, is a warranty as to a horse sold without any specification, the buyer relying on the statement. The buyer of horses under a written bill of sale simply reciting the transfer with warranty of title, may recover damages for false oral representations of the seller as to their trotting qualities and pedigree. A warranty that a horse partly blind was "all right, except he would sometimes shy" was held to be substantially a warranty that he was "sound." The seller's statement that a horse was "all right' was held a warranty that his eyes were sound, and a representation that a horse was 14 years old was held to be a warranty that he was no older.

On the other hand, the statement in a bill of sale that a horse is "considered sound" does not amount to a warranty, Nor is a statement in a circular that a young stallion will "make his mark as a foal-getter;" it is merely an expression of belief as to what may be expected of him in the future. A statement in a handbill advertising the sale of stock that certain animals are "in good health and condition" is not a warranty that they are in such condition at the time of sale three weeks later.

When a horse was to be sold at auction without a warranty, and the seller on the day before the auction said to the purchaser, who was looking at the animal's legs, "You have nothing to look for; I assure you he is perfectly sound in every respect," and the purchaser replied, "If you say so, I am perfectly satisfied," and on the faith of his representation bought the horse, it was held that there was no warranty.

Courts have always considered that a man who buys a horse warranted sound, must be taken as buying for immediate use, and has a right to expect one capable of that use, and of being immediately put to any fair work the owner chooses. The rule as to unsoundness is that, if at the time of the sale the horse has any disease which either actually does diminish the natural usefulness of the animal, so as to make him less capable of work of any description, or which, in its ordinary progress, will diminish the natural usefulness of the animal, or has from disease or accident, undergone any alteration of structure, calculated to diminish the natural usefulness of the horse, such a horse is unsound. But in the absence of any guarantee or warranty of soundness the rule of Caveat emptor applies, and the purchaser has no remedy, neither can he return the animal and withhold payment of check or note. F.

HOW MANY EGGS IN A COW?

Can you inform me how much money can be got out of a bob calf or a Bologna cow by slaughtering and feeding to hens for egg production, adding value of hide to egg product? Cows weighing 750 pounds to 1,000 pounds live. E. G.

Westtown, N. Y.

Equal to Equal Weight of Corn.

I am in the market each year from November 1 to April 1 for horses or cows at $2 each. We dress them the same as beeves, feeding the offal to the hogs. If the weather is cold, the quarters keep until fed out; if it grows warm and the meat is likely to spoil, we feed more freely and the last is often turned over to the shotes. In cutting for the hens we use a steam mill, cutting the smaller bones in with the meat. If we are short of stock we break up the larger and harder bones with an ax and grind all together. When the weather is stormy we cut meat ahead, and if it freezes hard, break off a piece and let the hens keep busy picking at it, it keeps them happy as well as busy. We think this meat and bone is worth as much per pound as dry corn, besides giving a necessary element in egg production and health and thrift that cannot be got from grain alone. J. D. BUTTON.

Suppose that E. G. has 326 hens, where fresh Winter eggs are worth 40 cents per dozen; that his flock is properly housed, in good condition, but not laying. Also that his meat can be kept five months. If given two ounces each, or 40 pounds per week, 160 pounds per month, in five months 800 pounds (the average weight of a Bologna cow) will have been consumed by the 320 fowls. The above conditions are similar to those of a flock of 80 birds, experimented with this last January. At the end of the month they had laid 20 dozen eggs; 320 fowls at the same rate would yield 80 dozen. At 40 cents per dozen, $32. Need we go further in figures? The flock of 80 are steadily increasing in egg production, and even now, February 15, yielding from 20 to 25 dozen per week. The flock is being fed, first, two quarts mixed grain thrown in the litter; at noon, the house scraps, with beef and bone well ground up and mixed in; at night about four quarts warm cracked corn. During the coldest weather (temperature ranging between 20 and 38 degrees below zero) a light wood fire is built at night in their roosting room. Though, under the circumstances, exact estimates are impossible to furnish, those given should conclusively answer the question inferred, as to whether it pays to buy meat for hens and take proper care of them during the Winter, even at eggs down to 20 cents per dozen. W.

OLEO ROGUES.—F. J. H. Kracke, Assistant Commissioner of Agriculture for the district including Greater New York, sends the following list of oleo rascals convicted during the 10 days ending February 13: Louis Snyder, Astoria, $300 or 60 days in jail; Thos. Murphy, Jersey City, $200 or 60 days in jail; Matthew Wahl, Jersey City, $200 *and* 30 days in jail; Henry Bellman, Jersey City, $200 *and* 30 days in jail; C. C. Kuhlman, Jersey City, $400 or 90 days in jail; Chas. E. Morris, Jersey City, $200 or 60 days in jail. The first named is a grocer, and the following five wagon men.

Shropshires at Auction.

On account of serious illness in my family, I am obliged to retire from the farm. In connection with a sale of all farm stock and implements, I shall sell at auction, on Wednesday, Feb. 27, 1901, at 2 o'clock, my entire flock of pure bred Shropshires, consisting of about fifty ewes of different ages in lamb by "Chief Hill" one of the best imported rams in this country, a fine lot of ram and ewe lambs, and a few yearling rams.

These sheep are all in the very best breeding condition, and will be sold without reserve of any kind, to the highest bidder. All are registered. This flock is recognized as being equal to any in the State, and a rare opportunity is offered to secure bargains in Shropshires. Intending purchasers will be entertained at the Hotel Richmond. Free conveyance to the farm Credit of one year on approved interest bearing notes.

A. W. LAWRENCE, Auctioneer.

FRANK D WARD, Batavia, N. Y.

OUR "HANDY MAN" GASOLINE ENGINE works a walking beam pump jack, grinds, shells, cuts feed, separates cream, churns, cuts bone, etc. Easy to disconnect and put on belt. Engine 1½ actual h. p. Easy to learn, easy to operate, most economical. Gasoline supply tank. Engine and all, on one base. Send for our illustrated catalog.
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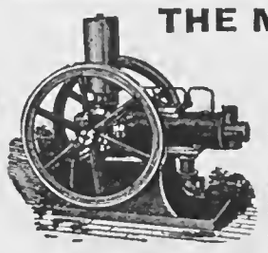

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Kerosene Engines
Cheapest and Safest Power known. For Pumping water, grinding corn, separating cream, sawing wood, *and all power purposes.* Send for Catalog.
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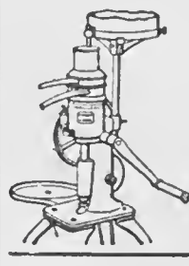
CHARTER
Gasoline Engine
USED Any Place By Any One For Any Purpose
Stationaries, Portables, Engines and Pumps, Hoisters
State your Power Needs.
Charter Gas Engine Co., Box 26, Sterling, Ill.

For Sale Cheap.—Baby Separator No. 2, disc bowl type. Mrs. K. H. Taylor, Hilton, O. T.



CREAM SEPARATORS
The REID is light running, close skimming, simple and durable. Send for Catalogue No. 3.
A. H. REID,
30th & Market Sts., Phila., Pa.

Save $10 per Cow
EVERY YEAR OF USE.
De Laval Cream Separators
Prices, $50 to $800.
"Alpha" and "Baby" styles. Send for Catalogue
THE DE LAVAL SEPARATOR CO.,
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NATIONAL
HAND SEPARATOR
You needn't run the slightest risk in buying a separator. Get a National Hand Separator and do your skimming with it for ten days
ABSOLUTELY WITHOUT COST

You won't be under any obligation whatever to buy it.
Test the National by the side of any other separator made. If you don't say the National is the best machine we'll take it back cheerfully. Write now.
National Dairy Machine Co.
Newark, N. J.

The Improved United States Separator
Demonstrates its Superiority in Canada
AS IT DOES EVERYWHERE ELSE

The following is taken from the report of Mr. L. P. Lacoursiere, Canadian Government Butter and Cheese Inspector, who followed the work of the United States and DeLaval Separators at a recent test at the Creamery of St. Annes de la Parade to determine which make the Officers of the Creamery would buy. The report covers two days' work of each machine and shows that the DeLaval skimmilk tests were .10, .11, .07, and .08, while the tests of the U. S. skimmilk were only .03, .04, .03, .07.

His summary is as follows:

	DeLaval Separator.	U. S. Separator.
Milk received	5605 lbs.	3952 lbs.
Average temperature	87½°	89°
Average speed	5825	8025
Total loss of fat	4.02	1.84
Loss per 100 lbs. of fat	1.55 lb.	.87 lb.
Total loss in cash	$1.15	$0.42

L. P. LACOURSIERE,
(Government Butter and Cheese Inspector.)

Sworn to before me Nov. 21, 1900.
T. E. LANONETTE, J. P. ex of C. C. Ste. Anne.

NOTICE.—The DeLaval lost **$1.15** in separating 5605 lbs. of milk, or **.205** on 1000 lbs., while the U. S. lost **42** cents in separating 3952 lbs. of milk, or only **.106** on 1000 lbs.; which shows that the DeLaval lost in actual cash practically twice as much as the U. S.

In other words, a Creamery separating 10,000 lbs. milk daily *would save in a year in butter fat alone by using the U. S. Separator* $361.35 *that would be lost by using the DeLaval Separator.*

The President and Directors, after carefully considering the Judges' report, *decided to purchase a No. 0 Improved U. S. Separator.*

This is only one instance among many where the

IMPROVED U. S. SEPARATOR HAS PROVED ITSELF TO BE A CLEANER SKIMMER THAN THE DELAVAL.

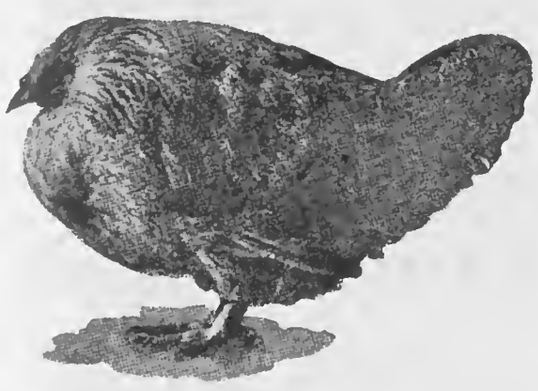
For further information and catalogues write the

VERMONT FARM MACHINE CO., BELLOWS FALLS, VT.

199.

CONSUMPTION IN POULTRY.

The Oregon Experiment Station (Corvallis) has issued in Bulletin No. 64 a very interesting account of several poultry diseases. Avian tuberculosis is a contagious disease almost exactly like consumption in man or animals. The germs of this disease, while growing in the body of the animal appear to be almost identical with those in mammals, except that they are larger and more vigorous. It has not been demonstrated that these germs will live and thrive in humans or animals. It was not found possible to inoculate guinea pigs with the fresh tubercles, although it cannot be said definitely that tuberculous hens are not dangerous as food. Several cases



A CONSUMPTIVE HEN. FIG. 53.

of this disease were studied at the Station, Fig 53 showing the appearance of the hen in the last stages of the disease. This hen was a grade Plymouth Rock. In ordinary health she would have weighed about four pounds, but disease had so reduced her that she weighed but 22 ounces. When examined it was found that the disease was largely in the digestive tract and liver, which were largely covered with tubercles. The lungs were not seriously attacked. The following statement concerning symptoms of the disease is taken from the bulletin:

The first noticeable symptom of this disease is, generally, lameness; the bird becomes more or less mopy, and gradually loses flesh until at the time of death it is a mere framework with feathers. The appetite is good throughout its sickness, at times it even becomes ravenous for food, and although it eats heartily this does not seem to appease the hunger. Toward the latter stages of the disease there is nearly always a persistent diarrhea, and the evacuations are accompanied by a discharge of a white or yellowish viscid matter. In all the specimens received, this matter was carefully examined, and in each case the tubercle bacilli were found in countless numbers. When the tubercle on the intestine reaches a certain period of its growth, there is a breaking down of the intestinal wall, and the germs are passed out with the feces, thus accounting for the rapid transmission of the germs from fowl to fowl, for in nine cases out of ten, the chickens' food is contaminated with their excrement.

To illustrate the danger of spreading this disease, the writer was called to visit a farm where it was found that 50 chickens had died of tuberculosis. In order to call

LEG OF CONSUMPTIVE HEN. FIG. 54.

the chickens together for our inspection, the owner scattered a handful of wheat on the ground of a run, where six choice blooded fowls had died some time previous; some of the wheat fell on the fresh excrement, and upon picking up several kernels with forceps, the under side of each was found to be soiled, but a chicken would not hestitate picking it up and swallowing. So if there were one sick bird passing germs, it would be only a matter of time that all would become infected. This offered an excellent opportunity to point out the danger of feeding in this manner.

In some cases the leg of the fowl is also attacked. Fig. 54 shows a case where the leg has been inoculated with the tubercle germ by picking it with an infected beak, or from some other external injury. The growth on the joints of the leg contains the germs in considerable numbers, and a hen in this condition should, of course, be removed from the flock at once. The bulletin states that, while there appears to be no record where consumption can be traced from fowl to man with fatal results, such a thing is always possible. The flesh of a fowl afflicted with Avian tuberculosis cannot be wholesome as an article of food, and should never be eaten. Another disease discussed is the ordinary one of scabies or scaly legs. A picture of a scaly leg is shown at Fig. 55 to indicate the difference between this and tuberculosis. As is now pretty well known, the scaly leg is caused by the presence of a mite which penetrates beneath the scales. This forms an irritation which results in white powdery crusts, which raise the scales on the leg from their position. The mites are found only on the inner surface of the crust, and in order to treat them properly the scales must be first removed. The leg should be soaked for a sufficient time in warm water to which some soap has been added. When they are well softened the loose scales may be removed without causing the leg to bleed. After this has been done the legs are dried and treated with a good coat of ointment

SCALY LEG IN HEN. FIG. 55.

made by mixing one or two drams of balsam of Peru with one ounce of vaseline. Where the crusts are soaked away and this balsam applied, a cure is not difficult. In cases of tuberculosis of the leg, which much resembles the scaly leg, the growth cannot possibly be removed in this way.

FEED FOR BROOD SOWS IN WINTER.

With many things Prof. Plumb has to say on the above topic, in answer to P. E. L., on page 89, of THE R. N.-Y., I fully agree, but with some I most emphatically disagree. He says: "Up to the last month before farrowing feed a ration half shorts and half cornmeal." Nothing could be much worse, except to increase the proportion of cornmeal. At no time after being bred would I feed a brood sow any cornmeal. It is constipating, fattening and heating, and contains very little of the material from which to build the bones of the young pig. Nothing so good as wheat middlings unless it be bran, reground so as to make it very fine. This is cooling, laxative, has plenty of bone material and also muscle and blood formers, and should constitute the entire grain ration. Artichokes and potatoes make a very good sow food, but I do not consider either as good as mangels, which are a very well-balanced ration, and he need not stop at three pounds a day. Nor would I cut them. It is better to feed them whole, as by eating them when so fed the sow will get the needed exercise.

We winter our brood sows in warm quarters, put them in roomy pens, 15 in a pen, 32x48 and nine feet high, and feed all the mangels they will eat, about a half bushel to a 350-pound sow. Give them all the good clover hay they will eat, and from two to three pounds of middlings or reground bran. If one has skim-milk it is a splendid addition, and may supplement a part of the middlings or bran. I would not make the grain food into a slop; just put enough liquid with it to moisten it so as to be eaten readily. If one believes with Prof. Plumb that they should have more exercise than they will get eating clover hay and whole mangels he should get into the pen and stir them around gently, but not more than necessary. We never take any trouble of this kind, and never under any circumstances let them out in the cold. Our sows farrow and raise on an average about eight pigs each and they come strong and active, and ready to help themselves, and P. E. L. may be sure that if he will so winter his brood sows he will never have a cannibal to deal with. Corn is all right to feed in a limited way to a fattening hog, but has no business to be made a part of the ration of a brood sow. Be sure to keep pens dry and well littered and then if sows want to root let them root, it won't hurt them.

J. S. WOODWARD.

RABBITS AND WHITE.—To keep rabbits from gnawing small fruit trees, we tie a strip of white cloth about the tree. The strip is perhaps an inch wide and two feet long. It is tied about two feet above the ground. The ends are left loose to flutter in the wind. It may be, as Ernest Seton-Thompson suggested, in his delightful book, Wild Animals I Have Known, that white is the rabbit's danger signal. At any rate, not a tree has been hurt, for two years, in an orchard of 700 trees, since adopting this plan. M. L. P.

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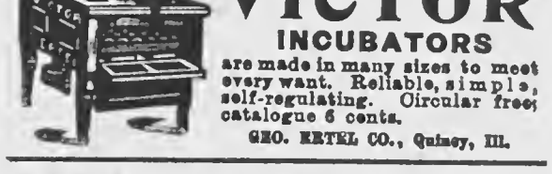

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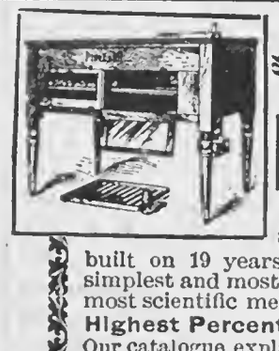

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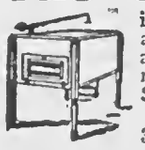

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SOME COW COMFORTS.

FOOD AND SHELTER.—The most critical time of the Winter for the cow is right now, and the wise dairyman is careful that all is done for the cow's comfort, health and happiness. It has been a long time since grass was browned, and it will be a long time till it greens again in the Spring. The memory of the past pasture has about faded from the mind of the patient cow, and the hope of that to come has not been born yet. Of course if her owner has been as wise as he should be he has provided an abundance of silage and good green hay and fodder, and is now supplying a balancing amount of good protein. I like my cows to be fed to fullness twice a day; to have water always with them, and not be compelled to build up their constitutions and general vigor too much out of doors. In fact, if I can't be among them in my shirt sleeves and be comfortable I want them in their stables. I have been using a silo for 15 years, and each year am more and more convinced that it is the best and cheapest place for storing cow feed, and in itself and its collateral usefulness is one of the most important of farm economics. I believe, too, that my experience is but the experience of all who have built them well and used them wisely, and why in our eastern country there is not at least one tub silo on each farm is beyond my comprehension.

THE GENERAL-PURPOSE COW.—I find her in much demand. I find also everywhere, some man who has found her, has tied to her, and is ready to stand up and swear by her, and at the fellow who does not believe in her. The wish is father to the thought. They are willing to own a plow and roller, and harrow and planter and reaper, etc., but they want a cow that will give 6,000 pounds of four to five per cent milk, make 300 pounds of butter, drop a calf each year weighing to the butcher 200 pounds, at six weeks old, and do all this on corn fodder, cob meal, straw, ice water and wind, and when she "gets up in years" fatten up to about 1,400 pounds for the aforementioned butcher. No wonder they sniff at me when I boldly assert the Jersey is queen of the dairy, and wears a chip on her shoulder.

SOILING.—Now, if you have never practiced soiling do try it next Summer, and now in the Winter of the cow's discontent is an excellent time to make plans and preparations. Don't depend on pasture. If you have it well and good. If you don't then you have the other. Plant plenty. If you find it getting old cut and cure, and plant something else. Keep something there to take up the plant food. First plant peas and oats, then corn, then sugar corn, then cow peas, then Soy beans, and more corn, and millet and rape and peas, but corn is king in his season. Every place that would otherwise be bare over Winter sow Crimson clover; and if it should fail any place scratch in rye; then there is always a place for the manure so it runneth not to waste in the Winter.

W. F. M'SPARRAN.

Sorghum in Orange County, N. Y.

On June 18 I sowed seven bushels, costing $1 per bushel, of Amber sorghum seed on 2½ acres of fresh-plowed ground; harrowed the seed in with a spring-tooth harrow. It came up quickly and grew fast until the dry weather checked it. I cut it with a six-foot-cut mowing machine the middle of September. It lay on the ground five weeks curing. It got one more storm on it than I intended, which discolored it somewhat. I raked it with a horse rake, pitched it on a wagon like hay with forks, and unloaded it with a horse fork and carrier. It yielded eight two-horse loads, which was about two-thirds of a crop, on account of the drought, as it grew from 10 inches to six or seven feet high according to fertility and moisture of ground. As I lacked seed a small corner was planted to corn fodder, which gave me a comparison, and until I drew the corn I was in its favor, but when I drew it, and since, I have declared in favor of the sorghum. It is the easiest and cheapest cut and handled, takes up smaller space, and fodders longer; is a good milk-producer, cows eating it up clean and with avidity. It is my intention to sow a greater quantity next season, and to sow earlier, as much of it did not reach proper maturity the last season with me. E. V. R. GARDNER.

Corncob Charcoal for Pigs.

How can I make good charcoal from corncobs to feed to hogs? Some advise digging a small pit, and then cover when the cobs are well charred. I wish to hear from some one who has experience in this matter. E. S. K.

Reddick, Ill.

ANS.—Prof. W. A. Henry, in Feeds and Feeding, a book which all stockmen should own, says: "The following directions for reducing cobs to charcoal are given by Theodore Louis: Dig a hole in the ground five feet deep, one foot in diameter at the bottom and five feet at the top, for the charcoal pit. Take the corncobs, which have been saved in a dry place, and, starting a fire in the bottom of this pit, keep adding cobs so that the flame is gradually drawn to the top of the pit, which will be thus filled with the cobs. Then take a sheet-iron cover, similar to a pot lid in form, and over five feet in diameter, so as amply to cover the hole and close up the burning mass, sealing the edges of this lid in turn with earth. At the end of 12 hours you may uncover and take out a fine sample of corncob charcoal. Charcoal so produced may be fed directly, or, better still, compounded as directed by Mr. Louis in the following manner: Take six bushels of this cob charcoal, or three bushels of common charcoal; eight pounds of salt; two quarts of air-slaked lime; one bushel of wood ashes. Break the charcoal well down, with shovel or other implement, and thoroughly mix. Then take 1¼ pound of copperas and dissolve in hot water, and with an ordinary watering pot sprinkle over the whole mass, and then again mix thoroughly. Put this mixture into the self-feeding boxes, and place them where hogs of all ages can eat of their contents at pleasure."

A Great Holstein Cow.

Another remarkable butter record has been made by a Holstein-Friesian cow. The cow, Beryl Wayne 32496, owned by H. D. Roe, Augusta, N. J., has completed an official seven-day test during which she gave 608.05 pounds of milk containing 22.298 pounds of butter fat, equivalent to 27.872 pounds of butter, 80 per cent fat. In the records of seven-day official test, as made by Holstein-Friesian breeders, by means of the Babcock test, this performance places Beryl Wayne as second only to her stable mate. Lilith Pauline DeKol 43434, whose phenomenal record of 28.236 pounds of butter, 80 per cent fat, made such a stir in the Holstein world a few weeks ago. Beryl Wayne was bred in Augusta, N. J., and was born March 8, 1892, her sire was Aaggie Prince of Wayne 8781 and her dam Beryl 3d's Empress 10536. The cow was milked every six hours. The largest yield in one day was 91.75 pounds of milk, which gave 3.37 pounds of fat. The test was made by H. C. McLallen and the retest, ordered by the Superintendent of Advanced Registry, H. F. A., by J. A. Foord of the Cornell Agricultural Experiment Station.

HAY FOR HOGS.—I have had no experience in feeding silage to hogs. Alfalfa and clover will never take the place of grain for fattening hogs, but makes an excellent feed in the Winter, when swine cannot get grass. I consider it an excellent feed for stock hogs; when chopped up and mixed with meal it makes a growthy and healthy feed. T. B. B.

Grafton, O.

"HOLLOW HORN."—Hunter Nicholson, in the Jersey Bulletin, says that this so-called "disease" is usually some form of indigestion. Here is his remedy: Powdered nux vomica, one dram; Barbadoes aloes, four drams; belladonna, one dram; powdered ginger, one ounce; sulphate magnesium, one pound. Give all at one dose, shaken up in two quarts of lukewarm water, as a drench by the mouth. After the medicine has acted, begin feeding the cow generously, avoiding constipating foods, such as cotton-seed meal or large quantities of corn or cornmeal. As a rule, the so-called "hollow horn" has been brought about by a hollow belly.

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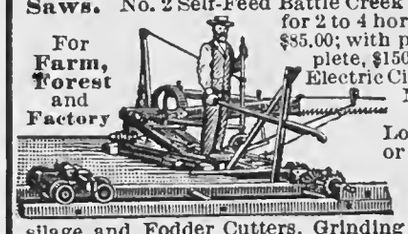

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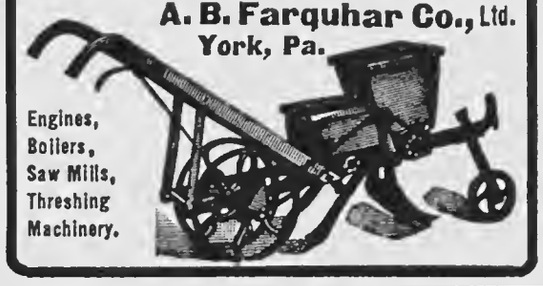

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AILING ANIMALS.

ANSWERS BY DR. F. L. KILBORNE.

Fistulous Withers on a Horse.

I have a mare that became very sore in the withers last Fall, as I supposed from being out in a storm and taking cold which settled in the withers. I doctored her, and let her be idle, hoping she would get over it, but she has not got any better, and a few days ago one side broke and it discharges a thick matter. Is it a case of fistula? Would I better try to heal the sore? What treatment would you advise? She is very sore yet on the withers, and I am afraid of losing the use of her.

Jasper, N. Y. R. W. W.

The mare has a fistula of the withers, which can be satisfactorily treated only by a competent veterinary surgeon. I would advise taking the mare to a veterinarian at once, before the fistula becomes deeper seated and more chronic.

Rheumatism or Founder in Pigs.

I have 10 pigs averaging 20 pounds each; they are in good thriving condition but do not seem to use their feet as they should. They seem to have a touch of rheumatism when they first get up, walk a few feet on their front knees, and show pains. They are fed principally on shorts, scalded; a liberal amount of bedding is given to them. Is there anything you would advise me to do or give to them? J. A.

Waterdown, Ont.

Give each pig two teaspoonfuls castor oil and repeat every third day until bowels move freely. Feed flaxseed or oil meal gruel, boiled potatoes, or other succulent food sufficient to keep the bowels open. Do not overfeed. Give a heaping teaspoonful of the following powders to every two pigs twice daily: Nitrate of potash, bicarbonate of soda and sulphate of magnesia, of each eight ounces, mix. See that the pigs are kept warm and comfortable.

Horse Blistered with Coal Oil.

About a week ago I came into possession of an 18-months-old black gelding that is very thin and weak from "roughing it." Before I got him a mixture of lard and coal oil had been applied to his back for lice; now the hair is falling out in bunches, leaving the skin naked but not raw. What shall I do for him? I am giving him a warm box stall, some corn fodder, clover, one quart of oats and one-third pint of oil meal, three times a day, but no medicine. He eats fairly well. W. V. R.

Deshler, O.

The hair would undoubtedly come in again all right without treatment. It requires a severe blistering to destroy the hair bulbs if the skin is not injured by the horse biting or rubbing himself. Some practitioners always anoint a blistered surface with lard, vaseline or other ointment, while others advise no application. If the skin is very dry, with a tendency to crack, the application of one part pine tar melted up with four or five parts of vaseline will prove beneficial. When the blistered surface has healed the following lotion may be applied to stimulate the growth of hair: Castor oil and alcohol, of each four ounces, tincture of cantharides one-half ounce; apply once or twice a week.

THE HEN AND HER EGGS.

Is it necessary to have a cock for hens, kept for the eggs only? That is, will a hen lay as many eggs without a cock as with one? How many eggs will a hen average per month when kept in good condition? How many months in one year will a hen lay? I am speaking of Leghorns. C. H.

Brooklyn, N. Y.

Male birds should never be kept with hens that are kept for eggs only. Not only will they lay fully as well without them, but their eggs will keep in good condition a greater length of time, besides saving the feed of the useless males. In laying, all depends on the hen and the month; Spring months being the natural time for hens to lay, they will under ordinary circumstances lay many more eggs than at other times. Some hens will lay an egg every day for a long time, while others in the same flock will probably not lay enough to pay for their keep. Here comes the advantage of the trap-nest system. The question is, can the laying qualities of the stock be increased enough to pay for the extra time required to attend to the nest and keep the records, which would be quite an item in large flocks? Good stock, well cared for, should average 150 to 175 eggs each per year. In some instances they may go 200 or better, but such records for large flocks are few, and 100 would come nearer the mark for the average fowl as ordinarily kept. Many hens will lay every month in the year; even when moulting they give us a few eggs, while others will take a long rest during the Fall and Winter months. Usually there are three or four months during the Fall and early Winter when you will get but few eggs from hens over one year old. The best way to get a supply of eggs all the year is to have March and April-hatched pullets to take the old hens' place in the Fall. If well housed and cared for they will keep up a fair supply of eggs until the next Fall, when they should be replaced with early pullets again.

J. E. S.

A TRUE "CROWING HEN."

With the possibility of throwing some light upon the subject of crowing hens discussed in THE R. N.-Y., page 795, last year's volume, I desire to submit a photograph of a White Wyandotte (Fig. 49) and the accompanying explanation. The subject of the picture was hatched in the Spring of 1899. In the Fall of the same year she was selected as one of 20 pullets for a pen. She was never seen upon a nest and so far as known never laid an egg. The male birds in the pen, two in number, were never seen to mate with it. During the Winter the feathers of the tail began to take on the appearance shown in the picture; they developed to a much greater length, and became more curved and sickle-like than is usual with females of this breed. The feathering of the neck and rump became full and heavy, presenting the general shape and outline of the hackle of the male. Upon close examination the feathers of these two regions were seen to be much longer and finer than those of the female, but not as much so as the hackle of the male. In detail of form and structure they were intermediate between the two. During the Winter the comb became well developed, likewise the wattles. They were smaller than those of the mature male, and considerably larger than those of the females. With the growth of the feathers of the neck, rump and tail, together with the enlargement of the comb, wattles, and spurs, the bird presented a distinctly masculine appearance. It moulted earlier in the Fall than the other fowls in the flock, the new feathers growing quickly.

In September it was sent to a taxidermist to be prepared as a specimen for the museum of the veterinary department of the college. The photograph from which Fig. 49 was made was taken after the bird had been mounted. A dissection of the genital organs revealed the presence of a diminutive uterus and oviduct. At the usual site of the ovaries or testicles were found an aggregation of nodular structures varying in size from a No. 4 shot to that of a cranberry bean. The largest of these were elliptical or bean-shaped, the smallest spherical. Section showed them to be quite firm and uniform in structure throughout. Owing to the bleaching action of the material used by the taxidermist for the preservation of the tissue the color of these glandular structures could not be determined. When the mounted specimen was placed before a group of students with the question as to what it was, some answered "A White Wyandotte cock"; others said, "A Wyandotte hen." Finaly one gave a correct answer by venturing the statement that it was "an hermaphrodite." JAS. B. PAIGE.

Mass. Agl. College.

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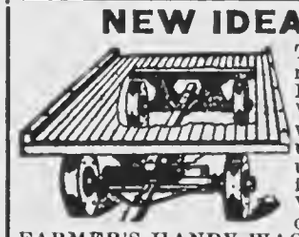

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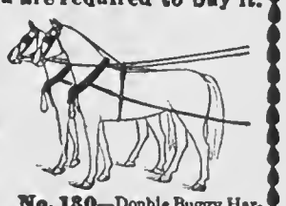

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The Rural New-Yorker

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THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, FEBRUARY 23, 1901.

THE Agricultural Appropriation bill, as reported to the Senate, calls for $24,500 to be used in conducting an investigation into the character of food preservatives and coloring matters. This would seem a wise expenditure appropriately placed, for food adulteration of any class, or the use of deleterious so-called preservatives, reacts directly upon agriculture, and is therefore of moment to the farmer. As a matter for comparison, however, what shall we say of a $9,000,000 appropriation for the rich shipbuilders, and half that for the farming interests which form the foundation of National prosperity?

*

IT is a terrible thing to have a fire break out on the farm. One may go to sleep at night thankful for the comforts and blessings of home, and be roused before morning only to see that home eaten up by flames. One of our readers has just met with this sad misfortune. "It is a terrible thing," he writes, "to be without a home, but neighbors and friends have been so kind that it has made us realize that it would be much worse to be without friends." It is truly an awful thing to lose the home, but the depths of desolation are reached when standing by the grave of the home one must realize that he is without a friend! Such things occur every day in the great cities, but seldom or never in the country.

*

THE picture on the second page shows how the average Senator looked when the honest-butter people were done with him. He is plastered from head to foot with two-cent postage stamps—every one of which represents a personal letter urging him to vote for the Grout bill. He is a living illustration of the power of the postage stamp—of the combined force of pen and tongue. *The pen that writes the letter and the tongue that licks the stamp!* The only way to get those stamps off is to vote for honest butter. There is room for a few stamps yet. Let every friend of the cow invest two cents more in a postage stamp, and stick it to his Senator with all the force of his mind and pen. Right now is the time! "The brand of the postage stamp" is more useful than ornamental.

*

A SUBSCRIBER to THE R. N.-Y. wrote the Senators from his State as to the Grout bill, and from one got a very cheering letter. The other Senator, while having nothing to say against the bill, spoke of the many important matters before the Senate and doubted, considering the opposition, whether the bill would get to a vote. In reply our subscriber wrote the following suggestive letter:

Dear Sir: Yours of the 3d is at hand, and I have read it with anything but comfort. I know what an obstructive, dilatory body the United States Senate is. I know that oleo sold as butter pays a profit of 100 per cent or more, and that there is a lot of money back of the business. It is deeply humiliating to think that the United States Senate can be "held up" in the interests of fraud. Can't you get a law through allowing them to pass counterfeit money instead of counterfeit butter for a year or two, while the Senate gets time to think it over? If the present Senate is unable to wrestle with so palpable a fraud, and the Grout bill goes over, there is likely to be some praying done, and Senators as well as Members of the House may find that there is a God in Israel.

* * * * *

That is what we call "sticking a postage stamp." There are some smug and amiable people who can't understand how Senators and Representatives could vote against the army canteen. "All logic and facts are against it," they say. If they could read the letters these Congressmen receive they would quickly see how their so-called "logic and facts" are melted out of the minds of Senators by the red-hot sentiment that comes from the common people. It has been just the same with this Grout bill. A lot of wise human owls have talked about the "logic" of oleo, but mighty little of this logic lodges in the Senator's mind after a few hot ones right off the bat of the men who are not afraid to speak out.

*

As we go about the country we meet a good many farmers who think our social and economic conditions are all wrong. Few of them have a clear idea of what particular things are out of joint, but in a general way they believe that the strong and powerful are taking money and the common rights which belong to humanity away from the poor and feeble. In spite of the constant talk about "prosperity" it is a fact that the common people have a deep-rooted conviction that the income and benefits from American capital and labor are not fairly divided. It does not seem to have occurred to many of these critics and complainers that before they lay down rules of conduct for others they should themselves show in their daily lives examples of the strictest rectitude. Has any man the moral right to denounce fraud and selfishness in others unless he has taken something out of his own life and given it to humanity? We doubt it!

*

THERE is a bill before the Pennsylvania Legislature which aims to establish a division of horticulture and pomology in the State Department of Agriculture. The Commissioner and his secretary are to be appointed by the Governor to serve under the Secretary of Agriculture. The following amendment is to be offered:

Provided, however, that the Governor shall appoint one of three persons who shall have been recommended for the said office of Commissioner of Horticulture and Pomology, by the Pennsylvania State Horticultural Association at its next regular meeting.

This amendment certainly ought to prevail. What is the sense in making a Department of Horticulture unless the only organized society can have a hand and voice in selecting the commissioner? Another bill is designed to enforce the laws against diseases and insects that injure trees and plants. This bill would take power away from the local authorities and put it all into the hands of the Secretary of Agriculture. We are informed that there is serious opposition to this change.

*

WE print this week an interview with B. F. Van Valkenburgh, ex-Assistant Commissioner of Agriculture for this district. The substance of his complaint is that oleo offenders are tried in civil courts, where there is practically no publicity, as the offender can quietly settle the case through a lawyer. Mr. Van Valkenburgh says that if these oleo rascals were prosecuted in the criminal courts and sent to jail now and then they would soon get out of the business. The Attorney-General is responsible for sending these cases to the civil courts; both Mr. Wieting and Mr. Kracke do all they can to catch offenders and obtain evidence against them. From the statement made on page 130, it is evident that the criminal courts are now getting their share. That is as it should be. These oleo rogues are the meanest sort of criminals. There is no sense in being civil to them—giving them a chance to hush things up and keep their rascality away from the public. We understand that the Attorney-General defends his course on the ground that the civil cases bring in larger fines—more income to the State! Is the State of New York prosecuting the oleo rogues for the purpose of earning money, or because it really desires effectively to stop the sale of this fraudulent stuff?

*

ON the next page is printed a call addressed to fruit growers. They are urged to meet at Syracuse, N. Y., on February 27 and 28, for the purpose of organizing a fruit growers' association. The reasons given in the call showing the need of such an organization are sound and dignified, and will, we think, appeal to all sensible fruit growers. THE R. N.-Y. hopes that the new society will start right. It should not antagonize any other similar association, but should be organized on broad, liberal lines by strong, business-like men. Advantage should be taken of the mistakes which have been made in organizing other societies in New York State. Let us make it entirely independent of State officials or State appropriations. Too many so-called farmers' organizations are fostered and pampered by the State until they have little independence left, and do not fairly represent the working farmers. One great trouble with some of these societies is the fact that the officers are selected by a "nominating committee." We hope that the new society will never have any such committee, but that the chief officers will be nominated and voted for in the open meetings. True, this will take more time, but it will be time well spent. We hope that there will be an outpouring of fruit growers at Syracuse, and that they will not come prepared to turn over the management into the hands of a few men, but that they will demand and obtain a society that will give fair expression to their wishes and wants. After doing that let them go home and do their own part of the work.

*

IT is made clear by Mr. Bonham's article (page 122) that clover requires good soil or fair manuring in order to give a good account of itself. It is not the crop for restoring poor or neglected soil when one has little manure and no money with which to buy fertilizer. Is there any plant that will do this? Yes, the southern cow pea will make a fair growth in poor soil, and when the vines are plowed in the character of that soil will be greatly improved. One may take a soil so poor that clover will not grow on it, and sow cow peas with the certainty of producing a fair crop. Plow the peavines in and use a fair dressing of lime, and a catch of clover is as sure as it would with a fair coat of stable manure. During the past year experiments with cow peas were made at many of the experiment stations, and the results shown in manurial value are astonishing. We used to think that the cow pea required the entire Summer for its growth, but now we know that it is of great value when grown between early potatoes or oats and Fall-sown grain or grass.

*

HERE is a smooth game which some of the canning factories are trying to work. This note is from an old friend:

Since writing you in regard to canning factory contracts, I have learned that our factory people are refusing to let anyone grow sweet corn for their coming season unless they will also grow some peas, at the same time keeping the price the same as last year, making the growers take the whole risk.

Now see what a scheme that is! The factory people know that the Green pea-louse is more than likely to ruin the pea crop. They know about this, for they discuss it at their annual convention. The price of canned peas is sure to go higher. The farmers who have heard about this destructive insect are inclined to give up growing peas for a season at least, but the canner purposes to make them grow the crop, assume all the risk, but have no share of any probable profit! Sweet corn is a crop which many farmers like to grow. The canners know this, and they are sharp enough to try to put a "rider" on the corn crop by compelling the corn growers to plant peas. The canner takes no risk whatever under this deal, for he will get the price of the seed peas out of the corn. The thing is unequal and unjust—a fair sample of the one-sided contracts which farmers are expected to sign to their own detriment.

*

BREVITIES.

RURALETTES.

The square-toed hen well kept in tow
By food and shelter day by day,
The squarcness of her heart will show
By piping up her round de lay.

* * *

Of speakers who climb up into the cloud
At institutes, alas, we have no dearth;
Get up and notify them—right out loud
That most of those who listen are on earth.

* * *

What shall we do when the sulky crew
Of doubts go painting the whole soul blue?
Some take powders and some take pills;
Give me a walk on the lonely hills
Into the heart of the mystery
Of God and Nature; there, comes to me
A stronger hope and a clearer sight
And a truer faith in eternal right.
No house-bound prison with doubt for me
But the silent hills where the soul is free.

* * *

"The milkmaid sat pensively milking the cow,
Then, pouting, she turned to mutter:
'I wish, oh, I wish, you would turn into milk,'
And the animal turned to butt her."

* * *

MORE soluble science on page 126.

NOT all the men with handles to their names are cranks.

WHAT do *you* say about rabbits and white color—see page 131.

MR. S. J. SCALE is of the opinion that there will not be an overproduction of fruits in the future.

To the many who are writing about the profits in growing witch hazel for distilling we wish to say—there is nothing in it.

ALFALFA; get good seed, give the soil the best possible preparation, sow 20 pounds per acre and cover with a drag or clod crusher.

IT's bad enough to take seeds of a common grass, label them "Billion Dollar" and sell at a high price, but it's like adding injury to insult to mix weed seeds with it.

How many eggs will a cow lay? That's a question some of our wise men will try to answer this week. The cow is a dead one cut and ground up into bone and meat for poultry food.

"THE people are the strongest and most intelligent I ever saw. Such handsome, rounded, cheery, rosy-looking women and girls I never saw before, except one now and then." That is what Mr. Van Deman writes about the "Palouse Country" in the State of Washington.

Events of the Week.

DOMESTIC.—A gigantic steel combination has been formed, including the Carnegie-Morgan-Rockefeller Interests, which allies companies having a capital of $1,000,000,000, and practically destroys competition in this country. . . . . The report of the joint commission on the Alaska boundary gives the United States about nine-tenths of the disputed territory. . . . . A fire at Evansville, Ind., February 5, caused a loss of $175,000. . . . . February 7 a limited express on the Erie Railroad was ditched near Greenville, Pa.; six persons were killed outright and 15 others badly injured. . . . . Delaware has passed a law fixing the death penalty or life imprisonment for kidnapping. . . . . A fire at Scranton, Pa., February 7, caused a loss of $400,000. . . . . Part of the Oriental powder mills, at Newhall, Me., was demolished by an explosion February 7; two men killed. . . . . By the bursting of a steam pipe on the new steamship Ventura, bound from Philadelphia to San Francisco, five men lost their lives. . . . . A cork factory at Pittsburg, Pa., was burned February 9, the fire spreading to an adjoining factory and machine shop; loss $750,000.

CONGRESS.—February 6, the Senate passed the War Revenue Reduction bill. An amendment substituting an income tax for the War Revenue bill was rejected. . . . . The House Committee on Banking and Currency, February 5, tabled the bill repealing the 10 per cent tax on State bank issues and the bill requiring National bank depositors to pay interest to the Government on public deposits. . . . . The Senate, February 7, passed the Pension Appropriation bill, carrying $144,000,000, after a few minutes' consideration. The House finally passed the Post Office Appropriation bill. The amendment to reduce the rate of railway mail pay was ruled out on a point of order; the amendment to continue the pneumatic tube service in New York, Boston and Philadelphia was abandoned with the purpose of making the fight in the Senate, and the motion to strike out the appropriations for special mail facilities was defeated. . . . . The Agricultural Appropriation bill reported to the Senate carries a total of $4,503,920, of which $158,820 was added by the committee. Among the amendments recommended is one to reorganize the eight divisions of the department into four bureaus. The divisions of pomology, agrostology, botany, vegetable pathology and experimental gardens and grounds are consolidated as the bureau of plant industry, and the divisions of forestry, chemistry and soils are made bureaus. Another amendment authorizes an investigation of articles imported from foreign countries which the Secretary of the Treasury has reason to believe are dangerous to health and provides for their exclusion if so found. An appropriation of $24,500 is inserted for conducting an investigation into the character of the proposed food preservatives and coloring matters to determine their relation to digestion and to health and to establish the principles which should guide their use. The establishment of a weather bureau station in Bermuda is authorized in order to complete the chain of stations in the West Indies.

PHILIPPINES.—A Spanish merchant in Manila and an American contractor have been arrested on a charge of dealing with the insurgents and paying assessments to the insurgent cause. The American, D. M. Carman, has a monopoly of carrying goods going through the Custom House ashore from the ships; he is a rich man, and possessed the confidence of Gen. Otis. . . . . The President plans to organize the Philippine municipalities, place the offices in the hands of intelligent natives and permit limited suffrage.

GENERAL FOREIGN NEWS.—Queen Wilhelmina of Holland was married to Duke Henry of Meckienburg-Schwerin February 7. . . . . The Rev. W. S. Ament, an American missionary, has been arrested with others in China, by the French and Russian troops, on the charge of extorting money from the Chinese. He denounces his arrest as an outrage, and asks Minister Conger to release him with troops. . . . . At Baku, Transcaucasian Russia, fire broke out in the oil wells and reservoirs February 6. The fire soon became uncontrollable; 500 persons are believed to have perished, and the loss is almost beyond computation.

FARM AND GARDEN.—Prof. S. A. Beach, of Geneva, N. Y., presented a paper to a meeting of the Royal Horticultural Society of England on January 15. His subject was "Recent Developments in the Treatment of Diseases and Insects Injurious to Orchard Crops." It was a resumé of the progress in the United States of the methods of fighting insects and diseases and was most instructive.

Twenty-five young men are attending the short courses in agriculture, horticulture, and the mechanic arts which are now being given at the Oklahoma College at Stillwater. They are studying the work of the experiment station very closely and are finding much that will be helpful to them when they return to their farms.

A deputation from the Ontario (Canada) Fruit Growers' Association visited the Canadian Minister of Agriculture February 1, to urge a careful system of inspection and fumigation to prevent the spread of San José scale. The Minister requested the Association to appoint a committee of three to coöperate with the government in securing precautionary measures. It is probable that the Provincial Legislature will take action in this line during its present session.

The annual report of the Canadian Minister of Agriculture shows an enormous growth in farm products in the past few years, while the exports to the United States are continually decreasing. Last year Canada exported wheat to the value of $11,995,488, while in 1896 the amount was only $5,771,521. The value of flour exported more than doubled in the same period, with even a greater increase in other grains. The greatest improvement was in cheese and butter. In 1896 the cheese exports amounted to $13,956,571, while last year it reached the sum of $19,856,324. In the same period the export of butter advanced from $1,052,089 to $5,122,156. Pork, bacon and hams advanced from $4.446,884 to $12,802,034, and eggs also about doubled. The report shows that Great Britain took no less than $4,947,000 worth of eggs. The United States bought only $5,044. The same is noticeable in cheese, as the United States only bought $4,836, which is $5,000 less than four years ago.

Edmund G. Harrison, special agent and road expert of the public roads division of the Agricultural Department, died in Washington on February 6, aged 72 years. He was an occasional contributor to THE R. N.-Y.

The American Saddle Horse Breeders' Association will meet at Louisville, Ky., April 5; secretary, I. B. Nall, Louisville, Ky.

Five students from Argentine Republic have recently entered the University of Missouri for special work in animal husbandry. Two of these are sent by the government for the purpose of becoming acquainted with American methods of instruction in agriculture.

Anticipating the repeal of the State Wolf Bounty law, a number of stockmen in the Bad River section of South Dakota have contributed a handsome sum from their own pockets, and will keep up the warfare. The State has expended $30,000 for wolf scalps, and the present Legislature is not expected to make a further appropriation.

The Eastern New York Horticultural Society.

THE FRUIT DISPLAY.—The fifth annual meeting of the Eastern New York Horticultural Society was held at the American Institute, 19-21 West 44th St., New York City, February 13-14. The attendance was very good, especially on the second day, and many questions were discussed in a profitable manner. The number of women in attendance was noticeably above the average at horticultural meetings. Geo. T. Powell, of Ghent, was elected for the new president, other officers being re-elected. The exhibit of apples was quite extensive, and may fairly be said to be superb in quality. Most of the specimens were models in color and finish. Ellwanger & Barry, Rochester, had a large and fine display of Winter pears as well as of apples. The standard apples shown by W. N. Teator, Upper Red Hook, were beauties in every way, though individual varieties were surpassed in other collections. The feature of greatest interest, however, was an exhibit of 14 plates of hybrids and seedlings of the famed Newtown Pippin, grown at Croton Point, N. Y. Crosses of the Pippin and Northern Spy, Greening and Russet, with the good characteristics of both parents plainly marked were shown, as well as new types. All seemed to be good keepers, and as far as tested the quality was excellent. We shall have more to say about these exceedingly promising novelties in a subsequent issue. Twelve plates of Lady apple seedlings were shown by another exhibitor, and were very beautiful, being larger and of brilliant coloring, ranging from bright yellow to a glowing garnet red. A new pear, said to be a hybrid between Bartlett and Winter Nelis, from Massachusetts, was in remarkably good condition for the season. It is very large and fair, of a good yellow when ripened, and of most satisfactory quality. There were many fine decorative plants from Siebrecht & Son, New Rochelle, and some little-known orchids from other growers. A very good display of roses and carnations in many new varieties lent attractiveness to the hall.

DISCUSSIONS AND OPINIONS.—The San José scale question excited much interest and discussion, and was disposed of by an indorsement of thorough inspection and the necessity of thorough fumigation with hydrocyanic gas of all nursery stock. Some points from the committee reports and question-box discussions are as follows: Apples in general proved satisfactory to growers who held their fruit. Early sellers got low prices. Peaches were plentiful and often small from overbearing. Those who thinned got fair prices. Strawberries were a satisfactory crop and brought good prices. Currants brought little profit. The crop was enormous. The yields of raspberries and blackberries were in most instances satisfactory, and the prices of good berries quite fair. Plums were much injured by winterkilling and curculio. Prices were good. Several of the Japans showed weakness. There is an increasing demand for Brussels sprouts. The secret of asparagus culture is heavy and constant manuring and thorough tillage. The Palmetto is the best and most resistant variety. No better tomato than the Trophy, introduced in 1868, has yet been developed, though some of the newer varieties have special points of excellence. Pears have been enormously injured in the last 25 years, and the dwarf Lima beans are a useful acquisition owing to ease of culture.

PETROLEUM FOR SCALE.—Some progress is being made in working out the petroleum cure for scale. Crude petroleum is more effective than either whale-oil soap, one pound to the gallon, or kerosene oil. The soap is good for Summer use. Petroleum in mechanical emulsion, 10 per cent, kills most of the scale; in 25 per cent, kills practically all, and has not proved dangerous. Crude petroleum is dangerous on account of varying quality and density. Leaf drop in peaches was bad last year in poorly-drained lands. The disease called "little peach" is spreading and is very destructive where it gains a foothold. A similar appearance is noted from the effects of overbearing, but the tree often recovers.

Floriculture has made gigantic strides in eastern New York during the last two decades, more than all other branches of horticulture. It has never asked the State for subsidies, but has stood on its own merits. The sale of plants and flowers during the past holiday season exceeded all records, amounting to over $1,000,000.

W. V. F.

To Fruit Growers.

We believe that the time is at hand when all those interested in fruit growing in New York State should consolidate their interests, join heart and hand, and be of mutual benefit, both in teaching how to grow their fruits, and in helping to sell the products. We all know that the average producer was made to believe that the apple crop of 1900 was equal to the crop of 1896. Whether this was through ignorance or intent we do not know, but if an organization, such as is contemplated, had existed last Fall, the members would have been in close communication, through their central head, and, after collecting and tabulating the information and sending it to the members, would have saved the apple growers of New York State alone many thousands of dollars. We also believe that through a State organization we can command attention in procuring shipping accommodations, cars at the proper time, the advertisement of dishonest commission merchants, cold-storage facilities, legislation, and aid in many other ways through their executive and legislative committees. These are a few of the many advantages that a strong organization can accomplish by its coöperation and unselfishness. Not only in these lines can we be of service to each other, but in producing finer and more salable fruit, and we would know better how to pack the same through closer communication of producer and consumer.

Therefore, we wish to call a meeting, to be held in Syracuse, in the assembly room of the Chamber of Commerce, February 27 and 28, at 11 A. M., for the purpose of forming such an organization. We earnestly urge the coöperation of all those interested in growing fruit in securing a good attendance at this meeting. We are promised the presence of J. H. Hale, of Glastonbury, Conn.; H. W. Collingwood, of THE R. N.-Y., and Prof. V. H. Lowe, of the Geneva Experiment Station. Certificates can be procured at nearly every station where coupon tickets are sold, when first-class fare one way is 75 cents, and return on one-third fare, on condition that 100 or more holding certificates attend the meeting. Headquarters at St. Cloud Hotel.

L. T. YEOMANS,
T. B. WILSON, Committee.

Prosecution of Oleo Cases

If violators of the law can escape with only a small fine and no newspaper publicity, much of the disgrace that should be connected with law-breaking is removed. Are dealers who are caught selling oleo for butter let off this way too easily? Ex-Assistant Commissioner of Agriculture Van Valkenburgh says they are. In a recent interview he said:

"During the 12 years previous to October, 1896, not a single oleo case in the Second District (including New York City) was prosecuted or settled in civil courts, except in cases where civil and criminal proceedings were instituted against the same person; and no milk cases, except where the milk was undoubtedly adulterated by the shipper, who was a non-resident of the State. In such instances the dealer was allowed to settle by paying the civil penalty, which he would deduct from the amount due the non-resident shipper. This system of handling the agricultural laws was continued until October, 1896. Since that date, and up to the Fall of 1899, nearly half the cases were settled by civil penalty, without going to court, after which date, as I am informed, the Attorney-General notified the attorneys assigned by him to the prosecution of violations of the agricultural law, that all cases must be prosecuted in civil courts only, except when given directions to the contrary. This is entirely contrary to the former policy, which held that nothing but criminal prosecution would deter violators of the law. To call at an attorney's office and settle by paying $25, $50 or $100 civil penalty, does not have much effect, as the dealer well knows that he can return to his place of business and make the amount of his fine in a week or two by continuing the sale of these goods in violation of the law. In fact, the manufacturers of the goods guarantee the dealers to pay all fines and penalties imposed. No publicity being given to his prosecution, he loses no credit. Other dealers hearing of no prosecutions under the law, naturally conclude that it is not being enforced. It seems to me that these cases are handled now in such a way as to make a record of a large number of prosecutions without having any effect whatever on the quantity of goods sold. In fact, this will lead to the sale of a still greater amount, as there is but little fear of criminal prosecution on the part of dealers who feel disposed to sell oleo as butter. The law might about as well be wiped off the statute books if this is the manner in which prosecutions are to be made. In my judgment, the worst blow ever struck at the agricultural interests of this State was the action of the Legislature in placing the selection of the attorneys in the hands of the Attorney-General, instead of allowing the Commissioner to secure his own counsel, as many of the lawyers selected by the Attorney-General are not experienced in criminal law, and especially not in agricultural law. The Legislature could not do better than to repeal this act and place the selection of counsel in the hands of the Commissioner, who is better acquainted with the requirements of each case."

IN some sections of North Carolina, the tobacco acreage will be decreased as much as one-third, and cotton will take its place. The high price of cotton this season is the cause.

IT is said that phylloxera is damaging vineyards in the neighborhood of Stockton, Cal., and experiments are being made with varieties of grapes which have the name of being resistant to this pest.

THE southern mule market has had a boom for the last three years on account of the increased demand for war purposes. The first of this month a British steamer left New Orleans for South Africa, having on board 1,500 mules.

THE crop in the celery-growing section of Florida is said to be large, and shipments will soon be made to the New York market. This Florida celery is usually superior in quality to that received from California, being more tender and not so strong in flavor. Some of the stalks of the California product are nearly two feet long, but inclined to be tough.

AT the beginning of this year a new market regulation went into effect at New Orleans. It forbids the opening of any private market within nine blocks of the public market section, and also prohibits peddlers from calling out what they have for sale, or in any way trying to attract the attention of people in the residence districts through which they go with their wagons. The idea of this new rule is to prevent the sale of unwholesome food by peddlers, and to increase the income of the city from the rental of the public markets. It has caused considerable hardship to outside marketmen, and some inconvenience to the public, and a strong effort is being made to have the law repealed.

Woman and Home

From Day to Day.

JES' A-FOOLIN'.

She sez to me: "I wisht you would
Jes' quit all time a-teasin' me.
Fr'm morn till night it seems that you
Don't fer a minit let me be.
Go 'way now, feller! Let me 'lone;
I never liked you much no how."
But say, she smiles when she sez that,
She's jes' a-foolin', I'll allow.

I go to see her Sunday night:
She allers sez she doesn't care
If I don't come, but why has she
Them bran'-new ribbins in her hair?
An' why's she got her best dress on?
Jes' tell me that, an' tell me now;
But still she sez she doesn't care,
Still jes' a-foolin', I'll allow.

T'other night I told her straight
I loved her, an' you orter see
That little flirt jes' tip-toe up
An' give th' sweetest kiss to me.
Ah-m-m-m! 'twas sweet, but still she said
She didn't like me much nohow,
An' then she laffed an' squeezed my hand—
Still jes' a-foolin', I'll allow.

—Chicago Post.

*

HONEY is a desirable addition to baked apples, especially at this season, when the fruit is likely to lose somewhat in flavor. Wipe or peel the apples, and remove the core without running the knife clear through. Into this hollow put a bit of butter and a teaspoonful of honey, and bake after the ordinary manner.

*

MISS ANNA BARROWS, of the American Kitchen Magazine, a well-known authority on domestic science, was recently elected a member of the Boston School Board by the greatest number of votes ever polled for any candidate to that office. Miss Barrows was one of the reform candidates selected by the Public Education Association. She is much interested in domestic science as applied to rural homes, and has been received very cordially as a lecturer at farmers' institutes.

*

WHITE petticoats have come in fashion again, and are already crowding the colored silk skirts aside. We realize that in spite of its attractiveness, the silk underskirt, worn long, as it must be under a fashionable dress skirt, becomes an unsanitary dust trap, whereas the easily-washed white cambric is always sweet and wholesome. Easily-washed, however, is hardly a correct descriptive of many of the white petticoats seen, for they have two—sometimes three—flounces, trimmed with diamonds and medallions of insertion, scalloped or vandyked flutings, and all sorts of elaboration. To wear under the thinnest Summer gowns a skirt of white lawn, cut like a dress skirt, and nearly as long, is very useful; it may be flounced, but without edging at the hem, any trimming desired being in the form of insertion. Such a skirt looks better than cambric or muslin under a very thin gown, and is not nearly so heavy in laundering.

*

IT is pleasing to note the prediction that the filagree shirt waist of last Summer will not reappear. There will be thin bodices of lawn and lace, but they will not be worn on the street. The array of white waists will be quite as extensive as before; those of tailor style will be of duck or butcher's linen, made quite plain, the sleeves puffed at the wrist, with a narrow cuff. Corded lawn is another excellent material for white waists. In colors, crushed raspberry and old blue, both light and dark, are likely to be very popular; madras and mercerized cottons being favorite materials. Polka dots and broad stripes are to be favorite patterns, also very complicated plaids of diverse colors. Sailor effects will again be popular, some waists having the regular blouse shape, while others are ordinary shirt-waist shape with a sailor collar, all having the shield in front, and the regular standing choker collar at the throat. The sailor styles are always becoming to slim and youthful figures.

*

OUR pattern department has just received an order for a skirt pattern from

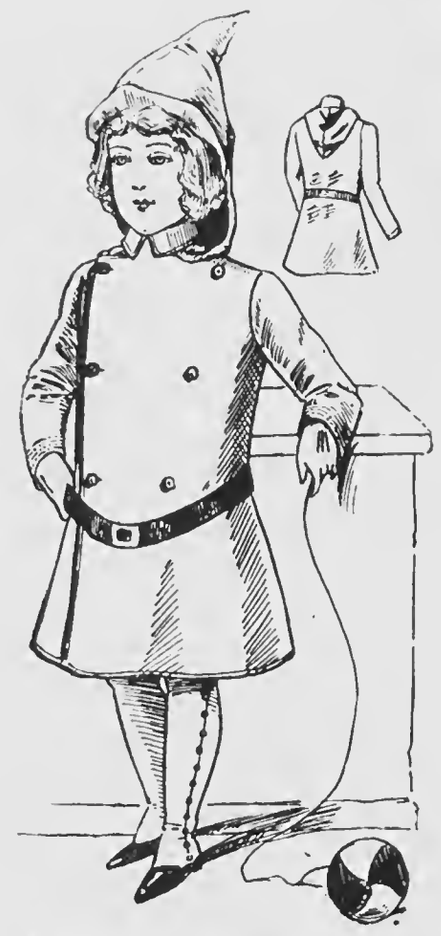
3726 Girl's Costume
6 to 12 Years.

a reader at Lowville (no State), who gives the size wanted, but neither the number of the pattern, nor her own name. Consequently, the order must be held until a letter of inquiry is received, and in the meantime some busy woman in New York or Minnesota or Pennsylvania (for there is a Lowville in each of these States) will wonder why she does not receive her pattern. Perhaps she will see this explanation, and feel relieved thereby.

The Rural Patterns.

Bright plaids are still very popular for girls' dresses. The very pretty little costume illustrated is made from camel's-hair cheviot woven with much red and lines of black, green and yellow; and is trimmed with bands of black velvet ribbon. At the neck is a V-shaped shield of heavy cream lace over plain red, finished by a simple standing collar. The skirt is circular, with a single seam at the center back. The upper portion fits snugly and smoothly, but below the hips it falls in soft, undulating folds. The fullness at the back is laid in an inverted pleat, or can be gathered, if preferred. The waist is made over a fitted lining and, with the skirt, closes at the center back. The V-shaped portions are faced on to the lining and the waist proper is arranged over it. The backs are plain across the shoulders and drawn down in gathers at the waist line. The front is laid in two backward-turning tucks at each shoulder, which provide soft, full folds below, and also is gathered at the waist line. The sleeves are snug, but not over-tight, and are finished with roll-over cuffs. To make this costume for a girl of eight years of age 4¾ yards 21 inches wide, or 2½ yards 44 inches wide, will be required, with one-half yard for V-shaped shield and 10 yards of velvet ribbon to trim as illustrated. The pattern No. 3726 is cut in sizes for girls of 6, 8, 10 and 12 years of age; price 10 cents from this office.

The small boy's Russian coat shown is very stylish, and not difficult to make. The model is melton cloth in Russian blue, with lining of bright red, leather belt and handsome gilt buttons, but all colors are used, hunter's green, dahlia red and brown, with the blue having special vogue. In addition to the cloth, cheviot, velvet and corduroy are all worn. Linings are usually, and preferably, of silk, but lightweight cloth, flannel and mercerized materials can be substituted, and are durable as well as less costly, besides which they look exceedingly well. The back of the coat fits smoothly across the shoulders, but ripples as it approaches the lower edge. The fronts are snug at the upper portion, but allow perfect freedom below the waist. The fitting is accomplished by means of shoulder and under-arm seams only. The left front laps well over the right in Russian style, and the closing is effected with buttons and buttonholes. The pointed hood is an excellent and practical feature, and can be included in the neck seam or finished separately and attached, by means of nooks and eyes, beneath the collar ready to be used when needed, or can be removed when the days are mild. The neck is finished with a simple roll-over collar, which is all-sufficient when the hood is omitted. The sleeves are two-seamed and finished with machine stitching at the wrists. To make this coat for a boy of four years of age four yards of material 21 inches wide, 3⅛



3706 Boy's Russian Top Coat.
2 to 8 years.

yards 27 inches wide, 2⅜ yards 44 inches wide, or 1¾ yard 50 inches wide, will be required. The pattern No. 3706 is cut in sizes for boys of 2, 4, 6 and 8 years of age; price of pattern 10 cents.

Masters of Men

By Morgan Robertson

The story of a man who ran away from a fortune. Contrasting stories of life on a battleship, and the torments of existence on a cargo-boat with a brutal captain. Begins in this week's (February 23) number of

THE SATURDAY EVENING POST
OF PHILADELPHIA

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THE SATURDAY EVENING POST

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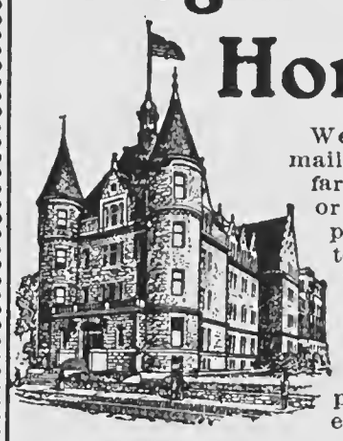
Begin at Home



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Electricians,
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A New Country

"The Valley of the Platte" is the name of a booklet we have published, which describes a new country just opened up by the building of a railroad from Northport, Nebraska, up the valley to Guernsey, Wyoming. There are great opportunities in this district for farmers and merchants. A copy of the booklet, with a fine map of the country, will be sent free on application to P. S. Eustis, General Passenger Agent C. B. & Q. R. R., Chicago, Ill.

BROWN'S BRONCHIAL TROCHES

Neglect of a Cough or Sore Throat may result in an Incurable Throat Trouble or Consumption. For relief use BROWN'S BRONCHIAL TROCHES. Nothing excels this simple remedy. Sold only in boxes.

Easy Harness

All harness, old or new, is made pliable and easy—will look better and wear longer—by the use of

Eureka Harness Oil

The finest preservative for leather ever discovered. Saves many times its cost by improved appearance and in the cost of repairs. Sold everywhere in cans—all sizes.
Made by STANDARD OIL CO.

Rural Recipes.

O woman, if seeker
  Your way to gain
O'er man, the weaker,
  The means are plain;
Would you be able
  Vain man to rule,
The dinner table
  Let be your school.
You need no ballot
  To win your part;
Just tickle his palate—
  You touch his heart.
—Good Housekeeping.

Peach Turnovers.—One pint of dried peaches stewed and sweetened with two tablespoonfuls of brown sugar; flavor with nutmeg to taste. Make a stiff crust, not as short as for other pies. Roll out pieces the size of a saucer. Cover one-half of the crust one-half inch deep with the stewed fruit. Fold over, pinch the edges together and prick with a silver fork. Fry like doughnuts, preferably in cooking oil; powder with sugar and serve with maple syrup.

Hashed Veal.—Slice roast veal very thin, season with salt and pepper and shake a little flour over it. Next chop fine a medium-size onion and put it into a stewpan with a tablespoonful of good table sauce and an equal quantity of mushroom catchup; boil these together for two or three minutes and then add half a pint of rich veal stock; boil until it begins to thicken and then throw in the veal; let the whole boil for five minutes longer and serve with small squares of toasted bread.

Frozen Frizzled Beef.—This is a suggestion for our farm housewives, who often have a large piece of beef frozen solid during cold weather. Procure a round or rump sirloin steak about 1½-inch thick; roll up tightly, tie, wrap in a fresh napkin and let freeze solid. When wanted for use shave off as much as required and put into a frying pan which has a generous supply of butter melted and hot. Toss the meat shavings about till they begin to brown, then add water to make sufficient gravy; season well and thicken with flour.

Dakota Doughnuts.—Beat together well two eggs, three good tablespoonfuls sugar, one-half teaspoonful salt, dash of nutmeg; pour on this two large kitchen spoonfuls smoking hot lard, add one teacupful sweet milk, flour to make a very soft dough, two teaspoonfuls baking powder. Do not cut too thin, and do not have the lard too hot when you first put them in to fry, as they will crust over and not be light. Roll in powdered sugar when cold. These are wholesome, as they do not absorb the grease while frying.

Eggless Waffles.—Mix at night a batter with sour milk if you have it; if not, sweet will answer. To each quart of milk, with flour for batter, add one tablespoonful each of butter and sugar, one-half teaspoonful salt. If sweet milk is used add small quantity yeast or one-quarter compressed yeast cake. In the morning add enough baking soda to correct acidity—you will have to try baking a little to get it right.

Mock Duck.—Four pork tenderloins; slash lengthwise, rub with salt and pepper, fill with dressing made of bread crumbs, one onion, one egg, one-half cupful butter, salt and pepper to taste; tie together and bake in roaster. Serve with hot apple sauce made as follows: Pare and quarter (if large, cut in eighths) as many apples as the family appetite requires. Put a layer of apples in a granite or enameled shallow pan, put bits of butter, goodly supply sugar and dash cinnamon on the apples. Do this in layers till pan is full; add a little water and bake till rich and clear, not just barely done.

Potatoes Allemande.—Dry in the oven to a delicate brown slices of stale bread. Grind or roll these rather fine and measure one cupful. Add to this two cupfuls of cold boiled seasoned potatoes chopped into fine dice. Heat a tablespoonful of good lard and fry potatoes and crumbs a golden brown. Heat one cupful milk to scalding point, stir into this one heaping teaspoonful each of flour and butter, add one-half teaspoonful salt and a pinch of white pepper. Put potatoes into a hot dish and pour over it the sauce. The dish is good without the cream sauce.

Spaghetti with Brown Sauce.—Put a half-pound of spaghetti into slightly-salted boiling water. Boil half an hour, drain and pour into a buttered granite pan. Pour over it the following brown sauce: Heat three tablespoonfuls butter, stir into this two tablespoonfuls flour, stir till smooth. Draw to a cooler place on the stove and add gradually one cupful cold water, stirring constantly. Let it boil up, add one scant teaspoonful salt, one-fourth teaspoonful pepper, one teaspoonful catchup, simmer two or three minutes, pour over spaghetti, set it into the oven and let it bake 10 or 15 minutes.

Sweet Potato Pineapple.—This will make a nice supper dish. Boil, peel and mash four or five good-sized sweet potatoes. Add one large tablespoonful butter, one tablespoonful very light brown sugar, one teaspoonful of salt, one pinch each of mace and grated nutmeg. Mold this into pineapple shape and place on a buttered tin. With the tip of a teaspoon make tiny depressions to resemble the dots in a pineapple. Into each one put a wee bit of butter. Lightly brown in a hot oven. If you wish you can make a small pineapple for each one at the table.

Graham Rolls.—These are worth a little extra care in making. To one quart of graham or whole-wheat flour use 1⅓ cupful of ice-cold water (more wetting must be used if the flour is very coarse); a half-teaspoonful of salt is first mixed into the dry flour, although some prefer these rolls should taste of the pure flour and omit the salt; stir fast until a moderately stiff dough is formed, and knead thoroughly from 10 to 15 minutes, till the dough is fine and elastic to the touch; roll half of it at a time into long rolls a little over an inch in diameter; cut off and shape into rolls four inches long and three-quarters of an inch thick; work quickly and place a little apart in a bakepan; prick them with a fork and bake in a hot oven. When done they should not yield to pressure between thumb and finger. Eat hot or cold, and are equally good rewarmed. To repeat, dip in cold water, cover with cloth, set in moderate oven, when they will puff up, lighter than at first. These require slow mastication, are sweet as a nut and very nutritious.

Self-Control.

It is easy to misunderstand and easy to be misunderstood; and sometimes, happily, it is easy to give and to accept an explanation.

"I did think I would never come to see you again," said a cousin of the prominent society woman who had come to the country to visit her and was about to start homeward. "It's kind of you to ask me, of course, but I remember that when I was at your house in the city, two years ago, you did not seem glad to see me. You were kind and hospitable, of course, but I remember you did not smile once during the entire two weeks of my stay."

To her astonishment, her city cousin burst into a fit of laughter.

"Maria," she said, "just before you came I had the misfortune to break the porcelain 'crown' from one of my new front teeth, and as my dentist was out of town on his vacation, I had to wait for his return. I didn't dare to smile when anyone was looking at me for fear of showing the ghastly metallic 'back' to which the porcelain had been attached. It was a strain, Maria, but I was equal to it, and I did not want to have to explain."

And her smile, now without a mechanical flaw, reënforced the renewed invitation.—Youth's Companion.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It i the Best.—*Adv.*

Pilgrim Succotash.

The following is the rule offered by Mrs. Mary J. Lincoln, of the American Kitchen Magazine, for making a well-known old-fashioned dish:

To make Pilgrim succotash according to rule you will need the large white beans (not the pea beans commonly used for baking) and the white southern corn. On its native heath yellow corn was not considered suitable. The corn should be hulled and in many places it can be procured already hulled. Wash one quart of large white beans and soak them over night in cold water. Next morning put them on in cold soft water, and after they have boiled briskly pour this off, add fresh water, and cook gently until soft enough to mash to a pulp and the water is nearly absorbed. Have ready, also, from six to eight pounds of beef which has been in brine only three or four days, and one pound of fat salt pork, well streaked with lean, a chicken weighing from four to six pounds (although I imagine this did not accompany the beef at every table), one large white French turnip (not the yellow kind), and eight or 10 medium-sized potatoes.

Wash the pork and beef and put them on about 8 o'clock for a 12 o'clock dinner, in cold water, in a very large kettle and remove the scum as soon as it collects. Clean and truss the chicken as for boiling, and put it with the meat about an hour and a quarter before dinner time. If a fowl must be used instead of a chicken, allow a longer time, and be careful to keep plenty of water in the kettle. Two hours before dinner time take off some of the fat from the meat liquor, put it in another large kettle, then put in the beans mashed to a pulp, also the hulled corn, of which there should be six quarts if you are planning for a large company, or to have a second serving of the dinner. The fat will keep the bean pulp from sticking to the kettle. Take out enough liquor from the meat to cover the corn and beans, and let them simmer where they will not burn. When done the succotash should be like a thick soup, and the beans should absorb all the liquor, yet it must not be too dry. Pare and cut the turnip into inch slices, add it to the meat about 11 o'clock, and the potatoes (pared) half an hour later. When the chicken is tender take it up and leave it whole on a dish by itself. Put the beef and pork together in a platter, the turnip and potatoes each on separate dishes, and the beans and corn, which are the real succotash, in a tureen. The meat usually salts the mixture sufficiently, and no other seasoning, unless it be a little pepper, is necessary. The meat liquor should be saved to use in warming the succotash the next day, but the meat is usually served cold. Like many other old-time dishes, the oftener it is warmed over the better it grows, and there is no objection to making a large quantity.

We rail at Time and Chance, and break our hearts
To make the glory of to-day endure.
Is the sun dead because the day departs?
And are the suns of Life and Love less sure?
—Richard Hovey.

KNOW ye not that we are the temples of God, and that such temples can be built only of the common stones that lie about us?—Charles Carroll Everett.

A MAN'S ledger does not tell what he is, or what he is worth. Count what is in a man, not what is on him, if you would know what he is worth—whether rich or poor.—H. W. Beecher.

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"Everything for the Garden"

is the grandest yet—really a book of 190 pages—700 engravings and 8 superb colored plates of Vegetables and Flowers. A perfect mine of information on garden topics.

To give our Catalogue the largest possible distribution, we make the following liberal offer:

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Counts as Cash.

To every one who will state where this advertisement was seen, and who incloses **10 Cents** (in stamps), we will mail the Catalogue, and also send **free of charge**, our famous **50-cent "Garden" Collection** of seeds, containing one packet each of *Jubilee Phlox, Giant Victoria Aster, Giant Fancy Pansy, Pink Plume Celery, Mignonette Lettuce*, and *Lorillard Tomato*, in a **red envelope**, which when emptied and returned will be **accepted as a 25-cent cash payment** on any order of goods selected from Catalogue to the amount of $1.00 and upward.

PETER HENDERSON & CO.,
35 and 37 Cortlandt Street, New York.

MARKETS.

The Week's Quotations.

WHOLESALE PRICES.

NEW YORK, FEBRUARY 16, 1901.

BEANS.—Heavy reeelpts from Austria, and prices easier. Marrows are very dull.

Marrow, choice, per bu	2 45	@	—
Fair to good	2 35	@	2 40
Pea, bags, choice	2 25	@	—
Red kidney, choice	2 30	@	2 35
White kidney, choice	2 60	@	2 65

SEEDS.

Clover seed, N. Y., good to choice, bu	5 75	@	6 30
Toledo, for Mch. deliv'ry, bu.	7 25	@	—
Timothy, per 100 lb	4 65	@	5 00
Red Top, lb	10½	@	—
Cottonseed, New Orleans, bulk, ton	13 00	@	—
Flaxseed whole, cleaned	6 50	@	7 00
Cottonseed meal, ton	15 75	@	—
Linseed oil, cake, ton	27 50	@	—
Meal, sacked	28 00	@	28 50
Celery, seed, lb	7	@	7¼
Hemp, Russian, lb	2¾	@	2⅞
Millet, lb	1⅞	@	2
Mustard, English, yellow, lb	6¼	@	7
California, yellow	6	@	6¼
Rape, German, lb	3½	@	3⅝
Sunflower, lb	2⅜	@	2½

FEED.—Complaints are made of irregular quality in Spring bran, owing to bad wheat in some of the flour milled. This has put Winter bran up a trifle.

Spring bran	16 25	@	16 75
Winter bran	17 25	@	17 50
Red Dog, to arrive	19 00	@	20 00

HAY AND STRAW.—Demand is moderate and receipts light, No. 1, 2½ cents up. These quotations are for large bales. Small bales sell for 50 cents per ton less.

Hay, No. 1	90	@	92½
N. 2	82½	@	85
No. 3	75	@	77½
Clover	70	@	80
Clover, mixed	70	@	80
Straw, rye, long	75	@	85

MILK.—New York Exchange price within 26-cent freight zone, 2¾ cents per quart.

BUTTER.—Receipts light on account of large quantities delayed on the road by storms, and market firm at an advance of one-half cent on extras.

Creamery, extra, per lb	22	@	22½
Firsts	20½	@	21½
Seconds	18	@	20
Lower grades	16	@	17
June make, extras	19	@	20
State dairy, half-firkin tubs; fresh, finest	20	@	—
Half-firkin tubs, fresh, firsts.	17	@	18
Tubs, full made, good	15	@	15½
W'n imitation creamery, finest..	17½	@	18
Lower grades	14	@	15½
West'n factory, fresh, fancy	14½	@	—
Lower grades	12	@	13½
Rolls, fresh, choice	14	@	14½

EGGS.—Market is weak on lower grades, and some holders are cutting prices rather than carry stock over.

QUOTATIONS AT MARK.

Nearby, State & Pa., fresh-gathered, fancy white, doz.	21½	@	22
Fancy brown, per doz	20½	@	21
Average prime	—	@	20
W'n, regular packings, firsts	19¼	@	19½
Fair to good	—	@	19
Southern, fresh-gathered, average best	—	@	19
Fair to good	18	@	18½
W'n, fresh-gathered, dirties	—	@	17½
Refrigerator, choice	17	@	17½

POTATOES.—Many complaints of frozen stock, and trade generally is dull.

Bermuda, good to prime, bbl	4 50	@	5 00
No. 2, per bbl	3 00	@	3 50
L. I., prime, in bulk, bbl	1 50	@	1 75
State & West'n, round, 180 lb	1 37	@	1 62
Per sack	1 40	@	1 50
Long, 180 lb	1 25	@	1 50
Jersey, prime, bbl	1 25	@	1 50
Sweets, Vineland, cloth-top, bbl.	2 00	@	2 50
Other Jersey, cloth-top, bbl.	1 75	@	2 25
Jersey, per d.-h. bbl	1 75	@	2 00
Jersey, per basket	75	@	90

HOTHOUSE PRODUCTS.—Lettuce is down and going slowly. Cucumbers, rhubarb and asparagus about steady at former prices.

Lettuce, choice, 5 to 4 dozen to case, per doz	50	@	60
Cucumbers, prime to choice, doz.	1 50	@	1 75
No. 2, per doz	75	@	1 25
Tomatoes, common to prime, per doz	20	@	35
Radishes, prime, per 100 bchs	1 50	@	2 50
Mushrooms, poor to prime	20	@	40
Asparagus, per doz. bchs	—	@	6 00
Rhubarb, per doz. bchs	40	@	75

DRIED FRUITS.—Buyers are demanding a higher quality of apples. Considerable discolored fruit is offered at three cents per pound.

Apples, evaporated, fancy, lb	6½	@	7
Evaporated, poor to good, lb.	3	@	4¼
Sun-dried, S'n, slieed, lb	3	@	4¼
Raspberries, evap., 1900, lb	19	@	20
Blackberries, 1900, per lb	6¼	@	4¾
Huckleberries, 1900, per lb	14	@	15
Cherries, 1900, per lb	15	@	16

FRESH FRUITS.—Apple market is firm, owing to large quantity of supplies delayed by storms. Receipts of Florida strawberries exeessive, and priees down five to 10 cents per quart.

Apples, common, bbl	1 50	@	2 00
Baldwin, bbl	2 25	@	3 50
Greening, bbl	2 25	@	3 00
Ben Davis, bbl	2 25	@	3 50
Spitzenburg, bbl	3 00	@	5 00
Newtown pippins	1 25	@	4 00
Grapes, W. N. Y., Catawba, small basket	8	@	12
Catawba, case	75	@	1 25
Almerias, bbl	5 50	@	11 00
Cranberries, Cape Cod, bbl	7 00	@	9 50
Jersey, bbl	7 25	@	7 50
Jersey, crate	2 00	@	2 30
Strawberries, Fla., qt	20	@	30

LIVE STOCK.—Choice steers scarce. Veal calves in good demand but 25 to 50 cents lower. Sheep and lambs firm.

Native steers, per 100 lbs	4 50	@	5 20
Bulls	3 00	@	4 00
Cows	1 95	@	3 80
Calves, choice veals	4 50	@	8 25
Barnyards	—	@	3 25
Sheep	3 25	@	4 75
Lambs	5 75	@	6 30

COUNTRY-DRESSED MEATS.—Calves in liberal supply: fancy Spring lambs scarce.

Calves, veal, prime, per lb	10	@	10½
Barnyards, per lb	5	@	6
"Spring" lambs, fancy, each	11 00	@	—
Poor to prime	5 00	@	10 00
Pork, light, per lb	7½	@	8¼
Heavy, per lb	5½	@	6½
Roasting pigs, per lb	9	@	12
Pork tenderloins, fresh, lb	—	@	20

LIVE POULTRY.—Market is keeping closely eleaned up, and tone is firm.

Fowls, per lb	—	@	11
Chickens, per lb	—	@	9
Roosters, per lb	—	@	7
Turkeys, per lb	9	@	10
Ducks, avge. W'n, per pair	70	@	90
Average Southern, per pair	60	@	70
Geese, avge. W'n, per pair	1 37	@	1 75
Average Southern, per pair	1 12	@	1 27
Pigeons, per pair	25	@	30

DRESSED POULTRY.—Large supplies are delayed on the New Jersey side, owing to ice in the river, which prevents lightering cars over. Fowls and fancy chickens are firm. Demand for ordinary stock slack.

Turkeys, W'n, pme young hens.	11	@	11½
W'n, prime mixed hens and toms	9½	@	10½
Broilers, Phila., under 2 lbs. to pair	30	@	35
Phila., 2½@3 lbs. to pair	25	@	—
Roasting chickens, Phila., selected, large	15	@	16
Phila., medium grades	11	@	13
Chickens, O. & Mich., scalded, average best	9	@	10
Fowls, O. & Mich., f'ey, scalded.	10	@	10½
Old roosters, per lb	6	@	6½
Capons, Phila., large	15	@	16
Medium weights	12½	@	13
Mixed weights	11	@	11½
Ducks, O. & Mich., fancy	12½	@	13
Fair to good	8	@	11
Geese, Western, prime	9	@	10
Poor	6	@	8
Squabs, choice, large, dark	—	@	3 50
Mixed, per doz	2 50	@	2 75

FURS AND SKINS.

Badger	75@		1 25
Otter	8 00@		10 00
Beaver, large	7 00@		8 00
Silver fox	50 00@		200 00
Cross fox	8 00@		25 00
Red fox	1 75@		2 00
Gray fox	80@		90
Fisher	8 00@		10 00
Lynx	4 00@		6 00
Wild cat	50@		60
Marten, dark	6 00@		10 00
Pale	3 00@		4 00
Skunk, black	1 40@		1 50
Half-striped	85@		90
Long-striped	80@		90
Striped	45@		50
White	20@		25
Raccoon	75@		1 00
Opossum, large	30@		40
Small	8@		10
Mink	1 00@		2 00
Muskrat, Winter	11@		12
Fall	8@		9

BUSINESS BITS.

WE have many questions about the Clark method of seeding to grass. This demand has been so great that all issues of THE R. N.-Y. which discuss it have been sent away. Mr. Clark has now printed a little pamphlet in which he tells the whole story. It is sent free by the Cutaway Harrow Co., Higganum, Conn.

THE Eureka Fenee Mfg. Co., Richmond, Ind., are making a post auger, or earth auger, that seems to be a great improvement on the old-time spiral auger. It is self-cleaning and self-dumping. Those who have to dig post holes, will be interested to know about it. The information will be found in their catalogue.

THE theory of aerated soils is treated very clearly in a little book issued by the tile supply house, John H. Jaekson, Albany, N. Y. It is entitled "Drainage and How to Drain." Praetieal experience demonstrates that tile-drained land is made very productive through the liberal admission of air and the carrying off of surplus moisture. If you have reclaimable land, write to Mr. Jaekson for this free book.

THE latest thing in steel wheels for farm wagons seems to be the patent grooved-tire wheel made by the Havana Metal Wheel Co., of Havana, Ill. It is easily understood that the heads being down in the groove below the surfaee of the tire they are proteeted, so they eannot wear as they are sure to do in plain, flat-tired wheels. The Havana Company claims that the grooved tire wheels will outlast half a dozen wheels made with plain tires with the heads of the spokes exposed. They do not eharge any more for them. They also make 10 different kinds of low-down truck wagons. Write for eatalogue and prices.

THE farmer who is thinking of buying a binder will, if he is wise, reflect upon the importance of buying the best. The experienee of money-making agrieulturists is that it pays to invest in the best. There are always seeond and third grades which a man ean buy for less money, but they are far the most expensive when at work in the field. The McCormick Harvesting Maehine Company of Chicago has been making harvesting maehinery for 70 years, and for 1901 offer to the farmer the McCormiek binder, a binder whieh is mechanieally perfect. The same may be said with regard to McCormick mowers and McCormick rakes. The maehines whieh lead in design, eonstruetion, light draft and in working ability are eertainly well worth the buying farmers' closest inspection. We know seetions where the McCormiek mowers are replaeing others entirely.

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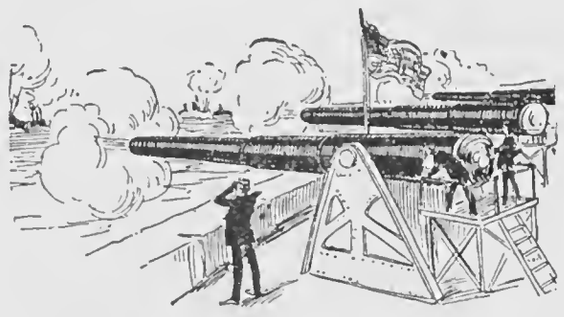

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Cut Price Books

We have in stock some books that have not been recently advertised, and are likely to become shelf-soiled unless disposed of. Some are slightly soiled now. We are going to sell them at cut prices to dispose of the stock on hand. When any stock is exhausted, we will take it out of the list. We give the number of each on hand, and regular price as well as cut price

	Regular Price.	Cut Price
30. Camellia Culture	1.25	.50
12. Annals of Horticulture, 1892	1.00	.40
30. Celery Growing and Marketing	1.00	.50
150. Cauliflower. Crozier	1.50	.50
100. Cooking Cauliflower	.20	.10
100. Fruit Packages	.20	.10
100. Accidents and Emergences	.20	.10
100. How to Plant a Place. Long	.20	.10
100. Tuberous Begonias	.20	.10
80. Canning and Preserving. Young	.20	.10
100. Landscape Gardening. Long	.50	.25
50. The New Botany. Beal	.25	.10
100. Milk: Making and Marketing	.20	.10
100. Fertilizers and Fruits	.20	.10
50. Fertilizer Farming	.20	.10
40. Ensilage and the Silo	.20	.10
100. Chemicals & Clover. Collingwood	.20	.10
100. Trees For Street and Shade	.20	.10
100. Country Roads	.20	.10
100. Chrysanthemum Culture. Paper Morton	.60	.20
50. Chrysanthemum Culture. Cloth Morton	1.00	.40

Some of the former books in this list have been all sold, and taken out of the list. The stock of some of these is quite limited as may be seen. When these are gone, no more are to be had at the price. Send in your order at once for what you want.

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Market Briefs.

PICKED UP HERE AND THERE.

RAW FUR SALE.—During the latter part of January there were large quantities of furs sold at auction in London. One fur company alone offered 27,000 American opossum, 390,000 Australian opossum. 4,000 bear, 150 silver fox, 85,000 raccoon, 1,050,000 muskrat, 9,000 wolf, 300 badger, 5,000 house cat, 7,000 wild cat, 5,000 lynx, 165,000 skunk, 100,000 mink, 1,100 otter, 9,500 beaver, 23,000 red fox, 6,000 gray fox, 16,000 kangaroo, 47,000 wombat, and 200,000 wallaby. From this it will be seen that the largest number of any one kind was the muskrat. Next came Australian opossum, then wallaby, a species of kangaroo found in Australia; skunk and raccoon. Prices on beaver, muskrat, red fox, wild cat, skunk and lynx ran lower than last year; and mink, raccoon and black bear were five to 15 per cent higher.

A MILK RAID.—On a recent Sunday the Board of Health arrested 20 East-Side milk dealers on the charge of selling adulterated milk. It is said that so many milk inspectors are off duty Sunday that unscrupulous dealers in some sections of the city have made a business of multiplying their profits by turning the hose on to the milk intended for Sunday sale. Suspicion was first excited on account of the cut prices at which some were offering milk. Probably not half the people who live in this city know the difference between pure and somewhat watered milk, and, unless the milkman overdoes it, they seldom kick. It is doubtful whether there is any other food product that can be adulterated so easily. Provisions should be made for thoroughly watching the trade Sundays as well as week days. Children are the greatest sufferers from these dishonest practices, as in many cases milk forms a large part of their food, and numerous cases of sickness, particularly in Summer, might be traced to the use of milk preservatives of various kinds. The addition of chemicals is something more than dishonesty. It is a crime. There may not be so much malice in the intent as in putting poison into a neighbor's well, but the results may be just as harmful, and offenders should be dealt with as severely as the law will allow.

FOREIGNERS FOR FARM HELP.—Every Spring we have inquiries from readers who wish to know where they can get immigrants to work on the farm. The Irish Emigrant Society and the German Society of the City of New York maintain a free labor bureau at 45 Pearl Street, New York, W. H. Meara, superintendent. People of all nationalities are entitled to its privileges, and there is no charge to employer or employee. By far the better plan for anyone wishing help of this kind is to come to the city and make arrangements personally with whoever is hired, as thus a better understanding all around may be had. Hiring immigrant help is uncertain business—something like buying prize packages of candy. You never know what you are going to get. Some are very slow in learning how to do farm work under new conditions, and an employer needs to have his supply of patience in first-rate working order.

EXPORT NOTES.—The total value of all exports from this port for the week ending February 12 was $10,476,600. In variety of goods shipped the British West Indies took the lead, with 250 different articles; and in value Liverpool was first, the goods shipped to that port being worth $1,845,236. This, together with London, Hamburg and Havre, makes a total of $4,731,195, nearly half as much as the total of the 140 other ports to which shipments were made. Trade with Cuba is on the increase, the week's shipments being worth nearly $300,000. In this lot there was a large proportion of farming implements, building materials, and household utensils, showing that people are gradually recovering from the effects of the long unsettled state of affairs there, and improving their farms, buildings and modes of living. The only live stock reported was one dog, valued at $100. To the other islands of the West Indies there was a large quantity of salt meats and fish, canned goods, and oils and fats. To Hull, Hamburg, London, Liverpool and Glasgow, there went 1,869,500 pounds of lard, 959,680 of butter ,and 3,910,000 of bacon. In the shipments for China, petroleum was far in the lead, 1,200,000 gallons. Other articles of importance were steel rails, bridge materials, lubricating oils and turpentine. Out of a total value of $205,000 for Japan, more than three-fourths was for machinery, including sewing machines, bicycles, typewriters, lathes, electrical goods and boiler machinery. A peculiar state of things is found from a study of the goods shipped to the Philippines. Out of a total of 62 items, beer, whisky and other spirituous liquors, and sporting goods, far exceeded all other items except copper wire and car materials. If the natives were to judge of us as a people by the civilizers sent to them in this one week, they might well wish to be delivered from having anything more to do with us. W. W. H.

THE CONNECTICUT POMOLOGICAL MEETING.

The fruit growers of Connecticut held their annual meeting at Hartford on February 6-7. As usual it was one of the liveliest meetings of the year. Reversing the usual order of procedure we give a report of the last day's programme first.

PEACHES AFTER YELLOWS.—The question as to the advisability of again setting peach trees upon land from which trees diseased with yellows have been removed provoked a lively discussion, and much difference of opinion was shown. It was decided that while in some cases trees might be so set and no harm result, in the majority of cases the practice is not to be advised.

WINEMAKING IN CONNECTICUT.—Albert Bernhard read a paper on this subject. There seems to be a growing demand in the State for grapes suitable for wine-making. This demand comes largely from the foreign-born element. Mr. Bernhard strongly urges that varieties of grapes yielding plenty of juice, rich in sugar, be planted to meet this demand.

SPRAYING PEACHES.—Dr. Sturgis, of the New Haven Experiment Station, read a very interesting paper giving an account of a series of experiments carried on last season. Eight different fungicides were used in several orchards, upon seven varieties of peaches. The trees were sprayed at intervals during the growing season, and the effect of each fungicide carefully noted. All of the remedies used caused a part of the foliage to fall, some of course much more than others, and almost all of the fungicides caused the premature falling of a part or all of the fruit. Dr. Sturgis believes that 10 per cent of the leaves of a peach tree may fall without injury to the tree. Bordeaux Mixture stronger than 2-4-50 formula and the soda-Bordeaux were very injurious to both foliage and fruit, and cannot be used. Bordeaux of the 2-4-50 formula was between safe and dangerous. While it caused some loss of fruit and foliage, its effects were not really destructive to the tree and crop. The ammoniacal copper carbonate injured foliage little, but was very injurious to the fruit. Bordeaux Mixture of the 1-2-50 formula did very little injury, but was not effective in checking fungous diseases. The normal acetate of copper promises well, one late application increasing the proportion of perfect fruit by 10 per cent over unsprayed trees. On the whole the practice of spraying growing peach trees in Connecticut is in the experimental stage.

PLUMS IN NEW JERSEY.—Wm. H. Skillman, of Rocky Hill, N. J., gave a very interesting and practical account of his method of growing plums. He has grown both European and Japan plums for market, and he looks at the whole business from a dollars-and-cents standpoint every time. He has discarded the plums of the European type because of his inability to control the rot. Bordeaux Mixture does not do the business for him. With him the Japs rot very little, come into bearing early, bear well and, as he expresses it, are as hardy as an oak tree. Here are some of his favorite varieties: Red June, Wickson, Chabot, Orient and Satsuma for canning. Abundance and Burbank are not favorites with him, as they rot more than the others, and do not color up as well.

STRINGFELLOW PLANTING.—Mr. Skillman is also a peach grower, and he told how, struck by the evident sincerity of the originator of the stump-root system of planting trees, he tried the scheme on a little block of 1,000 trees. He cut all roots to two-inch stubs; cut off tops and set in holes made with a bar. He cultivated his orchard as usual, and in the Fall 800 trees were dead. The remaining 200 had to be pulled out, as they were worthless. No more Stringfellow method for him!

CANNING AND PRESERVING FRUIT.—Quite a feature of the meeting was a paper read by Mrs. Harvey Jewell. If more farmers' wives, and other men's wives as well, would follow her directions and put up lots of fruit for Winter use an outlet would be found for much fruit now wasted, and a wholesome addition made to the bill of fare for the Winter months, when many of the fresh fruits cannot be obtained. This paper called forth questions and expressions of opinion from many ladies present. The practice of canning fruits of all kinds without the use of sugar was found to have many advocates. Simply place fruit in kettle with a little water; bring to a boil, put in cans and seal at once. When the fruit is to be used, stir with sugar as you would fresh fruit. The flavor of fruit put up in this way is said to be very fine.

SAN JOSE SCALE.—Quite a part of the afternoon was given over to a discussion of this very destructive insect, and to planning means for preventing its spread in Connecticut. It is present in nearly every township in the State, and unless prompt measures are taken to combat it great damage will result. The Legislature has shown no disposition to help fruit growers in the past, so the Society thought it hardly advisable to introduce a bill asking for help. The Society has sounded a note of warning, and it is to be hoped that the Legislature will see the danger and enact suitable laws.

MISCELLANEOUS.—It was asked: Can peach trees five years old be profitably worked over to a more desirable kind? J. H. Hale answered this question very positively in the affirmative. His method is as follows: Cut back all secondary branches to about three buds, then cultivate trees to stimulate new growth. When shoots are of proper size insert buds of desired variety. In some localities trees may be budded in June and a growth from the bud made the same year. Oftener, however, it is better to bud in August or September with buds of the same season's growth. The respective merits of Sutton and Baldwin apples were discussed. Baldwin is strongly advocated for planting in New England in preference to Sutton. Chas. Black, of Hightstown, N. J., made some remarks concerning his new pink carnation Russell, specimens of which he exhibited. He finds it far superior to Scott in abundance and beauty of bloom. J. H. Hale and several others spoke a good word for the Campbell grape. During the past season it proved itself early, productive and of good quality.

The following officers were chosen for 1901: President, N. S. Platt; vice-president, J. C. Eddy; secretary, H. C. C. Miles; treasurer, R. A. Moore. The meeting was interesting from start to close, and certainly a credit to the Society. R. W. R.

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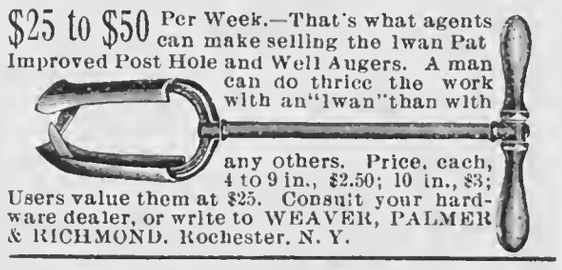

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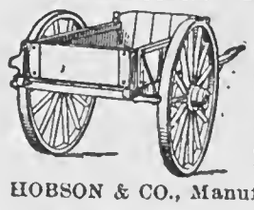

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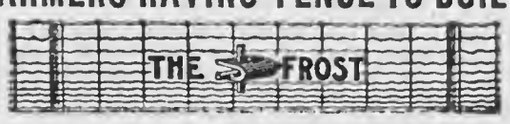

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She slipped through the straw and fell in.
—Credit Lost.

SHE: "Marriage is a lottery." He: "Not at all." She: "But it is." He: "Oh, no, it isn't. A lottery is forbidden to the mails."—Detroit Free Press.

"HE was a man of strong will," remarked one friend of the deceased. "Yes," agreed the other; "I hear that even the heirs despair of breaking it."—Philadelphia Record.

TEACHER: "Anything that is transparent may be easily seen through. Now, Emma, you may name something that is transparent." Emma: "Any kind of key-hole."—Fliegende Blatter.

"MY daughter had a quiet wedding on account of her husband's recent bereavement." "Has he lost a near relative?" "Yes, his first wife has been dead only six months."—Chicago Record.

"WHAT mo' kin I ask?" said the colored citizen,—"de co'n 's in de crib, de cotton is a-pickin', de 'taters is all banked, en de ol' mule don't know dar 's a mortgage on him!"—Atlanta Constitution.

TESS: "I notice you're encouraging Mr. Youngman. I thought he proposed to you some time ago and you said, 'No.'" Jess: "That's so, but he gave me a lovely camera for Christmas, and I—er—well, I decided to retouch the old negative."—Philadelphia Press.

"I'M glad to hear," wrote the old man to the youth at college, "that you favor the sun bath as means to health. When you come home vacation time I'll give you 15 acres of it, behind a spry mule, with not a tree to cast a shadder on you!"—Atlanta Constitution.

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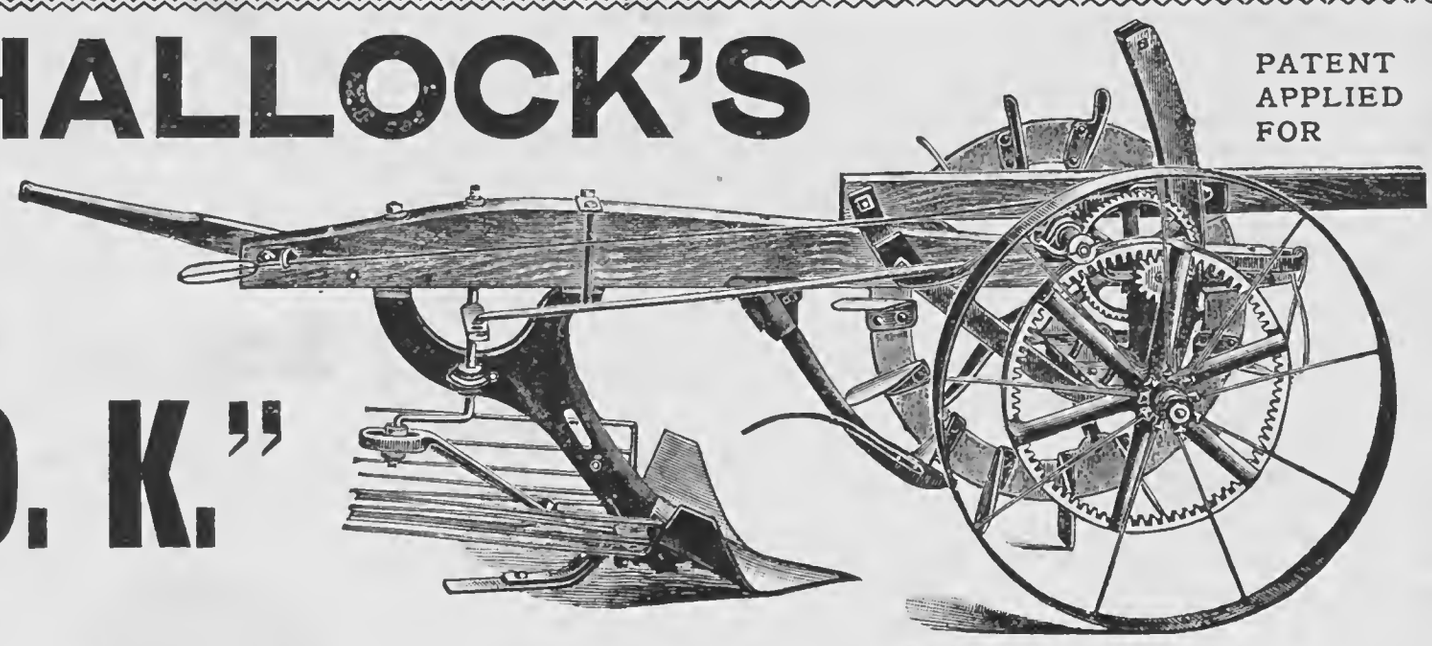

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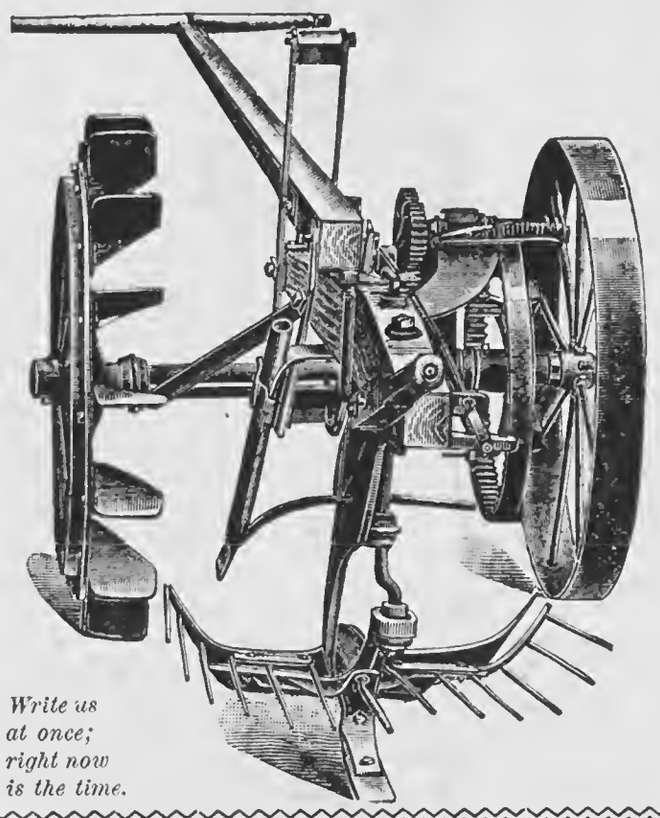

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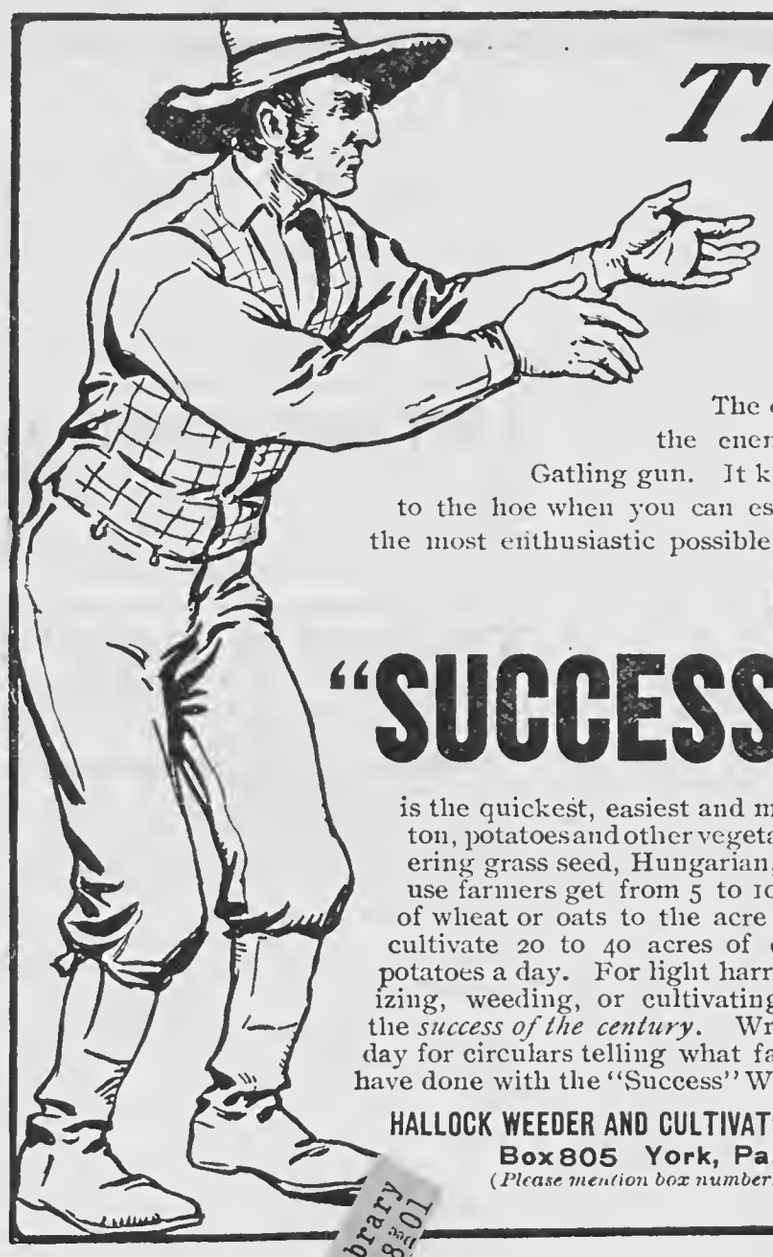

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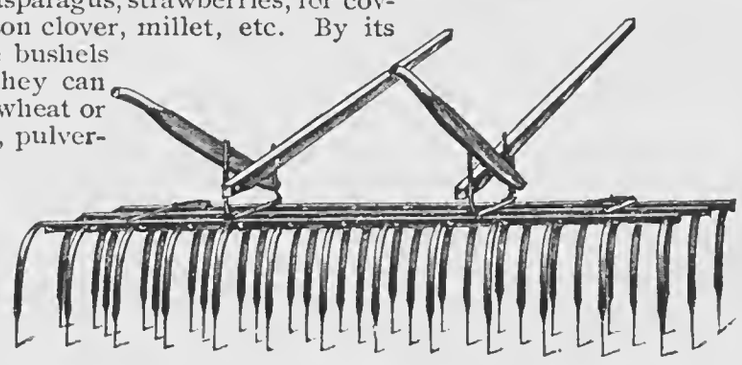

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A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL LX. No. 2666. NEW YORK, MARCH 2, 1901. $1 PER YEAR.

THE LESSONS OF AN ORCHARD.

BEST VARIETIES FOR NEW ENGLAND.

Can We Beat the Baldwin?

AN OLD MAN'S ORCHARD.—One of my earliest recollections, about 40 years ago, was the planting of the apple trees. In spite of some neighbors' misgivings, my father being then past 50, he did live to enjoy its fruiting, and died two years ago, having during a term of 30 years largely derived his living from this source. A hint to those, and many belong to this class, who at an age much younger still fancy themselves too old to plant an orchard. I know of no branch of farming here in New England which promises so alluring a return for a like investment. An orchard once grown and come into bearing, there is no crop growing above or below the surface which demands so little timely labor. This orchard, which has recently come into my hands, shows the evident results of neglect. The land it occupies had been carefully farmed the first 20 years, else it could hardly have survived the almost total neglect of the last 20, and still less have given the fair crops it has often borne. Besides this, it has generally been mown each year, although yielding, as a rule, of late years, a light crop. To pasture the orchard after cutting the grass would seem almost like adding insult to injury; but I have found this system, in the two years' time I have practiced it, to show improvement in both grass and fruit.

THE BALDWIN APPLE.—Of the 250 trees originally planted, about 10 places are now vacant. A block of 100 trees are Baldwins, and of the remaining 140, there are 40 more of the same variety, interspersed among other kinds, both early and late, thus allowing a conclusive test of varieties. As compared with Rhode Island Greening, Roxbury Russet and Northern Spy, the standard market varieties of our section, the Baldwin has proved by far the most reliable yielder. This has proved true throughout the history of the orchard, both under conditions of thrift and neglect. Strange as it may seem, the Baldwin gives the fairest and best-colored fruit in that portion of the orchard where the soil is naturally thinnest, at the top of the slope; while at one part which borders upon swampy land, where the soil is deeper and more productive of vegetation, the apples, while larger, are no more abundant, are not so shapely nor high colored, but more generally gnarly and affected with dry rot. Probably this is to be accounted for by the more favorable exposure upon the higher land, the smaller size of the trees contributing also to this end. Fine quality in fruit depends largely upon the action of the sun. My location is about 1,000 feet above sea level, and the rarer air here is comparatively cool and free from the sun-excluding mists of lower altitudes. I recently had occasion to compare fruit with some from a dozen miles away, grown at an altitude of about 500 feet, and the test was much in my favor, not only in size, but the difference in color was very striking.

BALDWIN SUBSTITUTES.—Still speaking of the Baldwin variety, while it has several defects, it sums up more points of excellence than anything yet tested. If what is known already of the Sutton Beauty could be thoroughly ventilated by an exchange of experiences, it might prove favorable to a more general planting as a substitute. Its finer quality would give it place as a first-rate market sort. In beauty of shape and color it yields in no way to the Baldwin. It has been declared to be a better keeper. There is a vast difference in quality between a Baldwin picked by the middle of September and immediately put away in a dark cellar, and one allowed to hang upon the tree during the succeeding three or four weeks. The lack of discriminating taste among buyers would probably make the early-picked more profitable, as, conditions of storing the same, the latter would prove the better keeper. The Baldwin, when so thoroughly ripened upon the tree as to be red upon all sides, and have also a rose tinge within the flesh, becomes almost a dessert fruit. But as generally handled it has a harsh acid flavor, much inferior to the Rhode Island Greening. As a business proposition, there is no comparison to be had between a red apple and a green one. This is one of the triumphs of the esthetic, that the average buyer of apples is bound to accept a business lie in the shape of a red apple which looks good in preference to the truth under a homely skin. A bright yellow is not so bad, and so beautiful an apple as the Peck Pleasant for strictly dessert uses, handled direct and in small packages, might prove a good thing. I have often been tempted to experiment in this direction. The Roxbury Russet has always enjoyed an exclusive season in spite of its ugly coat, filling a demand after all beautiful apples are out of market. I question whether our improved methods of storing will not allow fine-colored apples of better quality to displace it. When a more expert age is ushered in, allowing us to enjoy so good an apple as the Gravenstein through the Winter and Spring, then the list of varieties may be much simplified.

AUTUMN APPLES.—So far as my experience extends I do not know of a Winter variety but what suffers in comparison with the delicious quality of our best Autumn sorts. Perhaps the Northern Spy, among our eastern varieties, sums up as many points of superiority as any apple; yet this is one of those exclusives that call for the highest conditions of culture, of thinning its many small branches, and highly enriching the ground, and perhaps after all finding it received with scant appreciation. If the Baldwin is to be supplanted as the most profitable commercial apple, whether for export or home use, it must be by a variety just as productive and as thrifty under adverse conditions. It should be a little earlier to redden, hanging later to the tree. Its habit of growth should be less spreading, as it is one of the most subject to breaking down under the loads of ice that condense from our moist east winds, which we have learned to expect each season. But as to the coming market variety, it may have no better flavor than the Baldwin, for the buying public is willing to taste with its eyes, and does not promise to change in this respect, so far as we may judge.

THE EARLY VARIETIES.—What is true of Winter apples as a profitable farm crop does not necessarily follow with the earlier varieties. To market the former advantageously one has the whole season before him. The market for Summer and Fall varieties has suffered seriously by the inroads of the Apple maggot, which infests all early kinds indiscriminately. The demand for all early kinds has lessened on this account. My early apples have always been sold in my home town, and I am in a position to note the wide difference in sales. Where a bushel or a barrel of Porters could be turned off at a sale, a peck or at most a half-bushel is now the limit. As a safeguard against loss by the maggot I recommend my customers to take but a week's supply, and then much time must be taken to select fruit of that degree of hardness which can be guaranteed good. As a result of this condition of things, I have wished that my early apples were limited to a family supply. It is apparent that the farmer who sets any great number of early apples does the same with much risk as compared with the standard late or Winter varieties. The market should be studied most carefully in advance of planting and then only with some well-defined aim, either to supply the local trade or else to compete in the wholesale markets of the large cities. The large grower of some certain approved variety has the advantage in early apples, as he can afford to take the necessary trouble to become thoroughly familiar with the conditions of the market. I have a conviction that the Yellow Transparent is the most valuable extra-early variety. It is still so comparatively rare that it does not promise to become a drug in the market for several years to come. The Williams, so favorably known around Boston, as the catalogues are wont to affirm, should be known from one end of the country to the other, if adaptable to the different sections. The Gravenstein will not suffer in comparison with any apple of its season. These three kinds cover the season, from August to October, and would be my first choice if planting by the single tree or by the acre. Of about 40 kinds represented in my orchard besides those mentioned the less said the better.

NURSERYMEN AND TREES.—But I am speaking of my own familiar section of the country, fully aware

HENRY E. VAN DEMAN, POMOLOGICAL EDITOR OF THE R. N.-Y. FIG. 58. SEE PAGE 143.

that the climatic conditions from Ohio westward demand a different classification of varieties. I only wish that that great nursery firm in Missouri, instead of saying in its truly interesting catalogue, that the kinds I have found to be superior are worthless, would make this small concession to us by setting them down as successful in the East. It is no secret that New England has great advantages in soil and climate for the growing of apples unrivaled in quality. It may be that the great West also has better facilities for rearing our nursery stock. At least, it should be to their advantage in securing the trade they seem willing to receive, to acquaint themselves fully with the varieties which the East demands. Adaptability of varieties to certain localities is the key-note of successful orcharding. This question should receive the utmost attention of the nurseryman if he is to merit patronage. The Roxbury Russet is wellnigh worthless with me as compared with its productiveness and fairer quality in locations perhaps not more than 30 miles away. Such facts as this are of the gravest importance to the man who plants an orchard, and it would be businesslike on the part of the nurseryman minutely to map the country as to the most favorably habitat of each variety, and furnish the cold facts to prospective buyers. As the nurseries are proverbially novelty-mongers, here is an appropriate field for experiment stations to work more thoroughly than it has yet been done.

SOILS AND CLIMATE.—The question of soils and exposures I have but briefly touched upon, but is one of importance. We often have not mere frosts, but one or more sharp freezes, while the Winter apples are still properly upon the trees. And here the question of varieties and locations comes up again. The Baldwin will stand the effects of partial freezing rather better than most of its class, and the higher the elevation above the adjacent lower levels the less will the crop suffer. The immediate surroundings of an orchard may become a determining factor of profit. A neighbor lost his entire crop from a high wind this season, while mine, in a more secluded situation, was thinned to just about the right proportions to improve the quality. The moist winds from the Atlantic generally visit our orchards every Winter, and often deposit a mail of ice an inch or more in thickness on even the smallest twigs. If this wind can be broken by high hills to the eastward, it may mean much in saving large branches, or in some instances, entire trees from destruction. Our Eastern country abounds in land especially adapted for apples, but still in the rough, adjacent to tillage fields or mowings, often, like them surrounded by stone walls, but with the bowlders still undug. These are generally used for pastures, and are frequently reclaimed from forest. The question often arises whether orchard planting is advisable under such conditions. Is it necessary to have land so thoroughly prepared to warrant the planting of apple trees? The original seedlings which come up in odd corners, and in seasons of scarcity often yield $1 or $2 each at cider values, are often cited as proof that apple growing under neglect is as well justified by its frequent returns as is timber growing where the sole crop comes after waiting 40 or 50 years. With trees obtainable at from five to eight cents each for the younger and cheaper grades, the problem is changed from former conditions, when the high cost of trees was the chief factor of expense. I think the proper solution of such problems is to plant orchards, giving the best soil and care available, but to plant orchards, using cheap and poorly-prepared land, if this is unavoidable.

Massachusetts. F. W. PROCTOR.

THE ESSENTIALS OF BLACKCAP CULTURE

A Small Plantation Well Tilled.

LOCATION, SOIL AND FERTILITY.The blackcap raspberry is truly at home on the deep, loamy, sheltered slopes of our central Ohio hills. Blackcaps may be grown successfully upon any well-drained soil that will produce a really good crop of Indian corn. But they especially delight in a partially-sheltered location, such as is afforded by the eastern slope of a lofty hill or the leeward side of a forest. However, let the location be what it may, the soil should abound liberally in the elements necessary to the development of sturdy, fruiting canes. In the absence of stable manure, which is usually somewhat deficient in potash, clover, wood ashes (or muriate of potash), and fine ground raw bone will supply the proper elements for the production of blackcaps. However, upon rather heavy, clayey soils potash is usually available in such liberal store that stable manure, if it can be procured, will prove to solve the entire problem of fertility. Ground that is naturally cold and wet should be avoided as fatal to success with black raspberries.

PLANTS.—It has been suggested that the training of a child should begin with the birth of its grandmother. This is quite pertinent with regard to young blackcaps. Plants grown each succeeding year from thrifty young plantations never having borne a crop, develop to a wonderful size and vigor. The greatest drawback to the transplanting of such youngsters is their immense bulk and weight, necessitating the use of a team and wagon, or sled, in removing them, with the adhering soil, to their destination. I have often dug young Greggs that, with the soil tenaciously grasped by their thousands of rootlets, weighed five pounds or over. These plants are such as we may grow under good culture at home. I have never seen any of this size when purchasing from a distance, nor can I say that I would particularly relish paying express charges on such young giants. However, these excellent home-grown plants, when once settled down to business on a plot of strong, generous soil fulfill, to a surprising degree, the promise of their childhood.

PLANTING.—Blackcaps should be planted only in the Spring, Autumn setting being quite unsatisfactory, even when each plant is well mulched. Transplanting should take place either very early in the season, while the young shoots are yet dormant, or be deferred until they have attained the height of several inches. At the intermediate stage they are so tender that a touch will break them, and it is practically impossible to proceed without much trouble and loss. Indeed, I have come to prefer setting the plants when they have attained an average height of 12 inches. Carefully lifting the plants with the soil adhering, they are crowded as closely together as possible upon the bottom of the sled or wagon-box, in an upright position. Before driving to the prospective plantation these youngsters are given so thorough a shower bath that the roots and adhering soil are thoroughly soaked. It is then perfectly safe to proceed at one's leisure, so far as the safety of the plants is concerned, as they will remain fresh and bright for hours. However, we waste no time in hustling them into the ample, freshly-made furrows. As each plant is set the tip is pinched out with the thumb and finger. The plants rarely wilt at all; but the first evidence of renewed growth will not appear for several days. This new growth will push out at the axils of the leaves, along the main stock, and in a surprisingly short time the young plant will develop into a sturdy tree form.

A KANSAS PIGPEN. Fig. 59. See Page 149.

A SCARECROW THAT SCARED. Fig. 60. See Page 150.

CULTURE; DISTANCE APART.—The distance apart at which the rows should, or may, be spaced depends in a great measure upon the method to be pursued in the culture of the plantation. If continual, clean cultivation is to be practiced the rows should not be closer than seven feet; the plants 2½ feet apart in the row. We have grown blackcaps, however, and very profitably, planted much closer. Indeed, the tendency is toward this plan upon the steep slopes at Dale View, where continual cultivation simply means that our ground will not only very promptly assume the form of a huge stairway, but that every heavy rain will carry away tons of rich, mellow soil. Our first plantation of Greggs was set 3x3 feet apart, and was very profitable for eight years, although this is too close to admit the pickers readily. By their own luxuriance weeds were not permitted to encroach, although cultivation was not continued after the first season. The past season we planted a few hundred Greggs 2x4 feet. No doubt it will be urged that soil will not profitably sustain such dense planting, yet from the fact that a small area is more readily subjected to heavy fertilization than a large one, the objection does not carry much weight. We always give our plants extra care and culture the first season, after which they take such complete possession that weeds cut no figure. Thus established upon our steep, loamy hillsides, we may safely calculate to harvest at least six heavy, profitable crops of extra fine fruit, and with no extra expense above an annual thorough pruning, which is never by any means neglected. At our place we are so situated that the steep ground must be devoted to those crops that especially thrive under the conditions that must be maintained to preserve the soil, its deep loamy character and its fertility. The limited area of lower and more nearly level ground is demanded by the products that from year to year bring the soil constantly under cultivation.

PRUNING.—In pruning the plant we thin the fruit. In thinning the fruit we increase the size of that remaining to such an extent that the labor in harvesting is greatly diminished, while the product sells at an increased profit. For several years we practiced Spring "pinching" of the new canes—taking out the tips at the height of about 18 inches. This causes them to throw out laterals or branches which continue growth through the season. The laterals, the following year, are pruned back to from 12 to 18 inches. This forms a broad, tree-like head. Fruit is borne only upon the laterals—the main cane or body of the plant remaining destitute of new shoots. We have discontinued this plan with the exception of pinching back the newly-set plant, as mentioned, the first season, which is merely to check evaporation and prevent wilting. The objection to Spring "pinching" is that it practically stops the growth of the new plant or cane for about two weeks. The laterals are a new development or production that did not enter into the calculation of the tender young shoot in the dawning of its career, and very often do not sufficiently mature to stand the rigors of a zero experience. We now prefer to allow the young cane to grow and develop in its natural form. If any part of it winterkills it will be but the extreme tip. In the annual Spring pruning these heavy single canes are pruned, with a single clip of the shears, back to the height of 3½ feet. We have found by experience that a hill of blackcaps will yield almost as abundantly, pruned in this way, as with a broad, branched head, inasmuch as the canes, from the ground up, will send out strong fruiting shoots, while the branched plant bears only upon the laterals. The labor and expense of pruning is, by this method, reduced fully one-half.

Ohio. F. H. BALLOU.

ALFALFA HAY AND WHEAT BRAN.

In some recent publication I saw a statement to the effect that well-cured Alfalfa has was worth "almost as much, pound for pound, as wheat bran." Either there is a large colored gentleman hidden under the word almost, or the blessed R. N.-Y. man and some others have failed to give us poor beginners a little shred of primer science, not too hard for our proper mastication, nor too large for our swallowing. I have for the last six years had to pay from $18 to $21 for wheat bran. Now, if THE R. N.-Y. will tell us how near "almost" means almost, a whole lot of farmers will start a quarter of an acre or more into growing wheat bran or its—almost—equivalent Alfalfa. E. D. R.

Crooked Creek, Pa.

There certainly is a "large colored gentleman" under this word "almost," as we shall try to explain later. At the New Jersey Experiment Station a practical experiment has just been finished. Prof. Voorhees undertook to learn how near Alfalfa comes to taking the place of grain in a cow's ration. Wheat bran contains about 15½ per cent of protein, and dried brewers' grains about 24 per cent. By analysis, 11 pounds of Alfalfa contained as much protein as eight pounds of an even mixture of bran and dried grains. The cows were fed on this eight-pound grain ration for a time. Then it was stopped and 11 pounds of Alfalfa were fed in place of it—this feeding trial being continued for two months. The result was that the grain produced only 4½ per cent more than the Alfalfa. It requires 11 pounds of bran to furnish the protein found in the eight pounds of bran and dried grains. This makes the value of the Alfalfa 95.7 per cent of that of bran. That is as near as the "almost" can be figured out at present, and it is surely close enough. It is certainly enough to start "a whole lot" of farmers into the feed business by planting a "bran factory" on the farm. But how about that "large colored gentleman?" His name is "IF." This is all true *if* the hay is of the finest quality. Everyone knows that sour or moldy wheat bran would be worth less than half a pure, sweet article. Alfalfa is a hard fodder to cure properly—harder than Red-clover hay—nearly as hard as cow peas. The leaves are small and easily rattled off, and they contain the best part of the vine. Even the most careful farmers, in handling this crop for the first time, will not be likely to make first-class hay, and, of course, poorly-cured Alfalfa hay will not be "almost" as good as wheat bran or anywhere near it. Properly handled, however, Alfalfa hay will give the equivalent of several tons of wheat bran per acre.

CLOVER FARMING.

MANAGEMENT OF CLOVER IN THE MISSISSIPPI VALLEY.

The Great Value of the Plant.

PART II.

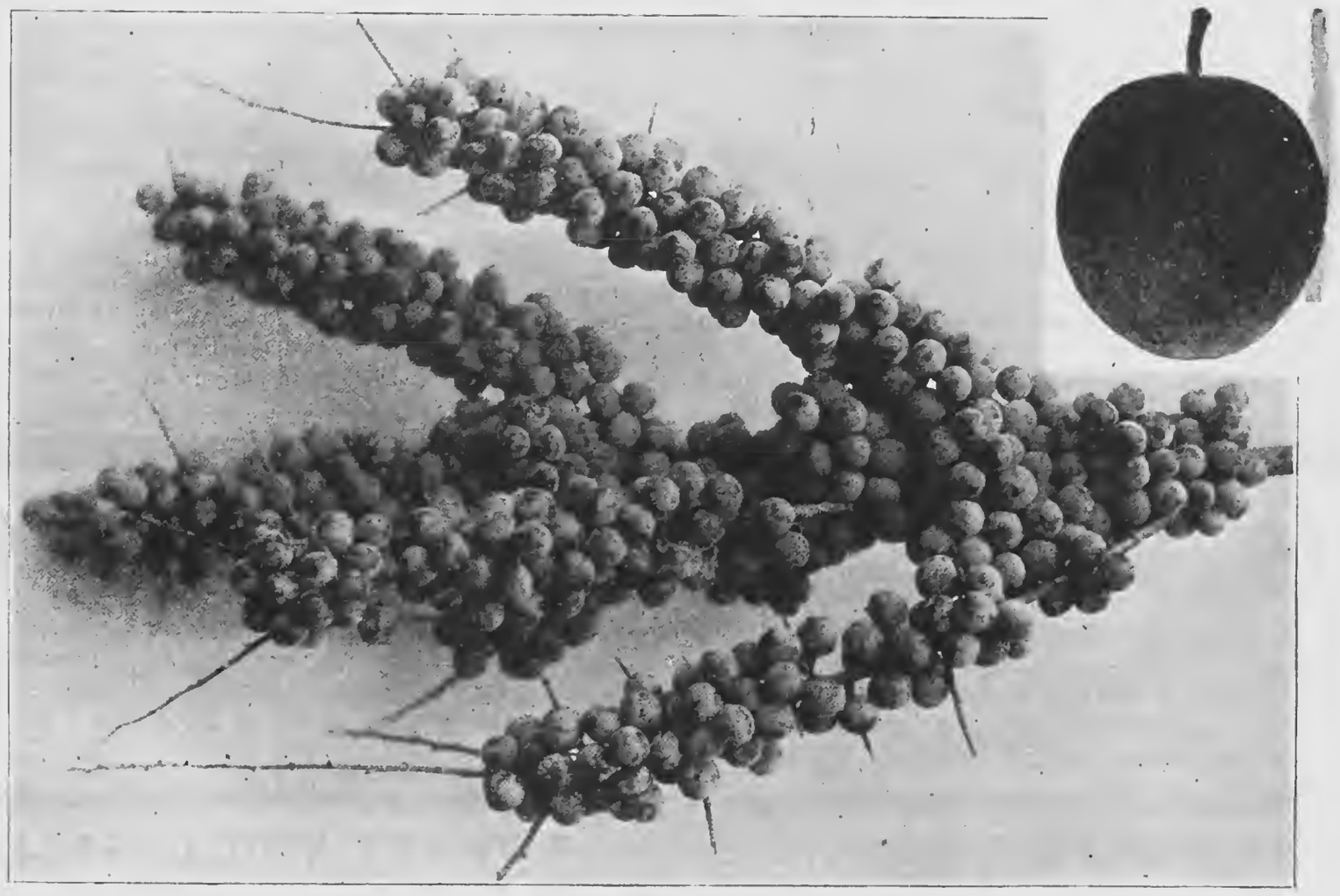
USES OF CLOVER.—The clover will not only give us a crop of hay, but a crop of seed, and leave in the soil a crop of roots worth as much as the tops for a fertilizer. By feeding the hay and returning the manure to the soil, we have in a good clover crop and the sod enough phosphoric acid for a crop of corn and wheat to follow. Dr. Kedzie claims enough nitrogen for four average crops, and potash for more than six average crops of wheat. The roots of the clover are worth as much or more than the tops for fertilizing. They weigh as much as the tops. This has been demonstrated by Lawes, by Voelcker, by Roberts and by several of our stations. If, then, land is run down so it will not grow wheat and corn profitably, is it wise to jump at the conclusion that clover will not do any good on such land? It is very doubtful whether we have any more land that is clover-sick than wheat-sick. The clover-sick land of Scotland seems to have a deficiency of soluble potash, and where potash is applied, even the worst cases of that clover-sick land have produced clover. Sandy lands that dry out quickly, clay lands that pack and are destitute of humus, black peaty lands that surface-dry quickly, are all hard lands to get a stand of clover on.

A CASE OF SEEDING.—I once tried to get a stand of clover on a clay lot, on which tobacco or corn had been grown for 40 odd years, and no man had ever seen a pound of manure or fertilizer used on it. It was tobacco-sick and corn-sick. But I plowed in the Fall and top-dressed it with manure hauled 12 miles from the stockyards. As soon in the Spring as it was dry enough to harrow and cultivate, we worked it twice, drilled in six pecks of oats, and sowed six quarts of Medium Red clover and two quarts of Timothy seed to each acre, and never have seen a better stand of clover. On a neighbor's lot he had tried clover sown on wheat, and told me it was waste of seed to sow clover. My experience leads me to conclude that land must be either naturally well supplied with fertility and moisture or must be provided these two factors, or clover will fail. Nor do I think that one kind of clover is any better suited to poor land than another. If a piece of land is so poor that clover will not grow on it after it has been Fall-plowed and top-dressed with stable manure, it is poorer than any I ever saw.

WHY FALL-PLOW?—Because I know of no means of putting thin land in so fine condition for carrying a regular supply of soil moisture near to the surface. Top-dressing with stable manure will add needed fertility and increase the soil's capacity to retain moisture. Shortage of moisture at the surface is destructive to young clover, nor will it thrive on land where there is an excess of moisture. It is the same with Timothy, Blue grass and Orchard grass, that I find perish oftener for want of soil moisture than from any other cause. If one will prepare a good seed bed fine and compact, and sow any of these seeds in Autumn or Spring I find them as sure as wheat, but sown on carelessly-prepared ground, that dries quickly on the surface or to greater depth, the season must be an exception if one gets a good catch. The looser the texture of the soil the greater is the need of care to make the soil compact and have the seed covered. Going farther west, where prairie soil dries more quickly clover is covered with harrow, drill or drag. Farmers in the Miami Valley who have put extra work on the soil, and had it fine and firm, have by covering the seed with drill or harrow, made good success by sowing clover among corn after last cultivation. To sow clover seed among corn, however, without such preparation of the soil, fails oftener than it hits. When the season is right clover catches so readily that the average farmer is slow to give the care needed to make failure the exception.

MANURE FOR CLOVER.—Common Red clover is so valuable a crop for feed and for cleaning and improving the soil, that we can afford to sow it often and to prepare the seed bed well, and on very thin lands to top-dress with stable manure. Even a very light dressing of manure well distributed seems to insure a good catch of clover. If on such land the crop is all turned under in July for wheat with which 200 or 300 pounds commercial fertilizer to the acre have been used, clover will start well the following years, under judicious farming. We cannot tell whether the light top-dressing of stable manure furnished the needed humus and fertilizer, or the bacteria, or both—possibly both. Our test of Fall plowing on a worn-out corn-sick and tobacco-sick clay hillside shows how easily and surely such land may be made congenial to clover. If I had land that I could not get a good catch of clover by sowing on wheat or barley in the Spring I would Fall-plow it, top-dress lightly with stable manure and sow a bushel of Spring barley and six quarts of Medium Red clover seed. Putting in the barley and clover with a drill would cover both more evenly, if the land was in good order and had been rolled before the drill. The barley would mature earlier than oats, rye or wheat and come off before hot, dry weather. Any weeds that might start would be cut before maturing seed, thus leaving a clean stubble. In an average season I would clip the clover again in August or early September, before any weeds would mature. The mulch thus left on the ground would help to retain moisture and add to fertility. It is well to remember that the leaves of clover that fall on the soil carry a considerable amount of sulphuric acid and potash that help to corrode its earthy particles.

ORIGINAL BEACH PLUM. FIG. 61.



IMPROVED BEACH PLUM. FIG. 62. SEE RURALISMS, PAGE 148.

PASTURING CLOVER.—The clover plant is hardy, but it will not excuse tramping when frosty; hence, it should never be pastured after frost appears, unless one is careful not to turn on in the morning before the frost has disappeared. Grazing late in the Fall and during Winter is very damaging and will usually kill so much as to make it unprofitable the following Summer. As the plant is a biennial, and not perennial, its proper place is in a rotation where it will be turned under the second year after seeding. Attempts to keep clover longer for pasture have invited attacks of Clover midge, Clover root-borer and kindred pests, that do not thrive where the plants do not occupy the ground longer than the second year, or until the crop has matured. Fortunately, we can hold in check the worst insect enemies of the clover crop, as we can those of the corn and wheat crop, by a rotation that does not keep the land in one crop more than a year or two. We find our rotation of corn, wheat and clover, each one year, is a good one for cleaning the land of weeds and insects. The cutworm and grub of the May beetle are the pests that are common after a clover sod. But Fall plowing of clover sod for corn, and the use of a plow or cultivator for first working of corn, that will cut a furrow as to leave the young corn on a ridge; and moisture, with abundance of available plant food for our other crops.

Butler Co., O. L. N. BONHAM.

HENRY E. VAN DEMAN—A FRUIT EXPERT.

We receive many letters from R. N.-Y. readers asking us to print a good likeness of our associate, Prof. H. E. Van Deman. We take occasion while our friend is 3,000 miles away (on the Pacific coast) to present at Fig. 58 one of the most characteristic portraits we have ever printed in THE R. N.-Y. Many of our readers have seen, at institutes and horticultural conventions, a short, sturdily-built man with a kindly, pleasant face, who seemed a perfect walking encyclopedia of fruit lore. Many more know him through the almost countless fruit questions he has answered in our columns. As a rule, people are not so much interested in what a man did years ago as they are in what he is doing now. We may briefly say that Mr. Van Deman came honestly by his fruit knowledge. He was born in Ross Co., Ohio—almost in an apple orchard—as he expresses it. He was a farmer's boy, knowing the hopes, ambitions and disappointments that fall to the lot of the average boy and young man on the farm. He received a good foundation in solid education, but like many other boys of his time, was unable to finish a college course. He studied botany by himself, and after his removal to Kansas, held the chair of botany at the Kansas Agricultural College. All through his busy and active life he had been identified with fruit growing. He set commercial orchards of his own, and traveled near and far studying the habits and merits of varieties, and the results of different methods of culture. When the Division of Pomology, in the National Department of Agriculture was to be organized the authorities found in Mr. Van Deman a man well qualified to do practical work for American fruit growers. He organized the Division on a broad, solid foundation.

Our friend has lived an active, useful life—of far greater service to his countrymen than hundreds of so-called statesmen who for years manage to occupy the eye of the public. He has worked faithfully to improve the quality of our fruits and to teach growers the necessity of higher culture and nicer discrimination as to varieties. We think he is at his best in answering questions—asked in all sincerity by men who, brought face to face with a hard problem, need honest advice. We do not believe that there is a man in the country better qualified to do this work. Van Deman is himself a plain, every-day working man. He understands what the common people want, and he knows how to reach them. We look over a good many miles of "copy" during the year, but none requires less work with the blue pencil than Mr. Van Deman's. His pen writes few useless words. People say that they can understand without extra effort just what he is talking about—and that is the highest compliment an author can ever receive.

Our picture shows Mr. Van Deman at his favorite occupation of examining or naming varieties of fruit. An apple or pear means much to him. He sees in it things which the ordinary observer would hardly dream were there. He can probably name more varieties off hand and give their prominent characteristics without hunting up the printed references, than any man in America. This knowledge will be of great value to him in his present work of organizing a great fruit exhibit at the Pan-American Exhibition at Buffalo. Yes, it is a good—a natural picture of Mr. Van Deman as he sits with his fruits spread out before him. It is a picture of a good and useful man, whose pen and tongue have brought him close to the lives of thousands of his countrymen. May he be spared for many years to come!

Mr. Van Deman is now on the Pacific coast. This accounts for the fact that some questions sent him have not yet been returned. They will all be answered in time, and friends will understand from this explanation that they have not been neglected.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Early Potatoes Left Undug

Is it your experience that early potatoes, dug, say in July and August, as soon as the crops die, are of better appearance and better quality than where the same potatoes are permitted to lie in the ground until October or November? There seems to be a difference of opinion about this, some people claiming that potatoes lose in quality or become soggy when permitted to remain in the ground after they are fully ripe.

Experience varies in different seasons and in different soils. A potato is in its perfection as soon as the vine which produced it is dead, and commences to deteriorate from that time. It is best kept by means of a cool, moist and even temperature. If the soil is an open one, and the season neither hot and dry nor very moist, the conditions should give satisfactory protection until Fall. If the crop is housed in a cool cellar as soon as ripe, where the temperature is uniform, and protected from any shriveling by a moist covering or otherwise, the result ought to be very near perfection.

Massachusetts. JABEZ FISHER, M. D.

We much prefer to dig our potatoes as soon as thoroughly ripe, and as in this locality the medium early potatoes give best results, the proper time for us to dig them is in the latter part of July or early August. We can see no gain by letting them lie till October or later, and can see much against this practice. Potatoes as soon as ripe will dig much more easily than late, as the ground is apt to be drier, and not so hard, and if properly taken care of earlier, there will be no weeds to contend against. We also find that they will be of better quality, as we have found them to become soggy if they lie too long in the ground. If dug early wireworms, grubs or Quack grass will not be so apt to trouble them, and it is our opinion that less scab will be found in the early-dug potatoes. If there is danger of decay we also should dig. We heard a grower once say that "if they are going to rot I'm going to leave them in the ground till they get through." We think this poor policy, as we have sold and had consumed a good many potatoes that we are morally certain would have been lost if left in the ground a month. We don't like to dig just after a heavy rain, nor during very hot, muggy weather, but when the air is warm and clear and the potatoes dry quickly. Another great advantage in early digging is that we can use the land either to grow turnips or seed down with grass or rye. Here we plant the potatoes as early as possible, so that they can make use of all the early rains, and will be nearly mature before blight conditions appear. When we dig our potatoes in July we find a good market at fair prices, as a good many slack farmers are haying then, and do not stop to dig, so that ours are sold before the general crop is in competition.

Connecticut. H. G. MANCHESTER.

The quality of the tuber is determined by the variety and the soil it grows in. Some kinds will be of good flavor, mealy and pleasant, even though grown on heavy clay soil, and foliage is killed by frost or blight before tubers are matured. New Queen and June Eating are familiar examples, while some like White Seedling and others of the American Giant class are rarely of good quality even on our upland, dry soils. Digging out, or leaving in, would not change the result. For seed purposes I prefer to leave all varieties in the ground until September rains begin, and the wilting, hot weather of August is over. Where land is well underdrained, and there is no danger of rot I would rather they were left in the ground till October. Last season my 125 varieties were all matured, very early, by the excessive drought, but were not dug until the last of October, and came out fresh, plump and sound. They are much better than withered, dried-up tubers dug soon after death in August for seed, and I think for table use also. I do not believe that they absorb any moisture from the soil to make them soggy after growth ceases; if they did it would cause them to rot. It would increase their weight, and some Yankee would have discovered it before now. I think that the process of ripening continues after growth of foliage stops, or is dead—which would tend to make them better.

C. E. CHAPMAN.

Potatoes that are fully ripe will never gain in quality by being left in the ground a month or two, but will surely lose in quality and dryness. If grown on moist soil, or wet with frequent showers, dig early potatoes and store them in the cellar, as that is the best place for them. If the weather is hot pick up as fast as dug; do not let them get hot, or they will surely rot if piled together in any great quantity.

New York. GEO. A. BONNELL.

Soft Bone and Meat.

S. R. H., New Castle, Del.—I have a chance to buy 10 tons of soft bone and meat at $1 per ton of a leather and tallow dealer. They have been steamed until quite soft, and there are no pieces of bone larger than a hen's egg. Would it pay to get it, and what properties would it contain?

ANS.—This contains nitrogen and phosphoric acid, but no potash. We cannot tell the amount of these substances, as that depends a good deal on the per cent of water. It is a great bargain at $1 per load. We would dry it out with fine dirt or plaster and use it for corn or garden crops.

Power for Irrigating.

A. L., Pine City, N. Y.—I have about 10 acres of land lying on both sides of a creek that never gets dry. I wish to take water from this creek during dry weather to water this land. I am raising apples and small fruits. I am purchasing 1¼-inch iron water pipe (second hand). I think of getting a small engine on trucks so I can move it as need may require; also a pump. How much power do I need, and probable cost?

ANS.—It is of doubtful expediency to use 1¼-inch pipe to carry water for irrigating 10 acres. A very large quantity of water is required for thoroughly irrigating. One inch of rain on 10 acres equals 271,540 gallons, a flow of 50 gallons per minute for 90 hours. In hot, dry weather one inch of water, or even more, will be needed every week on some crops. The friction of water in iron pipe increases as the square of the increase of water forced through it. That is, the friction on a flow of 100 gallons per minute is four times as great as on 50 gallons. If main pipe 2½ inches in diameter were used the 1¼-inch pipe could be used as laterals, and water allowed to flow from two or three pipes at once. Unless the engine is wanted for other purposes, I would advise having engine and pump stationary. For my irrigation plant and for one that I installed for Scribner Bros., at Neversink, Sullivan Co., N. Y., a 2½-horse-power gasoline engine does the work of pumping 150 gallons per minute 24 feet high, and 200 gallons 18 feet high. Write to United States Department of Agriculture, Washington, D. C., for Bulletin 87 on Irrigation in New Jersey. This bulletin gives detailed information concerning several irrigation plants. The cost depends on conditions. In my own case and that of Scribner Bros., engine and pump cost $200.

GEO. A. MITCHELL.

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A Fungus on Radishes.

O. D. P., Crosswick, N. J.—What is the trouble with the radishes in my greenhouse? They seem to decay below the soil level. The soil is sandy, and from the bottom of barnyard after the manure was removed. I inclose some specimens.

ANS.—The radishes received appear to be affected with ordinary "damping-off" fungus always to be feared when seedlings are raised in a close, moist situation such as a hotbed or glasshouse. The remedy is free drainage, abundant ventilation and exposure to as much sunlight as possible. Dry sand, previously heated to kill all germs, may be sifted over the young plants, and will go far to check the trouble. The soil you mention should grow good radishes if well drained.

A Talk About Lime.

C. S., Syracuse, N. Y.—Strawberry bed was plowed up after picking and seeded to millet. After I cut the millet I plowed and seeded to Red clover. Now there are 10 spears of Red sorrel to one of clover. I wish to plant to late potatoes in the Spring. How much lime would you put to the acre? The ground is full of vegetable matter.

C. T. M., Lemon, O.—I have two acres loam well tiled that I expect to plant with strawberries this Spring. It was manured with 20 pounds horse manure and in corn last year. I have one ton tobacco dust to spread in rows where plants are to stand to furnish potash. Give me your opinion as to the use of lime spread right after being slaked in big earth-covered piles, say 50 bushels per acre spread just before last harrowing. Will it be all right? I can get any amount in this part of Ohio for 15 cents or so per bushel on the cars. This is naturally a limestone region. I want to give the berries a first-class chance. I shall prepare plants as does L. J. Farmer before setting out.

ANS.—Sorrel usually indicates a sour soil, and lime is the best medicine for that. It is also about the worst thing for potatoes. In most cases where lime is used on potatoes the scab is very bad. The reason for this is that scab is a skin disease coming from germs or bacteria and "spreading" somewhat like a sore on the skin of the body. When you put lime in the soil you sweeten or neutralize it and make the conditions just right for the spread of this scab disease. In a sour soil it is not so likely to spread. Do not put lime on the potato crop, but on corn, small grain, clover or grass.

The use of lime and wood ashes on the strawberry crop has given contradictory results. In some cases they seem greatly to have helped the fruit, while in others the crop was actually smaller than where no fertilizer was used! These results are explained by the fact that the strawberry does best on a neutral soil—that is, neither very sour nor very alkaline. Potatoes are better on a sour soil—at least so far as the scab is concerned—while clover, grain and grass do much better where the soil is alkaline. The strawberry does best where the condition is not pronounced either way. On a very sour soil lime or ashes will most likely benefit the crop, while in a neutral or slightly acid soil they would injure it. We would not use lime on strawberries unless we knew surely that the soil was very sour. We think it better policy to put the lime on grain, clover or grass. How are we to know when the land is sour? The test with blue litmus paper gives a fair answer.

What is litmus paper?

Blotting paper soaked in litmus dye. This is obtained from lichens which grow upon rocks, and is very sensitive to acids. In the presence of acid the blue color changes to red, and with an alkali the red changes back to blue.

How can this test soil?

Take about a teacupful of soil—a fair sample—add enough water so that it will be firm but not pasty. Put a knife down into it. Then push the piece of blue litmus paper into the hole made by the knife and press the damp soil up around it. Let it stay there half an hour, then carefully pull it out and observe the color. If the part that entered the soil is a bright red the soil is quite sour, since there is acid enough to change the color. If after drying the blue color returns or the red fades to a light tinge there is not acid enough to need lime.

Do you call this a sure test?

Yes and no. When the blue litmus turns red it certainly shows that the soil in the cup is acid. That sample, however, may not be fair for the whole field. A number of tests should be made from various parts.

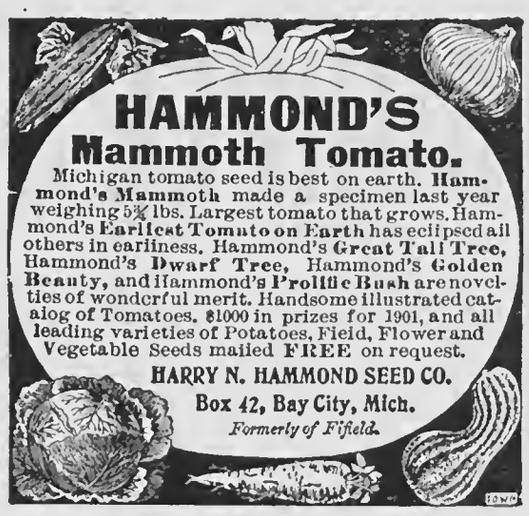
Would you put lime on a field intended for strawberries if it showed this red color?

Probably not, especially if it had been manured, for manure is alkaline and will sweeten the soil. If seeding to grass or clover, or planting corn, we would certainly use lime—from 20 to 25 bushels per acre.

Various Orchard Questions.

E. E. Z., Norwich, Conn.—I have a farm of about 30 acres of rather light, sandy soil, with about 10 acres of apple trees. For the past five years it has been left to take care of itself, or nearly so. What crops can I profitably raise in the orchards and what can I plant for forage crops that will do well here in this climate. I have a limited amount of pasture land. What is the analysis of average hen manure? Would you advise a small piece of Alfalfa for trial?

ANS.—When apples are grown for profit the best authorities agree that no other crop should be grown on the land. Clean and shallow cultivation should be kept up from Spring until midsummer, when a cover crop of clover, Winter vetches, Alfalfa, or if the land is too thin for legumes, oats or rye may be sown to hold the soil during Winter. If apples are only a side issue well-fertilized hoed crops, such as potatoes, beans and garden vegetables, will keep the soil in order, and not exhaust it unduly. It would be well to experiment with the earliest varieties of cow peas, putting them in in early June. Oats and peas and corn do well for cattle—rape for hogs and sheep. See the hen manure article on page 105.



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A Weeping Black Haw Tree.

L. B., Sparkill, N. Y.—I have just found growing on my place (property recently bought) a weeping Black haw tree. It has long slender branches nearly reaching to the ground from the height of about six feet. I found a few berries on it, so no doubt it will bloom and bear fruit when the trees are old enough. I do not find any such shrub or tree in catalogues or books I have, and would like to inquire through THE R. N.-Y. whether any such has been before known.

ANS.—There are several species of trees known locally as Black haw, belonging to at least three genera. Some of the thorn-apples are called by that name in the West, and another type, the Bumelias, are called Black haw in Florida, but we suppose the common plum-leaved haw, Viburnum prunifolium, is meant by our correspondent. We have never heard of a weeping form of this handsome native tree, and cannot find it catalogued. It will probably be necessary to propagate it by grafting or budding if it appears desirable to increase the stock, as weeping trees do not often come true from seed.

Best Forms of Fertilizing Materials.

T. E. M., No. Rush, N. Y.—Which are the best forms of potash, phosphoric acid and nitrogen for potatoes, wheat and clover, and how much of each per acre? Does muriate of potash give as good results on above crops as sulphate? Is nitrate of soda too soluble for potatoes?

ANS.—The ideal fertilizer for potatoes should *contain* at least three forms of nitrogen. Nitrate of soda supplies nitrogen which is available at once. Sulphate of ammonia is somewhat less available, while organic forms, such as bone, blood, tankage, dried fish or cotton-seed meal are useful later in the season. Nitrate of soda is the best single form of nitrogen, but several different applications of it would have to be made to carry the crop through. For wheat a small quantity of nitrate and the balance in blood, bone or tankage will answer. As to phosphoric acid, for potatoes, we would, from choice, select a mixture of dissolved bone black and fine ground bone. For wheat and clover the acid or dissolved rock will do. The sulphate is the best form of potash for potatoes. Some farmers like the double sulphate of potash and magnesia. The sulphate is considered best for such crops as potatoes, strawberries and sugar beets. For other crops the muriate is just as good and cheaper. Nitrate of soda is nearly as soluble as sugar. As explained above, it is thought best to mix several forms of nitrogen in a potato fertilizer.

Fish to Fertilize Corn.

Reader.—On page 35 M. H. J. gives his experience with fish as a fertilizer. How does he apply the fish, broadcast or in the hill?

ANS.—The land is clay loam. It has been planted three years with corn and potatoes, and fertilized in the hill with various phosphates. The fish I bought on the beach, carted soon as caught, and put them on the lot in small piles, say about 250 to a pile. I let them lie in the pile a few days to mellow; then spread them like yard manure and plow them in, harrowing the land and planting corn. It was nothing new to me; my father used to do the same. The result is what we want. Let me say here that on poor land where no fertilizer is used as a starter the corn should be planted early, in this locality from May 1 to 15 The secret is this, the fish not being decomposed the corn does not take hold of them until about the time the ears begin to set, and the fish make good, large ears. I used to fertilize in the hill for corn, and got a tremendous crop of stalks, but no ears in proportion. Long ears are not out of place on a mule, nor are long, well-filled ears of corn out of place in a cornfield. Sometimes when fish are hard to be had or we feel poor, we place two fish to the hill and cover them with earth as we hoe. This is almost sure to bring a good crop if put on before July 4. In a dry season corn will not feel the drought so much fed on fish as it will when fed on yard manure. Corn will usually hold green from one to two weeks longer with fish than any other fertilizer I know of.

Madison, Conn. M. H. J.

Roses for Michigan.

J. C. C., St. Louis, Mich.—Tell me what roses will be hardy enough for this climate, 60 miles north of Lansing, Mich. I want climbing, Rambler roses and Tea roses.

ANS.—None of the Tea roses is likely to survive Michigan Winters without careful protection. Some of the Bourbons, such as Agrippina, Queen's Scarlet, both crimson, and Mrs. Degraw, pink, might succeed. Clothilde Soupert, blush white, a free-blooming Tea-Polyantha, would survive with moderate protection. All of the moss roses are extremely hardy, and you should have little difficulty with them. Crimson Rambler, and Prairie Queen, bright rose, are among the hardiest and most reliable of climbers. You should also plant some Rugosa roses and their hybrids, as they are iron-clad in hardiness and very ornamental. We recommend the crimson and white forms of single Rosa rugosa, Agnes Emily Carman, brilliant crimson, Souvenir de Pierre Leperdrieux, bright rose, very double, Mme. Georges Bruant, white, semi-double, and New Century, blush, very double and sweet.

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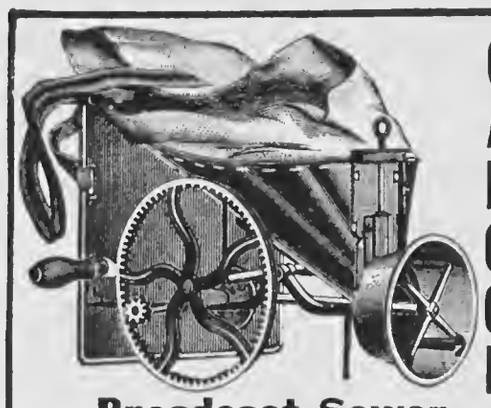

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THE MICHIGAN Wheelbarrow **SEEDER,**
the only practical seeder made for all kinds of grass seed. Not affected by wind or rain. Lightest and easiest running. **SOLD ON TRIAL** at a low price. Booklet with calendar free.
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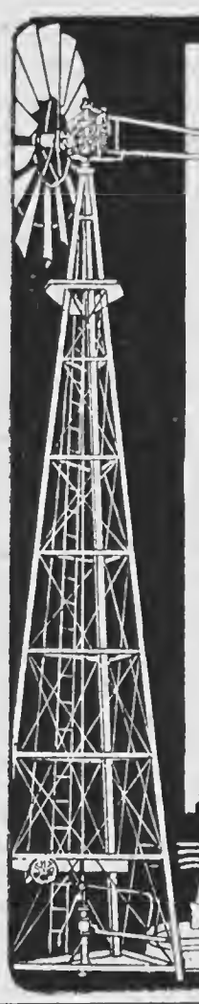

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Among my specialties (which no grower should miss) are: Three kinds of **Raspberry**, two each of **Blackberry, Currant** and **Grape**, and one each of **Strawberry** and **Gooseberry.** Better fruits for money-making were never known; guaranteed healthy, strong-rooted, fresh-dug. My 1901 Catalogue (sent *free*) is the most valuable one issued.
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"QUARTER-CENTURY EDITION"
A Grand New Book of two hundred and twenty pages. Entirely rewritten at our famous **FORDHOOK FARMS**—the largest Trial Grounds in America. New Directions for culture, New Leaflets, New Novelties of unusual merit in both Vegetables and Flowers, Elegant New Colored Plates. The Quarter-Century's Record of Progress, New Cash Prizes, and other New Features. **The largest, most complete, and BEST SEED CATALOGUE ever published.** Mailed for ten cents, which is less than cost per copy. Name this paper, send ten cents (silver or stamps) and with this great catalogue we shall send a **15-cent packet of either** Burbank's *Unique Floral Novelty* or Burpee's wonderful, new, dwarf, meaty, bright-red, earliest Tomato,—"*Quarter-Century.*"
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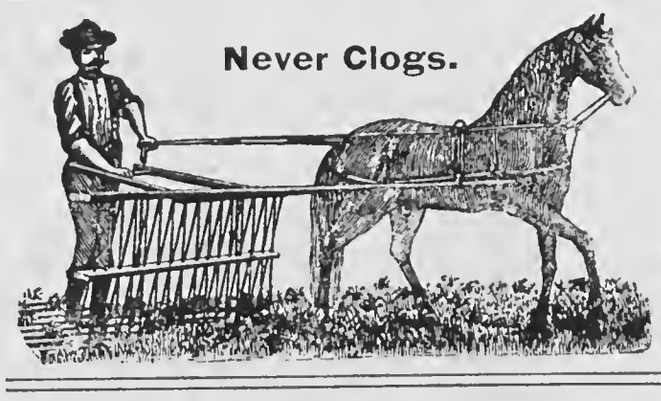

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Twelve 16 in. Round Discs and 3 Horse Attachments. Adjustable Heavy Steel Frame.
Built in all sizes and furnished with either 2, 3 or 4 horse eveners.
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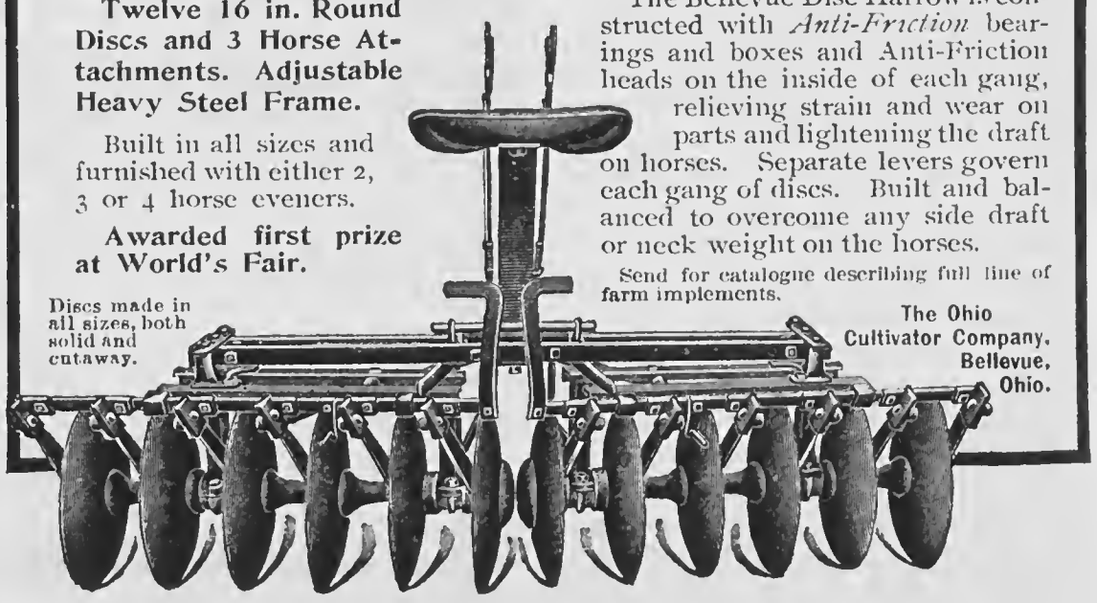

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Send for catalogue describing full line of farm implements.
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HOPE FARM NOTES.

WINTER OATS.—One of our readers in Montana writes thus:

"I see that in Hope Farm Notes you speak of Winter oats. Are the oats like Winter wheat, a crop that you sow in the Fall for the next year, or is it only for pasture? If it is for crop I wish you would tell me where I can get sample of it. I would like to try some, as Fall sowing of wheat and rye do much better here than the Spring sort. I am a New York farm boy myself, and know that if it will grow in York State it will grow here." E. E. S.

Wolf Creek, Mont.

These Winter oats are a southern variety or "breed." I first saw them growing in Delaware. The farmers in that State sow these oats in September. They live through the Winter like rye or wheat, and make a large crop the next season—somewhat earlier than the Spring oats. I observed that they stool out more than Spring oats, and make a thicker mat during the Fall than wheat or rye. Several years ago we tried them in a very small way, and part actually lived through the Winter. Last Fall I sowed six bushels alone, mixed with rye, and also with Crimson clover. They sprouted before the rye and made a fair growth, giving good Fall pasture. They are still alive, but I do not much expect that they will live through March, which is our most trying month. I do not advise their use except in a small way at first.

GIVING ADVICE.—Right here let me say again that I do not pretend to be a model farmer, and I do not want readers to go and do just as we do at Hope Farm. I try to tell of certain things just as they are—the many failures as well as the few successes. There ought to be a clear distinction between what is intended as a hint and what is meant for thoughtful advice. I say this because some good people seem to think that we expect all who read to pattern after our doings and sayings. No! No! That is a mistake. In many cases it would be well for us to go to learn from others. Here, for example, is a man who has less use for "a woman's horse" than I have for a pie:

"The Hope Farm man makes to my mind a curious mixture of farm economics and sentiment. It would appear that he proposed to winter four horses and a pony and two cows and a calf upon eight tons of hay and 15 tons of cornstalks. He figures an increase of $50 in wintering the horse Frank. How about old Major and pony Peter? He is undoubtedly a good fellow for providing a woman's horse and a pony for the children. But it seems to me that in the matter of taking a stock account he might better leave out old Major and pony Peter and put in a couple of heifers if the above amount of hay and fodder is the total product of his farm. I have just purchased a 40-acre farm where 'Mamma' had an old horse, 'the children' had a pony, 'Papa' had a trotter and the farm had a working team. It is perhaps unnecessary to state that 'Papa' failed. I run the same place to-day with but one team, hiring an extra horse at 50 cents per day when necessary, as in haying."

New York. E. T. E. L.

As a matter of fact both Major and Peter would sell for more in May than the value I set for them in January. I might doctor old Major up and possibly sell him to some peddler or foreigner for $35, but I wouldn't do it if you gave me a $50 bill on top of the price. As for Peter, he is growing in value all the time. Both he and old Major more than pay for their keep during the year. I suppose we might send the little Graft back to the asylum and raise a pig on the food he eats, or feed a cow with the price of his clothing. My sentiments regarding such matters are pretty well known. A good share of the crime, selfishness and cold-hearted deviltry in this world may be traced back to the fact that in too many homes, both in town and country, love, sentiment, justice and sympathy for the unfortunate take a back seat for the worship of a dollar! Major and Peter are not drones, but I will let the women folks speak up for them. It is possible that our friend is right in saying that when taking a stock account we should leave out all but the *carners*.

FEEDING THE IDLE.—If I could have every horse on the farm, except big Frank, turn woodchuck December 1 and sleep until April 1, turning up then ready for work, I could sell the hay to good advantage. It would pay us better to sell it than to feed it out. Horses are not woodchucks, however—look at the empty hay mow and be sure of that! Some farmers sell off their horses to save feeding them in idle times, and trust to trading and dickering to keep the team filled. I do not believe in doing business that way, for I must confess that I am not much on a horse trade. I think we do better with horses that know us, so would not like to sell Dan and Frank even for a little more than similar horses bring in the market. The fact is that the year and life of all of us, men, women and four-footers, is divided into profitable and unprofitable periods. There are times when you must feed a horse, a cow or a hired man at a loss in order to have them ready at a time when their work really pays. Both of these periods must be considered, for unless the man or animal is well wound up with food and good care during his slack time you cannot rush him when action means money. I think some farmers fail partly because they believe that animals, fields or crops can stand neglect during the seasons when they are not actually earning. As well expect a watch to run without winding it up. Sometimes a man is paid for making a speech. He doesn't earn that money in the half hour or so actually spent in talking, but in the days, weeks and months spent in study and preparation, which to many seemed lazy time.

OATS AND SMUT.—Here is a question which others are asking:

"Did the Hope Farm man succeed last year in preventing smut in oats? If so, will he give directions for treating seed before sowing? We cannot use the hot water treatment here in Nebraska; too much seed to be treated and not much barn space to dry seed afterwards."

Bennet, Neb. J. J. R.

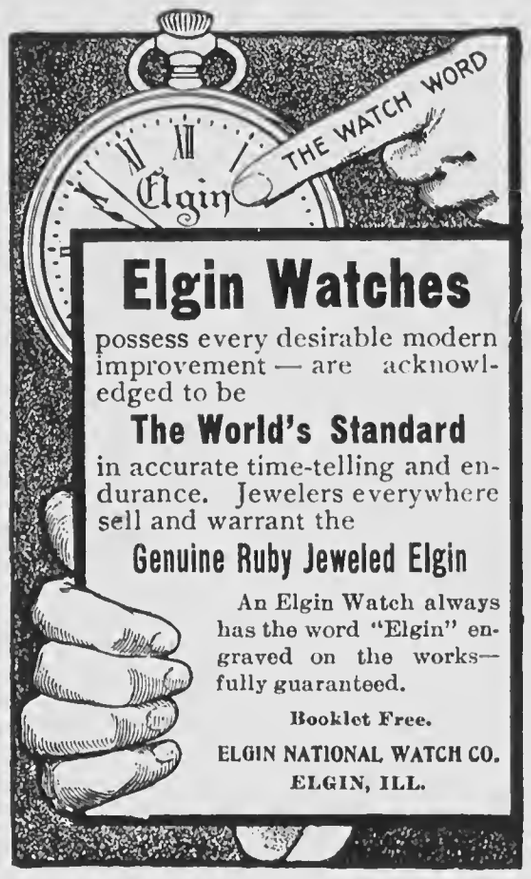
Yes, we had practically no smut in the oats. I used formalin or formaldehyde. This is a liquid—poisonous. We spread the oats out on the floor about six inches deep. Half a pint of the formaldehyde was mixed with 60 quarts of water—well stirred. This was sprinkled over the oats—we used a watering pot and made the oats wet. Then they were shoveled into a pile and covered for an hour and a half with sacks and blankets. This was to let the gas work all through the pile. Then they were spread out again and dried. The oats dry quite rapidly in a wind. This did the business for us. There may be other and better ways.

EGGS AND HENS.—Our hens laid 166 eggs during the first 15 days in February. This is not much of a record, but 10 of these days were cold and stormy. The hens were crowded into a very small house without proper exercise. Those eggs could all have been sold at three cents each. As closely as we can figure the cost of the feed for the 15 days was $1.56. That looks like a profit, but the idle months of December and January must be taken out also. . . . The showing is good enough to satisfy me that it would pay us to have more hens. A year hence I would like 250 pullets. Of course I know that means setting 1,000 eggs or more. I shall buy some White Leghorn and White Wyandotte eggs. About 25 of our own hens are good ones. The new Wyandotte rooster, Dick, will be turned with them, and the eggs kept for setting. . . . For the past six months our hens have run in the Summer garden. This is inclosed in high wire netting. I now purpose to build a fence inclosing a large space by the side of this garden. After April 1 the garden will be plowed and planted, and the hens turned into the other space. In July or August, when most of the garden crops except Lima beans and sweet corn have been picked, the hens will be turned back and the other yard will be seeded to rye and Crimson clover. By that time the hens will have fixed the garden. We can turn them into the other yard and seed the garden in Winter oats, rape and clover.

CLEAN DOINGS.—Lincoln's Birthday was a genuine labor day at Hope Farm. Lincoln made a mistake in not being born on the Fourth of July. There are too many holidays now crowded into the cold and disagreeable season. Outside we lifted up the ice house, while indoors the women got on the right side of a big wash. I came into the kitchen for a moment and found a busy scene. "Here, we need a big stout man to turn this machine!" Needless to say this remark came from the Madame, who sat on a chair in the middle of the kitchen turning the crank of the washer. The Cutting was washing handkerchiefs, Aunt Jennie scrubbing stockings, Aunt Emma rinsing while Chaddie put on the finishing touch at a tub. Almost before I knew it I was turning the crank, while the Madame had called her little school in the sitting room. The machine gets out about 85 per cent of the dirt. Some people might call it a full 100 per cent, but other folks rub out the remaining 15 by hand. That wash crowded every clothesline on the place. Aunt Jennie counted 179 pieces all told. No, I am not going to figure how many rubs and wrings were required to settle it. As these garments flapped in the morning sun they signaled to the world that Hope Farm was for the time at least emancipated from dirt! It was a good celebration for Lincoln's Birthday.

ODD NOTES.—We turned an old chicken house into a place for ice. I won't call it the ice house until I see how it keeps. . . . I have a stock of crude petroleum, and during the latter part of March I expect to spray all our pear trees. It must be done on a clear, bright day. I do not think we have San José scale, but I am going to make sure of it. . . . The days begin to lengthen quite suddenly at this season, and farmers begin to realize that Spring work will soon be driving them. We have some painting to do, a hoghouse to build, pruning and cleaning before the time comes for hauling out manure. In spite of the best of planning I have never been able to have our Winter work all cleared up before Spring work opened. This year I mean to come close to it. . . . A year ago the farm was in poor shape. We had Fall-plowed a number of acres, but the sod was tough and hard—not promising for good crops. This year the farm is in much better shape. The grass seeding looks well, and the grain is fair. The cornfield, which is to go into potatoes, is in good shape for Spring plowing. Take it all through, our prospects for a good season are far ahead of a year ago. But they ought to be. Wouldn't it be a pretty slim farmer who does not build up his soil and his prospects each year? Lots of you will shake your heads at that statement; but honestly, what about it?

H. W. C.



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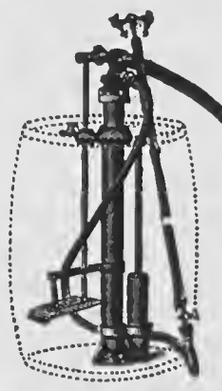

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Double-Acting—Sprays from bucket or barrel 50 feet. New scientific principle. My free catalogue will make plain to you that I have the sprayer you want. Write to-day. H. B. RUSLER, Johnstown, O.

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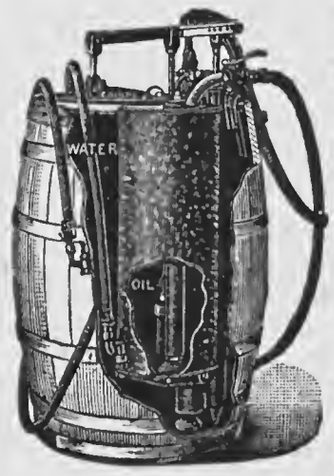

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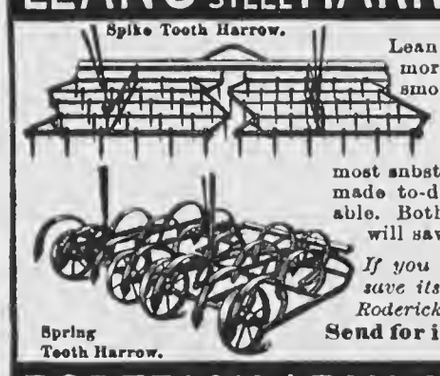
LEAN'S ALL STEEL HARROWS AND LAND ROLLERS.



Lean harrows make fat harvests. They do more work and do it more efficiently than any other harrow. They tear up the ground, smooth it for sowing, harrow in the seed, kill the weeds after the crop comes up. The teeth are adjusted to suit any condition of the soil. By a touch of a lever they are instantly cleared of trash without stopping the team. The most substantial and finest finished farm implements made to-day. Made entirely of steel, light and durable. Both the spiked tooth and spring tooth harrow will save enough in a year to pay for itself.

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Send for illustrated catalogue to-day.

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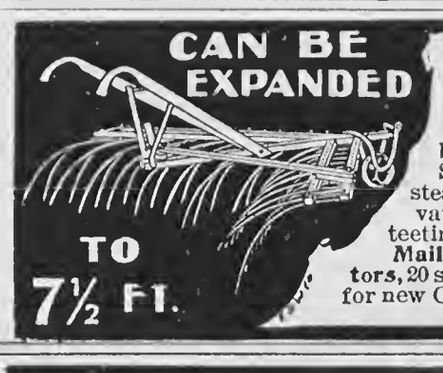

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Adjustable Weeder and Shallow Cultivator

because of its "A" shape, adjustment and ground wheel excels all others. Shape enables it to fit all rough and uneven surfaces. Wheel makes it run steady—prevents all vibration and "wobble." Adjusts to 7½ feet wide for cultivating entire surface. Narrows to 30 inches for cultivating "middles." Round teeth, blunt points for light soil. Flat teeth, diamond points for heavy soils. **We Mail Weeder Booklet Free.** Also make 10 styles of **Corn Planters**, 12 styles **Cultivators**, 20 styles hand and power **Corn Shellers, Harrows, Rollers, Feed Cutters, etc.** Write for new Catalogue C

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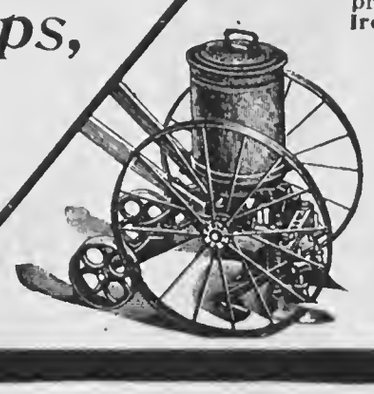

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BATEMAN MFG. CO., Box 102 Grenloch, N. J.

NOTES FROM THE RURAL GROUNDS.

BURBANK'S NEW PLUMS.—Among the several plum novelties described in Luther Burbank's 1901 supplement to "New Creations in Fruits and Flowers" none strikes us as so fraught with future value as the hybrid of the eastern Beach plum, Prunus maritima, shown in Fig. 62. The other varieties now ready for introduction are doubtless highly-finished products of careful breeding, ready for immediate utilization, but the future potentialities of the Beach-plum cross can scarcely be doubted in view of the great hardiness of the parent stock and the phenomenal productiveness of the hybrid. Fig. 62 shows a branch 3½ feet long, with the plums plastered on about as thick as they can hang. One can quickly see that here is a chance to practice the "thorough thinning" we all talk so much about and generally fail to do at the critical time. The hybrid plum in right upper corner is shown in natural size, and Fig. 61 represents the common Beach plum as grown in California, from fruits gathered along the Atlantic coast in Massachusetts. This tough native plum produces larger fruits of very tolerable quality as it grows on the waste lands of Sandy Hook, not far from the Rural Grounds. Bassett's American and the Floral Park plums, both introduced as great improvements on the wild Beach plum, produce small and acrid fruits not much better than selected wild specimens, but Mr. Burbank assures us that his hybrids are rich and delicious when eaten fresh, without a trace of the bitter taste so prevalent in the wild forms. The fruits of the specimen illustrated are deep purple with white dots and a thick white bloom. They grow something like the wild ones, on compact, bushy trees which bloom very late; at the extreme end of the season. It is to be hoped that this most interesting new native fruit will receive thorough and exhaustive trials over the whole extent of our fruit-growing lands.

GOOD PIE TIMBER.—We secured enough Juneberries from our young trees last Summer to put up a can or two for Winter use, and have just made a test of their utility in the construction of pies. We think that they are very good indeed, much better for the purpose than any fruit we grow, and we have planted everything we can get. The flavor is most distinct and appetizing, more grateful than when eaten fresh. It is to be hoped that the Rural Grounds workers will not be suspected of an undue addiction to pie, as our output of this National delicacy is very limited, but there are a few fruits whose pronounced flavor is most appreciated in conjunction with well-made pastry, and the Juneberry is, to our taste, the leading example of the class. Something good should come of this fine native fruit in the fullness of time, but the steps of improvement thus far have been very slow. Our trees are a selected variety of the common eastern Shad bush, Amelanchier botryapium. The Success Juneberry, a very dwarf form of the same species, has been grown in Monmouth County for many years. It is extremely productive, and the berries are larger and of better flavor than the tree form, but the straggling habit and propensity to throw up suckers make it a troublesome bush to have in the garden. Those who plant Juneberries should put in a large surplus for the birds, as they give their exclusive attention to the berries while they last.

YELLOW-FLESHED POTATOES.—For years we have been testing new varieties of white-fleshed potatoes, all claimed to be of superlative quality; dry, light and floury. While all do not meet the expectations of the buyers in this respect most of the late introductions really are of good quality from this starchy standpoint. A potato that bursts when boiled and promptly dries out before serving is most excellent in its way. It is tasty and wholesome when cooked in many different ways, but when you come to fry or warm it up after boiling with cream or meat drippings, a rational and legitimate method of serving the potato, as it is very deficient in fats, the white-fleshed mealy kind is much inferior to the solid yellow varieties, in the opinion of many gastronomic experts. The yellow potatoes, usually having a red or dark skin, not only refuse to absorb the fats in which they are cooked, but develop a high and distinctive flavor. It is said that some of the fried potatoes served at famous restaurants are of this type, and the fact has been kept as a trade secret by successful cooks. Be that as it may, red-skinned and yellow-fleshed are very unpopular with the marketing public, and are seldom seen. It is many years since the writer grew potatoes of this class, and their special excellence had nearly passed from mind, but a number of dark yellow-fleshed specimens have appeared among seedling varieties now being developed, and a careful individual trial has just been made to test the matter. We much prefer the yellow kinds for all "warming-over" purposes, though for boiling or baking they cannot compare with the floury, white-fleshed varieties. Possibly something more may be done to improve the yellow potatoes, and again bring them into favor in eastern markets. The National Department of Agriculture has recently imported some dark-fleshed potatoes for distribution. One is described as having handsome, purple-mottled flesh, and is said to be of excellent quality as a salad potato. W. V. F.

COLDS

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Live Stock and Dairy

A FRIEND OF OLEO TALKS.

I was born and reared on a farm. From my earliest recollection my people have taken THE R. N.-Y. The same can be said of my husband and his people. When we were married THE R. N.-Y. was the one paper we thought we must and did take for years. Of course everything it advocated we believed most heartily. Eleven years ago we moved from a farm to a city, and soon saw many of our theories melt in the fires of actual experience. We kept from 50 to 75 boarders, and had to buy everything, then our troubles began. I had been a good buttermaker myself; had always colored the butter, except for a short time in the Spring, when it did not need it. I always received the highest price, because it looked, and was, nice. Judge of my surprise, when I began to buy the various tints, not only in different crocks, but the same crock. There would be an inch or two of nice-looking butter, then a layer of pale substance that one would hardly believe belonged to the same species, judging either by look or taste. Once I found a lump of salt that weighed 1½ pound in the bottom of a three-gallon jar I bought direct of a farmer. I had all kinds of butter, sometimes good, sometimes bad, then indifferent. For six years I endured it like a martyr, rather than step down from my prejudice and try the oleo, as some of my friends were doing with great satisfaction. At last circumstances forced me to try the oleo, and I found it so much more satisfactory that for the last five years I have used it nearly all the time. I have never in all that time known of a single instance where one tried to sell it for genuine butter. It has always been plainly marked, and I prefer it to the average dairy product, if it were set side by side at the same price. I see no injustice to the farmer in its manufacture, any more than in the making of sugar from beets or cane. Farmers cannot supply the people with butter at any price. Nearly one-third of the people in the large cities go without any kind now, but drop out the oleo and not more than one-third of the people in the cities would be able to butter their bread at all. If the farmers, instead of trying to get the color out of the oleo, would put the color into their butter, and make a really good article, they will have no cause for complaint. The majority of the well-to-do classes want a pure, sweet, genuine article, and are willing to pay the right price for it; but until the farmers can supply such a demand, it is wrong to take the other from them. MRS. MARIA FRINK.

Indiana.

R. N.-Y.—Here is a case where a customer actually desired to buy oleo and was able to secure it. We believe that for every one such case, 25 can be found where oleo is sold to customers who think they are buying butter. Our friend does not tell us whether her boarders knew what they were eating! The creamery business has now been so thoroughly developed that almost any quantity of butter of a standard and uniform grade and color can be obtained. Hundreds of western creameries would be glad to get the trade of 50 or 75 boarders, and would furnish uniform butter in any quantity. The comparisons between butter and sugar will not apply. Beets have competed with sugar cane because they have enabled farmers to produce *the same article* cheaper than the cane growers could produce it. The introduction of the Jersey and Guernsey cattle into this country, and the use of new feeds and new methods of feeding, have driven some of the older breeds nearly out of business. That is the only fair comparison with the beet and sugar cane. Oleo is like the cheaper glucose and the chemical "sweets" which are often sold fraudulently as sugar. We have no objection whatever to the use of oleo provided those who buy and eat it are not deceived. Men who have spent years in watching the business in New York tell us that they do not know of a single instance where it is not sold as butter. Much the same is true of Philadelphia, Boston and other large cities. Where is your authority for the statement that "nearly one-third of the people in the large cities" go without butter? We know better, but even if the statement were true it is not because there is not butter enough to supply them! Do you mean to tell us that the people whom you say cannot buy butter are so fastidious that they would not buy uncolored oleo if it were sold at 14 or 15 cents per pound? The present cost of mixing the oleo is less than 10 cents a pound, including the two-cent tax, yet you and others like you pay a price determined not by the cost of the oleo but by the selling price of the best butter. With the Grout bill a law and properly enforced the manufacturers could afford to supply you with colored oleo at about the same price you now pay while, with the tax reduced on uncolored oleo they could afford to retail it at 14 and 15 cents, thus placing it within reach of the thousands who now are not able to buy even the colored oleo. THE R. N.-Y. has endeavored to be consistent in its position on the oleo question. We do not say that it is of necessity unhealthy or unclean. We do not pretend to say that all butter made from cow's milk is uniformly clean and sweet. We do say that the fats of milk are the most delicate and digestible of any other animal fats. They are distinctly different from the fats which give body to oleo. We insist that the great bulk of the trade in colored oleo is fraudulent, based not on the value of lard, suet and oil for table or cooking purposes, but on a bogus or counterfeit appearance. When sold alone these fats are cheap. When mixed and colored to imitate butter the price is doubled or more. Why? Because the yellow color is a dairy trade mark and without it the cheap fats of oleo, while losing none of their value as food, would at once find their legitimate price. The Grout bill will work injury to no one. The manufacturers can well afford to make the colored article so that our friend can buy it at about the price she now pays. They can make the uncolored oleo and sell it at a price that would put it upon the table of even the poorest—and still give a larger profit than the dairyman now receives.

A KANSAS PIGPEN.—The picture at Fig. 59 shows the style of pen that gives us best results after 20 years' experience in that line. We have tried everything, from a tight barn with a little window in the south side and a stove in the north side, through "wigwams" and open shed to a bunch of grass in the field. As to the merits of the pen shown, the most important is the large hinged door on the south side, that admits sun to the whole of the pen, and keeps it sweet and warm. We never have wet nor ill-smelling pens. Have the roof slanting at least 45 degrees; this makes the north side so high that the north winds do not blow in the pens when doors are open; then again, when the roof is high at the center you can get into the pen without bumping your head; a farmer gets enough bumps in life without going to a pigpen for them. We claim that these pens are the warmest made. We have most of our pigs to come in February and March, and as yet none have frozen. Fig. 59 will show how the pens are constructed; 12-foot roofing boards are cut so that 4½ feet are on the south side and 7½ on the north; width of pens, eight feet; height on sides, 30 inches, and each sow has seven feet in length. Cost of materials is about $2 per pen. We raised 150 pigs with six pens last Spring. At a month old we put the litters in open sheds; we found it did not pay, so have built six more pens. ZIMMERMAN BROS.

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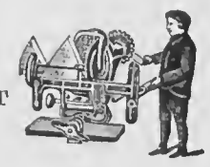

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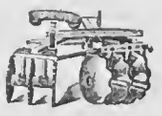

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Prepared by Dr. Earl S. Sloan, Boston, Mass.

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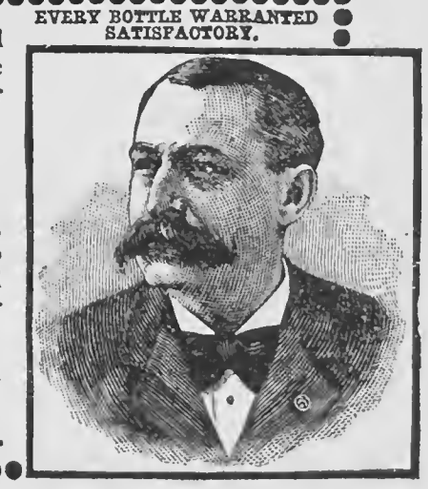

A ONE-HORSE NEW HAMPSHIRE FARM

Hens and Their House.

SOLID COMFORT.—It was pretty cold this morning, February 6, mercury being only 11 degrees above zero. The hens had eaten their warm breakfast, had their warm water, sour milk and some dry chaff to scratch over; the pigs were fed, the barn cleaned out, the cows carded and given their morning drink, the horse is watered and cleaned, and in a barn where it never freezes and enough coal and wood in the house for the day. The Madame is in the kitchen washing milk pans and baking, the dog behind the kitchen stove, the big yellow cat is behind the sitting room stove, his mother in my easy chair, and I am writing.

THE HEN BUSINESS.—I sold $50 worth of chickens and fowls last Fall, and last Spring had 25 hens sitting and with chickens. I wished to raise 100 pullets, and as usually only one-half of the chicks are pullets and as many of them die, I thought I would set hens enough. I had 250 chicks hatched, but 100 of them died. They would be smart until three or four weeks old. I seldom saw any sick or drooping ones, but would find them dead in the morning. I had the chicks in the south end of the henhouse, had gravel on the floor, and kept it clean. I kept the hens in coops two feet square, with slats in front, and let the chicks run where they pleased. A few hens with their chickens were put out of doors in small coops; but hawks and crows got some of them. The crows were worse than the hawks, because they were bolder. I put a scarecrow out, they they did not care for that, but at Fig. 60 is a picture of one that *did* scare. I had a piece of corn near the henhouse; the chicks stayed in that a good deal of the time, and it was a good place for them when it got large enough to hide them. After all I raised 85 pullets, and have 30 hens beside. Only one pullet and two or three hens have died since last Summer. My hens are not laying as well as common, but are doing better than most of the hens about here. Yesterday they laid 36 eggs. They have not been out for five or six weeks, and are kept, about 30 each, in pens 10x12 feet.

THE OLD HOUSE.—When I came, 15 years ago, I built a henhouse 50x12 feet, with a double pitch roof about six feet high in front and four feet high in the rear. Tarred paper was put on roof and sides, the roof shingled and sides clapboarded. It faced the south and had five windows of 12 panes, 9x12 glass. It had no floor, but was filled in with rocks covered with gravel and sand to make it dry. It was dry enough, but the rocks made a good place for rats to work, and they did so in great shape. I used traps and poison, but could not get rid of them. I thought the house was too warm when the sun was shining, and too cold at night or when it was cloudy. I think hens will stand a pretty low temperature if it is an even one. I did not like the earth bottom, because it was hard to keep clean. When I began to clean it out I did not know when to stop, but with a floor made of boards I know when I strike bottom.

A NEW ONE.—Four or five years ago I built a new henhouse, and tore the old one down. I built about 20 feet south of the barn, so that it would be handy for water and grain. The new one is 60 feet long, 12 feet wide, eight feet in front and five feet in rear. I used sills six inches square, and for studding used 2x4 joists 12 feet long, sawed both ends square and sawed these on a bevel so that the rafters would rest on the whole width of the plate without cutting the rafters any. That is, for three-foot pitch I made the front studs 7½ feet long and the back 4½ feet long, thus getting out a front and a back stud without any waste. The studding in front is set the right width for windows of 12 panes of 8x10 glass, which are 10 feet apart. A sill is put in without frames, and casings put on outside as usual. The floor is double-boarded, and roof and sides covered with two thicknesses of paper, and the roof and side covered with shingles laid five inches to the weather. I used windows with a whole sash, or outside windows, as they are called here. The sill is flush with the sash inside. I nailed strongly a piece of board three inches square on the studding about six inches from top and bottom of windows on each side, letting it project an inch toward the window, and used wedges to keep the windows in place.

SOME CONVENIENCES.—By this arrangement the windows can be raised or lowered about two feet, and can be kept just where one desires them, or be readily taken out. It is handy about cleaning out as one can drive a wagon alongside or use a wheelbarrow. On the back the studding is set the same, but I use half windows, and put on outside windows, that being the cold side. There are poultry netting frames with hinges on the inside of windows, so that the windows can be taken out in hot weather. I use 20 feet of the north end of the house for piggery; have a tight partition. The other 40 feet is divided into four pens, with boards as high as the roosts and poultry netting above and doors of the same. The nests run crosswise the house two feet from floor, leaving room for doors on front side. The nests are covered with platforms three feet wide, and roosts six inches above platforms. The house faces the east and the temperature is more even than with a different exposure. By having a floor it can be cleaned much better, and I know when I strike bottom, and rats can be kept out. There are small yards at back of house, and the hens do not get out of them from May 1 to about August 1; then they are let out for an hour or so at night, until garden stuff is out of the way and then they have free range, except that they are not allowed in the barn or sheds at any time. Outside of the house earth is thrown up as high as the bottom of the sills, and the weather has to be near zero to freeze during the night water that was warm the day before. The water is kept in five-pound lard pails hung on the partition about six inches from floor.

COLD NIGHTS.—We had a very cold night. At 11 o'clock last night mercury was at seven degrees above zero, and wind blowing hard. At six o'clock this morning mercury was the same, and wind had blown hard all night, and still continues. We had two good coal fires in the house, and were pretty comfortable. I could not help thinking of, and pitying the poor animals in the cold barns. Nothing froze in our tie-up, it had not frozen in henhouse under the roosts. In the hogpen it did not freeze in the feed trough or on the floor. Last night I went out and shoveled snow up against the house. It pays to do these things if you wish to keep buildings warm in such weather as we have been having lately.

NO SOFT JOB.—It keeps one man pretty busy to take care of a horse, five or six cows, pigs and over 100 hens; keep wood and coal in the house, sift ashes, churn and make butter one day in the week; go to town the next day with butter, eggs, etc., and bring back whatever is needed in the house, besides going for a load of grain occasionally, especially when one does all repair work indoors and out, and makes new tools when needed; in fact, does about everything except shoe the horse.

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Why do I feed warm mash to hens at noon? Because on these cold Winter mornings exercise induced by scratching in the litter for the light ration of mixed whole grains scattered all over the henhouse floor warms the hens far more effectually than would warm mash. This, with lukewarm water to drink, and mangel-wurzels cut in halves and placed on the floor to pick at, keeps the fowls busy, active, and warm all the forenoon. At noon they are very hungry, as they have been working all the forenoon for very little food. We now give them all the warm mash they will clean up in a short time. About 4 P. M. we feed all the whole mixed grain we think they can eat, scattered in litter on the floor, and replenish the water pans. H. J. BLANCHARD.

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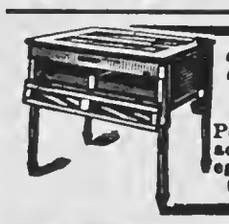

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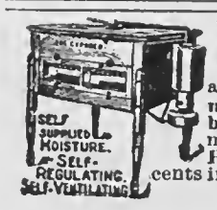

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POULTRY ON THE PACIFIC COAST.

A SEARCH FOR FORTUNE.—We were city people who had read chicken notes and farm notes, but not Hope Farm Notes, giving failures as well as successes. We were weary of drawing a salary of $80 a month at light employment in town when we could easily make a fortune on a farm raising chickens and fruit. We didn't find things just as we expected, but we will work out the problem to a successful finish. I suppose we have an ideal place for chickens; dry, gravelly soil, with a deposit on the shore line (of Puget Sound) of clam shells—in places these are three feet deep. Undoubtedly the point is an old Indian camp, as we find some of their rude cooking utensils buried in the shells.

TENDER PLYMOUTH ROCKS.—Our first mistake was in beginning with Plymouth Rocks. We knew that they were a success in the East, but here the young chickens are not hardy enough to stand our moist climate, and more than half of them would die just as they began to feather out. The first year we cleared just $12 and decided to try some other breed. People here praised the Wyandottes, and we found them somewhat better, but like the Plymouth Rocks, great eaters and small layers; that year was some gain, but mostly in the way of experience. I think our real success began when we got some pure Houdan cocks. Our chicken book said that they were very popular in France on account of being hardy in the moist climate. The cross on our Wyandottes and Leghorns (we had sold all the Plymouth Rocks), proved to be a great success, and we had good layers, lost no young chickens except as they were caught by hawks, skunks, minks and rats. We found we had to have vermin-proof houses, so the chickens were safe at night. In the day the chickens are often carried away by minks. They get very bold about their stealing; I have caught minks running off with pullets nearly old enough to lay

A BRAHMA CROSS.—I have tried some of the pure breeds, but as there is no demand around us for fancy stock, I think I get better layers by using pure-bred cocks. I now use the Buff Leghorns and Dark or Light Brahma cocks, the latter for only a month in early Spring to insure plenty of sitters. I have thought the Leghorn more of a Summer layer and some of the Brahma blood has, I think, increased our Winter production of eggs. Still, I was tempted to think your correspondents had overdrawn a little, not intentionally, perhaps, but guessed at results when they gave such a large per cent of their flocks laying during the Winter. My flock did better than our neighbors, but during October and November they only pay for their feed and clear about $1 a week, and 150 hens now (February 10) lay about 45 eggs a day, at 25 cents a dozen. It costs just 35 cents a day for feed. The best record I have made yet was for six months beginning April 1, 1900; with 90 hens I cleared $13.40 a month, besides raising to laying age 75 pullets, which I suppose might be rated at 50 cents apiece, although they would not bring that sold by weight. This would make the monthly average $6.25 more, or $19.65. I find in looking my books over that 35 hens were set, 15 eggs to a hen, or 525 eggs to produce 75 pullets. The number of roosters sold was 70 at 25 cents apiece, sold when they weighed from two to 2½ pounds, but at the price of wheat, $1 to $1.25 per 100 pounds, and corn $1.40 per 100, the profit, if any, is very small on raising chickens for market.

THE FEED QUESTION.—Why don't we raise our own feed, you ask? Some time we may, but we took our 40 acres about eight years ago in the state of nature, heavily timbered; no one but those who have seen our timber can appreciate what that means. It has taken some time and hard work to get slashing done, the large trees sawed down, and then the land logged off, and clover and orchards planted. The hens have the run of three acres of orchard, and as our climate is very mild there is not much time in the Winter when the hens can't help themselves to all the green feed they want, grass, clover and turnip tops. Sunflowers do finely here; we have raised a few for two years, and will try more this year. When we had them to feed the hens didn't stop laying during moulting time; however, we shall have to depend on buying the bulk of our chicken feed for some years.

THE EARLY PULLETS are the most profitable, so the first hens I put 18 eggs under; at the end of four days tested out the infertile ones, which are good to feed, and that generally left the hen 15 fertile eggs. By setting two hens at the same time I could then give the chickens from the two to the best mother, and have the other hen laying soon. A fair-sized hen can as easily care for 25 chickens, or even 30 as a small brood, if you provide warm quarters for her at night. We put the hens with chickens in one good-sized henhouse; after being shut in there for two days in coop when the chickens are first hatched, the hen will generally go back of her own accord. If not a little attention at night will soon learn them to go there. They seemed to keep warm nights; if a chicken didn't find room under its own mother it would adopt one for the night. Daytimes it made the young flocks run together more, and if a hawk came around four or five hens would warn the little ones to hide while they fought the enemy, and generally they made such a fuss that Mr. Hawk forgot his errand. I made a box out of slats so as to keep the hens from little chicken's feed, and still allow the small ones to go under. Three times a day I would fill their boxes with clean feed and the chickens can help themselves whenever they are hungry. They also soon help themselves to wheat which is out for the grown chickens. My chicken book said that the little ones must be fed every hour. At that rate I couldn't keep any, as the chicken business is my knitting work, and I believe they do just as well if they are not fussed with all the time. See every morning that shallow drinking pans are clean and give them plenty of whole grain to grind. Don't deal out just what they shall or can have; give over, and they will take the right amount at the right time.

INSECTS.—I have had a constant fight with the little red mites; have sprayed the chicken houses with whitewash, with kerosene emulsion; painted the roosts with kerosene, fumigated with sulphur, and with the best I could do the mites kept on living. Enough of them seemed to pull through to stock up as well as ever. For two months I have been using concentrated lye, one can to three pailfuls of water. That goes over the three houses, and it certainly kills whatever it touches; it is the best of anything I have tried yet. I use just after cleaning out the droppings, and in the morning, so the houses have time to dry before the hens go to roost. The flock is just as healthy as they were before I used it. Once after we had been spraying the orchard with Bordeaux Mixture we drove up to the chicken houses and gave them a thorough spraying, but I could see at once that the flock was made less vigorous, and the mites throve as well as ever, so it was not tried again. I don't see why so many recommend feeding pepper in warm mash. Whenever I do so I keep losing hens; on opening them the liver will be extremely large and diseased. As soon as I stop the pepper the chickens are free from disease, and I will not lose one for months. A good safe tonic is chopped onions. I have a large chopping bowl in which I put cold boiled potatoes and raw onions, chop fine, and mix with equal bulk of bran and the hens thrive on it.

Washington. MRS. KITTIE GRANT.

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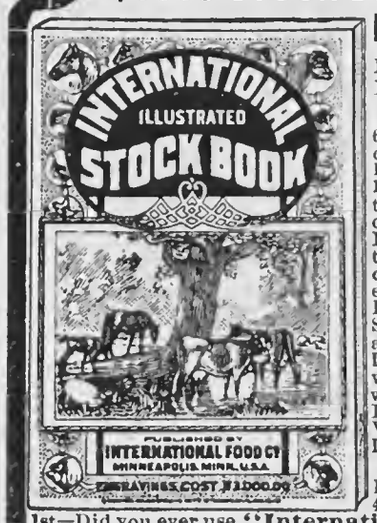

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ALL DEALERS KEEP THEM.

NOTES FROM THE COW.

COST OF COLD.—The weather has been cold and exceedingly windy for a considerable time; as a consequence cows that are in poorly-sheltered barns and have access only once a day to ice-cold water have been shrinking, and their owners must foot the bill. In our own town I find by inquiring among the retail dealers alone, numbering perhaps 15, that this loss amounts to from $5 to $12 per day, depending upon the severity of the weather. This sum would pay all the bills, in a very short time, for making more comfortable quarters for the cows, and installing some kind of a system where the cows could have plenty of water at seasonable times, and at such temperature that the cow wouldn't shiver for half an hour after drinking. I am afraid that too many of us yet do not realize that we pay for warming the water from the temperature at which she drinks it, up to the temperature of her body. This often means a rise of 60 to 75 degrees. Some of our scientific friends might easily tell us how many heat units from the grain-bin are used up this way that the cow would have turned to better account had it been possible. For cows that are in warm stables and have constant access to water that ranges about 40 degrees we are not in favor of warming the water, but where cows must drink their water outdoors once or twice only in a day we believe, from personal experience, that it pays to give them moderately warmed water. The more water that we can persuade a cow to drink legitimately the more milk ensues. The annual loss of milk from lack of proper water supply and cold barns is enormous, and should receive more attention than it does.

WATER FOR COWS.—Our cows have access to water all the time, as we have a basin between every two. We let them out twice a day where they can drink at a tub, but they drink but little there. We do, however, like to have them get a little exercise and fresh air while we are cleaning the stables and mangers. We notice how much the cows drink after eating, even silage and the like. We don't believe that cows turned out once a day to drink in cold water, then eat dry food entirely, are going to get enough properly to water the milk. This opinion has been often confirmed, as when a heavy storm or cold spell comes on the milkmen who practice the latter style are always short, and post after milk. We are not, however, satisfied with our water system, and have not yet seen a perfect one. Ours works 33 basins from one float, using inch pipe, but as the cows are not in one continuous row there are too many turns, and as the water necessarily runs slow the pipes sometimes clog. We use the porcelain-lined basins, and like them very much, as they never rust, are clean, and can be cleaned so easily. The water enters at the side, but this side opening will allow pieces of silage to enter, which help fill up the pipe. Flushing is impossible without tightly corking the basins. We have a stream running through the main pipe constantly, but once in about so often there is more or less trouble; still they pay and pay well. We don't like the basins that enter the water at bottom, as all sediment falls there, and valves are not satisfactory. They get slimy and don't work; many have taken them out, which lets the pipe fill up all the faster. When we find the perfect basin we shall be nearer dairy happiness. The cows use the basins much in Summer when out at pasture, as when it is hot they do not go much out of their way to get water, but are sure to have a good opportunity to drink night and morning. J. H. Hale preaches water, water, for fruit. We think some one ought to preach water, water, for cows, as it is the cheapest essential to plenty of *good* pure milk.

THE CLOTH STRAINER.—One of the most fruitful sources of trouble with milk, bad flavor, bitterness, unsatisfactory keeping and smell is the cloth strainer, which so many use with the ordinary wire strainer. The cloth saturated with milk and what filth has accumulated upon it lies around for several hours until the fibers are saturated. Then it is very likely to be improperly washed. It requires more care than any other dairy utensil. We prefer cheesecloth that is used only once, or only a few days at most. If not washed at once after milking it should be placed in a pail of cold clean water. It should be thoroughly washed and clean before put in boiling water or steamed. We have seen them placed at once in boiling water, which sets the milk, and you can never have a pure strainer. After proper washing then put in boiling water, or steamed and dried it will smell sweet and clean. Many cans and pails are improperly made, so that there are open seams which unless unusually watchful, will fill with milk which never comes out. Take these cans to a tinner and have a light coat of solder run over open seams.

CALF FEEDERS.—We use calf feeders for the younger calves, and believe them profitable when properly used. They work on the theory that the calf gets his milk in the natural way, and well mixed with the essential saliva. We had a calf given us several years ago that at its age was much finer and larger than ours were accustomed to be. On making inquiry we found it was brought up on a calf feeder. We've used them ever since, and certainly the calves are of good size and thrifty. The feeders require cleaning every time used, and careful cleaning of a calf dish is apt to be neglected, but if not cleaned properly the calf soon has the scours. We heard a dairyman only recently say he had no luck raising calves. He was using a feeder. We went to see his calves; found that he kept them in the basement. They were in filthy quarters, and in looking at the feeder found it half full of old milk, and the inside looked as if it had not been washed in three months. Calves require clean quarters and clean drinking vessels. A good dairyman once said, "Never feed a calf from a pail you would not be willing to drink from yourself."

SILO NOTES.—The past two or three Summers have been hard for making milk, and it requires good careful planning to keep up an even flow and depend on ordinary methods. We find it much easier to make a uniform flow in the Winter under even conditions. We plan to build one or two more silos, so that no matter what the Summer is we shall be prepared for it. The best stave silo that we have seen, and an inexpensive one, is on the farm of C. B. Pomeroy, Jr., Willimantic, Conn. It is made of 2x6 spruce planed but not beveled, and the material cost $19 per 1,000 feet. It is 20x16, and has a capacity of 80 tons. On opposite sides of the silo two of the staves are 6x6. These two stick out from the silo, and the rods pass through them. The rods are simply ⅝-inch bolts well washered, and cannot drop down. They are only half the circumference of silo, and no costly lugs are required. The silo is tight and the silage good, and the entire cost, painting, foundation, etc., was not over $1.50 per ton capacity. We opened one of our silos to-day and found about a foot of spoiled silage where usually we only find three or four inches. It was completely burned up, like fire-fanged manure. When we finished filling the silos with our regular silage corn (we use Rural Thoroughbred) it would hold several loads more, so we put on top some sweet corn that had gone by silage state and was rather dry. We lost it. Had we put it down in the middle of silo, or given it plenty of water when filling, it would have come out all right as it has before. H. G. M.

For the land's sake, use Bowker's Fertilizers. They enrich the earth.—*Adv.*

Perfect Butter

—the kind which brings the highest price in any market can only be made from perfect milk. All bad odors and flavors of animal, feed or stable must be removed,

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will do it quickly, cheaply and perfectly. Made in various sizes from 1 to 200 cows Send for prices and catalogue of Farm and dairy supplies. L. R. Lewis, Mfr., Box 12. Cortland, N.Y.

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because of its purity and long keeping qualities will make and hold trade for any man who sells it. The

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You may have one absolutely without cost (you'll be under no obligation to buy) to thoroughly test for ten days. Return it if you're not satisfied that it's the most profitable machine to buy. Write now.

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THE MOST FOR THE MONEY.

THE MOST POWER for the money can be gotten from our 1, 2, 3 and 4-horse

TREAD POWERS

because safest for dairy machinery, cutting, shelling, grinding, sawing, pumping, etc. Get our circulars and know all about them.

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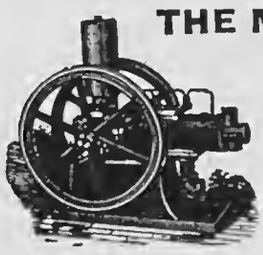
THE MIETZ & WEISS Kerosene Engines



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CHARTER Gasoline Engine

USED Any Place By Any One For Any Purpose

Stationaries, Portables, Engines and Pumps, Hoisters

State your Power Needs.

Charter Gas Engine Co., Box 26, Sterling, Ill.

Patent Pending.

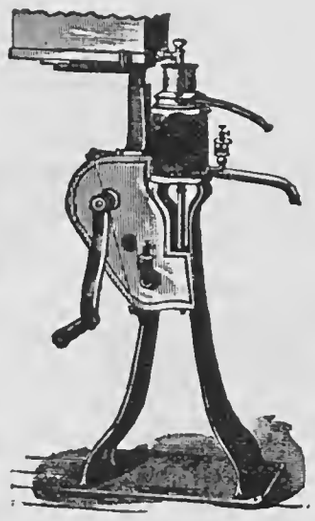
Designed expressly for Farmers, Thrashers, Well-Drillers. Simple, Strong, Durable—Absolutely Safe Mention this paper. Manufactured by The Binghamton Gas Engine Co., Binghamton, N. Y

Another Knockout for the DeLaval by the United States

LAWTON, WIS., Jan. 31, 1901.

This is to certify that the Alpha DeLaval No. 2 and the United States No. 6 had a contest to prove the merits of the two at P. L. Place's farm at Lawton, Wis. The Judges were appointed by Mr. P. L. Place and points to be considered were:

First—Cleanness of Skimming.
Second—Durability and Workmanship.
Third—Easy Running.



We, the undersigned, decide in favor of the United States. **All three points having been given to the U. S.**

A. S. BARG,
PEDER HALVORSEN,
PEDER PEDERSON. } Judges.

Witnesses:
HENRY A. HANSON, R. L. RASMUSON,
CARL CHRISTOPHERSON, M. H. HANSON,
A. H. HANSON, GEO. P. GROUT,
MARTIN HANSEN, P. L. PLACE.

Note the Fact that the United States won on every point, also that the U. S. was a $100.00 machine while the DeLaval was $125.00, which proves again very conclusively the truth of our claim that the

IMPROVED U. S. SEPARATOR IS THE BEST

Representatives Wanted in Unassigned Territory to Handle Our Goods.

Catalogues and full particulars to be had for the asking.

VERMONT FARM MACHINE CO., BELLOWS FALLS, VT.

200

Cattle for Beef and Milk.

I am interested in the "Breeders' Wayside" on page 109. The questions of A. R. H., of Buchanan, Mich., are in line with my practice, viz., I have been for 20 years or more endeavoring to build up a herd of cattle of good milking qualities, but so as to raise steers for beef that bring the top prices, and cows that sell for good milkers, and withal a hornless herd. I am succeeding. The principal blood is Durham, a milking strain of which was brought to an adjoining county from Ohio many years ago. Then in another adjoining county a few hornless Durham bulls were raised, one of which I have. I have also a number of one-fourth blood Polled Angus cows and heifers, all good Durham colors, therefore will soon have quite a herd of hornless cattle, and of rather good development for both milk and beef, hardy and quiet. Before dishorning was practiced, I began dishorning my heifer calves (Durham) with my pocketknife, and some of my neighbors were discussing the subject of having me indicted by court. I am now more opposed to dishorning than most of the people of the county. J. L. B.

Falls, W. Va.

Some Cold Country Notes.

To-day, February 12, we have been drawing hay up from lower barrack, to the barn. To-night I sit here and write of planting corn and potatoes, and it seems as though I could see and smell the warm Spring soil as it turns over from the plow. Outside I hear the wind roaring on the mountain and I know that all the plowing I shall do to-morrow will be through the big snowdrifts that the wind is piling up to-night. The road was full when I drove up from the post office at dark. I have a big board that I fasten on to my No. 4 steel plow, and I chain it on to the outside of a sled, get on and drive away. It will throw the snow out and pile it up three or four feet high, and leave the road smooth and clean. We call it "Big Jake," after a great snow plow that is used on the railway, and it is worthy of the name. One Winter I plowed the road from here to the station (about one mile) 14 or 15 times, but I kept a good road. Last Winter we had a big storm, ending with a freezing rain. It left a crust about one-half inch thick of solid, sharp ice, that we had to break with shovels and tramp with snow shoes made of boards before we could drive a team through with plow. It is after 9 o'clock now and I have been to the barn. The horses, cattle, sheep, calves and little lambs are all right. Whew! it is a wild night. Do I see a dish of apples warming by stove? Shall I eat one before I go to bed? Yea verily! I will three, a Northern Spy, a Russet and a King of Tompkins County. If I find a Vanderveer I will eat that also, for a Vanderveer is the best of all apples. S. C. ARMSTRONG.

Warren Co., N. Y.

Cow Pea and Soy Bean Experience.

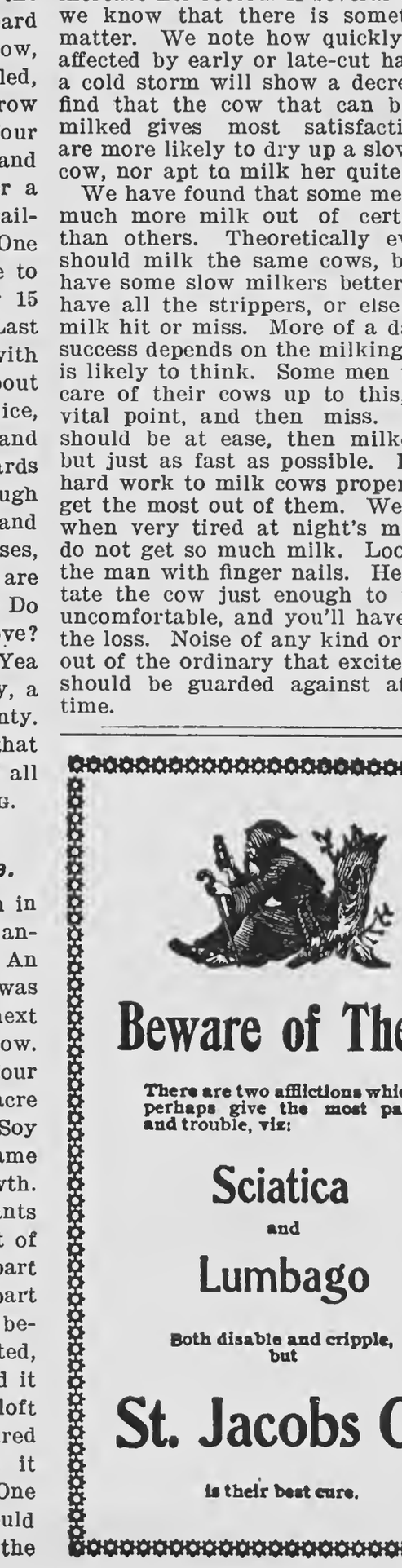
About May 10 cow peas were sown in one part of my orchard, Soy beans in another. The Black pea was selected. An ordinary two-horse corn planter was used; one row was planted, and the next round the planter straddled the row. Peas were drilled about three or four inches apart. Three pecks to the acre were required sown in this way; Soy beans planted the same way. All came up well, and all made a fine growth. Rows were too close to plow, and plants were not cultivated. The latter part of August pods formed on cow peas; a part of the crop was cured for hay. A part of the hay did not cure sufficiently before it was put in the mow. It heated, and I believe would have burned had it not been spread over the entire barn loft to dry out. The part that was cured enough made fine hay. Sheep eat it readily, and seem to do well on it. One load was fed to a Jersey cow. She would hunt for the bean pods first, but ate the hay very well. I would emphasize the fact that the hay must be well cured. Leave it in swath till thoroughly wilted, leave somewhat longer in windrows, and then put in small piles to cure for several days. A part of the peas were not cut. Pigs were turned in after the peas ripened. They were fed corn once a day, and thrived remarkably. The Soy beans did not ripen; the variety was too late for this locality. Cow-pea hay is mean to handle; it mats together. I believe that Soy-bean hay would not be hard to handle. Soy beans grew waist high. I expect to try the same field this year; I may plant more peas to the acre.

Ross Co., O. M. L. P.

Notes on Milking

We keep a daily record of each cow's milk, and find it pays in several ways. We think many are deterred from this practice because they think it takes too much time. We have a scale with set pointer so that the empty pails, which all weigh alike, will hang at zero; then it is but a second's work to weigh and set down the result. For keeping the record we have a roll fastened at both ends to roller similar to rolling pins. The frame has a glass front and a narrow space just wide enough to permit one milking to be set down at a time, but several milkings before are visible. The sheet is always clean, as they are not apt to be where a lot of surface is exposed. With the scale and record we don't guess so much. The cow with the pail full, but only half solid milk, gets credit for only what she really gives. The cow that gives a fair mess and sucks right at it has a show then with the cow that gives a big mess for a month or two and then drops out of sight. We are apt to milk a little faster and cleaner, as we want to keep up or increase her record. If several cows drop we know that there is something the matter. We note how quickly they are affected by early or late-cut hay, or how a cold storm will show a decrease. We find that the cow that can be quickly milked gives most satisfaction. Men are more likely to dry up a slow-milking cow, nor apt to milk her quite so clean.

We have found that some men will get much more milk out of certain cows than others. Theoretically every man should milk the same cows, but if you have some slow milkers better let them have all the strippers, or else let them milk hit or miss. More of a dairyman's success depends on the milking than one is likely to think. Some men take good care of their cows up to this, the last vital point, and then miss. The cow should be at ease, then milked gently but just as fast as possible. It is good hard work to milk cows properly and to get the most out of them. We find that when very tired at night's milking we do not get so much milk. Look out for the man with finger nails. He will irritate the cow just enough to make her uncomfortable, and you'll have to stand the loss. Noise of any kind or anything out of the ordinary that excites the cow should be guarded against at milking time. H. G. M.



Beware of Them

There are two afflictions which perhaps give the most pain and trouble, viz:

Sciatica

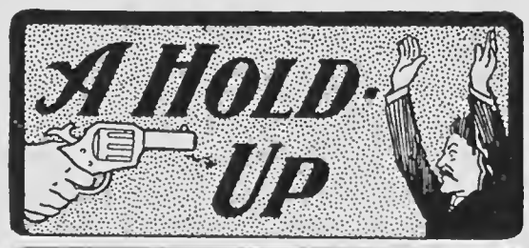
and

Lumbago

Both disable and cripple, but

St. Jacobs Oil

is their best cure.



Is not always the work of a highwayman.

When a dealer charges you from 35 to 50 per cent more for a carriage or harness than we would charge you direct for the same, or better, you are certainly being held up. This however, is not the dealers fault. He must live, but why at your expense? We sell our vehicles at factory prices and save you both the jobber's and dealer's profit. We do still better; we send our vehicles on 10 Days Free Trial. Try it before you buy. If not wholly satisfactory return it at our expense. Write to-day for our free illustrated catalogue.

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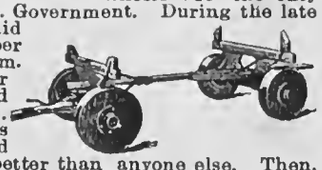
Where to Buy Farm Trucks.

Of course you ought to have a low-down, broad-tire, flat-platform, short-turning farm truck, and you ought to have one that possesses all these features. There is but one such truck, and the Farmers' Handy Wagon Co., of Saginaw, Mich., own the patents for it. Have you ever seen their catalogue?

You ought to send for one at once. They are free. They tell you all about farm trucks. You know these people up in Saginaw were the first who ever built trucks for farmers. Theirs are the only ones used by the U. S. Government. During the late war they built 50 solid wheeled farm trucks per day for our Uncle Sam. They build trucks for nearly every civilized country on the globe. These are the reasons why they can build trucks cheaper and better than anyone else. Then, too, they can ship a farmer any kind of a truck he needs, for they build all kinds as they own all the patents there are on farm trucks. They guarantee their patented wood wheels for five years, while it is impossible for you to get a guarantee on any other make longer than for one year. *Well!!* I can't stop here to tell you all the reasons why these Michigan people are in better position to supply your wants than anyone else, but if you will just send your name on a postal card to the Farmers' Handy Wagon Co., Saginaw, Mich., they will gladly send you full information and prices. Try it. It will cost you only one cent and may bring you information that will be valuable to you. P. S. I forgot to say that these same people can supply you with metal wheels for your old wagons.



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This Company is reliable.—Editor.

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YOU CAN BEND IT BUT YOU CAN'T BREAK IT.

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and save you ⅓ the cost. Don't confuse us with cheap "supply houses," but send for catalog, note our prices and examine the output of our factories. We finish and trim to suit your taste.

Ohio Carriage Mfg. Co., 39 W. Broad St., Columbus, O.

No. 3034, Buggy. Price $28.30, with leather quarter top.

No. 5016, Park Wagon. Price $65.50

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Our modern method of dealing direct with the buyer saves the profits of jobbers and dealers. We charge factory prices with only a small profit added. We give the buyer the benefit of the middleman's profits. No other factory can turn out high grade vehicles at similar prices. Our great facilities and long experience, the enormous trade we have built up in all sections of the country by selling

at Factory Prices

has enabled us to lead the carriage market of the world. Before you buy a buggy, surrey, phæton, road wagon, cart or any kind of harness or horse accessories, write for our catalogue and figure out how much you'll save. The broadest guarantee goes with each purchase. You can return anything with which you are not thoroughly satisfied, and we will pay freight both ways. Write to-day for the catalogue.

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The Rural New-Yorker

THE BUSINESS FARMER'S PAPER.

A National Weekly Journal for Country and Suburban Homes.

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We believe that every advertisement in this paper is backed by a responsible person. But to make doubly sure we will make good any loss to paid subscribers sustained by trusting any deliberate swindler advertising in our columns, and any such swindler will be publicly exposed. We protect subscribers against rogues, but we do not guarantee to adjust trifling differences between subscribers and honest, responsible advertisers. Neither will we be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent us within one month of the time of the transaction, and you must have mentioned THE RURAL NEW-YORKER when writing the advertiser.

Name and address of sender, and what the remittance is for, should appear in every letter.

Remittances may be made in money order, express order, personal check or bank draft.

THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, MARCH 2, 1901.

A FIVE-HORSE team is one of the newer developments in trucking noted in this city while the streets were obstructed with snow. The team is made up by hitching a pair of horses in front of three driven abreast. A spike team, made by hooking one horse in front of a pair, is not so often seen on a heavy city truck as the three hitched abreast, but the extra pair in front of the three seems a novelty. It is a pleasure to see the ease with which the five-horse team moves a big load over slippery and obstructed streets.

*

WE take pleasure in announcing two more "essential-principle" articles. J. R. Cornell, of Orange Co., N. Y., will tell our readers of his experience with pear growing. There is no man in the Hudson River Valley better qualified than Mr. Cornell to handle this subject. Another strong article will be "The Land of the Rome Beauty Apple," by U. T. Cox, of Ohio. Mr. Cox grows Rome Beauties that are really beauties. He sells them in boxes. There are dozens of other good articles on the way.

*

MR. PROCTOR, on the first page, says that his father set an apple orchard when 50 years old and lived to enjoy the fruit, and to derive an income from it. We have heard men of middle years say that they will not plant apple trees because the chances are against their living to see the trees in bearing. That strikes us as a poor excuse. Even if it be true, is it not a selfish view of life to say that we prefer to have our work die with us? To our mind there are few things more inspiring than the sight of an old, gray-haired man planting an orchard carefully and hopefully, and caring for it as though he were a young man once more. What nobler monument can a farmer leave behind him than a thrifty orchard?

*

LET the fate of the Grout bill be what it may at this session of Congress there is one man who deserves attention from farmers. That man is Congressman J. W. Wadsworth, of New York State. He is chairman of the Agricultural Committee of the House, but has no business to occupy such an important position. His action over the Grout bill shows plainly that he is more friendly to oleo than to honest butter. Well, one may say admitting that, for the sake of argument, what can the farmers of this country do about it? The chairman of this committee is appointed by the Speaker of the House—no vote can reach him. That is where you are wrong. The farmer has a new ballot. It bears the picture of a man whose name will ever live in glorious memory as the enemy of tyrants. This ballot is a two-cent postage stamp! Farmers should begin a systematic campaign against the reappointment of Mr. Wadsworth as chairman. Just now we ask farmers everywhere to begin at once to write letters to Hon. James B. Henderson, Washington, D. C., protesting in strong terms against the reappointment of Wadsworth. Give us a friend of the farmer!

*

"WILL it pay a farmer to study the crop and weather reports issued by the Government?" That question is asked by a thoughtful farmer, and we answer without hesitation—yes! These reports are of little value unless they *are* studied. There is a vast amount of work back of them, which must be known if we are to understand the indications. Take a clock, for example. The works of machinery are fixed and constant. We know that they are not affected by ordinary conditions—it is safe to look at the hands without further thought. But suppose the cold, the heat, the moisture, the wind, and half a dozen other things all affected the "works," causing them to skip or stop or move faster! Unless we understand these things and could discount them properly the hands would not tell the whole story by any means. It is much the same with the Government weather and crop reports. The bulletin and notices are merely the hands on the clock, and the "works" are affected by dozens of conditions which ought to be understood before we take the time. Watch the course of a single storm across the country as mapped on the weather charts, and you will at once get a new idea of the use of this service. Certainly—the farmer should *study* these things, or else pay little attention to them.

*

SOME farmers are increasing the capacity of their outdoor tub silos by having only a temporary roof, taking it off at filling time. With permanent roof it is almost impossible properly to fill and tread a silo chock full, and even then it will settle four to six feet, which very materially decreases the capacity of the silo. By laying aside the roof and putting up cheap boards on the inside five or six feet high, then filling full, it can be trodden well down, and when settled will be about even with top of silo. Take off the boards and put on roof, and the silo holds a good many more tons at no expense.

*

LAST week we printed a copy of a letter written by one of our readers to his Senator. There is a second chapter to this little story, as the following note from that reader will show:

The Senator took my letter as being intended for him, and writes me that he will vote for the Grout bill *if it comes up!* I have written him that the oleo fraud is so bare-faced that it was expected that self-respecting Senators would vote for the Grout bill. The trouble, I told him, was in the delay that had reached such a pass that it became disreputable. I disclaimed anything personal, and assured him that I should not suspect him of being smoothed over with either cotton-seed oil or tallow. I think my first letter jarred our Senior Senator a little, and the last will not ease his mind as to letting the bill go over.

"Jarred" him! Well—that is just what he needed. Good for the farmer who follows such things up and makes his Senator understand what is wanted.

*

THE other day a great combination of steel manufacturers was formed with a capitalization of $800,000,000. This will doubtless mean a monopoly in the production of steel—a product absolutely essential to the safety, comfort and labor of Americans. Think of it—the manufacture of a substance almost as essential to modern civilization as water or air in the hands of a few men who may regulate price and production at will. There is another side to this trust matter. This capitalization of $800,000,000 represents about 40 per cent of the total value of American farm products for 1900. A single lawyer hired by this great corporation might go before Congress, and say that he represents business interests which are larger than the combined business of 1,000,000 farmers! Congressmen would listen to him with great respect—and then complain because here and there an individual farmer writes a personal letter in defense of his business. The point is that farmers must also combine if they are to make themselves heard. They cannot combine their business as the steel makers can, but they can combine their influence and vote. We must *make the letter mightier than the lawyer!* The postage stamp well applied may be the salvation of the American farmer and his material prosperity.

*

MUCH excitement has been lately caused in Liverpool, Manchester and other manufacturing centers of England by the tracing of hundreds of cases of severe illness, usually accompanied by extreme exhaustion, heart-weakness and general paralysis, and too often terminated by death, to the presence of arsenic in the beer so copiously consumed by British workmen. It appears on careful inquiry through many inquests that the brewers were innocent of wilful contamination of their product, and were utterly at a loss as to how this deadly poison got in it in such quantities, as it has been calculated that the amount of arsenic in the beer consumed in Liverpool in a single week amounted to over 300 pounds; more than enough to kill a million human beings if divided and taken at a single dose. It has been finally determined that the poison came in through the use of cheap sulphuric acid, made from iron pyrites, which always contain arsenic in combination. This acid is used by glucose and "corn-sugar" makers, who sell their vile product to brewers as a substitute for malt. In this manner it is easy to imagine how arsenic in dangerous quantities can get into beer without the actual knowledge of the brewer, who is, however, criminally careless and guilty of fraud in adulterating his product with cheap and dangerous substitutes for the barley malt his customers think they are getting. Since the matter has been traced home the brewers have destroyed great quantities of the poisonous beer, 180,000 gallons having been poured into the Liverpool sewers alone. It is rather astonishing that the effect of this contamination has not been even more fatal, but it must be remembered that arsenic in small doses is rapidly eliminated from the body, and it is only when its use is continued unduly that such unpleasant consequences ensue. The whole matter teaches us a very pretty lesson in temperance in the use of malt beverages. It is in every way better to let the abominable stuff alone. We have no reason to believe that American beers are any better than the British product, but the fact that we do not hear of such serious results attending their use is probably due to a more limited indulgence on the part of American laborers, who are not so addicted to drinking as the natives of some European countries.

*

THE oleo people, when pushed into a corner with the argument that their stuff is a counterfeit, either dodge the question or undertake to say that colored oleo is a blessing to the poor man. This is not because the poor man is to pay less for it, but because it costs less to make! These folks have been very free to make light of the argument against fraud. Now, however, this fraud question comes a little nearer home. The National Provisioner recently said:

The brewery chemist has found a similarity between cows and malt—that is, he has found that he can make a beef extract of purely vegetable matter which has the taste and the chemical similitude of the packinghouse extract, which is made from real beef. A Chicago brewery expert discovered this fact first. An English specialist discovered it next. Now, when a German or a French scientist also finds out the fact it ought to be pretty well discovered and finally accepted. Then we shall see the spurious extract and all its fake substitutes masquerading under the real name of the real beef extract. The fact that this new product may be made from the refuse, or residue of the malt tank of a brewery will not jar anyone. The next thing we shall expect will be Hamburger steaks and sausage meats direct from the still and the beer factory.

Very likely; and who will be most responsible for it? The very rascals who have painted cheap fats and palmed them off as pure butter! What reason have they to complain if the dregs and filth of the beer tubs are colored and sold as "beef extract," after setting the example they have?

*

BREVITIES.

RURALETTES.

Put firsts along with seconds
If with greed you are athirst;
Your seconds will not rise up,
They will only pull down first.

* * *

The best of advertising
That the universe can send,
Is the honest word arising
From the mouth of some good friend.

* * *

Apple! Apple! Call for apple!
Everywhere you go.
Closely watch the bill of fare,
And if apple is not there,
Then proceed at once to pare,
Cook and landlord down with care.
They will come with smirking manner,
Offering the big banana,
Or the orange—be not shaken
In the job you've undertaken;
Call for pie or raw or bake
Sauce—no matter what you take
If you only call for apple,
Make your tongue proceed to grapple
With this plan of education
For an apple-eating nation.

* * *

SNORING may be called a night-trait.

CATALOGUE-REVIEW number next week!

THE man who constantly "gets left" cultivates leaves.

BETTER to boycott the saloon than to have a case of boy caught.

CERTAINLY some folks never hatch out the best that is in them until some one "sits on them hard."

WHEN the German Kaiser proclaims against American fruits we may safely conclude that our trees are affected by crown gall.

WHAT is the next best thing to election of Senators by popular vote? The vote with the postage stamp—strong, sharp letters from fearless men on the farm.

"YES," says Mr. Baldwin Apple, "they think some of these smart young fellows are to run your humble servant out of business, but I am still pretty well, thank you!"

THERE are men who honestly feel that they have done so much for society that they are warranted in sitting down for the rest of their lives. They are nice men, but don't put them at the head of a live society.

"A LATE R. N.-Y. says that 'the first requisite of success in farming is the ability to be happy on the farm,' and that I am very sure is true, but if we could only make that read 'the ability to be happy on the farm will bring success,' and still have it true, then, oh, what a success I would make." B.

THE man who writes the following comes pretty near to being an ideal contributor: "Now, I wish to say that you can sift the whole of this, and if it all goes through into the waste, I shall not feel offended in the least, as after serving the public for more than 40 years, I am inclined to conservatism."

Events of the Week.

DOMESTIC.—February 13 fire destroyed the National Glass Company's tumbler works at Rochester, Pa., entailing a loss of $500,000. . . . . A bill has been introduced in the New Jersey Legislature providing a penalty of 60 years imprisonment and $10,000 fine for the crime of kidnapping a child under 14 years old. . . . . Fire in a bolt factory at North Tonawanda, N. Y., February 11, caused damage amounting to $100,000. . . . . February 13-15 severe snow blockades were reported throughout northern New York. Intense cold and high winds prevailed over a wide area, and extensive ice floes hindered navigation around New York City. . . . . Three new fatal cases of bubonic plague were reported in San Francisco February 7. . . . . A terrific explosion occurred February 15 in a coal mine at Cumberland, Vancouver Island. Fire followed the explosion, imprisoning 61 men. None escaped alive, in spite of the heroic efforts of rescuers. . . . .Three men were killed and three fatally injured by a dynamite explosion in a railroad tunnel at Pinto, Pa., February 15. . . . . Owing to the imposition of a countervailing duty on Russian sugar by our Government, Russia has retaliated by a discriminating duty on American manufactures of iron and steel amounting to about 30 per cent. The duty on Russian sugar was imposed on the ground that a bounty is paid to the exporters. . . . . It has been announced that Denmark has finally decided not to sell her West Indian Islands to the United States. . . . . Chicago capitalists have organized a $1,000,000 corporation, known as the Central Sugar Company, to compete with the huge American trust in the home supply. Contracts have already been closed by the newly-organized company for the erection of a beet sugar factory at Shelby, Ind. This will be the first enterprise of its kind in that State. Ten thousand acres of land have been purchased by the company, and contracts let for one of the largest sugar refineries outside of the trust. . . . . Four firemen were killed by a falling wall, while fighting a fire at New Haven, Conn., February 19. The property loss caused by the fire was $50,000.

CONGRESS.—The House Committee on Irrigation and Arid Lands February 14 voted to report, with an amendment, the Newlands bill providing a plan of Government aid in reclaiming the arid sections of the arid-lands States. . . . . The right of Delegate Wilcox, of Hawaii, to a seat in the House has been confirmed. His opponents have charged him with bigamy and treason. . . . . Senator Hansbrough, of North Dakota, recently referred to the Interior Department for an opinion his bill providing that all moneys received from the sale of public lands in the arid and semi-arid regions shall be set aside as an "arid land reclamation fund" for the construction of reservoirs and other hydraulic works for the storage and diversion of water. Commissioner Hermann, of the General Land Office, has recommended to the Secretary of the Interior that a favorable report be made on the bill, with amendments to meet several suggestions he has offered. . . . . The House passed the St. Louis Exposition bill February 18 by a vote of 101 to 41. The bill to define the word "conspiracy" in the Sherman Anti-trust law, to avoid the possibility of its being held applicable to labor organizations, was defeated by almost a two-thirds vote on account of two amendments which the Judiciary Committee placed upon the bill, and which were opposed by the labor organizations.

PHILIPPINES.—There have been further incriminating developments in the charges against Dr. D. M. Carman, the American contractor, who, with his partner, Theodoria Carranza, a Spanish merchant, was arrested February 6, charged with furnishing supplies to aid the insurgents. Proof has been secured of his dealings with the rebels, showing that he supplied them with uniforms, provisions, money and some arms. The investigation will be continued In the province of La Guna three agents of the Tabacaleria Company, and William Webb, Pedro Lorenzo and Victoriaco Senatna, employed by the Philippine Trading Company, have been arrested on charges similar to those brought against D. M. Carman, for furnishing the insurgents with supplies. The Tabacaleria Company, the richest corporation in the Philippines, is accused of aiding the insurgents often and extensvely. The parties arrested are prominent persons, and the evidence against them is very strong. M. Brix-Hoelterman, a Belgian connected with the Philippine Trading Company, has been arrested at Manila, and M. Edouard Andre, the Belgian consul here and manager of the Philippine Trading Company, has hastily left Manila with his family on his way to Europe, on board the steamer Montevedo. Andre had previously been suspected. Other arrests are expected. . . . . Captain Novico, the insurgent officer who commanded the band which captured Lieutenant Gillmore, and party held them captive for many months, has been sentenced to imprisonment at hard labor for life, on the charge of having permitted one of Gillmore's party to be buried alive. The victim was a sailor named McDonald, who was a burden to the Filipinos because of his wounds.

GENERAL FOREIGN NEWS.—The capital city of Bolivia, La Paz, has been inundated by the overflow of a river; many lives have been lost, and the damage is said to reach $1,000,000. . . . . Disturbed conditions exist in Spain, where the marriage of the king's sister, Princess Mercedes, to Prince Charles of Bourbon, February 14, was the occasion of general rioting. . . . . Negotiations in China still proceed slowly. The United States protests against a punitive expedition projected by Germany.

FARM AND GARDEN.—At a meeting of the New York State Fair Commission, held February 6, it was decided to change the dates for holding the Fair from the week commencing August 26 to the week beginning September 9. The law will be amended so that any county or town society may hold its fair during the same week as the State Fair.

At the recent annual meeting of the Arkansas State Horticultural Society interesting papers were read, and it was decided to ask the State Legislature for a $2,000 appropriation. Officers for the ensuing year were elected as follows: President, John P. Logan, Siloam Springs; vice-president, S. H. Nowlin, Little Rock; secretary, W. K. Tipton, Little Rock; treasurer, Job Vestal, Little Rock.

Seedsmen and farmers of central Iowa have formed the Iowa Seed Corn Growers' Association, the officers of which are: President, John E. Brown, Mitchellville; vice-president, D. K. Nims, Emerson; secretary and treasurer, N. J. Harris, Des Moines. The object of the Association is to promote the corn-raising industry, so as to get the best varieties of seed corn raised and distributed among the farmers.

The Women's Agricultural and Horticultural Union of California, organized in San Francisco during the recent meeting of the State Fruit growers' Convention, has chosen officers as follows: President, Mrs. M. E. Sherman, Fresno; first vice-president, Mrs. E. Shields, Sacramento; secretary, Mrs. Emma Shafter Howard, Oakland.

The thirty-seventh annual meeting of the Nova Scotia Fruit Growers' Association met at Wolfville, January 28-30. The transportation of fruit to the English market was discussed very fully. The following officers were elected: President, J. W. Bigelow, Wolfville; vice-president, Peter Innes, Coldbrook; secretary, S. C. Parker, Berwick; treasurer, Geo. W. Munroe, Wolfville.

Through Western New York especially in Orleans County, fruit-growers are organizing local branches and will send delegates to the meeting at Syracuse, February 27-28. The growers are strongly in favor of the bill compelling nurserymen to fumigate nursery stock. At the recent hearing on this bill at Albany a strong delegation from Orleans County was present.

Connecticut Pomological Meeting

PART II.

At the reecnt meeting of the Connecticut Pomological Society there was quite a discussion as to varieties of red apples suitable for New England. The great desire is to find a rival for Baldwin which shall have all the good qualities of that variety, with a little higher quality, a little more vigorous tree, and larger size. Sutton Beauty and Jonathan seem to be most in favor, but there was some talk about Rome Beauty. York Imperial, of which much was expected, does not seem to gain many friends in Yankeeland. L. B. Smith, of Higganum, had an excellent article on the "Value of Fruits as Food." He said that he had been a confirmed dyspeptic, but had made himself a well man by eating freely of wholesome, ripe fruit. For a family of four persons he would have four quarts of ripe strawberries each day, in their season, avoiding those which contained the most acid. Peaches and plums are also excellent, but the apple, he says, is the best of all fruits, superior to the orange in every way. No family should go into Winter quarters without at least five or six bushels of apples for each person. This would mean less meat, and a greater degree of health.

[The Armour Packing Company is buying salt in Portugal, being driven to it by the exactions of the salt trust.]

UNCLE SAM: "If old Beefy can't stand it, how can I?"—PHILADELPHIA RECORD.

Charles W. Garfield, of Michigan, gave a noble address on "The Signs of the Times in Horticulture." He briefly reviewed some of the remarkable changes of the past 10 or 15 years, and went on to show how the progressive fruit growers are to take advantage of them. It would be impossible to give anything like a synopsis of this excellent address, which was earnest and thoughtful, and packed full of the soundest sort of advice. Among other things he said that he noticed in Europe how the farmers who had goods to sell dressed up for the occasion, and came to market presenting a neat, clean appearance which was bound to help the sale of their goods. In this country too many farmers are willing to come directly from the barnyard without any change of clothing whatever, to sell food which the customers are to eat without washing. He thinks that farmers should take more pride in their business, and above all remember that the appearance of their goods counts for everything, with a fastidious customer. Prof. W. G. Johnson delivered his address on the San José scale, which was well received by the Society. This led to the usual discussion, and after considerable talk, a resolution was adopted, declaring that, in the judgment of the Society, Connecticut ought to make an earnest attempt to save trees and shrubs. This is a pretty mild statement for Yankees to make, when threatened with such serious trouble. But it is a fair sample of the sort of resolution turned out whenever nurserymen and fruit growers get together and try to pool their issues on this question.

J. H. Hale delivered an excellent address, showing the progress of pomology during the past 10 years. It would be impossible to give a fair synopsis of this address, but we hope to give the greater part of it in later issues. Among other things he said that the only really valuable pear coming to us in recent years is the Worden Seckel; he thinks highly of it. He spoke of the fact that Connecticut has now as many peach trees as Delaware, which was once the most noted peach State in America. The Campbell's Early and Green Mountain grapes he calls the two most valuable late acquisitions. He thinks favorably of chestnut culture, growing the new and old varieties, and says that nearer the large cities cantaloupes are now being produced in great quantities, apparently competing successfully with the Western crop. Hale is rightly opposed to the Ben Davis apple, although, like others, he has no definite variety to take the place of Baldwin. He considers the Carman peach an acquisition, although Champion and Elberta are the most valuable varieties that have come to us during the past 10 years. Red raspberries are under a cloud, selling at 50 per cent lower, and less in demand than they were 10 years ago.

West Virginia State Horticultural Society.

The seventh annual meeting of the West Virginia State Horticultural Society was an epoch-maker in its history. Never before has so much real live interest been manifest in fruit growing at one of these meetings. Apple culture held the day from early morning till late at night; the papers and discussions all referred to the apple. Wm. Hewit referred to the tremendous influence which a single man, Jacob Nessly, had upon the subsequent history of the county in which he was a pioneer. About 115 years ago this man acquired a tract of land in the northern part of what is now Hancock Co., W. Va., stretching along the Ohio River for about four miles, and about 1½ mile in width. This area is now the most extensive apple orchard in the State, containing orchards of over 300 acres in extent, and an aggregate of nearly 3,000 acres, with ample storage and warehouses for the purpose of carrying the product over the season of low prices, so characteristic of picking time. There are no less than six of these houses, ranging from 2,500 up to 35,000 barrels capacity. Here numerous varieties are grown, but the commercial product is confined to Willow, Rome Beauty and Ben Davis.

How to Make an Orchard Profitable was discussed by Hon. W. F. Brown, of Arroyo, W. Va., who is one of the most successful apple growers of his region. He gave the results of his own experience in the use of bone meal and the spray pump in improving the quality and quantity of his fruit. One of the most instructive papers read was by Prof. G. L. Stewart, Assistant Industrial Agent of the Baltimore & Ohio Railroad, in charge of agriculture and horticulture, in which he pointed out the areas in Preston and Barbour counties in which successful orchard and garden enterprises were engaged in, as well as the possibilities of these counties for apple and peach culture and market gardening. This work, which the Baltimore & Ohio has undertaken, is certain to awaken an interest in horticultural pursuits along its lines. Mayor Floyd, of Charleston, gave a brief resumé of his market-garden operations carried on to supply the city of Charleston. One of his main crops is early cabbage, the seeds for which are sown in September; the plants carried over Winter in cold frames and planted out the last of March or early in April—20,000 to 30,000 are annually grown in this manner. Strawberries were tested in a small way, the plants set one foot apart in the row and 18 inches apart between rows. From 1-16 acre treated in this way an income of $55 was received, thus producing at the rate of nearly $900 per acre.

Spraying was discussed by Hon. Alex Clohan. He recounted his experience with the Snow apple. While this variety grows well and produces a fruit of high quality in certain localities, with him, it produced few fruits, and those so scabby and inferior that they were worthless. Fifteen trees, which were at least a dozen years old, had not produced more than five bushels of apples in any one year until 1898, when they were sprayed before the buds opened with the 6-4 Bordeaux Mixture; a second treatment was made as soon as the blossoms fell; a third when the fruit were about the size of hickorynuts, and a fourth about three weeks later. As a result about 30 barrels of good fruit were harvested, which returned a net price of $2.50 per barrel. The spraying was not confined to these apples, but was made general to all fruits in the plantation, with the result that plum trees, which previously cast their leaves in August and September, carried full foliage up to frost, and the following season produced a full crop of fruit. The results from spraying the Snow apples alone paid for all the spraying done on the plantation and left a small margin of profit.

The following officers were elected: President, Hon. R. C. Burkhart; vice-president, O. V. Oshel, Grimm's Landing; secretary, L. C. Corbett, Morgantown, W. Va.

APPLE REPORTS.—Last Fall, from week to week, apple reports from different places were printed in your paper, and I told the farmers around me that if I had apples to sell I should not be in any hurry, but most of them sold their fruit for 50 cents per barrel, while a few held until they got from $1.50 to $1.75 per barrel for fruit alone. G. W. H.

Columbia County, N. Y.

POTATO OUTLOOK.—The potato market continues unsatisfactory, and it is doubtful whether there will be any material increase in price for several weeks. From all that can be learned, large quantities remain in the hands of the growers in some of the western potato States, and as soon as there is any scarcity in the eastern markets sufficient to put prices up, western farmers will take the opportunity to unload their surplus stock. Taking the results year after year, those whose policy is to sell when they can get a fair price come out better than those who always hold for a rise, and in many cases hold until the bottom drops out of the market. Speculation is poor business for a man who has not capital enough so that losing will not cripple him.

Woman and Home

From Day to Day.

"There is no unbelief;
Whoever plants a seed beneath the sod
And waits to see it push away the clod,
He trusts in God.

"Whoever says when clouds are in the sky,
'Be patient, heart, light breaketh by and by,'
Trusts the Most High.

"Whoever sees 'neath fields of Winter snow,
The silent harvest of the future grow,
God's power must know.

"Whoever lies down on his couch to sleep,
Content to lock each sense in slumber deep,
Knows God will keep.

"There is no unbelief;
And day by day and night, unconsciously,
The heart lives by that faith the lips deny,
God knoweth why."
—The Social Gospel.

*

WE read recently of a little four-year old who went to the country for the first time to visit his grandmother. There for the first time he had a view of a cow. He would stand and look on while the man milked and ask all manner of questions. In this way he learned that the long crooked branches on the cow's head were horns. Now, the little fellow knew of only one kind of horn, and a few days after obtaining this information, hearing a strange kind of bellowing noise in the yard, he ran out to ascertain its cause. In a few minutes he returned with wonder and delight depicted on his countenance, exclaiming: "Mamma, mamma! Oh, do come out here! The cow's blowing her horns!"

*

PRINCESS skirts which look as though they were fastened on just under the arms are a new French model. They are gored to fit up above the waist, the actual ending being hidden under a bolero. They are only suited to a very slender figure. While the skirts still fit very snug around the hips, they are not so close as they were down to the knees; at the bottom they are still expected to flare very widely. Postilion coat tails are often used at the back, which may be attached either to the skirt or the waist, appearing below the belt; they are very new, and a decided advantage to a long-waisted woman, as the present fashion demands that one must be short-waisted in the back and long-waisted in front.

*

A NEW idea for making taffeta or wash silk shirt waists for Summer is to cut the waist in the ordinary style, without lining, the sleeves being a little short, and flaring at the bottom, the top of the waist cut down in the shape of a small round yoke. A perfectly plain waist of thin nainsook is made to wear under this, having a stock collar of embroidery, a little embroidery on the yoke, if desired, and full bishop sleeves with an embroidered cuff. These undersleeves show under the flaring sleeve of silk in the fashionable puff, and the effect of the whole is cool and pretty. The undersleeves still maintain their vogue; even where a sleeve is tight it is often cut of two materials, so as to give this effect, and where undersleeves are not worn there is usually a puff at the lower part. Very often the sleeve is tucked to the elbow, and left in a puff below; sometimes the tucking extends farther down, leaving a short full puff at the wrist.

*

A MAN has been driving through rural and suburban sections of New Jersey and Pennsylvania offering to sell table linen very cheaply. He tells confiding women that he has just arrived in this country, bringing with him a small quantity of high-class Irish linens, which he succeeded in getting past the custom house without paying duty; consequently he is prepared to sell them at reduced prices. His wares, however, are flimsy, heavily-glazed German linens of the cheap grades, dressed so as partly to conceal their poor texture. A great many women do not understand the quality of new linens, so the vender of gold-brick tablecloths gets rid of enough of these poor materials to pay him well, charging far more than they are worth. We hope that our feminine readers will be proof against his blandishments, should they happen to meet with him.

Rural Recipes.

She boiled the eggs and sliced them with discriminating care,
She cut the onions finely with a most important air;
With comprehending art she mixed the golden mayonnaise,
Which, really to her credit, was deserving highest praise.

Then she added the potatoes (humming gay a little ballad),
As she thought, "How pleased will Hubby be with this delicious salad."
But at lunch she was the saddest little girl you ever saw,
When he said, "Aren't these potatoes, dearest, just a little raw?"
—What to Eat.

Baked Toast.—This is a preparation of milk toast recommended by an English cook. Prepare toast in the ordinary way, and, as each slice is ready, dip quickly into a pan of boiling water slightly salted, then pack into a baking-dish, sprinkle well with salt, and cover deep with boiling milk. Bake in a dish, closely covered, for 15 minutes, and serve. The toast should have absorbed all the liquid without getting dry. If you can spare three or four tablespoonfuls of cream, heat, and pour over the surface just before sending to the table. The baking lends smoothness and richness to this dish not to be found in milk toast prepared in the usual way.

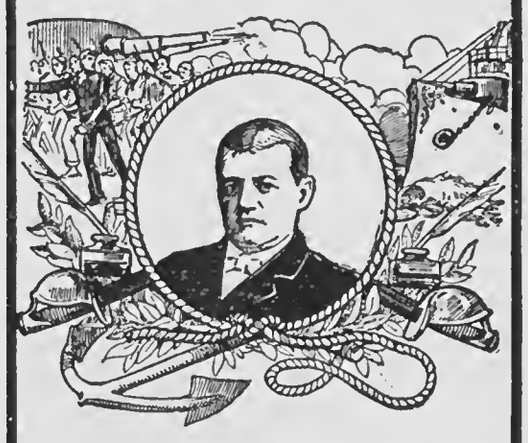
Oxford Sausage.—One pound each of finely chopped veal, pork and beef suet. Mix through this one quart of bread crumbs, grated peel of half a lemon, a grated nutmeg, a sprig each of savory, thyme and sweet marjoram and a tablespoonful of powdered sage leaves. Make in cakes and fry in very little hot butter.

Peanut Wafers.—Stir one-half cupful of butter to a cream with one cupful of sugar. Dissolve a scant half teaspoonful of soda in half a cupful of milk and add it to the mixture. Stir in two cupfuls of flour and beat vigorously. Turn a baking pan upside down, wipe it very clean, butter it and spread the wafer mixture over it, using a knife to make it smooth and quite thin. Sprinkle the top thickly with finely rolled peanuts and bake in a moderate oven until brown. Cut the cake into squares while hot and place them on a moulding board to cool. Place in a tin box to keep crisp.

Eggs with Bread Sauce.—Prepare a heaping cupful of stale bread crumbs, using only the interior of the loaf. Put into a saucepan with 1½ cupful of milk, one-half of a teaspoonful of salt, a dash of cayenne and a half teaspoonful of onion juice and simmer slowly until thick and smooth, beating several times with a spoon. Pour the sauce into a broad shallow dish and break carefully over it half a dozen eggs. Place in a hot oven until the eggs are set, then send quickly to the table.

Potato Chowder.—Wash and pare four large potatoes. Cut them into small dice. Chop fine one quarter of a pound of ham and one good-sized onion. Slowly fry the ham and onion together until a light brown, then in a saucepan put alternate layers of the ham and diced potato, seasoning well with salt and pepper. Add one tablespoonful of finely chopped parsley and one pint of boiling water, cover and simmer slowly until the potatoes are tender, which will take about twenty minutes. In a second saucepan thicken two cupfuls of milk with one tablespoonful of butter, and one tablespoonful of flour, simmer for a moment, add it to the chowder and let cook for two minutes longer.

Leaves from a Sailor's Log



By Captain Robley D. Evans

U. S. N. "Fighting Bob" Evans will contribute to early numbers of

THE SATURDAY EVENING POST

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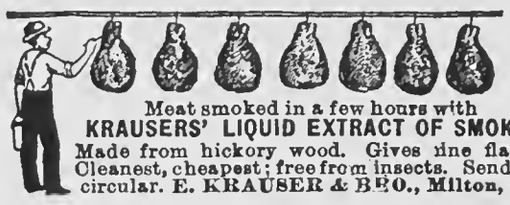

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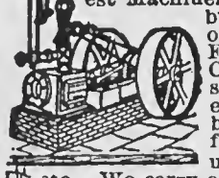

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The Luck of Monty Morrison.

TIPMAN and Dows, fellow graduates of Grinnell, editors and publishers, dust covered and weary, sat on the rear platform of the Pullman, the dust whirling about them in clouds, and doggedly viewed the dreary Nebraska landscape. The train—six coaches, loaded to the doors—was a special, kindly furnished on reasonable terms for the laudable purpose of restoring to their homes a party of jaded, satiated Iowa journalists, who had been seeing the sights of the great West. It was due to arrive at Omaha the following morning, and there a committee would drive the excursionists around in carriages and omnibuses. There would be a banquet, and the spokesmen of the party would once again unwind the frayed strings of speech which had done duty from St. Paul and Minneapolis to Helena, and back by way of Denver. Tipman was not anticipating the festivities with a great amount of pleasure, and he told Dows so, whereupon Dows came out of a state of mind closely resembling the waking slumber of functional debility, and declared his intention of cutting it.

"Monty Morrison's farm is somewhere near Omaha," he said. "Let's go out and see the old chap while the others are being entertained. I don't think I am strong enough to be entertained again this trip. I don't, really."

Tipman's travel-stained face brightened at the suggestion. "It's a positively great idea," he said.

Monty Morrison had been of their class at Grinnell, and in some mysterious way he had managed to graduate when they graduated. He had not been strong in books, but he could play baseball. He was afraid of girls. And yet, a year or two after his graduation, his fellow classmen were astounded to learn of his marriage to a young lady whom the Dubuque papers enthusiastically described as a queen of society. She was the daughter of a Keyes, and the wedding was followed by a violent shower of gossip all over the State. It was said that old Keyes raged unceasingly for weeks. He had wished his daughter to marry an old friend of his—a man of most disagreeable social attributes, but of undoubted financial standing. Not even so much as a bridal gown or a belt buckle did he give her for a wedding gift, though he might have given her a check for a hundred thousand dollars without the least inconvenience.

Public opinion, while severe upon old Keyes for permitting his anger to reach such lengths, was rather inclined to question the wisdom of the match. A young fellow whose fortune consists of a small Nebraska farm, and nothing else, takes stupendous chances when he marries a girl who has been reared in the lap of luxury. Furthermore, there seemed little in common between the daughter of the house of Keyes and Monty Morrison. Her education and culture had cost not a penny less than fifty thousand dollars. She had in her veins the most aristocratic blood between the rivers. Monty had no definite idea as to what culture was. He had gone to college principally because the boys wanted him on the team. He had sprung from very common stock—sound and honest and all that, but scrubby. After the wedding, Monty Morrison and his bride started for their future home, near Omaha. The elder Morrison had inherited the farm from an uncle, and in turn he bequeathed it to Monty. The rest of his fortune, which was not a large one, had gone to Mrs. Morrison and the girls. Monty was perfectly satisfied.

"Did you ever see Monty's wife?" asked Tipman.

Dows said he had not, but his mother had. "She described her," said he, "as very beautiful; a creature with all the graces; with an almost regal air; one who was accustomed to rule; one who had never known what it was to have her slightest wish ungratified."

"And yet," said Tipman slowly, "she married Monty Morrison."

"I suppose," he went on presently, "that it was pure love. Monty was a handsome chap with a pleasant way. He was different from the others. She was probably sick of twaddle and twaddlers. She wanted the real article. But I am afraid they have both repented before this. Farmers' wives have to work, and she doesn't know how to work. That was not included in her fifty thousand dollar education."

"Probably not," said Dows. "Poor Monty!"

"Poor Monty!" echoed Tipman.

Next day, they found that the farm was not far from Omaha. They came into full view of the place after an hour's driving in a hired buggy. It was a plain dwelling, set upon a well kept lawn. There was a red barn, and there was a carriage house. It was the typical home of the prosperous farmer. In the big garden, separated from the lawn by a graveled driveway, a sun bonneted woman was hoeing energetically.

Tipman nudged Dows, and jerked his thumb towards her.

"Has to keep a servant," he said pityingly.

"Poor Monty!" said Dows again.

They stopped at the driveway, and a tall broad shouldered, bearded man, followed by a yellow dog, came toward them from the barn. When he was near enough to recognize them he broke into a run and came down upon them with a mighty rush. He greeted them vociferously, and piled into the buggy on top of them, talking every instant like a delighted whirlwind. Tipman and Dows glanced their astonishment at each other across his back.

"How long can you stay?" asked Monty. "A month?"

"Heavens, no!" said Tipman; "we must go back in an hour."

Monty wanted to know all about his old friends, and they gave him all the news. The visitors wanted to know about Monty's marriage, and he told them very frankly.

"It came about like a story book," he said candidly. "I was strolling along the Mississippi below Dubuque, one day, with nothing to bother me but a picnic party. I sat down to enjoy the scenery, and when I awoke the first thing I saw was a man and a girl in a skiff. He was a beast—looked more like a hippopotamus than anything I could think of—and the girl was scared to death. She was begging him to return, and he wouldn't. She tried to take the oars, and he took hold of her. That made her scream.

"Of course it wasn't any of my business, but it roiled me to see that big dub bully the girl. I had a baseball in my pocket, and I reached for it, measured the distance to the skiff. It was seventy feet, I estimated—just far enough for my old out curve to work beautifully. I let drive. It was a great throw, boys, if I do say it. It caught the beast squarely under the ear, and he dropped into the bottom of the skiff so suddenly that the leer didn't have a chance to break loose from his face. Then I stepped down to the shore and called to the girl. 'Will you please take the oars and row over here so that I may get my ball?' said I. 'It accidentally slipped from my hand.' She did as I asked her to do. She shook my hand, too, and looked at me till I blushed fearfully. She asked my name. I gave it to her like a schoolboy. Then she gave me hers, and invited me to call on her. I pushed the skiff out into the stream, and escorted her back to her friends. The fellow in the skiff was the man her father wanted her to marry. She had suggested a boat ride rather than walk with him. Well, we were married, in spite of a lot of things, six weeks later."

"Love at first sight, eh?" said Tipman.

"I believe that's the term," said Monty; "but it's good love." He pointed with his finger down the road. "See that?" he asked.

"I see nothing but a cloud of dust," said Tipman.

"Nor I," said Dows.

"Well, in the midst of that cloud of dust are two of the greatest kids in the world. They've been visiting a neighbor's boys, and they're playing steam engine home again; the dust is the smoke, you know. And now I want you to meet my wife."

He spoke proudly, arising to his full height. Tipman and Dows moved involuntarily towards the front door.

"Not that way," said Monty. "She doesn't stay in the house much during the Summer."

He led the way to the garden fence, and called to the woman with the hoe. She dropped the implement, and came forward, wiping her hands on her apron. Then she pushed back the sunbonnet, disclosing a sweet face, beaming with health and happiness, and greeted her husband's friends.

That night, in the Pullman, Tipman was awakened by a vigorous prodding in his ribs.

"What is it?" he asked, starting up.

"Did Monty's wife lower herself to his level or did he raise himself to hers?" asked Dows, in the tone of one who has suddenly awakened.

"It looks to me like a blessed happy medium,'" replied Tipman sleepily. "Lucky Monty!"

"Lucky Monty!" echoed Dows.

—David H. Talmage, in Munsey's Magazine.

"Who are the blest?
They who have kept their sympathies awake,
And scattered joy for more than custom's sake—
Steadfast and tender in the hour of need,
Gentle in thought, benevolent in deed;
Whose looks have power to make dissension cease,
Whose smiles are pleasant, and whose words are peace."

Each hath his lonely peak and on each heart
Envy, or scorn, or hatred tears lifelong
With vulture beak; yet the high soul is left,
And faith, which is but hope grown wise, and love
And patience, which at last shall overcome.
—James Russell Lowell.

WHEN a Christian is heard asserting that his self-respect will not allow him to do this, or submit to that, it is reasonably safe to conclude he is deceiving himself. Nine times out of ten, if not ninety-nine times out of a hundred, he is merely indulging his personal pride. * * * So long as we do nothing unworthy ourselves we need not fear the loss of self-respect.—Episcopal Recorder.

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MARKETS.

The Week's Quotations.

WHOLESALE PRICES.

NEW YORK, FEBRUARY 23, 1901.

GRAIN.—Wheat 1¼ cent up. Kansas acreage reported seven per cent above last year, and conditions favorable. Corn and oats at a slight advance. Rye dull.

Wheat, No. 2, hard, N. Y.	81⅛	@	—
No. 1, Northern Duluth, spot.	87⅛	@	—
No. 1, hard Duluth, spot	90⅞	@	—
Corn, No. 2, elevator	48½	@	—
Oats, No. 2, white, in elevator	33	@	—
Rye, No. 2, Western, c. i. f., N. Y.	57½	@	58

BEANS.—Trade dull here. The stock on the Pacific coast is said to be unusually light, owing to the large supplies sent to the army in the Philippines.

Marrow, choice, per bu	2 45	@	—
Fair to good	2 35	@	2 40
Pea, bags, choice	2 25	@	—
Red kidney, choice	2 30	@	—
White kidney, choice	2 60	@	—

SEEDS.

Clover seed, N. Y., good to choice, per bu	5 65	@	6 30
Toledo, for March delivery, per bu	7 10	@	—
Timothy, per 100 lbs	4 65	@	5 00
Red Top, lb	10½	@	—
Cottonseed. New Orleans, bulk, ton	13 00	@	—
Flaxseed, whole, cleaned	6 50	@	7 00
Cottonseed meal, ton	25 75	@	—
Linseed oil, cake, ton	27 50	@	—
Meal, sacked	28 00	@	28 50
Celery, seed, lb	7	@	7¼
Hemp, Russian, lb	2¾	@	2⅞
Millet, lb	1⅞	@	2
Mustard, English, yellow, lb	6¼	@	7
California, yellow	6	@	6¼
Rape, German, lb	3½	@	3⅝
Sunflower, lb	2⅜	@	2½

FEED.

Spring bran, 100-lb. sacks	18 25	@	18 50
Winter bran, bulk	17 00	@	20 00
Spring middlings, 200-lb. sacks	17 35	@	20 00
Red Dog, to arrive	18 75	@	—

HAY AND STRAW.—Market for hay active, and better grades up 2½ cents. Straw quiet.

Hay, No. 1	95	@	97½
No. 2	90	@	92½
No. 3	80	@	—
Clover	70	@	80
Clover, mixed	75	@	85
Straw, rye, long	87½	@	90
Oat	50	@	55

MILK.

New York Exchange price within 26-cent freight zone, 2¾ cents per quart.

BUTTER.—Extra creamery one cent up. Trade is brisk and market generally in healthy condition. Exporters are taking considerable medium quality.

Creamery, extra, per lb	23	@	—
Firsts	21	@	22½
Seconds	18½	@	20½
Lower grades	16	@	18
June make, extras	—	@	20
Held, common to firsts	15	@	18½
State dairy, half-firkin tubs, fresh, finest	20	@	21
Half-firkin tubs, fresh, firsts	18	@	19
Welsh tubs, fresh, finest	20	@	—
Welsh tubs, fresh, firsts	18	@	19
Tubs, fresh, seconds	16	@	17
Tubs, Fall made, finest	16	@	—
Tubs, Fall made, good	—	@	15
Tubs, thirds	13	@	14
Tins, etc., fresh	14	@	19
Firkins	14	@	16
Western imitation creamery, finest	18	@	18½
Lower grades	14	@	16
Western factory, fresh, fancy	14½	@	15
Fresh, fair to prime	13¾	@	14¼
Lower grades	12	@	13½
June make, finest	13½	@	14
Held, common to prime	11	@	13
Rolls, fresh, choice	14½	@	—
Fresh, common to prime	12	@	14
Packing stock	11	@	12½
Renovated butter, fancy	17½	@	18½

EGGS.—Trade active, and market getting cleaned up in good shape. Further slight advances in price probable on account of extra demand for Lenten season.

QUOTATIONS AT MARK.

State & Penn., prime	18	@	18¼
W'n, fresh-gathered, firsts	12¾	@	—
Reg. packing, fair to good	17	@	17½
Kentucky, closely graded, fcy.	17½	@	17¾
Ky. & Tenn., avge. prime lots	17¼	@	—
S'n, fresh-gath'ed, fair to good.	16	@	17
W'n, fresh-gathered, dirties	15½	@	16
Refrigerator, early p'kd, good to choice	15	@	15½
W'n, refrig., common to fair	13	@	14½

POTATOES.—Large supply, but quality irregular. Western receipts largely poor and going at low prices. Prime tubers firm at unchanged figures. Demand for sweets light.

Bermuda, good to prime, bbl	4 50	@	5 00
No. 2, per bbl	3 00	@	3 50
L. I., prime, in bulk, bbl	1 50	@	1 75
State & West'n, round, 180 lb	1 37	@	1 75
Per sack	1 40	@	1 60
Long, 180 lb	1 25	@	1 50
Jersey, prime, bbl	1 25	@	1 50
Sweets, Vineland, cloth-top, bbl.	2 00	@	2 50
Other Jersey, cloth-top, bbl	1 75	@	2 25
Jersey, per d.-h. bbl	1 75	@	2 00
Jersey, per basket	75	@	90

VEGETABLES.—Choice domestic onions scarce. Southern lettuce in bad condition. Florida cauliflower scarce. Large supply from California but quality inferior.

Onions, Conn. & L. I., white, per bbl	3 50	@	5 50
Conn. & L. I., red, bbl	2 50	@	2 75
Conn. & L. I., yellow, bbl	2 50	@	3 00
Orange Co., white, bag	2 00	@	4 50
Orange Co., red, bag	2 25	@	2 75
Orange Co., yellow, bag	2 25	@	2 75
State & West'n, yellow, bbl.	2 25	@	2 50
State & W'n, yellow, 150 lb	2 50	@	2 75
State & West'n, red, 150 lb	2 25	@	2 50
Bermuda, crate	2 25	@	—
Havana, crate	2 25	@	—
Squash, marrow, bbl	1 00	@	1 25
Hubbard, bbl	1 25	@	1 50
String beans, Fla., crate	1 25	@	3 00
Turnips, Canada, Russia, bbl	75	@	85
Jersey, Russia, bbl	70	@	80
Peppers, Fla., carrier	1 25	@	2 00
Celery	15	@	75
Egg plant, Fla., box	1 50	@	3 00
Green peas, Fla., basket	2 00	@	3 50
Spinach, Norfolk, bbl	75	@	1 25
Baltimore, bbl	75	@	85
Carrots, old, bbl	65	@	1 00
Bermuda, crate	75	@	1 00
New Orleans, 100 bchs	3 00	@	4 00
Lettuce, New Orleans, bbl	3 00	@	4 00
Florida, ½-bbl	1 00	@	2 50
Charleston, basket	1 25	@	1 75
Brussels sprouts, qt	8	@	16
Parsnips, bbl	75	@	1 00
Cabbage, State, ton	12 00	@	15 00
Florida, new, bbl	1 50	@	2 50
Tomatoes, Fla., carrier	1 50	@	2 50
Chicory, New Orleans, bbl	4 00	@	6 00
Beets, L. I., bbl	75	@	—
Florida, crate	65	@	85
Romaine, New Orleans, bbl	4 00	@	5 00
Escarol, New Orleans, bbl	4 00	@	5 00
Okra, Havana, carrier	2 00	@	3 00
Parsley, Bermuda, box	2 00	@	2 50
Kale, Norfolk, bbl	40	@	75
Cauliflower, Fla., basket	3 00	@	4 00
Cal., case	1 50	@	2 25

HOTHOUSE PRODUCTS.

Lettuce, choice, 3½ to 4½ dozen to case, dozen	50	@	—
Cucumbers, fair to choice, doz.	1 50	@	1 75
No. 2, dozen	75	@	1 25
Tomatoes, common to prime, lb.	20	@	35
Radishes, 100 bunches	1 50	@	3 00
Mushrooms, lb	20	@	40
Asparagus, dozen bunches	—	@	6 00
Rhubarb, dozen bunches	30	@	50

DRIED FRUITS.—Prime evaporated apples a trifle stronger. Supply of small fruits limited.

Apples, evaporated, fancy, lb	6½	@	7
Evaporated, choice, per lb	5	@	5¾
Evaporated, prime, per lb	4½	@	4⅝
Evaporated, poor to good, lb.	3	@	4¼
Sun-dried, S'n., sliced, lb	3	@	4¼
Sun-dried, State & W'n, qrs., per lb	3	@	4¼
Sun-dried, S'n, coarse cut	3	@	3¾
Chops, per 100 lbs	1 25	@	1 75
Cores and skins, per 100 lbs	75	@	1 00
Raspberries, evap., 1900, per lb	19	@	20
Blackberries, 1900, per lb	6¼	@	6¾
Huckleberries, 1900, per lb	14	@	15
Cherries, 1900, per lb	15	@	16

FRESH FRUITS.—Receipts of apples large, but demand is good. Strawberries plenty, but considerable green and unattractive stock is seen.

Apples, Newtown Pippin, bbl	1 25	@	4 00
Spitzenberg, per bbl	3 00	@	5 00
Spy, State, per bbl	2 50	@	3 50
Ben Davis, per bbl	2 50	@	3 50
Baldwin, fancy, per d.-h. bbl	3 00	@	3 50
Baldwin, average prime	2 50	@	3 00
Greening, fancy, per bbl	2 75	@	3 25
Greening, good to prime	2 25	@	2 50
Winter sorts, poor to fair, per d.-h. bbl	1 50	@	2 00
Grapes, W'n N. Y., Catawba, per small basket	8	@	10
W'n N. Y., Catawba, case	75	@	1 25
Cranberries, Cape Cod., good to choice, per bbl	8 50	@	9 50
Cape Cod, com. to fair, bbl	7 00	@	8 00
Jersey, prime, per bbl	7 25	@	7 50
Jersey, fair to extra, crate	2 00	@	2 30
Strawberries, Florida, prime to fancy, per qt	25	@	35
Fla., poor to fair, per qt	15	@	20

LIVE STOCK.—Native steers lower and selling slowly. Cows steady. Veal calves dull. Sheep in demand. Choice lambs firm. Lower grades dull.

Native steers, per 100	4 15	@	5 00
Bulls	3 40	@	4 10
Fat cows	3 00	@	4 20
Calves, choice veals	5 00	@	8 25
Barnyards	3 00	@	3 50
Sheep, common to prime	3 00	@	4 50
Lambs	5 00	@	5 75

COUNTRY-DRESSED MEATS.—Calves and Spring lambs plenty and lower.

Calves, veal, prime, per lb	9½	@	10
Fair to good, per lb	8½	@	9
Common to medium, per lb	7	@	8
Small, per lb	5	@	6
Fed, per lb	6	@	6½
Barnyards, per lb	5	@	6
"Spring" lambs, fancy, each	10 00	@	11 00
Poor to prime	5 00	@	9 00
Pork, light, per lb	7½	@	8¼
Medium, per lb	6¾	@	7¼
Heavy, per lb	5½	@	6½
Rough, per lb	4	@	5
Roasting pigs, per lb	9	@	12
Pork tenderloins, fresh, per lb	—	@	20

LIVE POULTRY.—Receipts of fowls and chickens large. Choice turkeys scarce, and one-half cent higher.

Fowls, per lb	—	@	11
Chickens, per lb	—	@	9
Roosters, per lb	—	@	7
Turkeys, per lb	10	@	10½
Ducks, avge. W'n, per pair	70	@	90
Average Southern, per pair	60	@	70
Geese, avge. W'n, per pair	1 37	@	1 75
Average Southern, per pair	1 12	@	1 27
Pigeons, per pair	25	@	30

DRESSED POULTRY.—Many shipments damaged by delay in transit. Turkeys, except prime young hens, dull. Capons in large supply.

Turkeys, W'n, prime young hens	11½	@	12
Western, old hens	—	@	9½
Western, young toms	9	@	10
Poor to fair	7	@	8
Broilers, Phila., under 2 lbs. to pair	30	@	35
Phila., 2½@3 lbs. to pair	25	@	—
Phila., 3½@4 lbs. to pair	18	@	20
Roasting chickens, Phila., selected, large	15	@	16
Phila., medium grades	11	@	13
Other Pennsylvania	9	@	12
Chickens, Ohio & Mich., scalded, average best	9	@	10
Other Western, average best.	9	@	10
Other Western, fair to good	8	@	8½
Fowls, Ohio & Mich., fancy, scalded	—	@	10
Other W'n, dry-picked, prime	9½	@	10
Other W'n, scalded, prime	9½	@	10
Western, fair to good	8½	@	9
Old roosters, per lb	6	@	6½
Capons, Phila., large	15	@	16
Medium weights	12½	@	13
Small and slips	10	@	12
Western, large	12	@	12½
Mixed weights	11	@	11½
Small and slips	—	@	10
Ducks, Ohio & Mich., fancy	12½	@	13
Other Western, prime	12	@	12½
Fair to good	8	@	11
Geese, Western, prime	9	@	10
Poor	6	@	8
Squabs, choice, large, dark	—	@	3 00
Mixed, per doz	2 25	@	2 50
Dark, per doz	1 50	@	1 75
Culls, per doz	50	@	1 00

FURS AND SKINS.

Lynx	4 00	@	6 00
Wild cat	50	@	60
Marten, dark	6 00	@	10 00
Pale	3 00	@	4 00
Skunk, black	1 40	@	1 50
Half-striped	85	@	90
Long-striped	80	@	90
Striped	45	@	50
White	20	@	25
Raccoon	75	@	1 00
Opossum, large	30	@	40
Small	8	@	10
Mink	1 00	@	2 00
Muskrat, Winter	11	@	12
Fall	8	@	9

Farmers' Institutes in New York.

Marathon, Cortland	March		1- 2
Hornellsville, Steuben	"		1- 2
Clifton Park Centre, Saratoga	"		1- 2
Greenwood, Steuben	"		4
Minaville, Montgomery	"		4
De Ruyter, Madison	"		4- 5
Whitesville, Allegany	"		5
Hagamans, Montgomery	"		5
New Woodstock, Madison	"		6
Troupsburg, Steuben	"		6
Glen, Montgomery	"		6
Georgetown, Madison	"		7
Rural Grove, Montgomery	"		7
Canisteo, Steuben	"		7- 8
West Eaton, Madison	"		8- 9
Mayfield, Fulton	"		8- 9
Woodhull, Steuben	"		9
Hamilton, Madison	"		11
Corning, Steuben	"		11-12
Sherburne, Chenango	"		12
Bridgewater, Oneida	"		13-14
Bath, Steuben	"		13-14
Oxford, Chenango	"		15-16
Prattsburg, Steuben	"		15-16
Guilford, Chenango	"		18-19
Cohoeton, Steuben	"		18-19
Dansville, Livingston	"		20-21
Caledonia, Livingston	"		22-23

CONSUMPTION CURED.

An old physician, retired from practice, had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all Throat and Lung Affections; also a positive and radical cure for Nervous Debility and all Nervous Complaints. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all who wish it, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail, by addressing, with stamp, naming this paper, W. A. NOYES, *847 Powers' Block, Rochester, N. Y.*

The Baron De Hirsch Agricultural School,

WOODBINE, N. J.

The members of the graduating class, young men between 17 and 19 years of age, are ready for positions. All of them received practical preparation in the different branches of farming.

For particulars apply to

Supt. H. L. SABSOVICH, Woodbine, N. J.

Two Thoroughbred Guernsey Bulls coming two years old, for Sale, at Charlton Industrial Farm School. R. M. CARTER, Supt., Charlton, N. Y.

Eggs and Stock For Sale

Out of five entries at Delaware State Fair, 1900, we received one Second and four First Premiums, judged by the specialist, C. W. Pile. W. P. R., Barred P. R. (Nonpareil strain) and S. C. B. L. Eggs 26 for $1; $3 per 100. Hens and Roosters from $2 to $5 each. J. W. KILLEN, Felton, Del.

FARM PAPER FREE! Send ten cents to pay cost of mailing also names and addresses of five of your farmer friends and we will send you the **Missouri Valley Farmer** one year free. Regular price 50c. It is one of the best farm papers in the west and will tell you more about agriculture and live stock conditions in the great southwest than any other publication. It is filled with western stories and up-to-date articles in the breezy style of the west. **Missouri Valley Farmer, Topeka, Kansas.**

WANTED—Good man to care for stock; also, reliable girl for general housework and cooking. Both single, unless man's wife wishes to work in house. Good wages and pleasant home. J. W. GATES, Manlius, N. Y.

WINTER WORK. Farmers, Agents, take orders for my Seeds at home. Make big money. Get your own seeds free. New plan, quick sales, fine outfit. Write to-day. **Frank H. Battles, Seed Grower, Rochester, N. Y.**

BOYS AND GIRLS I want a bright boy or girl to help me in each place. Boys better write at once, that we may get to work. LESTER M. LOVELESS, Baldwinsville, N. Y.

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Choice Lambs, Calves, Poultry,

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☞ Please tell **what** you wish to purchase.

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Farm Managers, Gardeners, Buttermakers, etc., always on hand. No charges to employers. Write us. Rural Science Agency, Durham, N. H.

136 Acre Fruit Farm and country home, 60 acres fruit all bearing, good building, desirable location, $13,600. F. A. CHAPMAN, Wellsburg, W. Va

Maryland Farms for Sale.—Adapted to grain, grass, fruit and truck. For terms and catalogues apply to W. J. Mowbray & Son, Federalsburg, Md.

Farm for Rent, five miles from center of Binghamton, two from Lestershire; April 1; 140 acres; partly river flat. Write particulars. H. GRAY, 52 Main Street, Binghamton, N. Y.

SITUATION WANTED.—Man, 24, teetotaler, wants position on farm or ranch. Address, EAST or WEST, care Rural New Yorker.

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FARMS FOR SALE OR EXCHANGE. Send for complete List Free. If you have a farm for sale, write for terms. A. C. McCOMB & CO., Pittsburg, Pa.

Cash For Your Farm

may be obtained through me. No matter where located. Send description and selling price and learn my plan. W. M. Ostrander, 1215 Filbert St., Phila., Pa.

If You Have a Farm to Sell, no matter where located, write and learn our methods. Wanted, an energetic man in every County in the United States to represent us in buying and selling farms and country property. References asked and given. NATIONAL REAL ESTATE CO., Ithaca, N. Y.

FOR SALE—Fine home, near Glens Falls, N. Y., 10 acres garden soil. Large modern house. Shady lawn. Greenhouse 20x100. Ample outbuildings. Fine fruit in abundance. Excellent water. Healthful. Good home for business man or market gardener and florist. Price right. Address GARDENER, care The Rural New-Yorker.

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FOR SALE.—A new three stand Roller Mill (water power); pond said to contain 100 acres. Stone and cement dam. Machinery all of the latest inventions, capacity about two barrels per hour; extra fine corn meal Burrs and machinery. Also a 196 Acre Farm. One of Virginia's best dark Tobacco Farms, all in fence and necessary buildings. The owner being old and lost his eyesight, will sell with Stock and Implements. Also a 286 Acre Farm joining aforesaid farm. Inquire of owner. A. SCHROEDER, Clayville, Powhatan Co., Va.

FOR SALE.—Gentleman's Country Seat in Bergen County, N. J. 52 acres in high state of cultivation; convenient to three railroads; time 45 minutes to New York; fine house, 15 rooms and 3 baths, running water, electric lights and hot-water heating. Modern stables containing 5 ordinary and 2 box stalls, cow stable and cellar. Two ponds (stocked), ice house (filled), coachman and gardener's cottages and tenant house (now rented), on premises, and altogether, one of the most complete and elegant country homes in the vicinity of New York. Address PETER HENDERSON & CO., 35 Cortlandt Street, New York.

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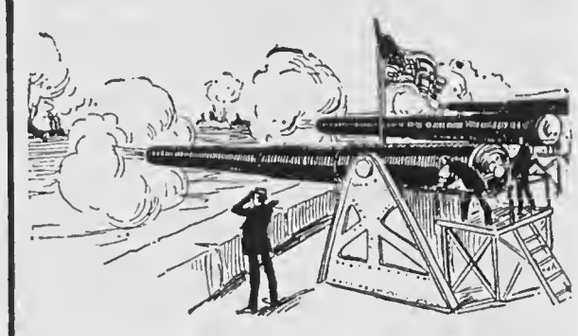
At Bellona, N. Y., in the great fruit belt of Western New York, and in the heart of the Cabbage Country. 140 acres first-class land with two sets of Farm buildings, one set nearly new. Apple orchard, and small fruits; 4 acres of wood land; never failing water, windmill and feed mill, 1½ miles from Bellona station on N. C. R. R.; two miles from Earl's Station on N. Y. C. R. R.; one mile to Creamery; ¼ mile to Church, School, Post Office, etc.

Above is a good produce farm in a high state of cultivation; buildings in good repair. Would sell the whole, or reserve one house and five acres of land. Will be sold cheap as the owner cannot give it proper attention. For further information apply to Mrs. MARY M. GAGE, Bellona, N. Y. on the premises or to H. S. SCHOONMAKER, Seneca Castle, N. Y.



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TROY CHEMICAL CO., Troy, N. Y.

MARKET NOTES.

THE LENTEN SEASON, which begins February 20, makes a decided difference in the market for some kinds of country produce. The demand for dressed calves and other meats usually falls off, and to a certain extent this is true of poultry. On the contrary, the call for eggs increases, and prices sometimes go up to a high figure. This is not likely to be the case this season, however, as the receipts, particularly from the Southwest, are large, and reports from the producing sections indicate a steadily increasing supply.

SCATTERING THE NEWS.—For the past few years great quantities of evening newspapers have been sold in this city; and from 4 to 6 P. M. every week day a variety of people, from boys three feet high to men and women 70 years old, stand on the streets where the great crowds pass on their way home from work selling papers. The profits are small, in some cases less than three cents for every 10 papers sold. For three Winters I have noticed one old lady engaged in this work in the coldest weather. The wind from all directions howls across the City Hall Park, and one would think that such exposure would quickly bring on pneumonia, yet there she stands day after day.

COLD-WEATHER DIFFICULTIES.—The recent long cold snap made lots of trouble for the marketmen. Produce delayed in transit was frozen more or less, and, after the cars arrived at the Jersey City and Hoboken terminals, it was found almost impossible to get them lightered across to New York on account of the blockade of ice in the Hudson River. It is hard enough for a ferryboat to plow its way through such a mass of ice, but a lighter with 10 or more loaded cars on board is a helpless thing if caught in an ice field. This week the market was overstocked with this delayed and damaged produce, which had to be disposed of at a discount. W. W. H.

EASTERN N. Y. HORT. SOCIETY.

PART II.

THE question-box brought out some interesting answers. In discussing the effects on color and quality of fruits of sowing Crimson clover in orchards, President Powell said that after practicing this for nine years in his apple orchards, he found that while the fruit was not quite so high a color, the quality did not suffer at all, but was, if anything, better and more juicy. He had not seen any effect on the color of peaches, and said that the use of plenty of potash in apple orchards might overcome that difficulty. An inquiry for a list of ornamental trees was answered by T. J. Dwyer. Among desirable maples he named the Norway and Japan dwarf; of flowering trees the Magnolias and Catalpa; in evergreens, the Scotch and Austrian pines; and in flowering shrubs the Hydrangeas, Grandiflora being considered best. A question about the Windsor cherry brought out favorable reports. Mr. Powell had no cherry that he placed a higher value upon; Dykeman had proved disappointing to him.

W. H. Hart, of Poughkeepsie, read a practical paper on the growing and preparation of fruits for cold storage. Among important points he emphasized care in the selection of varieties, avoiding those liable to scald in the cold room, like York Imperial, and also the very late varieties, giving the preference to those which ripen in midwinter. After picking, the apples should not remain in the sun, or be put where they will become overheated, as this is almost sure to cause scald. He said that for this purpose it is better to have large quantities of one variety than a good many kinds. Cold-storage buyers never pay so much for mixed cars, and are always anxious to get large lots of one variety. Space in cold houses is expensive, and they do not wish to have it cut up with alley ways, which would be necessary to get at different sorts where many are put in one room. He said he did not expect to see the time when it would not pay commercially to grow and store fine apples. Prof. Card gave an address on forestry. He believed that under intelligent management it would pay, particularly on the rough lands of New England, which in many cases should never have been cleared up. Of course some lands are worth too much for farming purposes to be given up to timber. He said that in Europe forestry had been handled so as to yield an annual profit of $2 to $4.50 per acre. There are few statistics on the matter in this country, but one 40-acre tract of White pine in New Hampshire which stood 80 years, when sold, yielded a profit equal to $3.75 per acre annually for the 80 years. He spoke of the requirements of different trees in regard to light and shade. Those needing light must be given a chance to get ahead of the others in a thick wood. Thinning is an important matter. Nature attends to this to some extent. Pruning is out of the question, being too expensive. There is some dispute as to whether forests influence rainfall to any extent, but there is no doubt that they help take care of the rain after it falls. The soil of a forest becomes rich in humus, and like a sponge holds water, giving it out gradually into the streams and surrounding lands, thus avoiding both flood and drought.

Prof. Waugh spoke on pollinization and its practical applications to the fruit grower, showing the need of studying this matter carefully before planting an orchard. Some varieties are self-sterile, needing the pollen of others to properly develop the fruit. In selecting varieties for cross-pollinization it is necessary to get those that blossom at the same time. The time and duration of blossoming in different parts of the country vary widely. In the South, plums are in bloom for six weeks, while in Vermont it is over within a week or 10 days. He thought that records kept by practical growers, of time of blooming of different varieties, would prove valuable data to refer to. He believed that cross-pollinization was carried on largely by bees, the wind having little to do with it. The pollen of the apple is of such a consistency that it is not easily blown about, but sticks to the bee, and is thus carried from flower to flower. Mr. Hart emphasized the good work of the bee in this line; said he kept an apiary on purpose for this, and believed that it made a material difference in his fruit yield. A communication from Mr. Van Deman was read, asking that a delegation be named from the Society to attend the meeting of pomologists at the Pan-American Exhibition, and on motion it was agreed that the president appoint such committee.

W. W. H.

WE consider the Opalescent apple worthy of a trial. The Worden Seckel pear is considered by many good fruit growers as the best new pear of the past 10 years. E. G.
No. Adams, Mass.

THE potato trade of Chicago was partly paralyzed for a time, owing to heavy snow and cold weather. For a time it was too cold to unload potato cars safely, and quite a stock accumulated on the track. The blockade, however, did not last long enough to force prices up to any great extent.

WE are now getting some real Winter; snow about 18 inches deep, about 10 degrees above zero and considerable wind. But we can stand it if the mercury won't go monkeying down to the bulb so as to kill peach buds. Wheat has been covered all Winter and we hope will stay so until April. J. S. W.
Niagara Co., N. Y.

J. H. HALE, who has just gone to his Georgia peach orchard from Connecticut, reports that, though the Winter has been mild, peach and plum buds show but little more signs of starting out than at the North. This is a favorable condition, as the blooms will be late and thus less liable to be caught in the Spring frosts. There are plenty of peach buds, and indications point to a large crop of Georgia peaches this season.

Grand Old Men

Some men seem to defy old age. They walk erect. Their eyes are bright. Their laugh is hearty. They are men of to-day—not men of yesterday. They are also men who have kept themselves in good physical condition in the past. As we grow older waste matter accumulates in the system. The body cannot throw it off without assistance. So, little by little the machinery of the body is clogged, vitality is lowered, and enjoyment of life ceases. Dr. Pierce's Golden Medical Discovery, cannot make old men young, but it does make them strong and healthy. By removing the waste accumulations, by increasing the blood supply, by strengthening the stomach and organs of digestion and nutrition, and thus increasing the assimilative and nutritive powers, "Golden Medical Discovery" makes grand old men.

"I suffered for six years with constipation and indigestion, during which time I employed several physicians, but they could not reach my case," writes Mr. G. Popplewell, of Eureka Springs, Carroll Co., Ark. "I felt that there was no help for me, could not retain food on my stomach; had vertigo and would fall helpless to the floor. I commenced taking Dr. Pierce's Golden Medical Discovery and little 'Pellets.' I am now in good health for one of my age—60 years. I owe it all to Dr. Pierce's medicines."

Dr. Pierce's Pellets greatly benefit old men by keeping the bowels in activity.

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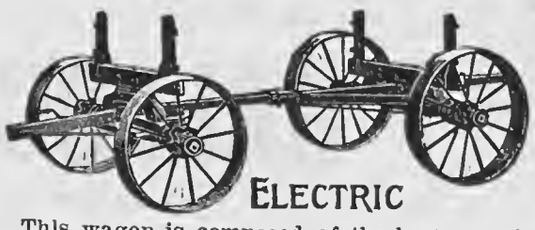
and send 4 Buggy Wheels, tire on, for $7.25. with axles welded and set, $10.60. All sizes and grades, ⅞ to 4 in. tread, steel or rubber tires. Write for catalogue giving instructions for ordering and how to obtain a Wagon Umbrella Free. Rubber tired Buggies $58. Buggy Tops $5.65. No. 2 Wheels for repair work, $5.50. Order at once to get these prices. W. R. BOOB, Center Hall, Pa.

STEEL WHEELS for your **FARM WAGONS**
any size wanted, any width of tire. Hubs to fit any axle. No blacksmith's bills to pay. No tires to reset. Fit your old wagon with low steel wheels with wide tires at low price. Our catalogue tells you how to do it. Address EMPIRE MFG. CO., Quincy, Ill.

Farm Wagon Economy.

The economy of this proposition is not all found in the very reasonable price of the wagon itself, but in the great amount of labor it will save, and its great durability. The Electric Wheel Company, who make this Electric Handy Wagon and the now famous Electric Wheels, have solved the problem of a successful and durable low-down wagon at a reasonable price.



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This wagon is composed of the best material throughout—white hickory axles, steel wheels, steel hounds, etc. Guaranteed to carry 4,000 lbs. These Electric Steel Wheels are made to fit any wagon, and make practically a new wagon out of the old one. They can be had in any height desired, and any width of tire up to 8 inches. With an extra set of these wheels a farmer can interchange them with his regular wheels and have a high or low-down wagon at will. Write for catalogue of the full "Electric Line" to Electric Wheel Co., Box 88, Quincy, Ill

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On every farm there is probably some land that could be made more productive by underdrainage. Properly drained land can always be worked earlier, and more profitably. The best and most economical way to drain is explained in the book, "Benefits of Drainage and How to Drain," which is sent *free* by
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Eureka Potato Planter, **$35.00**

Guaranteed to equal the work of high-priced planters in any spot or place. Has Fertilizer Attachment. Write for catalogue and full information.
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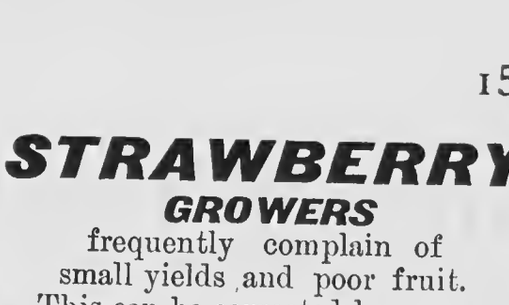
STRAWBERRY GROWERS
frequently complain of small yields and poor fruit. This can be corrected by proper use of fertilizers. 100 pounds of **Nitrate of Soda,** 200 pounds of acid phosphate and 100 pounds of muriate of potash, per acre, applied to the beds early in the spring, works wonders. Pamphlets on *Nitrate of Soda* sent free on application to **John A. Myers,** 12-O, John St., New York City, N.Y.

This Pennsylvania
Low Down Disc Grain and Fertilizer **DRILL**
Force Feed.



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It is mounted on a steel frame which combines **greatest strength and lightness.** Each disc works independently and has an adjustable coil spring pressure of **its own**—enables the disc to **cut its way through corn stalks, stubble, weeds, grass,** etc. It makes **sure** to put the seed in every time. Chain drive force feed, for grain, grass or phosphate. No gears—drives feed from center of main axle. Balances perfectly—saves the horses' necks. Absolutely accurate grain, grass, phosphate and land measures. Being low down it is easy to fill. Don't buy a Drill of any kind until you send for **Free Catalogue** of Implements, Engines, Saw Mills, and Threshing Machinery.
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THE ABC of BEE CULTURE.
The only cyclopedia on bees. 466 pages and 406 illustrations. Every phase of the subject fully treated by experts. Price $1.20. Circulars and sample copy of our semi-monthly magazine, **Gleanings in Bee Culture,** free if you mention this paper.
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SELF DUMPING Fencing Machines,

S. & B. Earth Auger Sample at cost to introduce. 3 STYLES, 9 SIZES
Send for free catalog. Eureka Fence Mfg Co
Wire at cost. Box Y Richmond, Ind.

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A small tie wire will not last as long as a larger size lateral wire. By building a fence containing all heavy wires, you get just that much more service. Reasonable, ain't it? Send for catalogue.
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Lots of Farmers
use PAGE Poultry Fence for all kinds of stock and like it first-rate. It is so strong and heavy.
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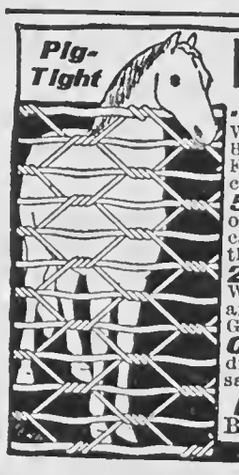

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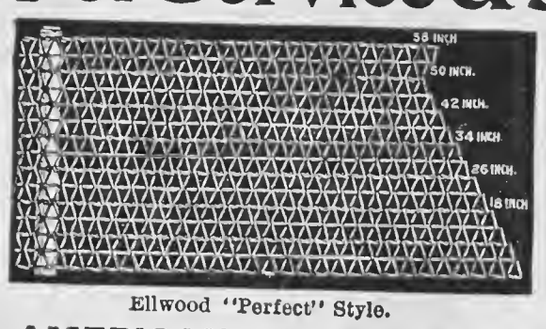
...BULL-STRONG...
With our **Duplex** Automatic Ball Bearing Woven Wire Fence Machine, any farmer can make 100 Styles, and from **50 to 70 rods a day** of the best and most practical fence on earth at a cost for the Wire to make it of from **20 to 30c. per rod** We sell Ornamental Fence and Gates, Farm Fence and Gates, Plain, Barbed and **Coiled Spring Wire** direct to the farmer at wholesale prices. Catalogue free.
KITSELMAN BROS. Box D 92. **Muncie, Ind.**

For Service & Satisfaction



Ellwood "Perfect" Style.

ELLWOOD Steel Wire Fences
Stand at the head. Best steel wire, heavily galvanized. **Standard, Special, Perfect, Lawn, Poultry and Rabbit, Crib** styles, 18 to 58 inches high. Don't fail to get our catalogue giving full particulars. We have agents everywhere who make right prices. If no agent in your town write to the makers, by whom
Every Rod is Fully Guaranteed.
AMERICAN STEEL & WIRE CO., Chicago or New York.

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MIXED PAINTS
At **WHOLESALE PRICES**, Delivered **FREE** For Houses, Barns, Roofs, all colors, and **SAVE** Dealers profits. In use 58 years. Officially Endorsed by the Grange. Low prices will surprise you. Write for Samples.
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New and Extra Inducements
to sell our celebrated Teas, Coffees, Spices, Extracts and Baking Powder. 20 and 25 per cent to agents. Freight paid. For special terms address THE GREAT AMERICAN TEA COMPANY, 31 & 33 Vesey St., New York. P. O. Box 289.

Transplanters
become an absolute necessity in dry weather as they put water on the roots of the plants, such as CABBAGE, TOBACCO and SWEET POTATOES, etc. Made by
THE NAGLEY MFG. CO., Lyons, N. Y.

ACME PULVERIZING HARROW
Sizes 3 to 13½ ft.
Clod Crusher and Leveler
Agents Wanted

ON TRIAL
To be returned at my expense if not satisfactory.
The best pulverizer and cheapest **Riding Harrow** on earth. We also make walking Acmes. The Acme crushes, cuts, pulverizes, turns and levels all soils for all purposes.
Made entirely of cast steel and wrought iron—**indestructible.**
Catalog and Booklet, "*An Ideal Harrow*," by Henry Stewart, mailed free.
Free on board at New York, Chicago, Columbus, Louisville, Kansas City, Minneapolis, San Francisco, etc.
DUANE H. NASH, Sole Mfr., Millington, New Jersey, and Chicago, Ill.

DAISY Corn... Planter
Durable, Accurate, Efficient.
Agents wanted. Write for Catalog and special terms.

A single row corn planter, made with or without fertilizer attachment. Has either double or concave single wheel. Has 4 rings or dropping dies. Dropping and fertilizer feed regulated by link chain belt. 5 chain wheels for dropping corn. Drops 1 grain from 11 to 19 inches or 2 grains from 22 to 38 inches apart. 3 extra feed wheels for fertilizer attachment drills 20 to 525 lbs fertilizer per acre. Ground wheel in front can be raised or lowered for **deep** or shallow **planting** Extra rings can be supplied for dropping or drilling peas, beans, ensilage corn, etc. **Write for Catalogue F**
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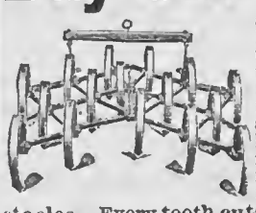
and get a Spring Tooth Harrow that is so made that it cannot clog. Each tooth works free from the frame and can **gather no rubbish** between tooth and frame. It is the **lightest strong harrow made.** Hinged in the middle, either side may be raised at will **to pass obstacles. Every tooth cuts its own track.** Nothing better can be put into a harrow than the material used in this "Pensylvania"
Steel Frame Harrow.
Our Malleable Friction Clamp Tooth Holder holds best. No boring or riveting to weaken the tooth. Easily adjusted—single nut. Can adjust to wear **15 to 19 inch of tooth. Adjustable hitch. Lightest draft** consistent with good work. Send for large illustrated catalogue of Implements, Engines, Saw Mills and Threshing Machinery.
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A Good PLANTER
should plant all kinds of field seeds,
Field, Ensilage and Sweet Corn, Peas, Beans, Sugar Beets, Stock Beets, etc.
It should plant in hills, drills or check at the will of the operator. It should at the same time **drop or drill** all kinds of commercial fertilizers, wet, dry **or lumpy, pulverized hen manure and other home made fertilizers,** evenly in any quantity per acre.
EASILY ADJUSTED. EASY TO HANDLE. WEIGHS 150 LBS.

The Eclipse
Corn Planter and Fertilizer Distributer
does all this in the most perfect manner. Drops seed from 6 to 45 inches apart. Will distribute from 50 to 450 lbs. of fertilizer per acre. They are strongly built of good material and will last indefinitely.
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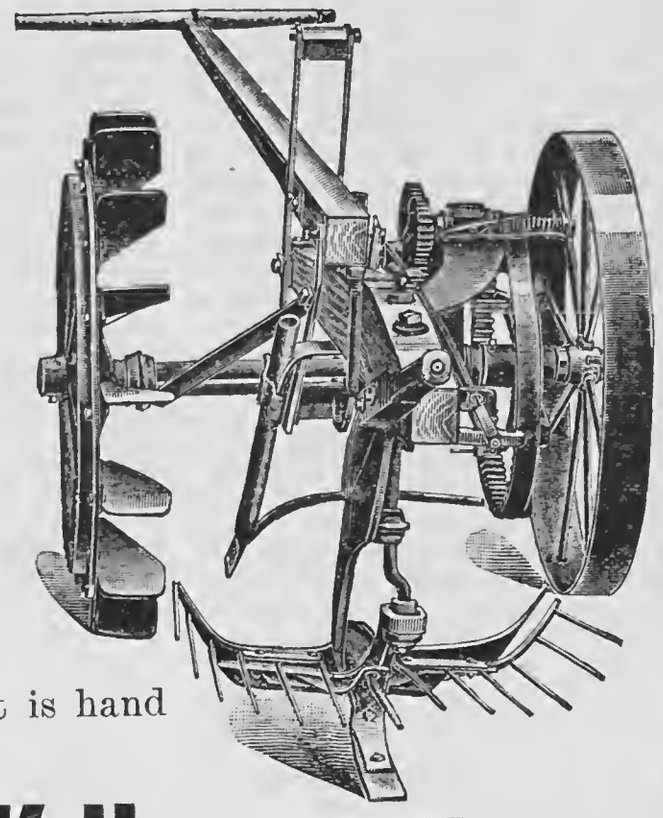
60,000 Potato Growers
should write to us in the next ten days to get our wonderful offer for quick orders and introduction of Hallock's "O. K." Potato Harvester. If you've been waiting for a perfect digger—**here it is.** If you have an old digger on your hands we will take it in trade. Get an "O. K." and ask your neighbors to watch it dig. The price is right, the draft is right (one team). The digging is done as clean as a man could do it with a fork. It is hand work for thoroughness, team work for speed.

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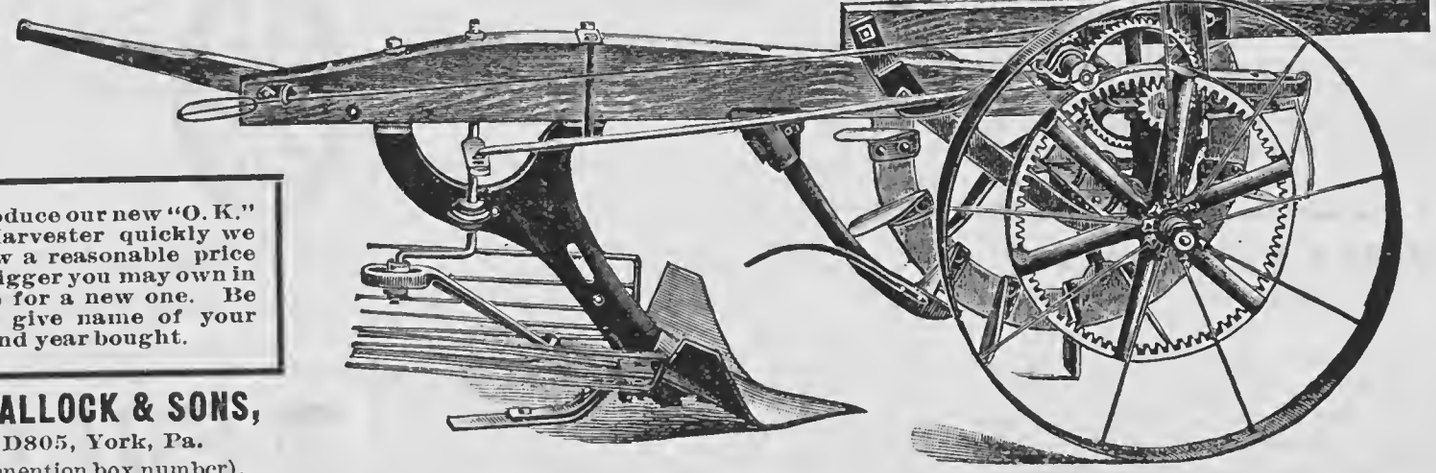
To introduce our new "O. K." Potato Harvester quickly we will allow a reasonable price for any digger you may own in exchange for a new one. Be sure and give name of your digger, and year bought.
D. Y. HALLOCK & SONS,
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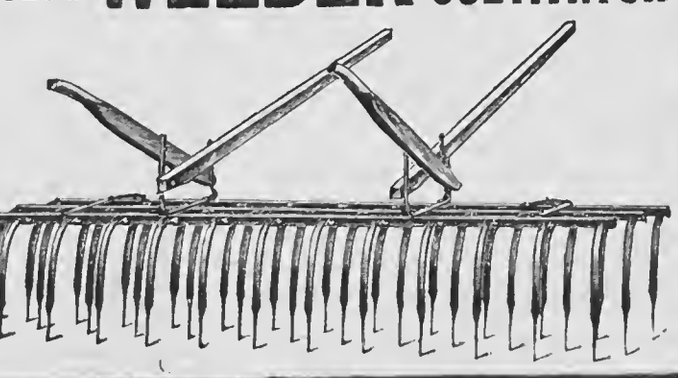
Big Potato Crops
It's very easy to drive a "Success" Weeder over 20 acres of potatoes a day, and every time you do it you increase the crop greatly. No need of any more hand hoeing. This year the sales of Hallock's "Success" Weeders will pass the 100,000 mark. Isn't it time you bought this greatest of all weed killers and cultivators? Every one of these thousands of farmers has testified that he has saved money by the purchase. The sooner you buy one the more money you'll save. Write to-day for the experiences of successful farmers with
Hallock's "SUCCESS" ANTI-CLOG WEEDER and CULTIVATOR
"I used the Success Weeder on potatoes with excellent results. Raised 225 bushels per acre."
W. A. BURTON, Westford, Conn.
"This is the first year in my life I ever raised potatoes without weeds. I would not take $100 for my 'Success' Weeder if I could not get another." O. J. CHAPMAN, Independence, Ia.
"Your Weeder has made it possible for me to grow 1000 bushels of potatoes for about one-half the cost of cultivation."
HARRY [illegible]SON, Jacksonport, Wis.
A wonderful implement for [illegible]g, light harrowing, pulverizing, cultivating, etc. W[illegible]ed not to break or clog with weeds. The only one. **If your dealer hasn't it, write for our special introduct[illegible]fer.**

HALLOCK WEEDER AND C[illegible]ATOR CO., Box 805, York, Pa.
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"Planet Jrs Girdle the World"

The "Planet Jr." Year Book for 1901,
like its predecessors, will be the best catalogue of the season. Last year it took 350,000 copies to supply the demand. We have issued a like amount for this year and shall print subsequent editions as required. To those who know us we need only say that the new catalogue surpasses that of 1900. Sixteen full page half tone views made from original photographs will show how they farm at home and in foreign lands. Illustrates fully the complete "Planet Jr." line, comprising Seed Drills, Wheel Hoes, Cultivators Harrows, Two Horse Cultivators, and Sugar Beet Seeders and Cultivators. We mail this catalogue free upon request to everybody having crops of any kind to cultivate. We fit every case from the smallest garden to the largest farm. Prices greatly reduced for 1901.
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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

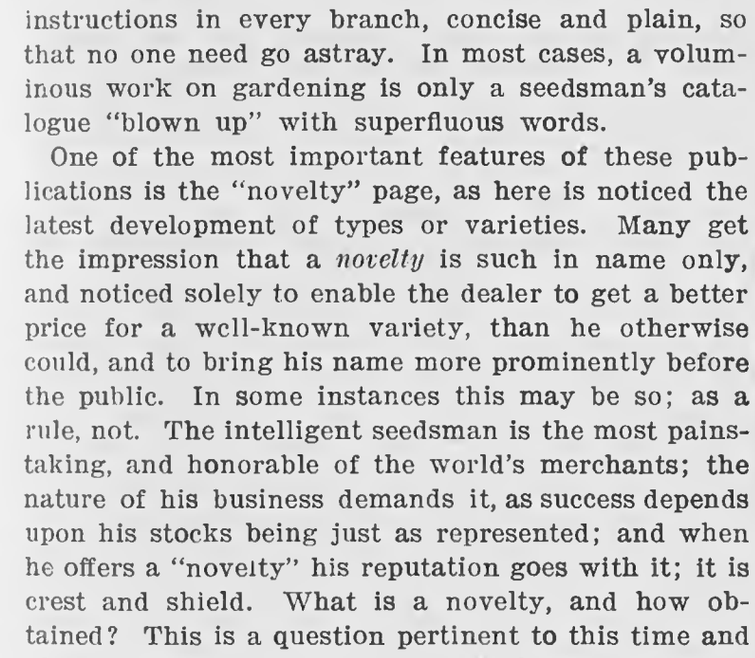
VOL. LX. No. 2667. NEW YORK, MARCH 9, 1901. $1 PER YEAR.

THE CATALOGUE SEASON.

This is again upon us, and there has never been a more abundant crop, or of better quality. The catalogue month, to those truly interested in gardening, is the most enjoyable of the year. Our greatest pleasures come from gardening for profit, and our greatest profits come from gardening for pleasure. The world's horticulture had its birth in a seed, and it is to the seedsmen we are indebted, more than to all others, for the fruits of the garden. They are constantly on the lookout for something new—something useful; upon this their success in a great measure depends. If there were no improvement in vegetable forms the garden would, in a great measure, lose its attractiveness, as well as its usefulness. Progress is the order of the day, along every line, and nowhere is it more manifest than in the horticultural field, and our seedsmen are its promoters, and whose catalogues are the records of success attained. The value of these catalogues cannot well be overestimated; not only do they point out the best varieties of fruits, vegetables and flowers, for a given locality, but they give the best possible cultural instructions. There are but few books published so complete in information on all subjects pertaining to the garden as many of our best catalogues, and we should advise the use of such as text-books on gardening. They give full instructions in every branch, concise and plain, so that no one need go astray. In most cases, a voluminous work on gardening is only a seedsman's catalogue "blown up" with superfluous words.

One of the most important features of these publications is the "novelty" page, as here is noticed the latest development of types or varieties. Many get the impression that a *novelty* is such in name only, and noticed solely to enable the dealer to get a better price for a well-known variety, than he otherwise could, and to bring his name more prominently before the public. In some instances this may be so; as a rule, not. The intelligent seedsman is the most painstaking, and honorable of the world's merchants; the nature of his business demands it, as success depends upon his stocks being just as represented; and when he offers a "novelty" his reputation goes with it; it is crest and shield. What is a novelty, and how obtained? This is a question pertinent to this time and place. Selection is the parent of all new varieties; there are in every locality, in all countries, where vegetables are grown to the highest degree of perfection, some particular farms which are famous for producing certain kinds of vegetables, and where the whole harvest is secured for seed purposes, and sold at very high prices. In such localities we generally find that this advantage arises not less from the nature and properties of the soil being favorable to the production of the one particular kind, than to the infinitely greater care and attention paid to cultivation of the crop, and the selection of plants for seed purposes. The seedsman is constantly looking for these localities, and for the best farmers therein, in order to get seeds that will give the best possible satisfaction, which will be to his honor as well as profit. These stocks cost many times more than those usually sold by the same dealer, and are worth more than the extra cost to the gardener, as the difference in price amounts to very little, as the expense for seeds is hardly noticeable, when compared with the other expenses of the garden.

C. L. ALLEN.



NEWTOWN x NORTHERN SPY APPLE. FIG. 64.

PROMISING NEW HYBRID FRUITS

As noted on page 135, several very promising new hybrid fruits were exhibited at the late meeting of the Eastern Horticultural Society in this city. We give somewhat reduced illustrations of two Newtown Pippin seedlings and a Bartlett pear seedling in Figs. 64, 65 and 66. The pear was raised by H. M. Hartshorn, Malden, Mass., and is said to be a hybrid between Bartlett and Winter Nelis. The former variety has evidently transmitted its large size, pyriform outline, and thin skin, and the introducer claims as well, good growing and bearing qualities. From the Nelis it gets its late keeping character. The flavor of the

NEWTOWN x RHODE ISLAND GREENING APPLE. FIG. 65.

specimens tasted was very good, and seemed a combination of both parents. The flesh was very juicy, and the texture smooth. The stem is long and slender, enabling the pears to hold on well during Autumn gales. It is claimed to be free from core rot, decay always starting from the outside. It is easily seen that this pear has points of considerable value, as there is little to compete with it at this late season. The color is a smooth yellow-green, like the Anjou.

The hybrid apples were raised by Stephen W. Underhill, of Croton Point, N. Y. Croton Point has the reputation of producing the best Newtown Pippins marketed either in the United States or abroad for the last 50 years, not excepting even the famous pippins of the Albemarle region of Virginia and North Carolina. Mr. Underhill has grown some of the very finest Croton Point Newtowns for almost a generation. Nearly 20 years ago he became convinced that the Newtown trees in his vicinity were failing, notwithstanding the best of care, and concluded that the variety, already an old one, was running out, and needed renewing in some manner. With this end in view he selected a peck of the most perfect specimens from among hundreds of barrels of the season's crop. Where a Newtown tree approached a Northern Spy tree, or had grafts of that variety inserted in it, as was sometimes the case, he sought for a Pippin having some markings of the Spy, probably due to the rarely-manifested direct influence of foreign pollen, and was successful in one or two instances. Other specimens were selected from Newtown trees standing near Rhode Island Greening and English and Roxbury Russet trees. The seeds of these apples were planted and in due time came up in the nursery row. No attempt was made at hand or intentional pollinization of any blooms, but the cross-fertilization was left to the free agencies of nature. The young trees were rather neglected, as other matters pressed heavily on Mr. Underhill's time, but were finally set out as a trial orchard, never receiving the best of care on account of their doubtful prospective value. A few trees came into bearing in 1899, and more last year. Fourteen plates of these Newtown seedlings were exhibited, some showing every indication, in size, form, color and quality of flesh, of a perfect blending of the Pippin with the supposed pollen parent, others showing widely differing characteristics, but not one typifying the Newtown, the seed parent of all. All were handsome in their way, and are good keepers, as indicated by their excellent condition as late as February 14 after ordinary cellar storage. The eating quality was very good, reaching dessert qualifications in the case of the Northern Spy and Russet crosses. The only apparent defect, from a market standpoint, was a lack of red in the coloring. These remarkable new apples excited great interest, and it was generally thought that in time they would sound the death knell of the Ben Davis and other showy delusions. It was remarked that American apple growers had been scouring the temperate zones, from the steppes of Siberia to the wilds of Patagonia, for hardy and late-keeping apples, importing hundreds of sour and acrid Russian varieties in the search, and neglecting the obvious sources of native improvement, until these superb varieties had risen up, as if in disgust at our lack of patriotism. One thing is certain, they deserve extended trials, and may be accepted as pointing out the path future improvements will follow. It may be well to caution the oversanguine that these fine apples were produced where natural conditions favored their most perfect development, and maybe they will fall off, as many promising novelties do, when transferred to less favorable localities. Then, too, the tree must be taken into consideration as well as the fruit. Mr. Underhill assures us that they appear most vigorous and productive at the present time, taking into consideration their immaturity and lack of special attention. We welcome these epoch-making fruits, even should they only prove the forerunners of something still more desirable.

W. V. F.

BARTLET x WINTER NELIS PEAR. FIG. 66.

PREPOTENCY IN PLANTS OF LIKE BREEDING

The records of tests made by Charles Darwin about 30 years ago, to determine the effect of cross and self-fertilization in plants, give the most detailed account of the character of the production of a large number of individual plants of any with which I am familiar. In these Mr. Darwin noticed that in the sixth generation of self-fertilized plants of Ipomœa there appeared one which he named Hero, which, though of the same breeding, was not only more vigorous than its companion, but showed in a marked degree the power to impart its characteristics to its descendants. This is the only case noticed, or at least recorded, by Mr. Darwin, but it seems to me that the published records of these tests indicate that there were several other instances of marked prepotency, but which were not developed by separate planting, as in the case of Hero. We have records of many later tests of the product of individual plants made by different experimenters for various purposes, and in many of these it seems to me that the differences in product have been attributed to various causes, when they were in reality largely, if not wholly, due to the varying degrees of prepotency in the plants experimented with.

This quality seems to have been given little attention by scientists, but seedsmen have come to recognize it as of the greatest importance, and to depend upon it, and line breeding from single plants of high potential power to establish any desired type. I can best illustrate not only the quality, but the practical use of it by an instance taken at random from a stock seed record which contains scores of such cases, some of them showing even more marked instances of individual plants having much greater prepotency than others raised from seed of the same fruit. In 1898 it was desired to establish a strain of forcing radish with a distinctly oval-shaped root, most of those cultivated as oval being too long properly to be called oval. To this end about one pound of seed of a stock which produced many roots of the desired shape was planted, and from the product about 5,000 plants were selected. From a careful study of these, an idea of the exact type desired was formed and recorded, with the variation from this type which was permissible. With this record in hand, the selected plants were carefully examined, and 30 of the most perfect were taken and numbered from 1 to 31 in order of merit, though the lot were so unlike that it is questionable whether if mixed, they would have been rearranged in the same order. These were called breeders, and from the remaining selected plants about 250 of the best roots were selected for seeding. The 31 breeders were set in a block, surrounded by the 250 seeders, and allowed to produce seed, that of each of the breeders being saved separately, the remainder in a single lot.

In 1899 the seed from each of the breeders from 1898 was planted, and at the proper time the product was carefully examined with the record of the ideal type made the previous year in hand, and eight of the numbers, including Nos. 2, 5 and 11, thrown out because their product did not adhere so closely to the type as did that of the mixed seed from the 250 seeders. A careful examination of the remaining 23 was made, and of these one, No. 8, was selected as showing the smallest per cent of plants with more than permissible variations, and from it 36 were selected and numbered in order of merit as breeders of 1899. These were in a block surrounded by the very best roots selected from the other numbers, and the seed of the 36 breeders saved separately, while that of the other selected roots was saved in a single lot. The seed from these 36 breeders was planted in the Spring of 1900, and their product was carefully examined, with the result that 10, including 2, 6, 15 and 32, were thrown out because their product showed more variation than the surrounding general selection, and No. 16 and 33 taken as showing the least variation, united with high quality, and from each of these 10 breeders have been selected for next year's seeding. Selection was made from two plants to guard against an unaccountable stampede from the type which sometimes takes place, and only 10 breeders were taken, because the type is now fairly well fixed. It has been true each year, and particularly so the last, that the general selection of roots from all numbers has been rather better in quality than the breeders selected from a single number because of its general adherence to type: but it has also been true that the product of these breeders, even including the rejects, has been better and more true to type than the product of the better roots of the general selection.

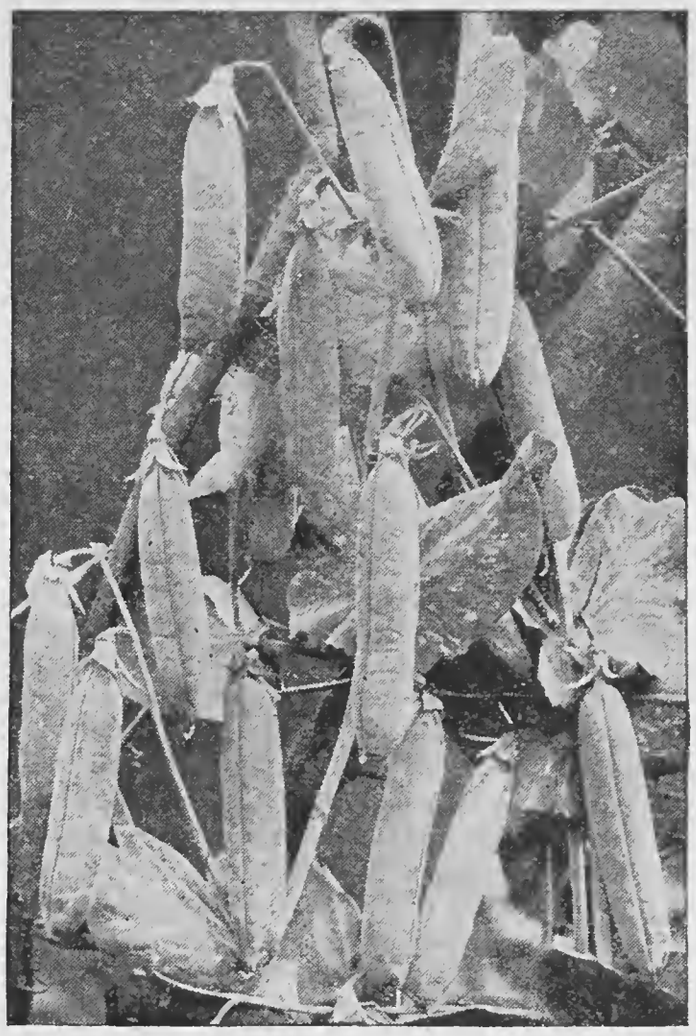
It will be noticed that the plant taken for breeder was in no instance No. 1, though that, at the time of its selection, was supposed to be the best, and among the hundreds of plants of different varieties and species selected during the past 10 years as the mother of breeders. The quality of the parents, as indicated by its number, does not seem to have been a reliable indication of its ability to reproduce that quality in its descendants, and this ability is really the main thing to be considered in the establishment of any particular type. W. W. TRACY.

A MICHIGAN HOME GARDEN.

My garden contains, as every garden should, flowers, fruits and vegetables. As to flowers—those silent but eloquent witnesses of God's love and care—I can-

SAND OR WINTER VETCH. Fig. 67.

not sufficiently admire their beauty, their fragrance, their varied forms and colors. Yet, with my limited time, I can raise but few varieties, mostly annuals, and of the somewhat old-fashioned kinds. I usually have, among others, the following: Verbena, poppy, pansy, Phlox Drummondi, Zinnia, snapdragon, Aster,



NEW SURPRISE PEA. Fig. 68.

candytuft, Petunia, forget-me-not, cornflower, sweet pea, larkspur, pink, cockscomb and balsam; also, hollyhock, peony, geranium, Crocus, tulip, Gladiolus and Begonia. I have lately raised some very fine specimens of the tuberous-rooted Begonia, and found them quite satisfactory.

As to the fruits found in my garden, the so-called small fruits get most of my attention, and I grow, with varying success, currants, gooseberries, blackberries, raspberries and strawberries. Among my raspberries are such red varieties as Cuthbert, Loudon, King, Miller and Worthy; also, the tall-growing purple variety named Columbian. The most promising blackcaps are Gregg, Kansas, Eureka, Hilborn, Munger and the new and large one known as the Cumberland, sometimes called the business blackcap. I have only tested blackberries in a small way. Two of the new varieties seem to be of great promise, the Rathbun—which propagates from tips as well as suckers—and the Mersercau. I have also the new white blackberry named Iceberg, but it has not yet fruited. Strawberries get more of my attention than any other of the small fruits. My best varieties thus far have been Clyde, Eureka, William Belt, Brandywine Greenville and Haverland. I expect to fruit this year Maximus, Luther, Senator Dunlap, Carrie, Johnson's Early, Pennell, McKinley, Gladstone and Excelsior. The last novelty I have is the Rough Rider.

My vegetable garden is generally well filled and, as far as home use is concerned, liberally patronized. The best varieties—those best for my purpose—are planted; not in beds, but in long rows. My first plantings are early potatoes and, if I can get good plants, early cabbage. Next in order I put in an ample supply of the old and reliable Landreth's Extra Early pea, a variety which has always given me good returns. This pea is much hardier than the wrinkled marrows, though not so fine in flavor. Other peas I use are Nott's Excelsior (very fine), Market Garden, Heroine, Yorkshire Hero, Telephone and Champion of England. The last two require bushing or a wire netting for support. Of cabbage my favorite sorts are Early Wakefield, Winningstadt, Late Flat Dutch, Drumhead Savoy and a new kind called Admiral Dewey. The last-named seems to be truly an all-seasons variety. It is an early, medium and even late variety. It has solid heads, is of fine flavor and very quick growth. The varieties of cauliflower that suit me best are Early Paris and Snowball. Cauliflower demands much moisture, and grows better when well earthed up. As to beans I have lately given up the pole varieties, and get very good results from the bush or dwarf kinds. The Valentine, Refugee, Landreth's First in Market, Byer's One Bean, and Wardwell's Kidney Wax are all good growers, and suit me very well. As to beans for home use I may add just here, that we cut up fine and salt down in layers all our surplus dwarf beans, either the green-podded or wax varieties, and we thus have, when freshened out, string beans all the year round. Those who do not know of this method will, if they try it, be well pleased with the result. Referring again to the Byer's One Bean—a green, round podded variety—I find it to be an excellent sort, one that yields well, and cooks very tender. Its great peculiarity is that it must be planted at least one foot apart in the row, and even then the plant is so bushy that the rows will be well filled. As to dwarf Limas, I had very good success last season with Dreer's New Wonder, and Dreer's Bush (the latter a dwarf variety of the well-known Challenger), as it yielded with me last year, was the most satisfactory Lima bean, pole or dwarf, I have yet raised. It is productive, hardier than most Limas, and of very fine quality.

Coming to root crops, my choice is Landreth's Bloomsdale parsnips, Eclipse and Egyptian beet, Danvers and Early Horn carrot, and Mammoth Sandwich Island salsify. Of cucumbers, I prefer Emerald Green and Fordhook Pickling; of squash, White Bush, Boston Marrow, Essex Hybrid and Hubbard. As to melons, I seldom attempt to raise them, for reasons that will readily occur to anyone who knows the propensities of marauding boys. My favorite varieties of tomato are the Enormous, Stone, Ponderosa, Beefsteak and Lemon Blush. One variety, sent me last season for trial, produced an immense cluster weighing 15 pounds, and having on it 20 well-shaped fruits. Besides the vegetables already named I usually raise good varieties of onion (mostly grown from sets), sweet corn, pepper, egg plant, turnip and many kinds of radish and lettuce. I have raised spinach, but not in recent years. Celery and asparagus have not, with me, proved successful. [Rev.] JOHN GREGORY.

Lenawee Co., Mich.

Some time since I saw an inquiry in The R. N.-Y. as to what would keep mice from gnawing harness. If the inquirer will mix a little pine tar with his harness grease before applying it, I will guarantee that the mice will not touch the harness. W. S. K.

Evans City, Pa.

"Why join the Grange?" is a not uncommon question among farmers. There are several reasons. It is the only National organization of farmers; it has done more to secure State and National legislation in the farmers' interests than any other single agency; it helps fight the farmers' battles; it affords the means for coöperation for definite purposes, and to secure certain benefits; it breaks up the isolation of farm life; it educates and entertains in a right and wholesome way; it broadens the farmers' horizon and likewise his mental operations, and it assists in elevating him to his rightful place socially and educationally in the community where he lives.

ESSENTIAL PRINCIPLES OF PEAR CULTURE

In the Hudson River Valley.

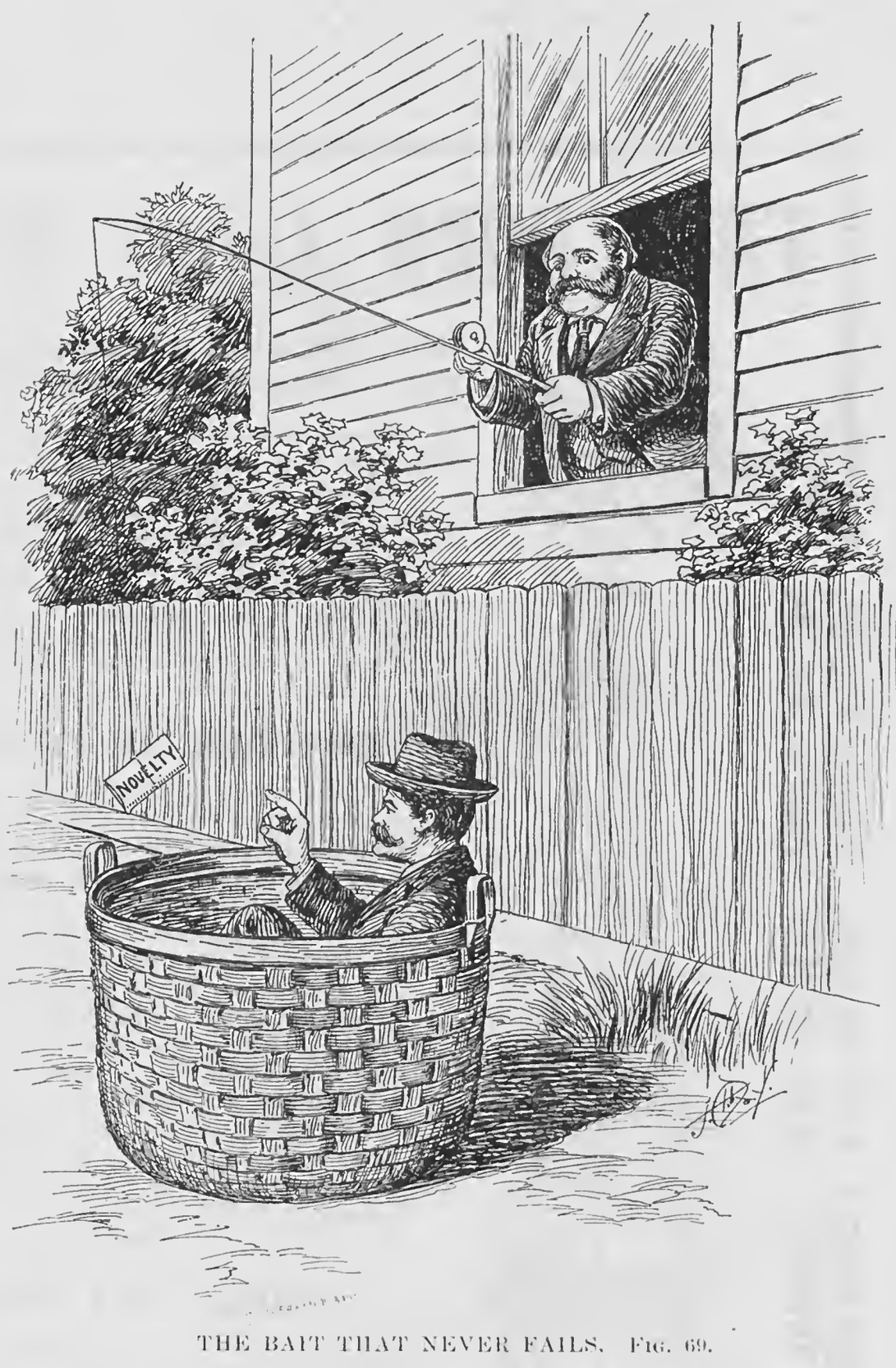
STANDARD TREES ONLY.—These observations have reference to the pear as grown on standards only. Dwarfs were unsatisfactory to us for market purposes, and were virtually discarded several years ago. I have grown the Orientals—in a testing way only. Their inferior quality rendered them of no value to us, as our efforts are directed to the production of high-quality fruit for the New York market. The essential principle in the successful growing of the finer type of pears commercially as I see it is somewhat as follows: Suitable soil and location; proper methods of cultivation and fertilization; the control of insect pests and diseases, and last, but not least, the right varieties. As to soil, I prefer a deep friable clay loam; one that either is naturally or artificially well drained. Such a soil absorbs surplus rainfall rapidly, and is retentive of moisture during periods of severe drought, when under good tillage. A soil rich in mineral rather than vegetable matter is to be desired. Some varieties succeed very well on heavy clay, but I do not think it an ideal soil. I have had finest colored fruit on land that is strongly impregnated with iron, whether due to this or not I am not prepared to say. A location that gives good air drainage is necessary, as such insures us to a certain extent from damage by fogs and frost. Low lands for this reason are objectionable, as it favors fungous troubles, such as scab and leaf spot; also clouded fruit.

CULTURE AND FERTILIZERS.—It is hardly necessary to mention the necessity of thorough cultivation. Many years of experience have shown us so absolutely must this course be followed in this section of the country, to produce good results, that no other course is considered. Orchards may live and produce irregular crops of inferior fruit under neglect. I deem it important in a bearing orchard that the trees, and they alone, should occupy the ground. No crops whatever except cover crops, unless your trees are farther apart than the usual distance used in planting, which is 20 feet each way. We sow cover crops from latter part of June up to August 1, depending on conditions. In the matter of fertilization I depend on phosphoric acid and potash mostly, using Crimson clover as a source of nitrogen. Use muriate of potash, acid phosphate and bone meal. Use no stable manure. I am very careful about the supply of nitrogen. Available nitrogen in large quantities is a dangerous element in a pear orchard, as it stimulates excessive wood growth, and renders it more susceptible to the disease that is the bane of all orchardists, the blight. I have found that I can make an exception to this rule, in the case of old bearing Seckel trees, especially where they are growing on warm, light soil (which by the way, is the ideal soil for this old favorite). An extra supply of nitrogen under these conditions seems to have no unfavorable effect on the tree, and will generally result in larger fruit. The control of various insect enemies is very important, and a failure to meet this condition promptly will result in disaster. Methods are so well-known as to need no mention here. Blight has unquestionably been the hardest problem to orchardists, and is today, and more loss has attended its ravages than all other troubles combined. We endeavor to hold it in check by cutting out on the very first appearance, and persistently follow up this treatment as long as any vestige of it remains, going over orchards two or three times a week if necessary. One can neglect anything else better than this.

VARIETIES.—A short list fills the bill. We have grown over 50 varieties in years past, which are at least 45 too many. The only desirable early market pear I have found is Manning's Elizabeth. I believe the first portion of the name is dropped, and it is now Elizabeth. The next in order of ripening is the Bartlett, and where cold storage is available, so that the grower is not forced to rush them on a frequently overloaded market, it is preëminently the foremost market pear to-day. Seckel, where it sueceeds well, is all that can be desired. Not as uniform a bearer as the Bartlett, it is a more vigorous grower, healthful in wood and follage, and the fruit is the standard of excellence, and is a favorite in the market. Bosc follows closely after the Seckel, and is a fruit of unqualified excellence, rapidly becoming a favorite in the markets. It should be top-worked on some good, strong-growing variety, as it is a hard tree to establish in the orchard, as we receive it from the nurseries. It is a moderate regular bearer of uniformly fine frult. Were I to add a later variety I think I should select the Clairgeau; when properly thinned the quality is improved; were the quality a little higher I would think more of it.

AS TO PRUNING.—I aim to keep tree in good shape, somewhat open; have no inflexible rule, some varieties requiring different methods from others. Better do too little than too much. The essential points that I would emphasize for successful growing after an orchard reaches the bearing period may be summed up as follows: First, the control of insect pests and fungous diseases, which is virtually, with the improved methods of spraying, within our reach, and, second, the control of the blight. The latter has been the rock on which many orchardists have been wrecked. Here is where the orchardist must exercise discrimination and good judgment. Cultivation and fertility are all-important in the production of fine fruit, but cannot be carried to an extreme, otherwise disastrous results may follow, as we are all aware to our sorrow. A sod-bound orchard that is practically making no growth is in positively the safest possible condition during an attack of this malady, but in this condition we cannot expect favorable results in fruit production, and cannot consider this method, but endeavor to pursue the middle course, aiming for a moderate growth of well-ripened wood. Stop cultivation the last of June if the season is wet, and sow cover crop, or if weather is dry, continue cultivation until the latter part of July, when cover crop is sown, thus tending to check growth and favoring an earlier maturing of the wood. I have made this trouble somewhat prominent in these notes, for the reason that in over 45 years' experience in the culture of this fruit, this has been our hardest enemy to fight.

Orange Co., N. Y. J. R. CORNELL.



THE BAIT THAT NEVER FAILS. FIG. 69.

THE Markham peach mentioned in THE R. N.-Y. of February 23, page 124, originated with W. D. Markham, of Hart, Mich., a few years since, and has now become known as a profitable market peach. It is a seedling of Hill's Chili, and the fruit resembles the Late Crawford. Hardy as the Chili, it has proved a heavy and regular bearer, which the Crawford is not. In size and beauty it equals the Crawford. E. HAWLEY & SONS.

Fennville, Mich.

AN OLD APPLE ORCHARD.

Its Varieties and How Cared For.

In 1855 I went to live on a farm where was an orchard of 20 apple trees that had been dug from hedges and various places—wild trees, set out and grafted. Ten of these trees were then more than 30 years old, but thrifty; the other 10, recently set out. I left the place in 1895. Only three of the trees had died, and during the period of 40 years there was but one season we did not have all the apples we needed and plenty to give away. A number of the trees had been regrafted, as better varieties came into being. Every Fall, when the cowyard was cleaned out, two loads of the scrapings were spread around the trees (the fine manure) before the ground was frozen. Every Spring the trees were trimmed; the suckers and branches that crossed or "rode" being removed. The greater part of the time the land was in grass. The trees were never sprayed, because there were birds enough to attend to most of the fruit enemies, until fashion decreed that ladies' bonnets were a more fitting place for our feathered friends, than the orchards and woods where their homes had been heretofore. A few years ago the tent-caterpiller appeared in great numbers, threatening to destroy the foliage, but a thimbleful of powder set off with a percussion cap did the business for that pest. The varieties were Yellow Bellflower, King, Fall Pippin, Newtown Pippin, Rhode Island Greening, Golden Russet, Sour Bough, Pound Sweet, Baldwin, Hatlot, Garden (the last two local varieties), and Belmont, a fine variety somewhat resembling the Bellflower, but more solid substance, and a prolific bearer, for we always had to remove a part of the fruit while small, in order to keep the branches from breaking off. The scions came from Ohio. Our apples were generally fair, and as we had a cool cellar where nothing else was kept, we often had a few specimens when the new fruit matured. We always had apples enough "to be comfortable." Your arithmetic will tell you that half of the trees were more than 70 years old, and when I left, these trees were still thrifty looking, bidding fair to beeome centenarians. I don't know whether there is anything especially unusual about these facts; I send them so as to find out whether it is a common thing to find a number of healthy, fruitful apple trees "three score and ten" years of age? GEO. HORTON TERRY.

Suffolk Co., N. Y.

R. N.-Y.—Let's hear of other veteran trees—especially about their habits and care!

APPLE TREES CROWDED.

I see on page 102, issue of February 16, a description of what is called a new plan for large crops of apples. Does Mr. Hoyt know of an orchard 25 or 30 years old on which this plan has been tried, or is the article theoretical? In 1866 and 1867, while yet a boy, I planted an orchard somewhat on this plan, and I know of another in this neighborhood planted about the same time. My brother owned the orchard I planted, and owns it yet. It was never cultivated, but was thoroughly mulched with forest leaves. It commenced to bear the third year, and has borne every year since. But when the time came to thin the orchard Mother refused to allow a single tree to be cut. Now this orchard is spoiled and we must plant another.

In the case of the other orchard, the man who planted it sold the farm before the trees were big enough to thin. The new owner, like my mother, could not think of cutting down a thrifty apple tree, and so that orchard is played out when it ought to be at its best. I have read of orchards planted 33 feet one way and 16½ feet the other to be thinned to 33 feet when the trees touched. I don't know how it worked in practice. I like the theory, but would like to know how it works in practice. My own experiment, and my neighbor's, failed through no fault of ours. Can we not hear from some one who has given close planting a fair trial? What a difference locality makes! Owing to a local nursery 30 to 40 years ago, we have specimens of almost all kinds of apples here. The four kinds of Winter apples that I shall plant are Northern Spy, Hubbardston, Spitzenberg and Baldwin. R. H. LEE.

Carroll Co., Ohio.

R. N.-Y.—Mr. Hoyt will have a second article on this subject next week.

EASTERN N. Y. HORT. SOCIETY.

PART III.

The substance of the transportation committee's report was to the effect that the profits of fruit growing largely disappear in transportation. Most growers can raise good fruits, but they cannot always get them to market economically. The project of getting reduced and uniform rates is very full of difficulties and will take much time. The legislative committee reported that the Short-package law had been quite generally disregarded by dealers, as there is little inducement to enforce the law, no official being charged with the duty. Makers had lots of material on hand for short barrels when the law went into effect. Many manufacturers complied with the law, and marked their barrels and packages "short." The law must be amended by bringing it under the direction of the Commissioner of Agriculture, and making inspection and enforcement of the law mandatory.

Prof. G. H. Powell, of the Delaware Experiment Station, said, in a paper on peach growing on the Chesapeake Peninsula, that commercial peach growing began near the northern border of the State nearly 75 years ago. At that time the trees were nearly all seedlings. By 1832 there was a regular boom in the business, and in 1848 orchards of 50,000 trees were known. Lands had jumped from $40 to $50 an acre to $150. In 1875 632,000 bushels of peaches were shipped from Middletown, then the center of the district. In 25 years from planting the orchards had nearly disappeared from each locality, being killed by yellows. It started in 1842, and has diminished very little in violence. The peach-growing belt has followed a line down the center of Delaware, and is now centered about Milford in southern part. The yellows in its destructive form has not moved more than 10 miles in as many years. Systematic efforts for stamping it out have only been made for the last two years. The decline in peach growing is making important social and economical changes in Delaware. In the best-managed orchards the yellows is controlled by the prompt destruction, root and branch, of every tree that ripens an immature peach, without waiting for any further evidence of disease, which experience has shown may be deferred for some time. It has been demonstrated that young trees may be replanted with comparative safety where diseased trees have been removed in the early stages of the trouble. The real nature of the disease is still a mystery.

Prof. John Craig, of Cornell Experiment Station, gave a talk on apple growing in western New York, illustrated with many excellent stereopticon views of notable orchards in the State. Particular emphasis was placed on thorough cultivation and the use of quickly-grown cover crops for Winter protection of the soil. The growth of such available plants as rye, oats, vetches, the clovers and cow peas was well shown on the screen.

CENTRAL N. Y. HORT. SOCIETY.

The twelfth annual meeting of the Central New York Horticultural Society was held at the Chamber of Commerce rooms, Syracuse, February 22. Officers were elected as follows: President, S. T. Betts; vice-presidents, Rev. Wm. A. Beauchamp, A. D. Perry, E. A. Powell, J. Wm. Smith, A. C. Chase; secretary, N. H. Chapman; treasurer, David Campbell. Executive committee, S. W. Rose, C. A. Fox, Geo. Ham, Peter Kay, F. H. Ebeling and John T. Roberts. It was proposed to hold a rose show June 6-7 next, at which time the amateur growers would be invited to participate in the competition for prizes to be offered by the Society. The Society also took action to send delegates to the second annual exhibition of the American Rose Society, which is to be held at the Waldorf-Astoria, New York City, March 19-21. President S. T. Betts and David Campbell were elected as delegates, and A. C. Chase and J. Wm. Smith as alternates. The proposition was also presented at the meeting to hold a Chrysanthemum show November 12-14. The Central New York Horticultural Society has done a good work in this community for a number of years, and has encouraged a larger interest along the line of horticulture and floriculture. There is an earnest desire on the part of the Society to extend its influence and enlarge its field of labor. N. H. C.

FRUITS IN EASTERN OHIO.—Esopus Spitzenburg apple is not very satisfactory any place in this State, and less so than formerly. It is rarely planted now. Mountain Rose, Champion and Crosby are very satisfactory peaches for home use in the section named. They are comparatively hardy, which is to be considered in that section, besides, are of good quality, Champion particularly. W. J. G.

A CITY MAN TURNS FARMER.

Crowded Into the Farm.

PART I.

For many years it had been a favorite expression of my wife's: "I hope some time before we die we may own a little place out in the country," but I did not think it wise to leave a good position where a living was assured, for the uncertainties of farming. Finally, the financial panic of 1893 came, paralyzing business, closing the factory in Brooklyn, N. Y., where I was shipping and receiving clerk, and I went home that night and said to my wife: "The hour has come, we'll go now and look for a farm." Right here I wish to give an illustration of the lasting power of a well-worded advertisement. A year previous to this time I read in a New York paper: "Farm for sale! An 80-acre farm, 2¼ miles from railroad station, ¼ mile from churches, school, post office, store, etc. High location, good neighbors, 23 kinds of grafted apples, cherries and small fruits in abundance. Trout brook runs through the farm. Price, $1,000." I had cut this out and put it in my pocketbook, and now wrote asking whether that farm was still for sale. Receiving reply that it was, my wife and I started out with the address of a number of farms, some in Massachusetts, which we went to see, but decided on buying the Connecticut farm as being best value for the price. It was September 15; beautiful Fall weather; the ground covered with apples, and an aspect of restfulness and peace about the place that was indescribably charming to a man fresh from the hurry and turmoil of city life.

The owner was a country carpenter whose outside work had caused him to neglect the farm, but he had three cows and two hogs which I bought, and paid him also $100 for eight tons of hay in the barn. The butter from the cows he had been selling to a relative who kept a restaurant in a manufacturing village six miles away. That was the only source of income which I could look forward to. Returning to the city, I began to realize with constantly increasing trepidation, what a decided break we were about to make, and how terribly ignorant I was of how to perform the labor which it would soon be necessary for me to assume. Milking was my chief terror, I remember occupying a large part of the time—even when on the street—in closing my hands the index finger first—to keep the milk from going back into the udder—then the other fingers in succession to squeeze it out. I had the *theory* all right, but found later that theory and practice were two quite different things.

At last the furniture was all packed, also a stock of provisions boxed, and taken to the New York pier, where I saw it loaded on the freight boat Monday afternoon. We had arranged to remain in the city three days to give plenty of time for the goods to arrive in Willington, where a teamster had been engaged to take it to the farm on Thursday, when the family would arrive. The owner was to move out so that we could have possession on that day, caring for the stock until then. How these well-arranged plans turned out I will tell next week. G. A. C.

Willington, Conn.

VERMONT FRUIT TRIALS.—I have made trials in fruits for many years, such as grapes, plums, cherries and the different berries, but in this climate it is not always conducive to good and pure thoughts. The pleasure of seeing them grow will compensate for some of the ravages of Jack Frost. M. M. W.

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Catalogues of the Season

REVIEWS OF LEADING NOVELTIES.

FREDERICK H. HORSFORD, Charlotte, Vt. Catalogue of Horsford's nurseries; 56 pages, beautifully illustrated. This tasteful catalogue contains the most complete list of valuable hardy plants that has come to our notice. The collection of herbaceous plants and ferns, both native and exotic, is very full. A choice selection of ornamental shrubs and trees is also offered.

GEO. S. JOSSELYN, Fredonia, N. Y. Catalogue of small fruits. The usual well-written descriptive catalogue and price list. The collections of the various fruits offered are well chosen, and it is safe to say that every variety offered has real merit. The great specialties are Fay's currant, Josselyn gooseberry, formerly Red Jacket, and Campbell's Early grape.

JOHNSON & STOKES, Philadelphia, Pa. Garden and Farm Annual, 94 pages, colored cover, representing Earlyana tomato and Early Cyclone cucumber. This beautiful catalogue is completely illustrated by process cuts direct from nature. This absence of exaggeration is most refreshing in comparison with some of the wondrous distortions that come to us from other sources. Specialties are made of the Foremost German cabbage, a new medium-early, large-heading variety, Summer-head lettuce, situations and dooryard planting, but time alone will confirm or reject our estimate. Special attention is called to Alba Rubifolia and Pearl Queen, two splendid companions to the Ruby Queen, now being grown by so many R. N.-Y. readers. Lovers of beautiful flowers should send for this catalogue.

R. H. SHUMWAY, Rockford, Ill. Illustrated Garden Guide. This huge catalogue is truly illustrated—in the sense that a circus poster is an illustration. The overdrawn cuts occupy much more space than the descriptive matter. No claims of novelty are made, but an extensive list of farm, garden and flower seeds is offered, as well as some garden conveniences.

GREEN'S NURSERY CO., Rochester, N. Y. Catalogue of nursery stock and fruit plants; 40 pages, colored cover, representing new plums, peaches and apples. The usual well-illustrated descriptive list of standard and new fruits. Prominence is given to the York State prune heretofore known as Fellenberg, Italian prune, etc., but now claimed to be a distinct variety, and the most profitable plum grown, and the Niagara peach, said to be a seedling of Early Crawford, but much larger, equally as productive and several days later. Has proved very profitable to the originator.

THE FARMER'S DREAM OF CATALOGUES. FIG. 70.

Sweet Home and Bonny Best watermelon. The latter has ripened in 62 days from seed near Philadelphia. The good qualities of the Earlyana tomato are also strongly emphasized. This catalogue is especially strong in forage plants, and many beautiful reproductions by photographs of their possibilities are given. Fig. 67 shows the Sand or Winter Vetch, and Fig. 71 the Norfolk Button muskmelon.

FLANSBURGH & PEIRSON, Leslie, Mich. Catalogue of strawberry plants and seed potatoes; 20 pages. A carefully-written and reliable catalogue, offering a large selection of varieties of these two specialties. Rough Rider, Pocomoke and Pennell are praised among strawberries for their behavior during trials last year, the latter particularly for its fine flavor. The King of Michigan is offered as an advance on the early main-crop potatoes now in general cultivation. Our trials have shown it to be large, smooth, productive and of good quality.

THE CONARD & JONES CO., West Grove, Pa. Floral Guide for 1901, 134 pages; colored cover showing New Century rose and new pedigree Cannas. A very complete catalogue of all the roses worth growing in America, decorative and flowering plants and flower seeds. Many new and splendid Cannas are offered, prominent among which is Pennsylvania, the first scarlet hybrid of Canna flaccida. Pennsylvania was originated in 1899 by J. A. Kemp, now assistant on the Rural Grounds, and is in many respects the finest Canna we have grown. The New Century rose also is a product of the extensive experiments in progress on the Rural Grounds, and is the result of hybridizing the lovely Everblooming rose, Clothilde Soupert, and the white-flowered Rosa rugosa. Our trials would indicate this hardy and beautiful new rose to be of great value for exposed

JAMES VICK'S SONS, Rochester, N. Y. Garden and Floral Guide; 134 pages; colored cover and two colored plates. This fine catalogue is beautifully illustrated, most of the newer cuts being reproduced direct from nature. An extensive list of novelties in plants and seeds is offered, some of which have been found deserving as a result of previous trials. The Twentieth Century cabbage is said to be the earliest of all cabbages. The Lemon cucumber is nearly round, and of superior flavor, being at its best just as the fruits turn yellow. The Irondequoit muskmelon bears out its promise of the previous year as being of the highest possible quality, as well as vigorous and productive. The Rochester beet is thought to have reached perfection in earliness, shape and quality.

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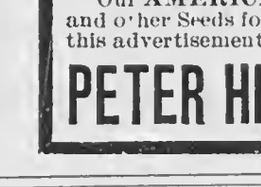

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GRASS SEED for GOLF LINKS,
GRASS SEED for LAWNS,

GRASS MIXTURES SPECIALLY PREPARED TO SUIT ALL CONDITIONS OF SOIL.

Our AMERICAN FARMERS' MANUAL for 1901, 32 pages, devoted entirely to Grass and other Seeds for the Farm, mailed free on application to those who state where they saw this advertisement. **Correspondence invited.**

PETER HENDERSON & CO., —35 & 37— CORTLANDT ST., **NEW YORK.**

WHAT SHALL THE HARVEST BE?

That's *the vital question* with every crop grower. Start with a supply of *Livingston's True Blue Seeds*, and the question's answered; other things being favorable. *Beautiful Seed Annual Free.* LIVINGSTON SEED CO., (Box 309), Columbus, O.

Catalogues for 1901.

[CONTINUED.]

R. G. CHASE & Co., Geneva, N. Y. Catalogue of general nursery stock; 52 pages. A neat and conservative catalogue offering a very full assortment of fruit and ornamental trees and plants. Clear and concise descriptions. Chase's Early peach originated in northern New York. It is of the Mountain Rose type, but of creamy white color, splashed with red; freestone, of the highest quality, and is recommended as a good shipper.

H. L. HOLMES, Harrisburg, Pa. Catalogue of seeds and garden supplies; 66 pages, with an excellent photographic cover. A neat and satisfactory catalogue, listing a great number of articles. The Holmes-Houser is the latest of all large, hard-heading cabbages; reliable and compact in growth. Holmes's No. 1 sweet corn is claimed to be five to seven days earlier than Adams, and to be a genuine sweet corn of the best quality; $100 in prizes are offered for a suitable name.

HENRY FIELD, Shenandoah, Iowa. Catalogue of seeds, potatoes and small fruits; 30 pages. A well-written and business-like catalogue. Not much space is used on descriptions. The Early Michigan and Livingston potatoes are given much prominence. The latter seem to be a rejuvenation of the grand old Peachblow. The Early Michigan makes a good substitute for the Early Ohio in earliness, and is superior in many other points.

T. J. DWYER & SON, Cornwall, N. Y.; eighteenth annual catalogue of fruit trees and general nursery stock; 62 pages, four colored plates. A most complete and well-chosen selection of fruit trees, plants and ornamentals. While the lists are very full no varieties are admitted unless they have distinctive merit. The descriptions are very fair, and the cultural directions intelligent and judicious. An interesting review of 18 years' increasingly successful business appears in the opening pages. No untried novelties are offered, but all the good new varieties as well as the standard ones are to be found.

JOSEPH HARRIS COMPANY, Coldwater, N. Y. Harris's Rural Annual; 64 pages. A full and reliable list of farm, garden and flower seeds. No varieties are offered exclusively as novelties, but particular attention is called to some specially good things, both new and old, with the remark that the most novel thing about them is that they are really good varieties. The new White-seeded Wax and Scotia beans, Eureka cabbage, French's Success celery and Potomac tomato come under this head. A feature is made of nitrate of soda and other unmixed fertilizing materials, and choice strains of chickens, turkeys and sheep are also offered.

LIVINGSTON SEED CO., Columbus, O. Livingston's Seed Annual; 104 pages. Colored cover and plate of Prolific Early Market pea, the chief novelty for 1901. Its special claims are, briefly: longer pods, more peas in a pod, and more pods to a vine than any of the "extra earlies." It matures three or four days later than the earliest of its competitors, but its great vigor and productiveness render it more valuable. Some interesting hybrids of their well-known Honor Bright tomato are offered. The Magnus tomato is again strongly recommended both as a market and forcing variety. The Early Golden Surprise field corn is called the best 90-day corn up to date.

WM. HENRY MAULE, Philadelphia, Pa. Maule's seed catalogue; 136 pages; seven colored plates and colored cover, showing various vegetable novelties, chief of which is the new tomato Success, sent out under number for a name contest last year. This is a large, handsome red tomato of high quality, and in congenial soils a good cropper. The Phenomenal pansies in one of the plates are colored as brightly as nasturtiums, and would look rather startling if they should actually materialize as represented. Maule's First Early cabbage and Model muskmelon are offered in unqualified terms as the best of their kinds. The cabbage is a flat-headed variety, solid and handsome, and in addition earlier than all others. The Model melon is a cross between Netted Gem and Pineapple, and is claimed to be the highest of all in quality. It possesses every good quality of the Rocky Ford, and is more productive. Several new beans are offered, and various novelties of late years given prominence. The Snow White dent corn, the result of hybridizing and years of selection, is claimed to be the most perfect and valuable field corn ever originated. Its pure white color, great vitality and productiveness will insure a greater return than other varieties. The selection of standard seeds and plants is very full and complete.

HARRY N. HAMMOND SEED CO., Bay City, Mich.; 50 pages. This compact catalogue is packed with a selection of garden and farm seeds especially adapted to the everyday cultivator. Hammond's Up-to-date potato is introduced from England, and is claimed to be a wonder in yield and quality. The new oat, English Wonder, hails from the same country, and the Hammond Company claims to have paid $5,000 for the right to introduce in America. It is a large white oat with stiff straw, stands drought well, and is an enormous yielder. Yields of 234 and 276 bushels per acre are reported by customers. Many other specialties and introductions of former years are given great prominence.

D. M. FERRY & Co., Detroit, Mich. Seed Annual for 1901; 100 pages; colored cover, two colored plates and miniature illustrations of vegetable novelties. The Defender muskmelon is introduced as a variety of unusual merit, being intermediate between Osage and Petoskey, or Paul Rose. It is early, and of unsurpassed quality. The Oakview Early Market sweet corn is as early as Cory, but more vigorous and hardy. The ears are much larger than that favorite sort, and average twice as long. The new morning-glory Aurora is the result of crossing the common kind with the Giant Japan morning-glory. It combines the vigor, hardiness and freedom of bloom of the common kind with the size and rich coloring of the Japan type. They recommend it as the most useful strain of Convolvulus in cultivation. The general make-up of this excellent catalogue is well-known. There is a wealth of useful information to be found between its covers.

THORBURN'S CENTURY CATALOGUE, J. M. Thorburn & Co., New York City. This is the one hundredth annual catalogue issued by this well-known and reliable firm, the founder, Grant Thorburn, having ventured into the seed business in New York in 1802. The intervening years have written a record of great and honorable success. The present catalogue is modeled on former issues, but is much embellished with the appropriate design of an Agave or century plant in bloom on the cover, and 28 superb full-page half-tone engravings of various flowers and vegetables. These pictures are in every respect works of art. The selection and arrangement of the subjects and the execution of the prints have not been excelled in any horticultural publication that has come to our notice. The frontispiece consist of a portrait of Grant Thorburn. The Thorburn Company refer to the hundreds of rare sorts of seeds they have always carried for the benefit of specialists and botanists, often at a loss. The immense collection is preserved and all the prominent European novelties are added. Very few new specialties are listed. The new Salvia Silverspot, introduced last year, is again highly commended. The Thorburn Century tomato is said to be worthy of the occasion to which it refers. It is large, extremely productive, and as early as Atlantic Prize. The fruits are of a dark scarlet color, perfectly smooth and always full and plump. The new celery, Fin de Siécle, first offered in 1898, is claimed to be the largest, solidest, best keeping and shipping Winter celery they have ever grown. The sensational German pea Athlete, is offered at 25 cents per packet. It is so vigorous and spreading in its growth that the seeds must be planted three feet apart, and each plant tied to a string-pole as it develops. The quality is good and the yield said to be enormous.

For the land's sake, use Bowker's Fertilizers. They enrich the earth.—*Adv.*

PALMER—Very Early. List free. T. C. KEVITT. Athenia, N. J.

PLANTS—Try the Lady Garson Strawberry. 13,000 quarts to the acre. Plants per 1,000, $12. Don't miss this great berry. Lucretia Dewberry and Miller Red Raspberry at $3.50 per 1,000. Trees of all kinds for sale. Catalogue free. D. W. MOSLEY, Dover, Del.

CAL. PRIVET—2 ft. fine, $25 per 1,000; 1½ ft. $18 per 1,000; all well rooted and branched. Asparagus Roots, Barr's Mammoth, 50c. per 100; $3.50 per 1,000. A good variety of Apple, Pear, Plum and Peach Trees. Send for special rates by 100 or 1,000. JOSIAH A. ROBERTS, Malvern Nurseries, Malvern, Pa.

APPLE CIONS FROM BEARING TREES. Rome Beauty, Sutton Beauty, Ontario, Malden Blush, Hubbardston. T. S. Woodward, Lockport, N. Y.

Tree and Shrub Seedlings in Variety

Magnolia, Linden or Basswood, Beech, Sugar Maple, Tulip Poplar, etc. Low prices. Send for trade list. J. H. H. BOYD, Gage, Sequatchie Co., Tenn.

NORTHERN GROWN SEED POTATOES

Sir Walter Baleigh and Carman No. 3; bu. 80 cents; bbl., $2.25; 5 bbls., $10. Buy direct from grower of 15 years experience and get seed true to name. J. H. ARBOGAST, Coral, Montcalm Co., Mich

ANEMIA

The face alone is no sure index of health; but headache and dizziness, no ambition, no force, no endurance, short breath, palpitation of the heart on little exertion—these with a pale face, are a clear indication of what is wrong. There is too little red in the blood.

There is too little vital force. It is life that is wanting.

Scott's emulsion of cod-liver oil supplies it.

We'll send you a little to try, if you like. SCOTT & BOWNE, 409 Pearl street, New York.

If you want good strong plants, buy of RIDGE NURSERY AND PLANT FARM. Catalogue free. GEO. W. WINCHELL, PROP., Tobinsport, Ind.

A1 Strawb'y and Small Fruit plants. Gibson, Excelsior, Rough Rider, New York, N. Ohmer. Sample. Best kinds, lowest prices. P. SPEER, Passaic, N. J.

Strawberry Plants.—Gladstone, Success, and other new var., $2.50 per 1,000. Stand. sorts $1.50 to $2. List of fruits on application. Chas. Barker, Milford, Del.

Rough Rider Strawberry Plants

Also over fifty other first-class varieties at reasonable prices. Send for price list. WILLIAM PALMER, Box 29, Grooms, N. Y.

STRAWBERRIES

I am prepared to supply choice plants of the most desirable market berries, including "Johnson's Early." Liberal discounts on large orders. Send for circular. O. A. JOHNSON, Manokin, Md.

APPLE TREES—$8 PER 100.

All kinds of Trees and Plants at Wholesale Prices. Cat. free. Reliance Nursery, B. 10, Geneva, N. Y.

OPALESCENT The New Century APPLE

Thoroughly up-to-date. It's choice. Write for descriptive circular. General assortment of Fruit Trees. Send list of wants for special prices.

McNARY & GAINES, Xenia, Ohio.

"Farmers' Friend" Corn.

A new Yellow Flint Corn, which ripens so early that wheat can follow on same land and yields **immense** crops of finest corn and fodder. For description and price see our catalogue; sent free. **JOS. HARRIS CO.,** Coldwater, N. Y.

Seeds from the Grower

We raise seeds on our own farms, and sell direct to the planters at **low prices.** Mangel Seed, finest quality, 16c. per lb. Evergreen Sweet Corn, $1.20 per bu. **Field Corn,** selected strains. **Seed Potatoes** of finest quality, and lots of other good things in Vegetable and Flower Seeds. Catalogue **free.** **JOS. HARRIS CO.,** Coldwater, N. Y.

Pedigree Strawberries.

These are our new seedlings, and we are proud of them.

Make Strawberry Culture Profitable. The Rural New-Yorker recommends them.

"Only Kinds that Paid in Mercer County this Year." This is the official report made of them before the State Horticultural Society.

Nina, Joe, Carrie Silvers, Reba, Stella, Robbie and Nettie.

These are the names that mean Gold Dollars to those who try these kinds. We are selling them at prices within the reach of all this year.

We have a stock of June-bud trees of **Luther Burbank's Latest Productions in Japan Plums.**

Free—A catalogue, well illustrated and full of pithy descriptions. All of our stock is inspected, and that is all right, but we also ***Fumigate it all before we send it out.***

We also have a full line of all kinds of nursery stock, but have especially fine lot of **Palmetto Asparagus.**

Address all communications

JOS. H. BLACK, SON & CO., HIGHTSTOWN, N. J.

GANDY PRIZE

Strawberry Plants in any quantity, grown in their native soil, free from disease, and the original genuine stock. Send for prices. TURNER BROTHERS, Port Norris, N. J.

The President Wilder Currant

heads the list as a producer and a money-maker. Plant no other. Prices given on application.

S. D. WILLARD, Geneva, N. Y.

SEED POTATOES—Sir Walter Raleigh, Carman No. 3 $2 3 bu. bbl., 4 bu. bbl. $2.65. Early Bovee, Early Michigan, Early Harvest, Gem of Aroostook, Northern Beauty, Green Mountain, $2.50 3 bu. bbl., $3.25 4 bu. bbl. Strictly choice stock guaranteed. Ref. Lyons Nat. B'k. C. W. BURNETT, Phelps, N. Y.

Salzer's Sunlight and Million Dollar Potato, $3.25 per bbl.

Sir Walter Raleigh, Chapman's Orphan, Enormous, White Mountain, White Rose, Early May, Bovee, Thoroughbred, $2 per bbl. This ad. will not appear again. IRA P. WATSON, Fredonia, N. Y.

Imes' Blight-Proof Seed Potatoes 1901 Catalogue, Free, gives particulars.

SEEDS. The *best* field and garden seeds at *Wholesale Prices.* The BEST 90-day CORN KNOWN. *Seed Potatoes that are unequaled.* The W. E. Imes Seed Co., Vermontville, Mich.

Cabbage Plants.

Large transplanted plants, well hardened; will stand freezing weather. Early Jersey Wakefield, Charleston Wakefield and Henderson's Ea. Summer, ready now. Price, per 100, 40c.; 1,000, $3. Write for catalog of transplanted vegetable plants. **J. E. HUTTON & SON, Conyngham, Pa.**

PLANTS.

Immense stock of Strawberry Plants in fifty (50) varieties. Jersey Wakefield and Early Summer Cabbage Plants. Asparagus Roots, etc. Price List free. **A. J. McMATH, Onley, Va.**

C. C. NASH, FRUIT PLANTS, THREE RIVERS, MICH.

SPECIAL PRICES FOR 30 DAYS.

YORK IMPERIAL, Baldwin, Ben Davis, Stark and other Standard varieties of Apple trees—Budded and Grafted—all sizes. We are largest growers of York Imperial east of Mississippi River. Japan Plums, Kieffer Pears, Cherry, Peach. Shade and Ornamental trees—let us price your wants.

J. G. PATTERSON & SON, STEWARTSTOWN, PA.

Rogers Trees are Safe to Buy.

The Tree Breeder will tell you the reason why. If you want trees as **"TRUE AS STEEL"** that when you read the label and plant the tree you can depend on what the fruit will be, **ROGER'S TREES** are the kind you want. They are bred for **purity,** and bred to **bear, healthy, clean, vigorous** and **well rooted.** Note some of our SPECIAL OFFERS for early orders: 100 Standard Pears, 4 to 6 feet, Anjou and others, $7.50; 100 Baldwin Apples, 4 to 5 feet, $7.50; Medium, $9; No. 1, 5 to 7 feet, $12. Other varieties at corresponding prices. 30,000 one-year Apples—Stayman, Sutton, Baldwin, Grimes Golden and other business sorts, 10 cents and up. 20,00 Japan Plums on Plum Roots, 1 year, 3 to 4 feet, $7 per 100; Medium, $8.50. No. 1, $11—Abundance, Burbank, Red June and Wickson, 3,000 Montmorency Cherries, fine, 1 year, bred from Geo. T. Powell's trees at $15 per 100. Better see our new list of Special Offers in next Tree Breeder. We can save you money and start you safe.

All Trees Fumigated.

The Tree Breeders: **THE ROGERS NURSERIES, Dansville, N. Y.**

Catalogues for 1901.

[CONTINUED.]

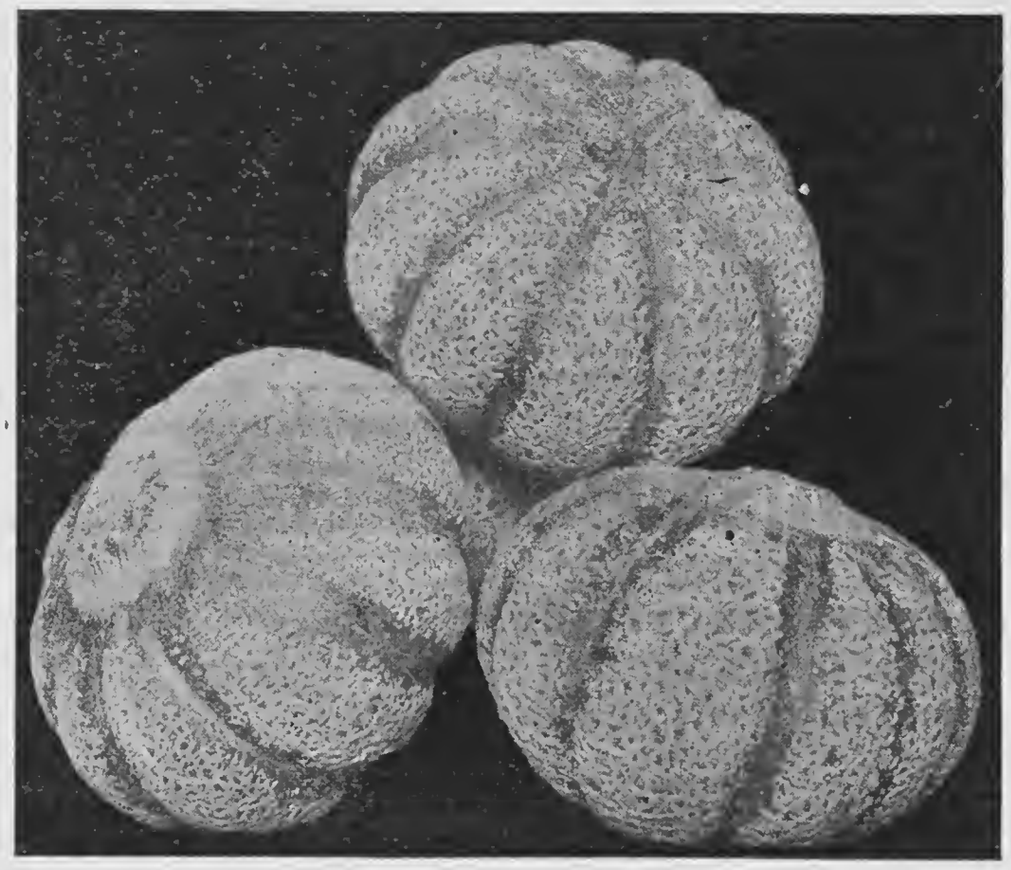
IOWA SEED Co., Des Moines, Iowa. Thirty-first annual seed catalogue. A large pamphlet of 100 pages, with colored cover representing a collection of Clematises and various flower and vegetable seed novelties. Two colored plates of special collections are inserted. Among the novelties are the Early Express cucumber, Giant Gray Sugar peas, the pods of which may be cooked and eaten like asparagus; Chinese Sago bean and Hester squash. The list in seeds, plants and garden requisites is very full and complete.

GEORGE W. P. JERRARD Co., Caribou, Me. Catalogue of northern-grown potatoes and seeds; 34 pages. This always interesting announcement does not introduce any new varieties this season, but the successful ones of previous years are given due prominence. The Northern Beauty, new last year, has fully met expectations, and is now offered as the best of the Rose type, and the Gem of Aroostook, now three years on the market, is considered the best all-around potato introduced by this firm.

M. CRAWFORD Co., Cuyahoga Falls, O. Catalogue of strawberry plants and Gladiolus bulbs; 22 pages. The Miller is given first place as the most promising novelty among strawberries. It is large, bright red, good quality and very productive. The plant is particularly vigorous. August Luther, a new western kind, gave the earliest fruit last year, a ripe berry being picked June 4, and June 7 it was in full crop. Senator Dunlap, introduced last year, is again highly recommended for general cropping.

GRIFFITH & TURNER Co., Baltimore, Md. Farm and garden supplies. A large catalogue of 128 pages, colored cover and many illustrations; 49 pages are given to seeds and plants, and the remainder to a most complete and excellent selection of farm and garden implements. No untried novelties are offered, but a specialty is made of the varieties of vegetables that succeed best in that paradise of truck farms, the tidewater regions of Maryland and Virginia.

J. L. CHILDS, Floral Park, N. Y. Catalogue of seeds, ornamental and fruit plants; 152 pages; colored cover and many colored plates showing various novelties and specialties. The Great Mississippi tomato has produced a plant over eight feet high, which bore, according to the figures given by the originator, over 80 pounds of ripe fruits. Under ordinary cultivation the yield is enormous, the tomatoes perfect and beautiful, and of superior quality. Child's hybrids of Primula obconica are given much prominence, and are in reality most beautiful and effective decorative plants. An immense variety of articles is offered, some of which cannot be procured elsewhere. The Cherokee rose, Rosa lævigata, is color-plated and offered as a desirable, hardy trailing variety. It is a native of China, and is much used for hedges in the Bahama Islands and in some parts of the Southern States. Our experience with this beautiful evergreen wild rose leads us to believe that it is hardier than has been suspected, but it is not likely to endure the rigor of our northern Winters unless well protected.



NORFOLK BUTTON MUSKMELON. FIG. 71.

R. M. KELLOGG, Three Rivers, Mich. Twentieth Century Horticulture; 36 pages. As the title indicates, this is much more than a catalogue of small fruits. It is a treatise on modern and progressive fruit culture in the light of Mr. Kellogg's extended and successful experience. It is elaborately illustrated with photographic reproductions. Much stress is laid upon the improvement of varieties by propagating only from selected specimens. The whole story of small-fruit growing is told in clear and forcible language. All the new and standard varieties of small fruits may be found listed here with a wealth of reliable information concerning them.

HENRY A. DREER, Philadelphia, Pa. Dreer's Garden Calendar; 200 pages. Handsome cover, showing group of Queen Charlotte Anemone and Centaurea imperialis. The novelties of the season are the new Mammoth Stringless Green Pod bean, offered as the largest, earliest and most prolific bean of its class; Dreer's Monarch celery and Perfect Forcing carrot. The best introductions of previous years are given much prominence. Many foreign novelties in seeds and flowering plants are listed, among which is an offer of seeds of Buddleia variabilis, a charming new profuse-blooming shrub from China. It is claimed that flowering plants can be grown in four months from seeds. The new giant Montbretia, Germania, is said to produce blooms over three inches across, of rich glowing scarlet and orange shades. Montbretias are grown just like Gladioli, and are very brilliant when well done. The new Giant Hardy primrose is strongly recommended as a most beautiful and useful new plant for the hardy perennial border, as well as for Winter blooming under glass. The beautiful hardy striped Yucca, Y. filamentosa bicolor, is offered at a very reasonable price. The section devoted to aquatic plants is more extended than in previous issues and is beautifully illustrated with half-tone engravings. Taken altogether this is a catalogue one likes to keep close at hand for reference. Fig. 68 shows the new Surprise pea.

LEWIS ROESCH, Fredonia, N. Y. Catalogue of grapevines and nursery stock; 32 pages. The Early Daisy and Lucille are commended as most valuable new market grapes. Early Daisy ripens a week ahead of any other variety, and ripens its crop within a few days. It is a black, of better quality than other extra early varieties, and an extra good shipper. Lucille is a late red grape, vigorous and very productive, as well as extremely hardy. Its special recommendation is its superior shipping quality. A very full list of standard grapes, fruit trees and plants and ornamental nursery stock completes the catalogue.

J. H. HALE, South Glastonbury, Conn. Hale's fruits for 1901; 16 pages. This little catalogue is crowded full of interesting information. All the latest novelties in peaches, plums and small fruits are offered. Excellent portraits of Burbank's new plums and the newest chestnuts are given. Hieley is a new peach of the North China type, claimed to be as large as Stump the World and as beautiful as Oldmixon. It is of fine quality and a good shipper. Ripens in the North early August. Waddell is a hardy white peach with a bright red cheek, good in every way. Mr. Hale thinks it will prove a sure annual bearer.

WHEN you write advertisers mention THE R. N.-Y. and you will get a quick reply and "a square deal." See our guarantee 8th page.

HOW TO BUY A $75.00 BUGGY

Follow instructions carefully.
1st. Send for our large free catalog of vehicles and harness.
2nd. Select the rig you want and order it on our **10 Days Free Trial.**
3rd. After trying it, if perfectly satisfied that it is the best bargain you ever saw for the money, draw $75 out of the bank, give your wife $27 for pin-money and send us the $48 and you will have the best $75 rig you ever saw. Your wife's $27 is the two profits—dealer's and jobber's—you save in buying from the factory. Write for our large illustrated catalogue and follow directions carefully.

Kalamazoo Carriage and Harness Co., Box 30, Kalamazoo, Mich.

Eureka Potato Planter, **$35.00**

Guaranteed to equal the work of high-priced planters in any spot or place. Has Fertilizer Attachment. Write for catalogue and full information.

EUREKA MOWER CO., UTICA, N. Y.

Good Fruit

always finds a ready market, but to bring top prices. It must be put up in neat, attractive and substantial packages. We have everything in the basket line.

All sizes of

Berry Baskets

Peach and Grape Crates

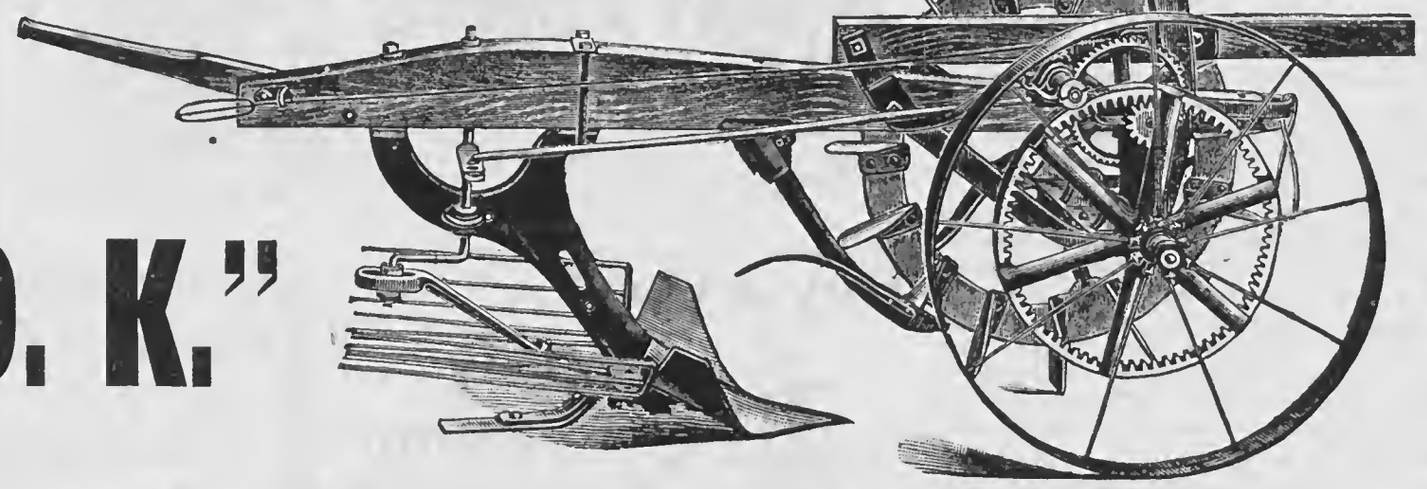
Buy direct from the manufacturers and save money. Write to-day for catalogue and new price-list of FRUIT AND FARM BASKETS.

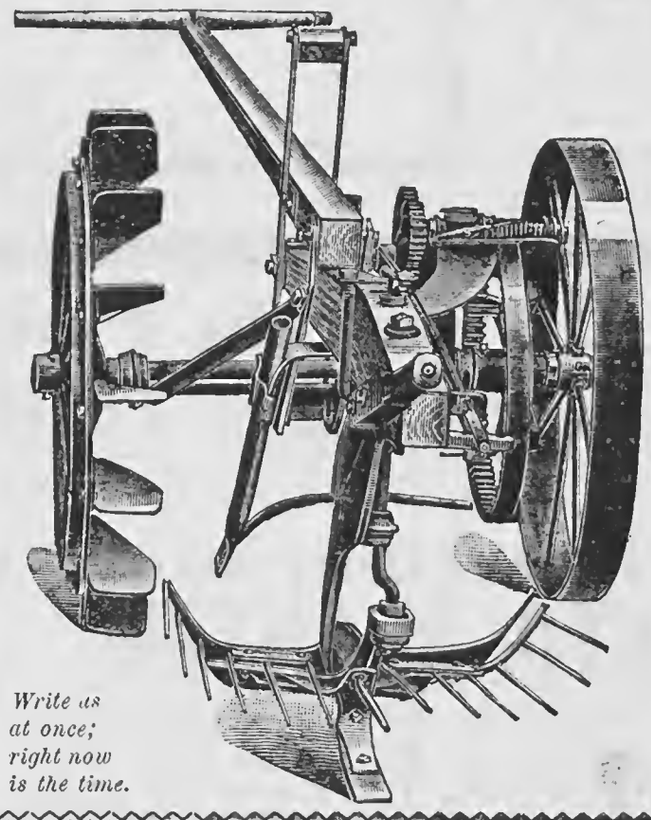
COLES & COMPANY,

Est'd 1884. 109 & 111 Warren St., New York.

HALLOCK'S "O. K." POTATO HARVESTER.

PATENT APPLIED FOR.





Write us at once; right now is the time.

POTATO GROWERS, this is the digger you have so long looked for, hoped for, longed for. The price is right, the draft is right (one team), easy to handle, strong and simple, every potato taken from its bed by the shovel, and every potato separated from the soil by the wonderful fork; dig every row straight as you go. In a word, it is hand work done with two horses.

OUR GUARANTEE. We guarantee the **O. K. Digger** to equal hand work. In other words, you dig a certain number of rows by hand, then dig an equal number with the **O. K. Digger,** pick up all potatoes in sight, then harrow, cultivate and plow, either or all; if **"O. K."** does not come out ahead, you are at liberty to reject it. We know just what it will do because we have followed it in a dozen fields in different parts of the country.

WHAT WE WANT. Correspondence with 60,000 potato growers before the winter is over, so we can tell them all about the digger and the **wonderful offer we make for quick orders and introduction.**

We know we have the digger you want. We know every potato grower who does not buy one will want his potatoes dug with one. This would mean profitable work for you if you had time for it, or could spare the digger.

D. Y. HALLOCK & SONS, Box D 805, York, Pa.

Please mention box number.

Catalogues for 1901.

[CONTINUED.]

J. G. HARRISON & SONS, Berlin, Md. Catalogue of Harrison's Nurseries; 42 pages. A compact and interesting list of the good things produced in their reliable nurseries. The Gibson strawberry is offered as the most attractive berry in cultivation, selling for from 50 to 100 per cent more than other varieties in the same market. Besides being so handsome it is healthy and very productive. An extensive collection of standard and new varieties is offered. The Francis peach is said to be equal in beauty and attractiveness to the famed Elberta, but ripens later and thus extends the season. Edgemont is of the early Crawford type and is highly favored in the new peach belt of the Blue Ridge Mountains. The division of the general list of peaches into ripening periods is very useful.

JAMES J. H. GREGORY & SON, Marblehead, Mass. Catalogue of vegetable and flower seeds; 76 pages, with many illustrations. This reliable catalogue is, as usual, packed with one of the best selections of garden seeds offered to the American public. Fewer untried novelties are listed this season than usual, but the best of late introductions from a great variety of sources is offered. The Early Fortune potato resembles the Early Rose, but is of better quality and very early. It is white and a splendid cropper. The Delaware potato is somewhat similar in its main characteristics, but is in addition very large. Mand's Wonder is a new annual forage plant offered on the strength of some western recommendations. The botanical name is Penicillaria Leaoides, and it is evidently a giant grass, in some respects resembling corn. Messrs. Gregory offer money back to customers who fail to grow a good crop on rich land. It is said to rank in nutritive value with Kaffir corn, Milo maize and sorghum, and to outyield any of them.

BURPEE'S FARM ANNUAL. Quarter-Century edition. In honor of its twenty-fifth anniversary this interesting catalogue is enlarged to 220 pages, and entirely rewritten. The colored cover is particularly chaste and beautiful. Colored plates of the new Matchless muskmelon, Quarter-Century tomato, Caprice nasturtium and new Dahlias are inserted, as well as many excellent new cuts. In addition to the novelties shown in colors special attention is called to the new Willow-leaf Dwarf Lima, a most prolific form of the narrow-leaved Sieva, or southern Lima bean, the Twentieth-Century dwarf wax bean, offered as the hardiest and most prolific wax or stringless bean, the new Dry-weather cauliflower, which has succeeded well in the dry air of California, and Chinese Giant pepper. Some of these have been offered for trial before, but we think this season marks their formal introduction. The Twentieth Century tomato originated on the Rural Grounds, and we have said all we may properly say about it on page 658, September 29, 1900, and only hope that those of our readers who care to test it will plant it in rich soil, and see that the plants are not allowed to become drawn or slender before planting. These dwarf, stocky varieties do not develop a far-reaching root system, and for best results, should have their plant food close at hand. The usual extensive assortment of seeds is offered, together with a selection of Summer-blooming plants. Taken altogether the Quarter-Century edition of Burpee's catalogue is far ahead of any previous issue.

PETER HENDERSON & Co., 35 and 37 Cortlandt Street, New York. Everything for the garden. The usual immense and complete catalogue issued by this popular house. In many respects it is the most tasteful number they have yet sent out, comprising 192 pages, six colored plates and a very attractive colored cover. Henderson's Reliance pea is now offered as an improvement on the old Champion of England, that will ultimately displace that variety. It is a main-crop pea of great vigor and productiveness, bearing an enormous number of pods evenly distributed from the bottom to the top of the plants. It is a wrinkled pea of the highest quality. The Immensity lettuce grows fully 18 inches in diameter, and is of surprisingly fine quality. The very large solid heads are very slow to run to seed. Not an early kind, but offered as a reliable and profitable main-crop and late variety. The early Leviathan pole Lima is claimed to be the ideal of its class. It is a week earlier than any other variety, productive and of superior quality and immense size. The well-known Henderson Bush Lima is offered in an improved strain, retaining all the merits of the old sort, while producing beans one-half larger. Among the many new roses offered are Pan-American, a cross between American Beauty and Mme. Caroline Testout. It is lighter in color than the ever-popular American Beauty, very fragrant, and productive of beautiful, large flowers, borne on long stems. While it has proved tolerably hardy the greatest value will doubtless be for growing under glass. In the outdoor section, the sensational European hybrid, Soleil d'Or (Golden Sun), is first offered. This is a hybrid between the well-known Persian Yellow and Anthony Ducher, a hardy Perpetual rose, not often grown in this country. The coloring is described as a happy mixture of the very diverse tints of the parents, being a blending of chrome yellow, nasturtium red and pink, with shades of reddish orange. Many prizes were captured by this unique variety in Europe last Summer, but it remains to be seen whether it is adapted to our climate. Some fine new Cannas are listed, among which Little Gem is offered for the first. This distinct and phenomenally dwarf variety has been thoroughly tested and was much admired on the Rural Grounds last Summer.

Green Arsenoid

Unquestionably the Most Effective, the Most Reliable, and in Every Way

THE BEST INSECTICIDE

Recommended by the most eminent Entomologists of the country, and pronounced

Better Than Paris-Green

Because Green Arsenoid

contains all the poisonous elements of Paris Green, but does not contain the worthless and harmful ingredients, and does not scorch the foliage while at the same time it is much more effective than Paris Green.

Because Green Arsenoid

being a finely divided powder (not crystalline), does not speedily settle in water like Paris Green, but remains in suspension a long time, thereby giving a mixture of uniform strength for spraying

Because Green Arsenoid

owing to its physical properties, adheres better to the foliage than Paris Green, and therefore is not so readily removed by wind and weather.

Because Green Arsenoid

being more bulky than Paris Green, spreads over a much greater surface, and is therefore far more economical.

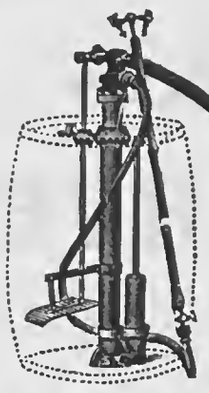
ALWAYS PURE ONCE USED
ALWAYS SURE ALWAYS USED

ADLER COLOR & CHEMICAL WORKS
Established 1836,
Sole Manufacturers of GREEN ARSENOID, and also of the S. S. F. Brand Strictly Pure Paris-Green,
100 William Street, New York

TEN CENTS PAYS FOR BOOKLET
40 pages, illustrated. Eighth thousand. Tells how to make cement floors, to grow and feed sorghum, beets, soy beans, &c., and gives illustration of hog house. Price list of cement and seeds free.
WALDO F. BROWN, - - - OXFORD, OHIO.

SPRAY PUMPS
ALL BRASS.
$17 outfit for $7.00, express paid.
Will spray a 10 acre orchard per day. 100,000 in use. Satisfaction guaranteed or money refunded. Illd. catalogue free. Agts. make from $5 to $15 per day. New improvements. Free Trial. Mention this paper.
P. C. LEWIS MFG. CO., Catskill, N. Y.
J. F. GAYLORD, Receiver.

Buy a Good Spray Pump



—don't experiment—costs money. We have done the experimenting—used the common spray pumps in our own orchards, noted their defects—then invented the ECLIPSE. You get the benefit of our experience free. Send at once for catalogue.
MORRILL & MORLEY, Benton Harbor, Mich.

BUY DIRECT FROM FACTORY, BEST
MIXED PAINTS
At WHOLESALE PRICES, Delivered FREE For Houses, Barns, Roofs, all colors, and SAVE Dealers profits. In use 58 years. Officially Endorsed by the Grange. Low prices will surprise you. Write for Samples.
O. W. INGERSOLL, 246 Plymouth St., Brooklyn, N. Y.

Spray your Fruit Trees and Vines

Wormy Fruit and Leaf Blight of Apples, Pears, Cherries and Plums prevented; also Grape and Potato Rot—by spraying with **Stahl's** Double Acting Excelsior Spraying Outfits. Best in the market. Thousands in use. Catalogue, describing all insects injurious to fruit, mailed Free. Address
WM. STAHL, QUINCY, ILL.

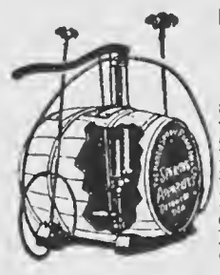
Why Bother with Making Kerosene Emulsion?

Readers of this paper will do well to investigate the merits of the Dewey Sprayer. Works like a charm with kerosene or crude oil and water; also for Paris Green. After a trial you will wonder how you ever

The Dew-ey Sprayer.

did without one. Delivered, charges paid on receipt of $2 by LEGGETT & BROTHER, 301 Pearl Street, New York. Write for Circular.

WHY BUY
an old-style, out-of-date Hay Carrier, when you can get the latest
Improved Louden,
worth twice the money? Let us send Catalogue of everything in **Hay Tools,** and circular of **Door Hangers—Best on Earth**—also, **How to Build Hay Barns,** etc.
GOLD MEDAL OMAHA 1898
LOUDEN MACHINERY CO. Div. J, Fairfield, Iowa.



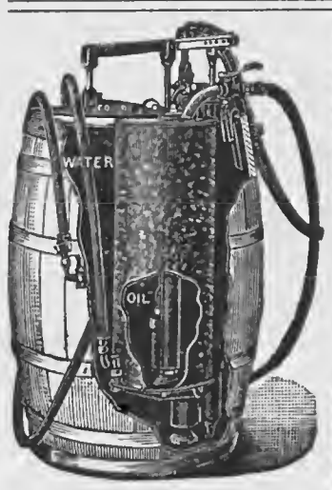
THE "HARDIE"
Spray Pumps
are the most powerful, easiest worked, most modern, simplest in construction and moderate in price. DON'T BUY A PUMP until you have sent for our catalogue "C" and treatise on diseases of fruits, etc., sent FREE. HARDIE SPRAY PUMP MFG. CO., Detroit, Mich.

WORKS TO PERFECTION.
There is no other barrel spray pump made which is giving fruit-growers such general satisfaction as the
Century Sprayer,

with submerged brass cylinder, brass ball valves and "everlasting" fabric plunger packing. It has the only thorough working automatic agitator made. Length of stroke 5 inch. Cylinder diameter 2¾ inches. For durability, ease of operation, free water ways and positive action it is positively unequalled. Sold at lower price than other good pumps. Send for handsome catalogue, showing full line of pumps and sprayers of all kinds.
THE DEMING CO., Salem, O.
Western Agents—Henion & Hubbell, Chicago, Ill.

For Wholesale Spraying
in large commercial orchards where the saving of time, labor and material is a necessity, to say nothing of having the spraying done in the right "nick of time" nothing equals
This Orchard Monarch
—note the large **storage chamber** in front. A convenient pump operated by chain sprocket from rear wheel raises air pressure to 150 lbs. With 12 gallons of liquid in chamber this will work two Vermoral Nozzles 5 to 10 minutes at full capacity—enough to spray the largest tree. Automatic agitators keep liquid thoroughly stirred up. Brushes clean suction strainers automatically every instant. No burning or scalding of foliage. Sold complete as shown in cut. We make the
Famous Empire King Barrel Sprayer
and full line of smaller machines.
Send for free catalog and opinions of people who used it last year.

FIELD FORCE PUMP CO., 2 Market St., **Lockport, N. Y.**



(PATENTED)

Goulds "Kerowater" Sprayer
For Emulsifying and Spraying Kerosene and Water.

Endorsed by the leading Horticulturists and State Experimental Stations. A kerosene sprayer which *accurately* proportions the mixture for any desired strength. Built in three sizes, for tank, barrel or knapsack use. There is a great demand for them. Ask your dealer or write direct to us.

"How to Spray, When to Spray, What Pumps to Use," a valuable Booklet, free for the asking.

The Goulds Mfg. Co.,
SENECA FALLS, N. Y.
Warerooms: 16 Murray St., New York.

For all Crops in Rows
Corn, Potatoes, Broom Corn, Sorghum, Sugar Beets, Carrots, Parsnips, Strawberries, etc., there is no cultivator equal to our
"KEYSTONE ADJUSTABLE"
Weeder and Shallow Cultivator.

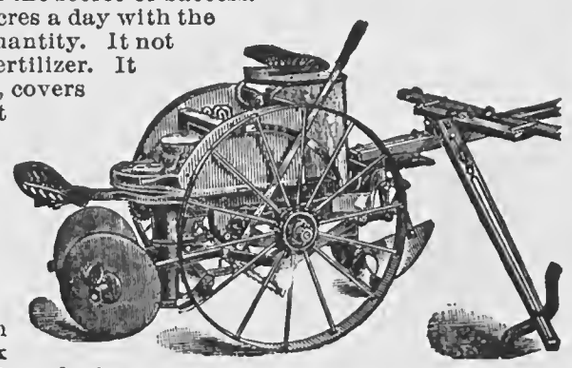
Cultivates the entire surface, or between the rows. Expands to 7½ ft., narrows to 30 in. No cumbersome shafts and only weeder with a front ground wheel to prevent vibration and "wobble." Kills all weeds, grass, etc., and leaves a fine mulch of earth on top, to absorb moisture and retard evaporation. Easiest to handle, lightest draft. Fits all uneven surfaces. Round spring teeth with blunt points for light soils, flat spring teeth with diamond points for heavy soils.

Can be narrowed to 30 inches.

Weeder booklet free. Send for general catalogue "C" embracing Corn Planters, Cultivators, Corn Shellers, Harrows, Rollers, etc.
KEYSTONE FARM MACHINE CO., 1547 N. Beaver St., York, Pa.

Profit from the Potato Crop

Promptness in planting potatoes when weather and soil are just right is often the secret of success. You can take advantage of favorable weather and plant from four to seven acres a day with the IMPROVED-ROBBINS POTATO PLANTER. Its work is quality as well as quantity. It not only plants quicker than by hand but better. It is economical of seed and fertilizer. It plants in every hill, makes no misses and no doubles. It spaces accurately, covers uniformly and the fertilizer is mixed with the soil near the seed but does not come in contact with it.



The IMPROVED-ROBBINS
POTATO PLANTER

is made by the **Iron Age** people at the works where the famous **Iron Age** farm and garden implements are made. Write for a copy of the **Iron Age Book for 1901,** describing all these implements. It is a guide to better farming and gardening.
BATEMAN MFG. CO., Box 102, Grenloch, N. J.

Catalogues for 1901.

[CONTINUED.]

STARK BROS., Louisiana, Mo. Advance sheets of nursery catalogue and colored plates of Burbank hybrid plums and Chicago apple. America, Climax, Gold, Shiro and Sultan are given as Burbank's greatest creations. The Chicago apple is shown as a large, deep-red fruit, in season during January and February.

JOSEPH H. BLACK, SON & Co., Hightstown, N. J. Catalogue of Village Nurseries; 48 pages. Devoted to fruit and ornamental trees and plants. A carefully-selected list of reliable varieties, as well as late introductions. The specialties of this enterprising firm are their new pedigree strawberries and the Mercer cherry, which is now becoming very favorably known. A full set of these remarkable strawberries is now on trial on the Rural Grounds. The latest Burbank plums are offered at very reasonable prices. Fig. 73 shows the Joe strawberry.

NORTHRUP, KING & Co., Minneapolis, Minn. Catalogue of "Seeds to Tie To"; 84 pages. A most extensive list of seeds for all purposes, with particular attention given to farm and economical seeds. The Peep of Day sweet corn is earlier than any other by the wide margin of 10 days. Said to be productive, and of high quality. The Extra Early Triumph potato shows the same precocity of development, and is claimed as absolutely the earliest variety, and is also the tree strong and symmetrical in growth. The Comet currant and Keepsake gooseberry, each probably the best English variety of their respective kinds, are given prominence. The Comet currant was figured in THE R. N.-Y. in 1896, but we think has not before been offered by an American nursery.

THE KEROWATER.—The term "mechanical mixture" is now used in articles on spraying. As all know, oil and water do not mix naturally, for the oil will rise to the top. Under pressure, however, the water and oil make a uniform mixture which is called "mechanical." When this is sprayed, the water evaporates and leaves the oil evenly distributed. The Goulds Mfg. Co., Seneca Falls, N. Y., have taken advantage of this fact in making the famous kerowater sprayer. This operates with two pistons, and forces uniform amounts of the oil into the water. It is a very fine machine, of great service now that kerosene and petroleum are being so largely used. The Goulds people also make all sorts of pumps for lifting or forcing.

NURSE AND POLICEMAN.—The Bowker Chemical Co., Boston, Mass., issues a neat pamphlet which is truly a "Handbook of Injurious Insects and Plant Diseases." The common plant diseases and insects are briefly described, and many are pictured. There are also many fine full-page pictures of fruits and farm scenes. The Bowker Company sells a complete lot of poisons and chemicals which may be called policemen and nurses of the farm and orchard. We have tried these goods on our own farm, and know that they are effective. The Bowker people have been at work for several years testing and experimenting until now they have trained their plant nurses and policemen so that they may be guaranteed. Bug and bacteria hate them. They will arrest or cure if you give them a chance. Send to headquarters for information. We have always believed that there would be a good demand for ready-mixed poisons and plant medicines.

THE JOE STRAWBERRY. FIG. 73.

heaviest yielder and best cooker of all the extra-early varieties. Said to have been raised from seeds of Bermuda-grown potatoes. Claims are made for the general superiority of northern-grown seeds. The accompanying little booklet on "Seed Truth" is an excellent exposé of the methods of sensational seedsmen, and is spicy reading.

H. S. WILEY, Cayuga, N. Y.; catalogue of Cayuga Nurseries. Fruit trees and general nursery stock; 28 pages. A fine and useful selection of fruit trees and plants. The Dikeman and Baldwin cherries are prominent novelties offered as specially hardy, vigorous and fruitful. The Dikeman is a very large, late black cherry, while the Baldwin, now becoming known, is of the large-fruited early Morello type. The new hardy peach, Clifton Park, is exclusively offered in this catalogue. The points of superiority claimed for it are extreme hardiness, fine flavor and handsome appearance. It has borne three full crops in five years in Saratoga Co., N. Y. The Hudson peach, a large yellow late variety of great promise is prominently offered. We notice some fine cuts of Burbank's new plums. The Baldwin cherry is shown at Fig. 74.

THE STORRS & HARRISON Co., Painesville, O. Spring catalogue for 1901; 168 pages; colored cover, showing pansies and sweet peas. A very extensive list of seeds, plants and general nursery stock is offered. Some of the departments are remarkably full, and it must be a very exacting customer who fails to find what he wants within the pages of this comprehensive catalogue. The Admiral Dewey peach, Fig. 74, is offered as superior in many respects to the Triumph. It ripens at the same time, is a perfect freestone, the flesh is yellow, and of uniform texture and color to the pit. The form and color is better, and the

SLUG SHOT is an insecticide that holds its own. Years come and go, yet Slug Shot keeps on slugging the bugs wherever it can get them in the ring. Age may not add to the reputation of butter and cheese, but it is a priceless boon to an insecticide, for a farmer would no more buy a bogus insecticide the second time than a hunter would use a powder which he knows will not explode. Benj. Hammond, Fishkill, N. Y., is the Slug Shot man.

THE LEGGETT dry-powder gun is still the standard bug duster. This gun blows out the dry insecticide with a powerful blast through tubes which can be aimed at plant or tree. The dust gets there—so does the gun. Leggett Bros., Pearl Street, New York, make this gun and also small sprayers which are operated by compressed air or popgun principle. They also sell insecticides, dry Bordeaux Mixture, and other plant necessities.

THE DEMING COMPANY, Salem, O., manufactures a complete line of spray pumps and spraying materials. The bug and the plant-disease germ know that though the man behind the pump may be alive and active, it is the pump and nozzle that are to be feared. The cheap pump will not do the work. The catalogue of the Deming Co. will show what they offer.

The Lincoln Pear

"The best pear we ever tasted" is what every one says about the Lincoln. Annual bearer, very hardy, Fruit large, solid, golden yellow, juicy and aromatic. Season, August and September. Very prolific. Handsome catalogue, free. Agents wanted. Introduced and sold under copyrighted label exclusively by

W. E. Jones Co., Lincoln, Ill.

PAGE'S SEEDS
ALWAYS GROW.

We are not selling gold dollars for fifty cents We are not selling you $1.19 worth of seeds for 10 cents, to pay for postage and packing Nor are we giving away silverware, houses and lots or offering any other catchpenny schemes. If you wish Reliable Seeds at Reasonable Prices, we shall be pleased to hear from you. Our lithograph, illustrated catalogue free for the asking.

THE PAGE SEED COMPANY,
GREENE, N. Y.

HAMMOND'S
Michigan Northern-Grown Onion Seed.
I sold 56,000 lbs. of this seed in 1899. My customers report yields of 450 to 1,265 bushels of onions per acre from this seed. Some of them intimate that this seed is worth $5 to $10 per lb. more than the California grown seed sold by anybody. I guarantee this seed to be new and freshly grown. We have seed of all the leading and standard varieties. We make special prices on large lots. Onion sets of all varieties. Buy direct from the grower. Catalogue—extended and illustrated—free.
HARRY N. HAMMOND SEED CO.
Box 42, Bay City, Mich.
Formerly of Fifield.

Vitality and Purity
has given Ford's Sound SEEDS a world-wide popularity. Catalogue of Seeds, Potatoes, Plants, Bulbs and Trees FREE. FORD SEED CO., Box Q, Ravenna, O.

HOLMES' CATALOGUE OF TESTED SEEDS FREE
Describing fully a number of the most wonderful vegetable introductions of the New Century, including: The Earliest Sweet Corn in the World, The Famous Holmes-Houser Cabbage, and other novelties of extreme merit. Write to-day for catalogue. It is free. A postal card will bring it.
HARRY L. HOLMES, Seedsman, Harrisburg, Penna.

STARK TREES SUCCEED WHERE OTHERS FAIL.
Largest Nursery. *Fruit Book Free.* Result of 76 years' experience.
STARK BROS., Louisiana, Mo.; Dansville, N.Y.

Cow Peas—Early Black, Whippoorwill and New Era. C. C. BROWN, Bridgeville, Del.

ASPARAGUS Roots.
Address CHAS. H. MATHIS, Blackville, S. C.
Mention this Paper.

Our Nursery Stock is the best, prices the lowest. Everybody send for catalogue and save money. ERNST'S NURSERIES, Moseow, O.

PLANTS.—Strawberry, cabbage, tomato, pepper, sweet potato, cauliflower, celery and egg plant. Asparagus roots. Catalogue free.
CALEB BOGGS & SON, Cheswold, Del.

Do You Want the Best Strawberries for Home use or Market? Then plant your beds from my extra fine stock.
WM. PERRY, Cool Spring, Del.

STRAWBERRY PLANTS — Nettie, Robbie, Sample and other new and standard varieties. Cat. free.
B. KING, Tewksbury, Mass.

SEED DUE BILL FREE
To get new customers to test my Seeds, I will mail my 1901 catalogue, filled with more Bargains than ever and a 10c Due Bill good for 10c worth of Seeds for trial absolutely free. All the Best Seeds, Bulbs, Plants, Roses, Farm Seeds, Potatoes and many Novelties at lowest prices. Ginseng, the great money making plant. Giant Prize Tomatoes, 2 to the foot, Pan American Oats, sent out free to farmers, and two Free Passes to Pan American Exposition, Buffalo, N. Y. are offered. $2,635.00 in cash premiums. Don't give your order until you see this new catalogue. You'll be Surprised at my bargain offers. Send postal for catalogue to-day. It is FREE to all. Tell your friends to send too.
F. B. MILLS, Box 79, Rosehill, Onondaga Co., N. Y.

Everblooming Hardy Roses.
I grow them. Don't bother with little mail-size plants. Get strong three-year old field-grown BUSHES—vigorous and hardy! I have them. Try this half dozen—all perpetual bloomers: Mrs. John Laing, soft pink; Anna Diesbach, bright rose; Coquette des Alpes, finest white; Gen. Jaequeminot, crimson scarlet; Baron Bonstettin, dark velvet; Paul Neyron, largest and finest of all. Too heavy to go by mail. Big, strong bushes that will bloom profusely the first season. By express, prepaid, $2. Order to-day.
J. A. CALLISON, Rose Grower,
Grand View Station, Des Moines, Ia.

If your dealer does not keep
Packard's Ensilage Seed Corn
write to-day for circular and sample. My seed corn ALWAYS GROWS. If you own a silo, you need my Early Mastodon corn. Makes one-third heavier crop than Leaming. Other varieties.
PACKARD, Seed Grower, Dover, Del.

For 14 Cents
215
We mail the following rare seed novelties.

1 pkg. Blue Blood Tomato Seed,	$ .15
1 " Northern Lemon Seed,	.15
1 " Mama's Favorite Onion Seed,	.10
1 " Emerald Green Cucumber Seed,	.10
1 " City Garden Beet Seed,	.10
1 " 13-Day Radish Seed,	.10
1 " La X. Market Lettuce Seed,	.15
3 " Brilliant Flower Seed,	.15
	$1.00

Worth $1.00 for 14 Cents.
Above 10 packages rare novelties we will mail you free, together with our great illustrated Seed Catalog, telling all about
Salzer's Billion Dollar Grass
Also Choice Onion Seed, 60c. a lb.
Together with thousands of earliest vegetables and farm seeds, upon receipt of 14c. and this notice. When once you plant Salzer's Seeds you will never do without.
JOHN A. SALZER SEED CO., LaCrosse, Wis.

Seed Potatoes—18 kinds. $3 a barrel. Cir. Free
F. FINCH, Box R, Clyde, N. Y.

SECOND-CROP Seed Potatoes. Earliest and best seed grown. Catalogue free.
A. A. WHITTINGTON, Marion Sta., Md.

POTATOES—Bovee, Carman, Cobbler, Harvest, Six Weeks, Ohio, Rose, Astonisher, 85 kinds.
C. W. FORD, Fishers, N. Y.

Heath's New Seedling Potatoes, free from Scab and Blight. Big yielders; fine quality. Price list and State Reports free. Prices low.
T. C. HEATH, Tidal, Armstrong Co., Pa.

EARLY OHIO SEED POTATOES.—Pure, choice seed. Price, $3 per barrel, of 4 bushels each. Address L. NORMAN NELSON, Laney, Shawano Co., Wis. Postal Money Order on Seymour, Wis.

SEED POTATOES.—Bovee, White E. Ohio, Peachblow, Minister's Commercial and others Sample tuber 6 cts., lb. 20 cts. List free.
J. W. HARTMAN, Sligo, Pa.

For Sale About 300 bushels Extra Choice Early Bovee Potatoes, free from disease and scab. For prices etc., address
J. D. MILTON, Seneca, Ont. Co., N. Y.

CARMAN No. 3 $3.00
Sir Walter Raleigh and Early Bovee $4.00 per bbl. all bbls. 4 bu. Dewey, the great cropper. Wholesale list *free*. GEO. A. BONNELL, Waterloo, N. Y.

SECOND-CROP Seed Potatoes pronounced everywhere best seed grown, come earlier, grow larger crops, than from any other seed. Get the best Strawberry, Rasp., Blackberry, plants, Asparagus Roots, Seed Corn, etc. Cat. free. J. W. HALL, Marion Sta., Md.

SEED POTATOES
Grown by us in Maine.
HENRY ELWELL & CO.,
310 Washington Street, New York.
Mention this paper.

ROUGH RIDER, SEN. DUNLAP, and other CUMBERLAND RASPBERRY, KING OF MICHIGAN POTATO.
STRAWBERRIES 100 Varieties.
HEADQUARTERS FOR HIGH GRADE **Plants and Seed Potatoes.**
Descriptive Catalogue Free to All.
FLANSBURGH & PEIRSON, Leslie, Mich.

Rough Rider Strawberry.
Best shipper, best keeper, best seller, $1,150 from 2¼ acres last year. We are headquarters for plants, having 7 acres to dig from. Order direct from the introducer and get the genuine stock Agents wanted in all great strawberry sections. Catalogue free
L. J. FARMER, Nurseryman, Pulaski, Oswego Co., N. Y.

First-Class Trees at Low Prices.
In addition to a good assortment of all kinds of Nursery Stock, I am pleased to quote as follows:

Kieffer, extra, ¾ to 1 inch	$25 per 100
Apple, extra, ¾ to 1 inch	$16 per 100
Plum, extra, ¾ to 1 inch	$15 per 100
Peach, extra, 4 to 6 feet	$5 per 100

Asparagus Roots, 2-year, $2.50 per 1,000. Send for my 1901 Catalogue.
C. A. BENNETT, Proprietor of the Robbinsville Nurseries, ROBBINSVILLE, N. J.

TREES AND PLANTS—Choice new varieties, such as Premo Dewberry, Brilliant Raspberry, Bobolink and Marie Strawberries. Old standard sorts of Trees and Plants. Free catalogue telling about them. MYER & SON, Bridgeville, Del.

JERRARD'S SEED POTATOES & EARLY SEEDS
ALWAYS EARLIEST & BEST
THE GEORGE W. P. JERRARD CO. CARIBOU, ME.

Catalogues for 1901.

[CONTINUED.]

FIELD FORCE PUMP CO., Lockport, N. Y., is a reliable house. They carry a full supply of pumps and spraying materials. Just now there is a demand from many farmers for pumps and tanks of large capacity. It is found too expensive to use small barrels in spraying large orchards. The Field Company can supply just what is needed by these large growers—and small ones, too.

THE HANDY WAGON CO., Saginaw, Mich., makes a wagon that is handy in the best sense of the word. It is low down, thus saving many a backache. Its wheels enable it to be turned around inside a small space. The wheels are made of wood—solidly built, so that on soft roads the mud will not crowd around rim and spoke, and double the draft. But it seems like an old story to mention the good qualities of this wagon—they are apparent to anyone who will glance at the picture.

MORE CATALOGUES.

H. W. BUCKBEE, Rockford, Ill. Seed and plant catalogue. A large catalogue with an extensive assortment of garden, flower and economical seeds as well fruit and ornamental plants.

D. HILL, Dundee, Ill. Catalogue of evergreens and nursery stock, 26 pages. Many interesting plates showing seedling evergreens. A complete and extensive collection is listed, including some marvelously cheap offers of seedling evergreens.

R. J. FARQUHAR & Co., Boston, Mass. Catalogue of seeds; 120 pages, handsome cover. A large, complete and well-illustrated catalogue, listing an immense variety of articles. All the standard varieties as well as foreign and home novelties may be found.

ness of color, and has all the other good qualities.

SILAS WILSON NURSERIES, Atlantic, Iowa. Wholesale price list of nursery stock, and circular of McPike grape. The McPike made the most satisfactory growth of all the grapes on trial on the Rural Grounds last year.

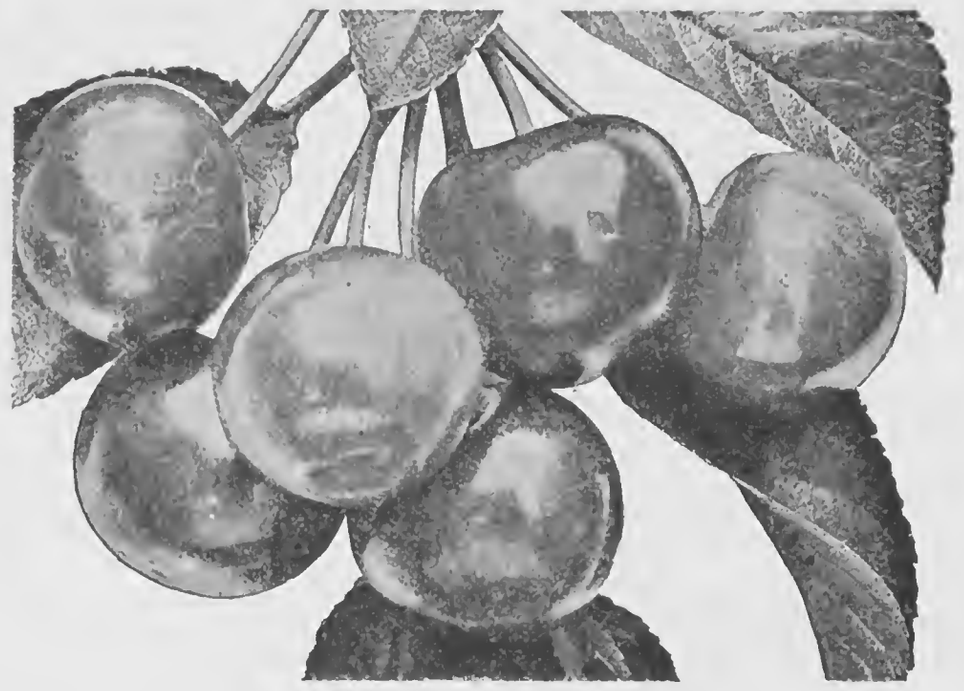
ALLEN L. WOOD, Rochester, N. Y. Catalogue of fruit plants; 18 pages; handsome colored cover, showing new berries. A most excellent list, comprising mainly varieties of established merit. One can scarcely go wrong in ordering from this discriminating catalogue.

SCHLEGEL & FOTTLER, Boston, Mass. Catalogue of seeds; 112 pages. A complete and satisfactory catalogue in every department of seeds, Summer flowering bulbs and garden requisites. All the home and foreign novelties may be found, as well as the meritorious standard varieties.

C. E. WHITTEN, Bridgman, Mich. Catalogue of small fruit plants; 18 pages. The list of strawberry varieties is brought right up to date. Rough Rider, Sample and Senator Dunlap appear to be most promising of the new kinds, but all the reliable and successful sorts may be found in the various departments.

THE GEO. A. SWEET NURSERY CO., Dansville, N. Y. Thirty-third descriptive catalogue of nursery stock; 32 pages. A compact and practical catalogue, mainly devoted to fruit trees and plants. Most of the descriptions are by Prof. H. E. Van Deman. The standard and well-tried varieties are chiefly offered.

LIVINGSTON'S SEED STORE, Des Moines, Iowa. Fourteenth annual seed catalogue; 66 pages, colored cover. A very complete selection of garden and farm seeds, fruit plants and horticultural requisites. Several select strains of vegetable seeds are offered as specialties, among which is the Tip-top muskmelon, which we know to succeed admirably in many localities.



THE BALDWIN CHERRY. FIG. 74.

WOODVIEW NURSERIES, Uriah, Pa. Catalogue of trees and nursery stock; 48 pages. An extensive and well-selected collection of fruit and ornamental trees. The specialties are York Imperial apple and Kieffer pear. There is also a great variety of small fruits and ornamental shrubs. The cultural directions are excellent.

ALFRED BRIDGEMAN, 13 E. 19th St., New York City. Seventy-seventh annual catalogue of seeds. A model catalogue in the neatness and convenience of its arrangement. The collection offered is very large and complete, comprising about all the standard varieties, and the tested novelties. In addition to seeds a selection of bulbs, ornamental plants and garden necessities is given.

J. VAN LINDLEY NURSERY, Pomona, N. C. Catalogue of Pomona Hill Nurseries; 64 pages. An extensive nursery catalogue, particularly devoted to fruits suitable for the South. The collection of peaches is very large, including all the promising new ones. The latest hybrid plums are also offered. The lists of apples for special localities are very interesting.

SHADY HILL NURSERY CO., Boston, Mass. Catalogue of nursery stock; 166 pages, devoted mainly to ornamental trees and plants, of which there is an immense collection. The catalogue is very neatly got up, and well illustrated. A novelty supplement of 30 pages contains some gems in the way of reproductions. The descriptions and notes on cultivation are very good.

MYER & SON, Bridgeville, Del. Catalogue of Bridgeville Nurseries; fruit trees and plants for profit; 18 pages. A business-like catalogue with direct simple descriptions of a full list of fruit trees and plants, late novelties as well as standard varieties. The new dewberry Premo resembles Lucretia, but is 10 days earlier, being gone before Lucretia ripens. The Brilliant red raspberry is superior to Miller in bright-

FORD SEED CO., Ravenna, O. Twenty-first annual catalogue of flower, vegetable and farm seeds; 48 pages. A neat and well-printed catalogue, containing a full and well-selected list of standard seeds, together with fruit trees and plants, and some garden and farm requisites.

J. H. LINDSLEY, Whitehouse, N. J. Catalogue of Lindsley's nurseries; 10 pages; fruit trees and plants. The new Harvest King pear is described as six days earlier than any other, large, golden yellow, with carmine cheek, free from disease and very productive. The Iron Mountain peach and Champion apricot are strongly recommended.

R. DOUGLAS'S SONS, Waukegan, Ill. Wholesale catalogue of Waukegan Nurseries; eight pages. A short list, but comprising all the evergreens and forest trees of value known to succeed in the Middle West, as well as many choice and rare species. The prices seem very low and attractive.

J. A. EVERETT, Indianapolis, Ind. Catalogue of seeds and farm supplies; 128 pages. A compact and closely-printed catalogue offering a great variety of farm, garden and flower seeds and plants, together with special tools. The Blight-proof Early Ohio potato is claimed to resist blight and retain all the good qualities of the parent variety. Cuts from photographs are given, showing this variety growing in luxuriance while others fail.

CALL'S NURSERIES, Perry, O. A 24-page catalogue of fruit trees, plants and ornamental nursery stock, with colored plate of the Arctic peach, which is introduced as one of the best and the hardiest peaches grown. It bears after being set two years, and produces a full crop where others fail. A large yellow-fleshed, freestone variety of excellent quality, ripening about October 1 in Ohio. A hardy and reliable peach is certainly needed in all northern localities.

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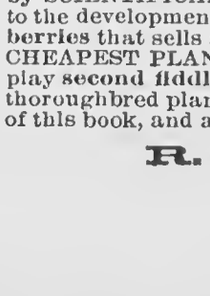

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A new variety and very early. This DEWEY Peach—beats the Triumph. Perfect free stone; heavy delicious, hardy productive. Tree is strong, vigorous grower. Plant some this season. Special prices on early Orders. Catalogue Free. Write to-day.

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Always did, always expect to, with a start of a baker's dozen of decidedly distinct varieties of known merit. *Six or seven BRAND NEW ONES for 1901.* One of the best among the new ones a *Purple Fruited Honor Bright*, the most strikingly distinct tomato ever sent out; differs from all others, and bound to be popular. *WE PAY $60 FOR NAMES.* Our **Beautiful Free Seed Annual** tells about the new tomatoes, prizes for names and many other new things.

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"STRAWBERRY PLANTS THAT GROW."

LUTHER—Most promising Extra Early, $3.50 per M. ROUGH RIDER—Best late, $2.25 per 100. Fifty other Strawberries. Also, Raspberry and Blackberry, Currant and Grape Plants. CATALOGUE with CULTURAL INSTRUCTIONS FREE. **C. E. WHITTEN, Bridgman, Mich.**

EVERY FRUIT GROWER SHOULD READ R. M. KELLOGG'S NEW BOOK, ENTITLED

GREAT CROPS OF SMALL FRUIT

AND HOW TO GROW THEM. The author has grown the largest crops of fancy fruit ever produced on an acre. In his experimental grounds are **single plants which yield over FOUR QUARTS** each of fine large berries. His customers have done as well. This has been accomplished by SCIENTIFICALLY BREEDING up plants to a high fruiting vigor so they throw their energies to the development of fruit instead of useless runners. **The profit comes from a big crop of big berries** that sells at sight to regular customers. This book tells you all about how it is done. THE CHEAPEST PLANT is the one that will give you the best fruit and most of it. You can't afford to play **second fiddle** on the market by using scrub plants. The only stock of scientifically-grown thoroughbred plants in the country for Spring planting. Send your address **at once,** and get a copy of this book, and a revised edition for three years FREE. Address

R. M. KELLOGG, Three Rivers, Mich.

Catalogues for 1901.

[CONTINUED.]

WM. PERRY, Cool Spring, Del. Circular of strawberry plants. Only tested varieties are offered, at very low prices.

D. BRANDT, Bremen, O. Catalogue of strawberries and small fruits; 42 pages. A large list of standard and new varieties, with extended information concerning the novelties.

SUNNYSIDE NURSERY, Reading, Mass. Catalogue of seeds, Summer-flowering plants and small fruits. A specialty is made of Dahlias, and some beautiful cuts of new varieties are given.

J. H. TRYON, Willoughby, O. Price list of grapevines and small fruits. All the good varieties are offered, as well as such promising new ones as the McPike and Campbell's Early grapes.

O. A. E. BALDWIN, Bridgman, Mich. Catalogue of Railroad View Fruit Farms; strawberries and small fruit plants; 30 pages. A safe and critical list which does not exclude promising new varieties.

HIGHLAND NURSERY CO., Rochester, N. Y. Catalogue of nursery stock and fruit trees; many excellent illustrations in half tone. This is a remarkably neat and satisfactory catalogue. The selections of standard varieties in every department are safe and good. The Chester apple to be first offered next Fall; said to be a wonderful bearer, blooming over a period of four weeks. Fruit can be picked from July 20 to October 1; golden yellow, large, and of good sub-acid quality.

SLAYMAKER & SON, Dover, Del. Catalogue of small fruit and celery plants; 20 pages. The new Auto strawberry is described as a phenomenon in size and productiveness, some of the berries measuring over two inches across, and all being large. It has yielded under ordinary treatment at the rate of 8,000 quarts an acre. It is less acid than other kinds, and the flavor is very rich. A fine assortment of new and standard varieties of different fruits is offered, and the new method of growing dewberries without stakes is described.

B. KING, Tewksbury, Mass. Catalogue of strawberry plants. A short list of excellent varieties, including the new ones. Several of J. H. Black, Son & Co.'s pedigree strawberries are offered.

W. C. BECKERT, Allegheny, Pa. Garden, field and flower seeds; 48 pages. A neat and well-pruted catalogue covering the field of useful and ornamental seeds, as well as garden supplies.

G. C. STONE, Dansville, N. Y. Catalogue of fruit and ornamental nursery stock; 80 pages. Colored plates of Eaton grape and Crimson Rambler rose. A full and extensive catalogue, mainly confined to standard varieties.

PETER SPEER, Passaic, N. J. Price list of trees and plants grown at Allwood Fruit Farm. A very neat and useful collection offered at modest prices. The Perfection strawberry hoe is a novel and apparently useful implement.

COE & CONVERSE, Fort Atkinson, Wis. Catalogue of fruits and ornamental trees and plants; 32 pages. About everything the farmer cares to plant in the way of fruits and ornamentals may be found in this modest catalogue.

G. C. WATSON, Philadelphia, Pa. Trade offer of grass and garden seeds, mushroom spawn and garden supplies; 16 pages. Mr. Watson publishes an excellent treatise on mushroom growing which he sends to purchasers of the spawn.

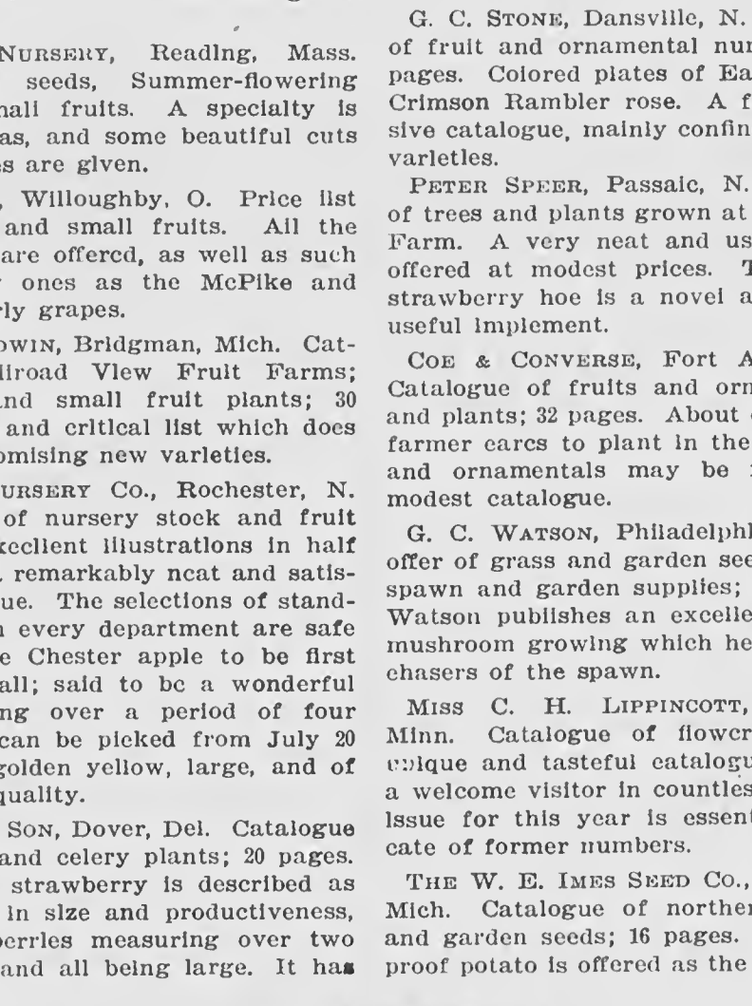
MISS C. H. LIPPINCOTT, Minneapolis, Minn. Catalogue of flower seeds. This quaint and tasteful catalogue has become a welcome visitor in countless homes. The issue for this year is essentially a duplicate of former numbers.

THE W. E. IMES SEED CO., Vermontville, Mich. Catalogue of northern-grown field and garden seeds; 16 pages. Imes' Blight-proof potato is offered as the most vigorous early potato yet produced. Several other new potatoes are strongly recommended, and a large list of garden seeds offered.

ELLWANGER & BARRY, Rochester, N. Y. Catalogue of Mount Hope Nurseries; 144 pages. This admirable publication does not differ from the issue of last year. Every one interested in horticulture should get a copy when possible; study it carefully and keep it for reference.

CURRIE BROS., Milwaukee, Wis. Horticultural Guide; 98 pages; colored cover, representing novelties in vegetables and hardy flowering plants; also seeds of all kinds and garden implements. The Milwaukee Market melon, Cream City tomato and All Sold radish are the leading specialties, though other varieties are made prominent.

WHEN you write advertisers mention THE R. N.-Y. and you will get a quick reply and "a square deal." See our guarantee 8th page.



THE ADMIRAL DEWEY PEACH. FIG. 75

Burpee's New Farm Annual

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A Grand New Book of two hundred and twenty pages. Entirely rewritten at our famous FORDHOOK FARMS — the largest Trial Grounds in America. New directions for culture, New Leaflets, New Novelties of unusual merit in both Vegetables and Flowers, Elegant New Colored Plates. The Quarter-Century's Record of Progress, New Cash Prizes, and other New Features. **The most complete**

BEST SEED CATALOGUE

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☞ Should you object to paying ten cents for a seed catalogue (even though it is worth a dollar), then **write a postal card for Burpee's "SEED-SENSE" for 1901,**—a "strictly business" catalogue of ninety pages.

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FOR SALE—200 lbs. of Giant Argenteuil Asparagus Seed. This variety of asparagus is the earliest, largest and most prolific asparagus grown on the American continent. Price, $1 per lb. Address WM. C. GERATY, Youngs Island, S. C.

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BEARDLESS BARLEY—Wonderful to yield; best of feed. **Henderson's Clydesdale Oats.** Eclipses all others in size, plumpness and yield. Sample 2c. Potatoes, Corn, Soja Bean, etc. A. J. C. C. Bull Calves cheap. Circulars. D. C. McPHERSON SEED CO., Pine View Farm, Garbutt, N. Y.

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Willowdale, Chester Co., Pa.

Salem Strawberry
I offer my new seedling the Salem at these prices, per mail: 50c. per dozen, $2.50 per 100. In growing, Strawberries 38 years this is the best in all points. Blossom perfect.
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Strawberry Plants.
Our new Catalogue describes about forty varieties fully and honestly, giving not only our opinions, but those of others—unfavorable as well as favorable. It contains the most of what has appeared concerning these varieties in the leading horticultural papers during the past year, as well as many extracts from private letters. It is valuable, and you ought to have it. Free to all.
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Box 1005, Cuyahoga Falls, Ohio.

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Why he is the man that introduced the
SAMPLE STRAWBERRY
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Telephone connection. Box 600.

STRAWBERRIES
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J. F. DAYTON,
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High-Grade Fruit Trees
If those wishing to set out orchards of Apple, Standard or Dwarf Pear, Plums, Cherry, Peach or Quince, will write me stating the varieties and number of each wanted, I will quote them reasonable prices on high grade trees. Stock fumigated if desired.
JAY WOOD, Knowlesville, N. Y.

SEED POTATOES—Our Own Growing.
True to name. Good stock. Best varieties at the following low prices per bbl. of 165 lbs. Sir Walter Raleigh and Carman No. 3, 1sts $2.10, 2ds $2.00. Bovee, Early Michigan, Old Early Ohio, Early Six-Weeks Market, Acme, Burr's No. 1 Early, and Early Trumbull, 1sts $2.75; 2ds of Bovee, Early Michigan, Burr's No. 1 Early and Early Trumbull, $2.25. Bliss Triumph (Red). Pride of South (White Triumph), and Irish Cobbler, 1sts $3, 2ds $2.60. White Early Ohio, 1sts only, $3.25. Big Crop, now offered for the first time. Second early, Rose Color, heavy yielder, best quality, 1sts $1.50, 2ds $3. Darke County Early Mammoth Corn, introduced by us 1896. A large, early, heavy yielding, Yellow Dent. Sure to please, $1.25 per bu. Order now, this ad. will not appear again. Catalogue mailed free. GEO. W. MACE, Box C, Greenville, O.

Ruralisms

NOTES FROM THE RURAL GROUNDS.

A NEW INSECTICIDE.—We have made a very satisfactory test under glass of a new insecticide named Sprayall sent us by Leggett & Bro., New York. It is a dark brown liquid, with a not unpleasant tarry odor, and is evidently a distillation product. It mixes readily with cold water in all proportions, forming a milky emulsion. Diluted with 30 to 40 times its bulk of water, and sprayed on various plants in the greenhouse, it proves fully as effective in killing aphides (green and black lice), Mealy bugs, thrips, etc., as tobacco infusion, and is much more pleasant to handle. When applied in the strength indicated above it does not injure the plants in any way, and a few repetitions rid them of the troublesome pests. In more concentrated solution, some of the younger leaves of tender plants are killed. While the insecticide value of Sprayall is apparently not greater than tobacco tea it is far more convenient, in that it seems to be permanent in solution, and can be kept ready for immediate use for an indefinite time, while tobacco infusions soon ferment, and must be made up fresh when needed. The Leggett people think that Sprayall is a good disinfectant and deodorizer as well. They purpose to sell it at a lower price than any other handy insecticide can now be obtained.

A BIRDLESS WINTER.—Although our Winter averages quite mild up to the last week in January, birds have been unusually scarce about the Rural Grounds. Few were seen except the modest and sprightly juncoes or black snowbirds, and the usual Winter flight of crows crossing daily from the hills to the beaches, and returning when the tides drove them from the shore. Severe weather set in with the coming of February, and still continues with little abatement. During the lulls in the almost constant sharp north winds a few robins, bluebirds and Meadow larks come chirping about the buildings, and one small flight of Yellow-rumped warblers was noticed in an evergreen hedge one chilly but sunny morning. Their actions showed plainly that they felt out of place. A young Sparrow hawk has been making himself very much at home for weeks, coming daily to the lawn terraces, bare of snow on their southern slopes, apparently in search of dormant grasshoppers or other insects, but always keeping an eye on the impudent European sparrows, which have apparently learned to respect his presence. This usually shy bird has become so accustomed to undemonstrative humanity that it now permits a very close approach. After many years' close observation of the smaller native hawks we are convinced that they are really useful birds, as the great bulk of their food consists of large insects, mice and reptiles, small birds, as a rule, only being pursued when other supplies fail. Severe cold weather usually brings a flight of northern birds down the coast, but none has been noticed here so far.

A FINE NATIVE CRABAPPLE.—We received from Chris Roessle, Jefferson Co., Wis., some large and beautifully colored wild crab apples. They were rather larger than full-sized Lady apples, rich, waxy, yellow in color, with a bright red cheek. Mr. Roessle rightly remarks that they are remarkable crabs for his part of the country. The tree was found last Fall, and he judges it to be about 10 years old. It bore about a bushel of apples, all large, and most of them with red cheeks. They had the usual high aromatic quince-like perfume of our common native crabs, but the flesh was much less acerb in flavor. When cooked with sugar they developed more agreeable qualities than any of the Siberian crabs we have tried. From their appearance and quality one would conclude Mr. Roessle's crab is a hybrid between the western wild crab, Pyrus Ioensis, and some cultivated apple. Several fine native crabs are now in limited cultivation, viz., the Soulard, Fluke and Matthews crabs. The two latter are credited with bearing fruits as large as the variety we are considering, but no mention is made of the attractive red flesh, all being described as yellow in color. When we consider the hardiness, vigor and exemption from disease of our native crabs, their long-keeping qualities and distinct and excellent flavor when cooked, it seems strange that greater progress should not have been made in their adaptation for culture. The national dish of England, as recently reported by a United States consul, has changed from beef to fruit jams, so enormous is their consumption of late years, and the jam habit is rapidly growing in all foreign countries. Now the base of much of this jam is made from the cores and peels of American apples, gathered at the evaporators and canneries and exported for the purpose. Enough other fruits or berries are mixed in this apple jelly to give the desired flavor and consistence. If in time we could get some greatly enlarged and productive crabs of Mr. Roessle's type a very superior article of apple jelly or marmalade could be made in immense quantities at convenience, as the fruits may be kept over Winter with but little loss. It would take a long time, however, to ameliorate these sturdy native apples sufficiently to make them of real commercial value, and meanwhile Europeans may find some other material to hypothecate their jams. We consider Mr. Roessle's crab well worthy of home cultivation in its present state, if the tree is sufficiently healthy and vigorous. W. V. F.

How to Handle Leaves.

I see your Hope Farm man has had considerable instruction on the way to gather leaves. I thought perhaps my experience might be of some use to him, as we have used leaves for litter for the last 18 years. We began by raking in piles and windrows, the same as hay, and that practice still holds good. But the great problem was getting them into the wagon. We used large straw forks to begin with, but they would not hold enough. In Auburn one day, I saw them loading with baskets which held four or five bushels. I thought that was a good thing, so I made a crate out of light wood that would hold a large amount of leaves, but it was too much labor, and did not give satisfaction. Then I tried large sacks and various other devices; none of them was satisfactory. I conceived the idea of a large wooden fork to run under the leaves. That was next to the best thing which I ever used. But the wooden teeth bothered a great deal on uneven ground; would not go through a pile of leaves well, neither would it always load evenly, so I got a long-handled and long-tined barley or gavel fork, and that is the nearest to a success of anything that we ever used. It works in a hollow, on a knoll or anywhere where one can find leaves, and a man who understands using it will put them into a large body as fast as two can care for them. A. P. H.

Ithaca, N. Y.

The Box for Western Apples.

There is no doubt but the packing and shipping of fruit in boxes throughout the East would increase the demand, making customers of an army of small families, and those not able to take care of fruit in large packages. I believe that such when boxed should be choice, and think that very much better prices could be had. I have not seen a bushel or half-bushel basket during residence in Washington; apples are all packed in boxes, pears and peaches also in boxes, and paper-wrapped, while apricots, nectarines, and plums, wrapped, are marketed in baskets, and crated four baskets to the crate; grapes crated four baskets to crate. All vegetables are sold by weight, including lettuce; celery by bunch, 12 stalks to bunch. This method of shipment will hold good also for Idaho and Oregon. The above States are extending their market for apples, and this past season a great many carloads have been sent in to the Middle West. H. G.

Addy, Wash.

Evergreens

You can increase the value of your home or farm by the use of ornamental and shade trees at little expense. We are the largest growers in America of **Evergreens, Shade Trees and Forest Trees.** We supply both Wholesale and Retail trade. Trees sent by mail. Let us send you price-lists of anything you want.

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FREE Illustrated Catalogue of Choice Evergreens, Shrubs, Fruit, other Trees, Roses, Water Lilies, etc. Prices low.
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Catalogue is now ready. Lowest prices for strictly reliable stock. True to name. Fruit Tree Seedlings **York Imperial, Kieffer, Peach**—Specialty.
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will find in our elegantly illustrated new Catalogue, a synopsis of all the most charming trees, vines, shrubs and roses in cultivation. It is, in fact, a perfect handbook of the "Flora of the World," suited to our climate and botanically correct. Price 10 cents.

HOOPES BRO. & THOMAS,
MAPLE AVENUE NURSERIES,
WEST CHESTER, PA.

PEDIGREED **PEACH** TREES o o
New Fruits and Berries—Low Prices.
Everything for the Fruit Grower. Catalog FREE.
LINDSLEY'S NURSERIES, Whitehouse, N. J.

TREES
300 ACRES.
For more than 50 years we have grown nursery stock—only varieties of known worth. Fruit, Ornamental trees, Shrubs and small fruits. **October Purple Plum,** fruited with us last year, excels Abundance and Burbank in every way and is one month later in ripening. We have large stock of two-year old trees. Extra fine stock of Green Mountain Grape. Catalogue **free.**

STEPHEN HOYT'S SONS,
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TREES—Young budded Apple, Pear and Plum, 11c. each. Send to G. C. STONE'S Wholesale Nurseries, Dansville, N. Y., for 80-page Catalogue. Secure varieties now; pay in Spring.

TREES

Fruit Trees, Small Fruits including **Grapes. Ornamental Trees, Evergreens** and **Flowering Shrubs** for public and private grounds. **Shade Trees** for streets. **Hardy Roses, Hardy Plants, Climbers, etc.**

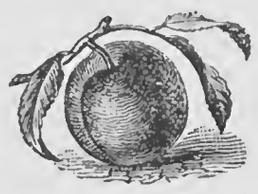
Our beautifully illustrated catalogue contains accurate and trustworthy descriptions of the choicest varieties, and is replete with practical hints indispensable to planters; it will be mailed **free** on application.

ELLWANGER & BARRY,
Mt. Hope Nurseries, ROCHESTER, N. Y.
Established over 60 Years.
Mention this publication.

SEEDS, PLANTS,
Roses, Bulbs, Vines, Shrubs, Fruit and Ornamental Trees. The best by 47 years test. 1000 acres, 40 in Hardy Roses, 44 Greenhouses of Plants and Everblooming Roses. Mail size postpaid, safe arrival guaranteed. Try us, our goods will please you and direct deal will save you money. Valuable 168-page Catalogue Free.
THE STORRS & HARRISON CO.,
Box 244 PAINSVILLE, OHIO.

Dwyer's 18th Annual Spring Catalogue

contains a thorough description of all the good Fruits for commercial and garden purposes. Also, descriptions of all the valuable Ornamental Trees, Vines, Plants, etc., for beautifying the home grounds. It is a book of 68 pages, with nearly 100 illustrations of the best Fruits and Ornamentals. We offer a choice Lawn Grass Mixture, and all the best grasses and clovers. The Catalogue is useful and instructive. The colored plates are beautiful. Mailed free to all who write for it and mention THE RURAL NEW-YORKER. Send for it at once. Address



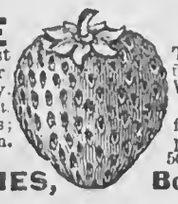
T. J. DWYER & SON, Orange Co. Nurseries, **Cornwall, N. Y.**

FRUIT TREES of **Superior Quality.** Get my catalogue to-day, with indorsements from many *Orchardists* who have *Bearing Orchards* of my trees many years planted. Anyone can produce testimonials of recent shipments. A period of years of fruitage is the *TRUE TEST.* Yes, sir, I fumigate; was among the first to advocate it. Special inducements prior to March 15 on *Apple* and *Pear* trees. H. S. WILEY, Cayuga, N.Y.

TREES Ours have stood the test of 50 years. Send for price list.
600 Acres. 13 Greenhouses. Established 1852.
PHOENIX NURSERY COMPANY,
1200 Park St., Bloomington, Illinois.

100 20 30 **VARIETIES JAPAN PLUMS** in Trial Orchard. Listed for Sale. Thrown Away.
We paid from $1 to $5 apiece for trees when introduced, and many times that for experience. We give away the experience, and sell the trees at a nominal price. We have some varieties we know are good, and plenty we know nothing about, if you prefer to pay for your own experience. FREE CATALOGUE—Fruit Trees, Berry Plants, Gladioli, Dahlias, Roses, Shrubs, Seed Potatoes, Baskets, etc.
THE BUTLER & JEWELL CO., CROMWELL, CONN.

THE THREE WINNERS
The York Imperial Apple just what you have been looking for. Large, bright red winter variety. Satisfies the most exacting. Robust, heavy bearer. 35 others; peaches, pears; everything for the orchard and garden. **Catalogue Free.** Send to day.



The DEWEY Peach. Perfect freestone; heavy and delicious. Very early, hardy and productive. **Gibson Strawberry,** large, fine flavor, very prolific. Good shipper. Catalogue describes this and 50 other varieties. Send for it now.

HARRISON'S NURSERIES, Box 29, BERLIN, MARYLAND.

HOPE FARM NOTES.

THE CATALOGUES.—The Hope Farm people have spent some time in studying the catalogues. It has been time well spent. I am surprised to see how much useful information some of these pamphlets contain. Of course the man behind the book wants to sell seeds and plants, and I don't blame him for that. I would like to have something good enough to sell myself, but simply as books for study and reference these catalogues are well worth examining. There is a good deal of character about these pamphlets. Some of them are mere wind—full of extravagant pictures and stories which any farmer ought to know are false. I would no more buy seeds of people who make such a wild use of printer's ink than I would give money to some overdressed fellow who talked a yard of bad grammar per minute. To my mind some of the smaller circulars issued by the little fellows offer sound bargains. It will certainly pay to spend a few postage stamps on catalogues.

"NOVELTIES" AND BREEDS.—These catalogues offer various "new" things which are pronounced superior to most old ones. Some of the claims are too ridiculous to notice, while others evidently have some basis of fact. Of course we hear a good deal of loose talk about "breeds," but many of us never stop to realize what we are talking about. On every farm we can pick out the marks of various breeds in the cattle, poultry or horses. Certain shapes, colors and habits become fixed by long continued "breeding" until they are sure to appear in our crops and animals. In one sense habits may be said to be good or bad breeds. Their characteristics are fixed, and unless we exert the will forcibly we are sure to do things in the wrong way, because the habit asserts itself. A study of some of the "novelties" named in the catalogues tempts me to go over our Hope Farm plans, and see what "breeds" we have taken up.

FARM CROPS.—The Clydesdale oats have given us good satisfaction. I have tried various so-called "new" varieties, but to my mind they are not new at all. I suppose I could take any good variety and grow it for a number of years, using lots of manure or fertilizer, and selecting best heads for seed, and have a "new" sort. We like a rank-growing stem, as we cut most of the crop for hay. I don't expect to try any new varieties. I have become satisfied that the Beardless barley may do better than oats with us, and I shall try a few bushels. Last year I raised the Thoroughbred flint corn entirely. It gave a tremendous yield of stalk, and is, I think, the best silage corn for the North. It does not yield as much grain as I like, and the corn is too hard for young pigs to crack. I shall plant one field to Huron dent, and another to a local dent, which the neighbors praise highly. A variety that has succeeded for years in a certain locality is pretty likely to do better than some new "breed" produced elsewhere. After all, a "new breed" is quite likely to turn out to be a "local favorite." For potatoes I shall plant mostly early varieties. After several years of careful observation I must say that June Eating suits our farm better than any other variety we have tried. Junior Pride is earlier, and we shall plant a few barrels of it, as it comes in ahead of June Eating. I have become a little weary of testing new "breeds" against our old stand-by, but this year I expect to plant Dewey, The Gem, Scotch Rose, Early Pingree, and possibly others by its side. Late potatoes are not very satisfactory with us, but Carman No. 3 and Rural Blush have been our best. I sent a few samples of Rural Blush to a farmer in Ohio, and he said that they gave a soggy, miserable lot of tubers. With us this potato is the best in quality. For cow peas I would use Early Black or Whippoorwill if seed was desired, or Wonderful or Red if vine only is wanted. We shall sow considerable Dwarf Essex rape and Early Amber cane for hog feed, and a small lot of Kaffir corn.

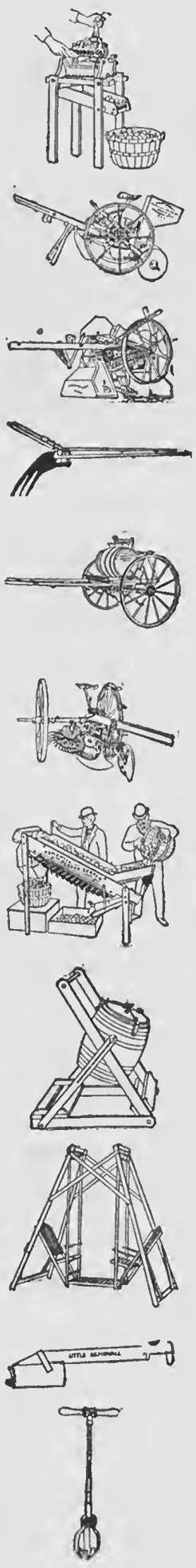
LIVING ANIMALS.—As a rule the live stock on the farm is not so purebred as the vegetables, fruits and grains. We have four purebreds at least. Hugha, the Berkshire sow, is full of the bluest of blood. The old cow is a Jersey of pedigree, but not registered. Shep, the dog, is a well-bred Scotch collie, and a gentleman in fur, if there ever was one. Dick, the Wyandotte rooster, is of royal blood, but the hens are a mixed lot. They have worked up to 20 eggs a day, however, which performance makes up for their lack of pedigree. The two heifers from the old cow have a Holstein father. The result of this cross is disappointing thus far. I think less of these heifers the larger they grow, for they are coarse and beefy. I now find that several years ago a Holstein was brought into this county—his owner having about the same theory that I had. Almost all his daughters from Jersey cows have proved disappointing. That's what you get by riding a theory when facts are right at hand. These heifers may surprise me yet, however. I hope they will, but hereafter I shall try to breed as close to type and form as I can. Horses are usually a mixed-up lot, for purebred animals are scarce among them. This is because farmers buy most of their horses, and when they do breed have little option as to pedigree. Frank and Dan are western horses, Frank showing traces of one of the English draft breeds. Major is an ex-car horse—one of the workers thrown out of a job by steam power. Nellie Bly, the brood mare, has good blood, and may raise the standard of the Hope Farm stable yet. Give us a year or so and we will have better animals in yard, pen and barn—that is, we will have them more uniform, at least.

HOME NOTES.—No use trying to give the pedigree of the Hope Farm folks. It is too much mixed up. Go back two generations in our household, and you will find English, Irish, Scotch, French, German and Dutch. The little Bud, for example, is a mixture of Massachusetts and Mississippi—a combination of several nations. What a mixed-up "breed" your American is. He certainly hasn't much to be proud of in the way of pedigree. He had better hustle about and establish a record for *performance*, and let pedigree take care of itself. . . . . Our children are gaining words at a rapid rate. Almost before I knew it they were picking up books and papers and reading to me. The Bud came to me in great trouble the other night. She had found a paper in which some foolish fellow, trying to be smart, had misspelled a lot of words and thrown in a lot of slang. The Bud could not understand those wrong letters in the printed words, because Mother and the book left those letters out. It was a serious thing to that little mind, for she had been taught to believe that a word is a true and important thing. It rather shocked her to think that a person should fool and play with a printed word! . . . . I have never known the cold weather to hang on as it does this year. A year ago our roads were deep mud; now they are still frozen solid, and deep snowdrifts line them. The grass and grain are only partly covered with snow, but they look better than I expected to find them. The keen, bitter winds delay outdoor work and make life miserable for the thin-skinned people. After all, it isn't so much the thickness of the skin as it is the layer of fat that keeps the cold out. Take a Short-horn and a Jersey steer, well fed and healthy, and turn them out in the cold. The Short-horn will lie down in the snow and chew its cud in genuine cold comfort. The Jersey will hump its back in sorrow. How is this? Nature has fixed in the Short-horn the habit of depositing fat on the outside of the carcass. The steer really has an overcoat of fat. Nature has made the Jersey differently, and its fat is mainly deposited on the inside, along and around the vital organs, so that it has no overcoat. H. W. C.

Potato Machinery

THE ASPINWALL LINE

Churns
Lawn Swings
Hand Sprayers
Post-Hole Augers
Pea Shellers, Etc.



Potato Cutter

The use of the Potato Cutter effects much saving of labor. The work of cutting enough seed to plant from ten to thirty or forty acres of potatoes is tedious and tiresome, and to do away with this enables the crop to be put in at a time when the ground is in proper condition and when the season and opportunity for planting presents itself.

Potato Planter

(PLAIN). The Aspinwall Potato Planter being Automatic requires but a Team and Driver in its Operation. There are no pockets or feeding attachments required to handle the various sized seed-cuttings; nor is it necessary to depend upon an additional operator perched on the machine or walking in the rear to complete the work the machine itself should do. Our planter does not cut or injure fingers or in any way endanger the safety and comfort of the operator. The planter marks the row, opens the furrow, drops and covers the seed, either shallow or deep.

ALSO WITH **Fertilizer and Corn Attachments** It is provided, when desired, with a fertilizer attachment, with which fertilizer can be sown underneath the seed after the most approved method. A corn-planter attachment is also provided which plants corn, peas, beans and corn for ensilage. The fertilizer attachment can be used when planting corn, in the same manner as when planting potatoes.

Weeder

The head is eight feet long. The weeder, therefore, covers eight feet wide. It has forty-eight oil tempered steel teeth arranged in three rows which cover the surface of the ground thoroughly. The teeth are so arranged that any number may be removed to straddle rows in such crops as cauliflower and the like.

4-Row Sprayer

Growers prefer the Aspinwall 4-Row Sprayer because: 1. The pump, governed by the pressure required at nozzles, is automatic, and can be changed instantly to increase or decrease the pressure without getting off the seat. There is no pumping back into the barrel, or waste of force in any direction. 2. The pipe connections are all in front of the machine. The nozzles are underneath and set to spray backwards, are in easy range to be seen by the driver, and can be adjusted to suit any width of planting. 3. Each pair of nozzles, or each single one, as in the instance of spraying two rows, can be easily adjusted to meet any irregularity in the rows, by foot pressure. The adjustment for different growth and height of vines can also be quickly made. 4. Twenty-five to thirty acres per day can be gone over. One barrel of the mixture will cover from four to six acres.

Potato Digger

The Aspinwall Potato Digger embodies the most novel features of anything of the kind heretofore made, and may be said to be a companion machine to the world-famed potato planter. The digger is adapted to all kinds and conditions of digging, on hillsides and level fields, among green or ripe tops, and wet or dry ground. It works in all soils in which potatoes can be grown; does not clog and reasonably small loose stones and trash do not phase it.

Potato Sorter

We have made a new departure in Potato Sorters, using an elevator with long distance travel, which enables very Rapid Sorting combined with excellent work. In the construction we gain another admirable feature in having the hopper down low, making Easy Work in Shoveling and Feeding the Machine. The entire work is under control of the operator, and any potatoes which are decayed or ill-shaped may be removed while the work is progressing; there is no Bruising or Injuring the Potatoes in the least. The machine makes a separation or sorting into three sizes.

Double-Action Barrel Churn

Awarded Bronze Medal, Paris Exposition, 1900. This churn possesses quite an advantage over anything heretofore made. The action, instead of being purely rotary, has an oscillation from side to side which increases the churning or stirring action of the cream. There are no projections to catch sediment. The churn is easily cleaned and does not become foul. It is simple in construction, with no cranks to turn. Little or no strength required. A child can operate it. It can be wheeled about at pleasure, being mounted on small truck wheels inside of frame base, and the barrel attached to the frame by a simple device. It makes a creamery grade of butter. Our churns are used by thousands of butter makers in all parts of the world, receiving their unqualified endorsement.

Lawn Swing

TWO AND FOUR PASSENGER.

Hand Sprayers

Great advantage is derived by the use of our sprayers in exterminating Potato Bugs, Tobacco, Tomato, Cabbage, and Currant Worms, and all Plant Insects; also in Killing Lice in Poultry Houses. They are used effectively on Horses, Cattle and Swine, and for spraying Clothes, Carpets, Cigar Wrappers, etc These sprayers are furnished in all Tin; Tin Air Chamber, with Galvanized Iron Tank; Tin Air Chamber, with Brass Tank, or all Brass, as desired.

Post Hole Auger

1st. The Aspinwall Auger works successfully in hard or soft ground, sand or gravel, sticky clay soil, through stiff sod, small roots, etc. 2nd. Owing to the ease with which the auger is operated, no back-breaking work is required. Made in 3 sizes, 6, 8 and 10 inches.

Twenty Years on the Market.
Thousands of Enthusiastic Users.

If interested in any of the above goods, write for our 1901 catalogue, which is now ready for distribution. We have an established reputation, which is world-wide. Address

Dept. K, ASPINWALL MFG. CO., Jackson, Mich., U. S. A.

Live Stock and Dairy

THE BREEDER'S WAYSIDE.

Selecting the Breeding Pig.

This matter of breeding is a pretty important thing. Our breeders are divided into two great classes, viz., those who think about it, and those who do not. The thinkers really have to keep up the standards for us all. All of us may not think straight, but some one has to think the matter out right. Some people who think, but with more or less uncertainty as to action, are helped by calling on those who think accurately and decisively. That, however, is correct in principle, for in reality no man is sufficient unto himself. We are all more or less dependent. So I am going to try to help a friend. He says: "I have just invested in a very fine blue-blood Berkshire sow." He wishes to work up a herd, and will try to produce only the best. Now he wishes to know about a boar. He says: "Where shall I go to get him? How closely should he be related to the one I now have? How about selecting pigs for breeders? What proportion of the litter might be used for this purpose, and how can I tell among little ones which to take?"

A natural reply to the first question would be, why, of an advertiser in THE R. N.-Y., to be sure! And still that depends. I prefer to buy of a breeder with whom I am acquainted, or of a man of special reputation. Reliability of reputation is of first importance. If one knows the breed, then it makes no difference who the breeder is, if he can pick out the sire he wishes, and that he should do if possible. Otherwise, buy of a man of reputation, with the right to return the animal if not satisfactory, and money refunded. Consult the records of breeders who won prizes with the breed at great shows, and thus one can settle on whom to buy from. A photograph may help a buyer materially, if he cannot inspect the pig in person. He should not be related to the sow, unless in a mild way some generations back. If one will keep in the breed lines, he will secure far stronger stock from unrelated than from related matings. The past 100 years of live stock breeding have repeatedly verified this statement in the practices and results of famous breeders. The one important thing is to breed from animals of *individual merit* that are only remotely related to each other.

As a rule a boar should be shorter-bodied than a sow, and, of course, I should look for a pig that had certain other qualities that would improve my stock. So I should seek a boar that was strong-chested, very straight or slightly arched back, thick and deep hammed, and that had short legs and stood up on his toes. A very common defect of pigs of to-day is a weak pastern, the feet bending badly at the pastern joint, letting the dew claws touch the ground. Pigs with such feet make poor shippers, and show defective muscle and bone in the leg and faulty conformation. The chest, back and legs I should look to first. Next, I should seek for a short head, broad between the eyes, for a well-sprung rib and deep, straight sides. In the selection, size for age should not be ignored. A pig should weigh 350 pounds at one year or 365 days of age. The other day I went to see a boar that a man had held for me for purchase. He was of superb form, and but for one thing, I should have bought him on the spot. He was too small. He was not a runt, but he was apparently a finished pig at 10 months, weighing 50 pounds less than he should have done.

Our pigs are deteriorating in two respects; in fecundity and size, so the breeder should advise you as to the size and character of the litter of dam, and also of size of litters both sire and dam came in. So far as breeding stock goes, the breeder is absolutely dependent on its fecundity for his gain. The animal that will not breed soon finds her true place, and a sow that farrows but five is far less profitable, other things being equal, than the sow that farrows 10 pigs. Then, if I could, I should select a breeding animal of pleasant, quiet disposition. Excuse me from the irritable, restless sort. One makes the good feeder, the other the poor feeder. A placid, prominent eye is a good indication of temperament. These I think some of the essentials in selecting. Selection in the litter would entirely depend on the character of the parents and their prepotency. A sow having a litter of eight should be able to suckle them without too much of a drain on the system. Under some circumstances a litter of 12 is too large. The runt in any event should be killed at once, or sold to some one for an early death. Any pigs that do not conform to breed type should also be set aside for feeders pure and simple. Generally, however, it is not necessary to separate out before weaning, at which time the sexes should be separated, and those of poor type fed strong for the butcher, with both growing and fattening foods, while the others should be fed more strictly on nitrogenous foods, such as promote strong, muscular growth, such as is desired in breeding stock. One may castrate at eight or 10 weeks, if necessary at about weaning time. The pigs reserved for breeders should show the body, back, head and leg development in the weanling, to a fair degree, that we look for in the maturer beast. As the pigs line up for inspection the breeder will soon discover those of superior qualities, and later daily observation will help settle questions of judgment in the matter of disposal of these.

C. S. PLUMB.

BREEDER'S GAZETTE tells of an Oregon hog raiser, who annually makes a trip of 110 miles to a California mining town with his crop of pork "on the hoof." He has been at that business for 41 years, and the people in that vicinity depend on him almost entirely for their meat. This season, with the help of two men, he took over a drove of 156 pigs averaging about 200 pounds, for which he got $7.40 per 100. He was 14 days on the road.

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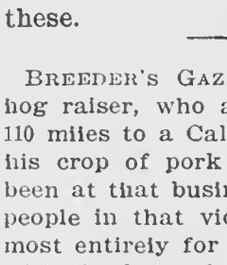

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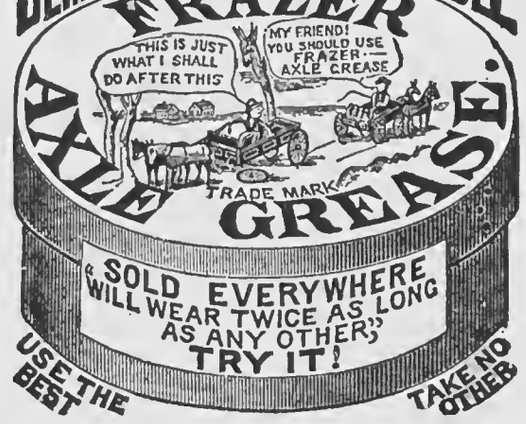

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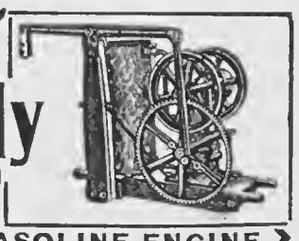

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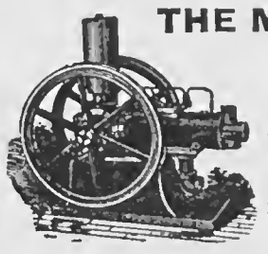

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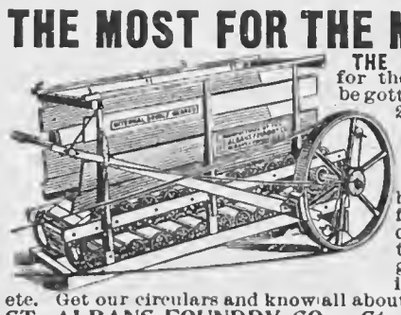

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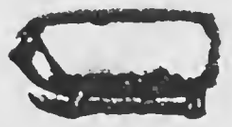

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A HERD OF POLLED CATTLE.

We have noticed on visits to the farm of Stephen Hoyt's Sons, New Canaan, Conn., a herd of hornless dairy cattle. We understood from Mr. Hoyt that these cows were natural mulleys picked up here and there about the country. The Hoyts preferred to take these natural polls rather than to dishorn the ordinary cattle. The following facts about this peculiar herd will interest many.

The herd of cattle we collected after our stock was all destroyed by fire were polled cows, gathered about the country wherever we could find one. They were of all breeds. We found a good polled bull of Durham cross, and the great majority of our calves were hornless. We did not have heifer calves from cows good enough to keep up our stock, and have brought in cows with horns to keep our number good. We have never had a purebred bull of either the Polled Angus or Red Poll breeds. We keep our dairy for milk and butter, and so far as we have been able to learn there are no polled breeds which excel as dairy cows, so have not been able to keep our herd all polled cattle, as we would like to have done. The Polled Angus is noted as a beef breed almost entirely, and if we wished to grow cattle for beef we do not know of a breed we would prefer to this. The Red Polled or Norfolk has a better reputation for milk, yet we have never learned that this breed is noted at all for large milk or butter records, so did not feel like investing in this strain of polled cattle at the high price they were held. We are greatly in favor of hornless cattle, and wish they might be bred up into a good strain of milk and butter animals. It is a pleasure to have a yard of these polled cattle. They can be yarded into much closer quarters and no more harm is done to each other than would be in a flock of sheep. There are so few of them bred about this section, that it was very difficult for us to keep our dairy of 30 cows replenished with them. We regret, however, that we did not take more pains to keep our stock all of polled cattle, for they should not be kept with the horned ones. Some of our grade hornless cows are as large milkers as any cows we ever had, and there is no reason why a good milking strain may not be bred if proper care is taken. EDWIN HOYT.

THE DUTCH BELTED CATTLE.

I believe no breed of cattle better suited for A. R. H., of Buchanan, Mich.; page 109, to cross on his herd than Dutch Belted. While preëminently a dairy breed, these cattle are of large size, and fatten readily, making very good beef, though, of course, they do not cut up on the butcher's block to quite so good advantage as do the strictly beef breeds. Though large they are less coarse—less openly built—than the Holsteins, with which they are frequently unjustly confounded. They are very hardy, hearty, strong-constitutioned cattle. They are very quiet, gentle, docile and intelligent. The bulls seldom become vicious, and trained steers make the very best of oxen. They are very prepotent; transmitting their character and coloring for many generations. When crossed on breeds whose color is some other than black, many of the calves may have the foundation color of the other breed, but the white belt will be there just the same. Thus may be obtained herds of red-belted, brown-belted, roan-belted, and so on. In size cows of the Dutch Belted breed range in weight from 1,000 to 1,500 pounds, while a number of the bulls have exceeded a ton in weight. They are a horned breed, but in this day of dishorning that is not so much of an objection as 20 years ago.

I have bred Dutch Belted cattle all my life, and know them to be excellent general-purpose cattle. I believe no *ideal* dual-purpose breed has yet been or ever will be, established. I believe if there is any breed that will suit A. R. H's requirements as well as the Dutch Belted, it is the Red Polled, but I think a cross with the Dutch Belted would produce far better and more salable dairy cows. Dutch Belted cattle have a wonderful digestive apparatus, and will live on almost anything that a goat could. They respond generously to good care, and are very heavy and persistent milkers. It is practically impossible to dry off many of them. To illustrate, I quote from herd book, "Queen dropped her first calf at 22 months old, and was burned at 16 years of age, giving milk 14 years without going dry, breeding yearly; milked 70 pounds a day for seven days on pasture alone."

New Jersey. G. G. GIBBS.

A Private Butter Market.

The farmer who wishes to make butter at home must pick up a route and retail his own butter, as he will find that the stores don't want it and won't handle it. They can get creamery butter that is reasonably uniform, and will give them less trouble than trying to handle butter made by Tom, Dick and Harry. Even the careful private dairyman is at a disadvantage unless he has regular private customers. To-day one farmer told us: "I am using a separator and take great care to have everything neat and clean, and do make first-class butter, but I can't sell it at any of the stores. The creamery near us only averages 16 cents per pound for butter fat, and we can't make anything at that price, but their butter always sells and ours won't. We dropped out because we got discouraged trying to give them clean good cream, while there were lots of patrons who took no care of their milk and were very dirty." This man acted discouraged and wanted to sell some of his cows. His only hope is to work up a private trade. One man from a neighboring town this week brought in a lot of his own butter, and canvassed the stores, but couldn't sell a pound, or hardly get an offer. He was discouraged, but he has a reputation for not being neat. A near neighbor of the latter brings in weekly what 30 good cows make, and has a steady trade at 25 cents in Summer and 30 cents in Winter. He also sells chickens, eggs, apples and beef. He makes good butter, is neat, and I believe is prospering. It all depends on the man. H. G. M.

Science in Buttermaking.

The butter exhibited by me at the State Dairymen's Association, at Watertown, N. Y., was made by a practical application of the principles of buttermaking, as I learned them at the Cornell dairy school. In the first place, our patrons did their part by supplying us with good milk, without which a good article of butter or cheese cannot be made. The milk was separated with a United States separator, which is a sufficient guarantee for the perfect condition of the cream as it went into the Cooley vat for ripening. The cream was ripened at a temperature of 68 degrees to an acidity of sixty one-hundredths of one per cent, and then cooled down to 40 degrees and held there through the night. In the morning it was churned at a temperature of 60 degrees until the granules of butter had gathered to the size of kernels of corn, when the buttermilk was drawn off perfectly. It was then washed in a volume of water equal to the buttermilk drawn off, and allowed to stand for about 20 minutes. The water was then drawn off and the butter put upon the worker, where it was salted, seven-eighths of an ounce of salt being used to each pound of butter; and then worked until sufficiently dry, care being taken not to work enough to destroy the grain. Buttermilk was used as a starter in making this sample of butter. A good commercial starter would have given better results. The milk we handle comes from many small herds of cattle. Some of our patrons feed silage, to which we do not object, provided they aerate the milk immediately after milking. We furnish our patrons with the Champion cooler and aerator at wholesale prices, the use of which largely removes any taints caused by the feeding of silage, cabbage or turnips. EDSON D. GILLETT.

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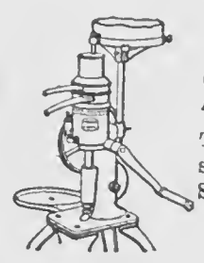

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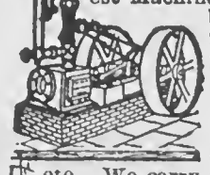

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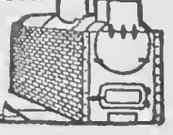

Sweet Curdling of Milk; Calf Feed.

1. What is the cause of a soft creamy curd forming in cow's milk while fresh? 2. What is a cheap, good food for a calf two weeks old, until grass comes? I don't wish to feed new milk, but have plenty of skim-milk. D. R. L.

Savoy, Ill.

ANS.—1. The question is a little ambiguous. If you mean that the trouble occurs in milk from cows that are fresh, that is, that have just calved, it is probably due to an excess of albumen in the milk. It will disappear as soon as the animal regains her normal condition. If, however, as seems likely, the curdling appears in normal milk, it is not an easy matter to state the cause. Sweet curdling of milk usually causes the most trouble in hot weather, the milk becoming curdled without the formation of lactic acid. It is undoubtedly of bacteriological origin, but has not, so far as we know, been thoroughly investigated. A thorough cleaning and sterilization of all utensils is to be recommended. Sterilize with live steam for at least half an hour, and five or six hours later repeat the operation. If you are making butter or cheese, and this does not remove the trouble, or if live steam is not available, you may be able to combat it by rinsing the utensil, into which the milk is to be put, with sour milk. The bacteria that cause sweet curdling do not thrive in an acid medium. Hence if you can give the acid-forming bacteria the start, they will probably prevent the development of those causing sweet curdling.

2. The calf should be weaned from the new milk gradually, that is by adding part skim-milk, and day by day increasing the quantity. The following grain mixture is a good supplement for skim-milk: 10 pounds wheat bran; 10 pounds ground oats; one pound old-process linseed meal. Feed a little every day, either dry or in the milk, until the calves learn to eat it, and increase as circumstances demand. This, with skim-milk and good clover hay, will give a good growing ration for calves. Calves intended for dairy purposes should be kept in good growing condition, but not fat. Until the animal is three months old, if you can feed three times a day instead of twice, and warm milk instead of cold, I believe that the calf will pay for extra labor in increased thriftiness. J. A. F.

A Plea for Holstein Cattle.

In reply to the questions of A. R. H., on page 109, I suppose that the writer expects to do a little too much at one time. "How do Short-horns compare with Holsteins in milking quality?" Short-horns have been bred for beef purposes, and, in my opinion, it would be about as difficult to find a good milker among purebred Short-horns as to find a needle in a haystack. In showing cattle at the fairs, as I do 10 weeks every year, I have yet to see the first milk or dairy cow in a herd of purebred Short-horns. I have seen a very few grade Short-horns that had the appearance of being good milkers. I made it my business to inquire into the breeding of those, and always found that they were not registered. On the other hand, the Holsteins have been recognized as the milkers for over a century, and in all this time had no rival, as milk producers. For the last number of years the Holstein has been the greatest butter producer, official tests as well as public tests. My experience is that there is no breed that has any dairy qualities in which steers, as well as calves or barren heifers or cows can be turned into beef, with less expense than the Holsteins. I find that my yearling and two-year-olds, as well as my aged bulls, are just as heavy with the same amount of food as the Short-horns; hence, do not see why they cannot be raised as cheaply as Short-horns. I find a good demand for them in the market. I sold a bull to the butcher at five cents a pound, which netted me a little over $100, an 18-year-old cow for $40, and the butcher was well pleased with her, a freemartin two-year-old heifer for $50; hence, I have good reason to contend that the only bull for A. R. H. to get a Holstein, as there are no dairy grades in greater demand for dairy cows. The only difficulty our friend would have to contend with is the hornless part, while if he is bound to have them hornless, he would better have them dishorned and afterwards have the calves' horns destroyed while quite small. W. M. BENNINGER.

Pennsylvania.

R. N.-Y.—We think Friend Benninger is in error regarding dairy Short-horns. A herd of this breed made a good record at the World's Fair, and there are certainly herds of pure Short-horns which have been bred for milk production. There are now two distinct types of Short-horns, and it is not fair to compare a Holstein with the beef type.

Silage and Children's Milk.

In this section there is an opinion with some that the silo is a souree of danger. In conversation a few days ago, an old milk produeer said, when the silo first came about he was in favor of silage for mileh eows, but has been told by good authority, and even by the doctors, that the milk made from it was fatal if given to babies. Is there any foundation for this statement. Will you air this point in your columns? I have been about putting up a silo this year, but if sueh is the ease I don't want it. S. M. P.

New Haven Co., Conn.

This question comes up every year. We have tried many times to find cases where milk made from cows fed on silage has proved injurious, but have never been able to find one that would stand investigation. Silage varies greatly. Some of it is sour and rotten, and large quantities of such stuff might injure a cow. Sweet bran or brewers' grains fed properly will produce good milk, but we all know that these same things, when sour and filthy, will not prove satisfactory. It may be that sour or rotten silage in like manner will injure the milk, but that does not prove that the silo is not a gooa thing. The quality of the average silage is improving every season, as farmers learn more about it. It is fed to the cows on farms where special milk for babes and invalids is prepared.

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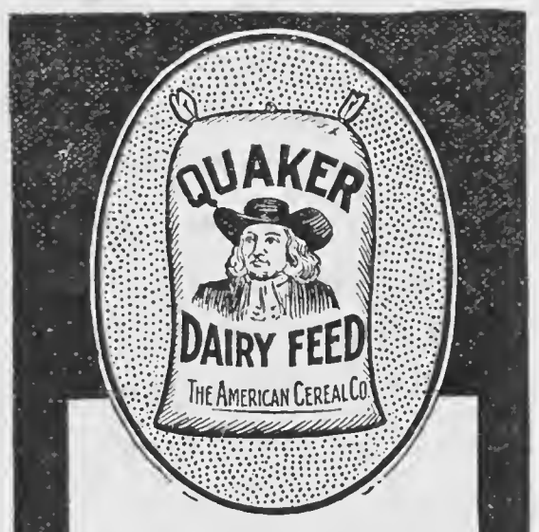

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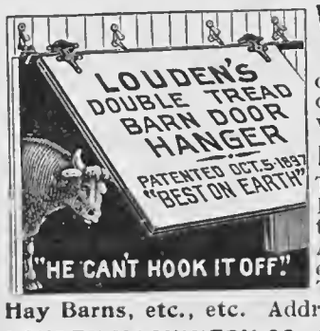

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Little Britain, N. Y. G. G. T.

ANS. 1.—I would advise cutting off from your Leghorn, *one* wing at the first joint, when quite young; as then but a slight gristle has formed; it pains less and heals quickly. Cut it towards night and cover the wound with slaked lime. By morning the other birds are not so likely to pick at and bother it. While such a wing will make a bird lop-sided, so as not to rise from the ground and fly, this will not prevent its getting over even an eight-foot wire netting fence. The little rascals stick their toes in the meshes, and using it as a scaling ladder, mount gallantly to the top, from which vantage ground they sit and swing and decide on what choice spot in garden or orchard to make the final grand swoop. If the fence is made so high that with clipped wing they cannot fly over it and at the top is curved sharply down and inward (say a four-inch lap) they, in scaling, will bump up against it, lose their balance and tumble back into the yard—checkmated. The clipped wing will not injure the sale for broilers or for a local market when large. 2. This cross is of no special value to you. A farmer seldom has leisure to perfect a cross, and if not perfected it is a detriment to the yard, resulting in a mixed flock of all sizes and conditions. Better leave to the poultry farmers that line of the business and select one of the standard all-'round breeds for your general-purpose birds, of which the Plymouth Rocks and White Wyandotte stand first. F. E. W.

MEASURE FOR GRAIN FEEDING.—I was very much interested in the article by H. G. Manchester concerning the common practice of feeding grain by measure instead of by weight. He certainly does not exaggerate the matter at all when he says that most farmers hereabouts use the former very inaccurate method. We do not weigh the grain, but get around the difficulty in another way. In addition to silage and hay we are feeding gluten meal and bran to the cows. We made two measures to use in feeding. One holds just two pounds of bran as it is dipped from the bin, the other holds a like weight of the gluten. Of course some cows are fed more than others, but with these boxes as guides one can judge very accurately how much he is feeding. When the different feeding stuffs vary so much in relative weight it certainly does not do to dive into the grain bin and feed promiscuously by measure. R. W. R.

Mill Brook, Conn.

THE GAME BIRD.—The ordinary Pit Game is a strong, robust fowl, and is one of the best of all for the table. Pit Games are of all colors and sizes, there being no standard governing them. There is no way of judging them at shows. They are not recognized at all by the American Poultry Association. I once asked an exhibitor how they could be judged at the New York show, and he replied, "Fight them." The laws against cock fighting have nearly ended such "sport." They are bred by many, however, for their excellent table qualities, and some of them are really handsome. The hens will fight to the death with the hawk for their chicks, and they are the best of sitters and mothers. They do not rank above the average as layers. They are in large numbers, because there is a class which recognizes their beauty, courage and excellent table qualities, and possibly some are secretly used for battle. They differ entirely from the "exhibition" Game, which is really not at all adapted for the pit. Games are somewhat tender as chicks, but when mature are hardy and capable of enduring any climate. They improve the table qualities of all breeds with which they are crossed, and there is no known breed that surpasses them in breast meat, flavor and small proportion of offal to the carcass. P. H. JACOBS.

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"I would like to express my gratitude for the benefit received from your wonderful medicine, 'Favorite Prescription,'" writes Mrs. H. C. Anderson, of South Britain, New Haven Co., Conn., (Box 33). "During the first month of pregnancy I could not keep anything on my stomach. Was so sick that I had to go to bed and stay for weeks. I tried different doctors, but with little benefit. I read about many being helped by using your medicine so I thought I would give it a trial. I began to take your 'Favorite Prescription' in November and I had a nice little baby girl in February following. My baby weighed over eight pounds. I was only in hard labor about one hour and got along nicely during confinement; was up and dressed on the eighth day. I never had the doctor with me at all. My friends thought that I was sick a very short time. I think Dr. Pierce's Favorite Prescription is indeed *a mother's true friend*, for it helped me wonderfully."

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MAKES WEAK WOMEN STRONG,
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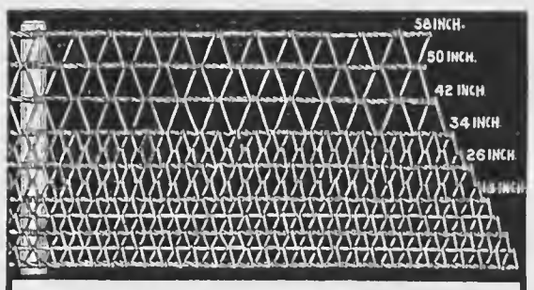

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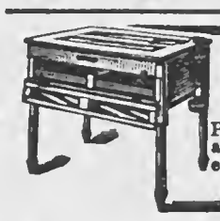

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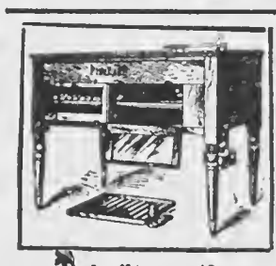

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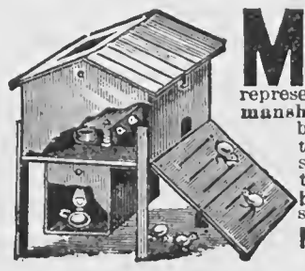

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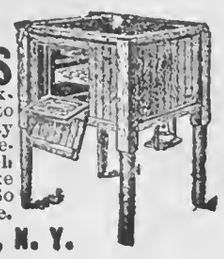

The Rural New-Yorker

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THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, MARCH 9, 1901.

WE begin an interesting series of articles this week in which a former city clerk will tell how he changed his base from desk to ditch. These articles will be peculiarly interesting to that large body of men who feel that their city job is narrowing down to the squeezing-off place. Many of our readers have doubtless heard a comic recitation in so-called German dialect entitled "The Old Blue Hen!" Most of those who "speak pieces" have memorized this laughable sketch. We are glad to introduce our modest contributor "G. A. C." as the author of the "Blue Hen!"

*

IN testifying before the Industrial Commission at Boston, Mass., recently, Secretary J. W. Stockwell, of the State Board of Agriculture, said that the reason why Massachusetts farmers do not raise more sheep is because of the losses caused by dogs, and the inability of the farmers to secure a law that will keep predatory dogs away from their flocks. He thought that the sheep-raising industry would be large enough to bring millions of dollars into the farmers' pockets if dogs could be kept from the flocks. There are many localities in the East of which the same thing may be said. Friends of the Horned Dorset say that this breed will be an aid in reforming such conditions.

*

IT looks as though Mr. Underhill, in attempting to rejuvenate the failing energies of the Newtown apple, has been instrumental in creating varieties of even more extended usefulness than that famous standard of dessert quality. The lesson taught is that we have, as a fruit-producing people, been neglecting our best opportunities, and running after the false gods of exotic varieties, when at our very hands lay the key to unlock the highest possibilities of American apple culture. We may now expect to hear of extended efforts to improve native apples by growing seedlings of our most useful varieties, from both selected and cross-pollinated specimens, though the length of time required by apple trees to come into bearing will discourage many impatient breeders. In this kind of work where the waits are long and the prizes few, only the most hopeful and zealous may be expected to continue the quest.

*

THE calling of a fruit growers' meeting at Syracuse, N. Y., was not a new thing, as many people seem to believe. For several years past fruit growers have known that the time was coming when such a meeting would be necessary. The spark that finally kindled the fire was the recent arbitrary action of the president of the Western New York Horticultural Society. As he is also president of the Eastern Nurserymen's Association, fruit growers felt that the time had come for action. It must be understood that these fruit growers do not desire to ruin the old Horticultural Society, for they love it still. They do not desire to ruin or injure the legitimate business of the nurserymen, for they recognize the fact that the man who grows the tree and the man who grows the fruit have much in common. What then do they want? A chance to voice their own sentiments and demands without hindrance or dictation, and also a society that shall make a special feature of the market side of their business. It is true that the discussion of the San José scale question has brought the fruit growers together. As one man said at Syracuse, the fruit growers of the State may live to bless the scale if it brings them together, shoulder to shoulder, in a permanent organization! Contrary to the expectation of some persons the new society took no radical action regarding legislation against the scale. A telegram from the State Agricultural Department was read, in which the statement was made that 56 New York State nurseries were found infested with scale last year, but that all had been thoroughly cleaned! That properly roused the ire of some fruit growers who well know that a nursery cannot be safely guaranteed clean in one year. One result of this meeting will be that more nurserymen will guarantee fumigation, while many more fruit growers will refuse to buy unfumigated trees.

*

CANNERS and grocers are united in opposing a bill introduced in the New York Legislature, which would compel manufacturers of canned goods to label their tins with the date of packing. The introducer of the bill points out the fact that many persons are poisoned by eating canned goods, possibly because the goods have been packed a long time before being opened. The goods, he declares, are often several years old before they reach the customer. On the other hand, the manufacturers assert that the goods, once canned, remain fresh until opened, except where a flaw exists, and this would be shown by swelling cans. This contention seems fairly sound. Naturally, long-packed goods would be likely to deteriorate rapidly when once opened, but we should always consider it wise to open canned food only when needed for prompt consumption, removing it from the can to an earthen dish at once. Care is needed in buying or using canned goods; whether the proposed bill would be advantageous or not seems uncertain.

*

WHEN THE R. N.-Y. was named, New York stood at the front as an agricultural section. It stands pretty well up now, but the great prairie States with their vast areas of rich land, natural pastures and cornfields, have secured a good share of the dairy and meat business. Many eastern men went out there. Among other things they took with them was the old R. N.-Y., and they or their sons have kept it coming ever since. Here is a letter from one of them who writes from Iowa:

THE R. N.-Y. has been a member of our family since 1869. Other papers have come and gone, but THE R. N.-Y. stays with us. We do things different from the way you do there, but there is not so much difference as there was 20 or 25 years ago. Our prineipal produetions are meat and butter. Corn fodder, of which we have an unlimited quantity, is being utilized more and more each year, and when we get to our limit, (if we ever do), Iowa can feed a small world.

The western people have been inclined to laugh at some of the thrifty ways of the Yankees, but they are slowly coming to it. The small eastern farmer has to move lively to compete with the natural fertility of western land. He will have to more faster yet when more of his methods move out West. Most eastern men dropped their close methods into the Mississippi River. Their sons are fishing them up.

*

WE have often referred to city men who at middle age look to the farm as a place for old age. Here is a letter we received from a man in a city of medium size:

I venture to ask adviee in regard to a man who has not followed farming for 25 years, now aged 43. He was raised on a farm and worked on same until 18; since that time has lived in city, engaged in rough work, mostly trucking. He has a fair amount of health. He has always thought that when the time came he would buy a small farm and spend the remnant of life there. The time has seemingly come, friends, wife ineluded, seem to think it such a mistake that he finds himself hesitating. It has been said, and perhaps well said, that the man who hesitates is lost. I don't think this is always the case, however, but do not feel that at this time of life one ean afford to make any mistake.

We must repeat what we have said before: "The first requisite to success in farming is the ability to be happy on the farm." It is hard to think of a more unhappy lot than that of a family bred to city ways, finding after their life's savings are invested in a farm that they do not like country life. If a man's wife and daughter dread the country and feel that they cannot be happy there we would never advise the purchase of a farm. The only way to try such an experiment would be to rent a farm with the option of buying, and give the life a fair trial. It takes a natural farmer to make a living on the farm. There are some unnatural farmers now on the land. No more are needed.

*

A FARMER is sometimes brought face to face with serious troubles. Certain conditions of soil, seasons or society have mastered him. He is their slave for the time, and he goes about his work with a chain fastened to his best ambitions. Some men make a feeble effort and then give up—remaining slaves all their lives. Others buckle down to the work before them, and slowly and patiently acquire strength and knowledge, until the slave becomes a master, and God gives him dominion over the forces that formerly held him down. Strange it is that when these strong men are asked to give advice and help to others who are still under the lash, they are apt to forget the most necessary things, because they seem small and trivial. It is hard to go back in life and look over the road accurately. Most of us forget some of the most important things, because we have studied and brooded over them until they have become a part of us—and no man sees himself perfectly. It would seem as though the self-made master of conditions ought to be able to show the slave how to follow him, yet too many articles and speeches by such men fail to strike the key-note. It looks as though the mastery of a farm problem sends a man on to attack others, rather than back to organize and explain his success to others. That is not the case with all, but it is with many.

*

FOR several years past THE R. N.-Y. has issued its annual catalogue review, until it has come to be a regular feature of the year's work. The catalogues issued by seedsmen and nurserymen are really standard publications, most of them showing decided improvement from year to year. Our plan is to group brief reviews of these catalogues, calling attention chiefly to the novelties or new varieties offered for sale. This issue may well be kept for reference by those who desire to buy seeds or plants. We certainly advise our readers to spend a reasonable sum for postage in writing for these catalogues. It must be remembered that sound judgment is needed when we come to invest money in new plants. The praises of such "novelties" are often sung in strong words and glowing colors, but the wise buyer will learn to discount a good deal of the introducer's language. Where one can afford to do so it usually pays to buy the new seeds or plants in a small way for experiment. Buying in a large way without fair testing is always a speculation, and he who loses money by doing so should not complain. We are glad to observe that most of the catalogues are fair and dignified in their manner of presenting their novelties to the public. Here and there we find one with loud and extravagant statements, which any man of ordinary common sense should know are built on mere wind. It is hard to work up much sympathy for the farmer who permits himself to be deceived by statements which his entire experience on the farm must brand as ridiculous. THE R. N.-Y.'s original plan was to fill the entire paper with these catalogue reviews. It has since been thought better to shorten these reviews and fill the paper with matter of general interest.

*

BREVITIES.

"FROM OUR LOVING FRIENDS"

THE R. N.-Y. is not responsible for the following verse, except that its weekly visits seem to have inspired our friend to put his thoughts on paper. "May his tribe increase!"

A progressive farmer (may his tribe increase),
Awoke one night from a deep dream of peace,
And saw within the moonlight in his room,
Making it rich and like a lily in bloom,
An angel writing in a book of gold.
Success in farming had made the good man bold,
And to the presence in his room he said:
"What writest thou?" The vision raised its head
And answered: "The name of the agricultural papers
That are the *greatest money* makers."
And is THE R. N.-Y. there? "Nay, not so," replied the angel.
The honest farmer spoke more low, but eheerily still,
And said, I pray thee do
Write THE R. N.-Y. as one which to its patrons is most true.
The angel wrote and vanished.
The next night it eame again, with a great wakening light,
And showed the names of those the agrieulturist had blessed,
And lo! THE R. N.-Y. led all the rest!

S. R. WALKER.

NOW for the garden.

CONCRETE silos are eoming!

THE brooder raises troubles.

SOLUBLE seienee to dishorn the greenhorn.

HE is indeed a rara avis who finds high flavor in Ben Davis.

No man ever pulled himself down by trying to lift another up.

FARM organizations come and go, but the Grange lives and prospers.

HE must be broiled in sauce of sweat who full of garden sass would get.

WHAT is a good fertilizer drill for cotton-seed meal? The eow's mouth!

UNDER the lee—under the snow—the wheat's all right, the rye will grow.

SOME folks who call themselves well-bred—leave lives that are more than half a loaf!

HE wears out his chances to ever get there who wears out a patch on a hard tavern chair.

THE Golden Rule is hammered into brass by the people who try to do humanity rather than do something for it.

THE fruit growers at Syracuse took THE R. N.-Y.'s adviee and elected officers by ballot. Wipe out the nominating committee.

Events of the Week.

DOMESTIC.—The Virginia Legislature has passed an act requiring steamboat companies operating within the State to provide separate accommodations for colored people. . . . . The Pacific Mail steamer Rio Janeiro struck on a hidden rock while entering the Golden Gate, San Francisco Harbor, February 22. She sunk in a few minutes, and though only 1,000 yards from shore, 128 lives were lost. A heavy fog prevailed at the time. Among those lost were Rounseville Wildman, United States Consul at Hongkong, his wife and two children. There were 234 persons on board. . . . . A head-on collision between passenger trains on the Pennsylvania Railroad near Trenton, N. J., February 21, caused the death of 15 persons, and serious injuries to 25 others. The wreck was due to negligence. . . . . February 22, snow fell at Jackson, Miss., and Atlanta, Ga. . . . . Investigations are being made of a system of labor contracts in South Carolina, by which negroes are held as slaves. The matter has become public through the murder of a young negro, who sought to escape from the stockade where he was imprisoned. . . . . After being 63 hours under ground, for the greater part of the time under water, 10 of the 13 negroes caught in the Asylum Mines, Alabama, by a sudden rush of water, were rescued February 23. When they reached the light they were nearly blind and in an exhausted condition. It is hoped to rescue the remaining three, as a large pump in addition to the others already in operation has been put to work. . . . . Fire in a mine in Kemmerer, Wyo., February 26, imprisoned 50 men; it is not believed that any will be rescued.

CONGRESS.—Representative Mann, of Illinois, February 22, introduced a bill repealing Section 5 of the Tariff act of 1897, under which the President is empowered to levy additional duty on imports receiving a bounty from foreign governments equal to the amount of the bounty paid. It is under the operation of Section 5 that a duty recently was imposed on Russian sugar equal to the bounty paid on this sugar. Mr. Mann's resolution was referred to the Ways and Means Committee. . . . . The President has called a special session of the Senate for executive purposes immediately upon the dissolution of the present Congress, March 4. During its sessions the Fifty-sixth Congress has spent over $1,457,000,000. . . . . The Senate Committee on Relations with Cuba, February 25, agreed unanimously to an amendment to the Army Appropriation bill outlining the conditions under which the United States is to withdraw from Cuba. . . . . February 26 the conferrees on the War Tax reduction measure announced in the afternoon that they had agreed upon a satisfactory compromise. This compromise restores the House figures on the beer schedule to $1.60, changes the tax on tobacco from nine to 10 cents a pound and makes small reductions in the cigar and cigarette tax. Under the compromise measure the total reduction will be about $30,000,000. There is no change in the situation in regard to the River and Harbor bill, and there appears to be little prospect of either it or the omnibus bill being considered by the Senate at this session.

CUBA.—As a result of a conference between President McKinley and Secretary Root supplementary instructions have been sent to General Wood to call the attention of the Cuban constitutional convention to the importance and necessity of including the requirements of this Government in the Cuban constitution. It is demanded that the Monroe doctrine shall be recognized; that Cuba shall not mortgage the island to any foreign power; that the United States be given the right to establish naval stations at Havana, Guantanamo, Nipe and Cienfuegos, and the right to maintain at least a part of the present military force in the island, and that the United States shall assist Cuba in maintaining a stable government.

GENERAL FOREIGN NEWS.—February 22, intense cold continued throughout Germany. In some parts of the country the weather is the coldest known in 25 years. At Cologne a young woman was frozen to death in the street, and a coachman fell from his carriage with both legs frozen. Near Remagen a bicyclist was found dead. In the Gulf of Dantzic a fishing cutter was frozen in, and three of the crew perished. The Moselle, at Coblentz, is frozen solid. At Hirschberg the temperature is 29 degrees below zero, centigrade, and in the Upper Hartz 30. From all the mountainous regions come reports of enormous snowfalls. . . . . Several of the Russian provinces are still suffering acutely from famine. In the governments of Kherson and Bessarabia tens of thousands are famishing. Amid the additional hardships of the severe Winter hunger typhus is rapidly spreading also. The condition of the peasantry in the famine districts of Southwestern Russia is equally lamentable; but it is worst of all in Northern and East Volga provinces, where the people for two months have been subsisting on roots, grasses and offals, and are now dying of sheer starvation.

FARM AND GARDEN.—The Southwestern Nurserymen's Association, recently in session at Oklahoma City, Okla., elected as president, J. A. Taylor, of Wynnewood, and as secretary, C. A. McNabb, of Oklahoma City. The business transacted was not made public. The next meeting will be at the same place January 8, 1902.

The Texas Live Stock Association met at Fort Worth February 13. A fine show of live stock was given in connection with the meeting.

The Indiana State Fair will be held at Indianapolis September 16-21.

Heavy falls of snow in the Malheur and Snake River valleys, Oregon, are causing a loss of 25 per cent in young lambs. There will also be some loss from lack of feed. Cattle on the open range are also suffering.

At the annual meeting of the National Creamery Buttermakers' Association at St. Paul, Minn., February 18-22, Kansas carried off the banner given for the best exhibit of butter. The score was 89.44 per cent, Minnesota being second with a score of 89.93 per cent.

The Northwest Fruit Growers' Association, in convention at Portland, Ore., decided to recommend a standard apple box of the following dimensions, inside measurements, namely, 18 inches length, 11½ inches width, 10½ inches deep, containing 2,173 cubic inches and to be known as "standard." The following size is to be known as "special": Length, 20 inches; width, 11 inches; depth, 10 inches, the ends of said boxes to be seven-eighths of an in thickness.

NEW YORK FRUIT GROWERS ORGANIZE.

Not for Horticulture, but for Business.

There were many people who regarded the recent call for a meeting of New York State fruit growers at Syracuse with suspicion—"a lot of 'kickers' are simply trying to get even!" That remark was made by one man, and it probably voiced the sentiments of many who had not observed some recent developments among fruit-growing farmers. It was freely predicted that the meeting would be composed of a few hot-heads who had come together simply to take radical action regarding San José scale legislation. These critics would be wofully disappointed could they have been present at Syracuse on February 27-28. Not far from 150 fruit growers attended the meeting. Here are the names of a few of those who were present, which will give an idea of its character: L. T. Yeomans, T. B. Wilson, Albert Wood, F. M. Bradley, S. D. Davis, L. H. Bradley, H. S. Wiley, S. D. Willard, I. I. Mann, T. Greiner, L. H. Brown, F. B. Freeman, J. B. Collamer, E. A. Coates, L. S. Brooks, C. R. White, S. W. Smith, E. W. Catchpole, J. T. Roberts, Dr. C. A. Ring, B. S. Harwood, Albert Yeomans, B. J. Case, K. F. Morris, H. M. Barnes, F. A. Willis, Chas. M. Day, C. H. Darrow, A. G. Graham, T. J. Jarvis, Ira Pease, L. M. Loveless, E. W. Ferguson, C. W. Odell, I. W. Stebbins, J. A. Hepworth, John Paylor, F. A. Taber, J. J. Borden, J. W. Strang, Frank Pulver, W. S. Browncll, Chas. Mills, J. K. Prosser, J. Q. Wells, Chas. Siddon, G. G. Hitchings, Prof. S. A. Beach, G. E. Ward, M. H. Boardman, W. I. Smith.

The keynote from the start was the statement that this is not to be a horticultural society, but a *business* organization for those who grow and sell fruit. Mr. Taber, of Poughkeepsie, at the start asked what we were there for,

THOMAS B. WILSON.

Father of the New York State Fruit Growers' Association.

and a prompt exchange of views soon made it clear that the growers had not come in any spirit of spite or revenge, but rather to build a society on broad and liberal lines for the good of all. It is true that fruit growers generally do not feel that they are being fully protected against the San José scale. They do not believe that all the nurseries of the State are free from it, as the Agricultural Department would have the people believe. At the same time it was evident that these fruit growers are ready to face the situation like grown-up men, and not like children. It was also made clear that there was little thought of tearing down any other society in order to build a new one on its ruins. For one reason or another, the horticultural societies of the State have taken up the work of horticultural education in the production of fruit. This, they are doing well, but such matters as selling, handling, transporting, as well as crop statistics, are not given the attention which fruit growers feel that they deserve. The general feeling at Syracuse was that an entirely new society devoted to these things first of all could handle them better than any society which had already settled into regular lines of work. After much discussion the new society adopted the following statement of the reason why it should be organized:

1. The object of this association shall be to encourage the coöperation of the fruit growers of New York for the protection and advancement of their common interests.

2. By securing such legislation as may be advantageous, and preventing that which may be detrimental.

3. By encouraging such improved facilities in transportation as shall tend to give us a more expeditious and economical distribution of our products.

4. By endeavoring to secure a better and more uniform system of packing and packages.

5. By devising some system of marketing of our products that shall open up and develop the markets, and give to the grower a fair and remunerative return.

6. By endeavoring to obtain such improved systems of crop reporting as shall furnish accurate information concerning production, thereby enabling the fruit grower to know the exact situation.

7. By securing and disseminating such scientific and practical information as shall promote the general advancement of the fruit-growing interests of this State, and shall tend to the improvement of the quality and quantity of our products.

The name adopted is New York State Fruit Growers' Association. The following officers were elected for the ensuing year: President, L. G. Yeomans; first vice-president, Jno. T. Roberts, Syracuse; second vice-president, Geo. W. Potter, Niagara County; third vice-president, John Collamer, Monroe County; fourth vice-president, Ira Pease, Oswego County; secretary, F. E. Dawley; treasurer, C. H. Darrow, Geneva. Directors: T. B. Wilson, Hall's Corners; F. A. Taber, Poughkeepsie; Dr. C. A. Ring, Appleton; S. W. Wadhams, Monroe County; W. L. McKay, Ontario County.

The management of the affairs of the society is controlled by the executive committee. The fee for life membership is $10, and for annuals $1. No less than 30 life members were secured at the first meeting. It is purposed to effect a system of county organizations to work as a part of the State society—in fact, a good many of the delegates to this meeting represented local organizations, which have already been formed in western New York. It will be seen that the general plan is to operate this society somewhat on the lines which have proved so successful in California. As the result of coöperation in that far western State uniform brands of California fruit are shipped to our market, and sold as standard articles. It was even stated at Syracuse that New York State fruit has been packed in the California packages, and sold as western fruit because the market brand gave it a better figure! No wonder one fruit grower exclaimed: "I hope to see the time when every package of my fruit will carry the brand of the New York State Fruit Growers' Association!" J. H. Hale rightly said that unless something is done to establish a standard brand and package for New York fruit our markets will go to the owners of the millions of trees west and south of us, whose growers *are* establishing private or coöperative brands.

The meeting was eager and enthusiastic from the start. It was not a cut-and-dried affair, but there was plenty of sharp, earnest discussion and no disposition to let a few men run the whole meeting. It was not desired to present a long programme at this business gathering, but J. H. Hale, of Connecticut, delivered a very useful and interesting address on general fruit conditions, and Prof. V. H. Lowe gave a very valuable talk on some sides of the insect problem. It is safe to say that this new society was organized in a fair-minded, liberal and hopeful spirit. There are strong men back of it, and its purposes and objects are broad and strong enough to provide standing room for every fruit grower in New York State. It desires the support of all who are interested in the production or selling of fruit and, as organized, deserves such support. Great credit is due to T. B. Wilson, of Hall's Corners, and L. T. Yeomans, of Walworth, for their work in starting the movement and issuing the call. Mr. Wilson may safely be called the father of the society, and we hope that the child may be a credit to its parent.

H. W. C.

THE R. N.-Y. has had its say, in prose and verse, about the Ben Davis apple. We admit all its good qualities. It is handsome when well grown, the tree is strong, vigorous and early to bear, and the fruit has nearly the keeping qualities of potatoes. It may be desirable to plant the trees in order to top-work them to other varieties, but as for fruiting it, in eastern orchards especially, we certainly feel that the time is near at hand when Ben Davis will be correctly estimated by the buying public. Here is a western opinion:

Your comments on Ben Davis are all right. It is only a pioneer, as a log cabin is to a dwelling house in a new country. It can be grown easily and is better than the wild crab apple, but after the way is broken up we want something better. We are a progressive people and should always be on the lookout for something better.

Kansas. J. STAYMAN.

No one believes that the western people are going to remain satisfied with the production of inferior fruit. The eastern growers have arguments that are better yet—witness the following:

Let me emphasize the suggestion that Prof. Van Deman made to a Connecticut correspondent in a recent number, in which he advises the use of Wagener instead of Ben Davis as a filler in orchard planting. Ben Davis is a failure in New England. The tree grows well, but the fruit is altogether unlike the Ben Davis fruit of the West and Southwest, so much so that one familiar with the variety there would hardly recognize it here. It seems to me that an orchardist could hardly make a greater mistake than to attempt to compete with the West in growing this variety here, where it succeeds so poorly, while he can grow so much better ones which will not thrive there. [PROF.] F. W. CARD.

Rhode Island.

Exactly. It would be more sensible for the New England farmer to attempt to breed and fatten beef steers in competition with the West.

THE R. N.-Y. has become almost indispensable with us on the farm. It is so different from most rural papers, that are so plausible and flippant in telling what ought to be done, and holding out illusive inducements to young men and women to leave the sober duties of the farm to go straddling about the country, peddling and annoying people, and contracting bad habits of idleness, the folly of which is only found out when it is too late to undo the evil of it. C. S.

Gunston, Va.

AN Albany (N. Y.) newspaper recently reported that a meat firm in that city had on exhibition a ham weighing 93 pounds, cut from a hog that dressed 1,800 pounds. On investigation it was learned that some one must have got the multiplication table mixed up with the story, as the hog when dressed weighed 809 pounds, and the ham 59 pounds. The persons who fattened the animal write that it was a full-blooded Cheshire sow three years old, with a frame large enough to carry 1,000 pounds if she had been kept longer. Her feed for the last two months was milk, with nine to 12 quarts of grain (wheat middlings, cornmeal and corn in the ear) per day.

Woman and Home

From Day to Day.

I would not be a selfish child,
For early I was taught
To give a part of all I have,
As generous children ought;
Not keeping everything myself,
But sharing it with others,
So, when I had the whooping-cough,
I gave it to my brothers.

Last Winter I was kept at home;
The doctor came each day.
We had a card outside our door
To warn our friends away.
No one might come to visit us,
Yet, doing what I could,
I gave my scarlet fever
To half the neighborhood.

And so it was with measles,
And so with chicken-pox;
I gave them to my little friends
On three surroundings blocks.
And now that we are well again,
It makes me laugh—Ha! ha!
To think that when I had the mumps,
I gave them to papa!

—Harper's Bazar.

*

A NEW way of serving poached eggs is to pour browned butter over the toast before putting the egg upon it, and sprinkling the whole with finely-chopped pickles.

*

THE chou, or cabbage-like rosette of velvet, satin or soft silk, is now used high up on the left side of the bodice, near the shoulder. It is only becoming to slim figures in this position. Sometimes it has two short ends of ribbon or silk, each finished with a gilt spike.

*

A READER in New York State gives the following as a tested recipe for curing hams: One ounce salt to every pound of meat; one ounce saltpeter to every 25 pounds meat; one quart molasses to sufficient water to cover 100 pounds meat. Leave in pickle from four to six weeks, this depending on size of hams. Smoke according to taste.

*

CHARGES are made that some wholesale druggists of Baltimore, Md., have been using wood alcohol instead of the pure medicinal alcohol in manufacturing Jamaica ginger, the results endangering life and health. Pure alcohol costs $2.45 a gallon, while the wood spirit costs but 75 to 80 cents, thus enormously increasing the manufacturer's profits. It is to be hoped that anyone guilty of such an atrocious adulteration of a familiar household remedy may be fittingly punished. We say atrocious advisedly, since this material, freely used as a familiar household remedy to allay pain, may lead to most dangerous results when so adulterated.

*

AMONG handsome white shirt waists shown are some of white linen with a damask finish, heavily embroidered all over in an elaborate design. Another is of linen having yoke, cuffs and band down the front of cream linen lace edged with narrow linen braid. Last Autumn, when the flannel waists came in, the manufacturers tried to introduce a tight fit, without pleats or tucks, but women refused to buy them. The fact is, a basque-fitting shirt waist is unbecoming and absurd, and this Spring we see none of this model. Small tucks seem to be used much more than gathers as a means of obtaining fullness.

*

WHAT TO EAT suggests snipping up chicken for salad with shears, instead of the wearisome chopping. The idea came to a southern housekeeper who was preparing to make salad for a church entertainment, when her patience gave out at the thought of so much chopping. Suddenly it popped into her head to try the shears—a bright, new pair she had, for this part of the work. It proved the greatest kind of a success. She says she just sat comfortably back in a chair and snipped and snipped away at the firm portions of white meat, filling the mixing bowl with trimly cut pieces, very different from the straggly, ragged-looking bits that so often find their way into salad through careless chopping. The celery she treated in the same way. Besides its labor-saving advantages this plan gives most appetizing results in the dainty uniformity of the chicken cuttings.

Rural Recipes.

Bring cakes of Scotland's oatmeal gray,
And German barley brown,
By all the rye of Russia lay
The wheat of Egypt down,
And pour the rice of east and south
From Amalthea's horn—
Their savor shall not tempt a mouth
That knows good Indian corn.

—Credit Lost.

Potato Dumplings.—Boil six large Irish potatoes and mash, seasoning with one-half teaspoonful salt. Place on a board. Add to this one egg and one-half cupful flour; knead into a dough. Roll out into strips, one-half inch thick, and cut into inch lengths. Sprinkle the pieces with flour, so that they are quite dry. Place enough of the dumplings in a saucepan of boiling water to allow them freedom to swim, and allow them to boil about eight minutes. Remove the dumplings from the water, with a perforated spoon, to a hot frying pan, in which one cupful bread crumbs have been browned in about two tablespoonfuls butter. All of the dumplings can be placed in the pan at the same time. They should be stirred from time to time, until nicely browned, keeping a small fire under the pan. Serve hot.

Pigs' Feet in Jelly.—Scrape and clean half a dozen pigs' feet. Cover with boiling, slightly salted water, and simmer for half an hour, then drain and rinse them. Put on in a clean kettle and cover with vinegar and water in equal parts. To two quarts of the liquid allow one teaspoonful and a half of salt, one tablespoonful of sugar, one small bay leaf, half a dozen cloves, half a dozen tiny red peppers, one sprig of thyme and two sliced onions. Simmer steadily until tender, place the feet in a jar and boil the liquor until it is reduced one-half. Strain it through double cheese cloth over the feet and keep in a cold place.

Date Puffs.—Two eggs, one cupful of sugar, one quarter of a cupful of butter, the same of milk, one teaspoonful of baking powder and flour enough to make a thin batter. Stir in one cupful of stoned dates; fill muffin cups half full and steam 30 minutes. Serve with a liquid sauce or with sweetened cream.

Corn Fritters.—Drain two cupfuls of canned corn from all moisture and add two well-beaten egg yolks, a little salt and pepper. Sift one-half teaspoonful of baking powder with one-half cupful of flour, add the whites of the eggs, beaten to a stiff froth, and milk for a soft batter. Mix altogether and drop by spoonfuls into hot fat. These may be cooked on a griddle, if preferred. Or make the corn into a custard, still serving it as a vegetable. To the contents of one can of the corn add milk to render it quite thin. Season with salt and pepper, add a piece of butter and three beaten eggs. Bake 30 minutes.

Cooking Dried Fruit.

Dried California fruit is usually cooked the wrong way, says a writer in What to Eat. I had to go to Santa Clara County, the heart of the orchard region, to learn how it should be done. There, when stewed apricots came on the table, clear, luscious semi-spheres, exquisite in flavor, and melting in the mouth, I asked my hostess:

"How do you cook these? With what are they flavored?"

"Flavor apricots?" And then she spoke her mind.

"Even the very best cook books tell you to soak the fruit before cooking, which is to spoil it at the start. Instead, have plenty of warm, not hot water, and wash each piece separately. Use two bowls. Put the fruit in one, with the water, and have the other empty, to receive it as it is washed. Rub each piece of fruit between your fingers, manipulating it and pulling the edges into shape. You want it to look as much like fresh fruit as possible. When all the fruit has been transferred from one bowl to the other, pour on fresh warm water and repeat the process. If the apricots are comparatively fresh, three or four waters are sufficient; if they have become dry and hard you will need five or six. When the fruit becomes flexible, and not until then, it has been washed enough. Peaches must be washed until no scum rises to the top of the water left in the bowl. This scum is the fuzz from the peach skins, which are invariably left on in drying the fruit. Prunes need but little washing, and very gentle handling. Washing the fruit in this way softens it without extracting the juices, as is done by soaking.

"After the fruit is washed, put it into a porcelain kettle with enough hot water to cover it fully, and granulated sugar. The quantity of sugar must be regulated by the tastes of your family—tastes differ greatly in this respect. A heaping tablespoonful to a pound of fruit is the minimum quantity, a teacupful the maximum. The last named quantity produces better results in the appearance of the fruit; a tablespoonful is too little to make the fruit quite clear. Cover the kettle and stew steadily, taking care not to boil hard, until the fruit is clear, about 15 minutes from the time it begins to stew."

Farmers' Combinations

By Honorable J. Sterling Morton

The former Secretary of Agriculture discusses Farmers' Combinations from the farmer's viewpoint, and tells what can be accomplished by their getting together.

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'Lon Snow's Peculiar Flock.

It was on the occasion of the celebration of the fiftieth anniversary of the wedding of Giles and Hannah Baker that Sile Andrews told about the poultry experience of his city cousin, 'Lon Snow.

The "women folks" were visiting with sweet old Mrs. Baker in the south parlor, and the men were all assembled with Giles in the north parlor before a good old-fashioned open fire, for it was a frosty November night. The talk had fallen on the knack that some people have with hens, while others, try as they may, never seem to be able to do anything with them.

"I never bothered with 'em myself," said Giles. "Mother's had 'em an' got tired of 'em, an' had 'em ag'in, but never seemed to me as if they was wuth their keep. When eggs are high they won't lay."

"That's the trouble 'Lon Snow had," said Sile Andrews, throwing the core of an apple he had been eating into the fire. "Never hear 'bout my cousin 'Lon?" said he, turning to me.

I was glad to be able to say I had not, for it meant a new story from Mr. Andrews, and I knew from experience that he had what the critics call a "good sense of selection."

He leaned forward and rested his chin on his hand and said:

"Well, 'Lon Snow was born an' brought up in the city, which was a misfortune to start with, an' besides that he hadn't no more sense of humor 'an a hen——"

"An' he was all-fired pig-headed, too," put in Sam Barlow.

"Well, I'm comin' to that. When he got 'bout 40 years old the doctor told him he'd got to stop workin' in an office an' go into the country to live or he'd peg aout in a short time. So he wrote to ask ef he could visit us fer a spell an' I wrote back 'Come on,' an' he came.

"When he got to the haouse he was the whites,' mos' pindlin' lookin' man I ever see. Looked as if he'd slump into himself ef the wind changed sudden. He moped araound the haouse a few days an' talked crops ter me at meal times an' in the evenin' until I wisht I'd never took up farmin'. Gosht, it was awful ter hear his views. Finally he said that the idleness was killin' him an' he wanted to take up farmin'. I choked daown my feelin' an' said he warn't built fer heavy farmin', but mebbe he might do a little hen business. Then Mis' Andrews, she got talkin' to him. I kep' my maouth shet fer I knew he couldn't l'arn from me, but Ma filled him up good on the proper food an' he nodded his head, very wise, 'sif he knew it all but was glad to have her freshen up his memory. He wanted to go right aout an' buy some hens that night. Thought a hundred would do fer a starter. But Ma tol' him that 15 or 20 was all he could manage at the start an' he finally agreed. 'What sort'll you keep, Plymouth Rocks or Braown Legg'ns?' says she, an' I could see by the way he hesitated an' at last said 'Braown Legg*ings*,' very distinct, that he didn't know anything whatever 'bout hens.

"Nex' mornin' we went over to Deacon Foster's to buy the hens. He had purt' near 500 walkin' 'raound his farm on Redtop. They did look mighty slick an' 'Lon was tickled to death with 'em. He asks the old deacon haow much he'd charge apiece and the deacon says, 'Seventy-five cents.' 'That's reasonable,' said 'Lon, though he didn't know if it was or not. Then he looked 'raound with a critterkal eye an' he says:

"'By the way, I on'y want the ones with fine feathers. I never cared fer the little sober ones.'

"'What do you mean?' said the deacon.

"'I mean,' says 'Lon with all the dignity that a city man could git on to him, 'that I want the big vari ty, the ones with the large combs and the big tail feathers; not those sober ones with no tails at all. I'm go'n' abaout this thing the right way an' I might as well have good hens as poor ones.'

"Well, the deacon, he stepped behind the barn door to conceal his feelin's, which was paowerful at the time, an' when he comes aout he was as sober lookin' as 'Lon. 'All right,' says he, 'but I'll tell you honest, it's the little ones 'at'll lay the most eggs.'

"But 'Lon couldn't be changed. He was go'n' in fer looks, he said, an' anyhow he guessed he'd make 'em lay if any one could. 'I don't daoubt it,' says the deacon with a cheerful smile, 'but ef you're go'n' to take the pick of the flock I'll hev to charge ye a dollar apiece.' 'Lon warn't no way small, an' he agreed to the terms an' arranged to come at night an' git 'em."

"I remember 'em," said Barlow. "As purty a flock as I ever see with their high steppin' ways. I used to go up an' tell your cousin that he ought to exhibit 'em at Merwinton Fair an' he said he guessed he would. On'y fault he found with 'em was they was quar'lsome an' slow to get to layin'. I says: 'Ef the redness of the comb is any sign you oughter hev eggs purty soon.'"

"Well," resumed Sile, "he never suspected nothin', but went to feedin' 'em fer eggs accordin' as Ma had told him the fust night. She said it was a shame not to tell him what kind of hens they was, but I argied that it kep' him busy aout er doors an' that's what he needed. He didn't need eggs any more'n a hen needs teeth.'

"Didn't he ever find out?" I asked, seeing that there was a move in the other room that suggested a breaking up of the gathering.

"Well, matters went on fer 'baout three or four weeks, an' then one mornin' in May, when eggs was so plentiful that they was usin' 'em to stone cats with, he comes into the barn where I was sharpenin' my ax on the grin-stun an' he says: 'Funny my hens don't ever go near their nests. An' they're quar'lin all the time.'

"Then I says: "'Lon,' says I, 'some folks never *can* l'arn anythin' arter they're growed up, an' you're one of 'em. You was dead set on gittin' that breed although the deacon told ye the small ones was the best fer eggs. Naow the city's a good place ter live in fer a *few* things but you don't l'arn everything ther'. Some country folks hev one rooster to a flock an' some don't hev any, but your city notion of hevin' *every one* a rooster ain't conducive to eggs!'"—Charles Battell Loomis, in Saturday Evening Post.

Staining Floors.

In a recent issue was an article on stained floors. Some of your readers might like to try what has been found very satisfactory to me. Take the bark of either Black walnut, or butternut trees, or even the nuts; put in an old kettle, cover well with water and stew till water is very dark. Stain the floor, being very careful to have the dye spread evenly; when thoroughly dry oil over with either crude petroleum or half each of raw linseed oil and kerosene. If raw oil is used alone it should be heated, which makes it more penetrating and dries more quickly. Oil also brings out the effect of the stain. I have found this much more durable for hard service than any stain I buy, or even the burnt umber.

H. T. P.

With the Procession.

He liveth long who liveth well;
All else is life but flung away;
He liveth longest who can tell
Of true things truly done each day.

H. Bonar.

THE rose and the thorn and sorrow and gladness are linked together.—Saadi.

WHEN saluted with a salutation, salute the person with a better salutation, or at least return the same, for God taketh account of all things.—Koran.

To be worth anything, character must be capable of standing firm upon its feet in the world of daily work, temptation and trial and able to bear the wear and tear of actual life. Cloistered virtues do not count for much.—S. Smiles.

Now the basest thought possible concerning man is that he has no spiritual nature; and the foolishest misunderstanding of him possible is that he has, or should have, no animal nature. For his nature is nobly animal, nobly spiritual—coherently and irrevocably so; neither part of it may, but at its peril. expel, despise or defy the other.—Ruskin.

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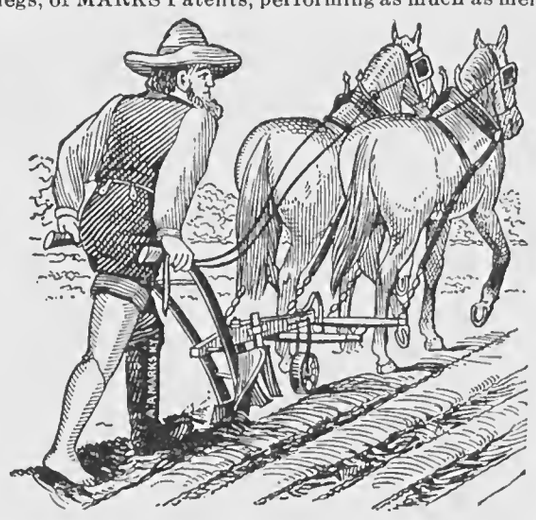

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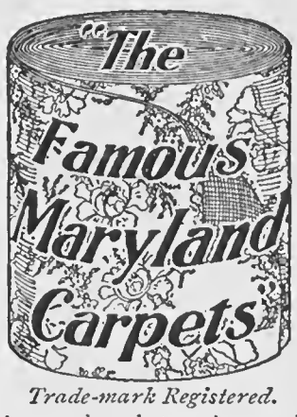

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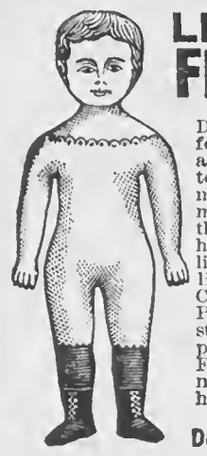

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MARKETS.

The Week's Quotations.

WHOLESALE PRICES.

NEW YORK, MARCH 2, 1901.

GRAIN.—Wheat up one-fourth to one-half cent. Corn and rye unchanged. Weather news from Western Winter wheat belt favorable.

Wheat, No. 2, hard, N. Y.	81⅜	@	—
No. 1, Northern Duluth, spot	87⅝	@	—
No. 1, hard Duluth, spot	91⅝	@	—
Corn, No. 2, elevator	48½	@	—
Oats, No. 2, white, in elevator	33	@	—
Rye, No. 2, Western, c. i. f., N. Y.	57½	@	58

BEANS.—Trade requirements light and prices down two and one-half to five cents.

Marrow, choice, per bu	2 42½	@2	45
Fair to good	2 30	@2	40
Pea, bags, choice	2 20	@2	22½
Red kidney, choice	2 27½	@2	30
White kidney, choice	2 50	@	—

SEEDS.

Clover seed, N. Y., good to choice, per bu	5 75	@	6 30
Toledo, for March delivery, per bu	6 95	@	—
Timothy, per 100 lbs	4 65	@	5 00
Red Top, lb	10½	@	—
Cottonseed, New Orleans, bulk, ton	13 00	@	—
Flaxseed, whole, cleaned	6 00	@	7 00
Cottonseed meal, ton	25 00	@	—
Linseed oil, cake, ton	27 50	@	—
Meal, sacked	28 00	@	28 50
Celery, seed, lb	7	@	7¼
Hemp, Russian, lb	2¾	@	2⅞
Millet, lb	1⅞	@	2
Mustard, English, yellow, lb	6¼	@	7
California, yellow	6	@	6¼
Rape, German, lb	3½	@	3⅝
Sunflower, lb	2⅜	@	2½

FEED.

Spring bran, 100-lb. bulk	16 75	@	17 00
Winter bran, bulk	17 25	@	18 00
Spring middl'ngs, 200-lb. sacks	18 00	@	21 00
Red Dog, to arrive	18 50	@	18 75

HAY AND STRAW.—Demand moderate, and most grades down five cents from last report. These quotations are for large bales. Small bales sell for 50 cents per ton less.

Hay, No. 1	90	@	92½
No. 2	82½	@	87½
No. 3	75	@	80
Clover	70	@	77½
Clover, mixed	80	@	85
Straw, rye, long	75	@	85

MILK.

New York Exchange price within 26-cent freight zone, 2¾ cents per quart.

FURS AND SKINS.

Black bear	15 00	@	25 00
Cubs and yearlings	5 00	@	10 00
Badger	75	@	1 25
Otter	8 00	@	10 00
Beaver, large	7 00	@	8 00
Small	3 00	@	4 00
Silver fox	50 00	@	200 00
Cross fox	8 00	@	25 00
Red fox	1 75	@	2 00
Gray fox	80	@	90
Fisher	8 00	@	10 00
Wolf, prairie	1 00	@	1 10
Timber	3 00	@	4 00
Wolverine	6 00	@	8 00
Lynx	4 00	@	6 00
Wild cat	50	@	60
Civet cat	—	@	—
House cat, black	—	@	—
Colored	—	@	—
Marten, dark	6 00	@	10 00
Pale	3 00	@	4 00
Skunk, black	1 40	@	1 50
Half-striped	85	@	90
Long-striped	80	@	90
Striped	45	@	50
White	20	@	25
Raccoon	75	@	1 00
Opossum, large	30	@	40
Medium	20	@	25
Rabbit	—	@	—
Mink	1 00	@	2 00
Muskrat, winter	11	@	12
Fall	8	@	9

FRESH FRUITS.—Receipts of apples moderate and prices unchanged except on choice greenings, which are 25 cents up.

Apples, Newtown, Pippin, bbl.	1 25	@4	00
Spitzenberg, per bbl	3 00	@5	00
Spy, State, per bbl	2 50	@3	50
Ben Davis, per bbl	2 50	@3	50
Baldwin, fancy, per d.-h. bbl.	3 00	@3	50
Baldwin, average prime	2 50	@3	00
Greening, fancy, per bbl	3 00	@3	50
Greening, good to prime	2 25	@2	75
Winter sorts, poor to fair, per d. h. bbl	1 50	@2	00
Cranberries—Cape Cod, good to choice, per bbl	8 00	@9	50
Cape Cod, com. to fair bbl.	7 00	@7	50
Jersey, prime, per bbl	6 50	@	—
Jersey, com. to p'me, per cte.	1 50	@2	25
Strawberries, Fla., p'me to fcy, per qt	30	@	40
Fla., poor to fair, per qt	20	@	25

LIVE STOCK.—Steers are a trifle higher; fat cows and bulls at a discount. Calves dull. Choice sheep firm and 25 cents higher. Lambs up 50 to 60 cents.

Native steers, per 100	4 30	@5	30
Bulls	2 75	@4	25
Fat cows	3 00	@4	00
Calves, choice veals	5 00	@7	50
Barnyards	2 75	@3	25
Sheep, common to prime	3 50	@4	75
Lambs	5 50	@6	35

COUNTRY-DRESSED MEATS.—Calves unchanged. Lambs selling slowly and lower. Anything over $10 is an exceptional price.

Calves, veal, prime, per lb	9½	@	10
Fair to good, per lb	8½	@	9
Common to medium, per lb	7	@	8
Small, per lb	5	@	6
Fed, per lb	6	@	6½
Barnyards, per lb	5	@	6
"Spring" lambs, fancy, each	9 00	@10	00
Poor to prime	5 00	@ 8	00
Pork, light, per lb	7½	@	8¼
Medium, per lb	6¾	@	7¼
Heavy, per lb	5½	@	6½
Rough, per lb	4	@	5
Roasting pigs, per lb	9	@	12
Pork tenderloins, fresh, lb	—	@	20

LIVE POULTRY.—All grades except turkeys lower. Fowls and roosters down one cent.

Fowls, per lb	—	@	10
Chickens, per lb	—	@	9½
Roosters, per lb	—	@	6
Turkeys, per lb	—	@	10½
Ducks, Western, per pair	60	@	80
Ducks, Southwestern, pair	50	@	60
Geese, per pair	1 00	@ 1	50
Pigeons, per pair	30	@	35

BUTTER.—All grades except factory and imitation creamery up one cent. Choice dairy is scarce and wanted. Exporters are taking some held creamery at 17 to 18 cents.

Creamery, extra	—	@	24
Creamery, firsts	22	@	23
Creamery, seconds	20	@	21
Creamery, lower grades	17	@	19
Creamery, June, extras	20	@	20½
Creamery, June, firsts	18	@	19
State, dairy, ½ tubs, fresh, finest	21	@	22
State, dairy, tub, fresh, seconds to fresh	16	@	20
State dairy, Fall made, 2nds	14½	@	15
West., imitation creamery, best	18	@	19
Western imitation creamery, lower grades	14½	@	16
West., factory, June picked, f'cy	13½	@	14
West., fctry, held, com. to good	11	@	13
Western, factory, fresh, fancy	14¾	@	15
W'n, fctry, fresh, fair to good	14	@	14¼
W'n, fcty or dairy, low grades	12	@	13½
Renovated butter, fancy	18	@	19
Rolls, fresh, fair to fancy	12	@	15
Packing stock	11	@	12½

EGGS.—Receipts are large but prices remain practically unchanged from last report.

QUOTATIONS AT MARK.

State and Penna., prime	18	@	18¼
Western, fresh gathered, firsts	—	@	17¾
W'n, reg. packing, fair to good	17¼	@	17½
Kentucky, closely graded, fancy	17½	@	17¾
Ky. & Tenn., aver prime lots	—	@	17¼
Southern, fresh gathered, fair to good	16¾	@	17
Western, fresh gathered, dirties	16	@	16½
Refrig'rator, carly p'kd gd to ch	15½	@	—
W'n refrig., common to fair	13	@	15

POTATOES.—Market is weak, and but few sales are made at outside figures. There is no prospect of any immediate improvement in conditions.

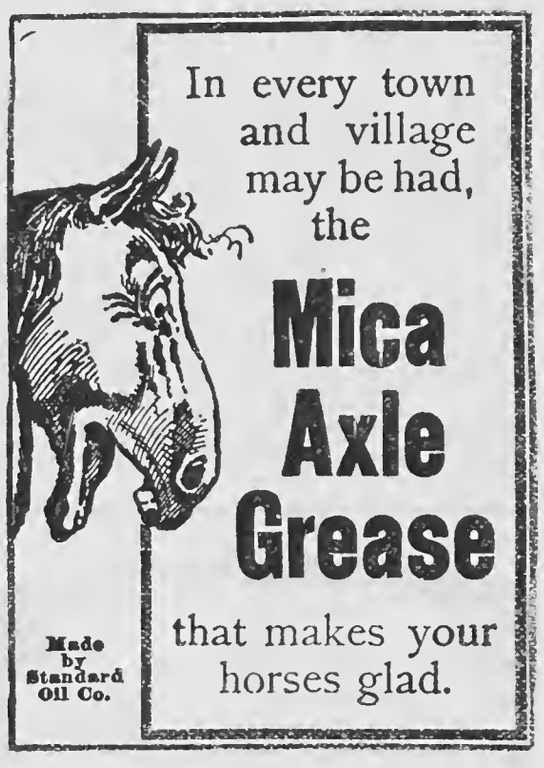
Bermuda, 2d crop, prime, bbl.	4 50	@5	00
Bermuda, 2d crop, No. 2, bbl.	3 00	@3	50
Havana, fair to prime, bbl	3 00	@4	00
State, round, 180 lb	1 50	@1	62
State, long, per 180 lb	1 37	@1	50
Michigan, round, per 180 lb	1 37	@1	50
Michigan, long, per 180 lb	1 25	@1	37
State and Western per sack	1 40	@1	60
Sweets, Va., per cloth-top, bbl.	2 00	@2	50
Other Jer. & Del., cloth-top bbl.	1 50	@2	00
Jersey, per d.-h. bbl	1 50	@2	00
Jersey, per bskt	75	@	90

HOTHOUSE PRODUCTS.—Lettuce lower and very dull. Western asparagus selling slowly at an advance.

Lettuce, choice, 3½ to 4½ dozen to case, dozen	40	@	—
Cucumbers, fair to choice, doz	1 25	@1	50
No. 2, dozen	75	@1	00
Tomatoes, common to prime, lb.	20	@	35
Radishes, 100 bunches	1 50	@3	00
Mushrooms, lb	20	@	40
Asparagus, dozen bunches	5 00	@6	00
Rhubarb, dozen bunches	30	@	50

DRIED FRUITS.

Apples, fancy	6½	@	7½
Choice	5½	@	6
Prime	4⅝	@	4¾
Low grades	3	@	4
Apricots, boxes, lb	7½	@	14
Bags, lb	7½	@	12
Peaches, Calif., unpeeled, bxs	6	@	10
Bags	5½	@	8
Peeled, per lb	13	@	18
Pears, California, per lb	5	@	10



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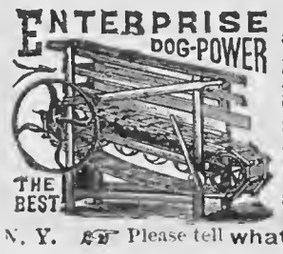

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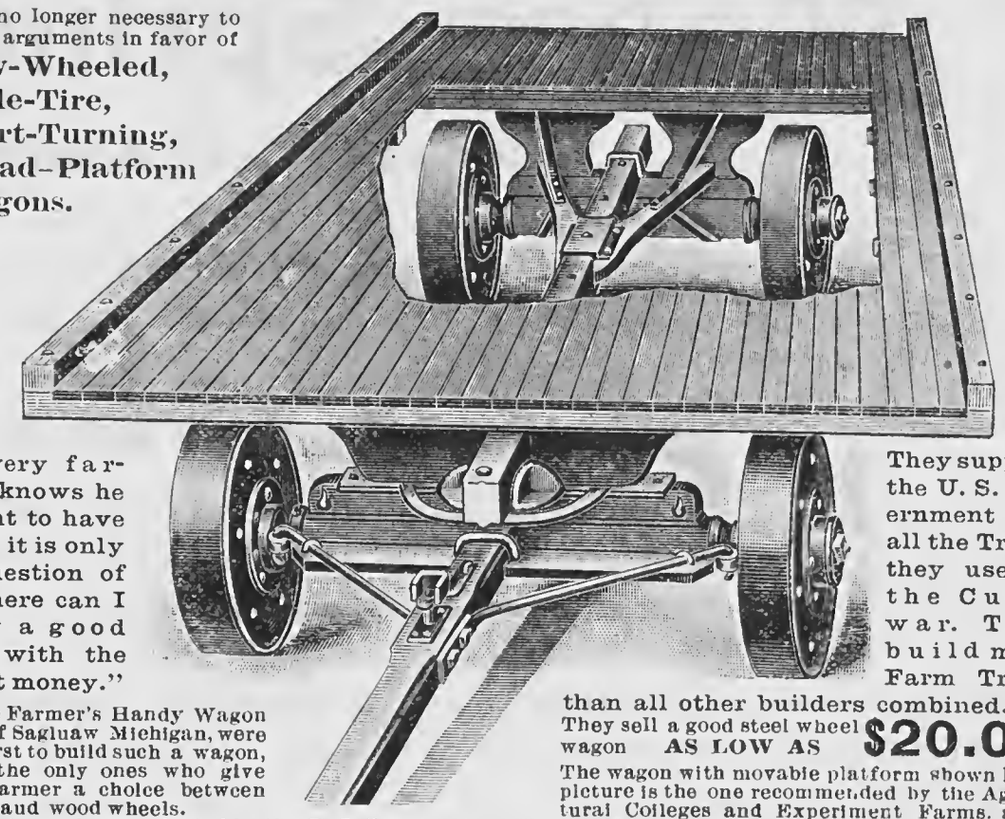

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HAND SEEDING AND CULTIVATING IMPLEMENTS.

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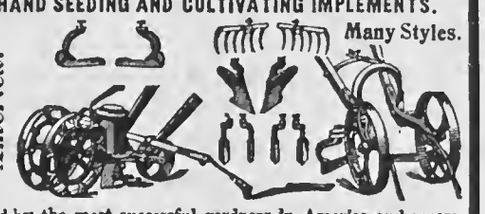

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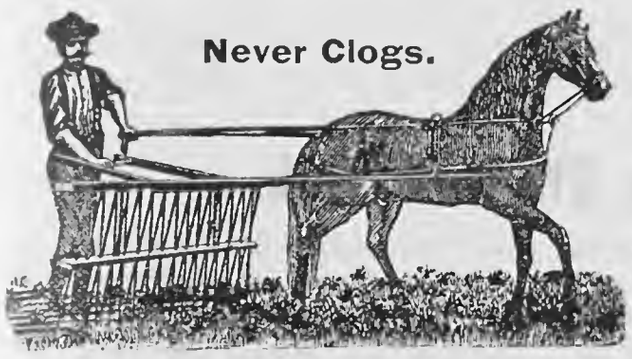

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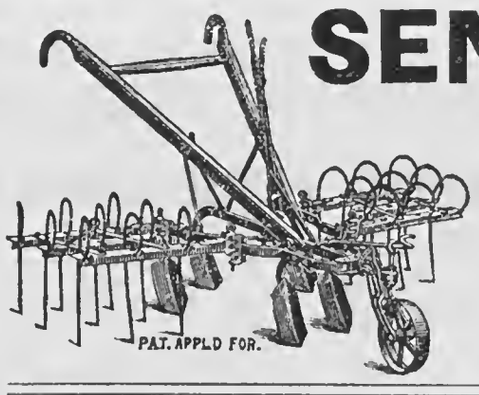

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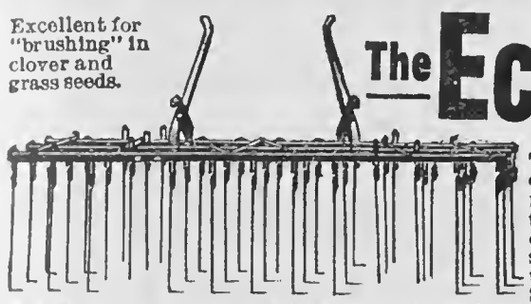

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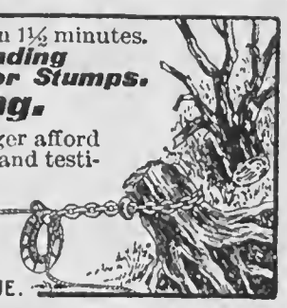

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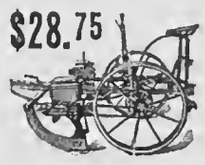

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2668. NEW YORK, MARCH 16, 1901. $1 PER YEAR.

PROF. ROBERTS AND AN AVERAGE DAIRY.

HOW TO COMPETE WITH THE MILLION.

Good Cows; Good Tillage; Dairy Mares.

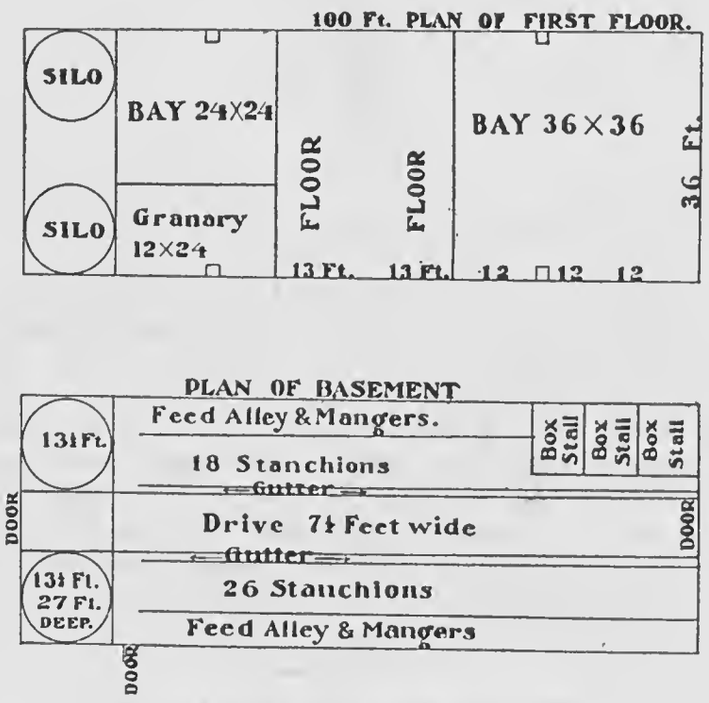
On page 123 of THE R. N.-Y. Prof. Roberts tells how he would conduct a dairy without a silo. He finishes up by saying: "If I were so situated that I could not reach this higher market, and had to go on in competition with the million, then I would conduct a dairy on quite a different plan." Will Prof. Roberts tell us how he would conduct a dairy if he was so situated? Many of us have farms some distance from market, and especially this higher market that he speaks of, and it is not possible for us all to get above each other; we have to meet competition. I would like to know the best way to conduct a dairy under those circumstances. G. A. B.

Groton City, N. Y.

If I were to enter into dairy husbandry, and was so situated that I would, of necessity, have to compete in the general market, my first thought would be to try to improve the tillage of the farm—that is, produce more per acre and at a less cost per unit. I believe that these results can be reached most cheaply by better farming. Second, I would use to a greater extent cover crops—legumes where they would succeed, the cereal grasses, such as rye, where the legumes would not succeed. Third, I would keep account, so far as I could, with each cow. A little inspection will readily give the approximate expense for food, and a little more investigation would give the approximate yield of milk or butter. This, without doubt, would result in discarding from a quarter to a third of the cows. In order to fill their place with paying cows I would make a more careful study of the milch cow, and if land was abundant enough I would try to fill the places made vacant by the discards with animals bred on the farm. I would use selected "nondescript" cows, and if some of the calves were to be raised I would see to it that their sires were purebred superior animals.

Having by slow and painstaking effort increased the yield of grain and roughage, and having increased the average output per cow, would then see whether I could not produce and store some of the food in a more acceptable form, or in a cheaper form than heretofore. I think I would raise some mangels. From 30 to 35 tons per acre can be secured, and they help to give variety of food, which is so essential to increased production. I would build a silo, plant corn thin enough and cultivate it well enough to secure not only roughage, but about half to two-thirds of an ordinary yield of ears. On some farms I would restrict the pastures and feed silage a part of the Summer, or at least have enough silage in store to tide over that part of the season when the pastures are short and the flies abundant. I believe that until the little black horn fly disappears it would pay to keep the cattle in the stables for a part of the day during the months of August and September. In connection with the dairying I would raise some horses; that is, I would endeavor to get by trade or purchase some good brood mares, perhaps having one good driving horse or mare, but the ordinary work mare should not only do the necessary work of the farm during the Summer, but raise a colt during the Winter. A dairyman who knows how to feed a cow to make her give milk will know, instinctively, how to feed a mare that is suckling a colt in the Winter. Or, in other words, I would try to diminish the cow dairy if I could not largely increase the crop product, and establish a small horse dairy. This would save some of the labor of milking, would help to diversify the work and result in higher intelligence.

If breeding horses was not to my taste, and the dogs were not too numerous, I would put a few ewes on the farm, and try my hand at raising early lambs. Again, a wider field of study and activity would be opened, and fewer cows would have to be milked. Now



PLANS OF A GOOD MILK BARN. FIG. 77.

that we have the woven wire fence pasture may be inclosed with it and the sheep protected from dogs. At least this is my experience during the past year. All these activities I would carry on in the best possible manner consistent with my surroundings and the price received for the products. I might set out some fruit, such as berries, peaches and Japan plums, and try to keep account so that I could discover whether there was most money and least labor in producing milk, horses, lambs or fruit. I should not be afraid of getting "too many irons in the fire." Of course that is possible, but on the other hand, where a man has but one "iron in the fire" he is apt to get very careless, and let that one burn, and himself degenerate mentally. I. P. ROBERTS.

A GOOD BARN FOR MILK FARMING. FIG. 78.

REPORTS from the Ohio maple sugar district indicate a prosperous season. The cold weather of the past few weeks has kept the hard maples frozen solid. This will cause an increased flow of sap when the season opens, and is generally believed to improve the quality.

SAVING A "LOAFER FIELD."

Success with Cow Peas and Crimson Clover

At a farmers' institute held in this county the past month, a question was asked in regard to the value of cow peas. I was surprised to learn that only one person had grown them, few even knowing what they were. Crimson clover is quite well known, and is grown by many of the more progressive farmers about here. The tendency now with the best farmers is to produce paying crops at the least cost of production, and this must be the study of every farmer; not how much, but how cheap and how good. How to build up land at the least cost is the study of the future. My experience with Crimson clover dates back 16 years, and that of cow peas eight, and with two exceptions I have had very good success. I have three back lots on my farm; my father abandoned their cultivation 25 years ago. He said he could no longer grow farm crops profitably on such poor soil, and the home supply of manure was all needed on the other parts of the farm, where mostly small fruits and vegetables were grown, and to buy stable manure (fertilizers were little known by him then), at $1.50 per load to put on that poor leaky soil would never pay. The soil is yellow sandy loam with a clay subsoil. The rotation he practiced was corn, oats, rye and Timothy. I never remember his cutting, any season, more than two loads of rye or one of hay from either of these lots.

On these lots I have commenced experiments to see whether profitable crops can be grown without stable manure, and at the same time build up the fertility of the soil by the least possible amount of purchased fertility. The reader can imagine how these lots looked after 20 years' growth of brush and catbriers. Lot No. 1 contains 2¼ acres; No. 2 the same, and No. 3 2½ acres. In the Spring of 1897 I commenced cleaning No. 1 by grubbing out the brush and young trees, which consisted mostly of White birch and poplar. This was a comparatively easy job; no stones, and the soil was very loose and roots near the surface. In April it was plowed five inches deep, harrowed with a Cutaway at intervals of two weeks until July 20; at the last harrowing 100 pounds of muriate was applied to the piece, and it was then sown to Crimson clover, 15 pounds to the acre, with the addition of one peck of rye and a quarter-pound of Siberian kale seed, and all was covered by going over twice with a weeder. The weather was favorable for its growth, and by December 1 the ground was well covered. The kale overtopped all with its long spreading leaves, making good Winter protection for the clover. In the Spring they came out in fine condition. By the last week in April the kale was ready to cut, and 14 barrels were sold from the piece, at an average of 85 cents per barrel. By the latter part of May the clover was in full bloom, and stood about 18 inches high. The rye I should not have sown had I known the clover would be such a perfect success. As it was, much of it was fed to stock from the heaviest spots in the field, cutting above the clover, and later some of the clover was used in the same way.

The first week in June the clover was plowed under six inches, harrowed twice with the Acme harrow, and sown to cow peas; 1½ bushel to the acre, and at the same time I had 100 pounds of muriate of potash and 500 pounds of dissolved S. C. rock applied to the piece, and all harrowed in together. For an experi-

ment I sowed a small portion of the piece with Crimson clover among the peas, but sown so early it would not live over Winter. I shall try Medium Red in this way next time. The peas made a heavy growth, but not having an early variety they ripened very little seed. They were killed by frost early in October. They were not plowed under in the Fall; this was a mistake. The Fall was warm so long after they were killed that it would have been much better to plow them in and sow to rye as a cover crop. By Spring they were so brittle that going over them twice with a Cutaway harrow completely mixed them with the surface soil. The piece was then plowed seven inches deep, harrowed several times, marked off and planted to Beauty of Hebron potatoes in drills 3½ feet apart. I applied 1,200 pounds of a fertilizer containing 2.50 per cent of nitrogen, seven per cent of phosphoric acid, and eight per cent of potash in the drills, on the whole 2¼ acres, using 13 bushels of cut seed per acre. The fertilizer was mixed with a small plow in the drills, and the seed covered with a cultivator, after which the piece was harrowed over both ways. This prevents loss of moisture, covers seed at a uniform depth, and leaves the surface in the best condition for the use of the weeder. This harrowing was continued once a week with an adjustable spike-tooth harrow until they began to break ground; then omitted until the rows could be plainly seen, then harrowed with the rows, slanting the teeth backward, and then the weeder was used until they were six inches high. I cultivated them six times shallow, the last with hillers attached; later the largest weeds were pulled by hand. The yield was 466 bushels from the 2¼ acres. The potatoes were very smooth and clean, which was due, I think, to the new soil. The piece was then gone over with a Cutaway harrow until the surface soil was like an ash heap; then plowed eight inches deep; 600 pounds of dissolved rock phosphate applied, and again harrowed as before; sown to Gold Coin Winter wheat, seeded very lightly with Timothy. The following Spring, March 24, it was seeded heavily to Medium Red clover. The yield of wheat from the piece, 2¼ acres, was 68 bushels. The stand of clover is good, and promises well at this writing. Lot No. 2 was broken up last Summer and sown to cow peas (Early Black), from which were gathered all the seed needed the coming season. Lot No. 3 has just been cleared this Winter and will be broken up as soon as the frost is out, and in June will be treated to a feed of nitrogen a la cow peas, the results of which I shall give an account of later.

M. L. BELL.

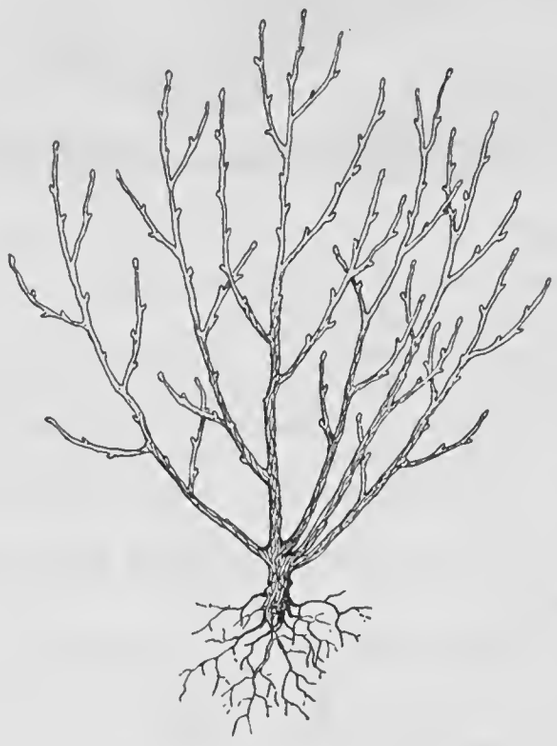
Rockland Co., N. Y.

THE BLACK ROT IN SWEET POTATOES.

For the past two years we have been troubled greatly with what is often called black rot with our sweet potatoes. Some report a loss in plants equal to 50 per cent of the entire lot transplanted. They often become well established after being transplanted, grow small potatoes half an inch or an inch in diameter, then the plant would show brown spots on the leaf, changing to yellow after a few days, and die. Last Spring I pulled from the sprouting bed one plant, the root discolored, and splitting it lengthwise, found the lower part very much darker color than a healthy plant. I then took up the potato from the bed, finding no discoloring of the remaining plants upon this one seed potato. Would a treatment of the seed, prior to bedding in hotbed, be the better way, or would treating the plants either before pulling from potato or after pulling, be the better method? I have thought to fumigate the seed with strong sulphur smoke before bedding; then after pulling the plants more or less of the potato would adhere to them. Spraying with sulphur or something known to be better might lessen the mortality of plants considerably. Is there any preventive known, and how applied? W. H. H.

Montrose, Iowa.

From the investigation of the subject, it is seen that the black-rot fungus is abundantly supplied with spores, and they may be found in one or more forms in every patch of diseased substance in the root or sprout. These spores, being formed under ground, as a rule, tend to charge the soil with the germs of infection. How long the spores can remain alive and inactive is not known, but very likely for many years, and the roots of one crop may become inoculated from the fungus of a previous crop upon the same soil. In like manner, the spores being light as dust can be carried from one field to another by the winds. The difficulties of applying a satisfactory remedy are not easily overcome, for the trouble is so largely under ground. In the first place, there is no doubt that only healthy sets should be used, which means the careful selection of perfectly sound roots for the hotbed. In order to get the best plants, it is possible to use some remedy in the hotbed, as, for example, a compound of copper, the Bordeaux Mixture, or similar substance, which will tend to keep the sprouts from outside contamination. There is also something in the setting of the plants, for if they get a poor start, as from chilling rains, they are weakened, and thereby made more susceptible to the attacks of the black rot. It is not to be considered that the circumstances of the season or conditions of the soil are in any sense the cause of the black rot, as a specific fungus is necessary for that; but it, like all other living things, is dependent upon its surroundings. It is possible that certain kinds of manure, as heavy cow dung, for example, are more conducive to the development of the rot than horse manure, and a commercial fertilizer may be better than either. Such questions must be settled by a thorough testing made in the field. It seems impracticable to apply any substances to the soil to kill the germs that have accumulated there. As a rule, the only way is to let the fungus starve out by with-



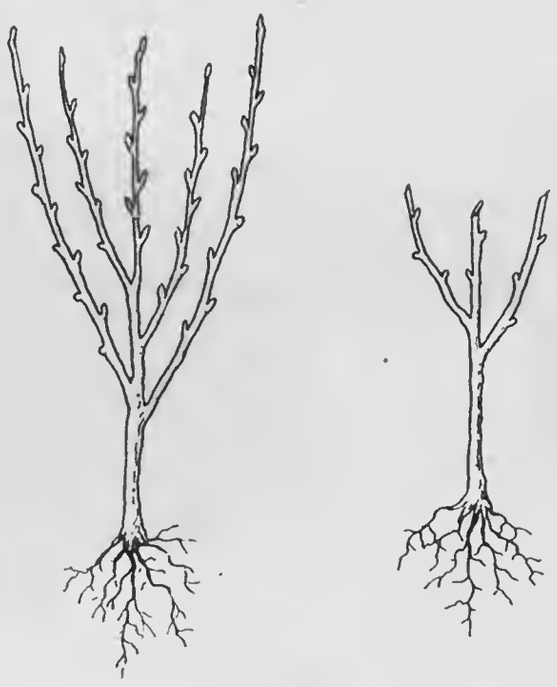
CURRANT BUSH TWO YEARS FROM PLANTING. Fig. 79.

holding the crop upon which it feeds, until the germs become extinct. While a grower with superior sweet-potato land may be loath to set aside his best crop, there is no doubt that in some cases, in the long run, it would be the most economical. The idea has been advanced that some varieties are almost rot-proof. Conversations held among the growers do not strengthen this opinion, and while there may be differences, they are not sufficient to be the foundation for a general practice in selecting "seed."

New Jersey Exp. Station. BYRON D. HALSTED.

TRIMMING THE CURRANT.

Our method of trimming currant bushes differs very materially from the plan usually followed and advised. Our first trimming is done before planting; if our plants are one year old we simply cut back to a single stem, and allow only enough of this to remain for a start of three or four eyes from which starts the young growth for the first crop. If our plants are two years old we allow two or three of the most vigorous branches to remain, but stub each back to three or four eyes, being careful to cut all other branches very close to the main stem, so as not to be troubled again by sprouting from the eyes that would other-



TWO-YEAR PLANT TRIMMED. Fig. 80.

wise be left. We endeavor to get a good stout plant as quickly as possible after planting. We allow from three to four good, strong stalks to grow in each hill; then carefully cut out all others as they appear. We do not favor the plan of keeping the fruiting hill to a single stem for several reasons. All currants are subject to the attack of borers after a few years from planting, which kill out the stalks they attack. When only one stalk is left to the hill, and the attack is made that destroys that hill, it creates a vacancy which in a few years often amounts to one-fourth to one-half of the plantation, while if the hill contained three or four stalks there would yet be left sufficient wood to produce a crop. A bush kept pruned to a single stem is also more liable in Winter to be affected by the freezing and thawing of the ground than when the bush is formed by a number of stalks. So too, the single-stem bush cannot so well support its load of fruit in time of high wind and rainstorms.

Our system of pruning is very simple; in fact, we do not believe in the wholesale butchery of a currant bush as advocated by so many. We want plenty of bearing wood, which is at its best from three to four years old. We never shorten in the branches at all. We want them to grow as tall as they will. We find the foliage on the top branches a great protection to the fruit, as in the shade thus afforded it will hang, if necessary, several weeks after being fully ripened, which is sometimes of great importance when labor might be scarce, or is needed in gathering more perishable products, or in case the market becomes temporarily overloaded. Bushes closely cropped back at the ends, and exposing the fruit to the direct rays of the sun, are in danger of total loss of crop in case of wet weather followed directly by hot sun, which will scald the fruit as effectually as if hot water is poured upon it. Our trimming is simply a thinning process. We cut close to the ground all unnecessary young growth, retaining three or four main fruiting stems, and treat the remainder as so many weeds. After the third or fourth year from planting we allow several of the strongest young shoots to grow each year for the purpose of renewing the bush, and when these become old enough to bear we then cut out the weaker of the old stalks, and let the new ones take their place as rapidly as the old ones become partially exhausted and show signs of decay. Thus by properly fertilizing and caring for the soil we could run a plantation through a long period of years, and have wood of four to six years' growth, thus keeping the bush in prime condition all the while.

The more we grow fruit the plainer it becomes that there are a whole lot of pet hobbies, that have been handed down for years, that must go. We do not have time, and it is too expensive if we had it, to stand at a currant bush for half an hour each Spring and clip a sprig here and there, and shorten back all growth to a certain fixed rule, and when we are through find we get no better fruit and no more of it than by a simple, common-sense method that requires so little labor, besides making our fruit liable to injury from sun and rain, and the bush itself becomes a prey to borers through the process of pruning too closely. Understand, our idea is simply to thin out all unnecessary young growth, retaining three or four good, strong-bearing stalks, which are allowed to grow as tall as they will without any restraint whatever, and after they have given several good crops, and show signs of weakening, cut them out and have others coming on to fill their places without loss of time. Having done this much, let nature do the remainder and the results will be satisfactory. The pictures, Figs. 79 and 80, show our idea of it.

Ohio.

BARN FOR A DAIRY FARMER.

The picture at Fig. 78, first page, shows a barn that we built the past season, and also plans of basement and first floor. Dairying is the principal business here, our milk being shipped to New York, and we produce most of our milk in the Winter, so that the barn is the most important part of the outfit. The barn stands on sloping ground, so that it is an easy grade to the first floor from the road. On the upper side there is a wall half way up; the rest of the basement is of wood, two thicknesses of planed and matched lumber, with tarred board between, the first thickness of lumber being horizontal and the next perpendicular. There are eight windows, 12-paned, 9x14 glass, and five six-paned in basement, making it almost as light as outdoors. The windows are double. The floor is cement, the drive being four inches lower than where the cows stand. The gutter is 18 inches wide and 10 inches deep on the side next to the cows, and six inches next to the drive. We put in the Scott self-closing stanchion, and the Foster system of water buckets, with tub silos 13½x27 feet. Whatever may be said against tub silos for outside we know that they are all right for inside.

A granary 12x24, 10 feet high on first floor, is a necessary part of a barn for Winter dairying. A hopper-bottom bin with spout into basement saves much work; four tubes 14 inches square carried from basement up inside of barn with an opening outside just under the eaves seem to do the ventilating in good shape. We furnished all of the coarse lumber and about half of the siding from our own woods, and the total amount that it cost, including extra labor, was $990, not counting our own labor or lumber furnished. We are much surprised to find how much manure we have lost by not being able to save the liquid.

Madison Co., N. Y. D. B. UTTER AND SON.

MOVING A LARGE TREE.

THE R. N.-Y. has several times described the moving of large trees, but I think the tree illustrated, Fig. 81, is larger than any you have described. This tree with the soil moved with it, was estimated to weigh from 50 to 60 tons, and it was moved on rollers much as a large building would be moved. During the Winter of 1899-1900 the tree was dug around, and the roots were cut which extended laterally. The tree was then permitted to remain in position during the following Summer, and the cut roots healed over. During the past two weeks the tree has been moved about 40 rods, and put in position, where it now stands as the finest tree on the grounds of a citizen of Ithaca, N. Y. It will be seen by the picture that the tree is a noble oak, and if it can be persuaded to take kindly to its new home it will certainly be an ornament. It is not probable that many farmers will attempt to move trees of such proportions as this one, because of the expense involved, $500 being a low estimate of the cost of moving this tree.

L. A. CLINTON.

MAKING A CEMENT WALL.

On page 103 S. E. Barney, of Indiana, wrote an interesting article on mixing cement. More than a dozen readers have sent questions to Mr. Barney, asking how he would build a cement wall. The following excellent article is written in response to these questions:

As to the kind of cement to use, I have no faith in natural cements, though they can be used safely under many circumstances. They take a great deal longer to "cure," i. e., to harden thoroughly, and they will not stand freezing and thawing. To build a cement wall I set posts opposite each other at such distance apart as may be required for the thickness of the wall. This thickness depends entirely on the weight it is expected to carry. If I wished to make a wall four feet high to carry a frame house of eight or 10 rooms, I would set my posts 20 inches apart, which, with an inch board on inner side of each post to hold the grout, would make an 18-inch wall at bottom. I would draw the posts together at top to 10 inches, and nail a piece of board at top to hold them there. These posts can be set in ground like fence posts 10 or 12 inches, or driven like stakes 18 or 20 inches. I only screen enough gravel to make the finishing course, using a mason's common sand screen of ¼-inch mesh. Any man can make one. Bear in mind that when grout is tamped thoroughly it causes a very heavy pressure outward. Six-inch posts are none too heavy, and they should be three feet apart lengthwise of wall. This wall, 18 inches at bottom and eight inches at top, gives an average thickness of 13 inches, and with gravel and sand within one-half mile, using Portland cement, should not cost over eight cents per lineal foot. An eight-inch brick wall (hardly safe four feet high), with brick at $6 per 1,000, would cost about 18 cents per lineal foot here. A cement wall should not cost over one-half as much as brick or stone, and it will last to the end of time. Remember these points: Fresh Portland cement, gravel and sand free from dirt or soil, *thoroughly* mixed, *thoroughly* tamped and the finish coat applied as soon as possible, and protected in very hot weather from the direct rays of the sun. A grout wall must be plastered on both sides, but needs only enough to make a smooth surface—excluding all water.

The above prices are based on hiring all work done, as I am unable to do bodily labor. Twenty years ago, when I was able to work with my men, I put in a grout foundation for a large brick house, using Louisville (a natural cement), and screened gravel nine to one, and it was as hard as stone in six months after, when plumbers were compelled to cut through it. In 1892 I let a contract to a mason, permitting him to use Louisville cement and screened gravel seven to one, and much of his work was useless. It all depends on the mixing and tamping. I would advise beginners to use only Portland cement at the proportion I first named, 50 heaping shovelfuls of unscreened gravel to 100 pounds of cement. To economize on cement, one can begin a wall or floor by putting in a layer of stones, and then use just enough grout to cover; then another layer of stones and cover with grout, thoroughly tamping every other course. If you take this course, rake out of your gravel all stones from size of a hen's egg upward. You can form a water table on top of your wall by giving the outer top corner a slope downward. You can further distinguish this water table after putting on finishing coat by taking a straight edge and mason's trowel, and making a cut with it the length of wall six inches from top, holding the end of trowel up, then slightly lower the straight edge and make another cut with handle of trowel downward. You can do this with one cut by using a three-cornered file broken in the middle. Cement work above the ground can be marked also to imitate stonework in same manner. To make plain or ornamental window caps and sills you must first have the mold and then cement and sand in proportions of three of sand to two of Portland. This should be thoroughly mixed, and use *just enough water to moisten* it. Then tamp it thoroughly into the mold, and remove the mold, leaving the mixture on a plank by which you can remove it to a place guarded from sun and rain for 10 days to cure.

A chimney smokes because the wind sucks down the flue, as most people say. There is no suck about it though. Air in motion is denser than air at rest, and a gust of wind passing over the top of a chimney, as ordinarily built, finds there a thin, lazy volume of smoke, and down goes the air, forcing the smoke into the room below. By reducing the flue at top to half its size you double the density of the smoke there and enable it to overcome the force of the wind. Never top a chimney any other way. S. E. BARNEY.

Indiana.

THINGS I HAVE TRIED.

More than half the pleasure of farm life lies in a disposition to experiment with the view of obtaining better results. I have found, however, that it is not always as profitable as the experimenter could desire. In 1854 I grew several thousand low-headed apple trees. Several of my agents made good sales to sensible farmers, but more of them did not, leaving altogether too many on hand to be dug up and thrown away. Nurserymen and dealers objected to these low, well-branched trees, preferring the tall, high-limbed

MOVING A BIG OAK TREE. FIG. 81.

ones, as so many more could be packed in boxes of equal size. Orchards of the low-topped trees, however, proved to be the longest-lived, best, and in dry seasons, the most productive ones. My experience with them ceased as ground could be cleared.

Another experiment, in southern Ohio, was the planting of a thrifty two-year-old Concord grapevine close to each peach tree that had been set out in orchard form about two years previous to planting the grapevines. The vines soon took the tree tops as a trellis, and with scarcely any subsequent care bore good crops each year, although the peach-tree blossoms were destroyed by frost, three years out of every five. The grapes proved to be a profitable crop at three cents a pound in the home market. The peach trees died out gradually, but did good service as a trellis for 10 or 12 years. My next experiment was made with a row of Hartford grapevines in the garden. They rotted badly every year. High staking and trellising did not prevent it, as I had hoped it would. Heroic measures were in order, and late in the Fall the vines were all cut off about four inches above the ground. The young canes made a marvelous growth the next season, and were laid down flat on the ground during the next Winter. In the following Spring three to four canes on each main root were shortened back to seven to eight feet in length, and tied up to 10-foot stakes, on which were three horizontal wires. A good crop of sound grapes was thus secured for several seasons. I am now located in a much more favorable region for fruit growing (near Washington, D. C.), but find the Grape rot quite prevalent here also. I have 30 or 40 grapevines of the newer varieties in full bearing, but I still make a practice of cutting back to the ground at least two or three vines each November or February. As a result, I thus secure an abundant growth of clean, vigorous canes, on which the fruit is much less liable to rot, even when unsprayed, than would otherwise be the case if the ordinary method of pruning is practiced.

Glencarlyn, Va. J. W., JR.

TREATMENT FOR BORERS.

AN ARSENIC INJECTION.—Two years ago we rented our farm for four years. When we left our apple and peach orchards were free from the borer, and strong, thrifty trees. On our return, alas, some were dead, some dying, and all sick from the borer. A friend told us we would lose most of the trees, so we went to work with a will, and dug and delved and scraped, but we probably did not understand how to do it, as not a beggar could we get out, so we thought of another scheme. We made a strong solution of Paris-green, and with a fine syringe injected the solution in every hole, and also sprayed all around the trunk with it. I have not lost a single apple tree, and only two peach trees, nor have I any borers in a new peach orchard put out a year ago. Now, while I am constantly spraying our fruit trees, this may keep the borers away. I am fully satisfied I killed all those that had taken hold by injecting the Paris-green.

Long Island. F. R. T.

A CALIFORNIAN WASH.—We are now so well satisfied with the results of our experiments with the lime, salt and coal-tar wash that we shall continue its use on all trees affected by the borers. Here are the directions: Make a brine with any cheap salt (we pay $4 per ton). Use good quality of lime and slake with this brine. While the lime is slaking and hottest, put in at least three quarts of coal tar to every five gallons of the slaked lime. When thinned sufficiently to put on the trees, the proportion will be reduced to about two quarts to five gallons. Uncover the tree to the roots, or as far down as borers usually go, and scrape clean. Put on the wash with a "slapper," which forces it into every opening in the bark. Let the wash extend up the trunk about a foot. We make "slappers" by tying 10-inch lengths of baling rope to a handle about two feet long. An old broom handle is just right by cutting off two feet of the lower end. We shall wash all peach, apricot and almond trees as soon as the rains are about over, and also part of the prune orchards, where the borers have appeared. No bad effects have yet appeared from the use of coal tar. We paint all wounds, sunburns or other bare places on all varieties of trees with tar right from the barrel. In cool weather it must be warmed, so that it will flow from the brush readily.

California. H. G. KEESLING.

Philadelphia Milk Shippers' Union.

It was reported recently that a new milk producers' union had been formed by a large number of farmers who were shipping to Philadelphia. The cause was dissatisfaction with the treatment received from the city dealers, who had cut down the price paid the producer, while the rate to consumers remained the same. The following from a Delaware Co. (Pa.) farmer tells what has been done:

"Feed and cows have got so high in price that milk cannot be produced as cheaply as it could a few years ago. Four years ago I bought bran for $12 a ton; now the price is $19.50 per ton. Ten years ago I could buy a better cow for $60 than I can buy now for $70; in fact, it is a difficult job to find a good cow now for sale. Breeders keep the best in the West for their own dairies, and ship the old and inferior ones here. It has always been the custom between the producer and the dealer that the producer get one-half the general retail price. All last Summer the general retail price was eight cents per quart, and the dealer paid the producer but 3½ cents per quart, and some dealers paid but three cents part of the Summer. The producer had to pay all freight and furnish all his own cans to ship in. On October 1 the dealers started to pay four cents per quart. But in January they wanted to make the producer believe that the production exceeded the consumption, so they put the price to 3½ cents, but still keep the retail price at eight cents per quart. It was then that the Jersey and Pennsylvania farmers decided to form an organization, which they have succeeded in doing, and have given it the name of the Philadelphia Milk Shippers' Union. It will not be necessary for the dealer to raise the price on the consumer, as we do not intend to ask for anything but our just rights, which are one-half the retail price. The main body is to meet in Philadelphia, and we are forming local unions all along the railroads and trolley lines hauling milk into the city, which are to be governed by the constitution and by-laws of the main union. We intend to go up into New York State and try to get those farmers from that State who are shipping milk to the Philadelphia market to form local unions and act with us. I hope THE R. N.-Y. will give us all the aid in its power to get those farmers from that State shipping milk to this city to join us. Our aim is to grow so strong that when we ask for our just rights we shall be backed by such a large number of milk shippers that if our demands are not granted we can control the market by shutting the supply off from the dealers for a few days. We are growing faster than we expected, and we intend to win. We do not intend to let the dealer come between us and the consumer, and take away from us all our profits to put it in their own pockets without giving the consumer any benefit of the cut price, which they did all last Summer in the city of Philadelphia."

DELAWARE CO. FARMER.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

The Lime for Sweetening Soil.

F. H., Ludlow, Vt.—Will ground phosphate rock answer for an application of lime to sweeten soil or supply a deficiency of lime on southern Florida land? Will acid phosphate answer the same purpose.

ANS.—No. The ground phosphate contains lime, but it is not in the proper form for sweetening the soil. This "sweetening" or neutralizing process is a chemical one. The lime should be in the form of a carbonate. As an illustration of what we mean take soda. Common salt is the chloride of soda, while cooking soda is the bicarbonate, and the well-known Glauber's salt is the sulphate. We do not use the sulphate for biscuit making, or the table salt for a headache, or the cooking soda for preserving food. Each has its place in economy, depending largely on the change made when it is broken from its chemical union. Just so with lime. The carbonate is the form used for sweetening the soil.

Soy Beans and Cow Peas.

C. D. G., Waynesboro, Pa.—What is the difference between Soja bean and Soy bean? Will Soja beans grow well on poor soil and how do they fertilize? Are they any more valuable in the way of fertilizing than cow peas?

ANS.—No difference except in the name. We sent to the best authorities in the country and asked them which name is preferable. They all agreed that Soy is better. The Soy beans require good soil, or a fair amount of manure or fertilizer to make their best growth. For manuring purposes we prefer the cow pea. It does better on poor soil, hugs the ground closer, and is easier to plow under.

Cotton-Seed Meal and Stable Manure.

H. M. P., Grand Isle, Vt.—How about cotton-seed meal as a fertilizer? How long does it take to become available? Would it not be a good fertilizer to apply with barnyard manure for corn on shallow soil liable to leach?

ANS.—We regard cotton-seed meal as too much like manure to be mixed with it. The following table will explain what we mean:

Pounds in One Ton.

	Nitrogen.	Potash.	Phosphoric acid.
Average manure	10	13	6
Cotton-seed meal	120	35	50

Both are what we call one-sided fertilizers; that is with a higher proportion of nitrogen than of the minerals. Most crops require more of potash and phosphoric acid than of nitrogen, and the corn crop in particular needs potash—the ash of the cob sometimes containing 35 per cent. To mix the meal and manure would make the proportion even worse. What should be done is to use acid rock and muriate of potash with either. The nitrogen in cotton-seed meal is quite available—rather more so than most organic forms.

You say that you would not care to mix it with barnyard manure for the reason that manure is already too rich in nitrogen in proportion to minerals. Prof. Aikman, in his book, Manures and Manuring, says: "The ingredient in which barnyard manure requires to be reinforced is nitrogen." He also speaks of the Rothamsted experiments, which showed that barnyard manure "restored the mineral ingredients, but was inadequate as a source of nitrogen." Are you sure that manure is not *oftener* out of balance by having too little of nitrogen in proportion to the minerals? Of course, manure varies much in quality according to treatment, feed, etc. Do farmers on this side of the pond feed so much more nitrogenous food?

The figures quoted above show the average composition of manure. As the result of many American experiments it appears that on light soil a farmer may profitably use for corn about three times as much potash and phosphoric acid as of nitrogen. Manure varies greatly, but in this country is regarded as valuable chiefly for its nitrogen. Experiments in Massachusetts, where potash and phosphoric acid were added to manure, both separately and mixed, show beyond any doubt the value of such "reënforcement" on average New England soils. Farmers on the lighter American soils apparently need to use more nitrogen than is required on the heavier grass lands of England.

Grass Seed for a Cemetery.

J. L. C., Marion, Ind.—I am interested in a new cemetery, which we wish to keep similar to a lawn. What kinds of grass seed, and how much per acre, shall we use?

ANS.—No grasses excel Kentucky Blue grass and Red-top either in beauty or utility for the purpose named. The seeds may be mixed in equal proportions, and 80 to 100 pounds of the mixture should be sown to an acre of well-prepared and enriched soil. A pound of Sweet Vernal grass may be added for the sake of the pleasant odor. This is rather heavy seeding, as the above grasses only weigh about 14 pounds to the measured bushel, but the result will be better, and far more permanent than if a smaller quantity is used. Six or eight pounds of White clover per acre may well be sown separately. It is very useful for covering vacancies and supplying nitrogen to the grass roots as time goes on.

For the land's sake, use Bowker's Fertilizers. They enrich the earth.—*Adv.*

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$1.00 per bu. for Sweet Corn. Other seeds and plants. $1 per 1,000 for strawb'y plants. F. E. RICHARDSON, Berrien Spgs., Mich.

WHITE WONDER OATS—90 bu. per acre; no rust or smut; 50 cents per bu. Sacks free. F. S. GOODRICH, Esmond, Ill.

FOR SALE—100 bu of Stowell's Evergreen Sweet Corn, carefully rogued, at $1.50 per bushel, sacks free. ORRIS METCALF, Momence, Ill.

Big Four Seed Oats. A white oat, with short, stiff straw that does not lodge. Last year 15 acres produced 1400 bushels (by wt.) for me. Recleaned, 60c. per bushel for 2 bushels or over. Bags free. S. G. BROWN, Willoughby, Ohio.

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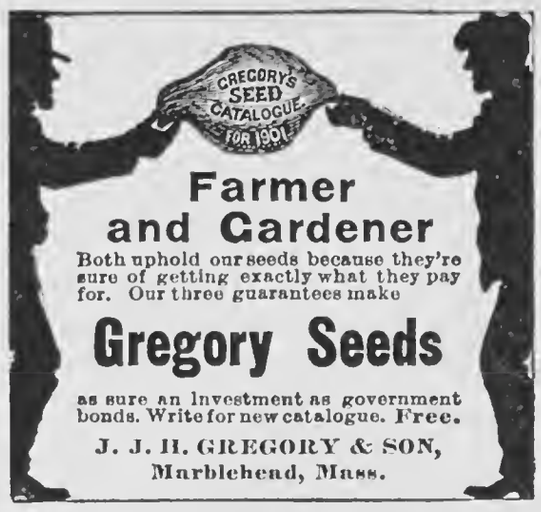
F. B. MILLS, Box 79, Rosehill, Onondaga Co., N. Y.



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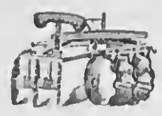
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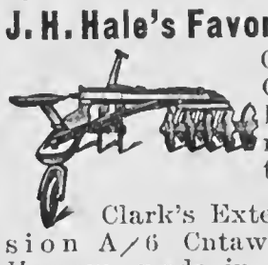
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200 bushels and upwards, 50 cents.
100 bushels and upwards, 55 cents.
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The way to sow it is in the rough. Now is the time to sow.
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New Prolific Pickling Cucumbers	.10
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New White Wonder Cabbage	.25
Total	$1.25

Send us 10c., we will mail you the above $1.25 all New Century Seed and our handsome illustrated Catalogue FREE. We can make you low prices on Extra Choice Maine Grown Seed Potatoes, and Choice Recleaned Red Clover. Timothy, Orchard Grass, Kentucky Blue, Red Top, Cow Peas, Onion Sets.
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CLOVER SEED.—New, Ohio-grown. Perfectly clean. Lowest prices. Send for samples and order for yourself and neighbors, thereby saving freight. The Geo. M. Wilber Co., Marysville, Ohio.

For Sale About 300 bushels Extra Choice Early Bovee Potatoes, free from disease and scab. For prices etc., address
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High grade Danish seed by mail, direct from the grower in Denmark, to your address, postpaid.
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FOR SALE—About 400 bushels extra choice Early Rose, Bovee, Maule's Thoroughbred, and Carman No. 3. Price, $3 for 4-bushel barrel.
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TREES $7 PER 100—APPLE, PEAR and PLUM, 3 to 5 feet high. HEALTHY and TRUE TO NAME. Best varieties. We sell all kinds of trees and plants at lowest Wholesale prices. Don't buy until you get our Catalogue, which is free, or send list of wants for special price. Address RELIANCE NURSERY, Box 10, Geneva, N. Y.

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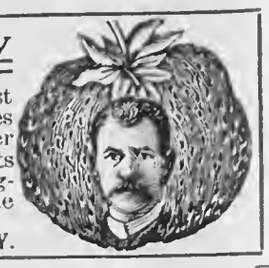

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Asparagus Roots, 2-year, $2.50 per 1,000. Send for my 1901 Catalogue.
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JERRARD'S SEED POTATOES & EARLY SEEDS
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"Billion-Dollar Grass" Exposed.

F. L. D., Victoria, Mo.—I send a sample of Salzer's Billion Dollar grass. Will you tell me the true name of it, and also tell me whether it is good for any purpose? Is it an annual or perennial?

ANS.—The above is only one of many inquiries concerning Salzer's Wonderful Billion Dollar grass, claimed to produce 12 tons of dry forage to the acre. A sample was submitted the seed specialist of the United States Department of Agriculture, and the following report received:

The seed sent is that of Japanese millet (Panicum crus-galli). This is a strong-growing variety of the common Barnyard grass, and under certain conditions is a very good forage plant. I had noticed Mr. Salzer's advertisement, and thought that some of the agricultural papers ought to call attention to the misrepresentations concerning this very grass. The common Barnyard grass is well known as one that makes a rank growth in rich, moist soil, but is usually regarded as a weed in this country. The Japanese variety is of a stronger growth, and if sown thickly on good soil will make excellent green fodder, but grown on poor, dry soil it is of very little use. The sample of seed sent is of special interest from the fact that it contains quite a proportion of Foxtail seeds (Chætochloa glauca). This fact probably indicates that the plants from which this millet seed was grown were raised on rather poor soil, and did not attain a growth of more than two feet. Growing on good corn land the Japanese millet ought to make a growth of from four to six feet.

A. J. PIETERS.

While this Japan millet possesses genuine merit under special conditions, it is an inexcusable exaggeration to make such inflated claims for it as the Salzer Seed Company is doing. The Japan millet was introduced several years ago by the Department of Agriculture, and will doubtless in time develop value in favored locations, but is plainly unfit for general cultivation.

The Terrible Melon Blight.

L. D. A., Cambridge, O.—I have been bothered severely with what is called the blight on my muskmelons and cucumbers. It generally commences about the time the melons begin to ripen, and the vines are soon all dead. It begins on the top of the leaves, and they look as though they were frostbitten. Can you tell the cause of it, and a preventive for it?

ANS.—This Melon leaf-blight is getting to be a serious matter. Practically all the melons in northern New Jersey, including an excellent stand on the Rural Grounds, were badly injured or destroyed by this subtle disease last year. Most of the growers attribute it to atmospheric and temperature changes, and it cannot be denied that hot, moist weather, interspersed with sudden cool showers, favors the rapid spread of the trouble, but the general appearance of the dying foliage impresses one with the idea that it is really of bacterial origin. Our vegetable pathologists have thrown very little light on this troublesome and widespread affection; at least no specially useful information concerning it has come to us. It is evident that until some way of controlling or avoiding the blight is developed, it will be well to confine our planting to quick-growing and early-maturing varieties, as the disease is plainly more destructive to the later kinds. We regret to say that neither cause nor cure is known to us.

How Much Wood Ashes?

J. A. J., Washington, O.—In the case of a dark iron-colored sugar tree land underlaid with gravel and sand, and in good mechanical condition, what amount of hard-wood ashes per acre should be used broadcast, and when applied, before or after plowing the land for corn? The same question also applies to a white clay, poor in fertility, also to a black rather mucky soil. I can use any amount of highly concentrated hard-wood ashes that would give best results. I have used 400 pounds per tree around bearing apple and pear trees, and with good results, and wish now to try them on corn ground.

ANS.—Of course we cannot tell much about these soils from this brief description. Wood ashes are useful chiefly for the potash and lime which they contain. As a rule the dark-colored soils are most likely to need potash and lime, while the white clays usually lack nitrogen. The clays are often greatly helped by lime, which opens them up, giving better drainage and preventing lumps. We should expect the last named soil to give best returns from wood ashes, with the first named next. We prefer to broadcast ashes after plowing and then harrow in. With 400 pounds per tree and 35 trees to the acre you use seven tons. This gives over 2½ tons of lime and 700 pounds of potash per acre—far more than ordinary crops can ever make use of. We would not use such heavy doses year after year. Three tons of ashes would be about our limit. You are probably in a position to buy such ashes at a very low figure, but we would caution you against using too much lime.

The "Book Worm."

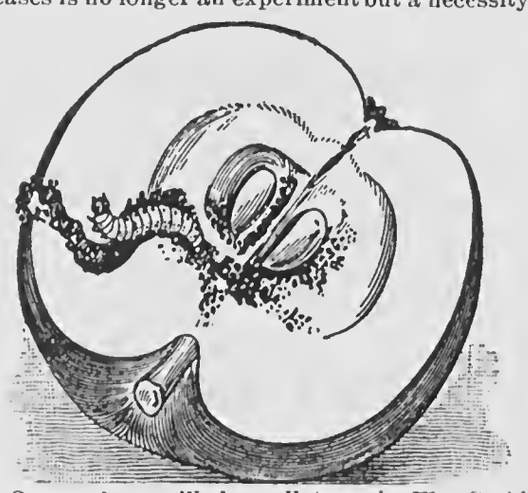
C. T. W., Elizabeth, N. J.—Do you know of any remedy for the book moth, or the insect that eats wall paper and books? The insect is of a silver color.

ANS.—Doubtless this "book moth" is the insect which has received the popular name "silver fish," on account of its peculiar fish-like form and sealy, glistening body, together with its very rapid movements and active efforts at concealment whenever it is uncovered; it is also sometimes called the silver louse or witch. It belongs to the lowest order of insects, is wingless, and of very simple structure. The head carries two prominent antennæ, and at the tip of the body there are three long, bristle-shaped appendages. The body is only about one-third of an inch in length, and it is covered with very minute scales like those of a moth. The general distribution of the insect about rooms, in bookcases and under wall paper renders the application of insecticides difficult and often impracticable. It readily succumbs to pyrethrum or insect powder, and wherever this can be applied, as on bookshelves, it furnishes the best means of control. For starched clothing and similar objects liable to be injured by it there are no means except frequent handling and airing, and the destruction by hand of all specimens discovered. Little damage is liable to occur in houses except in comparatively moist situations or where stored objects remain undisturbed for a year or more.

M. V. SLINGERLAND.

SPRAYING FRUIT TREES.

The question of spraying fruit trees to prevent the depredations of insect pests and fungous diseases is no longer an experiment but a necessity.



Our readers will do well to write Wm. Stahl, Quincy, Ill., and get his catalogue describing 21 styles of Spraying Outfits and full treatise on spraying the different fruit and vegetable crops, which contains much valuable information, and may be had for the asking.

SAN JOSE SCALE.

And other Insects can be Controlled by Using

Good's Caustic Potash Whale-Oil Tobacco Soap No. 6.

Kegs, 50 lbs. ea., 5½c lb. | ½ Bbl., about 275 lbs., 4c. lb
Kegs, 100 lbs. ea., 5c. lb. | Bbls., about 425 lbs., 3¾c. lb
Kegs, 170 lbs. ea., 4½c. lb.
Large quantities Special Rates. Send for Circulars

JAMES GOOD, 937 N. Front St., Philadelphia, Pa.

Cyanide

Guaranteed 98 to 99 per cent., for generating

Hydrocyanic Acid Gas

the most effective fumigating material, to destroy scale insects on fruit trees and plants. The only positive eradicator of the dreaded **San Jose Scale.** Endorsed by all Agricultural Experiment Stations. "A perfect practical remedy," says Prof. W. G. Johnson, State Etymologist of Maryland.

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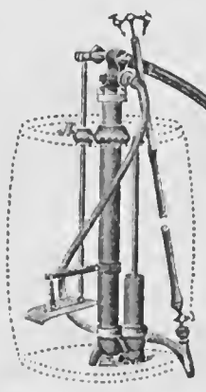
The Roessler & Hasslacher Chemical Co.,
No. 100 William Street, New York.

Buy a Good Spray Pump



—don't experiment—costs money. We have done the experimenting—used the common spray pumps in our own orchards, noted their defects—then invented the ECLIPSE. You get the benefit of our experience free. Send at once for catalogue.

MORRILL & MORLEY, Benton Harbor, Mich.

For Fruit Growers

FERTILIZERS

Bone, Muriate Potash, Sulphate Potash, Acid Phosphate and Kainit.

FUNGICIDES

Ammonia, Sulphate Copper, Bordeaux Mixture.

INSECTICIDES

Arsenate Lime, Paris Green, Arsenite Lead, Whale Oil Soap, Kerosene Emulsion.

Send for prices. Established 20 yrs.

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Insure Your Crops

of wheat and oats. This is best done by applying 100 lbs. of

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per acre early in the spring. Promotes stooling, stimulates growth, increases yield. Of great value on all crops, vegetables, grass, fruits, etc. Get free book, "*Food for Plants,*" which tells why. Address **John A. Myers,** 120 John St., New York. *Nitrate for sale by fertilizer dealers everywhere.*

Write at once for List of Dealers.

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Describing fully a number of the most wonderful vegetable introductions of the New Century, including: **The Earliest Sweet Corn in the World, The Famous Holmes-Houser Cabbage,** and other novelties of extreme merit. Write to-day for catalogue. It is **free.** A postal card will bring it.

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Do You Want the Best Strawberries for Home use or Market? Then plant your beds from my extra fine stock.

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STRAWBERRY PLANTS — Nettie, Robbie, Sample and other new and standard varieties. Cat. free.
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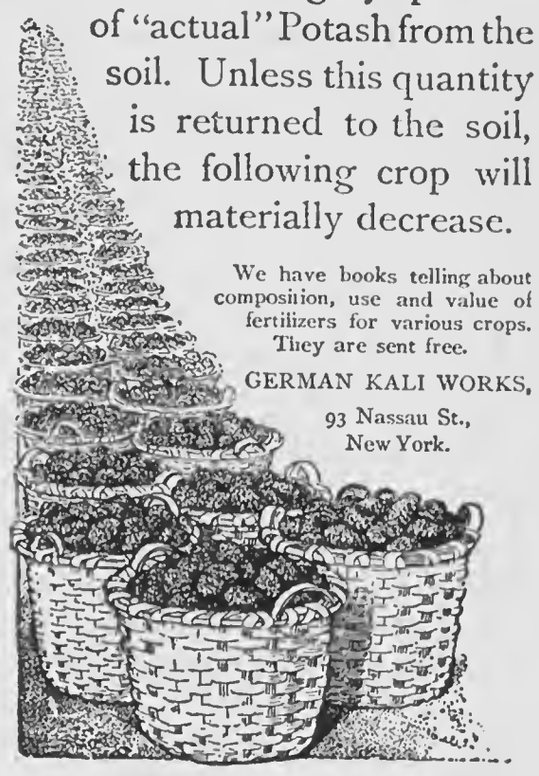
POTATOES—Bovee, Carman, Cobbler, Harvest, Six Weeks, Ohio, Rose, Astonisher, 85 kinds.
C. W. FORD, Fishers, N. Y.

Two hundred bushels of potatoes remove eighty pounds of "actual" Potash from the soil. Unless this quantity is returned to the soil, the following crop will materially decrease.



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Seeds! Seeds!

77th Annual Priced Catalogue of
Vegetable, Farm and Flower Seeds
is now ready and mailed **free** to all applicants.
BRIDGEMAN'S SEED WAREHOUSE,
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Cow Peas—Early Black, Whippoorwill and New Era. C. C. BROWN, Bridgeville, Del.

Speltz GREATEST OF ALL CEREALS

Speltz Startled the Farming World in 1900; it will capture every heart in 1901, with its 80 bu. of grain and 4 tons of hay, equal to Timothy, per acre. Get the genuine, buy of Salzer, the introducer.

Combination Corn is one of the greatest things of the century. It is early and an enormously, fabulously big yielder, a sort bound to revolutionize corn growing.

Salzer's Vegetable Seeds.

The beauty about Salzer's vegetable seed is, that they **never fail.** They sprout, grow and produce. They are of such high vitality they laugh at droughts, rains and the elements, taking 1st prizes everywhere. We warrant this.

For 14 Cents and This Notice

we send 7 packages of rare, choice, fine, splendid vegetable novelties and 3 packages of brilliantly beautiful flower seeds, all worth $1, and our big catalog for **only 14c and this Notice,** in order to gain 250,000 new customers in 1901, or **for 10c,** 10 rare farm seed samples, fully worth $10.00 to get a start and our great catalogue.

JOHN A. SALZER SEED CO.
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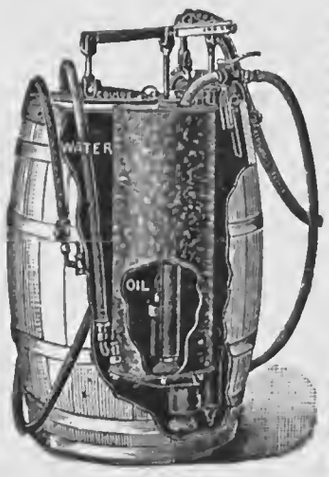
ROUGH RIDER, SEN. DUNLAP, and other **STRAWBERRIES** 100 Varieties.
CUMBERLAND RASPBERRY, KING OF MICHIGAN POTATO.

HEADQUARTERS FOR HIGH GRADE **Plants and Seed Potatoes.**
Descriptive Catalogue Free to All.
FLANSBURGH & PEIRSON, Leslie, Mich.

BURPEE'S FARM ANNUAL FOR 1901
"QUARTER-CENTURY EDITION"

A Grand New Book of two hundred and twenty pages. Entirely rewritten at our famous **FORDHOOK FARMS**—the largest Trial Grounds in America. New Directions for culture, New Leaflets, New Novelties of unusual merit in both Vegetables and Flowers, Elegant New Colored Plates. The Quarter-Century's Record of Progress, New Cash Prizes, and other New Features. **The largest, most complete, and BEST SEED CATALOGUE ever published.** Mailed for ten cents, which is less than cost per copy. Name this paper, send ten cents (silver or stamps) and with this great catalogue we shall send a **15-cent packet of either** Burbank's *Unique Floral Novelty* or Burpee's wonderful, new, dwarf, meaty, bright-red, earliest Tomato,—"*Quarter-Century.*"

☞ Should you object to paying ten cents for a seed catalogue (even though it is worth a dollar), then **write a postal card** for **Burpee's "SEED-SENSE" for 1901,**—a "strictly business" catalogue of ninety pages. **W. ATLEE BURPEE & CO., PHILADELPHIA, PA.**



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Goulds "Kerowater" Spraver

For Emulsifying and Spraying Kerosene and Water.

Endorsed by the leading Horticulturists and State Experimental Stations. A kerosene sprayer which *accurately* proportions the mixture for any desired strength. Built in three sizes, for tank, barrel or knapsack use. There is a great demand for them. Ask your dealer or write direct to us.

"How to Spray, When to Spray, What Pumps to Use," a valuable Booklet, free for the asking.

The Goulds Mfg. Co.,
SENECA FALLS, N. Y.

Wareroom: 16 Murray St., New York.

Van Deman's Fruit Notes.

ALL SORTS OF QUESTIONS ANSWERED.

Strawberries After Rye.

G. C., East Berlin, Conn.—I have a piece of land on which potatoes were planted last year; they were fertilized with a high-grade potato fertilizer at the rate of one ton per acre. The potatoes were dug early, a light coat of cow manure turned under and the ground sown to rye, which had a light top-dressing of fine barnyard manure. It came up thick and made a big growth. I would like to know whether it would do to turn the rye under and set strawberries in the Spring?

ANS.—It is probable that the soil described would be very good for strawberries. The rye should be turned under as early in the Spring as the soil can safely be plowed, and the harrow freely used for the space of a week or more before planting the strawberries.

Replanting an Old Apple Orchard.

H. L. B., West Cambridge, N. Y.—I have cut an old apple orchard this Winter; it is on ground that is not adapted to cultivation. I wish to set an apple or pear orchard in the Spring. How would you advise me to care for and fertilize? Which would you favor to be set in such a place?

ANS.—It is probable that the land on which an old apple orchard stood is not very rich, and has been in sod for a long time. It would almost certainly be well to have the soil thoroughly plowed and cultivated in some such crop as potatoes for a year before planting to orchard again. Of course fertilizers should be applied. Stable manure is very good, and so are such commercial manures as contain plenty of potash, phosphoric acid and nitrogen. Good Winter apples will probably pay better than pears.

Fertilizing a Peach Orchard.

W. E. A., Van Buren Co., Mich.—I have a peach orchard set two years ago on new land of a light sandy character. I have used no fertilizer or manure so far; but have a fair catch of Crimson clover to plow under this Spring. Do you think such an orchard on such soil really needs fertilizing until the trees come into bearing? The growth so far is fairly good, and I expect to sow Crimson clover each August.

ANS.—This orchard seems to be in fair condition. It probably needs more potash and phosphoric acid in the soil to prepare the trees for the coming draft upon their vitality, when they begin to bear. It may be well to give a light dressing of a commercial manure that has both these elements in about equal proportions. By growing the Crimson clover as is intended there will be no need to buy nitrogen, for it will be added from the air in the clover crop, and there is danger of getting too much of it by growing continuous crops.

A Case of Bud Variation

W. H. S., Rocky Hill, N. J.—Will you explain the following? Last Fall, while picking a tree of the Fox peach (a white variety with red cheek), the writer and his son each found (on different trees) a pronounced yellow peach, growing on the same limb with the ordinary type of the Fox, and only a few inches apart. The yellow peaches were a deep lemon color, with no red upon them. We also found several peaches with yellow spots on them as large as the end of my finger; the yellow extending through to the pits. One peach had a yellow band one-quarter inch wide, extending (longitudinally) half way round the fruit; the flesh under this band was yellow to the pit. Was this caused by bud variation?

ANS.—This is a most remarkable case, and I can see no other solution than that it is bud variation. I have seen some other remarkable cases of bud variation in the shape of peaches, but never one in which the color of the flesh was changed. It would be well to keep a close watch over this tree, and especially the branches where the variation occurred, and observe whether or not it becomes fixed. Buds should be taken and set in young seedlings, and it is possible that a remarkable novelty can thus be obtained. I have seen a similar case of bud variation in an orange tree at Riverside, Cal.; wherein the size and the color both inside and out were changed.

Catalogues for 1901

[CONTINUED.]

THE MCGREGOR BROS. CO., Springfield, O. Catalogue of roses and ornamental plants; 72 pages, with colored plates. Specialties are made of the Liberty rose and Mrs. Lawson carnation.

W. M. PETERS SONS, Wesley Station, Md. Catalogue of Snow Hill Nurseries; 37 pages, devoted to fruit trees and plants. A strong and conservative list of varieties is given, as well as some interesting photographs of orchards grown from Snow Hill trees.

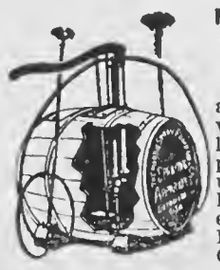
CHAS. B. HORNOR & SON, Mt. Holly, N. J. Wholesale catalogue of nursery stock; 16 pages. Specialties are made of choice evergreens and ornamental plants. The new shellbark hickory Hornor's Special offered, and attention called to their Magnolias and the Purple-leaved sycamore.

A. J. MCMATH, Onley, Va. Special price list of trees and strawberry plants. The Excelsior strawberry is a seedling of Wilson crossed with Hoffman, two of the most reliable berries known in the South. It is extra early, firm and high colored. It is, of course, vigorous and productive, but little is said about its quality.

F. W. DIXON, Holton, Kan. Catalogue of La France Fruit and Plant Farms; 26 pages. Small fruit plants exclusively. A long list of varieties, some of which are comparatively little known. The promising new ones are here also. A prominent feature is made of the Cardinal raspberry.

CHAS. C. NASH, Three Rivers, Mich. Catalogue of small fruits and roses; 9 pages. A modest and straightforward catalogue, listing a good collection of varieties.

WHEN you write advertisers mention THE R. N.-Y. and you will get a quick reply and "a square deal." See our guarantee 8th page.



THE "HARDIE"
Spray Pumps
are the most powerful, easiest worked, most modern, simplest in construction and moderate in price. DON'T BUY A PUMP until you have sent for our catalogue "C" and treatise on diseases of fruits, etc., sent FREE. HARDIE SPRAY PUMP MFG. CO., Detroit, Mich.

SEED POTATOES—120 varieties. Gold Standard Oats. Sample of oats and catalogue free. HILER BROTHERS, Box 5, Prattsburg, N. Y.

SEED POTATOES.—Bovee, Ohio, Hebron, Queen, Rose, Harvest, Michigan. *One Cent per Pound.* GEO. SISSON, La Plume, Pa.

SEED POTATOES.—Bovee, White E Ohio, Peachblow, Minister's Commercial and others Sample tuber 6 cts., lb. 20 cts. List free. J. W. HARTMAN, Sligo, Pa.

EARLY OHIO SEED POTATOES.—Pure, choice seed. Price, $3 per barrel, of 4 bushels each. Address L. NORMAN NELSON, Laney, Shawano Co., Wis. Postal Money Order on Seymour, Wis.

CARMAN No. 3 $3.00
Sir Walter Raleigh and Early Bovee $4.00 per bbl. all bbls. 4 bu. Dewey, the great cropper. Wholesale list *free.* GEO. A. BONNELL, Waterloo, N. Y.

NORTHERN GROWN SEED POTATOES
Sir Walter Raleigh and Carman No. 3; bu. 80 cents; bbl., $2.25; 5 bbls., $10. Buy direct from grower of 15 years experience and get seed true to name. J. H. ARBOGAST, Coral, Montcalm Co., Mich

SEED POTATOES—Sir Walter Raleigh, Carman No. 3 $2 3 bu. bbl., 4 bu. bbl. $2.65. Early Bovee, Early Michigan, Early Harvest, Gem of Aroostook, Northern Beauty, Green Mountain, $2.50 3 bu. bbl., $3.25 4 bu. bbl. Strictly choice stock guaranteed. Ref. Lyons Nat. B'k. C. W. BURNETT, Phelps, N. Y.

Imes' Blight-Proof Seed Potatoes
1901 Catalogue, Free, gives particulars.

SEEDS.
The *best* field and garden seeds at *Whole ale Prices.* The BEST 90-day CORN KNOWN. *Seed Potatoes that are unequaled.*
The W. E. Imes Seed Co., Vermontville, Mich.

Choice Seed Potatoes.
Bovee, Sir Walter Raleigh, Carmans and other standard varieties, grown and packed under my personal supervision. Send for price-list.
F. H. THOMSON, Holland Patent, N. Y.

Whiton's White Mammoth Potato

Outyielded all others at Ohio Experiment Station, yielding 52 bushels more than Carman No. 3. Circular free.
W. W. WHITON, Box 3. Wakeman, Ohio.

GRAPES—For price list of First Class Vines and Small Fruits by mail, express or freight. Address, J. H. TRYON, Willoughby, Ohio.

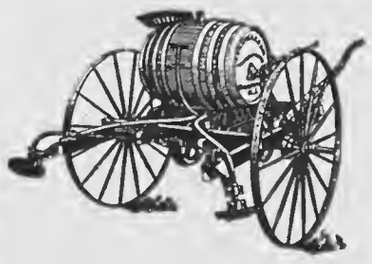
GROFF'S GLADIOLUS HYBRIDS
I have arranged with Mr. Groff for the sale of his products in the United States and I invite orders from the most critical. My bulbs are not from seed disseminated by him, but from stock grown on his trial grounds. Catalogue and particulars on application.
ARTHUR COWEE,
Meadowvale Farm, Berlin, N. Y.

American Gardening.
Ten Sample Copies, separate issues, 10 cents. Published at 136 Liberty Street, New York.

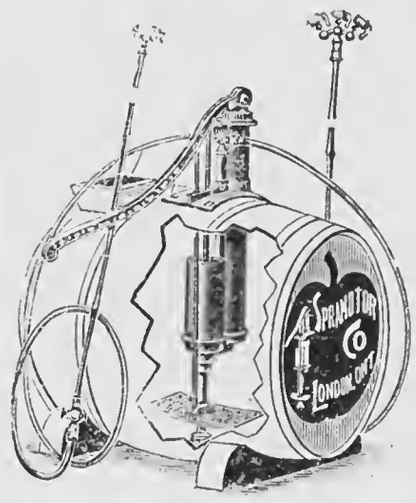
Other People's Profits

have increased 25 to 50 per cent. when they began to spray *the right way*—with the right sprayer, the PEPPLER AND CLIMAX SIX-ROW SPRAYERS. They will do as much for you. Read how they spray 30 acres a day, how they save ½ the poison, increase crops one-half, pay for themselves in one season. Catalogue contains spray calendar, formulas, etc. Sent free. I also manufacture the improved Riggs Plow and Riggs Furrowers.
THOMAS PEPPLER, Box 60, HIGHTSTOWN, N. J.

A Perfect Sprayer.



The "SCHANCK" 8-row will spray any kind of liquid poison.
IT has no small nozzles to stop up.
will not spray on horse or driver.
has no pumps, pipes, blowers nor cog-wheels.
will do more work better and with less trouble than any other sprayer. Price, $55. Send for circular.
JOHN R. SHANGLE, Mfr., Hightstown, N. J.



Official Certificate of Government Awards.
This is to certify that at the contest of Spraying Apparatus held at Grimsby, under the auspices of the Board of Control of the Fruit Experimental Stations of Ontario, in which there were 11 contestants, the **Spramotor** was awarded **First Place.**
H. L. Hutt
Judges.

Send post card for copyrighted treatise, and other valuable information regarding fruit, vegetables, and grain. **Free.**
SPRAMOTOR CO., London, Ont., Can.

PALMER—Very Early. List free. T. C KEVITT, Athenia, N. J.

If you want good strong plants, buy of RIDGE NURSERY AND PLANT FARM. Catalogue free. GEO. W. WINCHELL, PROP., Tobinsport, Ind.

Your Family Strawberry Bed Warfield, Beder wood, Splendid, Clyde, etc.; 50 cents per 100. Write. C. L. PEARSON, Baraboo, Wis.

Strawberrry, largest and best. Try the New Auto, 8,000 qts. to the acre; 1 doz. plants for $2. Other good kinds as low as $1.50 per 1,000. Catalogue free. SLAYMAKER & SON, Dover, Dela.

STRAWBERRIES
I am prepared to supply choice plants of the most desirable market berries, including "Johnson's Early." Liberal discounts on large orders. Send for circular. O. A. JOHNSON, Manokin, Md.

PLANTS—Try the Lady Ga son Strawberry 13,000 quarts to the acre. Plants per 1 000, $12. Don't miss this great berry. Lucretia Dewberry and Miller Red Raspberry at $3.50 per 1,000. Trees of all kinds for sale. Catalogue free. D. W. MOSLEY, Dover, Del.

KEVITT'S PLANT FARMS
SURPLUS LIST FREE.

5,000 Glen Mary	$ 5.00
5,000 Bismarck	5.00
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5,000 Wm. Belt	5.00
5,000 New York	5.00
1,000 Enormous	1.25
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T. C. KEVITT, Athenia, N. J.

APPLE CIONS FROM BEARING TREES. Rome Beauty, Sutton Beauty, Ontario, Malden Blush, Hubbardston. T. S. Woodward, Lockport, N. Y.

PEACH TREES, 1 year from bud, 2 to 4c. each. R. S. JOHNSTON, Box 4, Stockley, Del.

OUR FRUIT TREES GROW.
We have thousands of all the best varieties of TREES and PLANTS. APPLES 8c., PEARS 9c., PEACHES 4c., etc. We can save you money. Handsome illustrated catalogue FREE. Send for it to-day. HIGHLAND NURSERY CO., Dept. D, Rochester, N. Y.

Leggett's Dry Bordeaux Mixture and Paris Green Compound.
It kills Potato Bugs and all plant-eating pests, prevents blight and rust, keeps foliage in a green and vigorous condition. Paris Green is the best insecticide, and Bordeaux Mixture the best fungicide. We combine the two in a dry form, and furnish in 1 and 3 pound boxes and 35 pound buckets. Compound does not burn foliage, and is cheaper than clear Paris Green. Has a successful record of seven years. May be used dry or in water. For sale by dealers or send to LEGGETT & BROTHER, 301 Pearl Street, New York.

TREES, PLANTS and SEEDS.
Catalogue Free.
T. C. FURNAS & CO., Sheridan, Ind.

Cabbage Plants.
Large transplanted plants, well hardened; will stand freezing weather. Early Jersey Wakefield, Charleston Wakefield and Henderson's Ea. Summer, ready now. Price, per 100, 40c.; 1,000, $3. Write for catalog of transplanted vegetable plants.
J. E. HUTTON & SON, Conyngham, Pa.

If your dealer does not keep
Packard's Ensilage Seed Corn
write to-day for circular and sample. My seed corn ALWAYS GROWS. If you own a silo, you need my Early Mastodon corn. Makes one-third heavier crop than Leaming. Other varieties.
PACKARD, Seed Grower, Dover, Del.

Northern Seed Grain
Lincoln & Michigan Wonder oats at 45c in 40 bu. lots.
Big Four & Early Champion oats at 50c in 40 bu. lots.
Mandscheuri barley at 67½c in 25 bu. lots.
Beardless and Silver King barley at 72c in 25 bu. lots.
White Hulless barley and speltz at $1 in 20 bu. lots.
Jap. millet or "Billion Dollar Grass" at $1.75 per bu.
Order quick. Free catalog tells of all kinds of Field and Garden Seeds.
L. L. OLDS, Drawer G, Clinton, Wis.

100 Japan Plums one year, 3 to 4 Feet, on Plum Roots, **$7.00**
Abundance, Burbank, Wickson, Red June. Larger medium size, $8.50; first-class large one-year, $11 Order direct from this advertisement. This offer does not appear elsewhere. The Tree Breeder (Free) will give you prices on other stock in large or small quantities. Write to-day if you want the BEST TREES
ALL TREES FUMIGATED. THE ROGERS NURSERIES, The Tree Breeders. Dansville, N. Y.

SPECIAL PRICES FOR 30 DAYS.
YORK IMPERIAL, Baldwin, Ben Davis, Stark and other Standard varieties of Apple trees—Budded and Grafted—all sizes. We are largest growers of York Imperial east of Mississippi River. Japan Plums, Kieffer Pears, Cherry, Peach, Shade and Ornamental trees—let us price your wants.
J. G. PATTERSON & SON, STEWARTSTOWN, PA.

GRASS SEEDS
GRASS SEED for HAY,
GRASS SEED for PASTURE,
GRASS SEED for GOLF LINKS,
GRASS SEED for LAWNS,
GRASS MIXTURES SPECIALLY PREPARED TO SUIT ALL CONDITIONS OF SOIL.
Our AMERICAN FARMERS' MANUAL for 1901, 32 pages, devoted entirely to Grass and other Seeds for the Farm, mailed free on application to those who state where they saw this advertisement. Correspondence invited.
PETER HENDERSON & CO., 35 & 37 CORTLANDT ST., NEW YORK.

HOPE FARM NOTES.

LOCAL PRICES.—I am getting letters from farmers who ask why they cannot send eggs and pork here, and sell them for what our local markets have offered. One man in Prattsburg writes thus:

"I saw in THE R. N.-Y. that dressed pork is selling at 8½ cents per pound. Will you send me the name of some one who will pay that price? I have one pig that will dress 150 pounds or better, that I will send at that price."

Really, I ought not to refer to local prices, for the conditions in Bergen County, N. J., are peculiar. It is an old farming country, which is slowly being cut up into little towns for commuters—or those who work in New York and sleep in New Jersey. These people spend nights and Sundays at home, and their families are here all the time. They are good buyers, though many of them have a garden and keep a flock of hens. Many of the old farms are no longer worked. The owners raise a little hay or some corn, but a great proportion of the food consumed in the county is brought in from outside. The little towns of from 300 to 1,500 people are scattered along the railroads a few miles apart.

GOOD MARKETS.—"This must be an ideal market," the farmer back on the hills will say. In one sense it is, and yet our local farmers have failed to take advantage of it, and dealers have formed the habit of going to Paterson or New York for produce. Strange to say, the farmers carry their stuff to these large cities, too, and there it is bought and sold, so that the crop from a farm, after all this handling, may come back to a grocery store within a mile of where it was grown! The local market has never been organized, so that both dealers and farmers are working as individuals, and, of course, no single farmer can hope to keep several dealers supplied all through the season. Naturally the dealers prefer to buy of wholesalers, for then they can get just what they want at any time. A farmer who has a knack for peddling can sell lots of produce in our country, and some of them do it. There is, however, a fearful competition from hucksters, who buy cheap fruits and vegetables in the city in times when the market is glutted, and simply flood the country. They cut prices away out of sight, and nearly ruin the markets for the time. Thus far, on the new Hope Farm, we have sold to peddlers rather than to private customers, though some eggs and potatoes have been handled direct. On the old place we peddled more or less, but I felt that more was lost in neglect of the growing crops than was gained in the retail price. I would like to get about a dozen farmers to club together and agree to raise a certain amount of stuff, and let one good man handle it. But when you find 12 farmers who would trust each other in this way, I fear they will be very far apart. The total stranger with the limber tongue beats the old-time neighbor whose solid character is known for attracting confidence and cash.

SPECIAL PRICES.—The price I mentioned for pork was a special one. Most of the pork eaten in our county comes from the West. These western carcasses are too large and too fat to suit the best customers. There are a number of families in every town who want small cuts with plenty of lean meat. A pig that will dress about 125 pounds will cut up just about right for this trade, and local butchers will often pay big prices for them. They like to see those pigs before they are slaughtered. It would not pay them to buy single pigs from a distance. The freight or express would eat up too much money, and they might get into trouble with the dressed-meat trust if they began shipping in meat. I can see little chance for an outsider to cater to this trade. It is local entirely. When I spoke of selling eggs "eight for a quarter" I should have said that this price was only for a small and select trade. Strangers have often asked us to tell them how to get these prices, but I do not know of any way except by coming face to face with the consumer. All quotations of prices are more or less misleading, unless we understand just what they mean.

SAWING WOOD.—Not long ago a farmer, who lives in the Adirondacks, told of hiring a man, two horses and a tread power for $2.50 per day, for sawing wood. A friend in New Hampshire writes that he has to pay $4 a day, with dinner, for a man and two horses for nine hours' work! I had to pay $4 a day for a man and steam engine—we furnishing the saw. It cut up a great pile of wood, and it looks like economy to use wood for fuel, but I am not quite so sure of it after all. If we count the time spent in cutting and hauling wood, at regular teamster's wages, it is an even chance that coal will prove cheaper. I do not consider it fair, however, to figure the labor of men or team at what others obtain for a very different job. If I had a chance to put men and team at a job that would bring $4 a day in cash, I certainly would not haul wood.

SOAKING POTATO SEED.—It is time to begin the annual battle against potato scab. Here is a letter about it:

"Will formalin kill the sprouts of the potatoes, or will it be perfectly safe to use it on seed potatoes? Is there any danger in using the formalin—burning the hands, or are fumes poisonous? Is there anything better for using?" W. F.

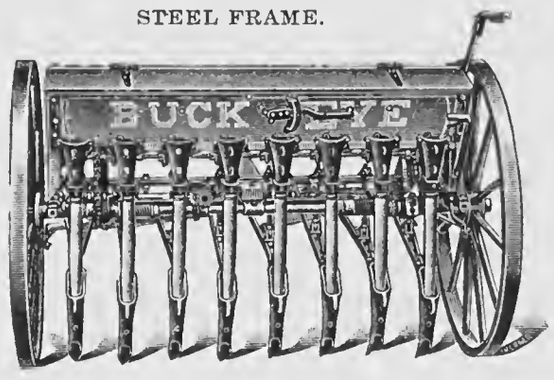
We have not tried formalin on badly-sprouted seed, but would not fear to do so. At the strength we have named we should not expect any trouble. In large doses formalin is a poison, but as used for soaking potato seed there will be no danger either from the fumes or in wounds or cuts. Corrosive sublimate is used by many. It is effective, but is poisonous, and will certainly bite if it gets into a place where the skin is off. Last year we used dry sulphur dusted on all the seed pieces. While this is probably not so effective as soaking the seed in either formalin or corrosive sublimate, I consider it very useful and shall always do it. The sulphur is frightful on the eyes, though, when you plant on a windy day.

A LITTLE SHADOW.—I tell many of our outdoor failures at Hope Farm, but it must not be thought that we have no shadows indoors because I do not speak of them. I thought of this last Sunday afternoon, and wondered how many of our readers were free from trouble, and how many farmhouses were entirely out of the shadow of impending sorrow on that day. Dinner was over. The Madame, Grandmother and Hugh had represented us at church and Sunday school. Outside the air was damp and raw. The upper two inches of the earth's frosty crust had been thawed out by the bright sun, only to freeze up again when Jack Frost chased the sun over the hill. We did not like the appearance of the children in the morning, and so before dinner I drove Dan to the doctor's and left word for him to come when he could. So after dinner we sat in our sitting room before a comfortable fire, waiting for the doctor. The Madame was reading the Life of Phillips Brooks. Grandmother studied The Evangelist, Hugh read a magazine, while the Cutting and Aunt Jennie were absorbing two good old volumes. Charlie and Aunt Emma were in their own room upstairs. The poor little Scion lay on the lounge, weak and silent, and the little Bud seemed as hot and feverish as an oven, as she cuddled up to me in the arm chair. We were glad and yet anxious when we saw the old doctor's big brown horse jogging up the road. To me there is something nobly pathetic in the life of these good old country doctors, as they journey over the hills and along the valleys carrying through silent, lonely places more than their share of the great secret of human life and suffering. I suppose it is true that, in a sense, a man becomes hardened to his trade, and yet I have often thought that I would like to look into that place in the heart of one of these old doctors where a man keeps hidden the best part of his life, and see what I could find. The old doctor's face grew a little serious as he saw the Scion. It was a mild case of pneumonia! The Bud's case was not so dangerous—probably the grippe. It wasn't long before they had a plaster on the little fellow's back, while the doctor was measuring out his medicines from the little case which he always carries. He gave his directions, put in a good word for all, and then jogged off behind the big brown horse to some other home, where disease or death stood ready to grapple with him. So you see we have our shadows like the rest of you. You may be sure that the little Scion will be well cared for, and with the good doctor to back them up the Madame and Aunt Jennie will make a royal battle for him.

FARM NOTES.—This freeze and thaw is tough on the grass seeding. Plenty of the grass on that field where we tried the Clark method has been thrown out by the roots. It looks much like a failure. But, say, what's the use to talk that way? I have been carried right side up through a hundred so-called failures, and I won't give that grass up yet! . . . . The hens laid 321 eggs in February, and are now striking their gait in good shape. . . . . The new hoghouse is progressing. We hope to have a clean, airy place for our sows. We have put it right out in the field—away from the other buildings. . . . . It begins to look as though I should get into the dairy business yet. The latest additions to the Hope Farm family are Julia and Genevieve (I didn't name them), a cow and heifer, which I bought of a neighbor. H. W. C.

Buckeye Fertilizer Hoe Drill.

STEEL FRAME.



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as shown in the illustration, is without doubt the most perfect grain and fertilizer drill made. Has our Change of Speed Device, and our Double Run Force Feed, which sows wheat, corn, oats, peas, beans, beet seeds, cow peas, etc, with uniform accuracy. Also our Glass Fertilizer Feed. The employment of glass in the construction of a fertilizer feed makes it possible to obviate the corroding of the mechanism and doing away with the annoyance commonly found in other fertilizer drills. This is a patented feature, and used exclusively on the **BUCKEYE.** Sows all kinds of fertilizer evenly and successfully.

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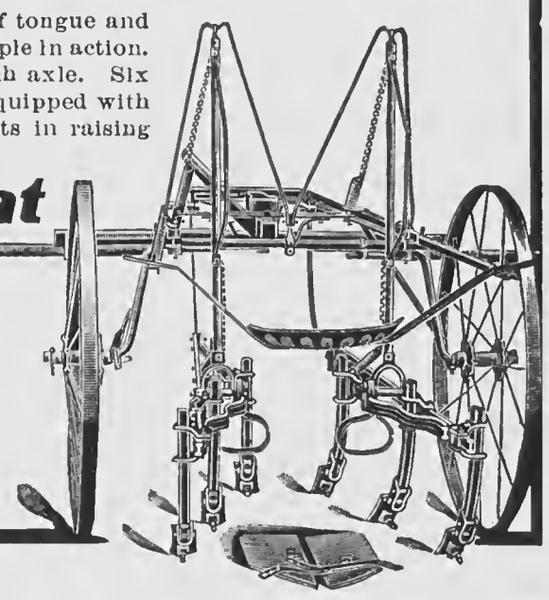

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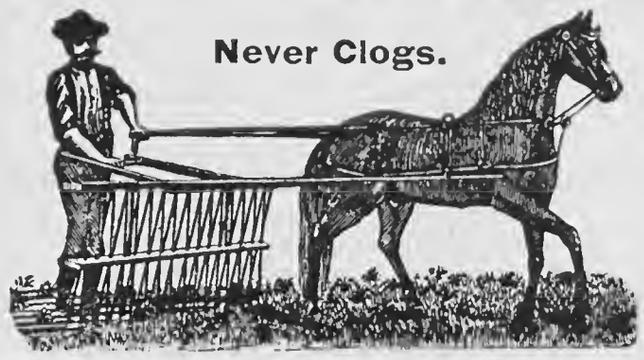

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Ruralisms

Grafting and Keeping Qualities.

If I graft a late Winter apple on a Yellow Transparent tree, what effect will it have on its keeping qualities? F. P.
Massachusetts.

Little or no effect. Thousands of late apples are yearly grafted on roots of seedlings that would produce early apples if allowed to grow, with no perceptible effect on the keeping qualities.

Pruning Chestnut Trees.

I planted last Fall some Paragon chestnut trees five to six feet high, grafted on Paragon stock. When and how shall I prune them? F. E. W.
Fruithurst, Ala.

Chestnuts are usually pruned to form compact, round-headed trees. In pruning take out all weak or interfering branches, and cut the new growth back nearly one-half. March is a very good month in which to prune chestnuts.

Grafting Black Cherry Trees.

I have three large black cherry trees (English variety), that produce a very inferior fruit. Can I graft some good variety on them successfully? If so, what kind, and when shall it be done?
Sardinia, N. Y. J. A. O.

They can be grafted as readily as an apple tree. Use scions from any good cherry tree near your locality. Do the grafting early in April; avoid splitting the central pith, and wax over the wound very carefully. The Mercer cherry would please you.

Sulphur for Gooseberry Mildew.

What about liver of sulphur for the Gooseberry mildew? Mine, mostly the Downing, suffered quite seriously last season from that disease. They are under high culture, and possibly were too heavily manured with stable manure. A. S.
Plymouth Co., Mass.

Sulphur abundantly dusted on the affected foliage is probably the best remedy. One-third sulphur to two-thirds fungiroid makes a good application. Liver of sulphur or sulphide of potassium in solution has not proved effective in this country.

A Bed of Creeping Roses.

I have seen a rose bed of little low creeping roses full of flowers all Summer. Will you name one or two of the best for this purpose? L. W.
Lutherville, Ark.

There are no creeping roses that bloom continually during the Summer. Several of the everblooming Tea or Bourbon roses would give the effect you mention. They are very dwarf in growth. We would recommend Clothilde Soupert, blush; Coquette de Lyon, yellow; Mme. Franciska Kruger, salmon, and Gruss an Teplitz, crimson scarlet.

The Asparagus Rust.

I expect to set out about an acre each of asparagus and strawberries. What asparagus will resist attaeks of rust the best? Would it be better to buy the plants from northern or southern growers? Would it be any safeguard from the rust to buy the seed and raise the plants?
Lestershire, N. Y. R. A. G.

Palmetto and Argenteuil are considered most resistant to rust in the order named. The nearest reliable grower will give the best satisfaction, as plants are sometimes injured during long transportation. The seeds would be less likely to be infected than the plants, but the trouble is spreading so rapidly that the immunity may be very brief.

Fertilizer for a Lawn.

Will grass grow as well on a lawn fed with wood ashes and fertilizers, as it would if manure was used? Would it be a good idea to add one-half plaster to Mapes complete manure, 10 per cent potash, and use it on a lawn? F. B. B.
Ayer, Mass.

Liberal dressings of a good complete chemical fertilizer, 800 to 1,000 pounds per acre, and 1,500 to 2,000 pounds of wood ashes applied separately, will be likely to produce a better and more lasting turf than even heavy dressings of manure. Lawns fed by stable manure start off very nicely in the moist, cool weather of Spring, but often burn out in midsummer. Probably in the long run annual dressings of ground bone and wood ashes will give best results. Aside from the possibility of getting a more even distribution, there can be little advantage in mixing land plaster with chemical fertilizers.

Lombard Stock; Pollenizing Kieffer.

What plan do nurserymen use to secure Lombard stocks for top-budding and grafting? What is the best kind of bud to insert in blocks of Kieffer pears to insure perfect fertilization of the blossoms?
Sheridan, Ind. E. J. W.

We are under the impression that Lombard stocks are grown from seeds of that variety. Lombard buds may be inserted on Myrobalan or other plum stocks, and afterwards budded or grafted to the desired variety. The Kieffer pear is normally self fertile, but it has been noticed that larger and better fruits are produced if Le Conte and Garber trees or grafts bloom among them.

Bordeaux Mixture for Plum Rot.

I have a Japan plum tree, Burbank, that has been bearing four or five years. Sometimes it has been so laden with fruit, even after severe shaking and thinning, as to break down the limbs, but I don't think we got as many sound plums from it as it has been years in bearing, all having rotted. Is there any remedy for this?
Monticello, Ill. T. B.

What is the best time to spray plum trees? What kind of sprays to use, and how to make them? I refer to destroying curculio. F. J. F.
Winona, O.

Spraying the trees with fresh Bordeaux Mixture just before the buds open, again when fruits are nearly grown, and finally as they begin to color, is said by the experiment-station people to check the brown rot to a great extent. Some practical growers say that it is not only useless to spray plums for rot, but positively injurious to the foliage. Thorough thinning, so that the plums hang three or four inches apart on the branches, is a common-sense remedy, as it not only checks rot, but gives increased size to the remaining fruits. Spraying plum trees for curculio is not considered effective, as the curculio beetle eats so little that poisons on the foliage or fruits do not greatly affect it. The best spray for the purpose is undoubtedly fresh Bordeaux Mixture stirred up with one ounce Paris-green to the gallon. The curculio is best kept in check by regularly jarring the trees during the early development of the fruits.

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Live Stock and Dairy

THE BREEDER'S WAYSIDE.

Spent Malt for Cattle Feeding.

I would like to learn the feed value and wholesomeness of spent malt, which has been used for the manufacture of beer; also malt sprouts. We have in this city several large breweries, and the sprouts and malt are used very largely by the milkmen. It is thought by some that this feed is not wholesome as a ration for milch cows. Cattle seem to be very fond of this feed, and it is sold at a very reasonable price, 20 cents per barrel for the malt, and 20 cents per sack for the dry barley sprouts. J. C. E.

La Crosse, Wis.

Spent malt is what is known commonly as brewers' grains, as I understand it. These grains are used for feeding dairy cattle, usually among dairy farmers about large towns and cities, and usually the wet grains are fed far more than the dry. Dried brewers' grains contain quite a bit more digestible protein than bran or oats, and about twice as much as Indian corn, and they offer a valuable addition to our feeding stuffs, being palatable and relished. Wet brewers' grains contain a large amount of water, and about one-fourth the digestible protein found in the dry grains. If the wet grains, however, are fed when perfectly sweet, and in connection with dry food, they may be profitably used. Fed with corn-and-cob meal and bran and clover hay, the wet grains are very good. One great objection to the use of brewers' grains lies in the drippings from them to the floor of the stable. This dripping promotes fetid decay, and after a time a stable with board or dirt floor where wet grains are fed becomes absolutely unhealthy, and entirely unsuited to a place for milking cows. Consequently, inspectors of boards of health frequently condemn such stables as unsanitary. If one is to feed the grains, he should have watertight mangers, and use every precaution to prevent spilling this feed in the barn. In the Summer only so much should be taken from the brewery at a time as can be fed up clean and sweet.

When at the New York Agricultural Experiment Station in the early eighties the writer fed extensively of this food to dairy cows, and no harm resulted to the cows or milk, both of which were carefully studied during the feeding. But we were very careful to keep the sanitary conditions of the very best, although we did feed grains that were not as wholesome as some would prefer. The use of malt sprouts as stock feed I do not take much stock in. When I lived at Geneva we got a quantity of sprouts from the malthouse there, but we could not persuade any stock on the Station farm to eat it, and it was finally used as a fertilizer. While malt sprouts are rich in protein they are dry and unpalatable, and the latter even when moistened. In his book on "Feeds and Feeding," I note that Henry states: "Unfortunately this feed is not much relished by cattle, and for this reason can only be fed in limited quantity." He recommends soaking several hours before feeding, and thinks that two or three pounds of sprouts can be profitably fed daily to dairy cows. If any of the readers of THE R. N.-Y. have used malt sprouts in feeding it would be interesting if they would communicate their experience to this journal. C. S. PLUMB.

How to Keep Smoked Hams.

Will you state how best to preserve smoked ham to keep in the hot Summer weather, bright and fresh, free from insects after being smoked? Is there not some material or cloth to put over the hams to keep them good, such as meat packers use? B. G.

Hart, Md.

We too have had some trouble in keeping hams through the Summer, and have tried several different recipes with only partial success. With us, the problem has been solved by allowing the meat to hang where it is smoked. Our smokehouse was made by building on to and over an old arch, that once held the proverbial copper kettle. The arch stands in a northeast room. The meat is not attacked by insects, owing to the smoky surroundings and it keeps in excellent condition. A little additional smoking can be given at any time, if it becomes necessary. J. A. F.

Keeping Brood Sows.

I have read with much interest Prof. Plumb's answer to my question about feed for brood sows in Winter; also J. S. Woodward's comment on same. That is just the kind of information I am after, such discussions are a great help to a new farmer like myself. So far I have fed two parts middlings, one part bran (fine), one part cornmeal; artichokes or potatoes at noon, with a little soaked corn, a good handful for each sow. They always have wood ashes, charcoal and salt in a box. Their pen is divided into nest and feed room, they having to pass through a passageway from nest to feed room, the pen being always clean and dry. There is a yard to the pen; the sows can go in or out at pleasure, and seem to enjoy it. They are thrifty, hardy and healthy, very active and remarkably tame. While I shall change my feed by leaving out the corn, I cannot bring myself to shut them out of their yard, as J. S. Woodward advises, in cold weather. I would like him to explain his objections and benefits from so doing. Will it not make them less hardy? I shall try beets next season. Three pecks of artichokes yielded about 30 bushels, cultivated twice; no fertilizer. P. E. L.

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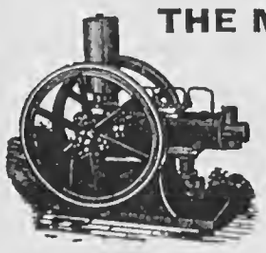

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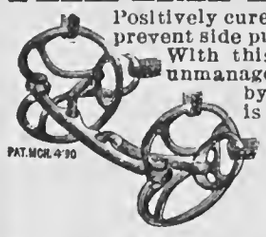

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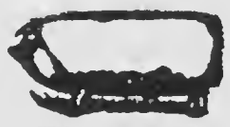

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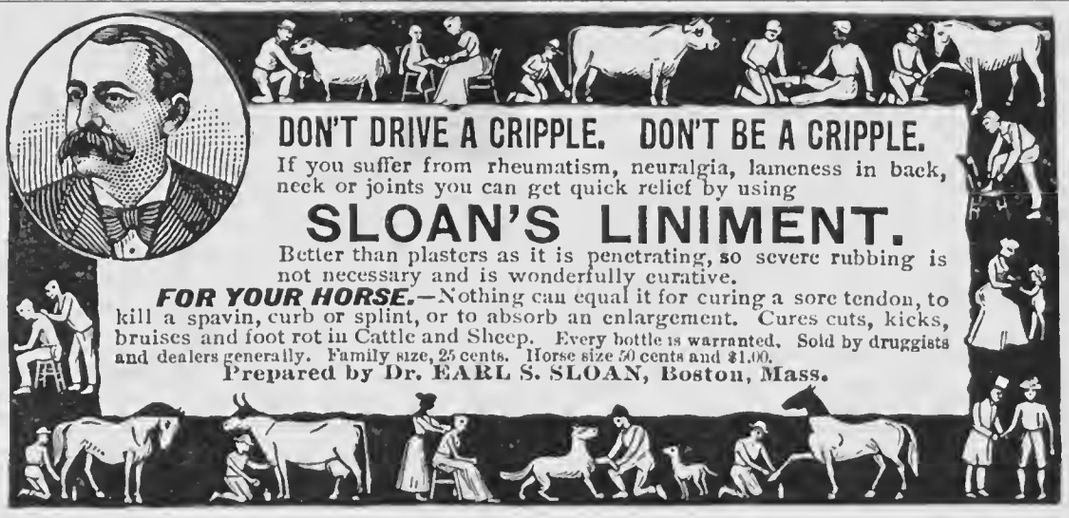

OVERHEATED AND OVERFED CHICKS.

On January 31, 60 B. P. Rock chicks hatched out. They were very smart, and grew finely until they were about 10 days old; then they commenced to die. They seemed to choke; would stand with their mouths open, totter and fall down. Some would die at once; others would get better for a few days. They seemed to lose the use of their legs. I have lost about one-half; the rest totter around; some go backwards and do not seem able to scratch much. They are still quite hearty. I put them in a Cyphers indoor brooder; the temperature has run from 70 to 95 degrees. I have had a fire in the room, with temperature about 70 degrees. They have been fed rolled oats, a mash of about two-thirds bran, one-third cornmeal, mixed up with milk quite dry, with a little beef scrap; fine cracked corn, hard-boiled eggs, chopped cabbage, curded milk, etc., with plenty of sand and gravel; also hay chaff to scratch in. Can you tell me what to do for them? I have another hatch coming off in a few days, and would like to know what to do to save them. This is my first experience with Winter chicks. C. L. B.

So. Paris, Me.

The chicks are overheated and overfed. They are dying from indigestion. The temperature in the brooder, when chicks go in, should be 90 degrees, and as they usually raise the heat about 10 degrees, turn down the lamp flame a trifle when you put them in. Never let the hover run over 90 degrees, and gradually lower to 80 by end of second week, and to 70 degrees by end of fourth week. The room in which they exercise should not run over 65 degrees, in cold weather, nor much under it. The hover, brooder and room should be kept clean, sweet and well ventilated. For the first two weeks feed rolled oats, just what they will eat up clean in 10 or 15 minutes. Always have fresh, clean water, fine sharp grit, charcoal (powdered) and bone meal at hand for them. Toward the close of the second week work them gradually into fine cracked corn, pinhead wheat and other grains in the litter, and give them one mash a day, beginning with one-fourth part cornmeal, one-fourth wheat bran, one-fourth wheat middlings and one-fourth steeped clover to wet it, gradually increasing proportion of cornmeal to one-half as they grow older and five per cent beef scraps in their mash. The important point is to keep good air, even temperature, and not overfeed. Make them work for every mouthful as soon as possible, and only give what is quickly eaten up clean. Leave no food around. Those that are overfed—your first hatch—I would advise you to diet. Give them charcoal and grit, the right amount of heat, a light feed of rolled oats and linseed meal, and, I think, they will come out all right. F. E. W.

BROODERS.

"Where will you put your little chicks?" The question is a simple one, but too many of the people purchasing incubators—if it is addressed to them—will look dazed, and reply that they do not know; have not thought. Most farm tools are expected to do the work they are bought for. Why should the incubator be an exception? Why is the novice astonished when the eggs hatch, and why is no efficient arrangement made ahead for the mothering of the costly flock? I asked these questions of the New York manager of our leading incubator and he replied:

"It *is* strange. I do not understand it myself; but very frequently we receive telegrams like this: 'Surprised by good hatch. Express us brooder at once.' So many who purchase our machines act as though they have not enough faith in artificial incubation to buy the fixtures necessary to save the birds!"

I had a neighbor whose first hatch was 128 fine chicks. She provided one Plymouth Rock hen and a bantam to mother them! When I expostulated, she said that she thought she would better not buy a brooder till she saw whether she had anything to put in it! Most of her chicks died, and instead of a good profit she was out of pocket, and had a lot of needless worry and remorse, for there is no more pitiful sight to the operator than the sickening and dying off of an erstwhile, healthy, happy flock of birds; poor, little motherless things! Hens, if managed right, make good mothers. I hatched over 200 for a friend who kept Brown Leghorns. He secured ahead eight Plymouth Rock sitting hens; kept a couple of eggs under each till my hatch was off; then—at night—he carefully substituted chicks. They all but three lived, and his verdict is that mine were more vigorous and hardy, matured earlier and were larger than those hatched by his hens. Again, I hatched a sitting for another person; When his chicks came off, his mother hens had gone off. I believe he eventually lost every one. That man "didn't think much of incubator birds; not very healthy, anyhow!"

The shrinkage and loss in artificial incubation is owing, principally, to hatching more fowls than can be properly mothered. One hatch raised is worth more than three where the mortality is heavy. If the operator starts with the firm conviction that he is going to have a fair percentage of birds, and has the comfortable sense of ample provision made for warmth and shelter during the first 10 weeks of their lives that individual will probably make a success of the work. Failure is often invited by providing but a single brooder with an incubator. Two are usually necessary so that at about six weeks old the chicks can be divided. While at first 100 chicks have enough room in an ordinary brooder, later on it should not have over 50. Deformity, debility and mortality follow overcrowding. The operator should either provide another set of brooders for his second hatch or withhold his hand for seven weeks till the first hatch can be safely removed to roosts. While not wishing to blame incubator men on this head, sad experience has taught the writer that in some cases they are prone to give their customers too generous a share of the knowledge that experience, not advice, brings. F. E. W.

Chazy, N. Y.

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I have five acres of Alfalfa which went into Winter quarters in fine condition; a first-class stand of from six to eight inches growth. What shall I do in the Spring, give it a dressing of chemicals, or of barnyard manure? If chemicals, what kind?
Lyndonville, N. Y. S. J.

Prof. E. B. Voorhees writes in reply to this: "I should recommend that the Alfalfa be covered with a reasonable dressing of good yard manure, say at the rate of eight to 10 tons per acre. This may be applied between now and Spring, if the land is reasonably level; if not, then I should apply it in Spring just before the plants start. I am a strong believer in dressings of manure upon permanent crops, as I believe that the soluble portions, being washed down, strengthen and stimulate the early growth of the plant."

There has been so much interest manifested in the crop that we repeat parts of a circular issued by Prof. Voorhees last year:

Alfalfa grows well on varying kinds of soil, provided the subsoil is open and porous; the most favorable is a rich, somewhat sandy loam, warm and friable with a deep and loose or gravelly subsoil, well supplied with lime. A dense clay or hardpan subsoil is most unfavorable. Although a rich soil is preferable, Alfalfa sometimes does well on poor, well-drained gravelly land. While the plant requires much water, it will not flourish where the ground is saturated or flooded. It is especially desirable that the soil be supplied with an abundance of lime. The plant is a heavy feeder, and will not thrive on soils deficient in plant food. The fertilizers applied should contain mainly potash and phosphoric acid, and while Alfalfa is a leguminous plant capable of obtaining atmospheric nitrogen, it responds quickly to applications of nitrogenous manures. These should be spread broadcast and harrowed in thoroughly. The following applications per acre are recommended: First year before seeding, 35 bushels stone lime; 150 pounds acid phosphate; 100 pounds muriate of potash; 75 pounds nitrate of soda; after seeding, 10 tons manure. The lime may be applied the Fall previous to seeding, and well harrowed into the soil; the fertilizers shou'd be applied just previous to seeding, and well worked into the surface soil. The manure should be applied late in the Fall after cutting has ceased; it should be fine, and evenly spread, and will prove serviceable both in protecting the plants and in furnishing food that will be well distributed throughout the soil by the Fall and Winter rains. Second and succeeding years, 10 tons manure; 150 pounds acid phosphate; 100 pounds muriate of potash. The fertilizers may be broadcast, either in Spring or Fall, and manure applied as recommended for first year.

The treatment of the field for the season preceding should be such as most effectually to subdue all weeds, and cause the sprouting and destruction of any seed in the ground, hence, farmyard manure should not be used for at least one year before sowing, as it favors the growth of weeds. The soil should receive careful and thorough preparation—this is very important—in order to secure a full stand. If the subsoil is hard or compact, subsoil plow should be used

Pure seed is essential; only that which is bright, plump and clean should be used. The seed resembles that of Red clover, but is larger, and, when fresh, has a greenish-yellow color. Experience has demonstrated that, in order to secure a good stand, it is best to sow 30 to 35 pounds of seed per acre. The seed should be sown broadcast the last of April, or the first of May, without any protective crop; it should be covered with a very light harrow or a weeder, and lightly rolled. The growth of weeds should be checked early, and as soon as the weeds are large enough to be clipped by slightly raising the cutter-bar, the mowing machine should be used. If the clipping is not too heavy, it can be left on the field, and will serve as a mulch during the dry weather. This destruction of weeds in the early growth is very important, besides, frequent cutting is helpful in establishing the young plants. On rich soils, two crops are sometimes secured the first Summer, but on poor soils, or in a dry season, no crop can be expected until the second year. Alfalfa should be cut every time it begins to blossom, whether the growth is short or tall, unless a seed crop is desired; if left until fully blossomed, the quality of the product is reduced, besides the plants are injured, and subsequent crops are smaller. The chief value of Alfalfa is as a green forage or soiling crop. After the field is well established, three or four cuttings are usually secured in a season. It is not a safe pasture for cattle and sheep, for it is likely to cause bloat. When animals are given all they will eat, the fodder should be allowed to wilt before it is fed. Alfalfa hay is a palatable and very nutritious fodder; much time and care, however, are necessary in curing it.

DELAWARE CO. COWS.—The dairy cows are in fair condition, and are quite well up in price, being worth from $30 to $40, according to the cows. The report that cows are cheap in price will not apply to Delaware County; it may be the case in some parts, still I doubt it. Feed has not been very high, milk and butter have brought a fair price, and farmers have to keep all their cows by buying feed. Most farmers saw in the early part of the season that the hay crop would be light and made arrangements to meet it by putting in corn, so they will not have to sell, and they are asking a good price. E. J. W.
Granton, N. Y.

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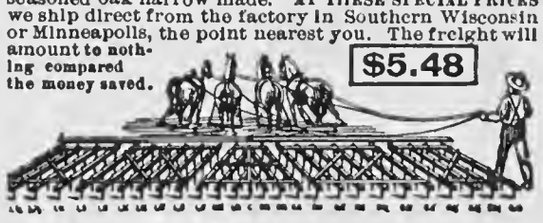
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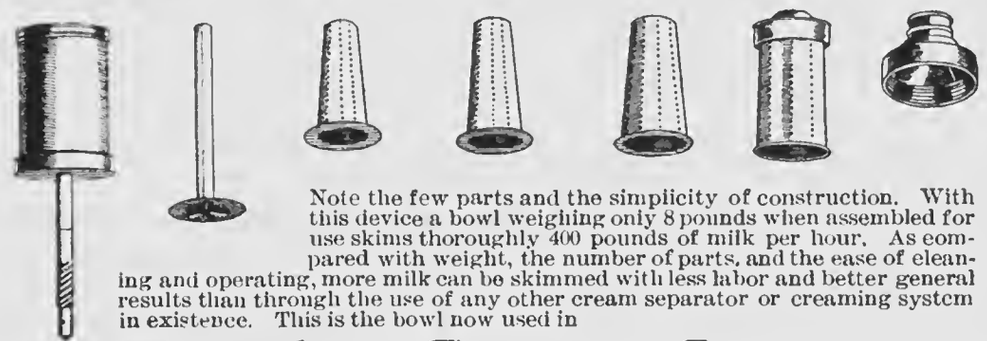

Note the few parts and the simplicity of construction. With this device a bowl weighing only 8 pounds when assembled for use skims thoroughly 400 pounds of milk per hour. As compared with weight, the number of parts, and the ease of cleaning and operating, more milk can be skimmed with less labor and better general results than through the use of any other cream separator or creaming system in existence. This is the bowl now used in
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Few parts with nothing but flat surfaces make this new Empire bowl exceptionally easy to clean; the smaller size and lighter weight make it turn easy; the several separations in the different compartments make the skimming thorough.
Our new catalogue for 1901 contains much of interest to every owner of milch cows. Send your address. We'll do the rest.
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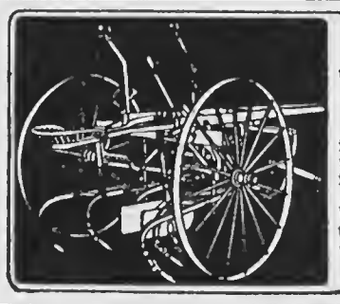

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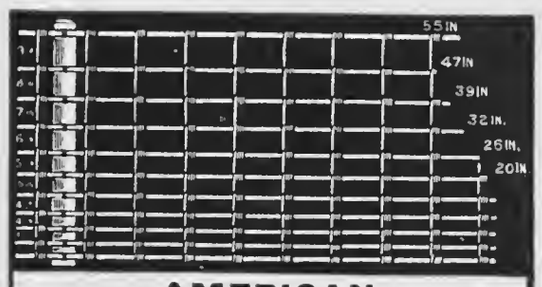

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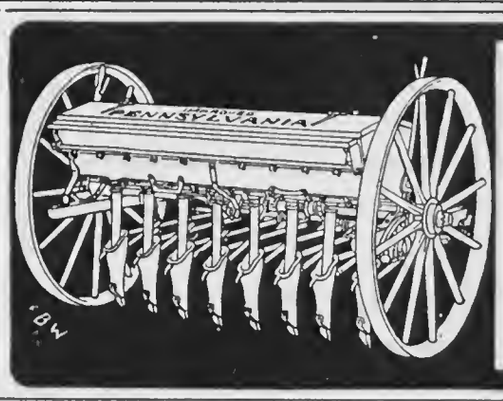

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ORGANIZATION OF MILK HANDLERS.

There are three organizations in Greater New York and Jersey City which have some interest to the dairymen who furnish milk to these two cities. They are all operated and controlled by practically the same men—milk dealers. The three organizations are all worked for the one purpose—the profits of the dealers. The New York Consolidated Milk Exchange to keep the price down to the producer; the Milk Dealers' Protective Association to keep up prices to the consumer; and the Dairymen's Manufacturing Company to manufacture and supply milk cans to the producing farmers. This latter company was organized about a year ago. Its offices are in Jersey City. The company is capitalized at $60,000. It is said to have been organized by C. H. C. Beeks, who is its president; Henry Krooss is vice-president, Joseph Laemmle treasurer and Mr. Comfort, of Reid's Ice Cream Company, secretary. It is said that small dealers were made to feel that it is to their interest to take stock in this company. Other manufacturers put their stamp on the bottom of the can or on the inside of the lid. The cans made by this company have no such designating mark. We doubt whether the officers of the company, who are also members of the Exchange, will be anxious to distinguish their make of cans from those now on the market. The feeling of producers toward them now is not such as to encourage them in the hope of a large trade with the farmers. It is said that these cans are sent to country dealers "knocked down," and that the dealers put them together and sell to the producing farmers.

If the producers could be bound together as effectively as these dealers, the milk problem would soon be settled. We doubt whether they will ever be able to do so as individuals, but when their milk is controlled by coöperative creameries and shipping stations an association of the heads of these coöperative institutions can be effected, and the price of milk in that way can be controlled, because the supply of milk can be regulated. It will yet be done; and by the way, why not start an association of coöperative creameries and shipping stations now, right away? It will do the heads of these institutions good to get together and compare notes. With milk in their hands and with their facilities to manufacture it into butter and cheese the Exchange would grow less insolent.

New Hampshire Fodder Crops.

I agree with what R. S. H. says in regard to sowing oats with grass seed. I have followed this plan for a number of years, and generally with good success, but have always cut the oats and made them same as grass. I cut them sooner than other farmers who sow them. When cut as soon as they are headed out, or even before they are all headed, I think they make a good food for cows. When they are allowed to stand longer before cutting they begin to dry at the bottom, and cows will not eat them clean unless they are kept on shorter rations than I think cows should be. Another reason why I cut so early is, that I can get a better stand of grass than by letting them stand longer. I sow three bushels to the acre, and unless the weather is very dry, I never fail of a good catch of clover. The oats are cut in haying time, and I have sometimes cut a heavy crop of clover the same season. Some farmers about here sow barley for a catch crop, instead of oats, because they say they get a better catch with barley. But I prefer oats for hay, and the seed costs less than a third of what barley does. I plant corn or potatoes one year with manure harrowed in and fertilizer in the hill, and next year harrow in a good coat of manure and sow three bushels oats and the grass seed with them.

The weather for the last two years has been so dry here that it has been hard to get a catch of grass seed, no matter how it was sown, and hay is pretty scarce about here. July 7 last I sowed an acre with two bushels of barley and one bushel of oats, to help out our Fall feed. When the piece was plowed it was so dry that when the furrow, as we plowed, dropped down, the dust flew like ashes. A few days after the barley and oats were harrowed in, we had a shower, and I put on the grass seed and rolled the piece. After a while the piece began to look green, and October 1 I began to cut and got enough green fodder to keep six cows until November 1. I had fodder corn enough to keep the cows from July 25 to October 1.

New Hampshire. W. E. R.

Oats, Barley and Buckwheat for Cows.

I have a quantity of buckwheat that I wish to grind with oats and barley to feed to cows. What proportion of each should I use, and how much should I feed to new milch cows without bran? Is it better to use bran? If so, what proportion? What amount is a good feed for each cow with good Timothy and clover, my silage being gone? B. W.

Ellery, N. Y.

Buckwheat is a little lower in nutrients than the other cereals, but is, nevertheless, a valuable feed. Buckwheat middlings are especially useful in compounding rations, and are usually relatively cheap. It would, perhaps, be advisable to buy some more nitrogenous feed to mix with buckwheat, oats and barley, but in this case cotton-seed meal would probably give better results for the money than bran. A mixture of 100 pounds buckwheat, 100 pounds oats, 100 pounds barley and 50 pounds cotton-seed meal would be in about the right proportion. The amount of buckwheat, oats and barley could be varied somewhat without injuring the value of the ration. For a 1,000-pound cow, eight to 10 pounds of this mixture per day with mixed Timothy and clover hay, the more clover the better, would make a very fair ration. Some succulent food, as roots or silage, would, however, greatly improve it. J. A. F.

PEARL GUINEAS.—I see in THE R. N.-Y. of January 12 a question asked on distinguishing the sex of Pearl Guineas. Pearl Guineas should be pearl all over in plumage; not a white feather anywhere, one white feather even disqualifying as not being pure. The male is larger, has a larger spike on his head. His wattles are larger and turn toward the front, forming a semicircle. He makes a louder noise than the hen. I have kept Guineas for 19 years, and know them well. H. A. J.

Worcester, Mass.

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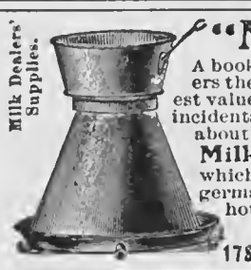

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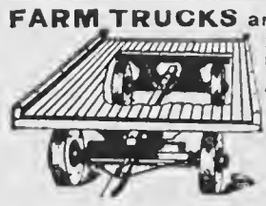

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197

Ailing Animals.

ANSWERS BY DR. F. L. KILBORNE.

Lice on Goats.

I have purchased a small flock of common short-haired goats, and find they are infested with small white liee or ticks, which do not scem to hurt the old ones, but the kids are not doing so well. Will they disappear in the Spring, like lice on cattle? Will dipping in a solution of kerosene or tobaceo kill the lice, and which would be best, eost to be equal?

Howell Co., Mo. H. K. S.

The kerosene and tobacco solutions are both effective if thoroughly applied. The kerosene is best used as an emulsion, diluted with about eight parts water; or it can be used as a simple mixture in water, in the proportion of one to eight, but it is more trouble to keep the kerosene well mixed. There are also several inexpensive preparations on the market, such as Fenoleum, thymo-cresol, etc., that are effective lice killers, and are less liable to injure the animals, if carelessly used.

Weak Legs in Hogs.

I have a pig wcighing about 100 pounds which has lost the use of his legs. He eats well, but seems to have a sore spot on the left side of his bowels. Is there any cure? Would he be fit to kill and dress now? He has been so about 10 days. E. F. S.

Manomet, Mass.

I have a purebred Berkshirc sow that lost the use of her hind quarters a few days ago. Shc cats fairly well, but is unable to move her hind parts. What is the disease, and is there any eure for it?

Lewiston, N. Y. B. M. P.

Such partial paralysis or weakness in hind quarters is usually due to overfeeding and idleness, or to too close confinement in pens. Reduce the feed to a light laxative ration. If there is constipation, feed some green food, boiled flaxseed or oil meal to keep the bowels open. Two or three ounces castor oil may be given if necessary. Give 20 grains powdered nux vomica in feed twice daily. Rub the loins with a liniment of equal parts sweet oil, aqua ammonia and turpentine, well shaken together. The loss of the use of his limbs would not render the pig unfit for food, if not allowed to remain too long, or until the animal became feverish.

Cow Fails in Her Milk.

We have a cow, an Alderney, fresh last April, which has been giving 2½ to three gallons of milk daily all through this Winter, until about two weeks ago, when she dropped suddenly to about a quart per day, on the same feed she had been getting. She had a sore teat about three weeks sincc, and the man who was milking her used zinc ointment to heal the eraek. Would the ointment act on the glands and dry her? Could you suggest anything to feed her which would tend to bring her baek to her milk? She is young, five years, in good ordcr, and has good appetite. We are feeding cut corn fodder and clover hay with gluten meal, corn chop and middlings. Can you tell me what gluten meal is, i. e., of what grain or plant is it a product? Corn, is it not?

Crafton, Pa. J. W. L.

The falling off in the milk is apparently due either to overfeeding or to the fact that the cow may be coming fresh again soon. The zinc cintment would not dry her off. If not due to calve soon I would advise reducing the feed until she begins to come to her milk. Unless the bowels are already loose, give one pound Epsom salts, with one-half pound common salt and two ounces ginger, dissolved in three pints warm water, and given as a drench. Follow with one of following powders in the feed night and morning: Gentian and ginger, of each eight ounces; powdered nux vomica, four ounces; Epsom salts, 16 ounces; mix, and divide into 32 powders. Gluten meal is obtained from corn in the manufacture of starch. It contains all the protein and little of the starch of the corn, and is therefore especially desirable as a feed for milk or flesh.

Growing Oats for Hay.

An Illinois reader of THE R. N.-Y. writes to know how we harrow in stable manure that is not well rotted, when seeding down. We never have any rotted manure, not if we know it, except as it rots on the field, and we have very little trouble in harrowing. We use a harrow of the Acme plan, that I bought cutters for, and bolted them on a plank, to cover the oats and shake up the manure. This we follow with a smoothing harrow, or bush, sometimes both, and a roller on light soil; where there are cobbles, too small to pick up fast, it will put on the finishing touch. Our friend Clark's Cutaway harrow would do excellent work with the manure, I think, and would not get in the oats too deep. Any of the disk harrows ought also to work well, but I have never tried them.

I am aware that I shall prove myself a little old-fashioned if I am not careful, but agricultural tools are too cumbersome for me to have a different one for every little job. It looks shiftless to see them left where they were used last, and if put in a building in common use, one's shins are continuously getting barked. There are many farm implements that I should gladly buy for use for a single day in a season if it were not for the trouble of getting them about and caring for them the other 365 days in the year. I have some meadow land a mile from home, and rather than shift a mowing machine and horse rake over a narrow and rough road I have got these things stored there. Where farms are compact the management may be quite different from that of the ordinary New England farm that is part of half a dozen original farms. Circumstances alter cases. The western farmer will plant and care for 10 acres of corn as easily as I do one. If he gets as much corn from his 10 acres as I do from one he is all right, but I could not afford to farm it that way. The kind of land, the kind of market, and the kind of man must all be considered in this matter of farming, and while no man should for a moment think of learning everything himself, he should be just as far from jumping to the conclusion that what is profitable for another man must be profitable for him. E. S. HINMAN.

Connecticut.

HOLE IN THE LUNGS

There are thousands of men and women, as well as ever, with holes in their lungs: consumption stopped.

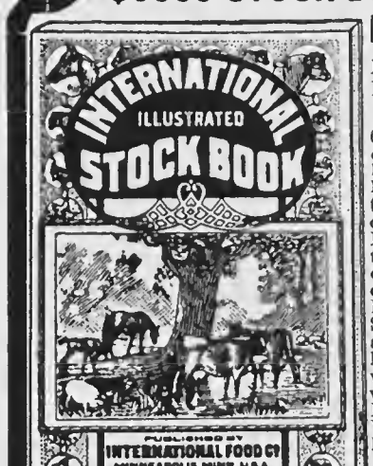
What did it?

Some change in way of life and Scott's emulsion of cod-liver oil.

A hole in the lungs, once healed, is no worse than a too-tight waist or waistcoat. Take the emulsion and give it a chance to heal the wound.

We'll send you a little to try, if you like.
SCOTT & BOWNE, 409 Pearl street, New York.

$3000 STOCK BOOK FREE.



POSTAGE PREPAID.

This Book is 6½ by 9½ and contains 183 LARGE COLORED ENGRAVINGS that cost us over $3000.00. It gives a history and description of each breed of Horses, Cattle, Sheep, Hogs and Poultry. It contains a valuable and very finely Illustrated Veterinary Department. MAILED FREE if you answer 4 questions: 1st—Did you ever use "International Stock Food" for Horses, Cattle, Sheep, Hogs, Colts, Calves, Lambs or Pigs? 2nd—Is it for sale in your town in 25 lb. pails? 3rd—How many head of stock do you own? 4th—Name this paper. Write to International Food Co, Minneapolis, Minn

WE'LL PAY THE FREIGHT

and send 4 Buggy Wheels, tire on, for $7.25. with axles welded and set, $10.60. All sizes and grades, ¾ to 4 in. tread, steel or rubber tires. Write for catalogue giving instructions for ordering and how to obtain a Wagon Umbrella Free. Rubber tired Buggies $58. Buggy Tops $5.65. No. 2 Wheels for repair work, $5.50. Order at once to get these prices. W. B. BOOB, Center Hall, Pa.

ELECTRIC HANDY WAGONS

excel in quality, strength, durability. Carry 4000 lbs. They are Low priced but not cheap. Electric Steel Wheels—straight or staggered oval spokes. Any height, any width of tire to fit any wagon. Catalogue FREE.

ELECTRIC WHEEL CO., Box 88, Quincy, Ills.

Elgin Watches

are tested and tried by extreme heat and cold at the factory and adjusted to withstand varying temperatures.

Genuine Ruby Jeweled Elgins

are sold by all Jewelers in sizes and styles to suit, and at reasonable prices.

An Elgin Watch always has the word "Elgin" engraved on the works—fully guaranteed.

Booklet Free.

ELGIN NATIONAL WATCH CO.
ELGIN, ILL.

The Lightest Draft

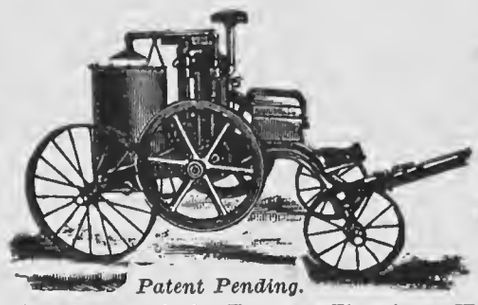
spring tooth harrow ever made is our Improved Riding & Walking Lever WHEEL SPRING TOOTH HARROW.

Reliable Agents Wanted.

It is fully a half horse lighter in draft than those of ordinary pattern. Suited for all soils for all cultivation. Rachet levers control depth free from rubbish, throw teeth out of way in going from field to field and enables 15 to 18 ins. to be worn from teeth. Guaranteed as to material workmanship and utility. Handy spring seat for operator. Write for large general Catalogue F, showing our entire line.

HENCH & DROMGOLD, YORK, PA.

Rumsey Portable



Gasoline Engine.

Patent Pending.

Designed expressly for Farmers, Thrashers, Well-Drillers. Simple, Strong, Durable—Absolutely Safe Mention this paper. Manufactured by The Binghamton Gas Engine Co., Binghamton, N. Y

Anyone—Anywhere

Our vehicles and harness are shipped to any point in the United States on approval, and for comparison with any other goods. We are willing to take chances on pleasing you. Are you willing to save money without taking any chances? Our **Split Hickory Vehicles** are right in style, in quality and in price. Write for our new catalogue and prices on seventy-six (76) different styles in vehicles and large assortment of harness. Buy direct from us, and save all dealers' commissions and profits. We are manufacturers of the famous **Split Hickory Vehicles**.

Ohio Carriage Manufacturing Company
39 W. Broad St., COLUMBUS, OHIO.

ROUND SILO

THE PHILADELPHIA.

The only perfect continuous open-front Silo made. See Open-Top Patent Roof. Ask for catalogue. E. F. SCHLICHTER,
321 Vine Street, Philadelphia, Pa.
Also made in the West by DUPLEX MFG. CO., South Superior, Wis.

Barns of Plank save timber and cash. Best, cheapest, strongest. 4,000 in use. Book for stamp. SHAWVER BROS., Bellefontaine, Ohio

IMPERIAL PULVERIZER, CLOD CRUSHER & ROLLER.

Leads Them All.

SEND FOR CIRCULARS. The Peterson Mfg. Co., KENT, OHIO.

S. & B. Earth Auger Sample at cost to introduce.

Fencing Machines, 3 STYLES, 9 SIZES

Send for free catalog. Eureka Fence Mfg Co
Wire at cost. Box Y Richmond, Ind.

DIRECT TO YOU.

Now only $6.25.

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Spike Tooth Harrows,
Cultivators, Seeders,
Land Rollers,
All kinds of Agricultural Implements, Vehicles, Harness, etc., at money saving prices.

16 tooth complete as shown, $5.85
18 " " " " 6.70
20 " " " " 7.70
24 " " no guard, $10.30
16 tooth guarded and lined, $6.65
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20 " " " " 8.25

Standard weight and length Spring Harrow Teeth 20c each.
Steel clips 20c per dozen.

200 page catalog for the asking. Write to-day.
CASH SUPPLY & MFG. CO., Dept. G, Kalamazoo, Mich.

WELL DRILLING Machines

Over 70 sizes and styles, for drilling either deep or shallow wells in any kind of soil or rock. Mounted on wheels or on sills. With engines or horse powers. Strong, simple and durable. Any mechanic can operate them easily. Send for catalog.
WILLIAMS BROS., Ithaca, N. Y.

LIGHTNING WELL MACHY IS THE STANDARD
STEAM PUMPS, AIR LIFTS, GASOLINE ENGINES
WRITE FOR CIRCULAR D8
THE AMERICAN WELL WORKS
AURORA ILL - CHICAGO - DALLAS TEX

How to Drain Land Profitably.

On every farm there is probably some land that could be made more productive by underdrainage. Properly drained land can always be worked earlier, and more profitably. The best and most economical way to drain is explained in the book, "Benefits of Drainage and How to Drain," which is sent *free* by

ROUND TILE

JOHN H. JACKSON, Third Ave., Albany, N. Y.

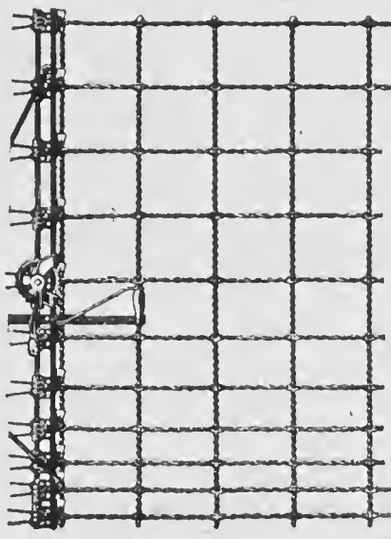
PAGE

Don't Brag About

a wire fence until you have used and abused it. Ours have been Used and Abused for fifteen years.
PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

A FENCE CONTAINING WIRES

of different sizes will be useful—as a fence—just so long as the smallest size wire lasts, and no longer. We use all large size wires for both the Horizontals and the Verticals. Send for Catalogue.
THE FROST WIRE FENCE CO., Cleveland, Ohio



CYCLONE FENCE

Is shipped knocked down, and put together with the Cyclone Machine with no more labor than stretching ordinary netting. Your freight rate is less. You save one-third the cost and get a better fence. You need less posts because **Cyclone Steel** cables are stronger with cross wires heavier than in common fence. We are the largest shippers of fence supplies direct to the consumer. Get our wholesale prices on wire and all fencing material, also ornamental fence and gates for all purposes. 1901 catalog just out.

CYCLONE FENCE CO., Holly, Mich.

Branches—Cleveland, Ohio. Waukegan, Ill. Toronto, Canada. Melbourne, Australia.

The Rural New-Yorker

THE BUSINESS FARMER'S PAPER.

A National Weekly Journal for Country and Suburban Homes.

Established 1850.

HERBERT W. COLLINGWOOD, Editor.
DR. WALTER VAN FLEET, H. E. VAN DEMAN, MRS. E. T. ROYLE, } Associates.
JOHN J. DILLON, Business Manager.

SUBSCRIPTION: ONE DOLLAR A YEAR.

To foreign countries in the Universal Postal Union, $2.04, equal to 8s. 6d., or 8½ marks, or 10½ francs.

"A SQUARE DEAL."

We believe that every advertisement in this paper is backed by a responsible person. But to make doubly sure we will make good any loss to paid subscribers sustained by trusting any deliberate swindler advertising in our columns, and any such swindler will be publicly exposed. We protect subscribers against rogues, but we do not guarantee to adjust trifling differences between subscribers and honest, responsible advertisers. Neither will we be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent us within one month of the time of the transaction, and you must have mentioned THE RURAL NEW-YORKER when writing the advertiser.

Name and address of sender, and what the remittance is for, should appear in every letter.
Remittances may be made in money order, express order, personal check or bank draft.

THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, MARCH 16, 1901.

No man should have charge of an experiment station, an agricultural college or any other instrument for agricultural education, who does his work simply for the money there is in it. Mighty little of an uplifting force will ever get through the heart of a man who has sold out his life to the dollar!

*

WE have many questions about the time and method for spraying fruit trees with crude petroleum for killing the San José scale. Unless you know that the petroleum has been tested it is better to use it in a mechanical mixture with water. In this latitude we would defer spraying with petroleum until the latter part of March. It is well to look over the trees and spray any spots missed the first time. Unsprayed portions are easily seen, as the oil blackens the bark wherever it touches. It is well to get only enough oil on to cover, especially on the sunny side of the trunk, or the trees may sunscald.

*

THE Grout anti-oleo bill failed to pass the Senate. We hoped it would go through, but other measures crowded it aside. What now? Surrender? Not by any means. He who suggests any such thing little understands the spirit and power of the American farmer. The bill will be brought up again at the next session of Congress, and pushed harder than ever—for its friends have learned much from the past campaign. Up and at 'em! Bring the guns to bear at once, and if possible prevent the appointment of J. W. Wadsworth as chairman of the House Agricultural Committee.

*

As will be observed on page 187, the farmers who furnish milk for the Philadelphia market are organizing for battle. It is the old story—the middlemen try to get the highest possible price out of the consumer, and then pay the lowest possible price to the farmer. The cost of making milk has increased, but the cost of handling it is cheaper, if anything. While the retail price is eight cents per quart, the dealers propose to pay the farmer 3½ cents, and make him pay freight! Think of it, the man who pays all the expenses and takes all the risks of production must be satisfied with less than half the final price! No wonder these farmers are ready to fight for their rights against this injustice.

*

"I HAVE just warmed up my pen with a letter to D. B. Henderson!"

That chunk of information comes from a Massachusetts reader. How could he raise the temperature of his pen by dipping it in cold ink? He wrote hot words stating that in his opinion J. W. Wadsworth, of New York State, is not a fit man to represent the farmers as chairman of the House Committee on Agriculture. He is not a true friend of agriculture. He now occupies the chair—let the farmers sit down on him! Hon. David B. Henderson, Washington, D. C., will appoint the successor to Mr. Wadsworth. Warm your pen with a letter to Mr. Henderson asking for a friend of the farmer. Fire a wad at Wadsworth!

*

A SOMEWHAT novel method of organizing a Grange was adopted in the town of Leslie, Mich., a few weeks ago. Several attempts had been made to get the people together, but the storm and weather prevented. It was found that it would be legal if they could organize by telephone, rural telephones connecting the 20 families interested, dues having been paid in advance. An evening was agreed upon, and the general call (eight bells) was given, everyone answering at once, of course. The county deputy explained the purpose of the meeting, and all reported in favor of organization by telephone. The roll of charter members was called, and all the officers were duly elected and necessary committees were appointed. It has been appropriately named "Telephone Grange." Incidentally, this illustrates the value of the rural telephone. It is said that 100 families are connected by telephone in that section.

*

HUNDREDS of our readers have enjoyed the blessings of a telephone for the first time this Winter. During the wildest storms or in damp, sticky weather, when the mud was hub deep, they have been able to talk with friends or carry on their business at home. We are thankful that the speaking wire is stretching out across the valleys and over the hills. We wish that it might be carried to every lonely farmhouse in the land, for unmeasured blessing and benefit would result from thus binding the farm homes of this country together. The first prize in our recent subscription contest was won by J. E. Allis, of Orleans Co., N. Y., and he used part of the money to put up a telephone in his house. The farmer will get "on the wire" yet!

*

WE feel a degree of pride in our special number of THE R. N.-Y. last week. It contained 24 pages with 310 different advertisements, measuring a total of 644 inches. Besides these we had orders for enough to fill one whole page in addition, which were left out, since we could not find room for them without encroaching on reading matter. Had we inserted them it would have made a total of just 700 inches of advertising. As it is, this was the greatest number of inches of paid advertising ever carried by any farm paper in a single issue. Another source of pride is the character of the advertisements. There are no guessing games; no fakes, no "get-something-for-nothing" humbugs. Every advertisement offers some honest article of daily commerce, and is signed by a responsible house. At no other time in the last 50 years could the character of periodicals be so completely classified by their advertising columns as now.

*

WE learn that in a few places canners are offering a little more for some varieties of green peas than they purposed paying earlier in the season. Their first plan evidently was to have their pea contracts signed at last year's figures before farmers realized the danger from the Green pea-louse. The chances are that canned peas will be higher next season, and in all fairness the farmer ought to share in the increase, since he takes practically all the risk in case of crop failure. In 1897 the wholesale price of canned peas ranged from 65 to 80 cents. In 1898 the range was from 70 to 80 cents; in 1899 from 70 to $1.15, and in 1900 from 90 to $1.15. In only one month of last year, June, were the peas sold at 90 cents. For eight months the price was $1.05 or more. The indications are for higher prices both for the stock now on hand and the coming crop. We therefore consider that farmers are justified in demanding more money for peas than last year's contract called for.

*

WE may truly say the seedsmen's catalogues gain in beauty, usefulness and reliability year by year. As the old exaggerated wood cuts wear out they are replaced by truthful process engravings, direct from well-grown specimens, and the glowing descriptive matter is modified to be in better keeping with the facts of nature. There are still some hardened old offenders of whom it may well be said that "the truth is not in them," but they are growing more lonesome each season. It is a question whether these flamboyant catalogues do as much harm as might be supposed. They often deal, in part at least, in good seeds and plants, and their customers have learned to discount the windy statements just as the modern small boy modifies his expectations, roused at first sight of a flaring circus poster. Novelties are less plentiful than in former years, but there is good reason to regard those announced as possessing in the main a good share of real merit.

*

SEVERAL local papers in New York State have printed an article taken from a Georgia paper describing work said to be done by the entomologist of that State in fighting the San José scale. We are asked to give the facts in that matter. W. M. Scott is State Entomologist of Georgia, and he seems to have gone at the scale with fire and sword. Since March, 1898, he has caused to be dug up and burned 300,000 trees which were found infested with the scale—most of them so badly that they were beyond recovery. Last Fall a nurseryman in Tennessee began to ship trees into Georgia which were covered with the scale. He was warned not to ship, but persisted in doing so. As a result 30,000 of his trees were seized and burned. This nurseryman threatened to bring suit for the destruction of his property. The case was submitted to the Attorney-General of Georgia, who decided that the State Entomologist had the right to destroy such infested stock, and that it was his duty to destroy it. That decision ended the case. The point about it is that the law upholds the State official in his fight against this insect. We ought to have just such an official in every State and Territory of the Union!

*

WE have often spoken of the danger of judging by the eye or hand entirely. It is true that some farmers become very expert in estimating a crop by looking at it, or in determining the weight of feed or fertilizer by "hefting" it in the hand. Still, even with the most expert, the scales will often tell a remarkable story. We find a good illustration of this in the following—taken from a Cornell bulletin:

On one occasion a field was planted to early potatoes, there being applied 700 pounds per acre of a high-grade complete fertilizer costing $40 per ton. As was the custom under such circumstances, some rows were left unfertilized for comparison. At harvest time the workmen were instructed to dig fertilized and unfertilized rows, leaving the potatoes in their rows side by side for examination. When ready the writer inspected them carefully, and while there was a slight difference observable, the verdict rendered as the result of inspection only, was, "Not enough increase to pay cost of fertilizer." Pressed with work the impulse was to have the potatoes picked up without further care, but a wiser thought prevailed, and a definite area was laid off and the potatoes from it carefully measured, when to the surprise of all the yield of the fertilized rows exceeded that of the unfertilized by 62½ bushels per acre. This occurred in August and these potatoes had a ready market at 90 cents per bushel. The value of the increase was $56.25 per acre. The cost of the fertilizer was $14 per acre, and if $2 are allowed as the cost of applying the same, the total expense on account of fertilizer was $16 per acre, leaving $40.25 as net profit. And yet we were on the point of turning away from this experiment saying "the fertilizer does not pay."

A good many experiments are rendered worthless because the results are eyed rather than measured. Too many of us ask a question of the soil, or of a plant or animal, and then answer it ourselves by using the eye for a basket or weight. The College of Agriculture at Cornell will conduct a number of co-operative experiments this year, and would like to arrange with many New York State farmers to test fertilizers, wheat, buckwheat or orchard culture. Those who wish to try the experiments should write to J. L. Stone, Cornell University, Ithaca, N. Y.

*

BREVITIES.

RURALETTES.

We've said it over many times
In prose, and now we'll try in rhymes;
The cow pea is a bean—no less—
With all the bean's crisp tenderness.
Once touched by sturdy old Jack Frost
Its usefulness is surely lost.
So hold your hand, my honest friend,
Sow not the cow pea till the end
of May, or e'en the first of June,
If you would have it sing the tune
That lures the nitrate from its lair,
Within the evanescent air.

* * *

Happy that man! Yes, happy he alone.
Who, at the close of life can say, "I've grown!"
Grown rich in spirit—grown more true and strong
In love of right and hatred of all wrong.

* * *

"I WANT a book with the Latin left out," writes a friend.

MRS. S. J. SCALE appears to be the "bad man" of the family.

THE cow-pea and clover students are invited to read Mr. Bell's article on first page.

WHAT ails the coward? He has a can't sir ous growth on the will.

"As full as an egg is of meat!" That is not very full, considering that the egg is 75 per cent water.

THOSE polar-creamery sharks seem to be polling a big vote in the sucker party. We hear from them in new places.

THE San José scale may take the scales from the eyes of New York farmers, so that they can get together for mutual good.

JUDAS! That's the right name for the man who goes around with the agent for some wild-cat scheme and sells out his neighbors.

GREAT interest is shown in the plan of crowding apple trees together as advocated recently by Mr. Hoyt. He will tell us more about it next week.

COMPARATIVELY few people realize how much cement is being used, particularly in the Central West, for paving and building purposes. "A great boon to mankind" is what Mr. Barney calls it.

THE criticism of the Grout bill is mostly destructive. Those who oppose it and admit the need of something that will prevent the fraud in the business seem to have no good substitute to offer.

MANY farmers in the Eastern States use the grain drill for distributing fertilizer. With all the drill hoes in use the fertilizer is well spread and nicely covered, and the expense of buying a special tool is avoided.

Events of the Week.

DOMESTIC.—Fire in an oil warehouse in Philadelphia, Pa., February 27, caused damage reaching $500,000. . . . . February 27, eight cases of smallpox were discovered in tenements in Brooklyn, N. Y.; a large number of persons were exposed to the disease. . . . . Wm. M. Evarts, lawyer, statesman and diplomat, died in New York, February 28, aged 83. He had been blind for the past 10 years, but this did not impair his mental vigor. During President Johnson's administration he was Attorney General, and President Hayes made him Secretary of State. He also represented New York in the United States Senate for one term. As an advocate and an analyzer of intricate law propositions, he was easily the leader of the American bar. . . . . An explosion in a coal mine near South McAlister, I. T., February 28, resulted in the death of three men. . . . . The main building of the Nebraska State Penitentiary, near Lincoln, was burned March 1; loss $200,000. . . . . Twenty-one fishermen were carried out on floating ice on Lake Erie, off Silver Creek, New York, March 3. Seventeen were rescued but the others perished. . . . . Five men were killed and two badly injured in a zinc mine at Joplin, Mo., March 4. . . . . The President's inauguration, March 4, was an unusually gorgeous spectacle, but was marred by heavy rain. President McKinley's inaugural address referred to the financial achievements of the past four years, declaring that National pledges had been fulfilled. He referred to the war with Spain, and was thankful that we now have a reunited country. "Our institutions will not deteriorate by extension, and our sense of justice will not abate under tropic suns in distant seas," he declared. The President said that the declaration of the purposes of this Government toward Cuba, contained in the resolution of April 20, 1898, must be made good, and the peace we pledged to leave to Cuba must carry with it the guarantees of permanence. In conclusion the President said that the settled purpose to give self-government to the people of the Philippines, as fast as they are ready for it, will be pushed with earnestness and fidelity. The inaugural parade was pronounced one of the finest that Washington has ever seen. There were about 30,000 men in line.

CONGRESS.—The Senate, March 1, after a lively debate, rejected by a vote of 25 to 36 Mr. Pettigrew's motion to discharge the Committee on Interstate Commerce from consideration of what is known as the Car Coupler bill, which requires sworn statements of all railway accidents to be filed with the Interstate Commerce Commission. The bills appropriating $500,000 for the Buffalo Pan-American Exposition, $5,000,000 for the St. Louis-Louisiana Purchase Exposition and $250,000 for the Charleston, S. C., Interstate and West Indian Exposition were discussed. Mr. Morgan offered an amendment authorizing the President to acquire from Nicaragua and Costa Rica territory sufficient for the construction of the Nicaragua canal and appropriating $10,000,000 for the purpose, but the Senate at the night session by a vote of 36 to 16 sustained a point of order against it. The House, by a vote of 159 to 134, concurred in all the Senate amendments to the Army Appropriation bill, after two hours' debate. The Philippine and Cuban provisions were defended by the Republicans and assailed by the Democrats. The final conference report upon the Indian Appropriation bill was adopted and a number of minor bills were put through the final stages. The conference report on the St. Louis Exposition bill (which agreed to Sunday closing) was agreed to and the bill was sent back to conference. A motion to concur in the Charleston Exposition amendment was defeated, 84-132. The Revenue Cutter Service bill was sidetracked early in the day by a vote of the House. Senator Carter, of Montana, signalized his retirement from the Senate, after six years of service, by talking the River and Harbor bill to death. He occupied the floor, constructively, for nearly 13 consecutive hours, although in the aggregate about three hours of that time were devoted to other business. All the other appropriation bills were completed. The Fifty-sixth Congress was in session 197 days, which is less than any Congress for years. The following statement of bills and acts is given by the House tally clerk: Number of bills, 14,336; number of reports, 3,000; public acts, 345; private acts, 1,250; total acts, 1,595; number of joint resolutions, 395. The Hay-Pauncefote treaty lapsed March 4 for failure of ratification, and it is expected that negotiations will begin anew for another treaty.

PHILIPPINES.—D. M. Carman, the American who was accused of furnishing supplies to the insurgents, was released March 2 on his personal cash bond of $10,000 in gold. The provost marshal recommended the acceptance of the bail, as Carman's physicians had certified that his further incarceration would have a bad effect on his health. He will be allowed to go to Mariveles to recuperate. The latest indications are that the case against Carman is not as bad as first reported, and that on the trial he may be exonerated. Further details are not obtainable. There is inside information that confirms the rumors that Mr. Carman will be vindicated. It is believed that his release on bail is merely a temporary measure pending his discharge. He will also be permitted to resume his business and bid for Government contracts. . . . . A Manila despatch reports that Mondigar, an important insurgent commander in the vicinity of Iloilo, Island of Panay, has surrendered, with 50 men. Hundreds are reported to have sworn allegiance to the United States Government at various points.

GENERAL FOREIGN NEWS.—A serious outbreak of bubonic plague has occurred at Cape Town, South Africa. The government has taken over control from the corporation, and is exercising a vigorous sanitary system. . . . . The German Government has provided for the maintenance of its army in China until 1902, although some of the troops may be withdrawn before the expiration of that time. The objects of the military expedition are said to be unchanged. Some of the details of the execution of Chinese leaders in Pekin are of a revolting character, and it is intimated that the foreign ministers may make no further demands for the deaths of high Chinese officials.

FARM AND GARDEN.—At a meeting held at the Chicago stockyards February 22 in the interests of the International Live Stock Exposition, it was decided unanimously to make the exposition a permanent show. Forty or more representatives of the various breeders' associations of the United States and Canada were present. During the discussion, General Manager W. E. Skinner said the stockyards company would erect a new exposition building between Forty-fourth and Forty-fifth streets, 230 feet wide and 700 feet long. Officers were elected as follows: President, J. A. Spoor, Chicago; vice-president, De Witt Smith, Springfield, Ill.; A. H. Sanders, Chicago; general manager, W. E. Skinner, Chicago; treasurer, R. Z. Herrick, Chicago; secretary, Mortimer Levering, La Fayette, Ind.

The seventh annual meeting of the Massachusetts Fruit Growers' Association was held in Horticultural Hall, Worcester, Mass., March 13 and 14. H. W. Collingwood, Prof. S. T. Maynard of Amherst, Prof. Fred W. Card of the Rhode Island Experiment Station, Ephraim Porter Felt, New York State Entomologist, and Prof. Frank Wm. Rane, horticulturist of the New Hampshire College, addressed the meeting.

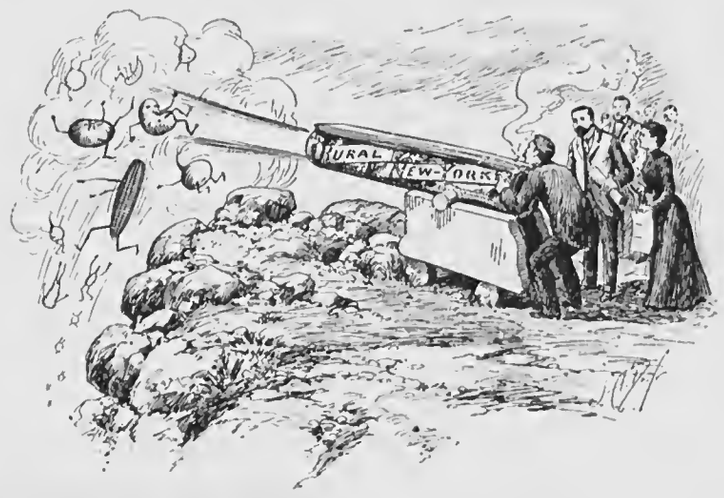
At the recent annual meeting of the Idaho State Horticultural Society at Boise, officers were elected as follows: President, I. B. Perrine, Shoshone; vice-president, Prof. F. A. Huntley, Moscow; secretary, Robert Milliken, Nampa; treasurer, R. M. Gwinn, Caldwell.

The Florida State Horticultural Society will hold its annual meeting at Jacksonville May 21-24. This late date is fixed for the convenience of the truckers, who are very busy earlier in the season.

The bill establishing a bureau of horticulture and pomology in the Department of Agriculture of the State of Pennsylvania, with a chief at a salary of $2,500 and one clerk at $1,500 annually, has been defeated.

C. W. Waid, assistant horticulturist at the New Hampshire College, has resigned his position to take a similar post at the Ohio State Experiment Station.

At the present time between 2,000 and 2,500 strange horses are scattered over a small area in the vicinity of Midland post office, S. D., in the interior of the ceded Sioux lands between the Missouri River and the Black Hills. The animals do not belong to South Dakota stockmen, nor do their brands show them to be the property of stockmen in either Montana or Wyoming, as the brands borne by them are not recorded in the official brand books of the three States, so the natural inference is that they have drifted to the South Dakota ranges from States even farther away than Montana or Wyoming. It is thought the animals may be from as far away as Idaho. Efforts are being made by officials of the South Dakota stock associations to ascertain the names and homes of the owners. Unless they can soon be located, it is feared that the herd of "drift" horses will become the prey of horse "rustlers," who have recently been very bold in that part of the State. The herd would prove a rich harvest for thieves, for with the animals are a large number of unbranded colts, which would be easy to dispose of without risk to themselves if the "rustlers" secured possession of them. Reputable stockmen living in the vicinity will strive to protect the animals from thieves until their owners can be found, but it is feared that they will not be able to prevent the herd being raided by "rustlers."



Tobacco growers in the vicinity of Big Flats, N. Y., have had trouble with New York buyers, who, last July, made contracts with them for their crop, paying a small sum in advance. Since then the market has greatly depreciated, and the buyers do not wish to pay the price called for by their contracts.

Delaware now has an organized Board of Agriculture, though it has taken three different Legislatures to complete its establishment. S. H. Messick, the president of the board, has been twice elected to be State Master in the Grange. He is also president of the Farmers' Institute, and a well-known up-to-date farmer. Jas. F. Shallcross is a large fruit grower and farmer of the upper end of the State, whose ability and popularity are attested by the fact that he has been twice elected to the Legislature when all the rest of his colleagues on the ticket were defeated. A. W. Slaymaker, the third member of the board, is known to many of our readers as a writer on small fruits and kindred subjects. The firm of which he is a member, Slaymaker & Son, is well known to our advertising columns. The board is charged with the care of the San José scale, and promises a vigorous fight for its extermination if such a thing is possible. Peach yellows, animal diseases, etc., will also claim attention.

A Grange was organized at Ionia, Ontario Co., N. Y., on February 22, by Special State Deputy J. Jay Barden with 42 charter members enrolled. C. R. White was elected master; E. D. Hoyt, lecturer; Mrs. E. D. Hoyt, chaplain; May Dibble, secretary. Much enthusiasm prevailed, and it is safe to say that this will soon be one of the strongest Granges in the county. This is the second Grange Brother Barden has organized within a month, and he says that more will soon follow.

THE recent cold snap in the South did considerable damage to garden truck and strawberries in the Carolinas, many growers losing their entire crops. The cold was less severe in the Georgia peach belt, and a high wind prevented a killing frost. The injury to the buds is slight, except in the extreme southern portion, where they were farther advanced.

Southern Seed Potato Notes.

The following letter from North Carolina may interest some seedsmen who are after business:

"Is it possible for us who buy northern-grown seed potatoes, to get a smaller potato? The usual 'marketable' is entirely too large; is no better for seed or planting than the smaller or hen's egg size, and does not plant near so far, besides being higher priced. Ask your advertisers to make a note along this line, and some one of them will get an order from me and many others who want seed size instead of eating-size potatoes for planting." R. M.

Saxon, N. C.

A friend who is traveling in the South sends us this note from the New Orleans market:

"Seed potatoes are arriving in quantity, coming from Michigan and the Northwest. In carloads in bulk they sell at the rate of $2 per barrel. The dealers put them in flour barrels, heading them up and cutting holes with hatchets in sides and top for ventilation, selling them at this date for the average price of $2.25 per barrel. Incredible as it may sound, Boston in this market ranks as the potato heaven—the place from which all good potatoes come, and the potatoes when duly fixed up are branded in big capital letters, Boston Peerless, etc. The immortal Boston bean must here just now hide its greatly diminished head! Peerless is the leading variety with Burbank coming next, with a thin sprinkling of Early Rose with the New York brand." J. Y. P.

New Orleans, La.

Prices Offered for Canning Vegetables

The following figures show what canners are offering for contract vegetables:

Greensboro, Md., two cents per pound for viner peas; 60 cents per bushel for pod peas, and $6 per ton for tomatoes.

Franklin, Ind., 20 cents for 16 pounds shelled peas; tomatoes, 20 cents per bushel of 60 pounds; corn, $6 per ton.

Auburn, N. Y., price paid for peas, $1.70 per 100 pounds shelled. Must be raised from seed furnished by the company at $2.50 per bushel. Corn, 45 to 55 cents per 100 pounds of husked ears, grown from seed furnished by the buyer at $2.75 per bushel; tomatoes, $5 per ton; table beets, $8 to $12 per ton; Boston Marrow squash, $5 per ton.

Stanley, N. Y., peas, shelled, $1 per bushel of 60 pounds; corn, $10 per ton of husked ears, husked at cannery; beets, $15 per ton; Boston Marrow squash, $5 per ton; Hubbard a little higher.

Ionia, N. Y., tomatoes, $6 per ton.

Le Roy, N. Y., peas, shelled, 85 to 90 cents per bushel of 50 pounds; sweet corn, $6 to $7 per ton; pumpkins, $2.50 per ton.

Syracuse, N. Y., peas, shelled, $1.75 per 100 pounds; squash, $5 per ton; sweet corn, 60 cents per 100 pounds of husked ears.

Fairport, N. Y., table beets, $13 per ton, 1½ inch in diameter and under; string beans, two cents per pound; green shelled peas, two cents a pound, vines taken to the factory and shelled there without charge; tomatoes, 22 cents per bushel; green corn, $6 to $7 per ton.

Baldwinsville, N. Y., tomatoes, 20 cents per bushel of 60 pounds; string beans, 75 cents to $1.50 per 100 pounds.

Brant, N. Y., sweet corn, $6.50 to $8; tomatoes, 20 cents per bushel; green peas in pods, $1.25 per 100.

Newport, N. Y., sweet corn, 50 cents per 100 pounds, husked ears; green peas, $1.75 per 100, shelled; table beets, 65 cents per 100.

Rochester, N. Y., tomatoes, $6 per ton; string beans, two cents per pound; peas, $27.50 to $32.50 per ton; raspberries, six cents per quart; currants, 3¾ cents per pound.

Westfield, N. Y., peas, per 100 pounds, $1.75 to $2; tomatoes, 40 cents per 100; sweet corn, 50 to 60 cents per 100; string beans, $1.50 per 100; beets for pickling, 65 cents per 100.

Rockford, Ill., tomatoes, $8 per ton for first three tons, and $7 for remainder.

THE outlook for honey in southern California this season is said to be the most favorable for a number of years. The rains have come at just the right time to give the flowers, trees and honey-producing bushes a good start. As the stock of held honey throughout the country is small, California apiarists look for a prosperous year.

SPRAYING WHITEWASH.—I see on page 121 a call from F. B., of Covington, Ind., for a formula for the lime spray for peach trees to retard the growth of buds. Lime alone will soon wash off. About March is pretty late. Last year the buds were all spoiled long before March; were black in the center. I should say spray in December. I have trees sprayed last December that are white now, though the fruit buds were already started by the warm spell at that time. My formula is this: Stir together six pounds dry whiting, two pounds dry zinc; scald with boiling water to a thick paste. Scald one pound cornstarch as for paste; mix the two while warm, and reduce to proper consistency. This makes a superior calcimine. H. L. H.

Munnville, N. Y.

CUTTING POTATO SEED.—I have not given particular attention to the recent literature concerning the different methods of cutting potatoes. I believe, however, that the form of the cutting is not to be governed by the variety, but by the form of tubers and the number of eyes. I believe that for ordinary conditions the piece of tuber should be as large as possible with each eye, in order to afford nourishment and to start the young plant. A few years ago, a practice was recommended of cutting out each eye and throwing away the body of the tuber. This practice gave good results only when the conditions of soil and climate were almost perfect, so that the plantlet was able to form a quick connection with its source of food supply. It is, I believe, to be recommended only as a special practice. The general practice should be, I think, as I have said, to have as much of the potato food as possible with each cutting. The difficulty with using the blossom end of the potato is that there are so many eyes that each one has a relatively small amount of food when the tuber is cut. If the whole blossom end of the tuber is used for seed, then so many sprouts are likely to start from it that there is too much competition, and the results may not be good.

L. H. BAILEY.

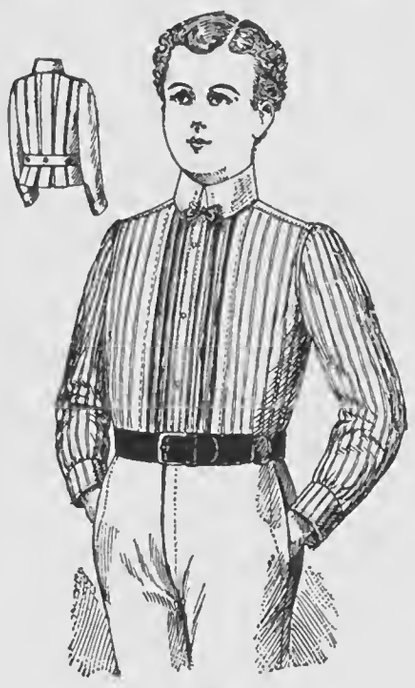
Woman and Home

From Day to Day.

Mothers are the queerest things!
'Member when John went away,
All but mother cried and cried
When they said good-by that day.
She just talked and seemed to be
Not the slightest bit upset—
Was the only one who smiled!
Others' eyes were streaming wet.
But when John came back again
On a furlough, safe and sound,
With a medal for his deeds
And without a single wound,
While the rest of us hurrahed,
Laughed and joked and danced about,
Mother kissed him, then she cried—
Cried and cried like all git out!
—Century Magazine.

*

A PIN holder for the baby's safety pins recently noted was made of a china-headed doll dressed as a baby, its skirts being composed of two strips of No. 16 ribbon. Inside the ribbon were several



3733 Boy's Shirt Waist,
4 to 12 years.

strips of white flannel with pinked edges, into which the pins were fastened. The ribbon skirt was tied at the waist with a sash, and tied again at the bottom. It made a pretty little gift for the baby's basket.

*

WE have printed several suggestions for alleviating chilblains. The following remedy, sent by a subscriber, is quite new to us: When going to bed put on a pair of woolen stockings, and place the feet in cold water; then put another pair of woolen stockings right on over the wet ones, and keep them on all night. One or two nights are enough to cure most cases. Prevent chilblains by keeping the feet warm and dry.

*

ONE of our friends asks for a recipe for a layer cake having a date filling. We have made this by using a mixture of chopped dates and soft icing between the layers, finishing the top with icing and halves of dates symmetrically arranged. A variation is made by combining walnuts with the dates. Can any of our friends give a different recipe from this for date cake?

*

THE barrettes or hair brooches used at the back of the head to pin up loose, short hairs are now preferred in oval or rectangular shapes; gold being more popular than silver. Many of them are not only showy, but very expensive. Instead of the single pin of an ordinary brooch, they have a double pin like a miniature hairpin, which easily springs into the fastening, and prevents the barrette from slipping down in the hair.

*

THE Spring tailor suits so far exhibited are quite as plain in cut as the early Winter models. The skirts are very smooth and plain over the hips, but seem a little fuller in the back, and the inverted pleats are not laid over one another quite so closely. One style seen has a tiny inverted pleat in the center of the back with a little group of finely-set gathers on either side of it. This would be an excellent idea for wash gowns. The skirts are full and flaring at the bottom, with very little stiffening, the linings being quite soft.

*

A SOFT, dull shade of blue known as blotting paper is to be popular in linens this year; another beautiful shade is katydid green. These shades, also lilac, rose and ecru, are to be fashionable in plain linen for Summer gowns. These linen gowns are to be simply made, the skirt plain, the bodice of the blouse or shirt-waist style, trimmed with a sailor collar. Such a frock may be very prettily made with a collar and undersleeves of white.

The Rural Patterns.

At this season it is quite possible to get a quantity of Summer sewing out of the way, and if the boys' waists are made at home the pattern here illustrated will be found useful. As shown it is of percale, white with stripes of blue; madras, cheviot, outing and Scotch flannels are much liked. The fronts of the waist are laid in straight tucks at each side of the centre box pleat, and the back is laid in three straight box pleats, so insuring simple and perfect laundering. The sleeves are in regulation shirt style, with stiff cuffs. The neck is finished with a band to which the turn-over collar is attached by studs or buttons and buttonholes. The pattern also includes a soft turn-over collar which may be permanently attached, if so preferred. The shoulder seams are covered and stayed with applied bands stitched on each edge, and stitched on at the waist is a belt, to which buttons are sewn to support the trousers. To cut this shirt waist for a boy of 8 years of age 3 yards of material 27 inches wide,

3732 Misses Shirt Waist,
12, 14 and 16 years.

or 2½ yards 32 inches wide, will be required. The pattern No. 3733 is cut in sizes for boys of 4, 6, 8, 10 and 12 years of age, price 10 cents.

Shirt waists fill an important place in the wardrobe of the young girl, as well as in that of her mamma. The pretty little model shown is adapted to silk, henrietta, French flannel and all the list of washable materials, cheviots, madras, batiste, etc. As illustrated, it is of albatross in Russian blue, with bands of black taffeta and small gold buttons overlaid with a tracing of black. The foundation is a fitted lining that closes at the center front. On it are arranged the back and the fronts, that also close at the center, but separately. The fronts proper are laid in groups of tucks, three each, that extend from the neck and shoulders to yoke depth, and are drawn down in gathers at the waist line. The back includes a center V-shaped portion and side-backs, which are laid in three narrow tucks each. The sleeves are in bishop style with narrow cuffs that terminate in pointed ends. At the neck is a stock collar, that also is pointed, and closes slightly to the left of the center. To cut this waist for a miss of 14 years of age 3½ yards of material 21 inches wide, 2⅞ yards 27 inches wide, 1⅞ yard 32 inches wide, or 1¾ yard 44 inches wide, will be required. The pattern No. 3732 is cut in sizes for misses of 12, 14 and 16 years of age; price 10 cents from this office.

CHEERFUL looks make every dish a feast and that it is which crowns a welcome.—Massinger.

ONE of the best rules in conversation is, never to say a thing which any of the company can reasonably wish had been left unsaid.—Swift.

MEN endure the losses that befall them by mere casualty with more patience than the damages they sustain by injustice.—Sir Walter Raleigh.

WE can be thankful to a friend for a few acres or a little money; and yet for the freedom and command of the whole earth, and for the great benefits of our being, our life, health and reason, we look upon ourselves as under no obligation.—Seneca.

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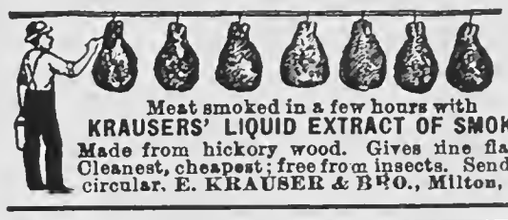

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Rural Recipes.

Entire Wheat Gems.—A friend in New Jersey sends this tested recipe: Three cupfuls entire wheat flour or wheat meal, two cupfuls cold water, half cupful of milk. Heat gem pans very hot on the top of the stove, fill them even full of the batter, place on the grate of a very hot oven. Let them remain 10 minutes on the grate, then bake 30 minutes on the bottom of the oven. They are nearly as good if 2½ cupfuls of water and no milk is used. Do not use any salt, or they will not be so light.

Bread Cake.—One cupful bread sponge, one cupful sugar, one-half cupful butter, one egg, three tablespoonfuls of sweet milk, one-half teaspoonful soda dissolved in a little warm water, one cupful of flour, one cupful of seeded raisins, spice to the taste. Stir all well together with a spoon and raise it. It will always rise some after being put in the oven.

Potato Salad.—Chop cold boiled potatoes with one raw onion to season. For the salad dressing, put on stove a sauce pan with one pint of vinegar and butter the size of an egg. Beat two or three eggs with two tablespoonfuls of mustard and a small teaspoonful of salt, and one of black pepper, two tablespoonfuls of sugar. When thoroughly beaten pour slowly into the vinegar until it thickens. Be careful not to cook too long, or the egg will curdle. Remove and when cold pour over the salad. It improves this to add the yolks of two or three hard boiled eggs mashed fine and beaten in with the mustard, or add a cupful of cream. This will keep several days in a cool place if desired.

A Cheap Cake.—One cupful sugar, one-half cupful sweet milk, two or three tablespoonfuls of sour milk, one tablespoonful of butter, one egg, one heaping teaspoonful of baking powder stirred and sifted into the flour. Stir rather stiff. This will make a three-tin jelly cake, or is good baked in a cake dish altogether.

Oatmeal Cookies.—Three cupfuls of oatmeal, sifted, three cupfuls of flour, one cupful of sugar, one cupful of lard, one cupful of hot water, one teaspoonful of soda; roll thin and bake quickly. Sift flour, mix it and oatmeal together, work in the lard, add sugar, dissolve soda in the water, and pour into the mixture.

Dried-Apple Fruit Cake.—This is an excellent cake for children, and less expensive than the regular fruit cake. Soak three cupfuls of dried apples over night in cold water enough to allow them to swell. Chop fine in the morning and put on the fire with three cupfuls of molasses. Stew until almost soft; add one cupful of raisins and stew a few moments longer. When cold add three cupfuls of flour, one cupful of butter, three eggs well beaten, one teaspoonful of soda and use whatever spices are desired. Bake in two loaves in a steady oven.

Frozen Biscuits.—We have not tested this recipe, but are assured that the biscuits are light, flaky and delicious. Scald one pint of flour with one pint of boiling, strained potato water; stir in half a cupful of butter or sweet lard, one teaspoonful of salt and two tablespoonfuls of sugar. When it is cool add one-half a cake of compressed yeast (dissolved in a little water) and the remaining pint of flour. Let it rise over night. In the morning knead into a smooth mound and let it rise light. Place the pan inside a large dishpan; cover it with another dishpan and bury it completely in snow. An hour before luncheon uncover it, bring the frozen bread dough into a warm room; pound and roll it into a thick layer, cut into biscuits, place them in a buttered baking tin. Remove the top from the teakettle, set the tin over the steam and let them stand until the biscuits rise into very light puffs. Bake in a quick oven and serve warm in a folded napkin.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

Storiettes.

The Widow's Farm

She was on the witness stand in her own behalf, being also defendant in the action. She was a sturdy widow, hard-working, shrewd in a deal and garrulous. A landlord was suing for back rent on a little farm she had abandoned.

"You say that the land was hard and sour and sterile?" suggested the attorney for the plaintiff.

"That's what I said, only I wasn't so persniffity about it, and I'll say more—"

"Just a moment, please. We want evidence, not opinions. Did you raise anything on this land of ours?"

"Land of ours?" with a sniff. "You never owned a thimbleful of it. Yes, I did raise things on it. It took two hills to raise a bean and a whole row of corn to raise a nubbin. I raised a cabin, I raised a pigpen, and I tried to raise a goat, but it starved to death, poor thing. That ground wouldn't raise dog fennel or even Canada thistles."

"Don't exaggerate, please. You say the soil was sour?"

"I couldn't exaggerate about that ground if I was a lawyer. In the morning, when the dew was steamin' off in the sunshine, you'd think you was livin' next door to a pickle factory. I kept my sugar in an air-tight jar."

"Pshaw! That's ridiculous. I suppose the ground was so hard you couldn't blast it."

"Nuthin' of the kind. I'm here to tell the truth. But I'll tell you how hard that ground was. I had to crop my set onions out with a hatchet, and a big gander I bought broke his neck tryin' to pull a tuft of spear grass." The landlord did not recover.—Detroit Free Press.

A Literal Application.

A couple of tourists who were journeying on horseback in the rural district of the South had ridden many miles when they came to a small log cabin, out of which children of all sizes and ages came swarming like bees from a hive. The tourists were tired and ravenously hungry. Hailing an old negro at the cabin gate they told him that they had come to take dinner with him. "Yo' is welcum, gemmen!" he said. "I ain't got much ter eat, but I'll do the ve'y bes' I kin fo' yo', gemmen." Then, raising his voice to a shrill yell, he said: "Hi yo, Judas Iscariot, yo' run catch a chicken fas' ez yo' laigs kin carry yo'." "What do you call that boy?" asked one of the tourists. "Judas Iscariot, sah." "What did you ever give him such a name as that for?" "Dat's a Bible name, sah, an' it has a meanin'. All de Bible names has a meanin', sah. Ise got fo'-teen, en dey's all got Bible names, case de Bible names has a meanin', sah." "What is the meaning of Judas Iscariot?" The old man was very reticent about giving further information, and it required a good deal of persuasion before he finally said: "Well, I'll tell yo', sah. Hit's like dis. Yo' see I'd had fo'-teen chillun befo' Judas Iscariot was bawn, an' fo'teen chillun is a mighty big fam'ly fo' a po' man ter raise en keer fo', 'thout habin' no mo', so when Judas Iscariot came erlong, I gib 'im dat name, caze you know de Bible hit say it'd be bettah fo' Judas Iscariot if he'd nebbah been bawn."—Detroit Free Press.

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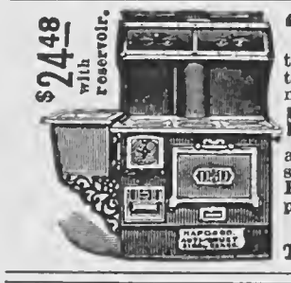

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⅓ of Your Seed.

50 ACRES Per Day

of wheat and other seeds in proportion.

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NEVER WEARS OUT.

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To send to each town sample of a new Self-operating Sprayer, with Safety Valve. First applicant gets wholesale prices and agency. Big money made during winter. Full particulars free.

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Great New Invention

Protects orchards, gardens, tobacco, tomatoes, cabbages, squashes, cucumbers, etc., from pests. It catches the parents of the worms. This picture illustrates a MOTH CATCHER, patented and being manufactured by S. A. Haseltine, who has had over thirty years experience in orcharding and now owns over two hundred acres of orchards. The "Moth Catcher," was tried last year and proved a great success. It is cheaper, and without the use of poisons, is more effectual than spraying. Price is low, small size 85c., large size, $1. Write him for testimonials, agents' terms, etc. Address

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S. A. HASELTINE'S MOTH CATCHER

DAHLIAS, 20 kinds, $1. H. F. BURT, Taunton, Mass.

43 FLOWERS 30c.

Worth $1.25, delivered free.

SPECIAL OFFER—made to introduce our goods.

20 Pkts. SEEDS—all SURE TO GROW, will BLOOM this year

1 Pkt. Pansy—10 colors mixed.
" Beautiful Hybrid Begonias.
" Washington Weeping Palm.
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" Heliotrope, mixed.
" Poppy—New Shirley.
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" Giant Verbena, mixed.
" Japan Morning Glory.
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" California Sweet Peas.

23 BULBS—2 Grand Peacock Iris, 1 Dbl. Pearl Tuberose, 2 Butterfly Gladiolus, 2 Hybrid Gladiolus, 9 Fine Mixed Oxalis, 2 Rainbow Lilies, 1 Elegant Spotted Calla, 2 Climbing Sweet Mignonette Vines, 2 Splendid New Canna Lilies, 1 Crimson, 1 Variegated.

Return Check good for 25 Cents on next order; also our

NEW FLORAL GUIDE, 136 pages, free with above 30c. collection.

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CANNA LILY

$11.75 $11.75

SEND NO MONEY cut this ad. out and send to us, state whether you wish Gent's or Ladies' Bicycle. (LADIES' WHEELS 50 Cents EXTRA), color and gear wanted and we will send you this HIGHEST GRADE 1901 MODEL EDGEMERE BICYCLE by express C.O.D., subject to examination. You can examine it at your nearest express office, and if found perfectly satisfactory, exactly as represented, the equal of bicycles that sell everywhere at $20.00 to $40.00 the MOST WONDERFUL BARGAIN YOU EVER SAW OR HEARD OF, then pay the express agent OUR SPECIAL PRICE, **$11.75** (or $12.25 for ladies), and express charges, express charges are only 50 to 75 cents for 500 miles.

THE NEW 1901 MODEL EDGEMERE is covered by our written binding guarantee. Built on the very latest lines, made from genuine 1⅛-inch best Shelby seamless steel tubing, 22, 24 or 26-inch frame, finest two-piece hanger, finest full ball bearings, handsome arch crown. Enameled in black, green or maroon, neatly striped, highly nickeled, beautifully finished throughout. Highest grade equipment, saddle, toolbag and tools, pedals, up or down turned handle bars, highest grade genuine Clipper pneumatic tires, with quick repair kit, best of everything. Order today. $11.75 is the lowest price ever known for a strictly High Grade Bicycle. A saving of $10.00 to $20.00. Order two Edgmeres at once, you can sell the extra one at profit enough to get yours free. Write for Free Bicycle Catalogue. Address, SEARS, ROEBUCK & CO., CHICAGO, ILL.

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for cash, no matter where located. Send description and selling price, and learn my wonderfully successful plan. Write to-day. Address,

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PROPERTY BARGAINS FOR CASH BUYERS.

No. 22B.—112 acres, Onondaga Co., N. Y., fine water, fair bldgs. $6,000—$1,500 cash.
No. 1544.—105 acres, Litchfield Co., Conn., fair bldgs, 3 miles R. R. $3,800—$2,300 cash
No. 1139.—60 acres Rensselaer Co., N. Y., 35 under cultivation; R. R. Station on farm. $4,800—$2,400 cash.
No. 22E.—350 acres, Onondaga Co., N. Y., modern house, 2 tenant houses, 5 large barns, good orchard. $21,000—$4,200 cash.
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No. 1531—126 acres, Seneca Co., N. Y., good bldgs.; R. R. & church 3½ miles $7,000.
No. 1498.—1,000 acres in Adirondack Mountains, Franklin Co., N. Y.; all native timber, suitable for game preserve. $30,000.
No. 1625.—Beautiful country residence, Guilford, Conn., on main line N. Y., N. H. & H. R. R.; 90 miles from N. Y. on Long Island Sound; fine bathing, fishing, driving, etc. $28,000—easy terms.

MARKETS.

The Week's Quotations.

WHOLESALE PRICES.

GRAIN.—Wheat one-fourth cent down from last report. Weather conditions in Western wheat belt reported somewhat more favorable.

Wheat, No. 2 hard, N. Y.	81⅛	@	—
No. 1, Northern Duluth, spot	87⅜	@	—
No. 1, hard Duluth, spot	90⅛	@	—
Corn, No. 2, elevator	48½	@	—
Oats, No. 2, white, in elevator	33	@	—
Rye, No. 2, Western, c. i. f., N. Y.	58½	@	—

BEANS.—Prices for all except choice marrow down five cents per bushel.

Marrow, choice, per bu	2 42½	@	2 45
Fair to good	2 25	@	2 30
Pea, bags, choice	2 15	@	2 17½
Red kidney, choice	2 20	@	—
White kidney, choice	2 22½	@	2 25

SEEDS.

Clover seed, N. Y., good to choice, per bu	5 55	@	6 30
Toledo, for March delivery, per bu	6 75	@	—
Timothy, per 100 lbs	4 65	@	5 00
Red Top, lb	10½	@	—
Cottonseed, Memphis, blk, tn.	12 00	@	—
Flaxseed, whole, cleaned	6 00	@	7 00
Cottonseed meal, ton	25 00	@	—
Linseed oil, cake, ton	27 50	@	—
Meal, saeked	28 00	@	28 50
Celery, seed, lb	7½	@	7¾
Hemp, Rusian, lb	2¾	@	2⅞
Millet, lb	2	@	2⅛
Mustard, English, yellow, lb	6¼	@	7
California, yellow	6	@	6¼
Rape, German, lb	3½	@	3⅝
Sunflower, lb	2⅜	@	2½

FEED.—All bran $1 to $2.50 per ton up.

Spring bran, 100-lb. bulk	19	@	19 50
Winter bran, bulk	18 00	@	23 00
Spring middl'ngs, 200-lb. scks.	18 00	@	21 00
Red Dog, to arrive	18 50	@	18 75

HAY AND STRAW.—Hay unchanged, but market easy. Rye straw 2½ cents up. These quotations are for large bales. Small bales sell for 50 cents per ton less.

Hay, No. 1	90	@	92½
No. 2	82½	@	87½
No. 3	75	@	77½
Clover	70	@	77½
Clover, mixed	80	@	85
Straw, rye, long	85	@	87½

MILK.

New York Exchange price within 26-cent freight zone, 2¾ cents per quart.

BUTTER.—Extra creamery down one cent. Quality of most grades is averaging better than for some time. Many of the creameries showing new milk.

Creamery, extra	—	@	22
Firsts	20	@	20½
Seconds	19	@	20
Lower grades	17	@	18
June, extras	19	@	20
State dairy, ½ tubs, fresh, finest	—	@	21
Fall made, finest	15	@	16
Tub, fresh, sec'nds to firsts	15	@	20
West. imitation cre'm'ry, best	18	@	18½
Lower grades	14½	@	16
West., fctry, June peked, fey	13¼	@	13½
Held, common to good	11	@	13
Fresh, faney	14½	@	15
Low grades	12	@	13½
Renovated butter, faney	17½	@	18½
Rolls, fresh, fair to fancy	12	@	15

EGGS.—Receipts are large, but demand good both by retailers and speculative buyers.

QUOTATIONS AT MARK.

Nearby, State and Pa., fresh gathered fancy white, per doz.	—	@	17½
Fresh gath'rd fcy brn pr doz.	—	@	17
Fresh gath'r'd av. prime	16	@	16½
Western, graded, choice	16	@	—
W'n, regular p'ckings, firsts	—	@	16
Fair to good	15½	@	15¾
Kentucky, faney marks	15¾	@	16
Southern, fresh gathrd, av. best.	—	@	15½
Fair to good	15	@	15¼
Western, fresh gathered, dirties	14½	@	15
Cheeks	13¾	@	14
Refrigerator, good to choice	—	@	14
Refrigerator, common to fair	12	@	13½
Duek eggs, Baltimore, per dozen	—	@	30
Western	27	@	28
Virginia and Tennessee	26	@	27
Far Southern	25	@	26

FRESH FRUITS.—Receipts of good apples light and outside figures seldom reached. Florida strawberries plenty and quality improved.

Apples, Baldwin, bbl	2 50	@	3 50
Greening, bbl	2 50	@	4 00
Ben Davis, bbl	2 50	@	3 50
Spitzenberg, bbl	3 00	@	5 00
Newtown pippins	1 25	@	4 00
Cranberries, Cape Cod, bbl.	6 50	@	9 00
Jersey, bbl	6 50	@	—
Jersey, crate	2 00	@	2 25
Strawberries, Fla., qt	25	@	40

EVAPORATED FRUITS.

Apples, faney	6½	@	7½
Choice	5½	@	6
Low grades	3	@	4
Sun dried, quarters	3¼	@	4¼
Sun dricd, sliced	3½	@	4
Apricots, boxes, lb	7½	@	14
Peaches, Calif., unpeeled, bxs	6	@	10
Peeled, per lb	13	@	18
Pears, California, per lb	5	@	10

LIVE STOCK.—Receipts of steers light. Veal calves steady and a trifle higher. Sheep and lambs firm and 25 to 50 cents higher.

Native steers, per 100	4 50	@	5 20
Bulls	3 00	@	4 05
Fat cows	2 00	@	3 90
Calves, choice veals	4 00	@	7 62½
Sheep, common to prime	4 00	@	5 00
Lambs	5 80	@	6 00

COUNTRY DRESSED MEATS.

Calves, average, prime	9½	@	—
Fair to good	8½	@	9
Common to medium	7	@	8
Barnyards	5	@	6½

LIVE POULTRY.—Fowls one-half cent down from last report. Supply of chickens moderate, but demand very light. Prime turkeys, ducks and geese firm.

Fowls, per lb	—	@	10½
Chickens, per lb	—	@	9½
Roosters, per lb	—	@	6½
Turkeys, per lb	—	@	11
Ducks, Western, per pair	70	@	90
Ducks, Southwestern, per pair	60	@	70
Geese, per pair	1 12	@	1 62
Pigeons, per pair	35	@	40

DRESSED POULTRY.—Receipts of fresh killed poultry moderate, and trade dull for both this and frozen stock.

FRESH PACKED.

Turkeys, W'n, young hens, av. best	10	@	10½
Western, old hens	9	@	9½
W'n, young toms, prime	10	@	10½
Old toms	—	@	8½
Chickens & fowls, W'n, mixed average best	9	@	10
Fowls, State & Pa., good to prime	10	@	10½
Western, dry pk'd faney	—	@	10
Western, scalded, faney	—	@	10
Old roosters, per lb	—	@	6½
Capons, Phila., large, per lb	15	@	16
Small and slips, per lb	10	@	12
Western, large	12	@	12
Western, mixed weights	11	@	11½
Ducks, Western, prime	12	@	12½
Poor to fair	8	@	11
Geese, Western, prime	9	@	10
Western, poor to fair	6	@	8
Squabs, choice, large, white, dozen	2 50	@	2 75
Mixed, per dozen	2 00	@	2 25
Dark, per dozen	1 50	@	1 75

POTATOES.—Market weak, and outside figures exceptional.

Bermuda, se'nd crop, prm, bbl.	4 50	@	5 00
Second crop, No. 2, bbl	3 00	@	3 50
Havana, fair to prime, bbl	3 00	@	4 00
State, round, per 180 lb	1 50	@	1 62
Long, per 180 lb	1 37	@	1 50
Michigan, round, per 180 lb	1 37	@	1 50
Long, per 180 lb	1 25	@	1 37
State and Western, per saek	1 40	@	1 50
Sweets, Va., per cloth-top bbl.	1 75	@	2 25
Other Jer. & Del., clth-tp bbl	1 50	@	1 75
Jersey, per d.-h. bbl	1 50	@	1 75
Jersey, per bskt	75	@	1 00

VEGETABLES.—Trade in onions light. Southern vegetables selling slowly. Celery dull for anything exeept prime. California cauliflower plenty and weak.

Onions, Conn. and L. I., white bbl	4 00	@	6 50
Conn. and L. I., yellow, bbl.	3 00	@	3 75
Orange Co., white, bag	3 00	@	5 00
Orange Co., yellow, bag	3 00	@	3 75
Bermuda, crate	2 50	@	3 00
Havana, crate	2 75	@	—
Squash, marow, bbl	1 00	@	1 25
Hubbard, bbl	1 25	@	1 50
String beans, Fla., crate	1 50	@	3 50
Turnips, Canada, Russia, bbl.	75	@	85
Celery, Florida, case	1 25	@	3 50
Egg plant, Fla., box	1 50	@	2 50
Green peas, Fla., bskt	2 00	@	3 00
Spinach, Norfolk, bbl	75	@	1 50
Carrots, old, bbl	60	@	1 00
Lettuce, New Orleans, bbl	2 00	@	4 00
Florida, ½-bbl	2 00	@	3 50
Charleston, basket	1 00	@	2 00
N. C., ½-bbl	75	@	1 25
Brussels sprouts, qt	5	@	12
Parsnips, bbl	75	@	1 00
Cabbage, State, ton	14 00	@	18 00
Tomatoes, Fla., earrier	1 00	@	2 50
Havana, carrier	75	@	1 50
Beets, L. I., bbl	75	@	—
New Orleans, 100 bchs	3 00	@	4 00
Romaine, N. O., bbl	4 00	@	5 00
Esearol., N. O., bbl	4 00	@	5 00
Okra, Havana, carrier	1 00	@	2 00
Parsley, Bermuda, box	1 00	@	1 50
N. O., 100 bchs	2 50	@	3 00
Kale, Norfolk, bbl	25	@	75
Baltimore, bbl	—	@	—
Cauliflower, Fla., basket	2 09	@	3 00
California, case	1 25	@	2 25

HOTHOUSE PRODUCTS.

Lettuee, choiee, 5½ to 4½ doz. to case, dozen	—	@	50
Cucumbers, fair to ehoice, doz	1 25	@	1 75
No. 2, dozen	75	@	1 00
Tomatoes, eom. to prime, lb	20	@	30
Radishes, 100 bunches	1 50	@	2 50
Mushrooms, lb	20	@	40
Asparagus, dozen bunches	—	@	7 00
Rhubarb, dozen bunehes	30	@	50

BUSINESS BITS.

E. F. SCHLICHTER, 321 Vine St., Philadelphia, Pa., issues a very handsome catalogue, describing the Philadelphia patent silo. Stave, hoops—in fact everything connected with silo building—can be found here, and there is mueh useful informa'ion besides.

AMES Plow Co., of Boston, Mass., is offering a copy of Prof. S. B. Green's book, "Vegetable Gardening," to every purehaser of the Matthews New Universal seeder. The seeder is a good one, and essential to any gardener or truek grower. The retail price of the book is $1.25.

"THAT is the best tool on my farm—in fact, it is impossible to form a perfect seed bed without it," said a prominent Orange County, N. Y., farmer one day last week, pointing to the advertisement of Duane H. Nash, Millington, N. J. If you want to know more about it write to Mr. Nash.

THE King Harness Co., 412 Church St., Owego, N. Y., enjoys a well-earned reputation for first-class harness. We have a set in use, and it gives perfect satisfaction, and at a cost much less than an equal grade can be purehased for at a local harness maker. Send four cents in stamps for postage on illustrated catalogue.

A PIECE of stumpy land is about the hardest proposition that a farmer can run against. It is trying on the man, on the team which tries to work it, but more than that, it is extremely expensive, for a stump takes up a whole lot of ground which yields no return. Get the stumps out. With the modern appliances such as are manufactured by the Milne Mfg. Co., 860 Eighth Street, Monmouth, Ill., it is an easy matter to clear a piece of stumpy ground. If you have a piece of stumpy ground it will pay you to send for the Milne catalogue. It is full of information on the subject of clearing land.

W. D. GREEN, of Zehner, Pa., writes on January 21, 1901: "I saw your advertisement and thought I would write you. I have used a great deal of Gombault's caustie balsam on my stock in the West, with very satisfactory results. Please send me your circular and catalog. Also send by express, C. O. D., one bottle of the Balsam."

GREEN Arsenoid is a form of arsenie well suited for use in poisoning inseets. It is claimed to be superior to Paris-green in several partieulars, being less likely to reaeh the foliage, clog the nozzle or settle in the water. All these things are detailed in the circular issued by the Adler Color & Chemieal Works, 100 William St., New York.

TERRIFF's Perfect Washer seems to make friends everywhere. Every garment that passes through it comes out perfectly cleansed—no wrist-bands or collar bands to be gone over by hand as with some so-called washers. The makers guarantee their washer to do the work as represented and should it fail in any particular or the purehaser be the least dissatisfied the company will return the amount paid for the machine. Write at once to Portland Mfg. Co., Box 14, Portland, Mieh.

EVERY succeeding season of planting and cultivating demonstrates more and more clearly the close relation that exists for the farmer and gardener between good implements and a good bank aeeount. Hand work, wasting time and losing the advantage that prompt planting or quick weed-fighting gives, is as wasteful in the garden and field as it would be in the factory. No class of implements has brought the economy of quick work home to agrieulturists more than the implements known as "Iron Age" that are made by the Bateman Manufacturing Co., Box 102, Grenloch, N. J. The Iron Age Book for 1901 fully describes the tools mentioned above, also a full line of Iron Age seed drills, wheel hoes, horse hoe and cultivators, riding cultivators, Improved Robbins potato planters, etc. Write to the above address to-day for the Iron Age Book.

CATARRH CAN BE CURED.

Catarrh is a kindred ailment of Consumption, long considered incurable; and yet there is one remedy that will positively eure catarrh in any of its stages. For many years this remedy was used by the late Dr. Stevens, a widely noted authority on all diseases of the throat and lungs. Having tested its wonderful curative powers in thousands of eases, and desiring to relieve human suffering, I will send free of charge to all sufferers from Catarrh, Asthma, Consumption and nervous diseases, this reeipe, in German, French or English, with full direetions for preparing and using. Sent by mail by addressing, with stamp, naming this paper, W. A. Noyes, 847 Powers Block, Rochester, N. Y.

TEN CENTS PAYS FOR BOOKLET
40 pages, illustrated. Eighth thousand. Tells how to make cement floors, to grow and feed sorghum, beets, soy beans, &c., and gives illustration of hog house. Price list of cement and seeds free.
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FOR SALE.—Fine home, near Glens Falls, N. Y., 10 acres garden soil. Large modern house. Shady lawn. Greenhouse 20x100. Ample outbuildings. Fine fruit in abundance. Excellent water. Healthful. Good home for business man or market gardener and florist. Price right. Address GARDENER, care The Rural New-Yorker.

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Address GEO. G. ATWOOD, Albany, N. Y.

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Physicians declare that no water is pure or safe to drink unless distilled. Filtering Simply Clears—Does Not Purify. Boiled water is full of dead germs, etc.—more poisonous than before. Water from wells, cisterns, hydrants and streams kills 250,000 people annually. Causes 500,000 cases of Dyspepsia, Stomach and Bowel troubles, Kidney and Bladder diseases, Gravel, Constipation, all kinds of fevers—Typhoid, Yellow, Lung and Malaria; also Rheumatism, Women's ills, Blood diseases, etc. Investigate, and you'll find **SAFETY LIES ONLY IN DISTILLATION** of all drinking water, before using. Boiling or filtering are merely subterfuges of no value. **EVERY FAMILY** can now, without extra expense or trouble, distill their drinking water (the **only known method** for making it **absolutely safe, pure, delicious,** and removing all impurities) by using the

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Market Briefs.

PICKED UP HERE AND THERE.

CELERY.—Great quantities are being shipped from California now to central and eastern points. That received in New York is large, but rather strong in flavor and a little inclined to be tough. There are several firms in this city that handle nothing but celery, one disposing of over 200 carloads of the California product during the season. It comes here packed in square crates. Buyers wash it; trim off the discolored parts, and fix it in shape for retailing.

HANDY MEAT.—The Chicago packinghouses try to outdo each other in trying to get up their products in the most convenient shape for the small dealer and consumer. The result is that many things which used to be considered luxuries are brought within reach of all in or near railroad towns at a reasonable price. I recently saw a lot of pork loins put up in crates holding 50 pounds or a little more, just about what a small butcher or provision dealer could dispose of quickly. Each piece was wrapped in waxed paper, and the whole package was attractive in appearance. It may be true that in some cases "appearances are deceitful," but good appearances that are not deceitful are certainly a great help in getting and holding trade. Some farmers send to this market pork that is so roughly dressed and dirty that no one will buy it at anywhere near what it is worth. I recently saw a hog that looked as though it had been rolled around in the mud for a time after being dressed, and then wiped off with a rag. It is useless to put such meat into competition with neatly-dressed pork. If a man does not know how to slaughter and prepare animals for market, it would pay him to hire a professional butcher, which may be found in nearly every town, to do the job.

HIGH RETAIL PRICES.—A surprising difference is often noted between the wholesale and retail prices of fruits and vegetables. It seems strange to the one who buys in small quantities that he should have to pay at the rate of $8 to $10 per barrel for apples, while the same grade wholesales at $3 or less; or why the grocer should charge him 36 cents per dozen for eggs, when the highest wholesale price is 25 cents. The buyer wonders where the extra 11 cents per dozen goes to, and is likely to think that the grocer is making too much profit. He forgets the big slice cut out of this profit by rent, clerk hire, horses and delivery wagons, and the waste that he has to contend with. Usually he has to throw away or sell at a discount part of every package of green stuff that he gets, and those who buy the best have to pay for this loss. His clerks have to be sorting over fruits and vegetables, and, if Saturday night finds him with a lot of perishable stuff on hand, there must be a big cut made to get rid of it. Many who have the time buy at the larger markets, where as a general thing they get better goods at lower prices. Quite a business is also done by hucksters with wagons, but there is some risk in buying of them, as they often load up at large stores with stuff that is just on the point of spoiling. To attract attention they go about the street yelling the somewhat indefinite offer of "10 cents for a whole lot."

EASTERN BEEF.—Now and then we have inquiries in regard to selling beef from nearby points, either live or dressed, in this city. Some have an idea that the packinghouses have monopolized the meat business to such an extent that the farmer with only one or two animals to sell stands no chance here. Of course, the meat business is largely controlled by a few of the great packers, but there is eastern beef for sale here every week, and in most cases it brings what it is worth. As a rule it is a good plan, however, for a farmer to dispose of his beef to a local butcher if possible; and, if the animal is a good one, it is better for the butcher to take it than to have western beef shipped to him. There is no doubt that, especially in large towns, there is a preference for western beef, and there is good reason for this. Usually western beef is superior. Not that as good cannot be produced in the East, but farmers here have gone out of the beef business. Dairy animals are kept, and what is turned into beef is largely scrub stock. One who watches the New York stockyards will see bony old cows, which have lost their teeth, and with so many rings on their horns that there is no longer a correct index of age; also inferior oxen and bulls. All of this stock is so much below par that it does not compete with western beef at all. It is disposed of in one way or another, and part of it becomes the "hoof steak" which the patrons of cheap restaurants have to struggle with. Another fact is that few farmers know how to dress a beef properly. Before the packinghouses got this down to a science, it did not make so much difference; but every detail of slaughtering and packing has been studied; and it can scarcely be expected that a farmer who kills only two or three beeves or half a dozen hogs in a year can do a job equal to the professional butcher who does nothing else. It is not necessary to be a judge of meat to tell the difference between the packinghouse product and that shipped in by nearby farmers. The packinghouse meat is uniform. Pass by hundreds of quarters, and they all look alike. The flesh is not cut and hacked, as is often the case where the hide is removed by inexperienced hands. There is a demand for uniformity nowadays. When people get anything that is really good, they are likely to inquire for "the same as they had before," whether it be butter, groceries, meats or other provisions; and the butcher or grocer likes to have it for them.

W. W. H.

VERMONT SUGAR MAKERS MEET.

The eighth annual meeting of the Vermont Maple Sugar Makers' Association was held at Morrisville, Vt., February 5-6. President V. I. Spear, in his annual address, spoke encouragingly of the future prospects for Vermont sugar makers. Prices may not be as high as during 1899 and the early part of 1900, and it is best for the sugar interests of the State that extreme high prices for maple goods should not prevail, because high prices restrict consumption of the common grades, and the general market becomes overstocked, with a demoralization of prices, which is just what has happened during the past few months. The Maple Sugar Makers' Market at Randolph is an organization in the interests of both producers and consumers, furnishing an outlet for such producers as do not have a good market for their maple goods, and a reliable place where consumers can procure strictly pure maple sugar and syrup at prices corresponding with the quality ordered. Adulterations are extensively practiced outside the State, but the trouble cannot be remedied until we get a National pure-food law which will include maple syrup with other food products.

The forest worm which threatened destruction to the maple forests of the State has ceased its depredations. While it did much damage in nearly all parts of the State, it is hoped that the injury will not seriously affect the maple-sugar industry. Geo. H. Soule, of Fairfield, the largest sugar maker in the State, read a paper on the comparative profit of sugar or syrup for the producer. Mr. Soule thinks that syrup is the best form for the market, and gallon tin cans the best package, but smaller packages are becoming popular. Mr. Spear, manager of the Randolph Market, said that patrons of the Market should send in syrup in bulk in five or 10-gallon cans, or good alcohol barrels. All syrup received is graded, reheated and put up in packages to suit customers. Sugar is also put up in any size of cake or pails ordered. A. W. Fulton, commercial editor of the New England Homestead, had an excellent paper on The Market Demand for Maple Goods. Maple goods should be put on the market as soon as made, and the sale pushed as fast as possible without demoralizing the market. Gallon tin cans for syrup, one-pound brick cakes and 10-pound tin pails are most popular in the general market. In maple sugar and syrup as in other commodities extremely high prices curtail consumption. Consumers want to be assured that the maple goods are genuine. Unfortunately for themselves many consumers look with suspicion upon the light shades of sugar and syrup. While imitations may be fairly satisfactory to them they hate impositions, and will meet producers half way in the attempt to drive spurious goods out of market. The Vermont Maple Sugar Makers' Association in the future, as in the past, must stand first of all for integrity and purity of the product. Make the guarantee label a force which will travel beyond the confines of New England.

The officers of the Association for the coming year are: President, V. I. Spear, Randolph; secretary, A. J. Croft, Enosburg Falls; treasurer, Alpha Messer, Rochester. The officers of the Randolph Sugar Market for the coming year are: President, Alpha Messer, Rochester; treasurer and manager, V. I. Spear, Randolph; clerk, E. L. Bass, Randolph.

A. M.

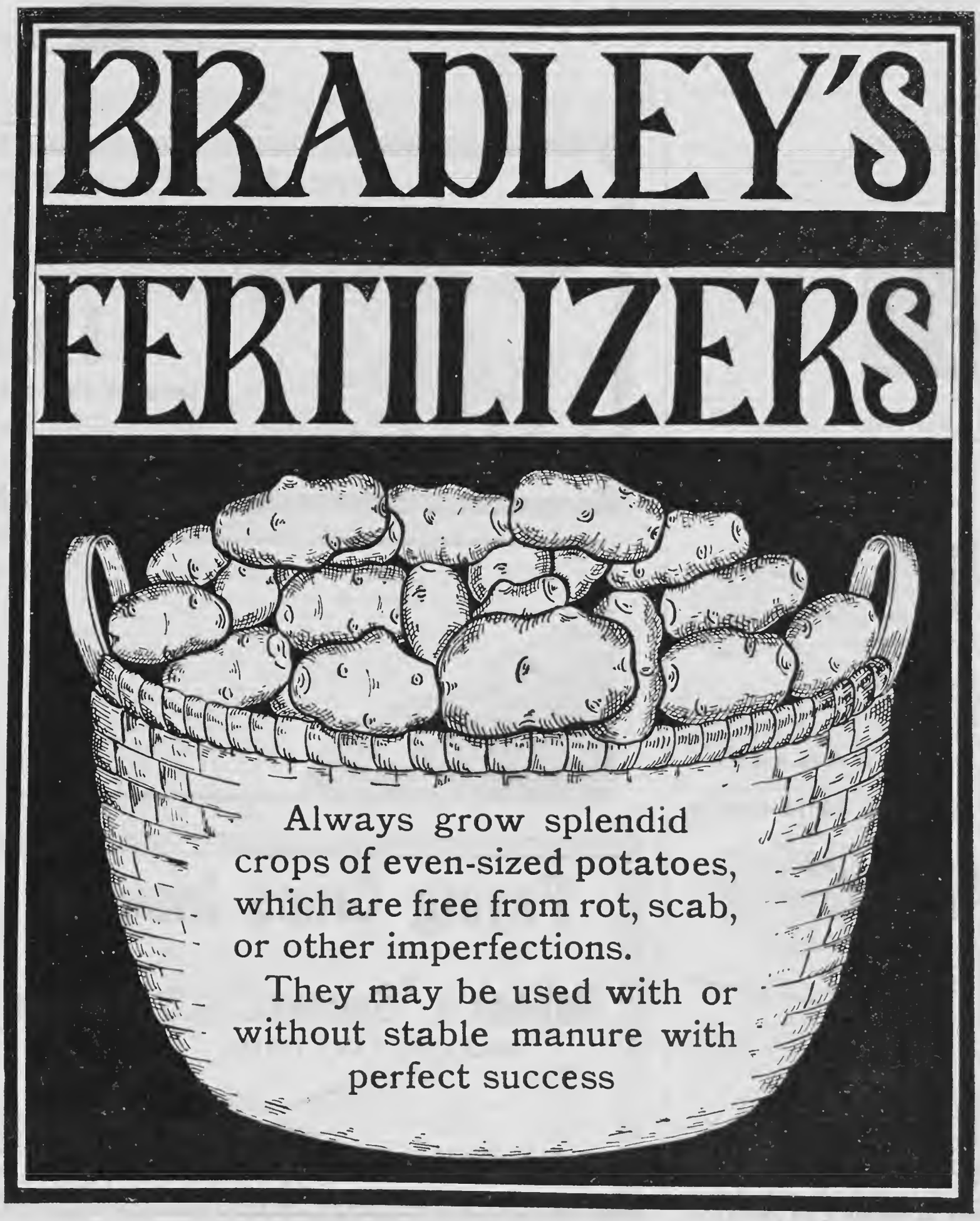
BEARDLESS BARLEY.—Your correspondents writing of beardless barley fail to mention a very important feature, a crop for seeding to clover. With me that is one of its best points. In 1898 I sowed 10 bushels, and thrashed 300. In the same field were oats and all seeded with clover. The clover in the barley was so large that the reaper took considerable in cutting the barley, while in the oats, though about three weeks later, the clover was scarcely visible. In 1899 I seeded 25 acres of the barley to clover, which at harvest was 12 to 18 inches high, and very thick and rank. In 1900 I sowed a strip to barley about six rods wide across the field, then a strip of oats, the remainder to barley. When the barley was cut the clover was very thick and fully 15 inches high. The oats were harvested about three weeks later, and but little clover was in sight. The yield in the three years has been from 40 to 45 bushels per acre.

T.

Wauconda, Ill.

BLUEBERRY CULTURE.—I had a small plot of about one-quarter acre of high-bush blueberries on the farm when I purchased it, that was well supplied with the bushes but badly overgrown with other brush. These I cut out and for eight years have kept cleared, and every Fall have applied either old rotted manure or wood ashes. This treatment I have found increased size of fruit and an immense increase in quantity. The soil is heavy gravel or hardpan, and very rocky, so is unfit for any other crops. I do not think transplanting or artificial cultivation would be profitable. Fifty years ago I lived near Portland, Me., and have bought many bushels of the low-bush berries at from two to five cents per quart. Berries have sold here from eight to 15 cents per quart to private customers.

Bellows Falls, Vt. M. M. W.



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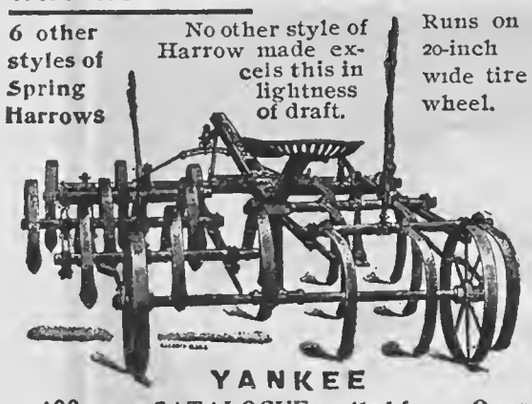
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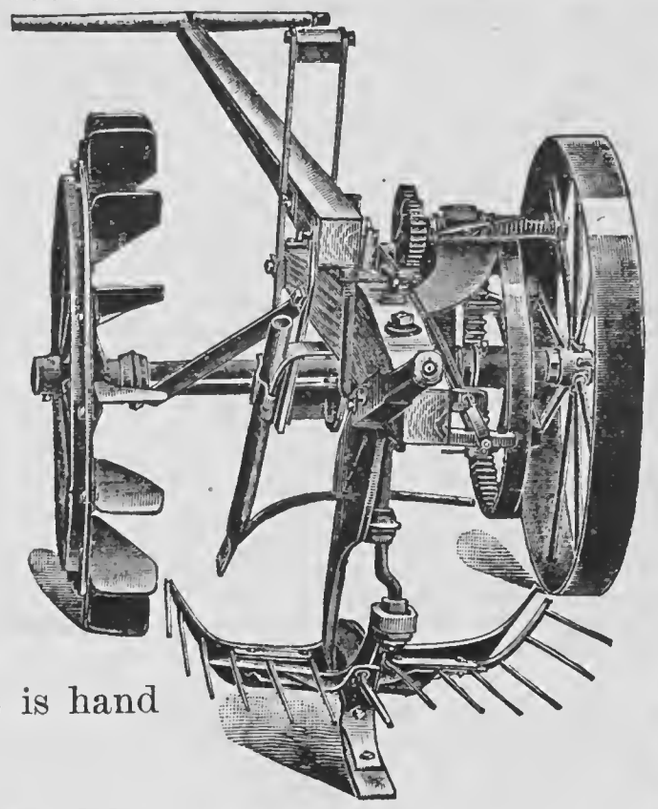

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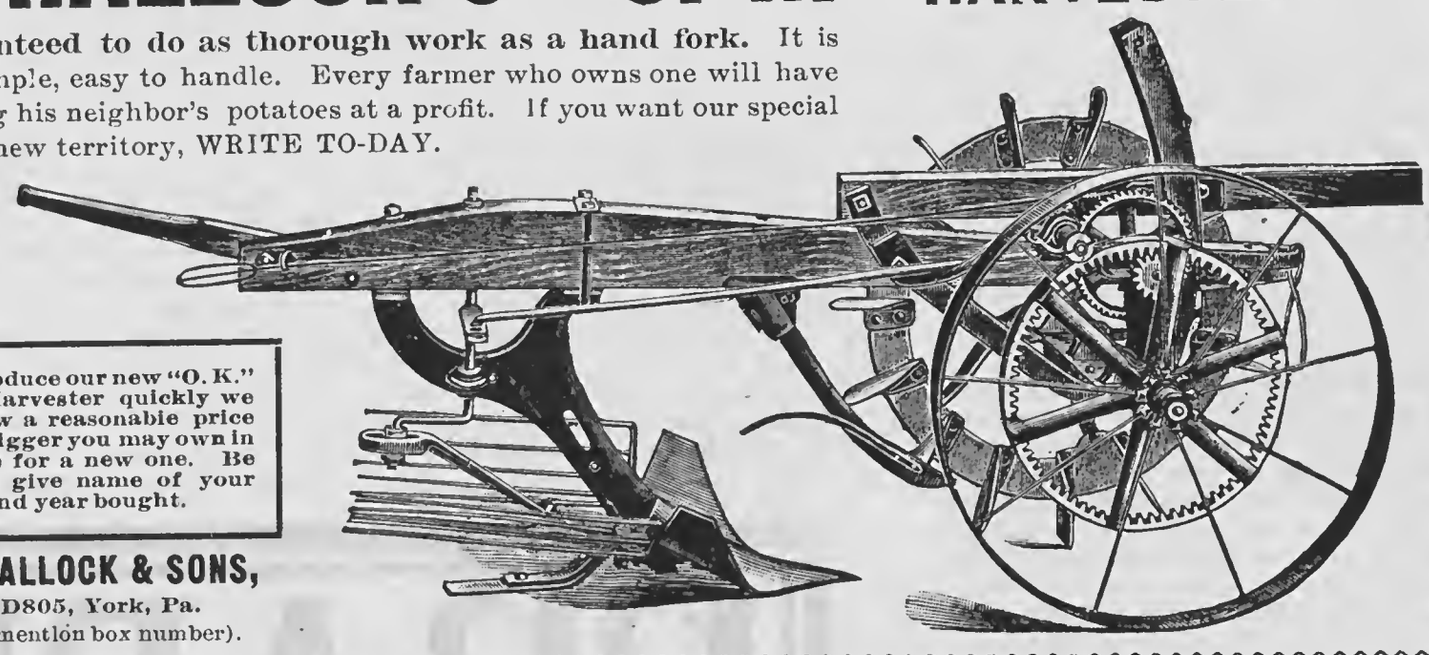

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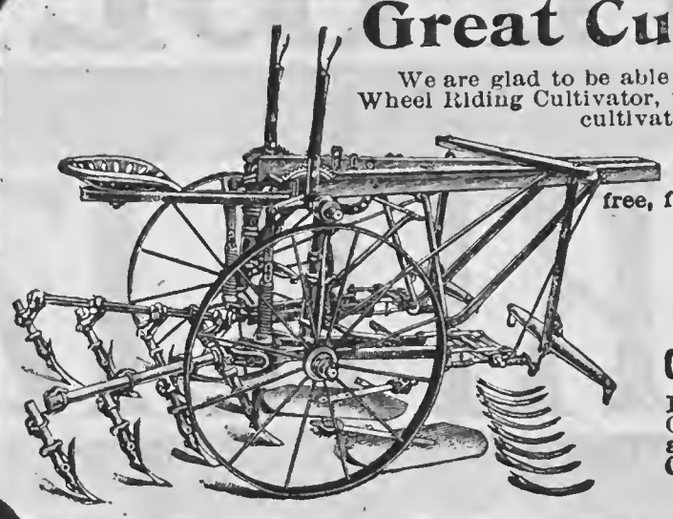

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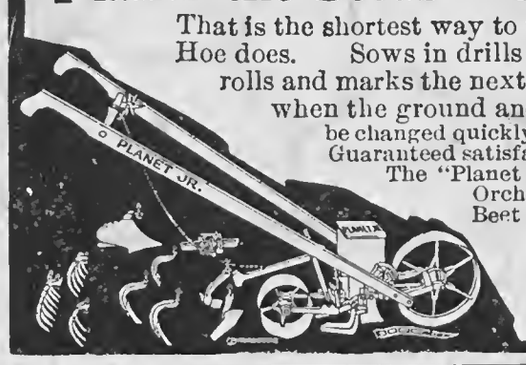

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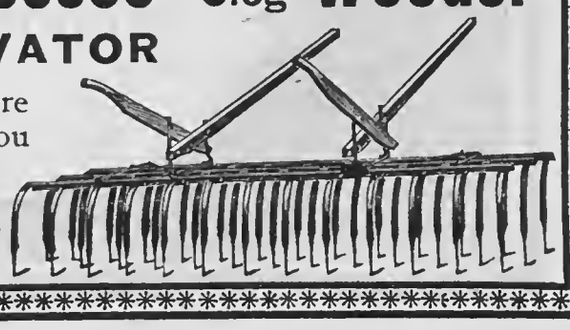

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VOL. LX. No. 2669. NEW YORK, MARCH 23, 1901. $1 PER YEAR.

AN OVERFLOW STOCK YARD.

SHINGLED WITH CORN FODDER.

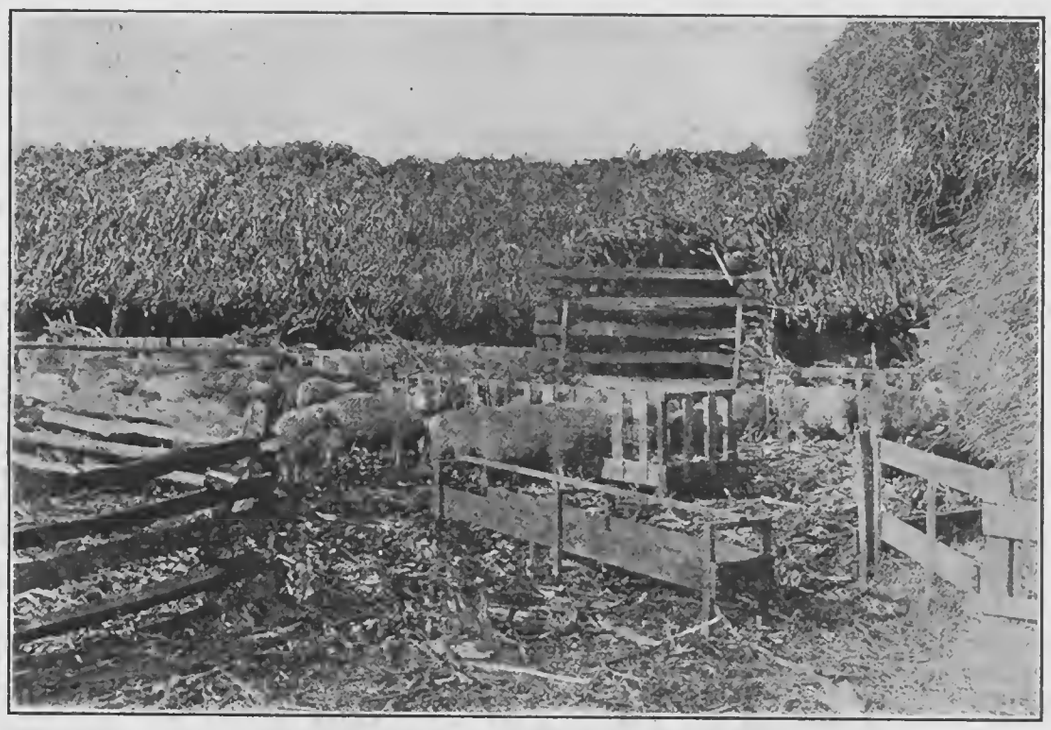
A Roof That May Be Eaten.

SURPLUS OF FODDER.—For years I have made pig-growing and feeding the stock specialty of the farm. As the years went on I made a strong effort to improve the land by tile drainage, rotation of crops—corn, wheat and clover—and by hauling large quantities of manure from town, selling from the farm only meat on foot, wheat and clover seed. By this system the increase of crops in quantity has been a rapid one. As I have not cared to handle cattle excepting the cows necessary for home use, there has been a surplus of clover hay and fodder or stover. This I could not afford to sell off the farm, neither could I feed it to stock taken in to realize any profit. Consequently for three Winters, I have been feeding lambs bought in the Fall for Winter market. To succeed well with them they must be kept dry and protected from driving winds. I have barn and barn-shed room for only about 200. Not desiring to build other permanent buildings, I must resort to temporary shelter, that must be of a cheap kind. As there has been but little wheat straw for two years, it was necessary to find something else. It was suggested to me to use fodder, and from this has developed the shed covered with stover as shown in Fig. 86. As I have built a number of sheds covered with straw I can judge from experience as to the value of this shed. I find it much more easily built, and much cheaper, and, as straw sheds are commonly built on the farm, much superior as proof against rain and cold Winter storms.

A FODDER SHED.—Last year I had a shed covered with fodder 65 feet long and 16 feet wide, covering 1,000 feet of space, using 500 bundles of fodder, tied with strings, four feet long, or 65 shocks of fodder 14 hills square. This roof never leaked. By April 1 last year the lambs fed at the barn had gone to market, and the lambs sheltered by the temporary shed moved to the barn. During April the fodder roof was fed off to the stock in the adjoining lots, leaving the skeleton frame for use again this year. Last Fall I extended the shed in length to 100 feet, using 135 shocks of fodder cut 14 hills square, making 1,000 bundles covering 1,600 feet of floor space. This shed stands north and south, the north end coming within 10 feet of low-down barn, as shown in Fig. 85. A post-and-rail and post-and-plank fence is used for the west side of the framework of the shed. The cracks between the rails and planks were covered with cheap plank to keep the lambs from eating the fodder through the cracks after it is set against the fence. The framework is constructed for a comb roof. The center row of posts is seven feet high; should be nine or 10 feet; made from White oak poles about eight inches in diameter at the butt. They are set 2½ feet in the ground in a hole bored with a seven-inch post auger, the posts being dressed to fit the hole. The soil is hard clay, so the posts stand firm. The sides are about four feet high, the rafters on west side resting on top rail or plank of the fence. They should rest on top of posts about one foot higher. The center posts are set the same distance apart as fence posts, and a rafter for each post, making them nine feet apart for the post-and-rail, and six feet apart for the post-and-plank fence.

MAKING THE ROOF.—For the fodder to rest on, rails are put across the rafters. The east side of the shed is open, the west made tight by laying fodder two or three bundles deep horizontal with the fence, and then standing a row of bundles against these, leaving them over against the fence, bending the tops over the fence. The first course of bundles for the roof extends over this course set against the fence, to shed the water off it. In covering this shed the courses of bundles were started at the north end, and laid to the south. The first course is only one bundle thick.

JOHN M. JAMISON AND HIS LAMB SHED. FIG. 85.



A TEMPORARY SHED THATCHED WITH FODDER. FIG. 86.

The butts of the bundles are down. After putting on the first course I found that to top the next course directly on to this would make the roof too flat. To prevent this I laid a course on the rails above the first course; this gave a pitch for the second course the same as the first. Before putting on the next course I raised the pitch of the roof again with fodder. As nearly all the winds here blow from the west and southwest, I put the fodder on the east side first, making the course at the top as near perpendicular as possible. To do this it was necessary to lay bundles lengthways at the comb of the roof. Then the west side was covered, the top course standing up against the course on the east side, but a little higher. This keeps the wind from blowing the bundles off the east side. As all the bundles are laid from the north end towards the south, each bundle as it goes down binds the preceding one, so if the wind takes them off it must commence with the last ones laid down. But to make sure of their staying on, the top course has a strand of wire running the whole length of the shed, drawn tight with a wire stretcher. The roof so far has remained intact.

VALUE OF THE SHED.—During the month of April I expect to feed the fodder off this shed to the stock on the farm, horses, cows and lambs, and it will be as good as that shocked with good care and left standing in the field. I shall commence at the south end to feed it off, and as it was put on from the north end towards the south it will come off easily. For a shed of this kind the steeper the roof frame can be made the less fodder it will take to cover it. It is useless to try to put on such a roof without bundling the fodder. For this shed the fodder bundles were taken from the farm wagon, but if required to be built much higher I would use my hay-stacking derrick and hay slings to lift the bundled fodder on to the rick. As I have the shed, after the frame is made three men should take the bundled fodder from the shock and put on the roof in two days. I would not try to put it on when dry, but would work in the morning when the fodder is damp or when the weather is cloudy and damp. It is a cheap shed that is within the reach of every farmer. But the roof should be made new each Fall, as fodder rots rapidly in the Summer. Fig. 85 shows the whole length of the shed, and the end of the old-fashioned low-down barn. Fig. 86 shows the shed with a pen 25 feet in front of it used as a rack to hold clover haulms, and which the lambs feed on through the cracks. It is built of fence posts that need seasoning. This picture also shows the feeding racks from which they are fed fodder, hay and grain as occasion requires; also the grain trough used for ear corn, screenings, roots, etc. By April 1 all the lambs not sold can be cared for at the barn and the fodder-roofed shed will not be needed any more till next Fall, and fodder stacked on the roof can be taken off and fed to the animals, and the team will not have to be taken from the plow to haul fodder from the field.

Ohio. JOHN M. JAMISON.

R. N.-Y.—Mr. Jamison writes us at a later date that the lambs did well in this shed, and that the first lot has gone to market. A heavy windstorm blew down and spoiled much of the shocked corn in the field, but the bundles on this roof held in place, and will make fair feed at the end of the season. This idea of eating up the shed roof will appeal to many feeders who need Winter shelter for their stock, and yet do not care to incur the expense for lumber. The stalk-covered shed makes a warm, dry shelter, and Mr. Jamison says that the fodder is about as good for feeding in April as that left out in the average shock. We have visited Mr. Jamison's farm, and have seen the tremendous crops of corn and clover which he produces. His plan is to sell nothing from the farm except wheat, that cannot walk off on its own legs, and thus hay and grain are all consumed at home. Fat swine and sheep and fatter soil is the motto under this management.

FARM BUILDINGS ON A SMALL LOT.

If one live in the suburbs, one has to get along without some, at least, of the advantages of city life. As compensation one ought to have all the advantages of the country. Most suburban residents will place among the greatest of these advantages the family cow, the family horse, and a moderate flock of poultry. That more suburban families do not have these luxuries is due to three reasons: the care involved, the space required, and the expense of buildings that would not look unsightly, rough sheds not being permissible on a suburban lot. The surmounting of these three obstacles led to the plans here shown. The buildings require but little space, and daily use has proven that their arrangement reduces the labor involved in the care of the animals to the minimum. They add to, rather than detract from, the appearance of a suburban home, yet their cost is small. The poultry house and the stable are separated, as they should be. Side by side they fit nicely on the rear of a lot 40 feet wide; otherwise disposed they can be built on a width of 25 feet. There ought to be about 10 feet depth of yard room behind them for the few unsightly objects of the stable yard, as this lightens labor. If there be no room for this, omit the arched door on the rear, place the small door and the partition door in front, and reverse the stalls so that the mangers will be against the rear wall.

The stable will commodiously accommodate a cow, a horse, a buggy and an ample stock of provender. Fig. 87 shows the building on sloping ground, with the floor of the stable dropped two feet below the floor of the carriage room. The walls are built of rough hemlock sheathing set up vertically without studding. On this tar paper is laid, outside of which the weatherboarding is nailed. This gives the warmest possible wall and is wind and vermin-proof. The front and rear walls are 10 feet high. The stalls are floored with oak, calked and pitched. There is an incomplete overhead floor above the stalls that makes them warmer, and affords a loft for extra bags of feed, bales of hay, etc. The doors are made simply of 1x10-inch pine boards running vertically, the cracks being battened with ½x2-inch strips. The poultry house will accommodate a dozen fowls, which, if of the right kind and fed properly, ought to yield an abundance of eggs all Winter. The house has a one-slope roof which, if objected to, can be hidden by continuing the lattice of the yard all the way around. The rear wall is four feet high and the front seven, the wall construction being the same as that of the stable. The roosts are three feet from the ground, reached by an inclined dropping board which slopes downward to the end near the door, thereby lessening the labor of cleaning. The space under the dropping board may be latticed up to serve as a coop for broody hens or fattening fowls. The nests are simply soap boxes hung on the wall, with a lattice above to prevent fowls roosting on top. They are taken out and burned at the Spring cleaning and replaced by new ones. The yard is made two laths high, and has a round bay front for appearance' sake. It can be covered in with a roof and cheap muslin sides for a Winter scratching shed if desired. Fig. 88 gives a ground plan of the buildings. In western Pennsylvania the cost with slate roofs was $30 for the poultry house with its yard and $181 for the stable. The investment has yielded handsome dividends of pleasure and profit.

CHEVALIER.

THE VINELAND BUSH SWEET POTATO.

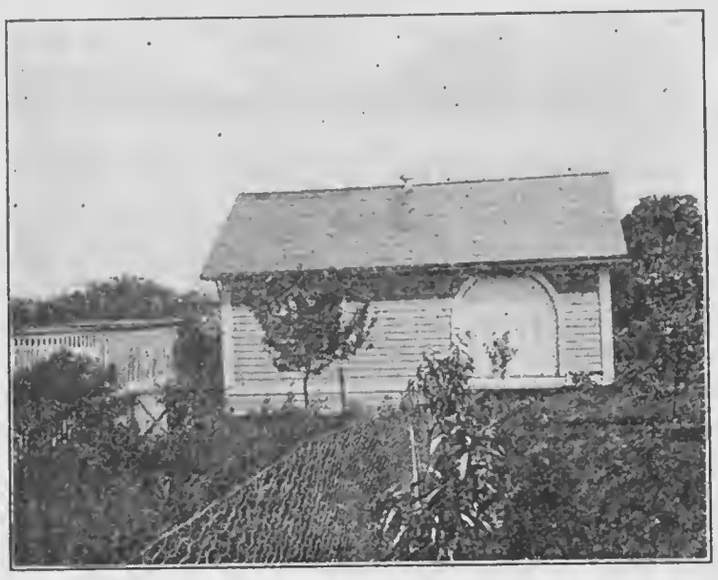
About a year ago THE R. N.-Y. published an article on the sweet potato, accompanied by an illustration over the name of "Vineland Bush." This was a mistake. The photograph was of a hill of Jersey Yellow of the Vineland Fancy strain, for which this town has become so noted. The Vineland Bush resembles the Jersey Yellow very closely in form and color. The picture, Fig. 89, was taken 24 hours after they were dug and the vine had become badly wilted, but it shows well the general character. The bush form is a great advantage in cultivation, especially in the garden. The plants are as easy to care for as a bush bean, as there are no vines in the way of cultivating, the short stubby stems never getting more than a foot or so long. The leaves are of the same general shape as the Jersey, but much larger and darker green. The bright golden yellow color of the tubers makes them very attractive. Their eating quality is practically the same as the Jersey Yellow when grown on the same soil; in fact, it is quite impossible to distinguish between them either before or after cooking. Their yield was at the rate of 50 barrels to the acre with us the past season; while some varieties yielded more the Vineland Bush gave a good average crop. Their keeping quality is not of the best, being somewhat inclined to shrivel in Winter storage. Caleb Boggs, of Delaware, who grew the Vineland Bush last season, says: "We have discarded the Vineless Gold Coin for the simple reason that it is superseded by Vineland Bush, which is a perfect bush with no inclination for spinning. The tubers grow directly under the stalk; they are most abundant bearers, good flavor, handsome, rich yellow color. It is simply perfection, and a great improvement over all vineless potatoes heretofore sold." F. S. N.

New Jersey.

MAKING A CEMENT WALK.

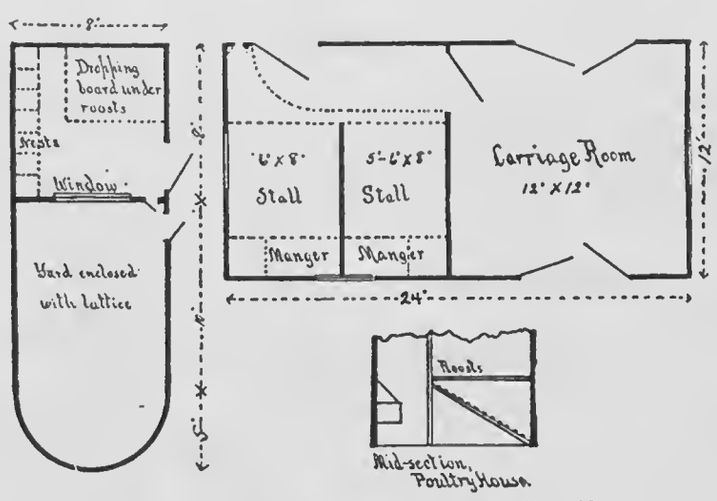
S. E. Barney, of Indiana, has told us how to make a cement floor and a cement wall. Now, readers have asked how walks of cement are made. As usual, the answer is very clearly expressed.

In reply to J. V. B. will say that cement walks, straight and curved in any way to suit conditions or



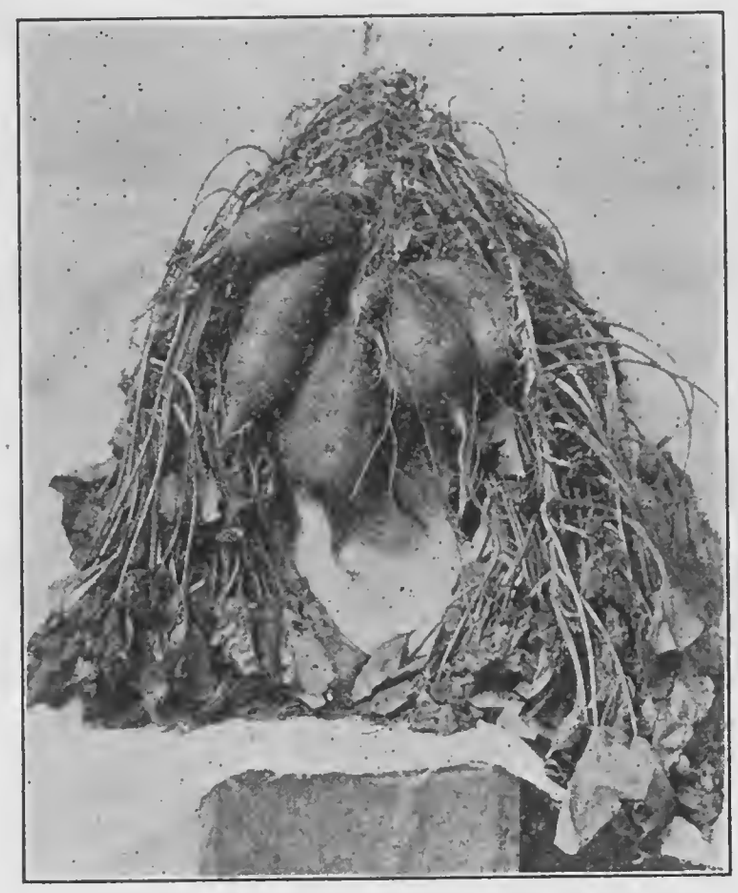
OUTBUILDINGS ON A SMALL LOT. FIG. 87.

fancy, are easily made. First secure 1x4-inch strips for the outside of your walk, and place at such distance apart as you may wish for the width. Hold these in place by stakes 10 to 12 inches long. If walk is to be straight, these stakes are only needed on outside of strips to hold the outward pressure of the



GROUND PLAN OF BUILDINGS. FIG. 88.

grouting. For a curved walk, the strips must be bent to the curve desired and held there by stakes till the grout will hold them. Then remove stakes. These strips must be absolutely level on top edge, or if the walk is to be on any grade, these strips must make the grade, and, if sidewalks, the side strip next to



THE VINELAND BUSH SWEET POTATO. FIG. 89.

road must be one inch lower than the other side, that water may run from walks. Procure a straight edge 1x4 inches, straight on both edges, and saw a notch of three-quarters of an inch at each end, so this straight edge will be full width, the width of walk, and 3¼ inches at each end. This straight edge with the short side down can be moved freely between strips to make the grouting level three-quarters of an inch below the top of strips. As fast as the grout is laid and set, put on the top coat of three-quarters of an inch, and use the other edge of the straight edge to make the top coat true. This top coat should be three of sand to two of cement. If to be used *only* for a walk you can safely use for this top coat two of sand to one of cement. To prevent any walk from being broken by frost, it must be laid off in sections. For a walk five or six feet wide make the sections 36 to 42 inches long. To do this use a strip as wide as the outer strips of walk, but only one-half-inch thick, and place these strips in the grouting to make the sections. Remove these strips before putting on top coat, and after the coat is finished, take a mason's trowel and make a clean cut through the top coat into the space left by the removal of the one-half-inch strips. The action of frost rarely ever breaks one of these sections. The top coat should be troweled as smoothly as possible, using a plasterer's trowel. Take pains at first and go slow, and you will succeed.

S. E. BARNEY.

WHEN AND HOW TO USE FERTILIZERS.

Will you advise me as to proper mode of using sulphate of potash and nitrate of soda on a vegetable and small fruit garden? Should they be spread on the surface now, or just prior to digging for Spring planting? Should they be mixed, and equal parts of each used? Are they alike beneficial to raspberries and strawberries?

We have many questions as to how fertilizers should be put on the land. Garden soil is usually rich, and we advise broadcasting fertilizers after the ground is spaded or plowed. Spread the fertilizer evenly over the rough furows and rake or harrow it in. One of the few iron-clad rules of soil culture is the fact that it is better to harrow rather than plow fertilizer or lime. Even quantities of nitrate of soda and sulphate of potash will answer for garden culture, but you must remember that neither of these substances contains phosphoric acid, which is likely to be lacking in most heavy garden soils. Phosphoric acid has most to do with the production of seed, and is very necessary to all small fruits. You might well add three times as much of dissolved phosphate rock or twice as much of fine ground bone as of nitrate of soda. It is not necessary to mix them—spread them evenly over the garden, and rake them in.

I wish to experiment on about half of 18 acres of corn and one-half acre of potatoes. In all my reading of THE R. N.-Y. I do not know *just how* to use fertilizer on either corn or potatoes. Is it to be applied a hill at a time by hand, or is there a faster way, and when it is recommended to use so much per acre, have I to count the hills and then figure out so much per hill, and then guess at it?

We plant in drills, and drop the fertilizer with the attachment on a Robbins planter, which does good work. When planting in hills the fertilizer may be dropped one way in the furrows, put in the hill by hand or broadcast. In the majority of cases broadcasting is better. Many who use the fertilizer in hill or drill put it there because it is easier and quicker to do so. A grain drill will put fertilizer in the ground well. When the upper surface is fine and loose the hoes on the drill may be let down so as to drop the fertilizer two inches or so under ground and cover it. Such application is just about right. If wanted in drill or hill deep furrows can be made one way with the plow. The tubes on the fertilizer drill can be tied together so as to feed into the furrows. Then crossmark with a light plow or marker. This will cover the fertilizer in the hills, and the seed pieces can be dropped and covered. If an exact experiment is desired of course some plan will have to be figured out so as to give the proper weight for each hill. In ordinary culture, however, this is not necessary. For corn we would broadcast by all means. Some farmers plant and then after several days scatter the fertilizer along the rows and work it in with harrow or weeder.

If I apply bone meal to an orchard that is set to grass, will it ever get in reach of the feeding roots of the trees, so as to benefit them? If so, in about how long a time? Theoretically, an orchard should never be set to grass, but in this part of the world I do not regard it safe to give it continued cultivation. W. H. L.

Iowa.

We always prefer to use ground bone on crops which allow it to be worked into the ground. Much bone meal is not ground fine enough. A finely-powdered bone will slowly work into the ground on sod carried down into the mud by rains. It would be slow to reach the tree roots. For orchards in sod, we prefer the forms of fertility that are soluble in water so that the plant food may be washed down past the roots of the grass. All forms of potash are soluble. Nitrate of soda is, we think, the best form of nitrogen for these sod orchards, and dissolved rock or bone black is better than bone, because the phosphoric acid will wash or leach down below the grass. With raw ground bone of ordinary fineness, on that sod, we should expect that the grass would get most of the phosphoric acid, the trees getting their share six months or a year after it was applied. There would not be this difference in a cultivated orchard, where the bone was thoroughly worked into the ground.

MORE ABOUT CROWDED APPLE TREES.

Mr. Hoyt Explains His Method.

Having an apple orchard, spread over about eight acres, although there are only 125 trees, your article of February 16 is of unusual interest to me. I would like to ask further information on a few points. What do you mean by thinning, and how do you do it? Do you use manure for feeding the trees? Do you plow the ground every year? What do you use to spray, and how often? New York. G. E. R.

Your apple orchard of 125 trees spread over eight acres, or 16 trees to the acre, at 50 feet apart, is all wrong. If the trees were all on one acre, you would realize more profit from the trees in 15 years on this one acre than if spread over the eight acres. Then you could have your seven acres to farm if you choose. The 125 trees on the one acre could be liberally fertilized with one ton of fertilizer, and the cost of harrowing, cultivating and spraying would not cost you one quarter what it would to cultivate the eight acres. With 16 or 30 trees set to the acre there is not enough fruit raised to pay one for giving up the ground to the orchard, as should be done; so other crops will need to be planted or the orchard put down to grass, which it does not pay to do, as the orchard is liable to be more or less injured thereby. If corn, potatoes or grass is to be raised on the farm, grow them somewhere else after the orchard is four years old, or after it begins to bear fruit. For best results from the orchard the trees should not be robbed of any of the soil's fertility or moisture. If the trees in the orchard are set too far apart, and other crops raised, the frequent stirring of the soil so necessary to keep up the moisture cannot be done, and the fruit will not only drop more, but will not be so fine as when closely set.

By thinning, I mean the fruit on the trees. If too much fruit sets, thin out by picking it off, not leaving but one apple to a fruit spur, and if the spurs are too close take all off every other one, or leave one apple only in every four inches, or perhaps farther, as good judgment would suggest. With an old neglected orchard this would be a tedious job, and would hardly pay to do; but when commencing with a young orchard to thin the fruit with the first crop, if it needed it, the work would be light. If no more fruit was allowed to grow than the tree could easily perfect, fruit buds would be formed for the next season's crop, as well as the crop of fruit grown. If more fruit set than you think the trees could perfect and form buds for the next season, pick off some of the fruit again. Never let the trees overbear. Overbearing tends to weaken the producing powers of the tree, which with starvation, is the cause of what is termed "off years." There should be no "off years" with intelligent apple growing, unless frost or blasting winds occur when the trees are in blossom. If you have stable or yard manure, and have no other use for it, spread it over the surface of the ground and harrow in thoroughly, but if you have to buy fertilizing material buy a good honest made fertilizer in preference to stable manure, and use from 1,200 to 1,500 pounds per acre annually sown broadcast and harrowed in well. For your eight acres of orchard you would have to plow every year, being careful not to plow too deep as you came to the tree. If the trees were set 18 to 20 feet apart I would only harrow with a Cutaway harrow early in the Spring, or cultivate with a good cultivator. After that with a spring-tooth or any good stirring harrow.

Spray in February with Bordeaux Mixture. If there are any injurious insects on the trees, spray with petroleum about 25 per cent strong. Just before the blossoms appear, spray again with Bordeaux Mixture. After the blossoms fall and fruit is well formed, spray again with Bordeaux Mixture with one-third of a pound of Paris-green to 50 gallons of water. Two weeks after this spray again with same mixture as before. This may be sufficient, yet another spraying the middle of July with Bordeaux Mixture might be beneficial, and certainly would do no harm. To spray, use a good force pump placed upon a barrel in a wagon. There are many good pumps advertised in the market for this purpose. A pump made by Morrill & Morley, Benton Harbor, Mich., we have found to be a very good one. This spraying of trees is to be a very important factor in fruit raising, and I believe the time is coming when some person will get up a spraying outfit and go about doing this work better and more cheaply than small orchardists can do it for themselves. Intelligently carried on, and with modern business ways, the future of the apple industry will be one of much pleasure, as well as great profit.

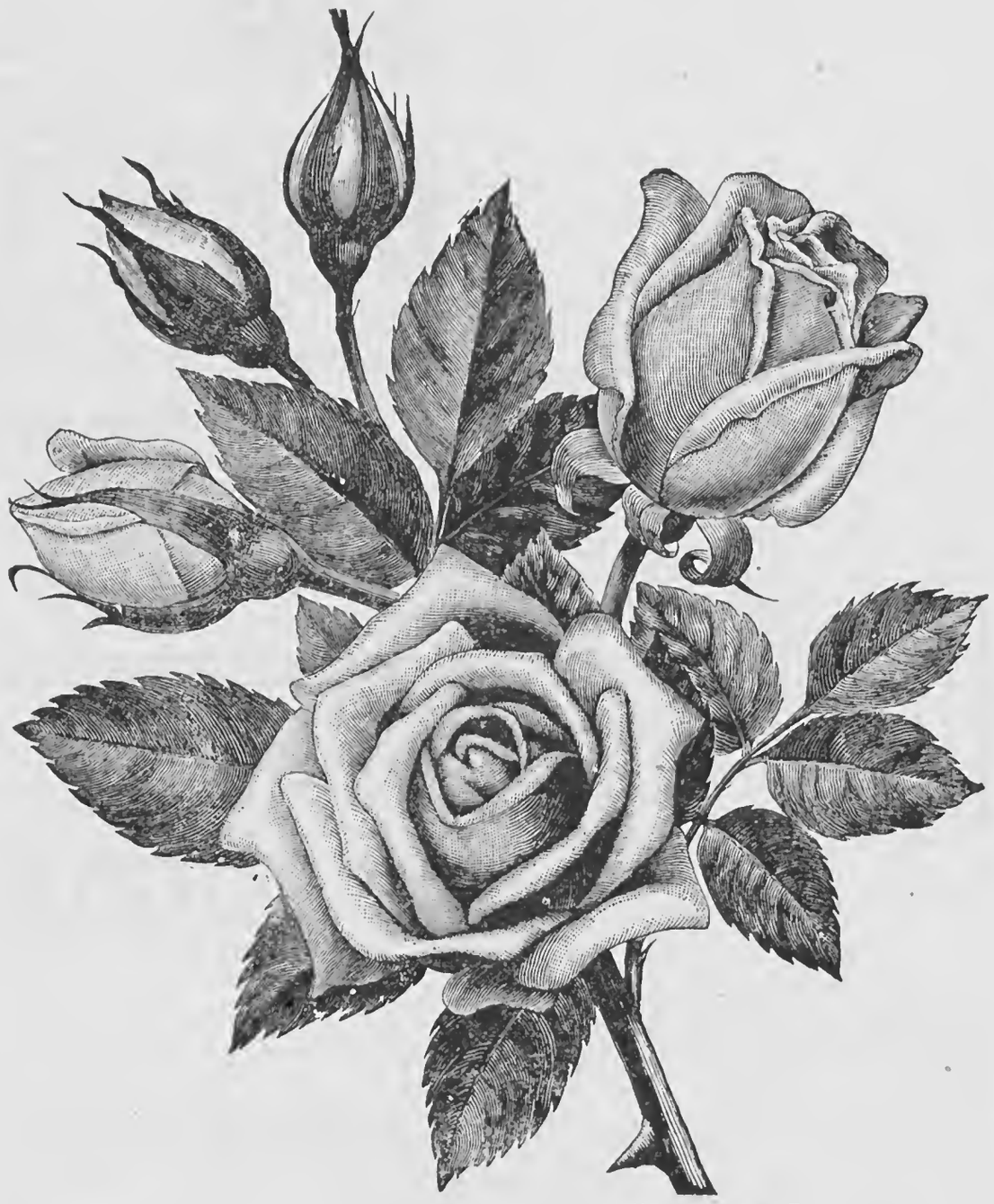
EDWIN HOYT.

A CHAPTER ON WILLOWS.

Every farmer who has running water on his farm will find it easy and useful to plant a few willows in the Spring. It is the easiest of all trees to propagate. By simply cutting off a limb and sticking it into the ground so that the bottom is near water the planting is done. Any size of cutting will do, but if it is to be set out where cattle run it would better be eight or 10 feet long, or they will eat off the young shoots and cause it to die. The willow is especially useful as a soil binder, and to prevent the washing of stream banks. It is against the laws of Nature for a stream to run straight, and if it is made so, it will get crooked again. Its sinuosities cause it to occupy more ground than necessary, and throw out points and corners which are of no use except, perhaps, for pasture. A willow planted at the right point, or a row of willows, will effectually prevent erosion of the bank, and keep the stream where it is put, or prevent further encroachment on the land. Its root system is a mass of fiber, and binds the soil completely. The trees give shade to stock in Summer, and, where there is plenty of moisture, they do no damage to adjoining crops.

If one contemplate making a fish pond, or confining the water for any purpose, there is no better way to build a dam than by planting a row of willows close together. As soon as the trees are large enough the dam is easily made, and the willow roots binding all together there will be no washout. Some farmers treat their willow trees as pollards; they cut them off about five feet above the ground, and allow them to sprout. In this way a clump of willows may be made to yield a supply of poles and wood year after year. When dry the timber makes an excellent Summer fuel. Baskets are made mainly from certain varieties of the willow. Basket-making is a growing industry in this country, and in 1890 $2,800 worth of prepared osiers were imported. There is no reason why many of our small farms should not have their osier beds, which would give the owner profitable employment for some of his idle time during the Winter preparing the osiers for market. There are a number of varieties grown in Europe for basket uses, but they do not seem to do well here. Some small native species, however, make good osiers, and if one thinks of starting an osier bed he had best to go or send to where they are already growing them. The basket-making industry and the growing of osiers are thriving about Syracuse and Rochester, N. Y. The Department of Agriculture at Washington, D. C., has issued a bulletin on osier culture which will be useful to those interested in the subject. G. D.

Whitehouse, N. J.



ROSE ALBA RUBIFOLIA. Fig. 90. See Ruralisms, Page 212.

DO THE CATALOGUES EXAGGERATE?

Varying Results Under Diverse Conditions.

The catalogue crop having been secured what are the fruits of the harvest? We reply, many, and along all lines pertaining to horticulture. The first is a stimulant to grow something, and, having grown it, to have the results a surprise rather than a disappointment. Many get the impression that descriptions are overdrawn; this, however, is rarely the case, but it must be understood that a squash weighing 300 pounds, and a crop of potatoes, 450 bushels per acre, or 800 bushels of onions and 800 bushels of carrots from an acre, 1,600 in one year, as Hallock & Son, of Orient, do annually, are the results of intensive cultivation. Such crops can only be produced by brain application as well as by fertilizers. These results are all possible, and happy is the amateur who exhibits the squash, or the farmer who produces the other crops. But they can be done, and when the catalogue promises what is seemingly an impossibility, it only states what has been done, and what the seeds sold will do again, if the buyer does his part. The catalogue only states possibilities, and the seedsman does not hope or expect that one man in a thousand will grow a 300-pound squash, because not one in a thousand gets from his farm or garden what it is capable of producing, along any line. Besides, that enormous growth can only be made where all the natural conditions are favorable, and where labor has been wisely and freely supplied. The gardener must understand fully that extreme products are the results of extreme efforts, and under the most favorable circumstances, and that where A does not get as good results as B, it is because the latter has some advantages the former does not possess

But this is not the point we started out to illustrate. Every gardener knows that some varieties will succeed admirably in one locality, and prove total failures in another. The same grape or apple that does well with one will not prove satisfactory in a locality not far distant. Trial alone will settle that matter. The same is true in the vegetable garden, and there is nothing more annoying than to plant a variety not adapted to one's soil and situation. To guard against disappointment the gardener should always buy a year's stock in advance and test in a small way the seed bought for the next year's crop; then he will be absolutely sure of what he has. Our best growers of cabbage always do that, and with good results. Many seeds improve with age; this is particularly true with vine seeds, which improve with age until vitality is greatly impaired, and all the Brassicas improve with age. The gardener who wishes to get the best possible results from his garden should give this subject the most careful attention. C. L. ALLEN.

WHO SHALL MIX FERTILIZERS?

A man has a pain in his knee, and finds that by rubbing a certain linament on it the pain is relieved. The next week he has a headache, and remembering his knee, he rubs the same liniment on his head. The pain gets worse instead of better, and the man denounces the liniment as a fraud. He does not realize that the trouble in his head may come from his stomach. The liniment helped his knee but failed to help his head—therefore it is a fraud. You see this man fails to recognize that there were two kinds of aches, each requiring a different treatment. He is like the man who uses a "phosphate" or some one-sided fertilizer, and obtains good results on a certain crop. He tries it on another crop or soil and fails—therefore all fertilizers are frauds. A friend once used 200 pounds per acre of nitrate of soda on wheat in the Spring and increased his yield quite a little. Next year he decided to use only nitrate on his potatoes, which were planted on a soil quite deficient in potash. He got a large growth of vines but few potatoes. He said that nitrate of soda and incidentally all fertilizers were "no good." A fair amount of potash used with the nitrate would have doubled his yield, but he would not go down to the true causes of his failure. Such men make a mistake in attempting to mix their own fertilizers, or to use special substances. They will do much better to buy the mixed goods, and always select complete mixtures. Generally speaking, it will pay a farmer to hire experts to mix or plan for him unless he is willing to think and study down to the basic principles that underlie his work. The soil may have four aches—requiring nitrogen, potash, phosphoric acid or lime to cure them. Unless you *know* which particular ache your farm has, you would better use all four.

Van Deman's Fruit Notes.

ALL SORTS OF QUESTIONS ANSWERED.

A Southern Ohio Orchard.

M. L. P., Ross Co., O.—I have an orchard in southern Ohio (Ross Co.). The trees were planted three years ago. The ground was an old pasture on which cattle and sheep had run for years. The soil is a heavy limestone clay with good drainage. It is a slightly rolling upland, just above the neighboring creek valley. All the ground was plowed carefully; part trench plowed. There is no perceptible difference in the growth of trees on the two parts, and I think I should not go to the expense of trench plowing for another orchard. The trees were set in early Spring and the ground planted to corn. In the Fall rye was sown and commercial fertilizer, bone and potash, 150 pounds per acre, was applied. The second year the rye was plowed under and corn again grown. Crimson clover was sown in the corn, but the season was too dry, and but little grew. The third year cow peas were sown. The trees have made a fine vigorous growth and are in splendid condition. I have too many varieties. Would it be advisable to top-graft undesirable varieties this Spring? I have 50 York Imperial, 61 Rome Beauty, 46 Grimes Golden, 45 Jonathan, 14 Winesap, 10 Stayman, 23 Stark, 25 Hubbardston (substituted for York Imperial by nurserymen), nine Baldwin, five Dominie, four Newtown Pippin. I had several Newtown Pippin trees and only four have survived. Those that are left are puny-looking. Since planting I have gained the idea that Stark is not a desirable variety, and that Hubbardston is too early-maturing for our locality. Baldwin is also early, and is a poor bearer here. Winesap does finely in our rich bottom lands, but is small on this upland. Stayman trees were planted last year to fill vacancies. Would you advise grafting Stark, Hubbardston, Baldwin, Dominie and Winesap to Stayman? Would you prefer any other variety? My desire is to make a specialty of raising apples of fine quality.

ANS.—This orchard seems to have been quite well planned, and the after management good, with but slight exceptions as to the varieties used, and these mistakes have been already discovered by the owner. I can see scarcely a chance to find fault with any detail of the whole affair. The trench plowing was probably unnecessary in that soil, where the natural drainage was good. Rye and Crimson clover for a Winter covering, and cow peas in Summer, were very good. The error of too many varieties is a very common one. The idea of top-grafting the trees of Stark, Hubbardston, Baldwin, Winesap and Dominie to Stayman would be very good, but I believe York Imperial would be better, because it is larger and perhaps more salable. However, Stayman may prove to be very good there, as it is an improvement on Winesap. The writer lives in the vicinity of my boyhood home, and I know of its conditions.

What About this Orchard?

R. S., Exeter, Pa.—I have an orchard set about 12 years ago. The trees were labeled 25 Baldwin, 25 R. I. Greening, 25 Smith's Cider, 15 Fallawater and 10 Red Astrachan. Those labeled R. I. Greening are fine trees of a spreading growth, bear large red apples, sunscald badly, and many of them are so watery that they are useless for any purpose. These trees commence bearing quite heavily before any of the others, except Astrachan. The apple is a fine one when free from sunscald and not watery. From the description given, can you name it? Not one of the trees labeled Smith's Cider was such. Every one is a Northern Spy—a variety which never amounts to much here, so far as my observation goes. They rot badly on the tree before ready for picking. The Baldwins are full of brown specks, all through, and have been for the last two years, not one in 10 being fit for sale. I have noticed Baldwins in our markets similarly affected. Are they thus inclined throughout the country? I have noticed a few of the Fallawaters thus affected. The soil on which this orchard stands is a sandy loam, full of quite large rocks in places. I kept it cultivated for several years, then seeded to orchard grass. The trees are branched so low that it is now impossible to cultivate. Has been several times fertilized with barnyard manure; twice with Canada hard-wood ashes, and once or twice with muriate of potash. The trees have made a good growth, and are thrifty. They were set hexagonal, 26x26 feet, which I think is entirely too close. My object in writing you is to try to find out what is best to do with the orchard; cut it down, graft with some other varieties, or let it alone and see what it will do further on.

ANS.—It is probable that the trees that bear the large red apples with water-cores are Tompkin's King, for nearly everything about the trees, and the fruit as well, suggests this to be true. Baldwin is apt to be a very poor apple south of its proper territory in New York and northward from there. The brown specks are characteristic of the variety, and are much more prevalent in those grown south than north. Northern Spy is also an apple for the north. Not one of the varieties ordered or received is in my judgment, valuable for market purposes in the region where they are planted. I would graft over every one of them at once. As the trees are too close for permanent use, being 26 feet apart, a good plan would be to select the permanent trees, which should be 52 feet apart, and graft them to York Imperial. All the rest I would make over into Wagener, which is a very early bearing and valuable Winter apple. After a few years' bearing the temporary trees should be removed.

Ben Davis Substitutes Wanted.

E. E. R., Manorville, L. I.—Can you tell me anything of the Senator, Delicious, Stayman and Apple of Commerce, catalogued by a western nursery? I wish to know as to their adaptability as market apples to be grown here on Long Island on light, hilly ground, considerable of it with a southern exposure. I want apples that will grow and bear, and keep as well as Ben Davis; but as good or better quality of fruit as Baldwin. Will the above fill the bill? If not, are there any that will?

ANS.—The varieties mentioned have all been tested but little outside of a very limited area in the Ozark region, except Stayman. It would be very unsafe to plant largely of these or any other new varieties until more is known of them than we now know of the former. A very few trees of each might be tried. The Stayman is almost sure to prove generally superior to Winesap wherever that variety is successful, because it is larger in fruit and much better in habit of the tree. It may do well on Long Island. York Imperial has many good points for that section. Both will do about equally well on either slope or on the hilltop.

For the land's sake, use Bowker's Fertilizers. They enrich the earth.—*Adv.*

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**It matters not how rich the land,
Or hard the labor on it,
Vexation is the only crop
Bad seed will raise upon it.**

All seed warranted to be pure and reliable, as per page 2 of catalogue. Our trade with market gardeners is immense; and market gardeners buy none but the best of seed. Write for our new Vegetable and Flower Seed catalogue—free to everybody.

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for farm or garden is JUNE EATING. Tubers, good to eat as soon as big enough. Vigor, vitality and growth equal to late ones. Remains vigorous into late Summer insuring a great yield. *Booking orders now.* Conn: "June Eating gave perfect satisfaction." N. J.: "Hope Farm man recommends it." Del.: "Cannot be bettered. It is the best I ever had." Send for catalog. C. E. CHAPMAN, Peruville, N. Y.

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400 Trees and Plants for $5.00.

You money back if not satisfactory. This offer holds good till April 15th.

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3 Elberta Peach	12 Lee's Black Currant
3 Abundance Plum	10 Imperial White Currant
2 Meech Quince	6 Pearl Gooseberry
50 New York Strawberry	2 Chautauqua Gooseb'y.
50 Nic Ohmer Strawberry	12 Loudon Raspberry
50 Wm. Belt Strawberry	12 King Raspberry
50 Parker Earle Junior Strawberry	6 Cumberland Raspberry
2 Palmer Very Early Strawberry	12 Kansas Raspberry
60 Bismarck Strawberry	12 Lovett Blackberry
12 Red Cross Currant	3 Diamond Grape
12 President Wilder Currant	3 Niagara Grape
	3 Worden Grape
	3 Brighton Grape

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What Varieties for Grafting.

H. B. L., Laceyville, O.—1. In an apple orchard I planted in 1895 Baldwin, Twenty Ounce and Duchess of Oldenburg apple trees; they have not done well, many having died. Ben Davis, Yellow Transparent and Tolman have grown vigorously—the last named exeeeding all others. I propose to fill the plaees of the dead trees with a strong-growing, long-lived variety, upon whieh to work grafts and buds of the kinds I wish to grow. Would you use the Tolman for the purpose named for King and other Winter apples, and would you use the same for Fall apples like Twenty Ounce? 2. Will you give me some general directions for pruning Burbank, Abundance and Satsuma plum trees?

ANS.—1. It will probably be a difficult matter to get young trees to grow well in an orchard six years old, but by careful cultivation it may be done to a fair degree. Northern Spy or Ben Davis would be even better than Tolman as stocks for other varieties. I would not graft any trees to Tompkins King, for even when top-grafted it does not do well in most sections. It does not matter what season a variety ripens as to the stock upon which it should be grafted. 2. The differences between the habits of growth of the plums mentioned are so very great that only general directions as to pruning them can be given. All cross branches should be cut out. Those that are growing too low or too high should be cut so as to modify these habits. Common sense and not too free use of the knife and saw are far better in the orchard than any fancy or radical ideas on pruning.

The Crothers Peach; Currants.

C. O. B., Moberly, Mo.—1. Will you tell me where I ean get the Crothers and Everbearing peaehes? I have seanned every priee list and eatalogue I have been able to get, but never found the Crothers mentioned, although the Matthews, which I think is the Everbearing, is frequently named. 2. I would also like to learn the merits of Wilder, Red Cross and Versailles eurrants.

ANS.—1. The Crothers peach is so new that it is in the hands of but few nurserymen. T. V. Munson & Sons, Denison, Texas, have it in bearing, for I sent buds there many years ago. It is a very choice red and white freestone peach that ripens quite late. The Everbearing is distinct from Matthews and all other varieties, and is not only peculiar in its habit of ripening over a long season, but it is large and of very fine flavor. It is sold by J. H. Black, Son & Co., Hightstown, N. J., and perhaps others of our advertisers. 2. The Wilder is a red currant of most excellent character as a market variety; for it is large and strong in plant and bears fruit abundantly, large in cluster and of fair quality. Red Cross is quite similar, and some think it a little larger in berry. Versailles is the same, or practically identical, with Cherry. It is very large in berry but small in cluster.

Peach Yellows and Budding.

S. H. M., Berkeley Co., W. Va.—1. Is there any risk of the yellows in planting a young peach orchard in the ground in which an old one has been eut down within the last year or two, and whieh was on the decline and had some yellows? 2. What is the objeetion to budding in the Spring instead of Summer? An expert budder here tried it last Spring, and the buds took well and grew; some of them more than three feet. 3. Would a piece of land, in other respeets good for an apple or a pear orchard, be bad for them on aeeount of having a bed of rock two or four feet under the ground?

ANS.—1. It has been quite well determined by experimcnts that the yellows is not transmitted to young peach trees that may be set in ground where others have died from this disease. In fact, the matter has been tested by planting trees in the holes from which trees with the yellows had just been removed, and with no bad results. 2. There is no objection, so far as I know, to Spring budding, provided the work is done successfully; but that is not always the case. The main difficulty is to keep the bud sticks or scions in a dormant condition until the stocks will peel readily, but it can be done by putting them in cold storage of any kind. Burying them in the damp sawdust on top of the ice of an ordinary icehouse is usually very satisfactory. 3. There might be danger of serious drought in case of a solid bed of rock as near the surface as three or four feet, but if the rainfall is abundant and regular there ought to be little or no difficulty with orchard trees under such conditions as those mentioned. I have seen many good vineyards growing in soil that was not over four feet deep, and above a solid and impervious stratum of limestone. Thorough tillage of the surface soil will do much to conserve the moisture in the subsoil.

Rome Beauty Apple in Maryland.

J. S. J., Greensboro, Md.—I have some trees of the Rome Beauty apple that bore fine-sized apples the past two years, but the fruit would only keep a short while after being pieked. They would rot at the core first. When showing signs of speeks they would be totally rotten. The trees are five years old. I bought them for a Winter apple. Would it be advisable to graft to some other variety? What would be best to graft on them?

ANS.—Rome Beauty is a good Winter apple in most parts of Maryland in ordinary seasons, but last year was a most unusual one, because of the early maturity of the Winter apples, and it is not surprising that this variety ripened as it did. I would wait another year at least, and see how the fruit behaved, before deciding to regraft the trees. In case of need to change them I would use scions of York Imperial. This is one of the most dependable Winter apples I know of for many parts of the country, and especially for Maryland and the adjacent States.

DO YOU SPRAY? Use the best. Rippley's Compressed Air Sprayer and Whitewashing Machine throws the finest spray and uses less solution. Continuous stream 30 ft. Tested to 60 lbs. Holds 5 gals Has safety valve; can't burst. Guaranteed. Made of copper & galv. iron. Circulars free.
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25 to 50 bushels, 65 cents.—On cars Paris, Ky.
The way to sow it is in the rough, Now is the time to sow. B. F. SKILLMAN.
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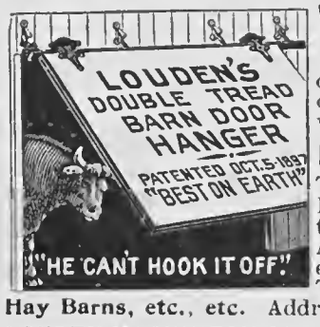

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OUR $14.95 DISC HARROW is the very latest for 1901. Embodies every up-to-date feature of every other disc harrow made, put out under our binding guarantee as the highest grade disc harrow on the market and offered direct to the farmer from the factory on THE BASIS OF FACTORY COST.
OUR $14.95 PRICE is for harrow complete with seat, eveners and singletree. FOR LARGER DISC HARROWS WRITE FOR DISC HARROW CATALOGUE. Address,
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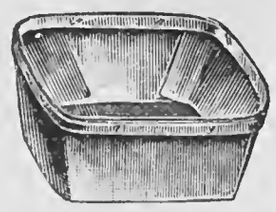

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applied before the plants are six inches high. The immediate effect of an application of *Nitrate of Soda* is to develop a dark green color of the leaves and start the plants to growing rapidly. Just enough *nitrate* increases the yield and improves the quality. Write to **John A. Myers,** 12-O, John St., New York City, for full information. No charge.

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Perfect Fruit.

Every fruit grower aims to have it. Those having perfect fruit succeed. Perfect fruit means perfect spraying. The very best sprayers are the
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They make the "fine as fog" spray, easy to work and because of perfect agitation avoid all scorching or burning of foliage. Automatic brush keeps strainer clean. Brass valves—no rubber or leather to rot. Book on Spraying and terms to agents mailed free.
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Wormy Fruit and Leaf Blight of Apples, Pears, Cherries and Plums prevented; also Grape and Potato Rot — by spraying with Stahl's Double Acting Excelsior Spraying Outfits. Thousands in use. Catalogue, describing all insects injurious to fruit. *Free.* Address WM. STAHL, Quincy, Ill.

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ALL BRASS.
$17 outfit for $7.00, express paid.
Will spray a 10 acre orchard per day. 100,000 in use. Satisfaction guaranteed or money refunded. Illd. catalogue free. Agts. make from $5 to $15 per day. New improvements. Free Trial. Mention this paper.
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No sprayer made gives better service than the Century Barrel Sprayer. Submerged brass cylinder, brass ball valves, everlasting plunger packing; automatic agitator For ease of operation, durability, free water ways it is unequalled. Never scorches foliage. Send for catalogue of full line of pumps and sprayers.
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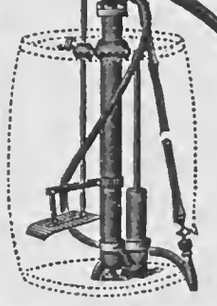

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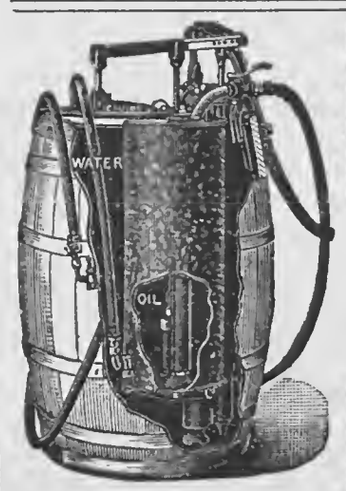

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Endorsed by the leading Horticulturists and State Experimental Stations. A kerosene sprayer which *accurately* proportions the mixture for any desired strength. Built in three sizes, for tank, barrel or knapsack use. There is a great demand for them. Ask your dealer or write direct to us.
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The Goulds Mfg. Co.,
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Warerooms: 16 Murray St., New York.

The Stayman Apple.

M. E. S., Canon City, Col.—1. Do you consider the Stayman Winesap as reliable in every way as the common Winesap, and especially have you any reports of it from Colorado? Does it blight at all? The common sort does not blight here, but Paragon, a seedling, is absolutely worthless. 2. In what respect are budded trees better than grafted of same grade?

ANS.—1. The Stayman is a seedling of Winesap, and fully equal to it in every respect and superior in some. The shape, color, flavor and keeping qualities of the fruit are about identical, but the size is larger. The tree has a more upright and symmetrical habit, and the root system is much better than is the case with Winesap in these particulars. I believe it will eventually supersede that old standard in a large degree. It does not blight more than Winesap, which is almost not at all, so far as I have observed. I am astonished at the statement that Paragon blights so badly at Canon City, Col., for I spent several days there recently, looking about the orchards, and saw many trees of Paragon in most excellent condition there. I am inclined to believe that the blight as reported may be the result of excessive irrigation, at least in part; for that is a common fault of many of the fruit growers of eastern Colorado. Less ditch water and more tillage would be better in many cases. 2. I do not believe that good root-grafted apple trees are worth less than budded trees of the same grade. The extra cost of budded trees is largely, if not wholly, because of the more expensive and troublesome method of propagation.

Fruit Trees on Cleared Land.

J. H. S., Hancock, Md.—1. I have a piece of high land from which the timber has been cleared this Winter, and I thought of planting it with peach trees, and perhaps with apple trees also, with peaches half way between. Would it do to plant the trees without plowing the land? The timber was not very thickly set, and not much undergrowth, but the land is somewhat stony. Would you advise planting any other kinds of fruit on the land for profit? 2. What list of varieties would you recommend for 500 apple trees and 500 peach trees, and the number of each variety, for market?

ANS.—1. On newly-cleared forest land it often does very well to plant orchard trees, but the stumps and roots are often quite troublesome in the matter of tillage. Where stones are abundant, as in this case, cultivation is still more difficult. Just what to do in regard to planting before or after plowing could hardly be intelligently determined without seeing the ground. If the ground is susceptible of plowing, why not plow it before planting rather than after? If it cannot be plowed at all, then the system of mulching must be followed. This is expensive, and must be continued as long as the orchard stands, or the roots will suffer, and consequently the entire trees, from being in hard, dry ground. Planting peach trees among apple trees is a bad practice in nearly every case. It has proved so in my own experience, and I have heard many others state their objections from the same cause, which is, that the peach trees rob the apple trees, being the stronger growing of the two. They should be planted separately in all cases, so I think. 2. In planting 1,000 trees, half peach and half apple, in the uplands of Maryland, and entirely for market, the following list will prove quite good: Peaches, Carman, 100; Elberta, 200; Chairs, 200. Apples, York Imperial, 200; Stayman, 100; Rome Beauty, 200.

Top-Grafting and Varieties in South Carolina

T. P. P., Wellford Sta., S. C.—1. In top-grafting, which is the better, to cut off the limbs and let new sprouts come out, and next season put in the grafts, or bud in July or August, as the trees are not satisfactory as to fruit? 2. I have lost a few trees, I mean apple trees, and would like you to advise me as to resetting in their place. I am thinking of trying a few trees from New York State. I wish to set early and late varieties, good keepers of the latter.

ANS.—1. I prefer Spring grafting on the stumps made by cutting off the branches of the tree just as they are, and without any preparatory pruning. Rather than cut larger branches than those two inches in diameter, I would go a little higher and cut two smaller branches. I always make a sloping cut, and never a square one in grafting. The angle should be about 45 degrees, and a small place squared on the point where one scion is set, and only one on each stock. By this method the wound heals up much more quickly and safely than by the more common plan of two grafts on a square stump. The sprouts that grow on any stump that fails to have a graft growing can and should be budded the following August. 2. It would be very unwise to plant apple trees in South Carolina with the expectation that the varieties would behave as they do in New York; but there are some kinds that do very well in both places, only ripening much earlier in the South. Red Astrachan, Fanny and Maiden Blush are among the good early kinds. None of the standard Winter apples of New York are the same in South Carolina. Winesap, Genet and Shockley are good Winter apples for warm sections, especially the latter.

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Are you in need of Fruit Trees? and do you wish the Best and Hardiest that can be grown? Would you like to buy at reasonable prices? Then write to Call's Nurseries, Perry, O., for price-list. They make a specialty of dealing direct with the farmers, send out none but the best of stock, and guarantee satisfaction. They can furnish you letters from hundreds of our best fruit growers, stating that the best trees they ever bought came from Call's Nurseries.

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ARTHUR COWEE,
Meadowvale Farm, Berlin, N. Y.

WANTED.

Potato Onions for Cash.

A. W. SMITH,
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THE "HARDIE" Spray Pumps

are the most powerful, easiest worked, most modern, simplest in construction and moderate in price. DON'T BUY A PUMP until you have sent for our catalogue "C" and treatise on diseases of fruits, etc., sent FREE. Hardie Spray Pump Mfg. Co., 66 Larned St. W., Detroit, Mich.

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Leggett's Dry Bordeaux Mixture and Paris Green Compound.

It kills Potato Bugs and all plant-eating pests prevents blight and rust, keeps foliage in a green and vigorous condition. Paris Green is the best insecticide, and Bordeaux Mixture the best fungicide. We combine the two in a dry form, and furnish in 1 and 3 pound boxes and 35 pound buckets. Compound does not burn foliage, and is cheaper than clear Paris Green. Has a successful record of seven years. May be used dry or in water. For sale by dealers or send to LEGGETT & BROTHER, 301 Pearl Street, New York.

Carman No. 3 and Sir Walter Raleigh Potatoes; bu. 80c.; bbl. $2.25. Choice *W. Wyan* and *W. P. Rock Eggs*, $1 per 15. C. WECKESSER, Marshallville, O.

SEED POTATOES.—Bovee, White E. Ohio, Peachblow, Minister's Commercial and others Sample tuber 6 cts., lb. 20 cts. List free. J. W. HARTMAN, Sligo, Pa.

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FARMERS—30 choice standard varieties. Raleigh, Giant, E. Harvest, E. Cobbler, Commercial. Tuber free (remit only postage), White Star Oats, tested, with 10 varieties; sample and descriptive list free, and 5c, packet seed free. Save $1 per bbl. 4 varieties of fowls. SMITH POTATO FARM, Box B, Manchester, N. Y.

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Outyielded all others at Ohio Experiment Station, yielding 52 bushels more than Carman No. 3. Circular free.

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I harvested 800 bu. from 56 lbs. planted on 6 acres. Used no fertilizer. Sorted out 200 bu., leaving me 600 bu. choice seed to sell. It is orange colored, deep grain, 16 to 20 rows on ear, 8 to 11 in. long, and small cob. Only 10 lbs. cob in 70 lbs. ear. I paid $5 per bu. for the seed, but offer mine at $2 per bu. (56 lbs. shelled, or 70 lbs. ear.) Bags free. Best corn I have raised in 10 years. JAS. LYONS, Macedonia, Summit Co., O.

American Gardening.

Ten Sample Copies, separate issues, 10 cents. Published at 136 Liberty Street, New York.

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Dreer's Permanent Pasture Mixture cannot be excelled for producing abundant hay crops, and luxurious aftermath. Full line of all Grasses and Clovers, also special mixtures for Lawns, Golf Links, etc. Circular and prices on application. HENRY A. DREER, Phila., Pa.

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GRASS MIXTURES SPECIALLY PREPARED TO SUIT ALL CONDITIONS OF SOIL.

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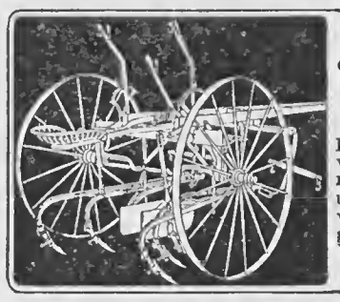

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If you have a small vegetable garden, and enjoy working it yourself, or if you hire the work done you will find this "Planet Jr." No. 4 Combined Hill and Drill Seeder, and Wheel Hoe Cultivator, Rake and Plow to be almost indispensible. In sowing it equals our best seeders; in cultivating it is the equal of our best wheel hoes. Drills or drops all garden seeds regularly producing regular stand and even growth. Cultivates all vegetables between the row, on each side of the row, throws dirt to or from the row, hills up, marks out, plows, rakes, levels, etc. Instantly changed from one to the other. This tool cannot be over recommended.

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Two Gold Medals at Paris Exposition; Highest Award.

HOPE FARM NOTES.

THE WOMAN'S HORSE.—Back on page 147 a farmer got after me about keeping oid Major when the food he eats wouid provide for a heifer. One of the things I have learned during my career as a married man is the fact that there are times when man shouid preserve a dark silence, which will bring out woman's flaming words in strong reiief. So I just turned this woman's horse question right over to the women folks—and here you have one from the original horse woman:

"I wonder whether the man who has no use for a woman's horse has any room in his heart for a woman's iove? Or hasn't he any heart, and his iiver keeps his blood in circulation? If that man isn't careful he will spend more in cigars, tobacco, etc., than it wouid cost to winter a woman's horse, which need not be an oid one, good for nothing eise. In this section the farmer often sends his wife to town on business or to the blacksmith's shop when his time is worth money to him at home. Also, many times on the farm a woman can drive the team or in other ways save the wages of one of those important beings called *m-a-n*. I would iike to hear what the farmers and their wives think about the money question. Should the husband keep his pocketbook iocked up or deep in his pants pocket, or let his wife have free access to it? Many women would save dimes, if they had the chance, where the men spend quarters. I believe when a woman marries she should share all the joys and sorrows of her husband; also the pocketbook, be it ever so iean or fat." ONLY A WOMAN.

Now, I don't know of anything I can say that will add any itailcs to that. Do I indorse every word of it? Weii, now, I prefer to act as judge in this case, and not add any arguments. Of course, there are cases where a man is struggiing under such a heavy load that the feed for an extra horse would hurt him. But suppose such a man spent more for tobacco and beer than the horse wouid cost? Well, when I ran for office last Fali I was told by some excellent people that the public has nothing to do with a man's personal habits. I imagine therefore that the iaws of polite society enable a man to be as selfish as his wife permits him to be. In many cases, though not all, when the woman does not get ali that she deserves, it is because she has lowered her standard of high living, played with her just rights, and lost them!

THE POCKETBOOK.—Am I going on to air my views regarding money matters between man and wife? No; because one can no more iay down cast-iron rules about such matters than he can say just exactly how corn shouid be grown on all soils. I think every woman should have some money of her own. The Madame has kept a smaii bank account for several years, and draws her own checks. I beiieve that it does any woman good to handie some iittle money of her own, with power to spend it just as she likes—without consulting anyone about it. One good thing for a man to do is to make his wife a birthday present each year of one dollar for each year of her age. She ought to increase in value a little each year! I do not like to see a man and woman stand off and say *my* house, *my* money, *my* farm. It is *our* property, or else that man and woman are not properly married. Many a man will give his wife 100 per cent of his advice and confidence, and yet feel frightened if he gives her one per cent of his money. It is true that we hear of women who ruin their husbands financially by extravagance and foolish advice. I have known of such cases, but I think I can match every one of them with a case where the husband has dwarfed the real development of his wife by pinching cents out of her self-respect. If a woman finds all the wires cut between her needs and the farm pocketbook it will, in most cases, be her own fault, for either starting wrong or running away from her rights later. The trouble is that lots of men and plenty of women, too, think man confers the greatest possible boon upon woman when he makes her his wife. The obligation is really on the other side, but that is not the view taken by many young women. But the time has come for me to stop, or the Madame wiil remark in her incisive way—"Or fat men just gray enough to think they are smart!"

FARM OUTLOOK.—I have tried to do some hard thinking lateiy about the best thing to do with this farm. The old farm was iight and warm, quick and easily worked, and within a short distance of a little town. The present farm is two miles from town, with high hiils between. The soil is heavy—the iower part inclined to be damp. The high hill is of lighter soil, yet there is considerable clay in it. Last year's experience has about convinced me that this soii is better adapted for growing grass, grain and tree fruits than for truck, potatoes or smaii fruits. It seems to me that I cannot bring the methods suitable for the iight soiis of the valiey up on to those high and hard hiiisides, but that other crops and methods are needed. It would probably be about as sensibie to put big Frank on the race track as to try to use our natural grass lands for truck and quick-growing garden crops. It could be done, but it wouid mean unnatural methods. I am obiiged to confess that Nature seems to have wrinkled up our ridge for the express purpose of producing trees and grass. Why should man, with his puny arm, undertake to fight against natural tendencies? Better get in line with these tendencies, and develop them usefully. That is the way I feel about it, and I am disposed to switch about and change my farm plans.

ALL SORTS.—The Scion came through his attack of pneumonia nicely. He was a pretty sick boy for several days, but there was a watchful eye on him all the time, and quick hands to keep him covered when he twisted any part of his hot little body out from under the covers. It is fortunate we took him in time. It is never safe to take any risk with children. Get after them at once if they begin to droop. . . . . A reader asks whether Orchard grass will make good pasture. From the littie experience I have had with it I should say that it will stand pasturing better than any grass we have, except Blue grass. I shall sow it in an orchard with Red clover, and expect good pasture from it. . . . . This has been the most disagreeable March I have known since the year of the great blizzard—1888. It has been cold, raw and windy. At times the wind has blown a smaii hurricane. It seems as though Jack Frost, having important business eisewhere, had hired a dwarf biizzard to come and rub it in. Our folks were never so weary of Winter. My, but won't they welcome the sun and grass once more! . . . . We have begun feeding the oat hay to the horses. The shredded fodder lasted until March 1, and we have nearly five tons more to shred. This will keep the cows when they first get out to grass. . . . . I have had several letters like the inciosed:

"In your article on the treatment of oats for smut in Hope Farm Notes you did not say how many oats were treated with the half pint of formaidehyde. Will you tell us whether formaldehyde wiil do for us on oats what Bordeaux does for potatoes? I think it wili increase the yieid one-third here." O. D. N.

Maine.

We gave 12 bushels of oats a good wetting with this amount of water and could have provided for eight more. With us this formaldehyde treatment for oats proved more effective than Bordeaux on potatoes. The germs of the oat disease were in the grain. When they were kiiled the piants had a far better chance to grow and develop. Most rusty oats are cursed from the start, for they never have a fair chance to grow. The case is different with potatoes and Bordeaux. Bear in mind, however, that I do not guarantee the oat treatment. I simply teii what it did for us.

H. W. C.

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REPEATING SHOT GUNS
are cheap in price, but in price only. "Take Down" guns *list* at $27.00 and Solid Frame guns at $25.00, but they will outshoot and outlast the highest priced double barreled guns, and they are as safe, reliable and handy besides. Winchester Shot Guns are made of the very best materials that can be procured, a thoroughly modern system of manufacture permitting them to be sold at buyable prices.
FREE—Send name and address on a postal card for 164 page illustrated catalogue.
WINCHESTER REPEATING ARMS CO., NEW HAVEN, CT.

Excellent for "brushing" in clover and grass seeds.
The Eclipse Weeder
Adopts an Entirely New Principle in Weeders.
The teeth are adjustable so that those coming immediately over the plants in the row may gradually be raised as the plants increase in size. I means that this weeder may be used long after the utility of all other Weeders has ceased. Has 39 oil tempered spring teeth, all adjustable to be raised or lowered, to stand straight, or slant to or from the plants. Stirs, fines and pulverizes all the top soil and kills all weeds, quack grass, etc. Adjustable Shafts—fit any horse. Send at once for *special weeder circulers, &c.*
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Peaches and Japan Plums are our Specialties. A full line of Fruit Trees, Plants and Ornamentals. Our trees are hardy, healthy, carefully graded, true to name, and low in price. Order now Special offers of Roses and Shrubs. Postal card request brings catalogue. No agents. You deal direct. We also sell the best SPRAY PUMPS.
THE CHESHIRE NURSERY CO., F. M. FROST, Manager, Lock Box A, West Cheshire, Conn.

BARREN FIELDS
MADE FERTILE
WITH
BRADLEYS
FERTILIZERS

Ruralisms

NOTES FROM THE RURAL GROUNDS.

A STRENUOUS FEBRUARY.—February has locally broken all records in continuous low temperature and bright sunshine. Practically every day but one was clear and bright, but persistently cold. The temperature at no time went below 10 above zero, but on the other hand scarcely rose above the freezing point during the mildest portion of the sunniest days. High northwest winds prevailed most of the time, and dried the soil to an unusual degree despite its frozen condition. Bare grass lands have doubtless suffered considerably, and young or newly-set evergreens show by their browned foliage that a higher rate of evaporation has been demanded from the exposed foliage than the frozen roots could well supply. Fruit buds and established plants show no indications of damage as yet, as the continued cold has kept them in a very quiescent condition. Notwithstanding the unusual percentage of sunlight in February plants under glass have not, as a rule, done well. Nearly all the cut-flower men report their plants as "off crop." They g ow vigorously and make lots of foliage, but do not bloom with freedom. This is rather surprising, as we have always thought that the slow movement of plants under glass during midwinter was chiefly due to lack of sunlight, as the days are generally dull as well as short, but the experience of the past month, with its phenomenal record of bright sunlight, shows it is not really as important a factor as has been credited, at least when accompanied by extreme cold and high winds necessitating hard firing and preventing sufficient ventilation. If plants do not greatly thrive under such conditions, the various insect pests incident to glasshouses find them much to their liking, and a constant battle must be kept up between the gardener and his foes. There are many insect killers for greenhouse use on the market, but they are nearly all expensive in proportion to their efficiency, and difficult or disagreeable in their application. We find a semi-weekly fumigation with dampened tobacco stems and an occasional pinch of red pepper the best practical thing we can use. Forcible syringing with cold water is generally sufficient to keep the troublesome Red spider within bounds, and dislodge any chance Mealy bugs that may fasten on woody plants. When any of the various scale insects appear we find an application of kerosene emulsion or the new and cheap liquid, Leggett's Sprayall, quite effective. Sprayall is now being prepared in combination with whale-oil soap, which makes it more searching in its effects on both insect and vegetable life, but its action is easily regulated by adding more or less water as experience indicates.

EGGS IN COLD WEATHER.—Our output of eggs for January was 300, and 263 for the shorter and much colder month following. This is in no sense a record-breaker for a flock of 25 hens, although several are really superannuated old biddies, kept for sentimental reasons or as an honorable compensation for past services, but we have the satisfaction of knowing these eggs are produced under normal conditions of good care and wholesome feeding with sound grains and table scraps. Three sittings of eggs yielded 30 chicks, which are now enjoying themselves immensely in a wire-guarded inclosure in the greenhouse, quite oblivious of the frigid weather that has prevailed outside. Successful poultry-keeping means a continuous round of detailed work, which must ever be conducted with scrupulous care, and no little worry over the endless complications that continuously arise, but there are compensations when fair success is secured.

ODD PLANTS UNDER GLASS.—In the prosecution of experimental work on the Rural Grounds it is often necessary to grow plants under glass that would not, under ordinary conditions, be given space. Their behavior under the artificial conditions of Winter forcing is often quite interesting. Three varieties of garden peppers, taken up just before frost, have bloomed and fruited in quite a normal manner, except that the peppers are beginning to color before they have reached more than half their usual size. Although peppers love warmth they endure the chilly nights of a Winter greenhouse very well. White field beans and yellow-podded wax beans grown in pots have set a number of pods, which are filling up in a satisfactory manner, but the plants show in their pale foliage the effects of uncongenial conditions. A large clump of sweet William in a 12-inch pot has made a pretty show with its crown of dense and glossy foliage, and is now blooming profusely. There are many plants more unattractive than this old garden favorite regularly forced for Winter bloom.

WINTER RHUBARB LIKES WARMTH.—The rhubarb roots planted December 12 in the warm cellar are yielding a fairly constant supply of tender stalks since the first week in February, while the similar lot in an unheated cellar have scarcely begun growth, and do not promise an edible result much before the usual outdoor period. The soil temperature of the first lot averages about 55 degrees, and the latter below 40 degrees during cold weather. This experiment seems to dispose of the prospect of forcing rhubarb in Winter without some provision for maintaining a moderate degree of heat.

NEW HARDY ROSE, ALBA RUBIFOLIA.—Fig. 90, page 207, shows this beautiful new hybrid of the Japan trailing rose, R. Wichuraiana, which was crowded out of the columns of the catalogue review number. Alba Rubifolia originated on the Rural Grounds in the same lot of hybrid seedlings that produced Ruby Queen. It is a result of crossing Wichuraiana and the double yellow Tea rose, Coquette de Lyon. It is a very strong grower, much of the foliage and young growth being a bright, cheerful brownish red. The flowers are very double and pure white. The mature foliage is thick and bright green, remaining on the plant most of the Winter, so that it always presents a neat appearance. It seems to be as hardy as the other Wichuraiana hybrids, and should prove a most desirable variety for permanent planting. W. V. F.

Dwyer's 18th Annual Spring Catalogue

contains a thorough description of all the good fruit for commercial and garden purposes; also descriptions and illustrations of ornamental trees, plants, vines, etc., for beautifying the home grounds. Mailed free to all who apply for it, and mention THE RURAL NEW-YORKER. This book is useful and instructive. The colored plates are works of art. Do not fail to write for it at once. Address T. J. DWYER & SON, Orange County Nurseries, CORNWALL, N. Y.

100 VARIETIES JAPAN PLUMS in Trial Orchard. 20 Listed for Sale. 30 Thrown Away.

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Live Stock and Dairy

Testing Cows for Tuberculosis.

C. S., Berlin Heights, O., asks how cows are tested for tuberculosis. The method of applying the tuberculin test to cows in New York State is as follows: The temperature of the animal is taken. Then about 30 drops of tuberculin are injected through the skin of the neck or shoulder. This is the proper amount for animals weighing about 1,000 pounds, and it would be varied according to weight. After eight hours the temperature is again taken, and at intervals of two hours thereafter, during the following day. Usually those showing a rise in temperature of three or more degrees are condemned as tuberculous. Some animals, though healthy, vary two to four degrees under changed conditions, or at different times of the day, and it is a good plan to learn the habit of the animal in this respect by making several temperature tests previous to using the tuberculin. In Canada five of these preliminary tests are required. The normal temperature of some cows is also as much as two degrees above others, and there are conditions under which the system is susceptible to an injection of tuberculin, even though the animal is not diseased. Dr. James Law says that at the time of the test the cow should not be within three weeks of calving, should not be exposed to a hot sun or cold drafts, or put into a close stable. Heavy cows accustomed to a ground floor sometimes show fever if made to stand on hard boards, and the same may be caused by omission in milking, delay in watering or change in food. These things show the need of experience and good judgment in handling the test. Some people have needless fears, however. If the tuberculin is properly prepared there is not the slightest danger of its conveying disease germs into healthy animals. The tuberculin used in testing cows is made by artificially cultivating under favorable conditions the tubercle bacillus. The tuberculin itself is a waste thrown off by the bacillus. It is subjected to a boiling temperature, which would kill any germs that might be in it; then filtered so closely that all dead germs are removed, and thus made absolutely sterile. This waste product is highly irritating to the tubercle bacillus. When injected under the skin of an animal in which tuberculosis is present, the bacilli living in the tissues are irritated as soon as the tuberculin in working through the system reaches them, and they become exceedingly active, causing a rise in temperature, or fever. The test is safe, and in most cases accurate when used by careful operators who know what they are about. Those who do not know how to handle it, or jump at unwarranted conclusions, are liable to condemn healthy animals.

Silage Against Stone Wall.

Has any R. N.-Y. reader had experience with a wall under his silo? If so, can he keep his silage without spoiling? My silo is in the barn, built on a wall two feet high by 18 inches thick. It does not keep the silage near the wall. I never lose a pound above that. How can I improve it?

Bemus Point, N. Y. B. W.

The experience you have had with your silage is very similar to that of many others. We have found by many years' experience that silage does not keep so well against a stone wall or against cement as it does against the wooden walls of the silo. The best silage should be found in the bottom of the silo, and will be found there if the silo is properly constructed. It is possible that the air gains entrance at the point of junction between the wood and the stone. In this case a collar of cement should be put around at the base of the boards. This will serve to exclude the air. It is probable that the silage may be made to keep better if the inside of the stone wall is covered with a layer of tarred paper. Next year, just before filling the silo, nail on strips of tarred paper to the lower part of the wooden wall of the silo. Allow these strips of tarred paper to reach down and cover the inside of the stone wall, so that the silage, instead of resting against the stone wall, will rest against the tarred paper. It is probable that by this treatment the waste in silage may be prevented. L. A. CLINTON.

BUCKWHEAT STRAW.—I know that for cows and sheep it is all right. It is rich in food value and animals like it. I cannot find that anyone has fed it to horses.

L. A. W.

HAM PICKLE.—If the Hope Farm man will use this pickle he will have tender hams if pig hams: 10 pounds salt, four pounds sugar, two ounces saltpeter, 24 quarts water. Pickle for six weeks, and smoke. We have used this recipe in the family for 40 years; used hot salt and pepper two years and quit. READER.

HORSES AND BUCKWHEAT STRAW.—I have never fed buckwheat straw to horses, so cannot say anything of the effects, but have had some experience with oat straw. Bedded a horse pretty deeply with it one night, and he ate freely of it, and next day was sick. A veterinary was called and said that the horse had indigestion and stoppage of the bowels, caused by eating too much straw. He was very sick for over a week but eventually fully recovered, and now we are careful not to give him too much fresh straw in his bed. The horse had been used to eating freely of Timothy, but seemed to prefer the straw. H. J. BLANCHARD.

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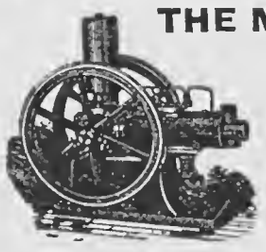

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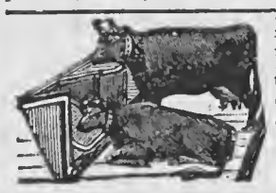

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CARE OF THE LITTLE CHICKS.

In caring for and feeding little chicks it is important that they have the right environment, else the care and the food will go for naught. The brooders should have preferably top heat, good ventilation, a thermometer and a floor entrance. This ought not to be placed out doors, but under shelter, with a sunny exposure and arranged so the chicks can run out of doors in pleasant weather, and be hustled under cover on the sudden approach of storms. In all pursuits there are certain laws before which we bow. We recognize the futility of combating and the necessity of conforming to them. This is especially the case with artificial poultry raising. In no other industry does an infringement of Nature's law and her ways find a more persistent and obstinate resistance than is to be met with in the little chick. There is no more independent creature on earth. Along certain lines it will not and cannot be trained or coerced. When this is fully understood and acquiesced in the case becomes greatly simplified.

For the first 10 weeks of a chick's life, or until fairly well feathered, they are as delicate and as sensitive to atmospheric changes as is a little baby of the same age. The downy dress they first wear is of about the same protection against cold and wet as a muslin slip would be on an infant. It amply suffices for their short little runs from under their mother's wings, where—if they get wet—they are dried and warmed before they become chilled. There is something so wonderfully simple and efficient in the combination of Nature's mother and chicks that few realize how frail a tenure on life these healthy, happy little fellows have, and how dependent they are on just the kind of warmth and shelter and food they have for health and life. "A chilled chick is a dead chick," may sound extreme, but for all practical purposes I can vouch to its truth. The bird may be nursed back to convalescence, but has received a setback in health and growth from which it rarely recovers. Too much heat is almost equally disastrous. The temperature of the hen gradually lowers as the chicks grow older and stronger, and they make longer journeys away from her; also, as one camping spot becomes foul she removes to another.

It naturally follows that our wooden mothers must be kept sweet and clean, and our temperature steady and gradually lowered from 90 degrees to—at the close of the second week—80, and that of the fourth week to 70 degrees, if we would have our birds thrive. We must also watch them close and see they go into their hover after eating; above all things, do not overfeed. The old hen knows well this danger to her babies, and will gorge herself to the point of bursting to put out of their reach what will make them sick. Like little babies, for the first month, little chicks do best fed four times a day on what they will eat up clean in 10 or 15 minutes. Grits, charcoal, bone meal and water ever before them, and work them into scratching for their day's rations as early as practicable. In a word, the closer we follow the ways of Nature the surer is our hope of successfully imitating her successes. F. E. W.

Chazy, N. Y.

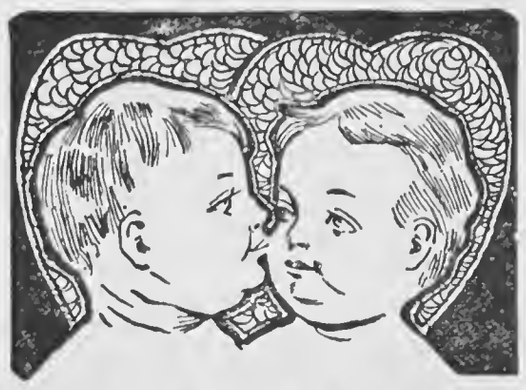
Trouble With the Eggs.

Our hens, one-half of them on killing, have the eggs just yolks, some large as full-sized eggs, some irregularly shaped, and quite hard, and seem partly baked together. We feed principally corn, some oats and table scraps, some wheat; they have plenty of range, comfortable house; are in good condition. They lay about half what they ought, and have been so three or four years. What is the trouble?

Renwick, Iowa. O. E. F.

An inflamed egg duct will cause irregularly shaped yolks, and a feverish, excited condition of the fowl will harden or partially cook them. Remove the cause for excitement, whatever it may be, and keep the birds peaceful and with plenty of exercise. Feed them in the litter whole grain—oats, wheat, barley and a little corn—about one-fourth. Give them the house scraps at noon, just what they will eat up clean and quick, mixing in with it about one-fourth its bulk of wheat bran. They should have plenty of clean water, and when shut up or yarded sharp grit, oyster shells and charcoal always within reach. If the house and fowls are very lousy the condition of the yolks is accounted for.

F. E. W.



Affection

Exhales from children as fragrance from flowers. The little lips are always puckered to give or take a kiss. In homes where there are children, love reaches its fairest and sweetest proportions. In childless homes the kiss of wife and husband grows formal, and presently is neglected; the springs of love in the heart become choked for want of use and exercise. Childlessness is a great sorrow to many women. It is like a curse from Nature, who bids all creatures to be fruitful. It is not a curse but a misfortune. Often the conditions which cause childlessness are removable. Dr. Pierce's Favorite Prescription has brought joy to many a woman by giving her the happiness of motherhood. It gives to the womanly organs vigor and vitality, removes local obstructions, and practically does away with the pains and pangs of maternity.

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To keep the bowels regular use Dr. Pierce's Pleasant Pellets.

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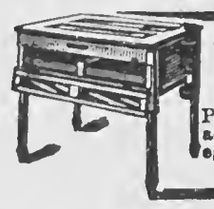
VICTOR INCUBATORS

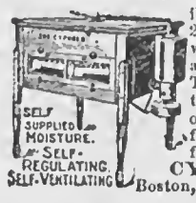
Hatch every fertile egg. Simplest, most durable, cheapest first-class hatcher. Money back if not positively as represented. Circular free; catalogue 6c. GEO. ERTEL CO., Quincy, Ill.



200-Egg Incubator for $12.00

Perfect in construction and action. Hatches every fertile egg. Write for catalogue to-day. GEO. H. STAHL, Quincy, Ill.

250 Poultry Pictures



illustrating every phase of poultry raising and 224 pages of matter telling how, when and what. That and much more is in our "Profitable Poultry Keeping in all its Branches." Tells also about the warranted for 10 years Cyphers Incubator, which is guaranteed to outhatch any other incubator, or money refunded. Book for 10c in stamps. Circulars free. Address nearest office. Ask for book 101

CYPHERS INCUBATOR CO., Boston, Mass. Wayland, N. Y. Chicago, Ill.

UNLIKE A HEN

The PINELAND

Incubator can alway be depended upon. We have the most sensitive and simple regulator, the most scientific system of ventilation, and we guarantee our machines. Our brooders are of best construction, perfectly adapted and unequalled as successful foster mothers. Send for catalogue.

Pineland Incubator & Brooder Co., Box P Jamesburg, N. J.

Stearns New Model No. 7

Ball Bearing Bone Cutter

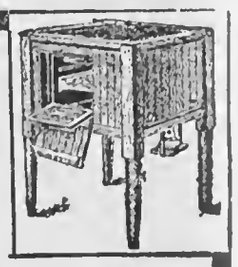
Back Geared Three to One.

It is geared to save power, making it the easiest running, fastest cutting bone cutter ever built. It will cut anything a fowl will eat—green or dry bone, gristle, meat, corn or vegetables. Self-regulating. *It cannot be clogged.*

Green cut bone brings the young chick to maturity quicker than any other food. Our book, "How to Make Poultry Pay," explains how and why. Sent *free.*

E. C. STEARNS & CO., Box 20 Syracuse, N. Y.

They Never Fail



You cannot afford to risk good eggs in a poor incubator or good chicks in a poor brooder. There is no need of doing it. Tho

MARILLA

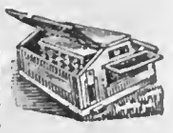
Incubators and Brooders

never disappoint. They are made of such good material, in such a thorough manner, and have so perfect a system of regulating heat and moisture that they are absolutely certain in results. They are sold on a positive guarantee. Your money back if you want it. Send two cents for catalogue and learn why they are the leaders. Twelve years' success behind them.

Marilla Incubator Co. Box 45 Rose Hill, N. Y.

ARE YOU MAKING MONEY?

—Out of your poultry we mean. If not, there is something wrong. May be you didn't start right. We have a book called the **20th CENTURY POULTRY BOOK** which helps to start poultry people right and then keeps them right. Tells all about the business and about the best—Reliable Incubators and Brooders—used all over the world. Book sent for 10c. Order at once. Reliable Incubator and Brooder Co., Box 5101 Quincy, Ill.



SUPERIOR Disc Drills

Save Time and Seed.

100 SIZES. GRAIN AND FERTILIZER.

ESPECIALLY VALUABLE to the farmer who wishes to drill **Corn, Peas, Beans, etc. Will not clog in trash or foul ground.** Full particulars about this and other Superior Implements in Catalogue No. 44. Write for it; it's FREE. A postal-card will bring it.

THE SUPERIOR DRILL CO. SPRINGFIELD, OHIO.

REBUILT MACHINERY

UNLIMITED SUPPLIES at BARGAIN PRICES

Bought at Sheriffs' Sale—25,000 squares **BRAND NEW STEEL ROOFING.** Sheets come in assorted sizes only. We sell it **either Flat, Corrugated or "V" Crimped,** complete with paint and nails, **Per 100 Square Feet $1.75** We have higher grades also.

A million feet of Brand New and Second Hand RUBBER, LEATHER and COTTON STITCHED BELTING, bought at various Sales. We guarantee to save you from 25 to 50 per cent. We have a job in ENDLESS THRASHER BELTS.

ROPE OF ALL KINDS, Wire, Manila, Flax, Tow, Sisal, &c. Write for prices. IRON PIPE in all sizes at a saving of 50 per cent.

ASK FOR FREE ILLUSTRATED CATALOGUE No 57

CHICAGO HOUSE WRECKING CO.

WEST 35TH & IRON STS., CHICAGO.

Fowls of W. & Bd. Rock, W. & Bn. Leg., W. Wyandottes, Eggs $1 & 1.50 26. Stamps. Mrs. J. P. Hellings, Dover, Del.

Partridge Wyandotte Hens.

The Large Money Makers.

Write for circular. C. G. LORING, Dedham, Mass

Blanchard's White Leghorns.—The leading strain of heavy layers. Cockerels for sale. Eggs for hatching. 1il. clr. free. H. J. Blanchard, Groton, N. Y

90 Varieties Choice Poultry. Eggs, Pigeons and Belgian Hares. All combined and information in 60 page book, 10 cents. J. A. BERGEY, Telford, Pa.

TURKEYS—Genuine M. Bronze, Buff Leghorns, Buff P. Rocks. Also eggs. Circular. S. J. B. DUNBAR, Elkhorn, Wis.

H. H Mohr, Quakertown, Pa., breeds all varieties thoroughbred P. Rocks, Wyandottes, Brahmas, Leghorns, Langshans, Cochins, Minorcas, Hamburgs. Eggs, 15, $1; 40, $2. Catalogue.

BROOKSIDE'S WHITE WYANDOTTES please every one because they are carefully bred for business as well as fancy. Eggs that hatch from the choicest matings, $2.00 per 13. Almost their equals for business, $1.00 per 13 $5.00 per 100.

J. E. STEVENSON, Columbus, N. J.

EGGS for hatching, 6 cents each. First class stock. *Rhode Island Reds,* Brahmas, Hamburgs, and Rocks. W. Sherman, 25 Boulevard, Middletown, R. I.

EGGS—Fertility guaranteed. By the sitting or hundred. 23 varieties of prize-winning land and water fowls. Big Catalogue free. Our guarantee means something.

PINE TREE FARM, Box T, Jamesburg, N. J

50 VARIETIES.

I breed fine poultry on one of the best equipped poultry farms in the world. Send 8c in stamps for new 1901 Book, telling all about 50 varieties, with special prices on fowls and eggs. B. H. GREIDER, Florin, Pa.

Eggs and Stock For Sale

Out of five entries at Delaware State Fair, 1900, we received one Second and four First Premiums, judged by the specialist, C. W. Pile. W. P. R., Barred P. R. (Nonpareil strain) and S. C. B. L. Eggs 26 for $1; $3 per 100. Hens and Roosters from $2 to $5 each. J. W. KILLEN, Felton, Del.

INCUBATOR EGGS.

Barred Plymouth Rocks exclusively.

$3 per 100.

C. A. HALL, Oak Hill, Greene Co., N. Y.

The Star Incubator

is best because simplest in construction and in operation. Hatches every hatchable egg. Positive directions and no moisture. Perfect hatchers. 60-egg size, $6. Illustrated catalogue *free.*

STAR INCUBATOR CO., 38 Church Street, Bound Brook, N. J.

New York Office; 38 Vesey Street

A CITY MAN TURNS FARMER.

Arrival in the Country.

PART II.

My programme was—having sent the furniture three days before—to send my family, consisting of wife and two granddaughters, Edith, 15 years, and Alice, six—by the Norwich boat leaving New York at 6 P. M., and reaching New London, Conn., at 4 A. M.; thence a two hours' ride by rail leaves them at West Willington with a drive of 2¼ miles to the farm. I was to get my money from a building loan association in Newark, N. J., that evening, and leaving New York the next morning should arrive in Willington the same day as my family. But to my consternation, I found on reaching Newark that so many "notices of withdrawal" had been handed in that there was not sufficient money on hand to pay them, and mine was one of the latest. It was impossible to obtain the money that night, and I spent most of the next day in the effort to get it, and only succeeded in doing so by submitting to a heavy "shave." Thus my family were left for 24 hours to shift for themselves, in constant dread of hearing that some accident had happened.

Reaching Willington my wife learned that the furniture had not arrived, and getting a liveryman to take them out to the farm, saw Mr. Curtis loading the last of his goods, preparatory to giving us possession. He had 10 miles to drive, and had to start at once, saying he would be back next day to receive final payments, etc. We had bought his milk-pans, pails, etc., and Mrs. Curtis left us a fricasseed chicken in a tin pail. Across the road from the house runs a stone wall, and on and against this were half a dozen big boys and men, come to see what the "New Yorkers" looked like. One of the men had a dog, and he followed my wife about, expatiating on the merits of that particular animal, and how necessary it was to kill woodchucks if one wanted to raise any crop. But Mrs. C. informed him that we wouldn't take a dog as a gift, and he subsided. In the house was a fricasseed chicken and some milk, but not a knife, fork, plate or spoon; not a chair, table or bed. Night was approaching; there were two hogs and a dozen hens to be fed; three cows to milk; and, worse than all, *I* had not arrived. Certainly the prospect at this hour for three lone females was not so "indescribably charming" as the place had appeared to us when looking at farms.

Mr. Curtis had informed us that Mrs. Naylor, whose farm adjoined ours, might be got to do the milking until we could get some one, so she was sent for and came, but there was no cow barn, no stanchions to fasten them; not even a piece of rope to tie them with. One of the cows would not stand, so Edith took her by the horns and with feet braced, actually held her while Mrs. Naylor milked. This is literally true; but just imagine a city girl 15 years old—though large and very strong for her age—doing such a thing! I don't think she ever feared anything on earth except a mouse. A previous milking had been left so we would have skim-milk for the hogs, and they were fed; the hens had to hustle for themselves. Unsuccessful application had been made to several places to take the family in for the night, and it began to look very much as though they would have to sleep in the barn; as it began to get dark a slow, drizzling rain set in to make the prospect more cheerful (?). Finally, the wife of the postmaster sent word that the family could stay at her house, so they started.

Our farm is on a hill, and between it and the higher hill on which Willington is situated, is a deep ravine heavily wooded, through which runs our trout brook. It was quite dark on the road through these woods, and Alice began to cry and asked: "Why don't they light the 'lectric lights?" The child had never seen a night before that was not lighted by electric light. The next morning I reached Willington, found our worldly goods just arrived at the station; was directed to the postmaster's house for breakfast, where my wife with a sigh of relief felt as if all troubles had vanished, now the family were united again. The next few days were spent in that peculiarly delightful work called "getting settled." G. A. C.

MEASURE FOR FEED.—In your issue of February 16 is an article on weight and measure in feeding, in which the writer states that he runs against many farmers who guess at results. While I admit that there is some truth in this, I still maintain that there are many of our shrewd farmers of to-day who can guess nearer than some who write for them can measure and weigh the different kinds of feed in use. Coarse bran is given in the table as weighing five ounces per quart. The question is, how was the quart filled, turned in lightly, or pressed in, or scooped up as would ordinarily be done in feeding? It is evident that three quart measures filled in these different ways will vary much in weight. This will apply to nearly all coarse feeds. Then, again, will not the same bulk of bran from Winter wheat weigh more than from Spring wheat? This question will also apply to middlings. This same writer seems to think that the majority of farmers are, well, rather wooden-headed, or, to use his language, they get "up against a stump," pretty often when he questions them. He certainly uses plain English, and I rather like it, if I don't agree with him. I have a suspicion, however, that this writer, who hails from the "Nutmeg" State, is a tenderloin farmer; not one of the "embattled host," who have to get up at 4 o'clock in the morning and help feed and milk from 25 to 50 cows, and take the milk to market or to the cars.

E. F.

R. N.-Y.—Your suspicion is all wrong. Mr. Manchester is a practical dairyman. He knows which end of the cow to milk, and milks at both ends by knowing how to feed.

ACME PULVERIZING HARROW

Clod Crusher and Leveler

Sizes 3 to 13½ ft.

Agents Wanted

ON TRIAL

To be returned at my expense if not satisfactory.

The best pulverizer and cheapest **Riding Harrow** on earth. We also make walking Acmes. The Acme crushes, cuts, pulverizes, turns and levels all soils for all purposes.

Made entirely of cast steel and wrought iron—**indestructible.**

Catalog and Booklet, "*An Ideal Harrow*," by Henry Stewart, mailed free.

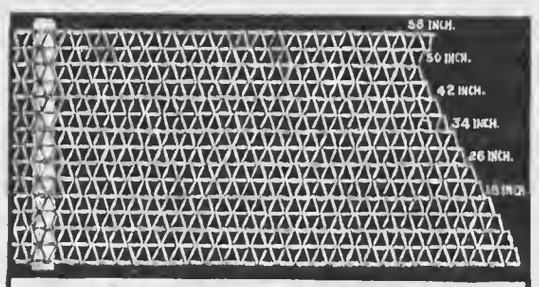
Free on board at New York, Chicago, Columbus, Louisville, Kansas City, Minneapolis, San Francisco, etc.

DUANE H. NASH, Sole Mfr., Millington, New Jersey, and Chicago, Ill.

Eureka Potato Planter, $35.00

Guaranteed to equal the work of high-priced planters in any spot or place. Has Fertilizer Attachment. Write for catalogue and full information.

EUREKA MOWER CO., UTICA, N. Y.



MILLIONS OF ACRES

fenced with them this year. The fences that grow more popular every season. Real saving, service and satisfaction in

Ellwood Steel Wire Fences

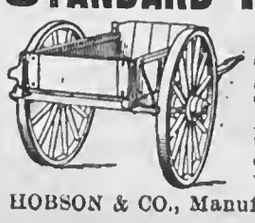
Fully guaranteed. Best steel and galvanizing. If you can't find our local agent write to American Steel & Wire Co., Chicago or New York.

EVERY FARM

needs power to run the Cream Separator, pump water, saw wood, cut ensilage, grind feed and grain, etc., etc. Our Gasoline Engines can be run on 10 cents a day for each Horse Power. They are simple, safe and durable, and are being used on many farms throughout the country. Send for prices, etc., stating size wanted.

R. N. DIRIGO ENGINE WORKS, Portland, Me.

STANDARD HORSE-CARTS.



Twelve Styles—2 and 4 Wheel—Wide and Narrow Tires—Steel Axles. Low rates of freight from our Works—**Tatamy, Pa.**—to all points. Adopted by farmers, contractors, miners, gardeners, cemetery authorities, etc., wherever the best is wanted.

HOBSON & CO., Manufrs, 19 State St., New York

Fake Tests and Testimonials About Cream Separators.

There are always new people to be gulled with an old fake. Hence a word of caution is pertinent regarding the reputed separator "test" and "testimonial" advertisements now being published in some of the papers and put out in circulars.

As regularly as the malarial and sarsaparilla season comes round the would-be competitors of the De Laval machines like to flatter themselves by seeming to stand up alongside the De Laval machines and publish reports of their imaginary nearness in efficiency—*according to means and measurements of their own creation and without much regard for truth and honesty.*

Many of these so called "tests" are simply manufactured out of the whole cloth—it being impossible to locate the places where made or the persons by whom made. Others of them are made by agents or employees or by intending buyers who are offered a big discount and an agency provided they will "try" a De Laval machine in apparent test, the conditions of which "test" are to be fixed by the concern in question and the "results" then certified to by the purchaser. Sometimes innocent parties are called in as "judges," to certify to skim-milk "tests," when they know no more of the manipulative use of a Babcock Tester than they do of a flying machine. Occasionally tests may be honest in a way but so conducted as to be altogether impractical and misleading in results shown.

All this applies equally to testimonials, though some of these are given in good faith—just as is the case with "dilution" separators and every other fake and nostrum ever perpetrated.

There isn't a man living sufficiently familiar with cream separators to pass competent judgment upon them who does not know that the patent protected "Alpha" disc system employed in the De Laval machines renders them unapproachable by anything else yet devised—a fact to which thousands upon thousands of De Laval users may bear witness with their experience.

A "20th Century" De Laval Catalogue may be had for the asking.

The De Laval Separator Co.

Randolph & Canal Sts., CHICAGO.

103 & 105 Mission Street, SAN FRANCISCO.

General Offices: 74 CORTLANDT STREET. **NEW YORK.**

327 Commissioners Street MONTREAL.

248 McDermott Avenue, WINNIPEG.

CREAM SEPARATOR, nearly new, for sale cheap. H. H. LYON, Bainbridge, N. Y.

LAND DRAIN TILE

(Car-loads or less).

Sizes, 2, 2½, 3-inch and up to 15-inch.

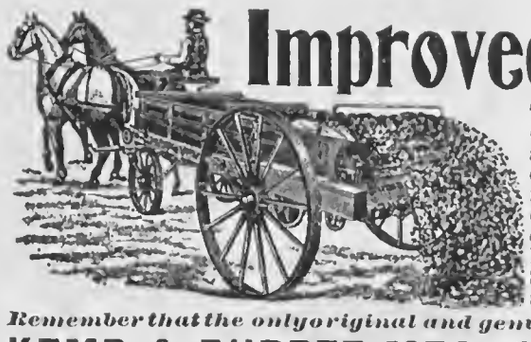
WILLIAM T. LEGGETT & CO.

1025 Liberty Avenue, Pittsburgh, Pa.

WAGON SCALE $20

JONES HE PAYS THE FREIGHT.

JONES OF BINGHAMTON, N. Y.



Improved Kemp Manure Spreader

This is the only machine made that will spread evenly and perfectly all kinds of manure, wood ashes, salt, lime, etc. Tears apart, makes fine and distributes evenly the hardest, caked and coarest manure, no matter how full of straw, corn stalks, etc. Machine is greatly improved for 1901. The driver does not have to leave the seat from the time he leaves the manure heap until he gets back again. Send for latest catalog describing all improvements and telling "How to Grow Big Crops." Mailed free.

Remember that the only original and genuine Kemp Manure Spreader is made by us.

KEMP & BURPEE MFG. CO., Box 38, Syracuse, N. Y.

The Milk Shippers' Union.

The farmers as a rule are the last persons to protect themselves, and have been dictated to by the middlemen so long until prices of their milk and produce have become so small that it is now either a case of "work for nothing and board yourself," or of obtaining a fair price for their products. The object of organizing the Milk Shippers' Union is, if possible, to have the coöperation of at least a majority of the milk shippers in a radius from Philadelphia, covering the supply to this city. When they have accomplished this they will be in a position to say that they will take a certain price for their milk. Until then, and the way it has been, we have had to ask: "What price will you give us?" The farmers here attempted, some time ago, to accomplish the same thing but failed; they undertook to take care of the surplus milk by disposing of it at a more reasonable figure, thus failing in the very thing they were striving to remedy. The present Union purposes to obviate this trouble by having each shipper retain at home say one day's milk per month or week; or oftener if necessary, so as not to get a surplus upon the market. A shipper can easily take care of at least one milking per week, by using the cream for butter or any purpose most needed, and feeding the skim-milk to his pigs. By this method they should be able to maintain a fair price. The farmer should certainly get one-half the retail price, say 3½ and four cents for the year; even at these prices he would make no fortune at it. When the middlemen expect the farmer to pay high prices for his stock, add to this the cost of feed and labor, the wear and tear and often total loss of cans, and the "milk bill," too; is it any wonder that the farmers are becoming aroused throughout the country and taking a stand to assert their just rights in this much-abused cause? To accomplish the desired end, it is necessary to go carefully and cover the ground thoroughly, and those who join it should be "those whose backbone contains an unusual amount of stiffening." A number of unions have been organized throughout New Jersey and Pennsylvania, and are being formed in other localities as speedily as possible.

Delaware Co., Pa. W. R. CALVERT.

Advantages of the Cemented Silo.

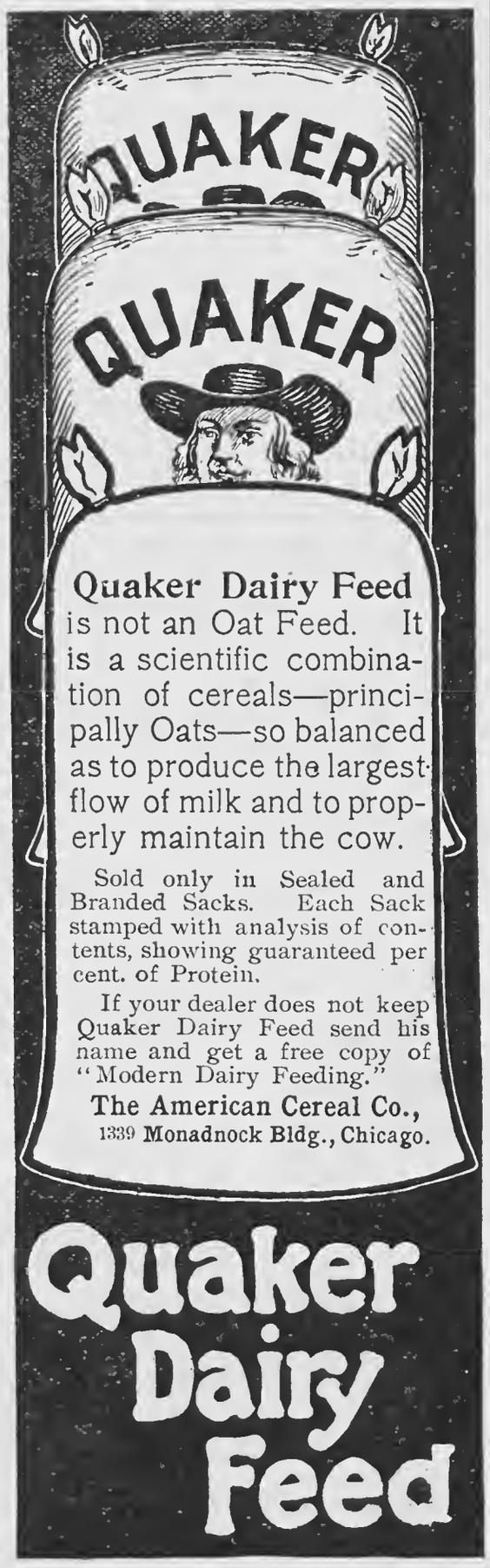
Why don't we hear more about the cemented silo? In this locality they are considered the best. Why use two thicknesses of boards with tar paper? These will absorb moisture and decay. Cement and lath are cheap, make a silo airtight and lasting.

Grand Isle, Vt. H. M. P.

In our last silo bulletin, No. 83, a copy of which can be had by inclosing a two-cent stamp with a request to the Wisconsin Experiment Station, Madison, we have set forth the desirability of stone, brick and cement-lined silos as thoroughly satisfactory structures for preservation of silage. It is doubtful whether a better silo lining for the money can be procured at the present time than one made of good Portland cement, made with clean, sharp sand in the ratio of one or 1½ of sand to one of cement, put on in good condition and thoroughly troweled so as to be hard and smooth. When the cement is used to line a stone silo, or one of brick, the coat need not be thicker than one-quarter to one-half inch. When it is used in plastering silos made of wood which are lathed, it is desirable to make the cement lining fully one-half to three-fourths of an inch thick, in order to have a heavy body to withstand the jarring and tendency to crack. We have in our State a large number of cylindrical silos which are lathed and plastered with cement; some of these silos have been in use now more than 10 years, and are thoroughly satisfactory to-day. I have hesitated unqualifiedly to recommend these lathed and plastered wood silos, because I have feared that the tendency of the silage juices to soften the cement and make it porous would ultimately allow a sufficient amount of air to come through the lining seriously to injure the silage. The silos we have in our State built after this plan are provided with two layers of half-inch lumber, with a layer of tar paper between before the lath and plastering is put on, so that there has been provided a reasonably good lining of wood in addition to the cement, and it is impossible to say from observations on these silos how influential this back lining has been in the preservation of the silage in those cases. Practical experience has proven that if the cement lining is occasionally whitewashed with a thick coat of cement, this layer of whitewash will neutralize the acids of the silage as they come in contact with it, and thus prevent the lining itself from being softened and rendered porous, and if care is taken to do this whitewashing once a year in the bottom of the silo, where the acid action is strongest, and once in two or three years towards the top, there will be no difficulty in maintaining a sufficiently airtight lining in the silo plastered with good cement. The cheaper grades of cement can be used for this kind of work, but they soften much faster than the Portland cements do, and the leaner cements, whether made of Portland or the common varieties, soften much faster than the rich cements, as well as allowing more air to pass through, because they are not sufficiently tight to prevent the juices from being absorbed into the interior of the cement. [Prof.] F. H. KING.

COOKING FEED.—I have a steam cooker, and have used it a great deal in cooking for hogs and chickens, but I have come to the conclusion that about the only thing it pays to cook is potatoes, and while hot mash meal and clover hay (cut up short) into the potatoes and feed warm or cold. It makes a very good ration for either hogs or chickens. T. B. WILSON.

Ontario Co., N. Y.



U S U S U S
The BUTTER SCORING the HIGHEST
98 POINTS
At the National Creamery Buttermakers' Convention, St. Paul, Minn., Feb. 18 to 23, 1901
Was the Product of the U. S. Separator

This butter was made by **Edw. H. Webster, Ames, Ia.,** and scored **one point higher than the butter entered by Mr. Quenvold,** which received a Gold Medal.

Mr. Webster's butter **was entered for scoring only,** therefore could not compete for the prizes, which explains why the Medal was given to the butter scoring second highest and not to the butter that was really the best.

Our "would-be competitor" claims to have had 35 times as many entries at the Convention as the United States, and for all the latter had so few chances, in comparison, of winning yet the **Judges reported the U. S. product the Best out of 829 packages,** another proof of the

SUPERIORITY of the IMPROVED U. S. SEPARATOR

We also call attention to the

GOLD MEDAL IN THE GATHERED CREAM CLASS

which was awarded **W. C. Noble, So. Waterford, Me.,** whose butter was **the Product of Improved U. S. Separators and Cooley Creamers.**

Remember we are Pioneers in the Cream Gathering System and lead in that the same as in everything else in the Dairy and Creamery line.

When you see our "would-be competitor" claiming everything at the Convention, just bear the above facts in mind, also that

THE BUTTER SCORING THE LOWEST, 75½ POINTS, WAS THE PRODUCT OF THE DE LAVAL SEPARATOR.

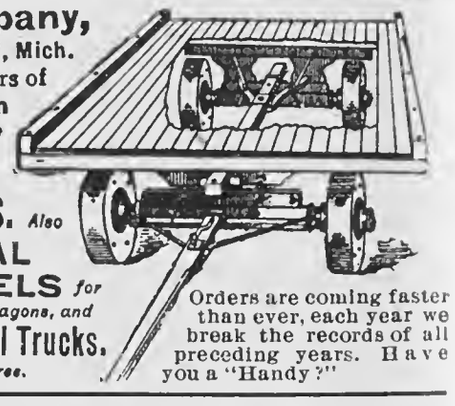
Write for Circulars telling of many other victories of the U. S.

VERMONT FARM MACHINE CO. - - BELLOWS FALLS, VT.
205

SEPARATOR FREE
on 10 Days' Trial. Lightest, easiest running HAND Separator.
NATIONAL Cream Separator
Free book tells all about it.
National Dairy Machine Co., Newark, N. J.

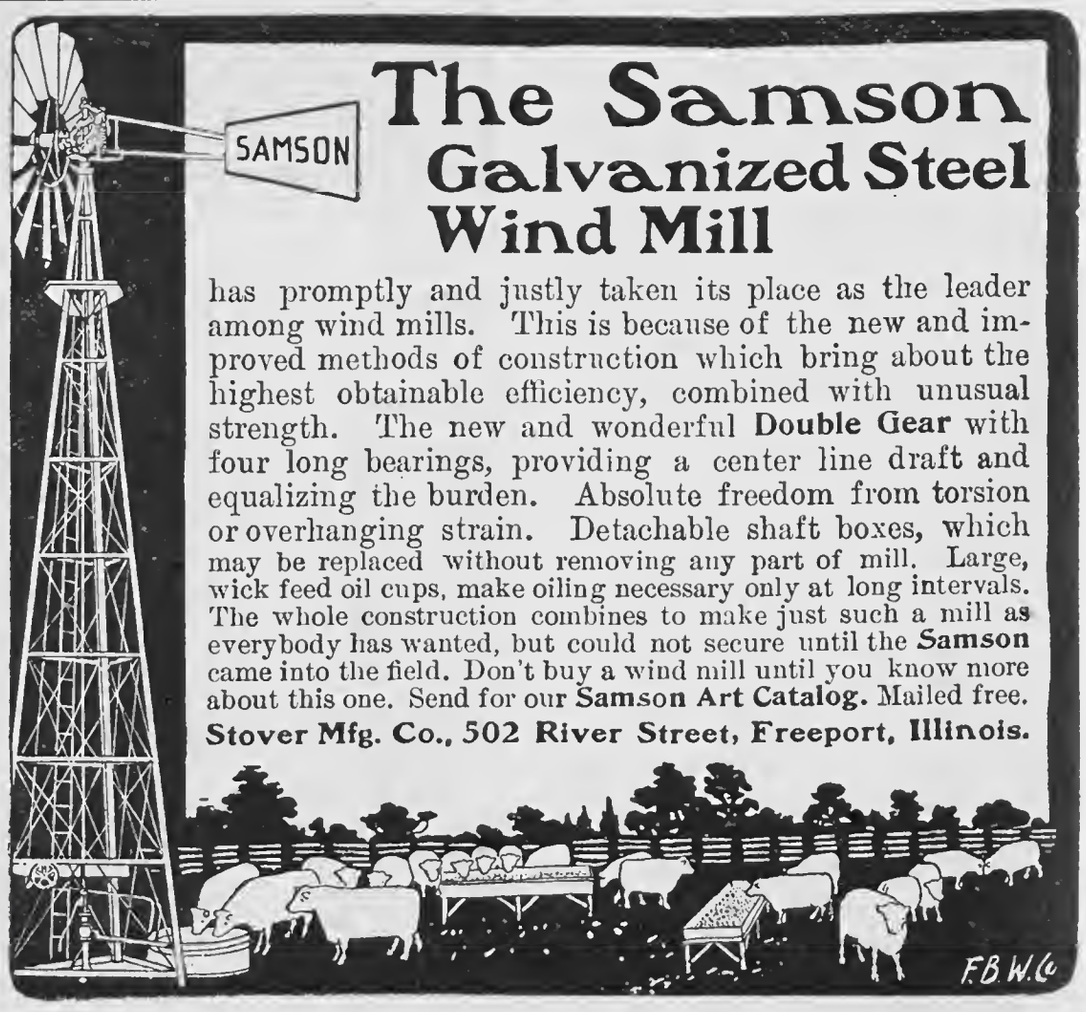
The New Improved
EMPIRE
Cream Separators
are now ready for the trade. They have proven a marvel in Cream Separator construction and results attained through their use astonish experts and appall all competitors.
The Empire No. 1
has a bowl weighing only 4½ pounds, only 2⅝ inches in diameter, only 4½ inches deep with only four parts to the skimming device and with a skimming
Capacity of 250 lbs.
per hour. Never before was a separator bowl of such size known to handle this quantity of milk successfully. On account of being so light, it is easy to turn, easy to handle and so simple it is easy to clean. Machines of greater capacity are equipped with bowl of comparative size. Our new catalogue tells about them and contains much of interest to you. It is free. Send for it.

United States Butter Extractor Co.,
Bloomfield, N. J.

The Farmers HANDY WAGON Company,
SAGINAW, Mich.
are makers of Low-Down Wide-Tire FARM TRUCKS. Also METAL WHEELS for Old Farm Wagons, and All-Steel Trucks.
Circulars Free.

Orders are coming faster than ever, each year we break the records of all preceding years. Have you a "Handy?"

Barns of Plank save timber and cash. Best, cheapest, strongest. 4,000 in use. Book for stamp. SHAWVER BROS., Bellefontaine, Ohio

Sugar Beets—
the largest yield per acre of the best and smoothest form, and very rich in sugar are grown by using
Nitrate of Soda
as a fertilizer. Apply just when the beets are getting well started in the row. The results will surprise you. Send to **John A. Myers,** 12-O John St., New York, for a free copy of book, *"Food for Plants."* Tells about this and much else of value. *Nitrate for sale by fertilizer dealers everywhere.*
Write at once for List of Dealers.



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AILING ANIMALS.

ANSWERS BY DR. F. L. KILBORNE.

Ringworm in Cows.

What ails my cows? Their hair comes off around the eyes; skin turns whitish and looks scaly. What is the cause, and what will cure it? R. L. W.

Beach Lake, Pa.

Saturate the patches with the compound tincture of iodine. Repeat in a week, first rubbing off all dry scurf and crusts.

Colt Weak in Fetlocks.

What shall I do for a 10-months-old colt that does not stand up straight on his hind feet as he should? That is, he seems to walk almost on his pasterns, with his toes pointing up. The colt is in fine condition and growing fast. G. U. N.

Cherlton, Va.

Bathe the sides and back of the leg from the hock to the hoof three or four times daily with alcohol or soap liniment, rubbing thoroughly with the hand each time, until the leg is well warmed.

Congestion of Parturition.

I have a young cow just in with first calf. Her udder began to get hard a week before calving, seeming to move first one side, then the other. She gives a good mess of milk freely, but the swelling does not go down. What is it, and what can I do for it? P. H. T.

Foster, N. Y.

If the heifer milks freely from all four teats, there is probably nothing worse than the congestion of the udder attending parturition. Rub and knead the udder, firmly but gently, after each milking, and I think the swelling will go down in a few days. If it does not, bathe with spirits of camphor, or rub with hot castor oil several times daily.

Constipation in a Cow.

We have a cow that is troubled with constipation. We feed hay, bran, cornmeal and middlings, but still her droppings are very hard. She is in good health; milk yield is good, and milk is very rich. What shall we feed or give her to remedy this? We have no roots of any kind. W. A. K.

Rocky Grove, Pa.

Feed more bran, and less meal and middlings, especially the middlings. Add a half-pint to one pint oil meal to the grain ration night and morning, or feed one to two gills raw linseed oil in the feed twice daily. If the grain ration, and especially the bran, were made into a mash with boiling water, it will be more laxative. If the above feeding does not prove sufficient, give one of following powders in her feed twice daily: Epsom salts, 16 ounces; ginger and gentian, of each four ounces; powdered nux vomica, two ounces; mix and divide into 12 powders.

Lymphangitis or Farcy in a Horse.

I would like to know what ails my mare, and what will cure her. One of her hind legs swelled at first, and she was very lame and sore; then it broke out in several places from the hock joint down to the fetlock joint. In a few days the sores stopped running, all but the one on the hock joint in front; that kept running for over two weeks, but has stopped now, and the lameness has also left. J. M.

Albion, N. Y.

The symptoms indicate lymphangitis, or farcy, probably the former. Give the following powder in ball or drench: Best aloes and ginger, of each one ounce, mix. If the bowels are not freely moved repeat the dose in three days. Then follow with a powder in the feed night and morning: Nitrate of potash and gentian, of each eight ounces; dry sulphate of iron and nux vomica, of each three ounces, mix and divide into 16 powders. Should the trouble recur have the mare examined for farcy. If not at work, feed on a light laxative diet, with sufficient roots, bran mashes or some succulent food sufficient to keep the bowels open.

Feeding Straw from the Stack.

Straw is fed to cattle in this region to a large extent, and no doubt sometimes at a loss financially, but this year especially cattle are doing well on it, owing to a large extent to the drought that ran through May, causing wheat to be short and make a poor yield of grain. It is also highly appreciated this year because meadows were quite a failure, and corn was a short crop, making feed scarce. My method is to have the stack-yards in dry meadows or places where cattle can conveniently run to the ricks of straw. Then fence the ricks as follows: Set poles of about five or six inches diameter at the large end, and long enough to reach over the top of rick when planted a few inches in the ground. Set these poles at convenient distances apart, say 10 feet, and have one of them in the middle of each end of rick, so that at each end there will be three poles thus coming together at the top where they must be fastened together with hickory withes or pinned or spiked together. Then fasten together in the same way the other poles, which must be placed in pairs. Next pin fast to these upright poles two strings of poles or strong rails horizontally, one about 18 inches from the ground, and the other about 18 inches above that, thus leaving a place between the two for the stock to eat through, but not large enough for them to get through. They will eat all the straw for a distance of about three feet, and in this space all of the remainder of the rick can be quite conveniently fed out. The feeder can stand on the top horizontal pole, and with a pitchfork can pull the sides of the rick down into that space, and need not untop the rick until at least one-half is fed out. We think this plan can be used also with hay or shredded fodder topped out with other material, and the poles do not hinder driving wagons near enough to put on a load to haul away. Our thrashing is done with a machine, using a cyclone stacker which rather cuts up the straw, and although ricks are generally made circular in shape these poles will stand well and answer the purpose, while the short straw and chaff are difficult to move except in this way, and makes excellent feed fresh from the rick. Our cattle are all dishorned, or hornless, and it would be a surprise to see the number that can be accommodated around a small rick. J. L. B.

Falls, W. Va.

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When you buy a carriage, buggy or harness. Choose from the biggest stock and fullest assortment, and pay only the cost of making, with but one moderate profit added. Our plan of selling direct from the factory insures satisfaction—your money back if you're dissatisfied with your purchase—and enables you to save the dealer's profit.

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of selling vehicles of every description, at factory prices, is constantly making us friends of this kind. You don't have to buy "sight unseen" when you buy of us. We let you use the vehicle for 10 days before you decide to keep it. And we sell a better vehicle for less money than any other manufacturer or dealer in the country. Send for our big, free catalog of vehicles and harness and think it over.

Kalamazoo Carriage & Harness Co., Dept. 30, Kalamazoo, Mich.

No. 170

$12.25 is our price. Retails for $18.00. High grade single strap driving harness, nick. or Davis rubber trim. Genuine rubber or brass trim, $14.25. 75 other styles single harness. Prices, $4.45 to $26.50.

No. 330

$22.15 is our price. retails for $30.00. Extra quality double buggy harness, nick. or Davis rubber trim, blind or open bridles, over or round side checks with collars. Less collars, $19.60. 26 other styles double driving harness. $14.60 to $60.00.

No. 385

$21.15 for a spring wagon harness that retailes for $30.00. X, C. plate or Japan trim, traces 1¼ in., wood hames with rings, less collars. Price with collars, $24.15. Brass or nickel trim, $2.35 extra. Breeching if wanted. Three other styles.

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$23.80 buys our Lace Box Loop hame tug heavy hook and terret farm team harness, less collars. With collars $28.15; retails for 35.00. A splendid farm harness for $18.50. 50 other styles of team harness $13.55 to $12.50.

We send 1 hilch strap with single harness, 2 with double harness. We ship any harness C. O. D. subject to examination, without any money with order. Order by number. Send for Free Catalogue. It gives prices on 225 styles of harness, strap work, snaps, buckles, and all kind of harness repairs, blankets, fly nets, saddles, etc. Write now for Free Catalogue.

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Disk Harrows,
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16 tooth complete as shown,	$5.85
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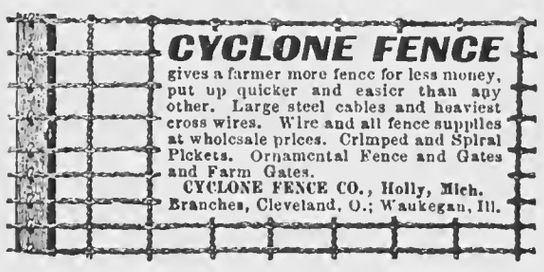
Let Us be Honest

and admit that a fence containing part large and part small size wires will not stand the same exposure and abuse as a fence containing all large size wires. One will last a lifetime. Will the other? Send for catalogue.

THE FROST WIRE FENCE CO., Cleveland, Ohio.



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BETTER THAN WOOD.

Costs less; looks better; lasts longer.

HARTMAN STEEL ROD LAWN FENCE will neither rot nor burn.

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SILOS

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Price for 1 section, 30-tooth, 5-foot, 132 pounds $ 3.92
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This Harrow $7.84

SEND NO MONEY, if you live within 500 miles of Chicago. (if further send $1.00) cut this ad. out and send to us, state whether you wish 1, 2, 3 or 4 section harrow, we will send the harrow to you by freight C. O. D., subject to examination. You can examine it at your freight depot, and if found perfectly satisfactory, exactly as represented, the equal of any steel harrow made, and about one-half the price charged by others, pay your railroad agent OUR SPECIAL OFFER PRICE and freight charges, less $1.00 if sent with order. The freight will average about 40c per 100 lbs. for each 500 miles.

THIS HARROW is made for us in Ohio by the best harrow maker in America, made of the highest grade channel steel, extra strong, heavily clamped. Has malleable eye tooth fastener, extra length teeth with enlarged heads, self adjusting lever, adjusted so the teeth can be set at any angle desired, backward, forward or horizontally. Sections are self-adjusting, can be used in 1, 2, 3 or 4 sections as desired. Embodies every up-to-date feature of the highest grade all steel lever harrows made, and put out under our binding guarantee. Each harrow comes with draw bar and all connections complete. For other harrows at $3.68 and upwards, write for Harrow Catalogue. Address

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The Rural New-Yorker

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Remittances may be made in money order, express order, personal check or bank draft.
THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, MARCH 23, 1901.

DOZENS of fruit twigs are sent us for examination from all over the country. People are reading about the San José scale, and they begin to examine their trees, perhaps for the first time. Out of all the specimens sent but one has proved to be the true Pernicious scale. The others are mostly the common Oyster-shell bark-louse. All this shows how the constant hammering on the scale question has waked up the people and taught them to use their eyes.

*

THE New York Fruit Growers' Association will be represented at the State Fair. It may not be desirable to hold a regular meeting, but "headquarters" will be established, new members secured and statistics and reports collected. It is thought by many that this farmers' organization is likely to become second only to the Grange in size. As we have explained, it is a *business* rather than a horticultural society. We wish that fruit growers in other States would join this Society, or organize similar ones. We need them all in order to secure accurate facts about production and distribution of crops.

*

THE second part of the story of the city man who turned farmer is printed this week. We take pains to caution every writer who attempts to discuss this subject against drawing too bright a picture. In reply to this caution G. A. C. writes:

> I should greatly regret being the cause of loss to any poor soul. I know from experience, with what eagerness the workingman grasps at a chance to escape from that constant dread—the loss of his job—and as advancing age is surely bringing that event nearer, so he becomes more willing to take the chances of success in a new calling.

A man might do great damage by painting country life in such glowing colors that city people might be induced to leave good jobs to attempt something for which they are utterly unfitted. Country life may mean freedom or slavery—depending on the ability of the family to be helpful and happy.

*

THE hill farmers of Connecticut want it understood that the ox is *not* passing off the stage. At one local Grange fair there were 226 yoke of working cattle in line. Most of these oxen were Devons. Years ago a farmer started a Devon herd, and the steers proved so useful at the yoke that most of the barnyards are now red with them. That shows what one man's good work in special breeding will accomplish. It also shows that the ox is still working in Connecticut. The chances are that he always will work there—and work at a profit, too. The grandchildren of the men who followed the ox across the plains into the western wilderness, do not know what an ox yoke is. How they would laugh at the slow, toiling, creature, and yet this faithful brute is keeping the forest back from many a New England farm, and earning a good living for his owner!

*

WE judge from reliable reports that the farmers' institutes this Winter are more appreciated than ever before. Evidences of the work more than ever before are appearing. The spirit of criticism that once prevailed is fast dying out. It seems true that the greater part of the institute workers are practical men, and men of standing, honored and respected at home. We must keep in mind the fact that no man in this country ever took a step in advance of his neighbor, but what he found some one to criticise him, and even say unkind and untrue things concerning him. Such always has been the case, and always will be as long as the world stands; no man ever yet even planted a hill of potatoes different from the general custom in that neighborhood who was not called hard names by some one; no one ever yet brought into a neighborhood any purebred stock, or even bought a purebred bull, ram, pig or chicken, that he was not called "a fool" for so doing. The animal was simply better than what the mass of the people owned, and jealousy called forth the word "fool." The fact remains just the same that this man was a public benefactor; yet his neighbors condemned him for it, and that is often just the case with the farmers' institute work.

*

WE were astonished at the showing made at Worcester, Mass., last week by the Massachusetts Fruit Growers at their annual meeting. The Worcester County Horticultural Society entertained the crowd—and it was a crowd. In the evening a banquet was given, at which over 400 men and women helped create a market for farm products. This was followed by a dance, in which the limber-limbed unlimbered. These social features seemed to us very useful. The banquet and dance brought the townspeople in and made them acquainted with the fruit growers and what they had to offer. After all, the man who lives in the town house is a most useful citizen to the farmer. He is the man to be reached and educated. It was an inspiring thing to face this great audience of clean, bright-faced men and women. We regret to say that in some places it would be necessary to go out and compel the lame, the halt and the blind to come in and eat the dinner. Even then there would be empty seats. These Massachusetts fruit men attracted the very flower of the State, and few made excuses. The Worcester County Society has put dignity and character into Massachusetts horticulture, and the State is stronger and better for it.

*

ONE by one the wild-eyed, strenuous horticultural catalogues, with their usual appalling array of superlative adjectives and preposterous claims, are being modified within the bounds of reason. Customers are beginning to regard these extravagant statements with a cold and wary eye, and venture cautiously, if at all, into a vegetable wonderland conjured up by the untrammeled imagination of the novelty boomers. The introduction of the photo-engraving process is responsible for most of the noticeable improvements, however. The camera may be induced to flatter, but will not lie outright. The resulting picture is certain to show the essentials of the object placed before it, while the riotous imagination of the artist employed to design the old-style cuts enabled him to depict thing things seen neither on land nor sea, and only possible in a seed or nursery catalogue. The number of these humbug catalogues is now reduced so low that we have hopes of witnessing their practical disappearance. We think that any fair-minded individual should be convinced, on examining the catalogues for the current season, that our seedsmen make as honorable a showing as any known class of merchants.

*

PRESIDENT Hadley, of Yale College, one of the most conservative institutions of learning in the land, in a recent address, declared that an emperor at Washington was possible within 25 years if the power of the trusts was not curbed by the growth of public opinion. He could see no chance of benefit from restrictive legislation, but based his hopes for the future on the restraining power of public opinion alone. It is conceivable that these immense combinations of capital, engineered by the shrewdest and least scrupulous individuals of the time, in order to gain direct military power, may insist on crowning one of their pliant tools as head of the Government if the popular will is not more alert and wakeful. But who is to express a forcible opinion adverse to predatory trusts? Not the college men surely. If not direct beneficiaries of the trusts as at present constituted, most of them hope to secure employment or protection under them in the practice of one of the liberal professions. Not the business man, for unless driven from the field he generally contents himself, as far as his ability extends, in practicing the same sharp methods of dealing. Hardly the artisan or laboring man, unless he develops more foresight than he has recently shown. He is so immediately dependent on the capitalists for his maintenance that they have little difficulty in cajoling or terrorizing him whenever the need arises. If there is really serious danger to our National institutions it will only be averted in the future as in the past by the intelligent and decisive action of the farmers and rural dwellers of the country. The farmer alone has everything to lose and nothing to gain by submitting to the commercial extortion of the trusts, and to the era of military extravagance and oppression they seem about to inaugurate. The American farmer has as yet given this subject very little attention, but when his mind is made up he will be heard from in no uncertain manner. The solid justice and patriotism of the agricultural masses may be trusted to thwart these monopolistic schemes.

*

WE have been interested in the evolution of a certain farmer in a New England town. He is 14 miles from market and in a locality where the majority of the farmers are inclined to be shiftless, and scarcely make ends meet. They make a little maple sugar in the Spring and pick a good many blueberries and peddle them in the Fall, but their dairies are neglected and their cows quartered in dirty stables, and as one man expressed it, you can throw your stool through the cracks in the side of the barn anywhere. Haying commences the middle to latter part of July, and continues into September. This farmer began with a small dairy, making butter for private customers which he delivers once a week. His dairy was not satisfactory, and he made arrangements with a good dairyman to take his heifer calves, paying a little more than the market price. Those from the best cows were raised, the others fed on skim-milk and later vealed. A good bull we believe now heads the herd, so that his own calves are of value. He has now a good-sized herd of cows that are first-class butter producers. His hay is early cut, and better quality than most of it in his neighborhood. He has a long haul for grain, and has studied the feeding question so as to haul the least possible, and have it of the most value. He now buys cotton-seed meal and bran, and still further to reduce cost, is now buying it by the carload, getting it hauled for $2 per ton. He thinks about his business, reads all he can upon the subject, and whenever he meets a good dairyman always has a hatful of questions to ask him. Most men would regard him as a little slow, but his progress has been sure, and now he is the leading dairyman of that section.

*

BREVITIES.

RURALETTES.

Mr. Freeze and Mr. Thaw
Have combined to try to draw
Young Tim. Hay out by the roots;
He puts on his rubber boots
Just about two sizes large
When old Mr. Thaw's in charge.
Then old Jack Frost suddenly
Gives a jerk and pulls him free,
And in April we shall find
Only his big boots behind.
Dig down deeper, Timothy,
We have further need of thee;
Put on boots that will not slip,
Do not let them break your grip.

* * *

The missionary who goes forth to preach
To cannibals would figure from the start,
That there are even chances that he'll reach
Their stomachs rather than their sinful hearts.
And so the missionary on the farm
Who would convert his neighbors need not think
To hear them sing his praises in a psalm,
But rather give him poisoned words to drink.

* * *

Yes, man is made of mortal clay,
And clay is still our strongest land;
Yet, am I not right when I say
That both require a heap of sand?

* * *

ALFALFA does not fancy shade.

MR. ALF. ALFA presents his card!

WHAT have you ever given away?

DO some strong thinking every week.

BEARDLESS barley may shave the feed bill a little.

How will beardless barley grow in a shady orchard?

THE strong man is able to cauterize a criticism into character.

THERE are people who need something that will kill the microbe of *my*.

THE robber hen should not try to lie out of her bad reputation, but rather *lay* out of it.

So far as farming is concerned, New England seems to be becoming a land flowing with milk and apples.

IN reply to a question from northern Michigan as to whether cow peas will make more cow fodder than oats and peas, we say at once—No!

HUNDREDS of our readers seem to have cameras, and they know how to use them. It is a great thing to be able to illustrate your private letters.

THE best time for a beginner to investigate the poultry business is in the Fall. The losses are then most apparent. By Spring delusive hope has secured a new grip.

THE system of "syndicate" celery growing in the West, by means of which great tracts were covered with the vegetable, has nearly driven out the smaller eastern grower.

AT the Kansas Experiment Station it was found that chopping up the old Alfalfa fields with a disk harrow did about as much good as cultivation does to corn. It would not pay to disk one-year-old Alfalfa.

A BILL before the Nebraska Legislature declares sunflowers and cockleburrs to be a public nuisance, and makes it the duty of every owner of land to destroy them between August 15 and September 1 each year.

SMITH, owing to the present high price of cotton, will increase his acreage of cotton, but Jones, who has read that the stock of manufactured goods is unusually large, will increase his acreage of corn with the view of feeding it, and convert his surplus crop into beef, pork and mutton, and dairy products.

Events of the Week.

DOMESTIC.—A delegation of Illinois manufacturers called on Secretary Gage March 6, protesting against the countervailing duty on Russian sugar, which has provoked retaliatory tariff measures on the part of Russia. The Secretary explained at some length that it was perfectly useless for any association of manufacturers or anyone else to demand of the Treasury Department the repeal of the countervailing duty order. The duty in question, he said, was imposed in obedience to the law of Congress, and was a matter over which the Treasury Department had no control except to carry out the law. . . . . The Prohibition State Convention in Michigan, by an almost unanimous vote, refused to endorse the work of Mrs. Carrie Nation in smashing the saloons in Kansas. . . . . A bill just introduced in the New Jersey Legislature prohibits "treating" to drinks. Temperance influence is backing the bill. . . . . March 9, the Utah Senate passed a law permitting polygamy. The new law grants immunity from prosecution, except under the United States statute, to all persons living in polygamy. The Federal statute applies only to the celebration of a plural marriage. The avowed object of this act, which is passed at the dictation of the Mormon Church, is to allow men now having several wives to live with them undisturbed. In consequence, preparations are already being made to resume openly polygamous relations. The measure, which is known as the Evans bill, passed the Senate March 9 and it was put through the House March 11 under "gag" rule. . . . . March 10, violent storms prevailed over a wide area throughout the United States. At Wills Point and Terrill, Tex., wind and rain demolished property and caused the loss of seven lives. At Chicago, Ill., wind caused a property loss of $175,000. At Detroit, Mich., over 1,000 telephones were rendered useless by the rain freezing on the wires. Missouri suffered from heavy snow, which crippled transportation. In Arkansas, there was widespread damage from wind and flood, and 16 persons were killed, many of them being drowned. . . . . The grand jury at Anderson, S. C., has reported 20 cases of negro laborers held in slavery. . . . . Two Chicago men have been arrested for complicity in the $30,000 robbery of revenue stamps at Peoria, Ill., January 25 last. . . . . By the explosion of a boiler in an old theater building in Chicago, occupied by a laundry, March 11, the structure was wrecked and many persons were killed or injured. Fire followed the explosion, and a dozen small business establishments were wrecked. . . . . An explosion in a brewery at McKeesport, Pa., March 12, blew the building to pieces, and killed several persons. A dozen adjoining houses were wrecked by flying iron and timber, and many persons were injured. The property loss is $150,000. The cause of the explosion is unknown. . . . . The Archer starch factory, at Kankakee, Ill., was burned March 12, with a loss of $325,000. The fire was caused by an explosion of the large grinders from combustion, due to wet starch and iron nails. . . . . A fire at the University of Iowa, Iowa City, March 10, destroyed the College of Medicine and literary buildings; loss $250,000.

CONGRESS.—The United States Senate, March 6, referred to the Committee on Rules the amendment placing a limit upon debate, offered by Senator Platt, of Connecticut. The debate developed the fact that there was intention to urge its discussion at the extraordinary session. Mr. Morgan, of Alabama, who on March 5 offered a resolution declaring the abrogation of the Clayton-Bulwer treaty, addressed the Senate for nearly two hours upon his proposition. . . . . March 9, the President appointed and the Senate confirmed the following members of the Spanish Claims Commission: William E. Chandler, of New Hampshire; Gerrit J. Diekema, of Michigan; James Perry Wood, of Ohio; William A. Maury, of the District of Columbia, and William L. Chambers, of Alabama. This country by the Treaty of Paris relinquished all private claims against Spain growing out of the Cuban war and undertook to adjudicate and settle them. The Commission appointed will pass upon claims aggregating almost $100,000,000, and including everything from the loss of a horse to damages for false imprisonment, from killing of relatives to destruction of sugar mills and cane fields. In almost every instance the claims are regarded as excessive, and the Commission will undoubtedly award considerably less than is asked for. . . . . The Senate adjourned March 9, the extra session having lasted six days. . . . . The answer of the British government to the Hay-Pauncefote canal treaty, as amended by the Senate, was submitted by Lord Pauncefote to the State Department March 11. The treaty is rejected, and no counter proposals are made. The subject will have future consideration, but not immediately, both in the United States and England.

GENERAL FOREIGN NEWS.—Smallpox continues to spread in Glasgow, Scotland. March 6, there were 42 new cases, and 435 smallpox patients in the hospitals. . . . . A severe earthquake occurred at Lima, Peru, March 9. . . . . Serious friction exists between Japan and Russia. The latter power is attempting to grab Manchuria. Conditions in China are unchanged.

FARM AND GARDEN.—The Keystone Poultry, Pigeon and Pet Stock Association, at its annual meeting March 6, elected these officers for the ensuing term: President, Edward L. Welsh; vice-presidents, Alfred C. Harrison, William Disston and George W. Childs Drexel; secretary and treasurer, James Cheston, Jr.; assistant secretary, Joseph Baird; directors, the above named and A. P. Groves, Robert E. Glendinning and Louis A. Biddle, Chestnut Hill; George Corson, Plymouth Meeting; C. E. White, Fox Chase; Henry D. Riley, Strafford; Louis Blanc and Howard Reifsnyder, Philadelphia; Pennock Powell, Swarthmore, and J. D. Nevins, Beverly, N. J.

Breeders of Andalusians are at last to organize. The officers elected at the initial meeting held during the Boston Poultry Show are: President, E. L. C. Morse, South Chicago, Ill.; vice-president, Newton Cash, London, Ontario; secretary and treasurer, R. W. Lovett, Boston.

The New Jersey Fanciers' Association, at the annual meeting in Newark, March 5, named December 10-14 as the date of the next exhibition. This is to be held in Newark. The officers for the new year are: President, E. C. Slater, Washington; secretary and treasurer, Howard Van Sickle, Lebanon.

The American Cattle Growers' Association, in convention in Denver, March 6, elected the following officers: President, F. C. Lusk, California; first vice-president, E. C. Goudy, Colorado; second vice-president, M. K. Parsons, Utah; treasurer, F. A. Keener, Colorado.

At the Wornall-Robbins sale of Short-horns at Kansas City, Mo., March 4, the five-year-old cow Lady Valentine was sold to W. D. Flatt, Hamilton, Ont., for $1,195. The imported heifer Graceful Rose was sold to F. H. Gilchrist, Hope, Ind., for $890. The average price of the first 25 cattle sold was $415.

The judges in the prize competition at the recent convention of the National Creamery Butter-Makers' Association, at St. Paul, Minn., have discovered errors in their computation of averages, and, as a result, Minnesota has been awarded the silk banner for the highest State average. According to the prior announcement Kansas had .05 per cent better average than Minnesota, but the errors discovered give Minnesota .42 per cent the better of it.

Homer Charles Price, assistant in horticulture and forestry at the State University of Ohio, has been secured as head of the department of horticulture at Iowa State College, Ames, Ia.

The March report of the statistician of the Department of Agriculture shows the amount of wheat in farmers' hands on March 1 to be 128,100,000 bushels; corn, 776,200,000; oats, about 292,800,000.

The trustees of the Maryland Agricultural College met in regular session at the college March 8. The board authorized the president to offer the use of the college building during the months of July and August to such teachers of the public schools of the State as desired to avail themselves of a Summer scientific course, the understanding being that the college would be put to no expense on this account.

The Lake Charles (La.) Rice Association will establish and maintain a "rice kitchen" at the Pan-American Exposition at Buffalo from May to November, at which the rice will be served in a variety of attractive forms, so as to show the real value of rice as a staple article of food.

The Secretary of Agriculture will call upon the supervising architect of the Treasury for plans for a new building for the Department of Agriculture. By a provision in the Sundry Civil appropriation bill the Secretary of Agriculture is authorized to expend $5,000 in the preparation of plans for the new building, but before asking assistance from private architects he will seek to have the plans furnished by the Treasury Department. Secretary Wilson has received assurances from influential members of Congress that an appropriation for a new building for the Department of Agriculture will be made during the first session of the Fifty-seventh Congress. The present building was condemned by experts 20 years ago, and is entirely inadequate. The Department of Agriculture is now conducting all its laboratory work in rented buildings, located outside of the department grounds. These buildings are for the most part mere makeshifts, consisting of dwelling houses remodeled to permit laboratory work. Some of them are overcrowded, and none is fireproof. There are five of these buildings, which, with rent and other expenses, cost the department about $10,000 a year.

WHERE THE BEN DAVIS APPLE REIGNS.

Red Apples in New Orleans.

In New Orleans Ben Davis is recognized as king of apples. The unanimous verdict of the dealers is: "This is a Ben Davis market!" Standing side by side with Baldwins from western New York, Ben is preferred, selling at this date for $4.50 per barrel, while Baldwins find but few buyers at $3.50. This state of things is certainly against all good common sense judgment, and entirely without adequate reason from our point of view, but what are we going to do about it? It might make us laugh if it did not make us mad,and doubtless it is quite provoking to us New Yorkers who think we know how much better our apples really are, and who find it impossible to grow the big beautiful spongy Ben Davis to compete with the great orchards of the illimitable West, but may not this unsatisfactory (to us) condition demonstrate that the proof (or profit) of the pudding (or apple) is not always found in the eating of it, but may sometimes *lie in the looks*, and, also, that much that glitters, though not gold, may, under certain conditions, be practically as good as gold if it brings gold prices, and all concerned are satisfied to have it thus estimated? Upon reading over the latter clause of the preceding sentence, I am free to confess that its apparent teaching is quite reprehensible, but would like it to stand on account of its intended sarcasm. Of course, we want the whole truth, nothing less and no substitution. For ourselves and everybody the highest attainable excellence in everything, including apples, and right here in this connection this statement which cannot be disproved, fits in exactly. For quality New York State produces the finest apples in all the world! Think of it! The folly and the cheek of it! Putting western Ben Davis ahead of New York Baldwins!

Last Fall we carefully selected, one by one, enough Northern Spy apples to fill a barrel, and wrapping each one in glazed paper, brought them through the Winter in good shape. When we packed for this southern trip, we put into our trunks and handbags all we could find room for, and on the way down we ate them, and their fragrance filled the car, and we could actually see the other passengers' mouths water as they hungrily watched us out of the corner of their eyes. We gave away but few—couldn't spare many—but their very presence was educational, and a revelation of what the best apples are. We came over the Southern Railway, and were greatly pleased with the perfect service and courteous treatment accorded us, and, of course, the train boys had for sale what they called apples—mostly the inevitable Ben Davis, but when compared with our educational exhibit the boys seemed quite ashamed of their stock in trade. We have on our table in our rooms here a large dish of mixed fruit, consisting of large navel oranges from California—Louisiana oranges being conspicuous by their absence since the freeze, California grape fruit and bananas, all of which are good and low in price, but best of all are our own apples brought from the Hudson River Valley in the Empire State of New York.

My wife thinks that this boiling over on my part is somewhat excessive, and remarks that since the preference for B. D. is so decided and prevalent and its friends so many, it is hardly proper to dismiss the matter by calling its advocates all knaves and fools, and she raises the question whether in our attitude toward B. D. we may not be in a condition similar to that of some people who are color-blind, and asks: "May not Ben Davis be in possession of excellencies and flavors which we, owing to our physical deficiencies of taste and unconscious prejudice, may be totally unable to perceive?" She concludes with this: "Anyhow, I don't believe you have eaten half a dozen Ben Davis apples in all your life! Why don't you eat a lot of them and give B. D. a 'square deal?'" And to this outburst I answer: "See here! This is Lent, the season for fasting and penance, and mortifying the flesh and all that. Let us do some of that business and buy a peck of Davis and eat them and find out if we are mistaken about them. Perhaps the taste for Ben is an acquired taste, like that for olives or tobacco or sauerkraut or guavas, and if we try hard enough we may get it." I remember how years ago when in our little south Florida home the odor of the guavas lying on the porch penetrated through the side of the house and made us gag; that I got up and threw them as far away as I could into the next lot, and in two days I was over there picking them up again, and couldn't get enough of them, and I hanker after them yet!

After three days I take up this narrative to relate that I bought the peck of Davis and we chewed half of them with great resolution, encouraging each other by asserting with simulated gusto: "Yes, indeedy! these apples are certainly delicious!" But it was no go; the remainder suddenly disappeared into the trash barrel. Today there is seen on the streets a new arrival of Oregon Bellflower apples put up in neat bushel boxes. Some of the dealers tell me that in years when the apple crop is not too abundant, carefully selected apples put up in that shape and shipped in, several choice sorts in each carload, would be likely to bring good prices. They would not recommend this method of sending them unless the supply was short and apples in demand, and they in no case want an entire carload of boxes of only one kind, such as Baldwins, etc. I am inclined to think that this method is the best way to educate a poor or a mistaken market, choosing for that purpose the off years when apples are scarce and high. In the present state of this market the dealers want barrels for ordinary fruit, and they want it to come by train, which method of freighting costs at this time 66 cents from Buffalo without change. They say that when it comes by boat it arrives in poor condition, owing to heating or scalding.

J. YATES PEEK.

The Hessian Fly in the Middle West.

The last few years have been very trying ones for the wheat growers of that section of the country lying between the Mississippi River and the Allegheny Mountains and north of the Ohio River. Two years ago, during the Winter, we brought a great deal of wheat into the insectary that had been destroyed the previous Fall by the Hessian fly. By bringing this material into a Summer temperature, and keeping it there, we are able to bring out the insects long in advance of the dates during which they would appear outside. While we were able to get an abundance of Hessian fly during January and February, we did not secure a single individual of the parasites. Ordinarily, these parasites exert a powerful influence in keeping the Hessian fly reduced in numbers. Last year, we again secured material from various portions of the State and again got an abundance of flies, but very few parasites. This year the order of affairs has been reversed. During the latter part of February and first week in March we have developed comparatively few Hessian flies, but swarms of parasites. In some cases this proportion is about one fly to 25 parasites. As each one of these parasites has, in its earlier stages, destroyed a fly, it will be seen that this pest of the wheat field is likely to get a tremendous repulse from this quarter. These parasites are very minute, black, four-winged flies. The females of these deposit their eggs in the bodies of the Hessian fly maggots, and the young develop therein, destroying the maggots before these have developed to flies. From all appearances, where wheat was sown early and destroyed by the fly, and later sent out fresh tillers, if these were sufficiently advanced to withstand the Winter, there is still a prospect for a fair crop.

Ohio Experiment Station. F. M. WEBSTER.

CANNING PEA CONTRACTS.—Since writing you in regard to prices offered for canning products by the canning company situated in this place, I have learned that they had advanced the price of two varieties of peas, Alaska and Advancer, from $1.75 to $2 per hundredweight. The Telephone variety remains the same as last year, $2 per hundredweight. The 40 cents per 100 rate for tomatoes is extended from September 1 to September 15; after that date 35 cents per hundredweight. They take sweet corn contracts, but say that they are not begging for them, as the country is flooded with canned corn, and the price is low. Is it your intention to publish the prices offered in different sections for canning products? The first contracts were made out at last year's prices.

Westfield, N. Y. W. W. M.

BROOK CO., W. VA.—This county lies along the Ohio River. The land is somewhat rough, but of a very rich quality. Farming is of a diversified kind. The raising of sheep, cattle and hogs is the principal industry. The following are the selling prices: Cattle 3½ to 4½ cents per pound; hogs five cents; sheep $2 to $4 each; butter 25 cents; eggs 25 cents; hay $12 to $14 per ton. We have had a very nice Winter; the roads have been fine. Those having hauling to do have been highly favored. There has been a large amount of oak lumber hauled and shipped from this county this Winter, the farmer receiving $3 per 1,000 feet on the stump. The price of land has advanced within two years from $15 and $30 per acre to $25 and $50 per acre. The coal excitement has very much to do with this advance, as nearly all the coal in this county has been optioned at from $10 to $30 per acre. It looks as though this would, in the near future, be quite a coal field, as the Government has decided to build dams along the Ohio River, which will give an outlet for all the coal. We have had but very little snow this Winter. The wheat in the ground does not look very promising for a good yield. Wheat is selling for 75 cents; corn 45 cents; oats 30 cents per bushel.

Wellsburg, W. Va. E. J.

Woman and Home

From Day to Day.

MISS MANDY'S NEW YORK TRIP.

Miss Mandy wuz the keerfullest housekeeper, high or low!
Warn't no one in the country could make a dollar go
As fur as she could make it, in purchasin' o' things—
She pulled the eagle's feathers, an' spread the eagle's wings!

The keerfullest housekeeper—the grocerymen all roun',
They shook to see her comin' like a earthquake shook the groun'!
They couldn't git ahead o' her—her motto wuz, all times:
"The dimes—they make the dollars, an' the dollars make the dimes!"

Well, she'd never been out Billville sence the town wuz corporate,
Till some o' them swell friends o' hers took her to New York State—
To the very city of it—the biggest, best hotel,
Whar each minute meant more money than arithmetics could tell!

The waiters thronged aroun' her, all dressed up fit to kill;
An' ever' time she went to eat, she asked 'em: "What's the bill?"
An', lookin' at the bill o' fare, she only shook her head,
An' to the great surprise o' all, she hollered out, "Cornbread!"

It all wuz jest too much fer her—to see a waiter smile,
Up thar meant just two dollars, which at home would go a mile!
An' so she couldn't stand it; she left that New York shore;
An' she's now at home in Billville, to economize some more!

—Atlanta Constitution.

*

AMONG Spring colors dough is a pastel shade of beige or biscuit. It is rather hard to say where is the exact distinction in the beige tints—biscuit, castor or tan. Mode generally means a mushroomy tint with a pinkish suggestion in it, but, on the other hand, tan or almond shades are often called mode.

*

SAUSAGES always spatter so badly when being fried that their cooking is decidedly detrimental to a clean stove. This is avoided by putting in a baking pan and cooking in a hot oven for 10 minutes. This is an old Dutch method. It is also a good plan when cooking sausages to boil them for eight minutes, allow them to cool, and then fry them brown. They are thus well cooked (a very necessary thing with pork) without being cooked hard, and they also seem less greasy than when fried in the ordinary way.

*

THIS is the season of millinery openings, when the windows are all filled with flower-garden hats. They seem more floriferous than ever this year, and the blossoms themselves are strikingly suggestive of the color plates in a seedsman's catalogue. A majority of the hats so far shown are made shapes of tulle, maline, chiffon and mouselaine de soie; the straw hats will appear later. Large toques or turbans, worn off the face, are especially prominent, and great use is made of shaded colors, melting one into another. Folds rather than shirring seem favored. One very pretty toque seen was of wood brown tulle shading to beige, trimmed with white roses with brown satin foliage. The few straws seen are coarse, heavily-plaited braids, but they are usually very light in spite of a heavy appearance. This is especially true of what is called pineapple straw, which has a beautiful silky luster. A hat noticed at an opening was of mode pineapple straw, with a flat crown and rather wide brim turned up in front. It was trimmed with flat bows of inch-wide turquoise blue velvet, and long sprays of maidenhair fern, delightfully natural in appearance. The Ladysmith hat, so popular for outing wear last Spring, has appeared again; it is modified a little in shape, so as to be more becoming, and is not poked forward quite so much as it was. The usual trimming is a large bow in front with a long (but not stiff) feather sweeping back. Eminence red, often referred to as a trimming for outing hats, is our old friend cardinal under another name.

*

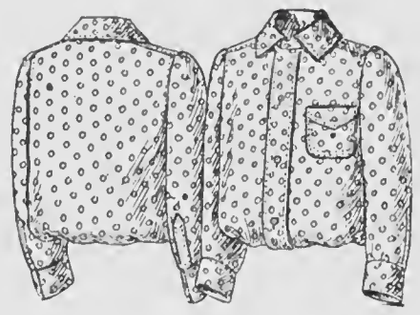
AT this season we always envy those fortunate readers who have a sugar bush, whence they may obtain really authentic maple sugar. We have to buy our "genuine Vermont maple sugar" from a confectioner, and we often wonder how nearly it resembles that sophisticated product described some time ago by an Ohio correspondent, in which maple chips and pigskin were used to impart the "natural" flavor to syrup. Maple sugar may be used in many culinary ways, as well as upon cakes. A delicious pudding sauce is made by melting four ounces of this sugar in a cupful of hot cream, continuing to stir until the sugar is all melted. This is very good with apple, or with plain steamed pudding. A cupful of maple sugar broken into small lumps (not into powder), may be stirred into a panful of biscuit-dough just before cutting, or into waffles or flannel cakes. Maple fudge makes a very nice filling for layer cakes, and the same use may be made of the chocolate fudge, so dear to college girls, a little extra butter being used to prevent it from hardening too much. It is richer than ordinary chocolate filling.

The Rural Patterns.

The open blouse and the tucked skirt combine to make as charming a little girl's costume as can be devised. The excellent model illustrated combines all the latest features. As shown, the material is foule cloth in Russian blue, with trimming of darker blue velvet, full vest and undersleeves of dotted silk, but

3742 Girl's Costume,
6 to 12 Years.

henrietta, cashmere and all lightweight wool fabrics are equally suitable. The pleated skirt has many advantages that are all its own. Being stitched flat it fits snugly at the upper portion, yet falls in ample folds at the feet. The foundation is a fitted lining that closes at the center front. On it are arranged the back, the fronts and the full plastron. The back is smooth across the shoulders and drawn down in gathers at the waist line. The full plastron is attached permanently to the right lining front and hooked over on to the left. The fronts are smooth across the shoulders, but full at the waist, and are extended to form pointed revers. The right front edge is tacked over the full plastron, the left is hooked invisibly into place. The sleeves are double and include the fashionable Paquin cuffs, which are attached to the lining, while the upper portions, turned back to form cuffs, are slipped over the whole. To cut this costume for a girl of eight years of age 4¾ yards of material 21 inches wide, 3⅞ yards 27



3752 Boy's Blouse,
4 to 12 Years.

inches wide, or 2¼ yards 44 inches wide, will be required, with ¾ yard 32, or 44 inches wide for plastron, collar and undersleeves. The pattern No. 3742 is cut in sizes for girls of 6, 8, 10 and 12 years of age; price 10 cents from this office.

A blouse is a very comfortable and satisfactory garment for the small boy. The model shown is well suited to home making, and can be relied upon to fit nicely. As illustrated, it is of English percale in blue and white, but cheviot, madras, shirting, cottons and both Scotch and French flannels and serge are equally suitable. The fronts and back fit smoothly, the shoulder seams being strengthened by applied straps stitched on both edges. A hem is provided at the lower edge through which tape or elastic is inserted to adjust the fullness, which droops over in regular blouse style. At the center front is the regulation box pleat, through which buttonholes are worked that, with the buttons, effect the closing. At the left side is a patch pocket; at the neck is a soft turn-over collar or a neckband to which collars may be attached. The sleeves are in shirt style finished with straight cuffs that close at the back, where an opening is cut in the sleeves and finished with a pointed overlap. To cut this blouse for a boy of eight years of age 2¼ yards of material 27 inches wide, or two yards 32 inches wide, will be required. The pattern No. 3752 is cut in sizes for boys of 4, 6, 8, 10 and 12 years of age; price 10 cents.

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By ex-President

Grover Cleveland

Mr. Cleveland, the champion of Civil Service reform, has formulated some valuable suggestions for the practical betterment of the Service and the increase of its efficiency, which will interest every man who holds office—who wants to hold office—or who wants to see business methods in political service. One in a series written especially for

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Just to get a reputation we offer this month for $12 your choice of Three Handsome Ranges, Gas, Gasoline or Oil. Guaranteed absolutely perfect. Write immediately for particulars. CLEVELAND SALES CO., 59 Knox St., Cleveland, Ohio.

LADIES do you ever get tired **Washing Dishes?** Our Dish-Drier will save you half the time and labor. Sent by express for $1. Your money back if dissatisfied. Send for circular. S. R. Divine & Son, Loch Sheldrake, N.Y.

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contains more digestible nourishment than the finest Beef tea. For Breakfast, Luncheon, or Supper, it is unequalled.
Sold at all grocery stores—order it next time.

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Over a quarter of a million satisfied customers.

To every person mentioning this paper we will send, **absolutely free,** four beautiful **Paris Exposition model pianos in miniature.** The illustration herewith is a reproduction of one. All we ask is that the person shall be genuinely interested in pianos. If you intend to purchase a piano, either now or at some time later, we will gladly send this embossed set to you. These miniatures have been made at great cost. **They are the most expensive advertisement we have ever issued;** we believe it will pay us, because the beauty of these models can not fail to win your admiration. With the miniatures we will send our SOUVENIR CATALOGUE telling how to have

Music Free for a Year

It tells of our great plan of selling a piano or organ direct from the makers at your own terms, allowing you to use it **free for a year,** and if it is not thoroughly satisfactory to return it at our expense. We pay all charges. 25 years guarantee. Write for full information. Address

CORNISH & CO.,
Washington, N. J.

Established over fifty years.

Have you had a kindness shown?
Pass it on.
'Twas not given for you alone—
Pass it on.
Let it travel down the years,
Let it wipe another's tears,
Till in Heaven the deed appears,
Pass it on.

President-General, Mrs. Cynthia Westover Alden.

Headquarters, No. 96 Fifth Avenue, New York.

Society Motto—"Good Cheer."

Colors—Yellow and White.

Flower—Coreopsis.

Society Song—"Scatter Sunshine."

The folks that pine fer the brighter side
Don't look where the daisies grow;
They never sigh—like we folks sighed,
When they're chilled by the wintry snow.
They know it's jest what the Winter'll bring,
An' they say: "We'll blossom again, next Spring!"

The folks that pine fer the brighter side
Don't ever stop to think
That the rain that falls on the world so wide
Gives the cattle drops to drink.
But the cattle know—on the hill an' plain,
An' they're might glad o' the rain—the rain!
—Atlanta Constitution.

A friend in Massachusetts, Sergia Wierne, has this to say, after expressing her interest in Sunshine and its work:

"I have very little time at my disposal, but I try each week to write to one or more invalids, descriptions of our home life and any little pleasures which our family may enjoy. Two years ago I was kept in bed with a broken limb for nine weeks, and on crutches for more than six months. It was a very stormy Winter, and our home is rather isolated, but the letters which friends from a distance wrote to me each week were a surprise and delight, and passed away many otherwise lonely hours, for my children were in school, and my husband away from home for hours."

Some of our newer friends have again asked us the requirements for membership in the International Sunshine Society. We repeat that there are no dues and no stringent rules; the initiation fee takes the form of some kindly deed. Here are the requirements, as given by a Philadelphia branch:

Always to look on the sunny side, and to make the best of life as it is, if not just as we would have it.

To look for happiness rather than borrow trouble. Mark Twain says: "Cheer up! the worst is yet to come." The natural inference is that he considers cheerfulness the best preparation for what is to follow. Our times are not in our own hands, and often the "worst" is the best, for us, in ways we know not.

To do and say pleasant things even when spirit and inclination protest.

To pass on smiles, kind words, bright thoughts, clever and sweet stories and even jests. They may awaken that "sense of humor" which is "a means of grace."

To note when reading, helpful, inspiring and entertaining suggestions and to circulate them. Newspaper clippings are invaluable as promoters of good cheer and interest in current events. A written word or two may indicate the sender and it gives pleasure to know whose the kind thought, but they will be enjoyed with or without the name.

There is no question that one may acquire a fixed habit of cheerfulness, even where it is not a natural characteristic. Happy the woman who leaves, wherever she goes, a memory like that long-dead New England wife, whose tombstone bears the quaint, pathetic comment—"She was so pleasant!"

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

A Woman's Won't.

"You know what Hattie Pike did. Her husband had promised her for 10 years that he would build her a Summer kitchen to put her cook stove in so that her dining-room needn't be so heated up by the stove. Well, he kept putting it off from year to year even after he had the material on the ground, and one day when Reuben was going to have half a dozen harvest hands Hattie got up from the breakfast table and told Rube that she was going over to her mother's, and that she was going to stay there until he put up that Summer shed-kitchen. Rube plead and almost wept, but Hattie walked off, and when the harvest hands came Rube had them all whirl in and help him, and they had that shed up and the cook stove set up in it in time for Hattie to get dinner in it. It's a good thing to let the men know once in a while just how dependent they are on us women."—The Household.

With the Procession.

Do the work that's nearest,
Though it's dull at whiles;
Helping when you meet them,
Lame dogs over stiles;
See in every hedgerow
Marks of angel's feet,
Epics in each pebble
Underneath our feet.
—Rev. Charles Kingsley.

THAT a thing can love and be loved . . . is just a' ane to sayin' 'at it's immortal.—George Macdonald.

BOOKS are good enough things in their own way, but they are a mighty bloodless substitute for life.—R. L. Stevenson.

IT is the every days that count. They must be made to tell or the years have failed. To tell, for that thought and feeling must become action, and action habit, and habit turn to principles and character. And if for some of us and sometimes for all of us action cannot mean doing, then remember that bearing too is action, often in its hardest part.—W. C. Gannett.

THE earth waits for mighty statesmen who shall bind the jealous nations into a commonwealth of mankind. It longs for those who shall teach it the secret of happiness. It is growing tired of coarse, gross, selfish, partial, material forms of civilization; it waits for real and complete civilization; it waits for leaders who shall embody in art, in literature, in institutions, in industry, in business, throughout all human society the beautiful and commanding law of love.—Charles F. Dole.

HOW DO YOU DO?

When you find yourself saying: "pretty well, thank you, but not very strong;" you are likely to be, as you say, "pretty well;" but getting no good of your food.

If you have money and leisure, take a vacation; the doctor calls it "a change." Which is good.

Almost as good is Scott's emulsion of cod-liver oil, instead of vacation. With it is better yet! the doctor is right.

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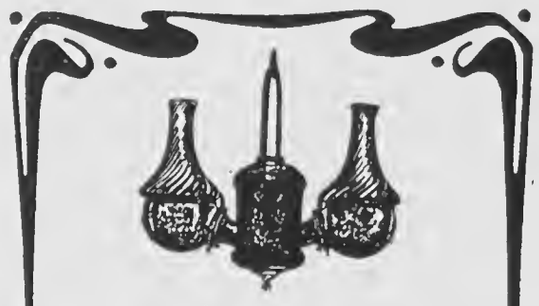

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[*We recommend the above firm as thoroughly reliable.—Editor.*]

Illustration shows machine closed, to be used as a center table, stand or desk.

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OUR $11.25 NEW QUEEN SEWING MACHINE IS COVERED BY A BINDING 20-YEAR GUARANTEE, is made by one of the best sewing machine makers in America, has every new and up-to-date improvement, high arm, positive four-motion feed, very light running, does any work that can be done on any sewing machine made. It comes in a beautiful solid antique oak, drop head cabinet, as illustrated. Our cabinet is beautifully finished, highly polished, elaborately finished throughout.

AT $11.25 WE FURNISH THIS SEWING MACHINE Complete with all accessories, including 1 quilter, 2 screwdrivers, 6 bobbins, 1 package of needles, 1 cloth guide and screw, 1 oil can filled with oil, and a complete instruction book, which makes everything so plain that even a child without previous experience can operate the machine at once. FOR 25 CENTS EXTRA, we furnish, in addition to the regular accessories mentioned, the following special attachments: 1 thread cutter, 1 braider, 1 binder, 1 set of plain hemmers, different widths up to ¾ths of an inch.

SEWING MACHINE DEALERS who will order three or more machines at one time will be supplied with the same machine, under another name, and with our name entirely removed, but the price will be the same, viz., $11.25, even in hundred lots. ORDER TODAY. DON'T DELAY. Such an offer was never known before.

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Address your orders plainly to SEARS, ROEBUCK & CO., CHICAGO, ILL.

MARKETS.

The Week's Quotations.

WHOLESALE PRICES.

NEW YORK, MARCH 16, 1901.

GRAIN.—Western wheat down two cents. Corn one-fourth cent up, and export demand firm. Receipts of oats light and market active.

Wheat, No. 2, hard, N. Y.	81¼	@	—
No. 1, Northern Duluth, spot	89	@	—
No. 1, hard Duluth, spot	92¼	@	—
Corn, No. 2, white, to arrive	48⅝	@	—
No. 2, yellow, to arrive	48⅛	@	—
Oats, No. 2, white, in elevator	33½	@	—
Rye, No. 2, Western, c. i. f., N. Y.	—	@	58¼
State & Jersey, track	57	@	58
Barley, feeding, c. i. f., N. Y.	47	@	48
Malting, c. i. f., N. Y.	62	@	70

BEANS.—All grades but white kidney down five cents, and market weak with very limited trade.

Marrow, choice, per bu	2 37½	@	2 40
Marrow, fair to good	2 25	@	2 35
Pea, bags, choice	2 10	@	2 12½
Red kidney, choice	—	@	2 20
White kidney, choice	2 40	@	—

FEED.—Spring bran and Red Dog 50 cents to $1 up.

Spring bran, 100-lb. sacks	19 50	@	20 50
Winter bran, bulk	20 00	@	22 00
Spring middlings, 200-lb. sacks	18 00	@	21 00
Red Dog, to arrive	19 00	@	19 25

HAY AND STRAW.—No. 1 hay and rye straw down 2½ cents. Receipts moderate and market fairly active.

Hay, No. 1	87½	@	90
No. 2	82½	@	85
No. 3	75	@	80
Clover	70	@	75
Clover mixed	75	@	80
Straw, rye, long	80	@	85

MILK.

New York Exchange price within 26-cent freight zone, 2¾ cents per quart.

BUTTER.—Prices practically unchanged from last week. Tone of market firm, particularly on better grades.

Creamery, extras, per lb	—	@	22
Firsts	20½	@	21¼
Seconds	19	@	20
Lower grades	16	@	18
Held, fancy	19	@	19½
Held, firsts	17	@	18
Held, thirds to seconds	14	@	16
State dairy, ½-firkin tubs, fresh, finest	—	@	21
Tubs, fresh, firsts	19	@	20
Tubs, fresh, 3ds to 2ds	15	@	18
Tubs, Fall made, finest	15	@	16
Tubs, Fall made, lower grades	13	@	14
Firkins, Summer made	13	@	15
W'n imitation creamery, finest	18	@	18½
Lower grades	14		16
Western factory, fresh, small tubs, fancy	14½	@	14¾
Fresh, large tubs, fancy	14	@	14¼
Fresh, fair to choice	13¼	@	13¾
Dairy, lower grades	11½	@	13
Held, finest	13	@	13½
Held, common to prime	10	@	12½
Rolls, fresh, choice	14½	@	15
Fresh, common to prime	11½	@	14
Renovated butter, fancy	17½	@	18½
Packing stock	10½	@	12

EGGS.—Receipts large and prices down two cents.

QUOTATIONS AT MARK.

Nearby, State and Pa., fresh-gathered, fancy white, doz.	15½	@	16
Fresh-gathered, fancy brown, per dozen	—	@	15
Fresh-gathered, avge., prime	14¼	@	14½
W'n, regular packings, firsts	—	@	14
Kentucky & Tenn., f'cy marks	—	@	14
Southern, fresh-gathered, average best	13½	@	13¾
Poor to fair	13	@	13¼
W'n, fresh-gathered, dirties	12¾	@	13
Checks	12	@	12¼
Refrigerator	10	@	12
Duck eggs, Baltimore, per doz.	—	@	30

POTATOES.—Supplies large and trade weak.

Bermuda, 2nd crop, prime, bbl.	4 50	@	5 00
Second crop, No. 2, bbl.	3 00	@	3 50
Havana, fair to prime, bbl.	3 00	@	4 00
State, round, per 180 lb	1 50	@	1 62
Long, per 180 lb	1 37	@	1 50
Michigan, round, per 180 lb	1 37	@	1 50
Long, per 180 lb	1 25	@	1 37
State & West'n, per sack	1 40	@	1 50
Sweets, Va., per cloth-top, bbl.	1 75	@	2 25
Other Jersey and Del., cloth-top, bbl.	1 50	@	1 75
Jersey, per d.-h. bbl.	1 50	@	1 75
Jersey, per basket	75	@	1 00

VEGETABLES.—Trade in cabbage active. Choice domestic onions scarce. Other grades in excessive supply and offered at cut prices.

Brussels sprouts, per quart	5	@	12
Beets, old, per bbl.	75	@	—
Florida (tops off), per crate	75	@	1 25
Carrots, old, per bbl.	75	@	1 00
Southern, per 100 bunches	2 00	@	3 00
Cabbages, State, per ton	14 00	@	18 00
Fla., new, per bbl., crate	1 50	@	2 25
Celery, State & Cal., large, per doz.	60	@	75
Small, per doz.	15	@	25
Florida, per case	1 00	@	3 00
Chicory, New Orleans, per bbl.	4 00	@	6 00
Cauliflowers, Fla., per bskt	2 00	@	3 00
California, per case	1 00	@	2 25
Escarol, New Orleans, per bbl.	3 50	@	4 00
Eggplants, Fla., per box	1 50	@	2 50
Green peas, Fla., per bskt	2 00	@	3 00
California, per box	2 00	@	3 00
Kale, Norfolk, per bbl.	25	@	1 00
Lettuce, New Orleans, per bbl.	2 00	@	4 00
Onions, Conn. & L. I., white, per bbl.	4 00	@	4 50
Conn. & L. I., red, per bbl.	3 00	@	3 50
Conn. & L. I., yellow, bbl.	3 00	@	4 00
Orange Co., N. Y., red, bag	3 00	@	3 50
State & W'n, yellow, per d.-h. bbl.	3 00	@	3 25
State & W'n, red, d.-h. bbl.	3 00	@	—
Bermuda, per crate	2 50	@	3 00
Havana, per crate	—	@	2 75
Peppers, Fla., per carrier	1 00	@	2 00
Parsnips, old, per bbl.	90	@	1 12
Parsley, Bermuda, per box	1 00	@	1 50
New Orleans, per 100 bchs.	1 50	@	2 50
Romaine, New Orleans, bbl.	4 00	@	5 00
Fla., per basket	1 50	@	2 50
Squash, Hubbard, old, bbl.	1 25	@	1 50
Marrow, old, per bbl.	1 00	@	1 25
Fla., white, per crate	2 00	@	3 00
String beans, Fla., crate	2 00	@	4 00
Spinach, Norfolk, per bbl.	50	@	1 75
Turnips, Jersey, Russia, bbl.	70	@	85
Canada, Russia, per bbl.	90	@	1 00
Tomatoes, Fla., per carrier	1 00	@	2 50
Havana, per carrier	75	@	1 50

HOTHOUSE PRODUCTS.—Trade in all grades quiet.

Lettuce, fancy heads, per doz.	60	@	75
Average receipts, per case	1 50	@	2 00
Cucumbers, prime to choice, doz.	1 00	@	1 25
No. 2, per doz.	60	@	75
Tomatoes, common to prime, lb.	20	@	30
Radishes, prime, per 100 bchs.	1 50	@	2 50
Mushrooms, poor to prime	20	@	40
Asparagus, per dozen bchs	—	@	5 00
Rhubarb, W'n, per doz. bchs	25	@	60
L. I., per 100 bunches	4 00	@	5 00

DRIED FRUITS.

Apples, evaporated, fancy, lb.	6½	@	7
Evaporated, poor to good, lb.	3	@	4
Sun-dried, S'n, sliced, lb	3	@	4
Sun-dried, State & W'n, qrs., per lb	3	@	4
Sun-dried, S'n, coarse cut	2¾	@	3¼
Chops, per 100 lbs	1 00	@	1 75
Cores and skins, per 100 lbs	50	@	1 00
Raspberries, evaporated, 1900, lb.	19	@	20
Blackberries, 1900, per lb	6	@	6½
Huckleberries, 1900, per lb	14	@	15
Cherries, 1900, per lb	15	@	16

FRESH FRUITS.—Receipts of apples moderate, and trade quiet, being confined mainly to small sales.

Apples, Newtown Pippin, bbl.	1 25	@	4 00
Spitzenberg, per bbl.	3 00	@	5 00
Spy, State, per bbl.	2 50	@	4 00
Ben Davis, per bbl.	2 50	@	4 00
Baldwin, fancy, per d.-h. bbl.	3 25	@	3 50
Baldwin, average prime	2 50	@	3 00
Greening, prime to fancy, bbl.	3 50	@	4 00
Greening, good to prime	2 50	@	3 25
Cranberries, Cape Cod, good to choice, per bbl.	8 00	@	9 00
Cape Cod, common to fair, bbl.	6 50	@	7 50
Jersey, prime, per bbl.	6 50	@	—
Jersey, good to prime, crate	2 00	@	2 25
Strawberries, Fla., prime to fancy, per qt	20	@	25
Fla., poor, per qt	15	@	18

LIVE POULTRY.—Ducks and fowls firm.

Fowls, per lb	—	@	10½
Chickens, per lb	—	@	10
Roosters, per lb	—	@	7
Turkeys, per lb	—	@	11
Ducks, avge. West'n, per pair	70	@	90
Average Southern, per pair	60	@	70
Geese, avge. West'n, per pair	1 37	@	1 62
Average Southern, per pair	1 12	@	1 37
Pigeons, per pair	35	@	40

DRESSED POULTRY.—Receipts of fresh-killed moderate. Some western shipments open up in bad condition, owing to unfavorable weather in transit.

DRY PACKED.

Turkeys, W'n, hens, avge. best	10	@	10½
Western, old hens	9	@	9½
Western, young toms	8	@	8½
Poor to fair	7	@	8
Broilers, Phila., under 2 lbs. to pair	30	@	35
Phila., 2½@3 lbs. to pair	25	@	—
Phila., 3½@4 lbs. to pair	18	@	20
Roasting chickens, Phila., selected, large	15	@	16
Phila., medium grades	11	@	13
Other Pennsylvania	9	@	12
Fowls, Western, dry-picked, prime	—	@	10
Western, scalded, prime	10	@	10½
Western, fair to good	8½	@	9
Old roosters, per lb	6	@	6½
Capons, Phila., large	15	@	16
Medium weights	12½	@	13
Small and slips	10	@	12
Western, large	12	@	12½
Mixed weights	11	@	11½
Small and slips	—	@	10
Ducks, Western, prime	12	@	13
Fair to good	8	@	11
Squabs, choice, large, dark	—	@	2 75
Mixed, per doz.	2 00	@	2 25
Dark, per doz.	—	@	1 50
Culls, per doz.	50	@	1 00

LIVE STOCK.—Supply of steers light. Trade in calves active. Demand for sheep and lambs good.

Native steers, per 100 lbs	4 50	@	5 25
Bulls	3 00	@	3 90
Cows	2 00	@	3 75
Calves, choice veals	4 00	@	7 50
Sheep	4 00	@	5 00
Lambs	5 85	@	6 15

COUNTRY-DRESSED MEATS.

Calves, veal, prime, per lb	9½	@	—
Common to medium, per lb	7	@	8
Small, per lb	5	@	6
Fed, per lb	6	@	6½
Barnyards, per lb	5	@	6
"Spring" lambs, fancy, each	—	@	6 00
Poor to prime	4 00	@	5 00
Pork, light, per lb	7½	@	8¼
Medium, per lb	6¾	@	7¼
Heavy, per lb	5½	@	6½
Rough, per lb	4	@	5
Roasting pigs, per lb	9	@	12
Pork tenderloins, fresh, per lb	—	@	20

FURS AND SKINS.—Skunk up five cents.

Silver fox	50 00	@	200 00
Red fox	1 75	@	2 00
Gray fox	90	@	1 00
Lynx	4 00	@	6 00
Wild cat	50	@	60
Marten, dark	6 00	@	10 00
Pale	3 00	@	4 00
Skunk, black	1 40	@	1 50
Half-striped	85	@	90
Long-striped	80	@	90
Striped	45	@	50
White	20	@	25

Proof of the Pudding.

Ten hours between New York and Buffalo means excellent travelling, and when I say I travelled at the rate of sixty miles an hour, gathered no dirt, and was not bothered with dust, you can believe me when I say my steel-gray travelling costume was as clean when I stepped off at Buffalo as when I said "Au Revoir" at Hoboken.

The Lackawanna is a route worthy of the attention of all who wish to travel in luxury, in absolute cleanliness, and in security. The "proof of the pudding is in the eating," and the Lackawanna Limited will be a favorite train with ladies visiting the Pan-American Exposition.—Marie Jarboe, in *Toilettes*.

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136 Acre Fruit Farm and country home, 60 acres fruit all bearing, good building, desirable location, $13,600. F. A. CHAPMAN, Wellsburg, W. Va

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for cash no matter where located. Send description and selling price, and learn my wonderfully successful plan. W. M. Ostrander, 1215 Filbert St., Phila., Pa.

FOR SALE.—20 acre truck farm. In the suburbs of Plainfield, a thriving city 21 miles from New York City. Trains there every ½ hour; ½ mile from station. Fine location, good buildings, soil and fruit, with greenhouse. Now in demand for town lots. Address J. B. CLINE, Clinton Avenue, Plainfield, N. J.

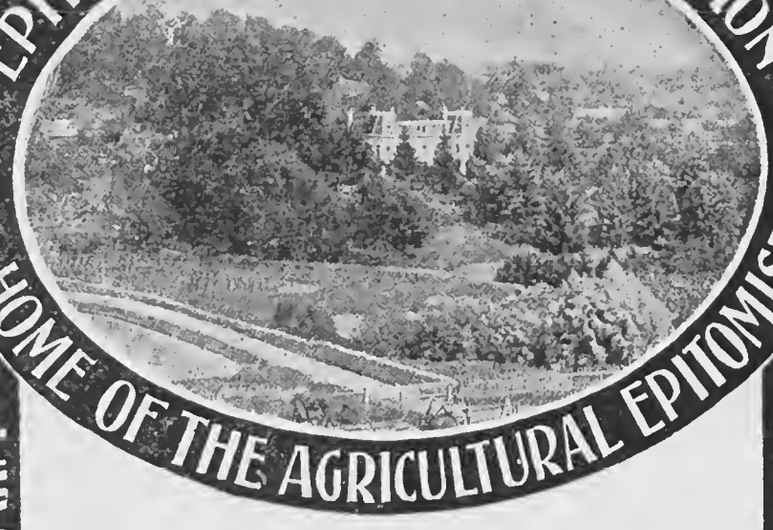
For Sale—A Bargain in Small Fruit Farms One orchard of 16 acres, and another of 8 acres in the best fruit County of the State, will be sold cheap. Both are well located for shipping and with excellent home markets. Trees mostly in bearing. Owner is engaged in other business, requiring his entire time.
Address GEO. G. ATWOOD, Albany, N. Y.

Old Fogy Farmers' grange song, "The Old Wooden plow." Its picture, words, music. Anti-Farming. Ears corn 30 rows. Double crops, half cost. Read and sing, 15c. H. E. Plumb, Stevenson, Conn.

PLANK BARNS! Strongest, most durable and economical frames known. Book showing 32 plans for 50 cents. Send for free booklet FRANK BRYAN, Mechanicsburg, Ohio.

GUERNSEY BULLS FOR SALE.—Descendants of old Sq. Kent. All ages farmer's prices. ELMER SHARP, Barnard Crossing, Monroe Co., N. Y.

1901
THE SOUTH SIDE
FRUIT CARRIERS AND BASKETS
PETERSBURG, VA.
WRITE FOR CATALOGUE AND PRICES

PRINTED ON THE FARM
THE AGRICULTURAL EPITOMIST
Has always given its readers experience at first hand. To carry out this plan still more extensively, plain, complete and detailed statements of practical experiments made on this
650-ACRE EXPERIMENT FARM
are being recorded from month to month in the
AGRICULTURAL EPITOMIST
"THE ONLY AGRICULTURAL PAPER EDITED AND PRINTED ON THE FARM."
The EPITOMIST not only gives the results of experiments made under natural conditions of cultivation and fertilization, but it also tells how work is conducted for actual profit in the various departments of its 650-acre farm known as the
EPITOMIST EXPERIMENT STATION
HOME OF THE AGRICULTURAL EPITOMIST

Experiments at this Station are now and will continue to be made under the directions of experts, constituting an able corps of practical and scientific farmers of unquestionable reputation, whose efforts in the past have resulted in
BETTER FARMING, BREEDING AND FEEDING.
Farmers wishing to keep in touch with the work and experiments being made on this Experiment Farm from month to month, can do so by subscribing for the AGRICULTURAL EPITOMIST which has a circulation of over 200,000 copies each issue, penetrating every state and territory in the United States and Canada. Subscription price, 50 cents per year. Send for sample copy. Agents wanted. Address
AGRICULTURAL EPITOMIST
DEPARTMENT A
Epitomist Experiment Station, SPENCER, IND.
PRINTED ON THE FARM

Catalogues for 1901.

[CONTINUED.]

GEO. J. KELLOGG & SONS, Janesville, Wis. Beile Cottage Nurseries. Circular of nursery stock and strawberry plants; four pages.

JOHN F. DAYTON, Waukon, Iowa. Wholesale price list of small fruit plants and grapevines; eight pages. A very safe and conservative assortment.

W. E. JONES CO., Lincoln, Ill. Lincoln pear catalogue, containing many new and late reports on the behavior of this promising pear, very neatly got up.

T. C. FURNAS & Co., Sheridan, Ind. Price list of trees, plants and seeds; 12 pages. A general list of desirable and useful articles for the home grounds offered at very iow prices.

C. A. REESER CO., Urbana, O. Catalogue of seeds and flowering plants; 80 pages. A large collection of hardy and tender roses and window plants. One of the few catalogues listing the kumquat or Japan Gooseberry orange

T. S. HUBBARD Co., Fredonia, N. Y. Catalogue of grapevines and small fruits; 36 pages. This is a gem of a catalogue, interesting, artistic and useful. An extensive and reliable list of varieties is given. The illustrations of grapes are the best we have ever seen.

ROGERS NURSERIES, Dansville, N. Y. The Tree Breeder. A 32-page periodical devoted to pomological literature and the cataloguing of the products of the Rogers Nurseries. Very good instructions are given, and many comparative descriptions of fruit varieties.

THOS., MEEHAN & SONS, Germantown, Pa. Guide to Home Grounds; 40 pages. A very fine list of the choicest trees and hardy plants for ornamental planting. The cultural directions are ample and reliable. Many excellent illustrations are scattered through the book.

ROSS BROS., Worcester, Mass. Catalogue of seeds and agricultural implements; 98 pages, finely illustrated. Nearly 50 pages are given to seeds for farm and garden, and the remainder to a very discriminating selection of implements. A fine illustration of the place of business is given on the cover.

F. R. PIERSON CO., Tarrytown-on-Hudson, N. Y. Catalogue of seeds and plants; 56 pages. A large and tasteful catalogue, splendidly illustrated. A very choice list of ornamental plants, both for garden and house culture is given, as well as an extensive collection of seeds, hardy shrubs and evergreens.

ARTHUR J. COLLINS, Moorestown, N. J. Catalogue of Pleasant Valley Nurseries, 26 pages. Devoted to fruit and nut trees and fruit plants. A good selection of standard and new varieties adapted to the Middle States. A great specialty is made of nut trees and many named varieties of chestnuts are offered.

STEPHEN HOYT'S SONS, New Canaan, Conn. Catalogue of fruit and ornamental trees and plants; 50 pages. This is a beautiful and reliable catalogue, well illustrated and beautifully printed. Special attention is given to the October Purple plum and Green Mountain grape. The scarce Mountain Seedling gooseberry, probably a natural hybrid of the eastern Ribes cynosbati, is offered among other worthy varieties.

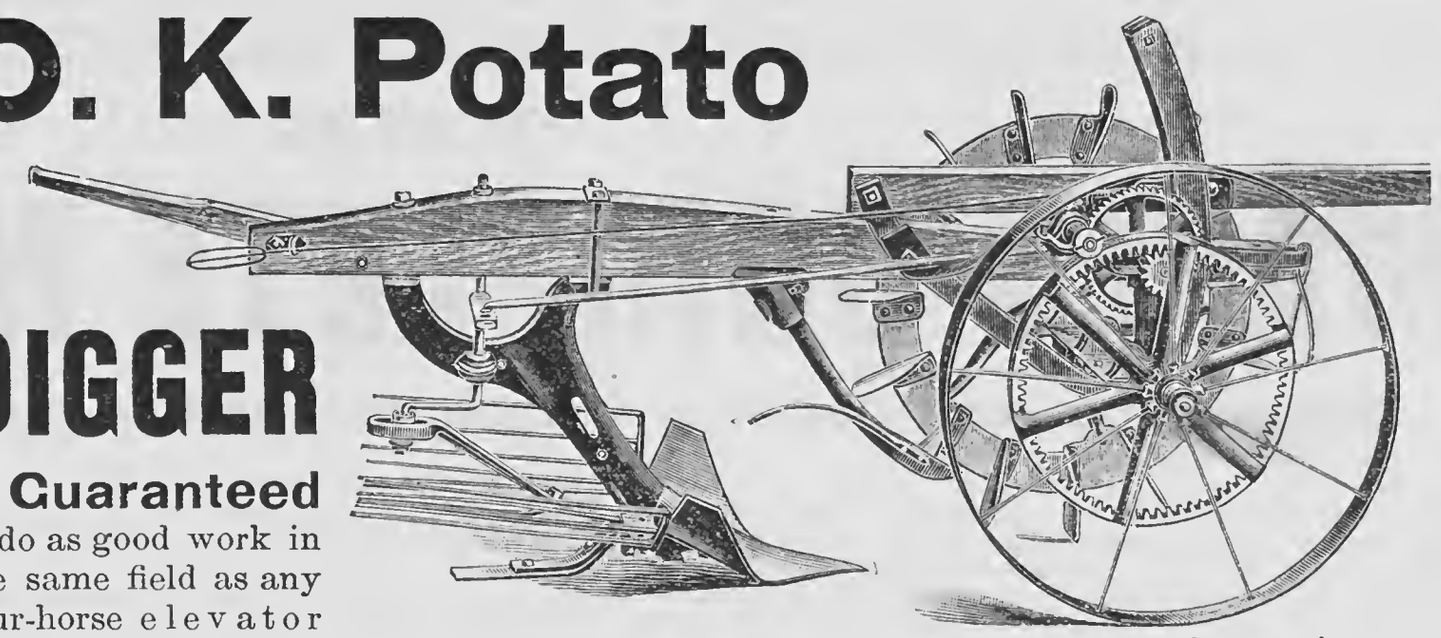
L. L. OLDS, Clinton, Iowa. Catalogue of seeds and potatoes; 40 pages. A substantial list of potatoes is given, from which the purchaser should be able to pick out the varieties best adapted to his needs. Pat's Choice is considered the greatest of all late varieties, and Vigorosa the most profitable of the early potatoes. The Alaska oat is introduced as the earliest of all oats, and one of the most productive also.

F. B. MILLS, Rose Hill, N. Y. Catalogue of garden and field seeds; 80 pages. Many illustrations, some of which are extraordinary in their get up. The new bean, Prize Winner, has yielded 40 bushels per acre. Great prizes are offered for the best yield from the Great Pan-American oats. The Pan-American lettuce and Mills Giant tomatoes are prominent specialties. Offers of ginseng roots are made, and the cultivation of this difficult plant is strongly urged.

J. T. LOVETT, Little Silver, N. J. Guide to Fruit Culture; 36 pages. Fruit and ornamental trees and plants. The Lester Lovett strawberry is declared to be the latest, the most beautiful and most profitable of all varieties. Said to be 10 days later than Gandy or any other variety, the large berries being of fine quality and borne profusely on giant plants. Features are made of the Mersereau blackberry, Mrs. Lovett rose and Frank Bassett apple. The latter is a red Winter apple of an extraordinary late-keeping quality.

VAUGHAN'S SEED STORE, Chicago and New York. Catalogue of seeds, plants and garden supplies; 114 pages, fine colored cover. A large and interesting catalogue. Every department seems filled with the best known varieties. Among the many new things we note a special strain of Bavarian garlic, a culinary relish not as yet greatly used in this country, but in high favor among foreigners. Among small fruits we notice the Marvin Crystal currant, which is described as bearing a great profusion of giant bunches and being nearly twice as productive as the Cherry currant. The berries are large, white in color, contain few seeds, and are much less acid than the old varieties

O. K. Potato DIGGER



Guaranteed to do as good work in the same field as any four-horse elevator digger on the market. Price one-half. Draft one-half. Cost per year for repairs, one-fifth. Guaranteed to dig as clean as a man can with a fork. Will make digging potatoes as easy, simple and inexpensive as cutting grass. Would such a digger please you? Will you buy such a digger? WE TAKE ALL THE RISK—unsatisfactory work in your field means no sale. Every farmer who grows five acres or more of potatoes is interested. We wish to hear from all such.

D. Y. HALLOCK & SONS, Box D 805, York, Pa.
(Please mention box number.)

CIDER MACHINERY
Best and cheapest. Send for catalogue.
BOOMER & BOSCHERT PRESS CO.,
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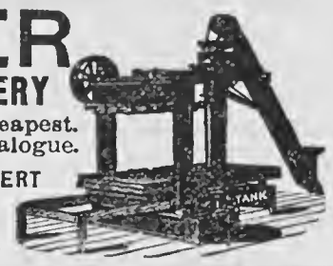
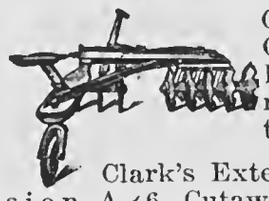


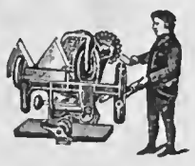
J. H. Hale's Favorite Orchard Tools.



Clark's California Sr. Orchard Plow and Harrow. Plows a furrow 3 feet wide 6 feet to the right of the pole

Clark's Extension A/6 Cutaway Harrow, made in 12 sizes, by the

$2.50 Cash



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Weeder and Shallow Cultivator.

Cultivates the entire surface, or between the rows. Expands to 7½ ft., narrows to 30 in. No cumbersome shafts and only weeder with a front ground wheel to prevent vibration and "wobble." Kills all weeds, grass, etc., and leaves a fine mulch of earth on top, to absorb moisture and retard evaporation. Easiest to handle, lightest draft. Fits all uneven surfaces. Round spring teeth with blunt points for light soils. flat spring teeth with diamond points for heavy soils.

Weeder booklet free. Send for general catalogue "C" embracing Corn Planters, Cultivators, Corn Shellers, Harrows, Rollers, etc.

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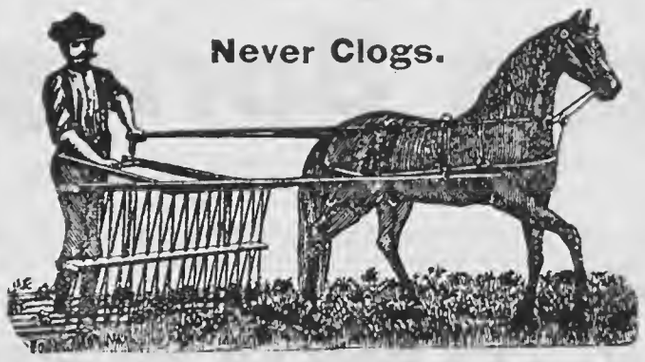


Never Clogs.

BREED'S Universal Weeder

is the best weeder ever made for all conditions of soil. For killing weeds and pulverizing the soil it has no equal. 7 feet 6 inches wide, permanent tooth, and best of material and workmanship. Former price, $8; we will send it direct to farmers for $4 f.o.b., Boston. No agents. You get the benefit. Order at once. The supply is limited.

UNIVERSAL WEEDER CO.,
32 S. Market Street, Boston, Mass.

Iron Age Implements produce early crops and large profits. The reputation of **Iron Age** tools has been built during sixty-five years of fair dealing, and *you run no risk* in buying any farm and garden implements stamped *Iron Age* — SEED DRILLS, WHEEL HOES, RIDING CULTIVATORS, POTATO PLANTERS, HORSE HOES AND CULTIVATORS, etc. Get the *free Iron Age Book for 1901*—a beauty—and read about all the

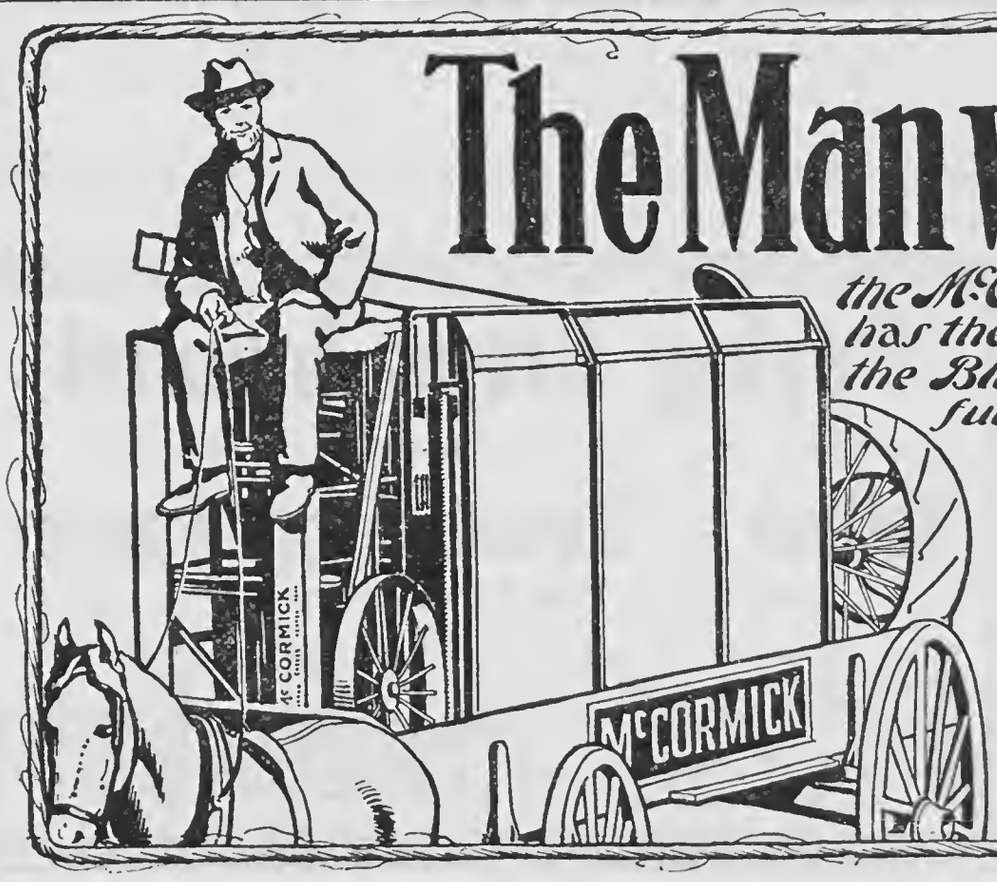
IRON AGE
FARM AND GARDEN IMPLEMENTS.

The cut shows one of our new tools — the IRON AGE COMBINED FERTILIZER DISTRIBUTER, HILL AND DRILL SEEDER. It distributes fertilizer and sows the seed in drills or drops in hills; also distributes fertilizer alone to growing crops. It is strong, simple and light running. The results of its use are shown in large and early crops. The fertilizer can be regulated and placed exactly where desired.

BATEMAN MFG. CO., Box 102, GRENLOCH, N. J.

Save Fertilizer, Seed, Trouble, Time, Work.

The Man who Buys



the McCormick Binder has the satisfaction of owning the Binder that gives him fullest value for his money.

For seventy years the McCormick Company has been pre-eminent in manufacturing Harvesting Machines and for the season of 1901 presents the unequaled McCormick Line comprising the best Binders, the best Reapers, the best Mowers, the best Hay-Rakes, the best Corn Binders, the best Shredders, the best Headers, and the best Tool and Sickle Grinders.

BUY McCORMICK TWINE

THE MAPES COMPLETE MANURES

Permanence and Certainty Combined in the Complete Mapes Manures

[From The Rural New-Yorker, March 17, 1900.]

Twenty Years After.—There are still some farmers who undertake to argue that fertilizers are not lasting in their effects. All such farmers should read Twenty Years After, a pamphlet just issued by the Mapes Fertilizer Company, 143 Liberty street, New York City. This pamphlet tells the story of a farm in Connecticut on which fertilizers have been exclusively used for 20 years. While practically all other farm methods have been changed on thls farm, "twenty years after" finds the farmer still using the same fertilizer in the same way. A piece of land as poor "as ever lay outdoors" was brought back to usefulness and profit, by the use of the MAPES HIGH-GRADE MANURES. It is a true story, we will vouch for that, and one that will put new heart into every fertilizer farmer. One would suppose that a 20-year test is long enough to establish the value of chemical fertilizers, and here we have the test. The pamphlet also shows why these high-grade manures give results which could not be obtained with super-phosphates or cheap mixtures.

"Twenty Years After"

[From The American Agriculturist, Feb. 24, 1900.]

Twenty Years After is the title of a pamphlet which gives the experience of Newton Osborn, a prominent Connecticut farmer, in converting worthless land into a source of profit for the past 20 years by the use of fertilizers alone. The fact that Mr. Osborn still employs the same methods now as 20 years ago shows that he started right and is keeping right. As he has used the Mapes manures exclusively, the pamphlet is a wonderful showing for the permanence of these fertilizers, their combined solubility and power to build up the land. It is evident from this and many other experiences that there are but few lands that cannot be made to pay in the hands of good farmers by using the right methods of culture and fertilizers. This statement is borne out by other experiences cited in the work referred to.

Farms Constantly Grow Stronger. Experience with Mapes Manures Over 30 Years

Dr. F. M. Hexamer, Editor American Agriculturist, March, 1898, writes:

The testimony of thousands of farmers shows that by the use of MAPES MANURES large yields of the highest quality are obtained, while the farms are constantly growing stronger. Indeed, practical results from the use of these fertilizers have been substantial profit, even during the past hard times. As we have previously remarked, our own experience, extending through a period of over 30 years, has always shown the Mapes fertilizers to be invariably satisfactory, on the truck farm and in the garden, as well as in the field, orchard and meadow.

My Farm is Getting Richer Every Year

Wilmer Atkinson, Editor and Proprietor of the Farm Journal, reports on the MAPES MANURES: I do not use stable manure, and my farm is getting richer every year. We have found the MAPES MANURES equally good for grass, potatoes, corn and orchard trees.

Farms Steadily Improved and Crops Doubled

[From The New England Homestead.]

The actual statements from those who have used these high-grade manures demonstrate the truth of the great claim made for the MAPES MANURES, viz.: that by their continued use, in some cases for 10, 12 and 15 years, farmers, truck growers and fruit growers report their lands as having steadily improved in condition, and their crops as double those formerly grown, while the quality of the crops has greatly improved, and their profits largely increased.

Mapes Spring Top-Dressing

FOR GRASS, LAWNS, ETC.

For TOP-DRESSING in Spring, all kinds of grass lands, Pastures, Mowing lands, Golf Links, Lawns, etc. Use two to three bags per acre broadcast, by hand or machine. On poor land use three bags per acre. Pastures, Timothy, etc., apparently worn out, have been brought up into good condition by a single application. Quality of grasses greatly improved.

Restore your Meadows and Grass Lands by Simply Top-Dressing

It is lasting in effects equally with the best stable manure, but at the same time it is quicker and more effective on the crop. Its introduction some years since marked a new era FOR RESTORING GRASS LANDS WITHOUT PLOWING.

This manure corresponds closely in composition with the best stable manure, and is from 25 to 30-fold more concentrated in soluble and available plant food. Contains no weed seed, no disagreeable odor, requires no skill in its use—simply scattering evenly over the surface and working in when practicable. On lawns, grass lands and around fruit and other trees it can be left exposed, the rains will wash it in and no loss of strength will occur through exposure to sun, air, etc.

It is EXACTLY ADAPTED also to the wants of the owner of a small plot for fertilizing lawns, vegetable gardens, fruit and ornamental trees, hedges, etc. On vegetable gardens use at the rate of five bags and upward per acre.

The Mapes Potato Manure

Dr. Collier, Director of the New York State Agricultural Experiment Station, on the Large Yields of Potatoes Grown Only With the Mapes Manure at Rural Farm. "Who can doubt," says Dr. Collier, who was one of the judges in the R. N.-Y. Potato Contest, "that the great yield of Potatoes secured at the rate of 645 bushels to the acre of one variety, and 1,076 bushels of another variety, under the conditions of soil and climate obtaining in the locality where the trial was made, was due wholly to the fertilizers applied and the method of cultivation employed?"

NOT A SUPERPHOSPHATE WANTED.

E. S. Carman, of The Rural New-Yorker, in commenting upon the large yield of Potatoes obtained by him at the Rural Farm, and his Trench method and the Mapes Potato Manure, concludes: "But we don't want a 'phosphate' or 'superphosphate' or an Ammoniated Superphosphate, or a 'Swiftsure,' or anything of the kind. We want a high-grade Potato manure."

The Mapes Formula and Peruvian Guano Co., 143 Liberty St., New York.

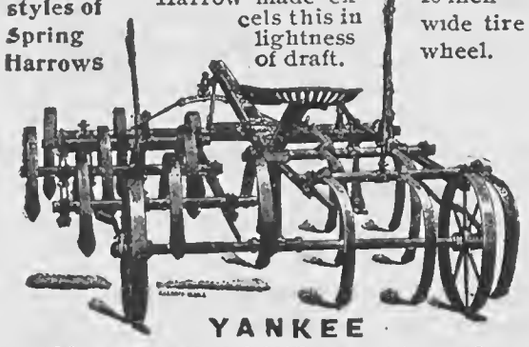
The highest prices obtained for tobacco crops in Massachusetts and Connecticut reported in the press the past year, 1900, grown with the MAPES TOBACCO MANURES. Descriptive pamphlets, prices, etc., sent on application. Also new Florida pamphlet on Orange growing, care of groves, etc. Permanent results from the Mapes Manures continued use for 20 years and over.

WHY NOT RIDE? Just as easy for the team and much easier for you.

6 other styles of Spring Harrows

No other style of Harrow made excels this in lightness of draft.

Runs on 20-inch wide tire wheel.



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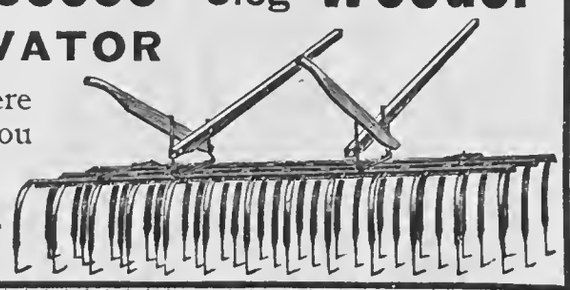
Surface Cultivation insures paying crops.

Hallock "Success" Anti-Clog Weeder and CULTIVATOR

stands for . We are here to tell you about it, if you will give us chance.



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Box 805, York, Pa.

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STEEL FRAME

Get catalogue of 1, 2, 3 & 4 Horse Tread Powers, Sweep Powers, Grain Separators, Hand and Power Corn Shellers, Grinding Mill, Potato and Corn Planters, Cultivators, Engines. 3 to 25 horse, mounted or stationary, etc.

THE MESSINGER MFG. CO., Tatamy, Pa.

Buy a Planter

THAT PLANTS all kinds of corn, for all purposes, on all kinds of ground and in any soil and save time, labor and money. The

SPANGLER CORN PLANTER

fills the bill to the letter. You always know when it's working properly because you can see the corn on its way to the ground. With or without fertilizer attachment. New device for sowing peas, beans, ensilage corn, etc. Also make Spangler Broadcast Fertilizer Distributer, Spangler Single Row Fertilizer Distributer, Spangler Low Down Grain and Fertilizer Drill. Write for circulars.

SPANGLER MANUFACTURING CO., 505 Queen St., York, Pa

CORNELL UNIVERSITY
MAR 30 1901

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2670. NEW YORK, MARCH 30, 1901. $1 PER YEAR

A BATCH OF HARD QUESTIONS.

Alfalfa in an Orchard.

A reader expects to sow beardless barley in an old orchard near his barn. Should he sow Alfalfa with the barley? D. R. Pease answers:

Alfalfa would not be likely to do well in an apple orchard on account of the shade, and because the trees would rob it of moisture. My advice would be to sow the barley in the orchard this season, which would get the ground in good shape; then this Fall, after the pressure of work is over, take those apple trees out by the roots and clear the land, so that next Spring you would have it in good shape for Alfalfa. If the apple trees are sound you can dispose of the wood at a good price to some of the large tool-manufacturing concerns. It is my opinion that the barley and Alfalfa would not work well together, because the barley should be sown early in April and the Alfalfa not before May 15, and perhaps June 1, according to the season. The barley would ripen before the Alfalfa had made sufficient growth.

R. N.-Y.—We have not been able to find a profitable market for apple wood.

New Cement Over Old.

We are asked whether it is desirable to put a new layer of Portland cement over an old floor in a dairy house. S. E. Barney, of Indiana, says:

"It all depends on the condition of the old floor. Cement will not adhere properly to any smooth, hard surface. When a cement floor proves to be bad it breaks and crumbles in spots, leaving places hard and smooth. These spots might remain, and patch up the broken ones, making a floor as good as new. To do this, the edges of the solid parts must be cut down square at least a half inch. Remember that you cannot *overlap* one coat of cement on another after the first has 'set'; the new and the old must come together squarely. If an old floor is so badly broken that you wish to make an entirely new one, then rough up the best places nearly to correspond with the worst. If some of the broken places have gone clearly through, it would be well to put grout in them so that your top coat will be of nearly equal thickness. Sweep the broken floor well to remove as much as possible of the loose particles, then wet it thoroughly, and after it has stood a few minutes, wet it thoroughly again, and immediately apply the top coat as directed in building sidewalks, leaving out the cutting into sections. You can use the sweepings of the old cement as sand or gravel in the new work."

Roots for Horse Feeding.

We are asked by a fruit grower who has seven horses what root crops besides carrots can be grown for Winter feeding. Carrots are best, but are hard to start and hard to grow, and he wants a crop to follow strawberries. Will any other root answer? It seems to be settled that no root is better than the carrot for horse feeding. The following note is from Long Island, where great crops of carrots are grown:

Carrots, it is true, are a little troublesome in the starting, but if the land is in good condition the seed may be soaked for a couple of days, then dried by rubbing in dry sand or land plaster until all moisture is absorbed, so the seed can be sown in a machine. It thus comes up quicker, before the weeds get a start. With a Planet cultivator it is easily possible to keep them in order. Our gardeners here usually plant on a slight ridge 2½ feet apart, though that is not the way to get the greatest yields. Beets and mangels are the best substitutes for carrots, but horses do not care for them as they do for carrots. As many can be grown per acre as carrots and they come a little easier. After strawberries would be too late for best results; turnips are then the only crop, and they are not relished by horses, though they will take them sparingly. Better stick to carrots. I send you a list of a 78-acre crop for 1900, grown on that sand bank, Long Island; beat it if you can: Early cabbage, 4,700 barrels; early potatoes, 9,600 bushels; early potatoes, culls, 1,200 bushels; onions, from sets, 3,540 bushels; cucumbers, 1,550 barrels; Hubbard squash, 915 barrels; carrots, 17,000 bushels; onions, from seed, 8,000 bushels; late potatoes, 825 bushels; corn, ears, 1,300 bushels; onion sets, 75 bushels; onion seed, 250 barrels; carrot seed, 100 barrels; apples, 100 barrels; cabbage plants to carry over, 250,000. G. W. HALLOCK & SON.

Orient, L. I.

"THE AMERICAN FARMER HAS GROWN IN INFLUENCE." FIG. 93.

The "Seed End" of Potatoes.

A subscriber asks will it pay to take off the "seed ends" when cutting potato seed? If he will consider the fact that the potato tuber is simply a short, fleshy stem, and that the "eyes" are so many buds, capable of producing branches, he will see that clipping off the seed end is simply one method of pruning. Naturally, if number of stalks or stems in each hill is reduced the individual stems will have a better opportunity for development, in the same way that corn is better if not planted too thickly. Since the faculty of the seed piece is simply to furnish nourishment to the developing plants until they are capable of deriving food from soil and air, reducing the size of this seed piece without removing eyes (or buds) would naturally have no effect on the developing crop unless carried to extremes. Repeated experiments have demonstrated that these theoretical considerations hold good in practice. Our own custom is to use medium-sized tubers cut to about two eyes, and plant 10 inches to one foot apart in drills. I have no doubt that the size of the seed piece best suited for planting may vary with the variety and with the degree of ripeness of the seed potato; but I do not believe that the difference is sufficient to warrant much expenditure of time in extra preparation for planting.

Maine Exp. Sta. W. M. MUNSON.

Fruit in Refrigerator Cars.

We are asked to obtain the experience of southern shippers who have used refrigerator cars for fruits or vegetables. The first reply comes from W. F. Allen, of Maryland.

Shipping in refrigerator cars is a great improvement on the old way. Some of the advantages are that when fruits are put in refrigerator cars they are cooled off, and go into market in much better condition, almost invariably bringing better prices. If they should arrive late, or if market should be overstocked, and prospect better for the next day, the consignor can have the car re-iced and held over. This is a big advantage. The cost from here is three-fourths of one cent per quart and one cent per quart from Norfolk. This is over and above regular freight. On melons and vegetables the extra cost is $50 per car. I pay this and use refrigerator cars almost entirely for cantaloupes, and believe it pays me to do so. Do not make the mistake of overloading a refrigerator car, for if you do it will be a disadvantage. The hot air is driven to the top of the car, and a space of 1½ to two feet at the top should be left open. Many shippers would fill the car full, thinking it economy, because they have to pay for the car anyhow, but this is a mistake. *Don't overload a refrigerator car.* Leave a space of 1½ to two inches between every package, and tack strips across each layer to hold packages steady, and to give air passage between. Of course it does not pay to refrigerate culls, and it does not pay to ship culls anyway. The service could be greatly cheapened if the railroad companies would furnish the cars and let shippers furnish their own ice and ice the cars themselves. It takes about six tons of ice to each car, which can usually be had at $3 per ton.

THERE are numerous rumors of combinations among southern truck farmers, in order that their produce may be handled and marketed to better advantage. There is no doubt about the benefits of organization if carried out on business-like lines. Transportation companies and receivers in distant markets are much more likely to respect the rights of producers belonging to such associations, than of individuals who are trying to handle the selling end of their business on their own hook.

When to Cut Apple Grafts.

When is the proper time to graft apples? Should the grafts be cut two or three weeks before setting?
Mearns, O. G. F. C.

Grafts should be cut while the buds are still dormant, and kept in some cool, moist place until the sap starts freely in the stocks. A common and very successful practice is to bury them in the ground on the north side of buildings until wanted. If grafting is done early the scions may be cut and used at once with good results.

Wants to Kill Muskrats.

I have a pond in my lawn, which is infested with muskrats. They do much damage in burrowing under the lawn and cutting the roots of Magnolias, Arundo Donay and other plants. Can you tell me any way to poison them? O. S.
Greenville, Del.

Muskrats will eat almost any vegetable food. A few crystals of sulphate of strychnine packed in a slit in a small apple, which may be placed in their holes or runways, will be effectual as far as it goes. Pieces of fresh fish may be poisoned in the same manner. Persistent trapping by means of steel or box traps will probably accomplish more than casual attempts at poisoning, and is free from dangerous consequences.

Trimming Japan Plums; Black Currants.

1. I have some Japan plum trees about three years old. Some of them need trimming, as they are quite straggly, especially the Burbank. When is the proper time to trim? 2. I bought some currant bushes, supposed to be Fay, but they proved to be a black variety. Can any profitable use be made of them? A. S.
Chatham, N. J.

1. Japan plums are best pruned similar to peach trees. Cut out all weak and interfering branches, and shorten the new wood one-half to two-thirds. Some varieties have a tendency to droop, and others are very upright in habit. These tendencies should be noted and corrected in the pruning if too prominent. 2. Not unless somebody in your local market fancies the flavor. The sale of black currants in the cities is very limited.

The Care of Azaleas.

How shall I take care of my Azaleas? They have now done blooming. How shall I care for them from now on, and during the Summer, in order that they may grow and thrive, and furnish the usual quantity of flowers next Winter? N. J.
Cuba, Mo.

Keep the Azaleas in a sunny position until warm weather, when the pots may be plunged in coal ashes in a partially shaded place. See that the soil is always kept moist, but not sodden, and frequently spray the foliage with clear water. They may be turned out of the pots into the garden soil if a position shaded from the midday sun can be found. Apply some wood ashes to the soil occasionally, whether plunged in pots or planted out, and water every week with diluted liquor manure. If your Azaleas are of the usual imported varieties they will not be likely to bloom so freely again.

When to Sow Onions.

When is the right time to sow onion seed, so as to have large onions for early market? What is the best soil for them? Is horse manure a good fertilizer for onions, cabbage and beets? G. L. M.
Minard, Mich.

In order to grow marketable onions directly from seeds it is necessary to prepare the soil as soon as it can be thoroughly worked without packing in the Spring. Seeds are usually sown in the vicinity of New York, early in April, but may be deferred until the end of the month. Onions greatly prefer a fine, rich soil. The kind commonly called sandy loam suits them best, but they will thrive on any well-cultivated soil if made sufficiently rich with well-rotted manure. Horse manure is preferred to any other kind by practical gardeners for the plants named, but it should be composted for several months, until the fiber is well broken up, before it is used.

How to Plant Apple Seeds.

Can you tell me how to grow apple trees next Summer from the seeds of the apples we eat this Winter?
Phillipsburg, Pa. F. W.

Seeds of the apple and similar fruits grow best if mixed with moist sand soon after being taken from the fruit, and freely exposed to frost until planting time. Hard drying weakens them very much. As soon as the ground is in condition in the Spring they may be sown thinly in rows three feet apart, in good, well-enriched soil, covering about one inch deep. Cultivate very carefully after the seedlings come up, and keep the soil mellow until August. Thin to two or three inches apart as soon as the second pair of true leaves has formed. Next Spring they may be transplanted to similar nursery rows, setting them about eight inches apart. Good cultivation should be maintained for a season or two longer, when the trees should be large enough to plant out in the orchard. As they come into bearing inferior varieties may be top-grafted or budded with better kinds. While in the nursery rows all branches and sprouts should be trimmed off as they start up to the point it is intended to form the head. If it is intended to raise seedlings for root-grafting proceed in the same way, except that the roots are taken up one year after planting the seeds and grafted in the usual manner with desired varieties, the scions being preferably taken from bearing trees, then planted out and grown on in the same manner as seedlings.

How to Handle Cuttings.

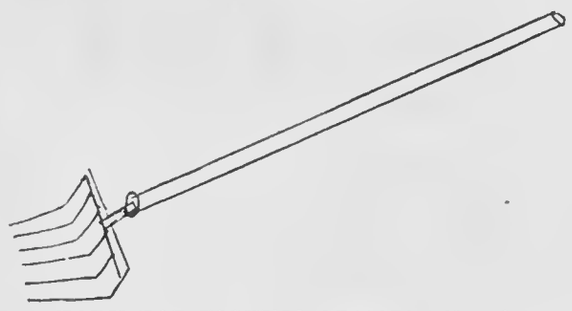
What is the best time and proper soil for cuttings of grapes, currants and gooseberries? P. M. H.
Littleton, Mass.

Any well-drained soil, fairly retentive of moisture, is suitable for grape, currant and gooseberry cuttings, but preference would be given to a moist loam. Currant and gooseberry cuttings are usually made before freezing weather, and planted out at once in rows far enough apart to admit of convenient cultivation, placing the cuttings three or four inches apart in the row. They are made about eight inches long, and only one or two buds are left above ground. The soil is very firmly packed about the lower end of cuttings before the trenches are filled. Grape cuttings may be planted out in the same manner, but the usual practice among propagators is to make the cuttings during mild weather early in Winter, allowing two or more buds to each cutting. Make them up into bundles and pack away in moist sand or old sawdust in a cool place, free from severe frost, until Spring, when the cut ends should be callused over. They are then planted out like the currant and gooseberry cuttings.

Pruning the Almond Tree.

Will you advise me as to pruning the Hard-shell almond? I planted two trees last Spring, and as they resembled the peach so much, I cut off the entire top just the same as I do the peach when planting. The result was very satisfactory; the trees made a fine growth, many limbs reaching five to six feet in length. Shall I cut them back this Spring from one-half to two-thirds of last year's growth, or would that be too severe? Are they long-lived trees? A. D. C.
Sweetwater, Ill.

The almond tree is practically identical with the peach in habit and characteristics and should have the same treatment as to pruning and culture. The



FORK FOR PICKING STONES. Fig. 94.

tendency of both, if left unchecked, is to extend their bearing wood out on the ends of long, pole-like limbs, which are liable to break down under the weight of the ripening fruit. It is a safe practice to cut the new growth back about one-half every season, and to endeavor to produce an open, vase-like top without interfering limbs. Almond trees are not quite as hardy as peaches, and are very intolerant of a wet subsoil, but in other respects they are as lasting as peaches. The great defect of the almond as regards its culture in the East is its great propensity for early blooming, and consequently liability to damage from late Spring frosts.

Apple Pomace for Potatoes.

Having no other place, I piled the pomace from over 1,200 barrels of cider on about one acre of ground last Fall. The potatoes grown there last season were somewhat scabby. Will the pomace remedy the evil by souring the land? Will the pomace injure young plum and pear trees, as there are a few trees, about 12, where it is piled? W. B. M.
Auburn, N. Y.

I think there can be no question but that the immediate souring of the soil by the introduction of apple pomace would tend to decrease scab. Upon general principles, however, I do not like the idea of having such a large amount of readily decomposible substance in immediate contact with the tubers, and if the material is not put in the drill, it will not accomplish much. It may, however, be a serious question whether the acid condition will last until the new tubers are formed, since the organic acids to which the acidity of apple pomace is due are very likely to be destroyed before that time arrives. I think the best plan where soil has a tendency to promote scab is to employ a fertilizer containing muriate of potash, acid phosphate, and which supplies all of its nitrogen in the form of sulphate of ammonia. It would doubtless be still more efficient if kainit were used in place of muriate of potash. Potatoes may not be of so good quality if grown with kainit and muriate of potash as where high-grade sulphate of potash is employed, at least to furnish half of the potash. Upon our soil, where lime has been used, we are nevertheless able to grow potatoes of good quality even by the employment of muriate of potash for the entire potash supply. The idea of using apple pomace upon young plum and pear trees savors a little of the old idea that "eating a part, strengthens a part." Of course it would furnish a little potash, very little nitrogen and extremely small quantities of phosphoric acid. If I were to apply it, I should prefer to compost the material with lime, and allow it first to become well rotted. H. J. WHEELER.

How to Grow Root Grafts.

Will you give directions how to plant and grow root grafts of apple and plum? How far apart, and what is the treatment the next year? G. H.
Larchwood, Iowa.

Root grafts of orchard trees are usually planted in rows far enough apart for loose cultivation, and set eight to 10 inches apart in the row, choosing the greater interval where the soil is poor. A spade is used in planting, one man walking backward down the line and thrusting the spade in the soil at right angles to the line the full length of the blade, with a forward and backward motion. An assistant places the graft carefully in the opening, holding it so that only one or two buds appear above the surface. The spade is again thrust in the moist soil about two inches from the first cut, and the slice of ground between firmly pressed to the graft, so as completely to close the opening. It is essential that firm pressure be made at the bottom of the graft, or it is not likely to root well. The after care consists simply in thorough cultivation and sufficient fertilization to keep up a good growth. Wood ashes make an excellent fertilizer when they can be had, but any form of manure or fertilizer will prove beneficial. All sprouts and branches should be trimmed off as they appear up to the heading point, which depends on the wishes of the propagator. In two or three years, under fair conditions, the trees should be ready for the orchard.

What About Tomato Blight?

Can you give me the remedy for Tomato blight? I raise 10 acres of tomatoes for canning factory, and for the past three years the blight has nearly ruined them. In July the lower leaves begin to die; then the next above until all are dead but the very top of the plant. Will be glad to hear from anyone's experience.
Adrian, Mich. T. F.

We confess with much regret that a practical and economical remedy for the Tomato blight is yet unknown to us. The experiment station people will say: "Spray frequently with ammoniated copper solution or Bordeaux Mixture," but we submit that such treatment is too costly and troublesome for the ordinary commercial value of the product. Something may be done in the way of selecting more resistant varieties and supplying them with an abundance of plant food. We have noticed that the affection called blight in tomatoes is usually accompanied with symptoms of general starvation of the plant. The leaves die progressively from below upwards, the ends of the growing shoots remaining green. If a light application of nitrate of soda or other fertilizer, rich in nitrogen, is made, the plants at once begin a new growth, and if fertilization and liberal culture is continued they may throw off the trouble to a great extent. The older text-books claimed that tomatoes should not be grown on highly-enriched land, as too much available plant food stimulated the vine at the expense of the fruits. This was probably true of the varieties grown at the time, but the newer kinds now in favor are much more productive and will utilize a greater amount of fertilizer.

Van Deman's Fruit Notes.

ALL SORTS OF QUESTIONS ANSWERED.

Grapes and Small Fruits.

1. How shall I treat my grapevines? I have lost nearly all the fruit by black rot for three years. 2. Is McPike grape as strong a grower and as productive as Worden? 3. Is Mersereau blackberry as large as Eric? 4. Is Pomona currant as profitable to grow as Red Dutch?
Independence, Mo. T. A. P.

1. Grapevines, trellis and posts should be sprayed or swabbed before the buds open with a very strong solution of sulphate of copper to kill as many as possible of the germs of the black rot that are lurking in the vineyard. When the fruit is just past the bloom the Bordeaux Mixture should be sprayed into the vines in a most thorough manner. In about two or three weeks longer another spraying of the same should be given. If this is done thoroughly, and with the mixture as described in the directions given in the bulletins and rural papers, there will be little or no rot on the grapes. 2. McPike is said to be as strong a grower and as productive as the Concord or Worden grapes. 3. The Mersereau blackberry has been tested but little as yet, and so far it seems to be about as large as Erie. 4. Pomona is a rather new currant, and is thought by some to be as profitable as Red

Dutch, while others do not think so. It is doubtless somewhat changed by the climatic and other conditions under which it grows.

The Vigorous Ben Davis.

Why do you recommend top-grafting the Rome Beauty on Ben Davis roots? My experience is that Rome Beauty root dies first, while Ben Davis dies first at top. Is this your reason? Would you advise me as to the profitableness of planting Stayman apple in southeastern Ohio?
Newport, O. F. F. D.

The Ben Davis tree is so strong and vigorous that it makes a good stock upon which to graft almost any variety of apple; and as Rome Beauty is deficient in hardiness of trunk and roots I recommend it for insertion upon the Ben Davis. Yes, I think Stayman will be a very good apple to plant in southern Ohio and anywhere that Winesap is profitable, because it is a seedling of that variety and much like it in all respects, except that the fruit is larger, and the tree much better in habit of growth.

Transplanting Large Peach Trees.

On the south side of the old house at my home are two old peach trees, whose fruit is admired by all who see it. The trees must be removed to make room for another house. Can I get them to grow again, by resetting in another place? Some have said cut off their tops. What is your opinion? A. M.
Wolcottville, Ind.

If these trees are not very old they are probably worth the trouble and expense of transplanting. This can be done by cutting back the tops to where the branches are an inch or two in diameter, and digging up a large ball of earth with the roots. Very large trees of various kinds are successfully moved in this way, and if great care is used the branches need very little heading back. As the cost of a new tree is very little, and it will soon grow into bearing, it is doubtful as to the profit of transplanting large ones, unless for the preservation of a variety. These trees may be seedlings which ought to be preserved, but if not, and the variety is known, young trees might be better than the old ones.

Girdling Apple Trees.

Is it desirable to girdle apple trees to make them bear? It has been so advocated, but I have not seen anything regarding it lately. I was always led to believe that girdling a tree kills it. If it is a good thing, how is it done and what time of year is best? J. S.
Salamanca, N. Y.

Girdling some kinds of trees will cause them to bear very soon, and is not injurious to them if it is done at the right time and in the right way, while others would be killed by the same treatment. The apple and pear I have sometimes girdled with good effect, but the peach, cherry and other stone-fruit trees would have died outright. The time to do the work is in June, when the bark peels readily, but in no case must the tender, sticky growth under the bark be scraped or shaved off. A ring of bark several inches wide may be taken off entirely around the tree, or several longitudinal strips removed, with intervening spaces of bark left between them. Rings cut to the wood without removing any bark are sometimes effectual in causing tardy trees to bear early.

A Talk About Chestnuts.

I should like some information concerning chestnut culture. I have about 10 acres grafted with Paragon, McFarland and Coe on native sprouts. Some of the Paragons are bearing. The nuts are large and of fine quality, but the coarse growth is objectionable, being apt to blow out, also making too large a growth for the native stock. How is the quality of McFarland and Coe? Do you think that there are any better varieties for this purpose? G. C. S.
Pattenburg, N. J.

The Paragon is one of the best of the foreign class of chestnuts to unite with our native species, so far as experience has gone, but other varieties may prove better in time. I feel quite sure that if the stumps were cut at an angle of 45 degrees or more, and the scion set at the top, instead of the old plan of a square-cut stump, the wound would heal over much more quickly and lessen the danger of breaking off. I set all of my scions that way. McFarland and Coe are of the Japan class and are thought to be very good for the purpose mentioned. I do not now know of any that are better for uniting with our native stocks than those mentioned.

Some So-called New Apples.

Would you inform me about the following varieties of apples? They are catalogued by a certain firm, but I do not see any account of them elsewhere: Chicago, Champion, Black Ben Davis, Apple of Commerce, Ingram, Senator, Delicious, Stayman, and Aikin. Are they all right, or are they old varieties under new names?
Bonaparte, Iowa. H. W.

Collins is the approved name of the apple which is called Champion by some. Black Ben Davis may be distinct from Gano, but it surely resembles it so closely that there is no observable difference. Last December I tested several specimens under both names grown by the same person in southern Illinois, and they were all alike in every particular. This was the unanimous opinion of several persons who tested them. Reagan is another name that has been given the variety in Arkansas. Commerce is called Beach in the official list of the Arkansas Experiment Station. Oliver is the correct name of the variety called Senator. Ingram has no other name, so far as I know, and is a promising Winter apple. Stayman is another very good Winter apple that will probably prove better than its parent, the Winesap. Aikin is rather small, not a late keeper, but very bright red and of excellent quality. Chicago and Delicious I have never seen. It would be unwise to plant more than a few trees of any of these kinds, except Stayman, until more is known of them.

Grafting Chestnuts and Peaches.

Which method is best for grafting chestnuts and which for peaches? Would it be better to bud them? Also, is it better to wait until the buds are pushing (having kept the scions dormant), or graft same time as apple? 2. Will you recommend a list of apples for succession in the latitude of southern Pennsylvania or northern Maryland? G. E. W.
Goshen, Pa.

1. In my own experience I have found one of the bark methods of grafting best for the chestnut. The first thing to do is to cut the scions and store them where they will be kept so cool that they will not start in the least until the stocks to be grafted have begun to show green leaves, and the bark will peel. Then the stumps are cut as for cleft or split grafting and the bark slit with a sharp knife on one side, instead of splitting wood and all. The scion having been sharpened into a long wedge, and from one side only, it is pressed down between the bark and wood of the stock where the slit was made. It should then be tied firmly in place with a small string and the entire wound thoroughly waxed. Some have succeeded with cleft-grafting at the ordinary season, as with apples, but I have done well that way. Peach trees are exceedingly difficult to graft, and should be budded instead. 2. As it is probably a family orchard that is desired the list should be very

NEW HAMPSHIRE BARNYARD IN WINTER. Fig. 95.

different from one for commercial purposes. There should be but two trees each of some of the Summer and Fall kinds, and a larger number of the Winter varieties. The following will be a fairly good family list: Summer Rose, Early Harvest, Benoni, Lowell, Fanny, Jefferis, Fall Wine, Grimes, Jonathan, Hubbardston, Winesap, York Imperial.

Apples for Maryland.

1. I wish to set out about 75 apple trees as a starter for orchard, and wish your advice as to varieties best suited to this climate (lower Maryland) on what is known as "White oak" soil. I wish about 60 Winter and Fall varieties and the other 15 of Summer kinds. What is the best cider apple for this section? Is Stayman's Winesap a good keeper and reliable bearer? Is the Albemarle Pippin the same as what is called the Newtown Pippin? Is there likelihood of losing any considerable nunber of apple trees if set in Spring? The Fall is usually, of course, deemed the best time. 2. How are conifers propagated? 3. Is any special preparation of seed necessary in planting pecan or English walnut?
St. Mary's Co., Md. J. F. C.

1. To plant any kind of apple, especially for cider, seems to me unwise, because there are more windfalls from the Fall and Winter varieties than can now be profitably utilized. Winesap makes excellent cider. The richer the apple the richer the cider. Stayman is a good bearer and keeps as late as Winesap. Albemarle is merely a synonym of Yellow Newtown, although there are some who contend that they are different. Scions from Yellow Newtown trees in New York have been taken to Virginia and grafted into trees besides those called Albemarle there, and when the grafts produced fruit the two were identical. Spring setting of apple trees is all right. In many sections, where the Winters are cold and dry, it is far better than Fall setting. 2. Conifers are usually propagated by sowing the seeds in beds under lath sheds, and when the plants have grown about two years they are transplanted to a place where the shade is not so dense, and finally into open ground. The oftener they are transplanted the better roots they will have, and the more confidently they may be set in their permanent places. 3. The most important thing about planting pecans, or any other nuts, is to have them fresh and to prevent them from getting dry. They should be planted only about two inches deep.

WEEDER OR HARROW ON SPRING GRAIN.

One of our readers says that he has a field of wheat that is seeded with Red-top and Timothy. He wishes to know whether it would be an advantage to go over the field with a weeder before sowing clover in the Spring, or whether it would tear up the grass too much. We have seldom seen mention made of the use of a weeder where wheat was seeded to grass, but there are some advantages in such an operation. What do you think about this matter? Under what circumstances do you think it would pay, and under what conditions would it not be advisable?

Might Pay in the West.

There is no doubt as the value of using the harrow or weeder as soon in the Spring as the ground is dry enough to admit of this being done, both on wheat and rye crops sown in Fall. The chief advantage is in the fact that it breaks up the capillary attraction and prevents the too rapid evaporation of moisture from the soil before the plant has pushed out and down roots sufficient to sustain the full growth. If the wheat has been sown in drills, the grass has no doubt been deposited in the drill furrows for the most part, and the weeder will not pull them up, and if they are not covered up too much by the rigid use of the weeder they will not be harmed. If, however, the wheat has been sown broadcast, the grass plants being small, and as they spread out many roots near the surface and have no top roots, there is much danger that they will be injured by the use of the weeder if its work is effectual enough to be of service to the wheat plant. If clover was sown ahead of the weeder it would be well covered. E. E. CHESTER.
Illinois.

Conditions in Central New York.

It would seem to be best to secure a good foothold for the plant, and that would require some system of covering of the seed. Properly to cultivate the seed bed for the grass, and to cover the seed, without injuring the wheat, is a difficult matter, and without injuring the Red-top and Timothy impossible. Had the inquirer not sown the other grasses last Fall, and sown all together this Spring, he could have given the wheat one good harrowing after sowing the seed, and either brushed or rolled it in. Except in such cases as soft, mellow or mucky soils, free from stone and not compacted by Winter rains and snows, the weeder will not loosen or stir the surface soil enough to do any good, and will do some injury to the small grass plants, especially if used more than once over. On many wheatfields once over would leave hardly a visible scratch. Cultivation, to be of value, must break up the crust, and a smoothing harrow is much better. The seed should always be sown first, and be covered by the first harrowing, for not many have the nerve to give the second and third ones, although I do not believe it will injure the wheat on our hard, stony fields. Wheat harrowing is not popular here, one reason being that so many stones are turned up, and rolling them down leaves some of them on the wheat. I find more surety of success sowing both clover and Timothy in the Fall on all upland fields that do not heave, and sow on more in the Spring as the fields seem to require.

The ideal time to sow grass seed is when bare ground is frozen enough to cause it to crack open in an immense number of crevices, and early enough in the morning to get done before it is thawed out. When the seed falls on the hard ground it rolls into the cracks, which close and cover the seed. I have sown clover seed in March where the field was more than half covered with snow, and had good results. I prefer to sow in a cold time, and let the thawing carry the seed downward, distribute and cover, to sowing in a warm spell which causes the seed to germinate on top of the ground, and freezes it to death, the first time the weather changes. Early sowing gives the plants a better start and a better chance to withstand the Summer drought. My wheatfields were fairly seeded last Fall, and I shall watch for a chance about April 1 to put on some more seed, with a wheel seeder, some cold snap, when ground is frozen. I believe nearly all good seed sown at any time grows, but is killed afterwards by frost, drought and the other crop growing at the same time. The better the plant is protected from these disturbing causes by better covering, earlier growth and thinner seeding of the wheat, the better the seeding will be. Rather than to sow on a hard, dry surface in warm weather I would harrow in the seed and roll the ground, preferring to lose some of the Fall-sown seed to losing *all* the Spring-sown. C. E. CHAPMAN.
Tompkins Co., N. Y.

SNOW IN THE BARNYARD.—On page 150 a "One Horse Farmer" in New Hampshire told us about some of his operations. A picture of his yard as he found it one morning in early February will interest some of our southern readers, who at that season were basking in warm sunshine. See Fig. 95.

MACHINES FOR PICKING STONES.—The only tool that I have seen used for picking stones was a stone picker with six teeth or prongs, like those on a hand-potato digger, Fig. 94, with a handle about the same length. If you would take one of those diggers and bend the shank so that it would hang about like a hay fork it would resemble one of these pickers. I never would use one of them, as it looks like a lazy man's tool, but these pickers are used on the highway, some by men following the road machine when repairing the roads. I have seen men use a manure fork to do the same work. There are some places in the highway where we have used a steel garden rake to gather the small stones in small heaps and then shovel them out one side. P. C.
Milford, N. H.

Killing the San Jose Scale.

J. E. W., Churchland, Va.—I have been intending for several seasons to set a variety of fruit trees, one of a kind, for family use. But I am uncertain whether it would not be better to abandon the idea after all than to introduce the San José scale here. Would I not better continue to buy fruit than introduce the scale, where we do not know what it is? Do you consider the hydrocyanic acid gas treatment an absolute safeguard and destroyer of the scale where it exists on nursery stock?

ANS.—We should certainly buy the trees and plant them. We feel confident that the entomologists will in time find for us a sure method of fighting the scale insect. Other injurious insects have appeared suddenly in the past and caused great damage before we learned how to fight them. The Potato beetle, the Codling worm and others frightened farmers at first, because they did not know how to kill the pests. The scientific men had to learn the theory of applying poisons, while the practical men had to turn the theory into practice. Just now no one seems to know the best way for fighting the scale, yet we feel sure that the entomologists will in time master it, and give us a sure weapon against it. We believe that the hydrocyanic acid gas will destroy the scales on nursery stock if used at the proper strength.

Clark's Grass Method With Cow Peas.

W. A., Hartford, Conn.—I desire advice regarding treatment of three acres of land to be seeded to grass approximately after G. M. Clark's method. This land is now turf, has not been plowed for 20 or 25 years, and is part of the moraine of an ancient glacier; soil, sandy loam (red in color), underlaid by very stony subsoil; always yielded poor crops; northerly slope, fairly well drained. I intend to plow in April, harrow with wheel harrow, remove stones, harrow with wheel and Acme until May 25; then fertilize with 25 pounds ground bone and 75 pounds muriate of potash per acre, harrowing in with Acme. Sow one bushel cow peas per acre broadcast and harrow in with Acme (would weeder do?) as soon as weather permits. Plow in about August 5; top-dress with 500 pounds air-slaked lime per acre; harrow with wheel and Acme until September 5; remove stones over two inches diameter; sow 200 pounds per acre complete fertilizer, harrow in; sow proportions of Timothy and Red-top recommended by G. M. Clark. Do you think this will give first-class results?

ANS.—In general, this plan seems a good one. We would rather sow or plant the cow peas in drills 30 inches apart, and give constant cultivation through the Summer. One great secret of Mr. Clark's success is the thorough stirring of the soil that is given during the hot months. This constant culture kills the young grass and weeds. The cow peas may cover the ground completely and smother down the weeds, but they are not destroyed. They will come up later, in the grass crop. You do not want to let the weed seeds remain in the soil. Better sprout them and then kill by cultivation. If you do broadcast the cow peas, the Acme will do a better job, as the peas need a deep covering. We should wait until August 15 before plowing under the cow peas so as to get as large a growth as possible. We would broadcast the lime at once after plowing under the vines. This ought to give good results, but we have seen the best of preparation fall short of expectations, and therefore would not guarantee a yield equal to Mr. Clark's.

Red Raspberries in Vermont.

M. W. S., Fairlee, Vt.—We have a young orchard on heavy, sandy loam, moist and rich; Winter apple trees two years set. We have raised corn in the orchard, manuring and cultivating well. Now we wish to set an acre of red raspberries for market purposes. Will it be best to set the raspberries among the apple trees, and will both fruits thrive together? The site is a stair in the side hill, 150 or 200 feet above the Connecticut River. Meadow, good drainage, and sheltered north, east and west by evergreen-covered hills. What variety of the red raspberry is best for the North? Will the red raspberry thrive on good, moist, sandy loam 50 or 60 feet higher than the meadow, or would the bushes winterkill?

ANS.—I would not advise setting red raspberries with the apples, but by themselves. If the land is quite rich and moist it might force too much growth, which would be sure to winterkill. For best results, land should be only rich enough to grow a good, well-ripened stocky cane of medium height, and to be kept in a good healthy condition all the season. Good hardy wood cannot be made from a rank and sappy growth early in the season, and later neglected enough to stop growth so it will ripen up. Had M. W. S. stated how low the mercury is liable to go in the Winter, a better idea in regard to his questions might be had. Here the Cuthbert still takes the lead. Loudon may be a little more hardy in cane but has not taken the place of that variety. The Brandywine is quite hardy, but is a back number where better varieties can be grown. Before investing too heavily I would advise M. W. S. to experiment somewhat for himself, unless he has neighbors in the business, and can learn from them.

Massachusetts. H. O. MEAD.

The Seed End of Potatoes.

W. S., Sabillasville, Md.—I expect to plant half of my 1901 crop of potatoes with seed of the Bovee, using tubers about the size of a hen's egg. These I shall cut in two lengthwise. Will you tell me whether I can obtain best results by clipping off and discarding seed end? Will rejecting seed end of this particular variety reduce or increase crop?

ANS.—We doubt whether it would make any difference whatever. Experiments on a small scale seemed to show that some varieties give a larger yield when the stem end is planted, but single experiments prove little more than individual habits. The purpose of the seed piece is to feed the little plant—which starts from the "eye"—until it can make its way above ground. We see no good to be obtained by cutting down this supply of "baby food." We prefer a large seed piece, especially in cold or backward seasons.

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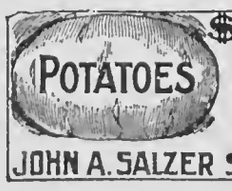

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Cyanide Fumes and Germs.

B., South Haven, Mich.—Will the cyanide of potash and sulphuric acid method of fumigation work effectively as a germicide? We have had two deaths from consumption, and just passed through a siege of scarlet fever. Will the cyanide fumigation injure household goods? I suppose it will be neeessary to remove house plants, will it not?

ANS.—We do not advise the use of the cyanide fumes for destroying disease germs. This gas is deadly to all breathing things, but the germs of disease are not killed in that way. The fumes of sulphur will be more deadly. Corrosive sublimate or bichloride of mercury dissolved in water and used as a wash or spray on the walls and floor of the rooms and in all cracks and crevices will be far more effective than the cyanide. The fumes will not injure furniture or household fixtures, but will kill the house plants.

Tobacco Stems and Wood Ashes

J. D. K., Mt. Airy, Philadelphia, Pa.—What are the respeetive values of tobaceo stems and wood ashes as fertilizers for fruit trees? Are either of them complete fertilizers, and will either take the place of commereial fertilizers? How many tons should be used per aere, and when should they be applied? Are fruit trees likely to be injured by commereial fertilizers?

ANS.—Both tobacco stems and wood ashes vary somewhat in composition. The following figures show a fair average:

In one ton.

	Nitrogen.	Potash.	Phosphoric acid.
Stable manure	10	13	6
Tobaeco stems	45	130	12
Wood ashes	0	100	36

Thus the wood ashes contain no nitrogen. If clover or cow peas are grown in the orchard, and plowed under to provide the nitrogen, the wood ashes might answer. Some growers use wood ashes freely, and add nitrate of soda as the trees seem to need nitrogen. Tobacco stems contain four times as much nitrogen and 10 times as much potash, but only twice as much phosphoric acid as stable manure. They are, therefore, more a substitute for manure than for ashes. By using 250 pounds of acid phosphate with the ton of stems you will have a much better orchard manure. One ton or more of the ashes can be used per acre. If cultivated we would apply in Spring or Summer, and follow with some cover crop. If the orchard is in grass we would apply in Spring. Personally we would prefer to use the ashes in the orchard and the stems on corn or garden crops. No, fair dressings of chemicals will not injure fruit trees.

A Problem of Poor Soil.

C. S. W., Monmouth Co., N. J.—Do you think green produets, sueh as peas, beans, sweet potatoes, tomatoes, etc., will grow here? The reason I ask this is it has been corned every year for seven years, and yielded well. Must I use plenty of manure and fertilizer (if needed), and what kind? Will lettuee, cauliflower, cabbage and celery grow here? My ground is sandy loam. Will strawberries grow on ground that was a wood last year, but now it is all grubbed off? It is a little heavier loam. Do you think it would pay better to put it in an orehard, that is, the whole five acres? About 1½ foot from the surface is a clay bottom. Would you advise me to scoop it all off next Fall, or leave as it is? The reason I ask this question is that the ground has been worked in corn so mueh that it has taken the entire strength from the surface down to clay bottom; and by scooping all off I thought it would make it all new land and as good as ever.

ANS.—We do not, of course, understand your peculiar local conditions, but the sandy soils of Monmouth Co., N. J., generally produce well all the crops you name if sufficiently fertilized and cultivated. The fact that corn has been grown on the land for seven successive years proves that the soil is naturally good. Good stable manure applied at the rate of 20 to 30 tons an acre would supply sufficient humus and plant food to give your crop a chance, and this could well be supplemented with an application of 600 to 1,000 pounds per acre of a complete chemical fertilizer from some reliable manufacturer, containing not less than four per cent nitrogen, eight of phosphoric acid and 10 of potash. When soil has been so badly cropped as yours it is best to spread the manure before plowing and turn it under. The fertilizer may be broadcast on the newly-plowed land, and harrowed in, or may be applied in the furrows before planting. Do not think of scraping off the top soil, as it would render your land unproductive for years, but depend on manure, cultivation and such restorative plants as Crimson or other clover, or cow peas to restore its fertility. Strawberries should do well on newly-cleared land if given good care. We would not advise the planting of an orchard until the local conditions have been well studied.

Gardens Without Manure.

P. F., Ayer, Mass.—Can fertilizers be made to take the place entirely of manure? Can I plant a garden year after year without using manure, and get as good results? What is best to sow to keep a garden on a side hill from washing in Winter and early Spring, and when is the best time to sow it?

ANS.—Yes, if the wastes of the crop are worked into the ground with the fertilizer. Manure has several advantages over fertilizers. It is alkaline, and on garden soils, which are likely to be sour, it acts somewhat like lime. It supplies humus or vegetable matter and warms the soil. It also adds various microbes or germs, which devclop through the soil and add to its soluble fertility. The fertilizers add plant food, but in a garden soil, there should be plenty of humus. This can be provided by leaving all the roots and trimmings of the vegetables on the ground and sowing rye in the Fall after the vegetables have been killed by frost. With humus provided in this way you can have a good garden year after year by using fertilizers. Rye sown about the middle of September will hold the hillside.

Fertilizer on Potato Seed.

J. M. T., Marietta, O.—Will it injure potatoes to put the fertilizer in the row with them? The fertilizer would be about as follows: 300 pounds acid phosphate; 200 sulphate of potash (high grade); 50 nitrate of soda; 100 tankage (10 to 20). This proportion to the acre, put in with a Robbins planter. I have heard that the fertilizer is liable to injure the potatoes for growing if it comes in contact with them. We have used the above fertilizer with success, but have always put on as the potatoes were coming through the ground.

ANS.—The Robbins planter will mix the fertilizer so that there will be no injury to the seed. You are safe to go ahead with it. In hand planting we do not like to put nitrate of soda or acid phosphate close to the seed. It is better to mix them with the soil. Make a deep, wide furrow, and scatter the fertilizer, not in the bottom, but along and over the sides, then run the cultivator through and work the fertilizer in before dropping the seed.

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used in their fertilizers, which pushes the crops forward for an early market. GARDENERS should insist upon having a large proportion of *Nitrate of Soda* in all their fertilizers. Free pamphlets setting forth its proper application to crops, as well as a ***list of dealers,*** can be had by addressing **John A. Myers,** 12-O John St., New York City.

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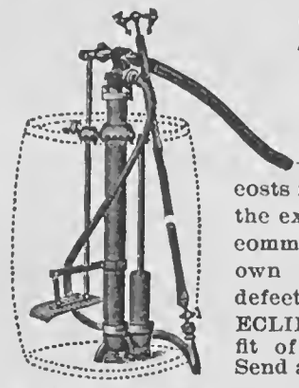

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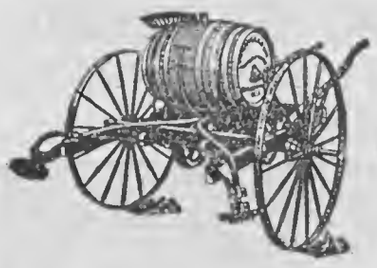

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IT has no small nozzles to stop up.
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will do more work better and with less trouble than any other sprayer. Price, $55. Send for circular.

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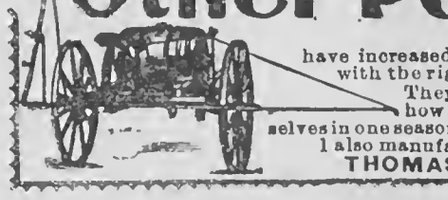

have increased 25 to 50 per cent. when they began to spray *the right way*—with the right sprayer, the PEPPLER AND CLIMAX SIX-ROW SPRAYERS. They will do as much for you. Read how they spray 30 acres a day, how they save ⅓ the poison, increase crops one-half, pay for themselves in one season. Catalogue contains spray calendar, formulas, etc. Sent free. I also manufacture the improved Riggs Plow and Riggs Furrowers.

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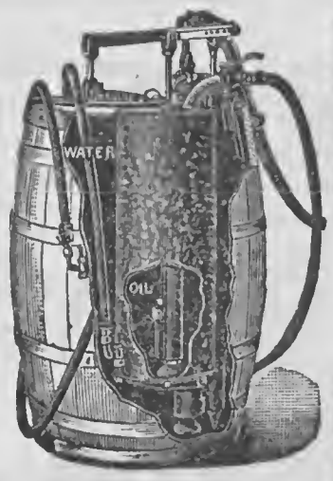

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BITS OF TALK.

Why not use S. C. rock instead of plaster as an absorbent in stable?

Some farmers do, and find it very useful. It is not so neat and clean-looking as plaster, but is worth more as a fertilizer.

* * *

What chemical process goes on in the silo?

It is not definitely known, but chemists are now coming to believe that in many cases there is no regular fermentation.

Does not the great heat which starts up after filling show that the silage is fermenting?

Not always. This heat has been observed when no ferment was present.

What caused it then?

The respiration (almost like breathing) of the cut stalks. These stalks are living things, which give off gases in the silo.

Is this heating necessary?

No. People used to think so, and some do now, but the best of silage has been made with little if any heating.

According to these new ideas what sort of corn makes the best silage?

The mature stalks. The green, soft stalks make a poorer silage, with more acid.

What about the silo?

The best silage is made in strong, light silos. We hope to have this whole thing explained by Prof. F. H. King ere long.

* * *

Why do you feed so much wheat bran?

It contains more of the minerals or bone-forming food than any other feed. For young stock, poultry or brood animals we call it specially useful.

* * *

Will the continuous use of nitrate of soda harm the soil? I have heard it stated that nitrate of soda leached the soil and carried other materials with it.

No. The nitrogen may leach out of the soil in a rainy season, but it will not carry other valuable fertilizing elements with it.

* * *

Is there any profit in dandelion culture?

Very little, except in some special localities. The dandelions are boiled for "greens." There is but a limited market for them. We would not advise any large investments in the business.

* * *

A dwarf stock will always dwarf a standard tree grafted on the dwarf. What is the effect when a dwarf is grafted on a standard, as, for example, a Paradise graft is inserted in an ordinary apple tree?

As the dwarf graft cannot be induced to grow fast enough or produce sufficient foliage it will eventually succeed in checking the growth of the vigorous stock, but if a good union is made it will probably grow larger than if on its own roots. Catalpa Bungei, a large-leaved shrubby species, is often grafted high up on C. speciosa or C. bignonioides stocks, and forms the dense round-headed Umbrella Catalpas often seen on ornamental grounds.

* * *

What are the best kinds of peppers for market? Are they a profitable crop to grow? What kind of soil is best suited for them? What distance apart are they usually planted for field culture?

The Ruby King, County Fair and Large Bell are the kinds generally preferred, given in the order of their popularity. The new Chinese is immense in size and of splendid quality. It is rather late, but if first fruits are removed as soon as they reach marketable size it is very productive. Peppers are considered fairly profitable near the large markets. A warm, light, well-enriched loam is best. The plants are set in rows 30 inches apart, and 15 to 18 inches apart in the row.

* * *

I have about three acres of asparagus that I intended to put farm manure on this Spring, as the land is a trifle heavy. I saw just a trace of rust last Fall. Which will be the safer, manure or a complete fertilizer? I used nitrate of soda last Spring; year before manure and fertilizer. What is the best black raspberry to plant?

Good stable manure is probably best for asparagus, applied at the rate of 20 or more tons to the acre. Good asparagus is grown with fertilizers containing four per cent nitrogen, eight of phosphoric acid and 10 of potash, applied at the rate of 1,000 to 1,200 pounds per acre. Kansas is probably the safest black raspberry to plant just now, though Cumberland is meeting with great favor, as it becomes more widely tested.

ASPARAGUS RUST AND VARIETIES.

What New Jersey Growers Say.

While we have had no experience with the Argenteuil or any other of the new or old varieties other than the Palmetto and Conover's Colossal, we find a very decided difference in the immunity from rust between the Palmetto and the old stand-by, Conover's Colossal, in favor of the Palmetto. In fact, the Colossal rusts so badly that it is not planted except by mistake in this locality, while the Palmetto and French "grass" is being put out in large quantities.

Middletown, N. J. W. B. CONOVER.

My experience is only between the two varieties, Conover's Colossal and Palmetto, both in the same field, and of same age and culture. Palmetto is very much less affected, showing three weeks' good growth after Colossal is apparently dead. I have had no experience with the Argenteuil, which some of my neighbors claim as good as Palmetto. I think not. The old varieties are no good; too easily killed by the rust. J. S. E.

Port Monmouth, N. J.

Palmetto will rust badly with me. My plants were raised from seed grown by Johnson & Stokes, Philadelphia, and they assured me the seed was genuine Palmetto. There is a variety grown here to a limited extent known as French asparagus, which may be Argenteuil that does not rust as much as the Palmetto.

Red Bank, N. J. H. C. M'L.

In regard to Asparagus rust in our locality, my experience has only been with the Palmetto and Colossal, and the latter is so susceptible to rust that it is a dead failure, and people have about stopped putting any more of it out. As for the Argenteuil, as far as I can learn, it is about the same as Palmetto, although the beds are all very young yet.

Red Bank, N. J. T. S. F.

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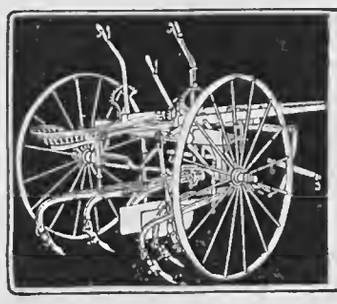

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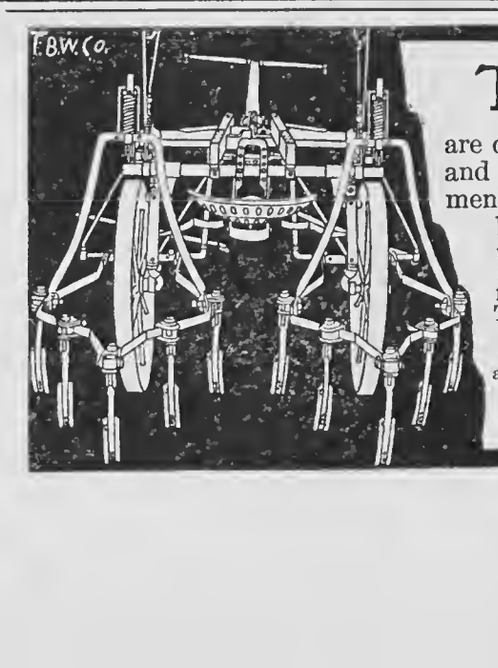

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HOPE FARM NOTES.

AT OUR WORST.—If you wish to see the country in northern New Jersey at its worst you should put on your rubber boots and walk abroad during the last days of March. You will need boots, for the frost has crawled at least 18 inches into the ground, and the officious Winter sun has tried to crawl in and pull him out. The result is four or five inches of soft slimy mud, into which the foot of man and beast plows great ragged holes and furrows. Every rain and thaw on the hills sends the water coursing down. It cannot sink in past the frost, and so it gouges on down the hillsides, leaving the very bones bare in some places. While the sun may be shining brightly the air comes over the hills with a dagger in one hand and salt in the other to stab and rub the pain in! As you look across the valley you see cold corners on the north sides of the hills where snow lingers and pneumonia waits for its victims. The cattle, rough-haired after their long Winter in the barn, stand in dumb unhappiness around the buildings or track their muddy way over the fields. The hill roads are deep tracks of mud, over which few horses are driven for pleasure. The big apple trees have mostly been trimmed with a liberal hand, and each one has a ring of brush around it, as though it were caught partly undressed in this desolate season.

LOOKING THINGS OVER.—Yes, it is the hardest season of the year. The women folks are closely housebound and the men are sick and tired of the mud. This is the season that breaks the heart of the city family who thought to make a happy home on the farm. Hope Farm has been pretty well battered, but is still in the ring. The rain washed down the hill and made some bad gashes just where we least expected them. We thought we were ready for a flood, but this one got in a blow in a new place. It jumped out of the ditch we made for it, and rushed over one of the meadows we had seeded to grass on the famous Clark method. It looks now like a bad wreck, but grass is tough, and we may get something from it yet. The other grass field looks better, but the frost has pulled out a good share of the plants. That flood made a raid through the field where we sowed Crimson clover, rye and Winter oats all together. They don't look happy at present, but they may find that March tears have watered them for June smiling! Some of the Winter oats seeded alone are greening up, but it will be a poor stand at best. Yes, the farm looks sick enough just now. What a hopeless thing it would be if we were forced to conclude that the year is to contain 365 days of March weather! No—we are starting pansy seeds, tomatoes and cabbage—getting the seed potatoes ready, and going right ahead, sure that June will show up at the regular time all ready for business. As I look at that grass field I am reminded that the best of us are likely to let our enthusiasm slop over in June. Yet, if we did all our truthful talking in March painting things only as they are then—who would try to improve? Another thing that I now realize is why Mr. Clark lays so much stress on grading and levelling the field. Had I spent more time on this field making a level, gentle slope this flood would have done far less damage. March rubs things into us, but June is apt to heal the sting and make us forget it.

WHAT TO RAISE.—We have something over six acres of rye and Winter oats growing. Last Fall we seeded about four acres to grass. I now plan to cut all the rye early for fodder. In the orchard near the barn we expect to sow beardless barley, seeding to Orchard grass and Red clover at the same time. The barley will probably be cut for hay. Over the hill where I thought to put a large crop of potatoes we shall sow oats to be followed in part by sweet corn or grass seeding. On the high hill the frost holds off until late in the Fall, and there is a good chance that the sweet corn will ear out. If it does it will bring good money. If it does not it will make fine fodder. I shall plant a fair acreage of potatoes in the best soil of the farm, a fair lot of sugar beets and all the corn I can get in. I shall also start a peach orchard this Spring and a young apple orchard next Fall. But what are you to do with all this fodder? Well, it means live stock of some sort—cows, hogs and hens. I now have five head of horned cattle, four of which will be giving milk by next Fall. We have four brood sows now. I also hope to carry a flock of at least 300 hens. I hope to see the time when I can sell Timothy hay enough to pay for all the bran and middlings we need. Our own stock can live on oat hay and shredded fodder for roughage.

WINTER JOBS.—Since I stated that some paying Winter job would be acceptable at Hope Farm I have been well supplied with suggestions. Witch-hazel growing was exploded when the price for the twigs was quoted. Broom making is very doubtful. A friend in Michigan sends a full raft of ideas. Here are some of them:

1. A mail order business! Invent some toy or get hold of some little thing and advertise it for sale! The trouble about this is that I am no inventor. Charlie might get up something of the sort, but I doubt the profit in it unless one has something entirely new.
2. Sell botanical specimens to city pupils and others. Our friend says that thousands of city children do not know the silky covering on the milkweed, corn silk, grass, etc., yet they often have to study botany. There might be something in this—I am not sure.
3. Why not work up your old stone walls into marbles or paper weights? "Let your windmill do the work!" Marbles are put together the other way—pressed and baked. I have some stone much the same as the famous Plymouth Rock. If I believed in the oleo business as at present conducted I might pound up our stone walls and sell the pieces for weights from the famous stepping stone.
4. Our friend thinks that we have so many women folks that they might go into the rug-making business or carve out new designs from wood for Noah's arks, or put a turning lathe on the windmill and turn out chestnut timber into woodenware or set out Japan chestnuts on our back fields and sell big crops from them!

I mention these suggestions as they come. Some of them seem to me impractical as we are situated. I find it easier to make 100 plans than it is to execute one plan well.

SEASONABLE NOTES.—Our seed potatoes have been kept in the cellar. Some of them have sprouted quite badly. Our second-crop June Eating, grown from seed dug in Florida in May, have hardly started a sprout. The cellar is no place for seed potatoes. I must have a better place next Fall. We are looking the seed over already and shall bring several barrels for earliest planting out into a sunny place. This will make the sprouts thick and strong. . . . . The hens are doing better. They laid 238 eggs in the first 15 days of March. We have the 220-egg incubator under way and one old hen has been gratified in her desire to add to the chicken population of Bergen County. This old hen hatched three broods last year! . . . . I am asked how we handle and feed our purebred Berkshire sow. At present she occupies a box stall in the corner of the small barn. There is a pen connected with it and on fine days she runs out and in at will. We have fed her boiled turnips and small potatoes mixed with wheat bran and middlings. I don't believe in starving a brood sow. Possibly we have made this one too fat in our first attempt, but I do not think so. She has had plenty of green cabbage and now and then a handful of oil meal in her mess. She has also had wood ashes in plenty. The hog-house will soon be ready and then she will be moved into a good-sized pen in that building. I have been criticised by some good hog breeders for ever building a large hoghouse. They say that the small portable houses are much better. . . . The little Scion is out of danger, but cannot go out doors yet, for the wind is too fierce. He has to play out doors by proxy—running from one window to another to watch the other children. We bought him a little bucksaw and frame and Aunt Jennie lets him work with it in the kitchen. The Graft brings in the smaller sticks from the pile, and between them the little fellows really provide a fair supply of fuel.

FARM PARTNERS.—One "new thing" that is in great demand is a breed or variety of farm hand or manager. The position of a good many farmers is stated in the inclosed letter:

THE R. N.-Y. prints a statement in regard to men leaving the city in search of country employment; also those wishing to buy farms, etc. Can you tell us of a worthy man and wife who would come to the country for that purpose, whom you can personally recommend (or through others?) We are much in need of help on our farm; would like a married couple—honest, industrious and ambitious. Our farm is a small but good one, in Allegany Co.; good fruit, a sugar bush with evaporator, Jersey stock with a cream separator, well watered, etc. Any man who has $1,000 or $1,500 to invest, and wants a farm, could not do better than to come here. They could have the opportunity of coming for one year at proper wages, and learn how to do farm work, eventually to buy the farm if they liked. If you could send the right man both parties could be benefited. FARMER.

Rushford, N. Y.

I regret to say that I do not know of any such person. There ought to be lots of them, but they are not in view. One would think this a good chance for some industrious couple, and I have no doubt that there are hundreds more like it. The man who can find the true connecting like between such people and the farm will do good service for his country. H. W. C.

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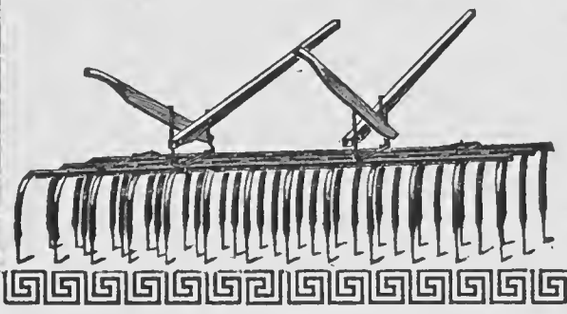

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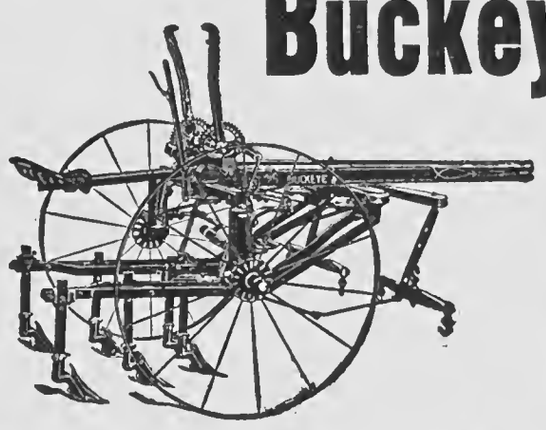

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This is our new hillside or pivot axle Riding Cultivator, equipped with six pin shovels on straight standards. The wheels on this Cultivator are pivoted to the frame and it is what is termed a wheel guide Cultivator. The beams are so connected that they shift in unison with the wheels, thereby enabling the operator to guide the plow entirely independent of the team. In addition to convenient levers for raising the beams, it is provided with a spacing lever by means of which the beams can be spaced to any desired width while the machine is in operation. Our No. 73 is the same as above, with the exception that it has our new Buckeye spring trip. No. 74 is also similar to the above, with the exception that it has eight pin shovels, the two additional shovels being clamped in the rear to the outside of the beam and is only furnished in pin shovel. We make a full line of riding and walking Cultivators. Send for new Catalogue No. 40.

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Built in all sizes and furnished with either 2, 3 or 4 horse eveners.

Awarded first prize at World's Fair.

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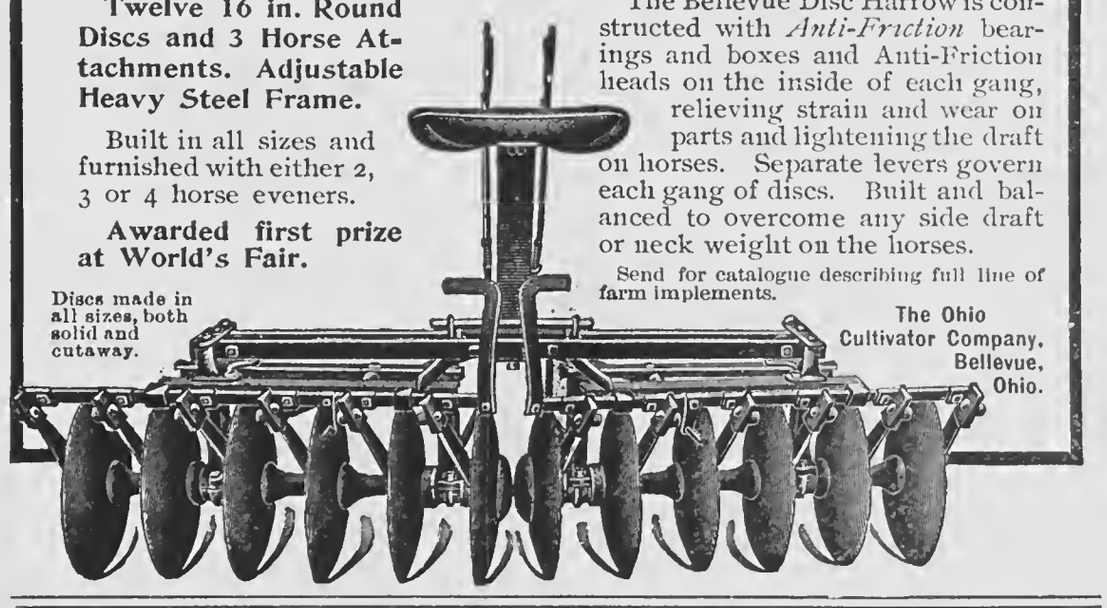

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Send for catalogue describing full line of farm implements.

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For Level Land and Hillside. Foot Latch. SHIFTING CLEVIS. No Dead Furrows. Lightest Draft. Best Quality Work.

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Send for circulars and our 1901 Catalogue of Agricultural Implements.

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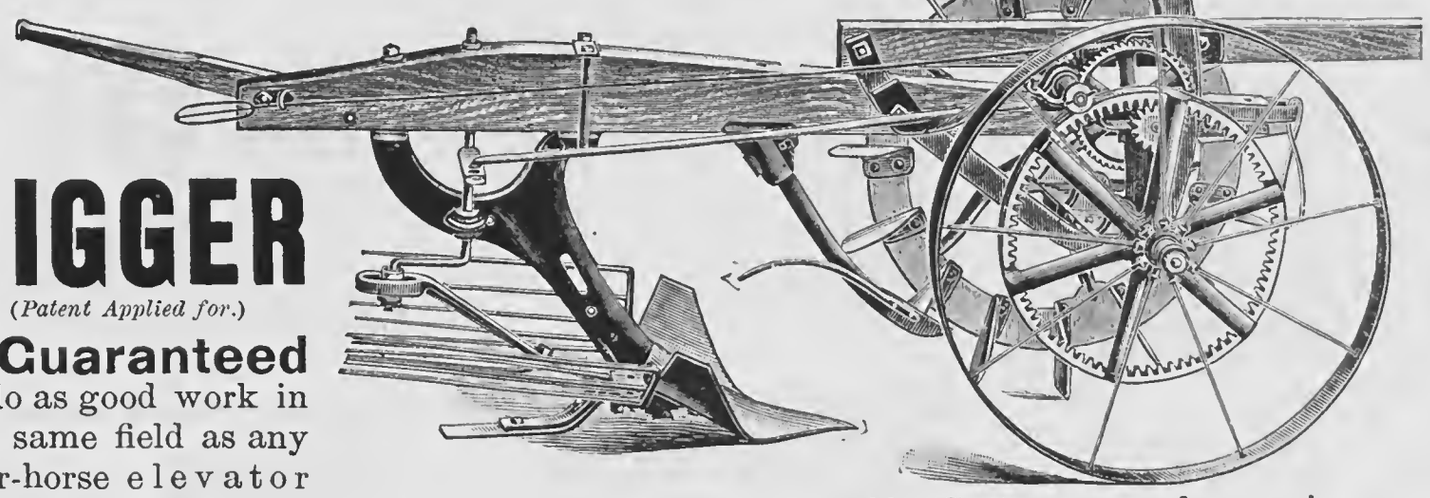
Is the latest, and it drops at twelve different distances.

For CORN, BEANS, PEAS and BEET SEED.

If you want them, we furnish Marker and Trip Attachment for rowing both ways. Send for Circulars.

O. K. Potato DIGGER

(Patent Applied for.)



Guaranteed to do as good work in the same field as any four-horse elevator digger on the market. Price one-half. Draft one-half. Cost per year for repairs, one-fifth. Guaranteed to dig as clean as a man can with a fork. Will make digging potatoes as easy, simple and inexpensive as cutting grass. Would such a digger please you? Will you buy such a digger? WE TAKE ALL THE RISK—unsatisfactory work in your field means no sale. Every farmer who grows five acres or more of potatoes is interested. We wish to hear from all such.

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(Please mention box number.)

Ruralisms

APPLE ADVICE.—Mr. Van Deman seems to be a little in the dark as regards the York Imperial. From our experience I would not advise anyone to set it out. It may keep well in cold storage of the very best, otherwise it always scalds with us, and only bears every other year. W. H. K., in your issue of January 26, asks about setting out an orchard. I will say that I have about 3,000 apple trees set 22 feet apart, the larger part Greenings with Ben Davis set every other row. The latter to be kept within bounds, ought to be cut as soon as they interfere with the Greenings. I am expecting to be away from home when that has to be done. I have also used a good many Wagener trees for the same purpose, and as they are a slow grower and bear early they are better than the Ben Davis for this use. Quality considered I would like to ask Mr. Van Deman what is the matter with the Jonathan or Winesap for market? S. R. S.

Orange Co., N. Y.

THINNING PEACHES.—I see by the report of the meeting of the New Jersey Horticultural Society that shaking was recommended to thin peaches. I am surprised that this should have remained unchallenged by such a body. We all thin peaches, of course, but we pick them, and it puzzles us even then to get best results. Pick them, and take the worst ones, allowing those that do remain to remain firmly fastened and uninjured. Shaking bruises those that remain, and often injures them in the stem, so that the fruit is dwarfed, or it falls afterward as a result of the damage. Our horticultural societies should at all times stand for the most improved methods. There are enough who shake them off, and some of these very fellows, hearing the shaking recommended, will continue to do it, thinking it as good a way as any. Pick the peaches off, leaving none closer than five to six inches. Convert one man to this and you may benefit a whole community. E. P.

Pennsylvania.

MORE ABOUT THE VOLGA POPLAR.—In THE R. N.-Y. of December 22 we notice an inquiry as to the Volga poplar. As we grow it, it is quite different from the Carolina poplar. Here it grows erect and compact, resembling the Lombardy poplar in this respect. It is perfectly hardy, and does not blight as does the Lombardy. The habit of the tree is much more compact than the Carolina poplar; does not drop its foliage in Summer, as the Carolina often does on account of fungus attacking the leaves. The leaves of the Volga are smaller than those of the Carolina. Trees 10 or 12 years old on the streets in Indianapolis present a much better appearance in mid and late Summer than the Carolina, on account of their erect compact growth and fresh appearance of the foliage.

Indiana. ALBERTSON & HOBBS.

THE SUTTON BEAUTY.—The Sutton Beauty apple is a rather slow grower on its own trunk, and requires a strong soil, such as would be suitable for the best development of the Baldwin. It will come into bearing much sooner if top-worked on another variety, and should be so grown, as it is a little inclined to tenderness in trunk, though apparently quite hardy otherwise. It is as long a keeper as Baldwin, and in quality lies between Baldwin and Hubbardston, being superior to either as a table apple, but not quite acid enough to rank with Baldwin for cooking. For market it excels Baldwin in its uniformity of size, and its freedom from leaf deterioration. Owing to its health of foliage the Sutton grows and colors beautifully up to gathering time, Baldwin often failing in this respect. Sutton is the only newer variety I would choose for planting in the Baldwin belt, as a competitor with the old standards. York Imperial scalds in storage and Rome Beauty calls for a spray pump, while Sutton is as free from scab as Hubbardston, and keeps without scalding. READER.

Dutchess Co., N. Y.

LARGE PEACH TREES.—I think THE R. N.-Y. is to be congratulated on your unique scheme to give your readers talks on timely topics by well-versed men. The article by Mr. Hale is worth the price of THE R. N.-Y. to any peach grower; however, I fear he would have a hard time to verify his argument on the size of trees to plant in all localities. The reverse has been true in my experience, and I have yet to see the tree a year from bud, in good health, and which has been transplanted from beds as a seedling, that does not have from 15 to 20 per cent more roots, and better roots proportionately, than any similar or other large-sized tree. I think I can show Mr. Hale as fine a four-year-old orchard as he ever saw, and it gave a good crop during the past season. The large peach-tree craze is bosh; where they have been properly grown in the nursery the smaller trees are preferable and less expensive. Get a tree that has health, and good surface, fiber roots, with a lot of good buds along the trunk from the bud up, and let it be 18 inches to three feet; cut it off at planting, from six to 15 inches above the bud, and follow Mr. Hale's culture, and you have all that a man can wish to get. The orchard I would show Mr. Hale is unfortunately not my own. E. P.

Pennsylvania.

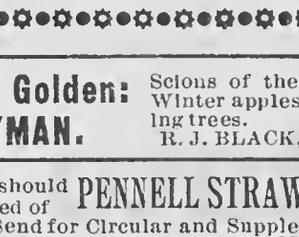
WE think R. N.-Y. No. 3, Sir Walter Raleigh and Green Mountain potatoes are the most profitable for any farmer to raise. We raised 200 bushels to the acre last year without any extra care. We did our plowing, marking, covering and digging with horses and plow. O. H. ALEXANDER.

Vermont.

SPLITTING TREES.—The best way to prevent limbs splitting by frost or wind is to bore a hole just below where they start to split, and put in ½ to ⅝-inch bolt. Draw it tight, and the split will grow together and save the tree. Maple and elm are quite apt to split where the branches grow near parallel. P. C. M.

W. Sand Lake, N. Y.

TWIN CUCUMBERS.—The engraving of the twin cucumber on page 50 is very good. I see THE R. N.-Y. refers to their bearing seeds. Yes, they both ripened seeds, and my sister sent me a dozen seeds, six from each twin. I raised five plants, but did not raise any cucumbers, as the plants failed to thrive out of doors, and very few hothouse seeds will. The old gardener raised plants and cucumbers from the seeds the following year under glass. C. J. F.



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from cold or over exercise. It lasts but a short time after

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is applied. The cure is prompt and sure.

Stuart's Golden: STAYMAN. Scions of these extra fine Winter apples, from bearing trees. R. J. BLACK, Bremen, O.

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ASPARAGUS Roots. Address CHAS. H. MATHIS, Blackville, S. C. Mention this Paper.

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We paid from $1 to $5 apiece for trees when introduced, and many times that for experience. We give away the experience, and sell the trees at a nominal price. We have some varieties we know are good, and plenty we know nothing about, if you prefer to pay for your own experience. FREE CATALOGUE—Fruit Trees, Berry Plants, Gladioli, Dahlias, Roses, Shrubs, Seed Potatoes, Baskets, etc.

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Our collection embraces all the newest and rarest varieties, such as *Coquelicot, Rayonnant, Mars-le-Tour, Ferdinand Cortez, Crepuscule, Huxley, Wm. Ramsay, Esperance, Thebaide, Lumineux, Le Mahdi, Lord Rayleigh, R. P. Struthers, Amphitryon, Eclaireur,* and also the best standard sorts, such as *Sir Edwin Landseer, Richard Wallace, Miss Lingard, Marie Stuart, La Vogue, White Queen, Jeanne d'Arc, Princess Louise,* etc.

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Live Stock and Dairy

THE USE OF WORDS BY BREEDERS.

We get in the habit of using certain words, and whether right or wrong, it is difficult to change the custom. Yet if one is wrong he ought to change his method. I wish briefly to refer to several words, the correct use of which is not commonly understood, with the hope that the explanation may be of interest to some who are not already informed concerning them.

The word "thoroughbred" is commonly used in referring to stock from ancestry of pure breeding. This is incorrect. The word "Thoroughbred" applies to the race horse of that name, it being the name of a breed. It should not be used to express purity of breeding, for it is just as distinct a breed name as is Clydesdale or Percheron. What one should say is "purebred." One person writes me that he has a "thoroughbred hog." But he has not. He meant that he had a purebred hog. The word "purebred" is meant to signify that an animal is descended from stock from registered ancestry. At some time in the history of each breed the breeders of it have come together and established a breeding association of that breed. The work of such an association is to adopt some standard of purity for the breed, and to provide for the registration of all animals of pure breeding that the members of the association or others may desire registered in flock, herd or stud-book to be published from time to time. Animals whose ancestry traces back to the foundation stock of the breed, without admixture of foreign blood, are considered purebred, and as some express it, are *pedigreed* stock. But the word "pedigreed" need not necessarily apply to such an animal, because all animals, no matter how low their breeding, have pedigrees. So, in fact, instead of saying "pedigreed" stock the breeder should term it *purebred*. And then, if its parents or grandparents are registered in the books of some record association the breeder may say that it is eligible to registration. Generally speaking, however, it is difficult to register an animal, if either the sire or dam is not registered, for one must conform exactly to the rules of an association when registering stock.

The words "cross bred," properly speaking, should refer to an animal the result of crossing two distinct breeds, as for example, a pure Short-horn bull on a pure Hereford cow. If, however, a Short-horn bull were used on a cow that was three-fourths Short-horn, I should call the cow a "grade," and would say that this breeding was *grading up*, rather than crossing. But when men who have Poland China sows that are purebred, or nearly so, and they mate them with a Chester White boar, then they are crossing breeds.

The word "scrub" is often unfairly used. This word is meant to apply to a very low-grade class of animals. There are many very fine *grade* animals, representing really a good deal of careful breeding and possessing considerable fixed character. Such animals ought never to be called *scrubs*. They are grades, and in cases where purebred males of the same breed have been used on the females persistently for some years, they are *high grades*, though according to the modern ideas of breeding associations, they will never become purebred. I wish to go further, however, and state that the word scrub, in my opinion, should mean any animal of inferior type and character. On this basis, we have many purebred, registered animals, that are scrubs of the truest type, far worse in every sense than many grade ones. It is too bad that this is so, but such is the fact, as any person who is fair-minded, familiar with many purebred animals, will testify. Consequently, it need not imply that because an animal is purebred and registered it is a superior individual. It may may yet be a first-class scrub.

C. S. PLUMB.

BUCKWHEAT STRAW.—I think there is more nutriment in buckwheat straw than in wheat or oat straw, and it is befter for eattle and sheep. I do not think it would hurt horses fed in moderate quantities. We do not feed horses large quantities of elther hay or straw feed; more grain and less eoarse fodder. I am sure that buekwheat straw would make more milk than wheat, oat or rye, and therefore is worth more.

HOMER J. BROWN.

A NEW YORK COW REPORT.—The following is the amount of butter made from seven eows In one year:

1900.	Pounds.
Mareh	173
April	250½
May	291¾
June	317
July	270¼
August	243¼
September	199¼
Oetober	258
November	207¼
Deeember	171¾
1901.	
January	168¾
February	151½
Total	2,702¼
386 pounds per eow.	W. C. L.

Homer, N. Y.

TIMBER FOR SILOS.—Last Fall I put up a small tub silo. I eut the logs, hauled them to mill and had them sawed up lnto planks 2x13 inehes, so I could get 3x2x4 out of a plank. The logs were green. Experlenee ls a dear teacher. I know a man who put his logs lnto mill and had his lumber eut in 2x4 lumber and stuek lt up to dry, but when he eame to build his silo he found his lumber all warped out of shape. He put up hls tub silo; it ls a partial fallure llke a great many others. He made a mlstake in having his lumber sawed up ready. I have never seen adviee in the farm papers about sawlng up logs into planks as soon as eut, and then drled out and ln the Fall ripped into the proper lumber and planed, and put up soon after. That ls what I dld and a man ean use hemlock and make a good tight tub silo. I put my silo up after the plans from the Cornell Bulletin and THE R. N.-Y.

Chautauqua Co., N. Y. F. B. B.

The paroxysms of Whooping Cough are at once relieved by Dr. D. Jayne's Expectorant, and if this medicine is continued, it almost invariably effects a cure.—*Adv.*

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A SAFE, SPEEDY AND POSITIVE CURE.

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SUPERSEDES ALL CAUTERY OF FIRING
Impossible to produce any scar or blemish. The safest best Blister ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses or Cattle.
As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, Etc., it is invaluable.
WE GUARANTEE that one tablespoonful of CAUSTIC BALSAM will produce more actual results than a whole bottle of any liniment or spavin cure mixture ever made.
Every bottle of Caustic Balsam sold is Warranted to give satisfaction. Price $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address
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NEWTON'S CURE. For Heaves Use $1 size. For Distemper, Cough, Worm Expeller and Conditioner, a 50c. size. Strong recommends Dealers or delivered. Newton Horse Rem. Co.(Y)Toledo, O

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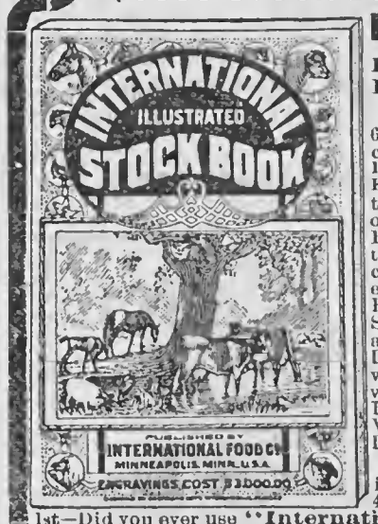

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Registered Jersey Cattle.
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Holstein-Friesian Bull
ready for service, and a fine lot of Bull Calves. Best of breeding, and from deep producing families.
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Choice Bull Calves from first class milkers. Also a few Cows and Heifers. Spotted Ladd, 6461, at head of herd. Maple Row Stock Farm, Cherry Creek, N. Y

150 Dellhurst Holsteins
for sale, including young Cows, Heifers and a great lot of BULL CALVES—several now ready for service—sons of "DeKol's Butter Boy", and the famous "Royal Paul" out of advanced Registry cows. Catalogue.
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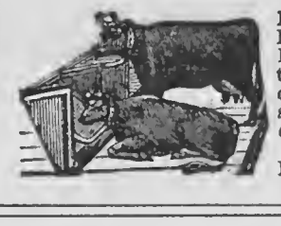
Reg. P. Chinas. Berkshires and *O. Whites*, Choice Pigs, 8 weeks old, mated not akin. Bred Sows and Service Boars. *Poultry*. Write for *hard times prices* and free circular.
HAMILTON & CO., Rosenvick, Chester Co., Pa.

Collie Pups—Spayed Females. Circulars. SILAS DECKER, South Montrose, Pa.



Newton's Improved COW TIE Holds them firmly, draws them forward when lying down, pushes back when standing, gives freedom of head, keeps them clean
E. C. NEWTON CO.
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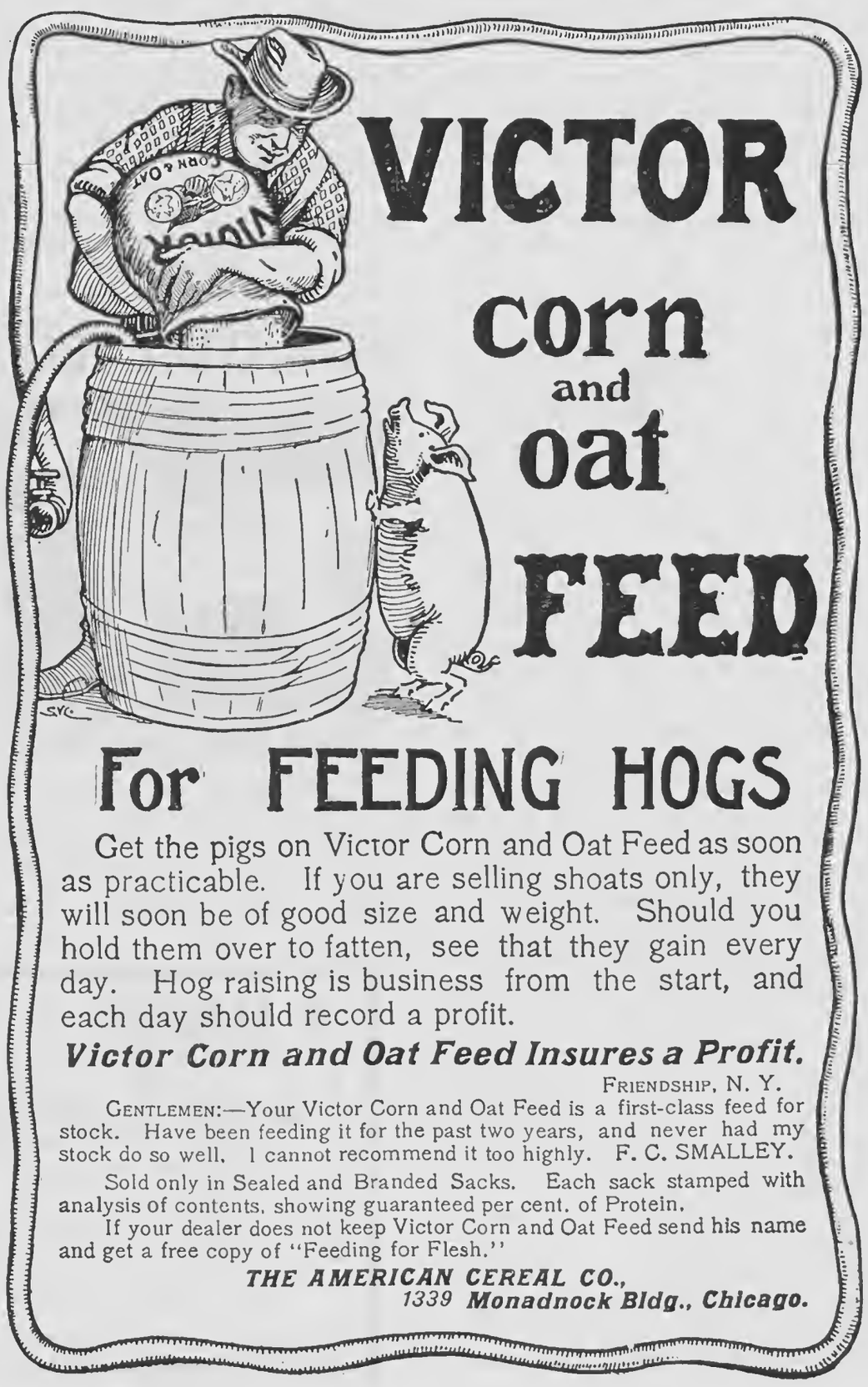


The Chicken Yard.

The Outdoor Brooder.

The picture shown at Fig. 96 is of one of the gardens on Fairview Farm, some of the S. C. White Leghorn chickens that were raised near by, and one of the outdoor brooders which mothered them. We had great success with all our chicks last season, in both indoor and outdoor brooders. Both kinds of brooders have their advantages. In early Spring, when the weather is still cold, wet and snowy, the chicks can be cared for indoors much easier, and get needful exercise running about the room and scratching for seeds scattered in chaff on the floor. Again, the indoor brooders can be cleaned any day, even though very stormy without. But when the weather becomes warmer and fresh, new grass starts, then the outdoor brooder is our choice. Strong, well-hatched chicks can be out on the ground in fair weather when they are a week old, and in running about, picking at the tender grass and basking in the mellow sunshine, gain strength and vigor with every hour. H. J. BLANCHARD.

Are Plymouth Rocks Too Large?

Three years ago we purchased five Barred Plymouth Rock pullets. They commenced laying November 10, and in December, when eggs were highest in price, they dropped 85 eggs—the best percentage for any month of the year. Last November the flock had accumulated to 17—12 old hens and five pullets. One or two of the pullets commenced laying November, but in December, although the weather was generally mild and favorable for egg production, we got only 53 eggs from 17 hens—or about three per cent against 17 per cent. Naturally such a discrepancy surprised us, and we purpose to change the breed. We are inclined to the belief that the Plymouth Rocks have been bred too much for size, thus impairing their usefulness for layers. Last year we sold to the butcher a cockerel weighing 10¾ pounds at 11 months old. Soon afterward two hens, about a year and a half old, went the same way. They weighed, respectively, 9¾ and 10 pounds. This year we have just disposed of another cockerel 10½ months old, tipping the scales at 11¾ pounds. At this rate they bid fair to rival the President's turkeys—excellent for the table, but "not in it" for eggs. As an indication that an increase in size tends to diminish egg production, one of the pullets, very much the smallest of the lot, commenced laying in November, and has continued quite regularly ever since, while another, hatched at the same time and nearly twice as large, has not to our knowledge yet laid an egg. Much is said about purebred stock by poultry dealers. So long as purchasers are willing to pay fancy prices for exhibition birds breeders will continue to propagate for size and plumage rather than for egg capacity—an unknown and uncertain quantity. Everyone likes to get the most for his money, and so it is only natural to select the largest and handsomest birds. We have an idea that if the Plymouth Rocks, which have so long enjoyed a deservedly high reputation, were bred to about five pounds in weight their egg capacity would be much improved. Lacking the facilities for such selection ourselves we hope others may be induced to experiment in this line. H. H. B.

Jewett City, Conn.

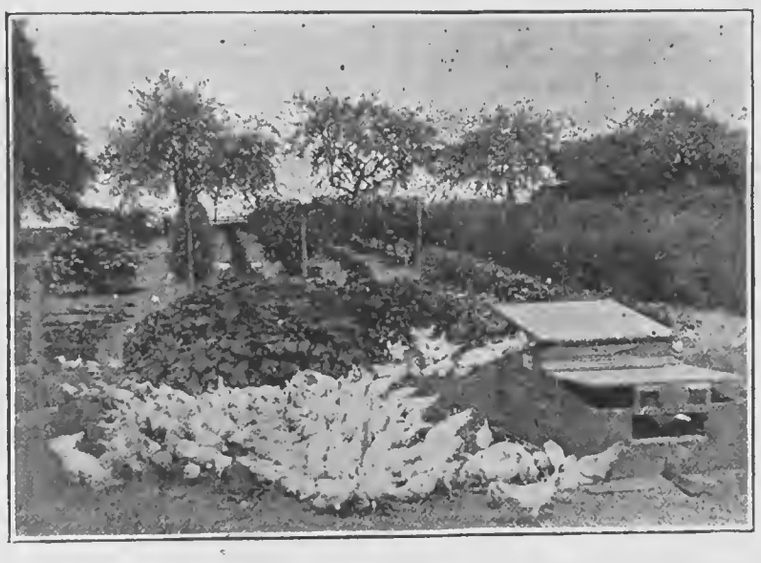
Wanted—A New Duck.

I want some hardier ducks than the Pekins, with which I am not successful. What breed would you recommend? I want a pair so as to raise some this season. I have four Pekin ducks.

West Hartford, Conn. A. W.

There is a mistake somewhere in the care of these birds, as it is universally conceded by our leading breeders that the Pekin is the best and hardiest duck on the market. These, possibly, are not of healthy stock, but it is more probable that the trouble is in raising the young birds. Little ducks are very easy to care for, if we observe certain rules, which are simple. They are much hardier than chicks. They *must* have shade, in Summer. They *must not* be overfed; give just what they will eat up clean and take away the remainder. Oat flakes and breadcrumbs slightly moistened are good at first, gradually working into cornmeal and wheat bran, wet beef scraps and vegetables with grit always handy. Their drinking vessels should be deep enough to insert their entire bill, or the nostrils become clogged and they smother. They need clean quarters and plenty of ventilation. Must not get wet until they are feathered out.

Chazy, N. Y. F. E. W.



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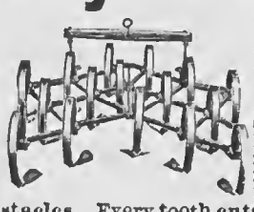

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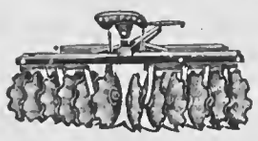

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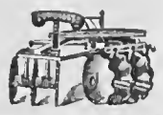

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His purpose is to secure strong, vigorous, farm-raised chicks for showing and breeding, so he announces this plan in farm papers only, not in poultry journals. *Write for full particulars at once to*

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Barred Plymouth Rocks exclusively.
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Incubators Best and Cheapest. For Circular address G. S. Singer, Cardington, O

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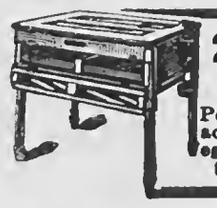

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Do You Keep Chickens
Make 100% more. You want
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TEN CENTS PAYS FOR BOOKLET
40 pages, illustrated. Eighth thousand. Tells how to make cement floors, to grow and feed sorghum, beets, soy beans, &c., and gives illustration of hog house. Price list of cement and seeds free.
WALDO F. BROWN. . . . OXFORD, OHIO.

A CITY MAN TURNS FARMER.

At Work on the Farm.

PART III.

Landed on the farm in the middle of September, I began to look around and see what preparation must be made for the coming Winter. It was self-evident that a cow barn must be built at once. The large barn formerly on the place, had burned to the ground a year previous and a temporary barn 18x21 feet put up, and part of the eight tons of hay I had bought was stored in the unused barn of a neighbor, one-eighth mile away. The question to be solved was whether I should run in debt for a large, convenient barn, or put up an attachment to the one we had, with the money at hand. My family is a unit in one thing at least, we all detest debt, and I was not long in deciding to adopt the latter course. So the cow barn, 16x21 feet, was built on the south side of the horse barn of tight matched stuff, double-planked under the cows, with an air space between so they would not have to lie on frosty boards. The arrangement as completed is so convenient that it is worthy of description. The floor of the cow barn is two feet lower than the horse stall in the main barn, and the horse droppings are swept through a hole, closed with a sliding door, into a box on wheels, and this is rolled about 10 feet and dumped into the trough behind the cows, and the contents of the trough are thrown every day through another sliding doorway back of the cows, into a hogpen 12x25 feet which is roofed over. Thus there is no fire-fanged horse manure, none exposed to rains, no fumes arising into cow barn from a manure cellar under the cows, and the least possible amount of handling required to get it out of the way.

We had not been on the farm many days before we found that a horse must be had immediately; and the horse dealers were aware of that necessity, for scarcely a day passed that some more or less dilapidated specimen of the equine species was not displayed and offered for sale. But I did not want any "crow bait;" a good horse reflects credit on his owner, and gives him the respect of men. I had tried to get a horse for the Winter for his keeping, but could find none. Going to Willimantic at "fair time" I was offered a three-year-old "Goldbeater" colt for $125, with a written guarantee that if I did not like him, and wanted to return him in the Spring the owner would return the money and pay $25 more for his keeping, if he was not injured. Of course that proposition suited me exactly, and I paid the money, also bought a second-hand two-seated top carriage (altogether too heavy for the horse), a new farm wagon and harness, the latter to be delivered at the farm, and started to drive 14 miles at 5 P. M. over unknown roads with a young and untried horse. But my lucky star must have been in the ascendant that day, for Ben, as we named him, brought me safely home, and has been the pride and pet of the family ever since. He can trot a mile in three minutes if I am in a hurry, or can go slow enough for the most timid old woman. Always, when I go to put on his bridle, he puts his head on my shoulder and presses his warm nose up against my cheek. Little children can do anything with him. I have seen three on his back at a time, riding him up from the pasture lot, though how they got on him I don't know. Once, when driving out of a strange yard at night, a wire clothesline caught the top of the buggy and turned it over so the front wheels were up in the air directly over the hind ones, and I was on my back, heels up, with nothing between the back of my head and the ground, but the back curtain of the carriage top.

I instantly called out "Whoa, Ben," and with difficulty managed to get out, and then saw that the bottom of the buggy was pressing against him from his heels to the root of his tail, and he was trembling with fear. Standing on the hub of the hind wheel I could not reach high enough to undo the traces, and had to unbuckle them in front, and after unfastening the holdback straps I took him by the bridle and said, "Come Ben." The old darling jumped 10 feet and wheeled around to see what he had been holding up. If he had started to run, as most horses would, my skull would have been crushed in a minute.

Going down a steep hill in the night I have had him stop and refuse to move, and getting out find the belly-girth unfastened and the shafts over his ears. Coming from an evening party with three in the buggy, I found the breast collar down around his knees, and he had pulled us up a steep hill and one-quarter mile, while I wondered why he kept stopping and looking around at us. He will come to the dining-room door, take the doorknob in his mouth and rattle the door for some of us to come and give him a cracker or piece of cake or candy. I could fill pages about Ben, but must hasten to other matters.

The rheumatic boy was discharged, and a man hired who agreed to work for $8 a month and his board. We all had good appetites, but it was a daily wonder to me where that man could stow away all the food he ate. He was a loafer, too; he was handy with an ax, and could cut more than a cord of wood a day, I afterward learned, but he hardly cut enough to keep the fires going. I was too green then to know what he ought to do, and he took advantage of it.

G. A. C.

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Our BLIZZARD LANTERNS are warranted not to blow out.
We offer special prices on these goods to introduce.
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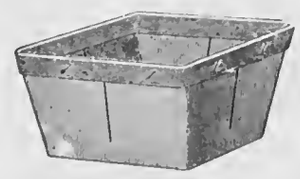

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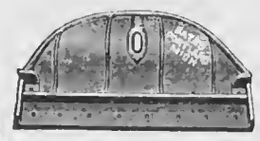

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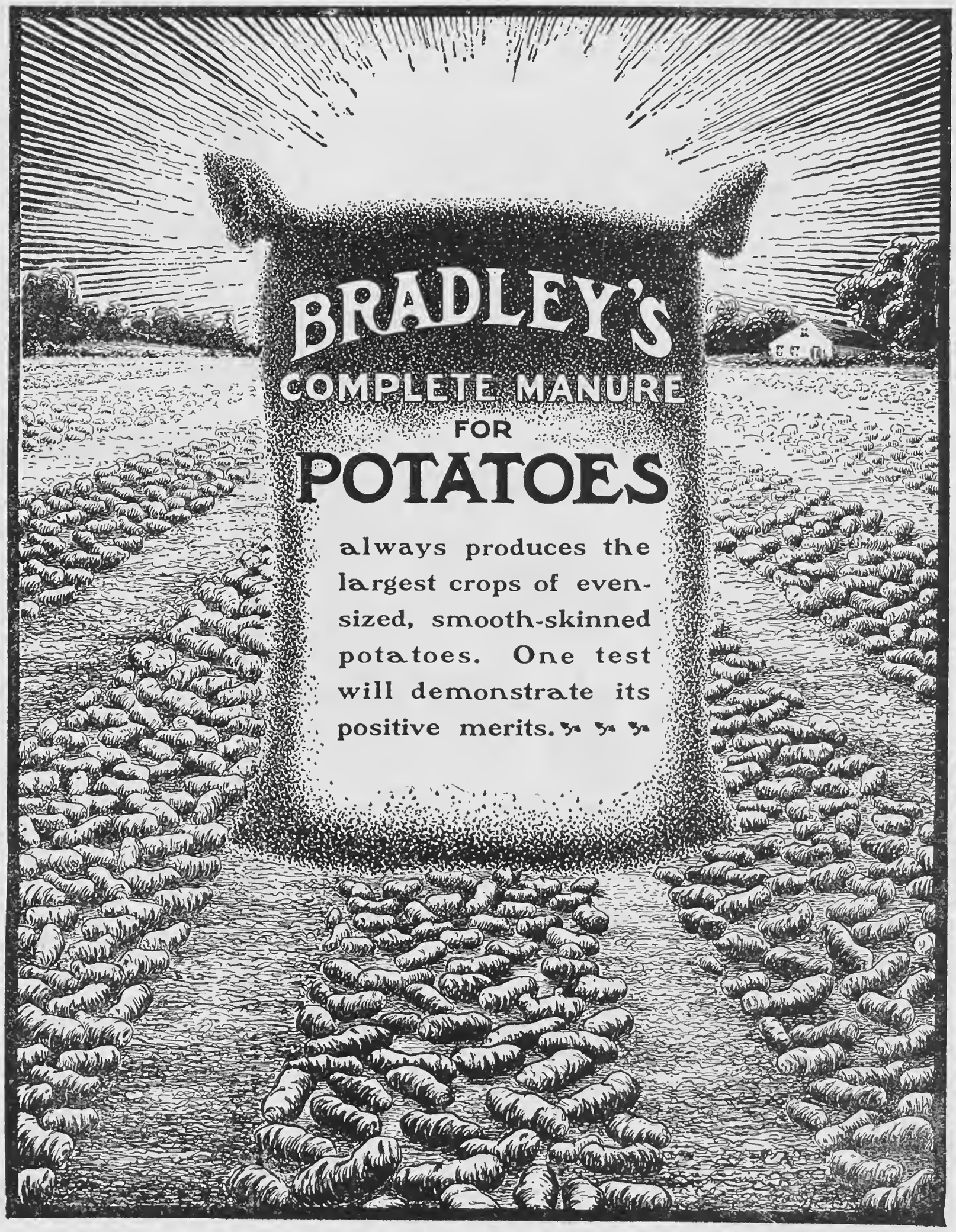

WINTER FEED FOR COWS.

The old-time question, "Got hay enough?" that so often follows a few remarks about the weather when neighbors meet, seems particularly applicable this season. How to get the stock through the Winter was by no means a pleasant problem to consider last Fall, and its force has diminished but little since. On our farm we knew that we hadn't hay and other fodder enough to carry all our stock. We commenced in the Fall feeding some wheat bran, and have kept it up ever since. We have varied the grain feed somewhat according to conditions. Have fed a little corn and oats ground together, as these grains were grown on the farm. To those cows that freshened in the Fall and Winter we have given a liberal feeding of bran, gluten meal and oil meal once a day, and oats and corn once. Of the former mixture by far the greater volume and weight has been a wheat bran. The reason for introducing the bran in so large a proportion is to get bulk together with protein. This is for the purpose of saving hay. The wise ones tell us that a cow, to do well, must have a certain bulk and weight of food. They say in the neighborhood of 24 pounds per day for each 1,000 pounds of live weight. We have fed 10 to 12 pounds of this grain mixture to cows weighing somewhere near 900 pounds. Upon figuring it out the other day, by aid of the Cornell Bulletin No. 154, I found that our ration is short of the 2.2 pounds of protein per 1,000 pounds live weight, by about one-tenth of a pound. If I were to plan the ration over again I should make out the same bill of fare, but would add a half pound of cotton-seed meal a day. Indeed, I have ordered some cotton seed already, and shall feed it from now on.

But has it paid? Well, in a measure. Cows were too cheap to sell last Fall. We have paid a good deal of money for grain. I have had my neighbors say when I met them as I came from town, getting my check at the creamery, and hauling home a load of feed: "Take your money home in bags, do you?" And so it seemed. I haven't quite cared to figure closely to see whether I got enough for the milk to pay for the feed, including the hay, etc. But when the cows come through to grass they will be worth a good deal more at a cash value than they were last Fall. They have done nicely all Winter, are in excellent health and condition and are just what I want when grass grows this Spring. Yes, I think it has paid. It is not a serious job to figure out by the aid of tables, a perfectly balanced ration, but it is quite another thing to feed it. The former savors a little of science; the latter is an art. The one can be done by a little study, but the other requires much experience and observation to do it successfully. To induce a cow to eat hay, straw, cornstalks and other rough fodder greedily, eating all put before her without waste, and still do well and give a good mess of milk, is surely a fine art. Not every feeder can do it. But this year of all years is the time when it surely should be done. H. H. L.

FRAUD BUTTER AND FRAUD FEED.

I have just finished my supper, at which I had some hard butter. Last Winter we had such butter several times. It remains quite hard even in a warm temperature, and generally has the appearance of tallow. Some time ago I saw a somewhat spicy letter in the Outlook, by an M. D., who defended pure, cleanly prepared oleo against rancid butter. I thought, if this gentleman wished to protect people against fraud, he could find plenty of work among quack medicines. But perhaps if quack medicines were as good as farmers' butter he would not have such a good business. Several M.D.'s have candidly told me that patent medicines produce diseases which the doctors are called on to cure. This is specially so of soothing medicines for children. But this is not my main point. This doctor's statement about bad butter suggested this idea: The butter makers ought to be willing to abide by the results of their work, good or bad. For the protection of good butter makers and the detection of bad ones every tub should be plainly stamped with the name of the maker, the date of making, and the number of the package or tub. If this had been done with the tub from which I got doubtful butter I could go to the grocer, ask for the credentials of this special tub and send, by mail, a sealed sample to the makers. This might start a train of investigation which would reveal a rogue somewhere. From this same merchant I buy feed. I am quite within the limits of truth when I say that from one-fifth to one-fourth of the wheat bran is oat shells. How do oat shells get mixed with bran? I have watched the same brand of bran during six months and find it the same, so it cannot be a matter of an occasional handful of sweepings. I have lately bought a feed, and it looks more like oatmeal dust than a wheat preparation. What is the penalty for such adulteration? When one pays $1.10 per 100 pounds for bran it should, at least, be all bran, and such mixing should be punished.

I must not forget to say that I am anxiously watching the fight which THE R. N.-Y. is making against colored oleo. and hope that the butter makers will get the protection which they deserve. If it is right for western beef dressers to sell 10-cent tallow for 25-cent butter, it is just as fair for the eastern horse killer to sell five-cent horseflesh for 15-cent beef. A. C.

Nassau Co., N. Y.

R. N.-Y.—There is a law in New York State against adulterating cattle feed. Samples of that suspected bran should be sent to Dr. W. H. Jordan, Geneva, N. Y., for analysis. The United States Senate failed to pass the Grout bill, but it will be pushed harder than ever at the next session of Congress.

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to skim all your milk for ten days with the

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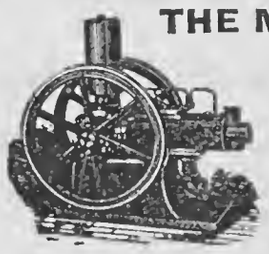

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IT HAS REPEATEDLY BEATEN IN COMPETITIVE TESTS ALL OTHER KINDS OF CREAM SEPARATORS

At the **National Buttermakers' Convention,** at St. Paul, Minn., Feb. 18-23, 1901, with **829** packages in competition,

UNITED STATES SEPARATOR BUTTER SCORED THE HIGHEST, **98 POINTS**

made by Edward H. Webster, Ames, Iowa, and **entered for scoring only.**

The Third Best Butter was also U. S. Separator Butter, made by W. R. Lund, Plainview, Minn., score **96 points.**

THE GOLD MEDAL FOR HIGHEST IN GATHERED CREAM CLASS...

was also the product of **United States Separators and Cooley Creamers,** made by W. C. Noble, South Waterford, Me.

Our "would-be competitors," the DeLaval Separator Co., advertise that they had 668 entries to 19 U. S. entries, 35 chances to 1. Notwithstanding this **The United States Product Scored the Highest, Scored Third Highest and Got a Gold Medal to its honor. What greater victory could anyone ask for?**

THE UNITED STATES SEPARATOR STANDS TRIUMPHANT

Ask for circulars for full particulars and illustrations.

VERMONT FARM MACHINE CO., BELLOWS FALLS, VT.

206

DAIRY AND FEED NOTES.

ARTIFICIAL BUTTERMILK.—We have a retail trade for 20 to 30 quarts of buttermilk daily, and the demand for fresh buttermilk increases during the Summer, but as our cream then goes into ice cream we are short of the milk. To overcome this we tried last Summer the manufacture of buttermilk from skim-milk with varying success. With a starter of fresh buttermilk, using about 10 per cent of the starter, and allowing it to ripen 18 to 24 hours, as for cream, then churning 20 to 30 minutes, the resulting product cannot be told from straight buttermilk by the most critical. Skim-milk and buttermilk have practically the same composition, and the ripening and churning process really makes buttermilk. We learned to our sorrow that one cannot keep on using this skim buttermilk for a starter, as a different class of bacteria seems to result therefrom which will not properly ripen the milk, and the result is a sour, foamy mass which is no good. By using fresh buttermilk each time a first-class product can be made. A number of physicians now recommend buttermilk for kidney troubles, and it is said to be very helpful.

BALANCING RATIONS.—There are a good many men who do not believe in balanced rations, yet are quite careful to balance their own rations. A meal of crackers or bread alone would not last, as they say, but add some cheese to it, and butter their bread or crackers, and they might make a lunch that they could work on a good many hours. The crackers or bread alone supplied carbohydrates, but add cheese and butter and we come near balancing it, as the cheese supplies protein and the butter fat. We noticed a stonemason's dinner pail. Probably he had never heard of balanced rations, but either he or his wife had quite happily balanced it. It contained a piece of meat, a large chunk of cheese, bread, pie, cake and a quart of milk.

THE DAIRY ENGINE.—The best-paying and perhaps most satisfactory machine on our farm is a Safe engine. We know not whether its name was given because of its shape, or on account of safety. It has no name plate to tell where or by whom made. We first saw one at one of our fairs, and it seemed to be just what we needed. Ours is five horse-power, weighs 1,400 pounds, is mounted on small wheels, takes up a space about 4x3, and is about 4½ feet high. It doesn't require an experienced hand to run it, and is very economical of fuel. We can get up steam in 10 minutes from cold water, and then with very little attention is ready for work all day. It is square, box-shaped, and the flues or pipes set very thickly and screwed horizontally into a water back. These are set in alternate rows, so that heat strikes all of them. There is a fusible plug near the bottom, which, melting when water gets below that point, puts out the fire and prevents blowing up. A door in front makes it very easy to clean off the flues. Our engine does all the creamery work, such as churning, heating water and milk, steaming cans, freezing ice cream, runs turbine separator; also saws our wood and runs in the Winter a green-bone grinder to help out the chickens. By detaching one union we can roll it right out on a truck, and in the Fall use it to cut our silage. It does a great amount of work every day with but little fuel, and is a very satisfactory machine in all respects.

Connecticut. H. G. MANCHESTER.

WE have had an open Winter, stock getting along in good shape until recently; then matters changed and we have had very cold weather. Farmers have suffered on account of scarcity of water, but it has rained for two days and that will help the wells, as far as surface water. Ground is still full of frost. E. H. S.

Orangeville, Pa.

Killing Sheep Ticks.

How can I rid my sheep of ticks when the wool is on them? C. T.

Pennsylvania.

Last Spring, after I sheared my sheep, I dipped both sheep and lambs in the Cooper dip, and I have not seen a tick since, but these liquid dips are hard to use, when the wool is on the sheep. A better way is to wait until it is warmer, then shear the sheep, and within a few days after shearing dip the sheep, and if there are any young lambs dip them also, for the ticks will leave the sheep after being sheared and go to the lambs. I have used in a small way Scotch snuff when the wool is on the sheep. I take a baking powder can (a pound can), punch the cover full of small holes, fill it half full of the snuff, then lay the sheep on its side, part the wool, and dust the snuff all through it. It will kill the ticks every time, but is a slow way of doctoring a very large flock.

G. W. H.

The Contents of a Silo.

How many tons of corn silage will a round silo hold that is 14 feet in diameter and 30 feet high? How many cows will it feed eight months, feeding twice a day?

Geneva, N. Y. C. A. K.

ANS.—A fair average weight for a cubic foot of silage is 40 pounds. It will vary somewhat, but this is a fair statement. First find the cubic contents of the silo. A circle 14 feet in diameter contains 154 square feet, and the whole silo thus contains 4,620 cubic feet. If it were filled to the top and well stamped and settled down it would hold 184,800 pounds, or 92 tons. It is not, of course, possible to fill every inch of the silo with good silage. A cow would average 35 pounds of silage per day, which for 240 days will mean 8,400 pounds. In theory, therefore, this silo would feed 22 cows. That is not a safe estimate, for half a dozen things may upset these calculations. You should be satisfied if the silo provides good silage for 15 cows.

BLOODY MILK.—I have had considerable experience with bloody milk in cows with large udder, in heavy flow of milk. A bruise may cause it, but I think it is very often caused by jerking the udder too much when milking. Bathing or greasing is good when swollen badly. I have had them so bad that it was difficult to free the udder from clotted blood. I consider the main thing to do to effect a permanent cure is to hold the part of the udder affected with one hand while milking with the other and especially crowd up on the udder with the hand milking, instead of pulling down, which should be continued a few days in mild cases, but in severe cases 10 or 12 days after the flow of blood stops. In all cases avoid pulling down on the teat. H. J. E.

Clarence, N. Y.

LIKE A SORE THUMB.

Our low prices and our **Ten Days Trial** plan are "forever in the way" of the local dealer. He doesn't like us—naturally—because we let our customers take a vehicle and use it 10 days before deciding whether they will keep it or not, and because we sell you better goods for less money than he possibly can. There are two or three profits on the goods he sells—the dealer's, the jobber's, the manufacturer's. We make our own goods and add but one small profit. In style, finish and material you wont find the equal of our vehicles for the money anywhere.

Send for big, free catalogue and particulars of our 10 days trial plan. We make harness too.

KALAMAZOO CARRIAGE AND HARNESS CO., Box 30, Kalamazoo, Mich

HOW MUCH CAN I SAVE?

This is a question that every man should ask himself when it comes to a business proposition. For instance, we manufacture **vehicles and harness** and sell them **to you direct from our factory at wholesale prices.** On this plan the saving to you is **about 35 per cent;** that is, you would have to pay a local dealer or agent about that much more than you pay us for the same quality of goods. **Is not this item worth saving?** We make 178 styles of vehicles and 65 styles of harness and are **the largest manufacturers of vehicles and harness in the world selling to the consumer exclusively.** We make every article we sell and **ship our goods anywhere for examination** and guarantee safe arrival. You have the advantage of large selection, newest designs, latest styles, &c. Above all you have a guarantee of quality at a reasonable price. **144-page illustrated catalogue FREE.**

No. 717—Canopy top surrey with oil burner lamps. Price complete with pole or shafts, $75. Same as sells for $35 more than our price.

No. 130—Double Buggy harness, with nickel trimmings. Complete with collars, $22. As good as sells for $30.

ELKHART CARRIAGE & HARNESS MANUFACTURING CO., Elkhart, Indiana.

THE WHOLE WORLD ADMIRES Split Hickory Vehicles,

and the best of it is, the closer you examine them, the better you like them. They are built right all the way through and they have a hundred special features—"little things" that add to their comfort, safety and durability found on no other. We sell

DIRECT FROM THE FACTORY

You save all agent's profits. We ship on approval. You don't keep it unless you think it a bargain. Send for our Vehicle and Harness catalogue. It will save you money.

OHIO CARRIAGE MANUFACTURING CO., 39 W. Broad Street, Columbus, Ohio.

No. 376.

$48.00. Different from the ordinary buggy, is our latest style for 1901. We use **Long Distance Axle** with bell collar which keeps out all dust and mud, runs 1000 miles without reoiling. **Combined Quick Shift Shaft Coupler and Anti-Rattler,** so you can change from shaft to pole in one minute. With this attachment you never have any rattle. **Wheels and Gear,** every stick of timber used **guaranteed** to be the very best of second growth hickory. Every forging and bolt the best Norway iron. (Wheels furnished any size.) **Body** 20,22 or 24 in. wide, 55 in. long. Spring cushion and back **Trimmings.** We upholster the seat and back cushion with a fine **green velvet** with gold fignre, or **whip cord** with high wings on end of seat cushion, and line the top with a special light color top lining to match the seat trimming. The edge of top lining is pinked, the back stays of top are pinked on edge and center stitched, a special design with thread to match top lining. We use a light color carpet for bottom and side panels of body, (or when desired will use leather or dark broadcloth trimmings and dark lining in top with dark carpet to match.)

Nickle Mountings. We furnish nickle dash rail, nickle rail over back of seat cushion, nickle prop nuts, nickle seat handles, nickle hub bands. **We paint** to match trimmings, or will paint any color to suit purchaser. We take special pains with this buggy to see that it is fitted with trimmings, paintings, and everything to match.

We have no agents, but sell direct to you at wholesale prices and save you the middle man's profit. **NO MONEY.** We ship subject to examination without any money with order, and if you are not satisfied in every way, and do not feel that we have saved you money and given you a better buggy than you could have bought elsewhere for any thing like our price, return to us and we will pay all freight. **We warrant** every buggy for **2 years** and **guarantee safe delivery. Do you want,** or are you interested in any way in a vehicle or harness of any kind? If so **send for our new free vehicle Catalogue.** We have all styles at prices that will interest and save you money.

MARVIN SMITH CO., 55-57-59 Jefferson Street, Chicago, Illinois.

SILOS HOW TO BUILD ASK WILLIAMS MFG. CO., KALAMAZOO, MICH.

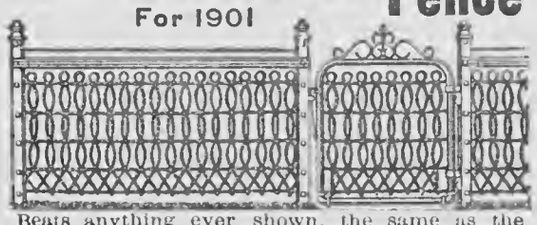
PAGE

SUPPOSING YOU COULD

buy a cheap wire fence for a trifle less than you can buy a Standard PAGE, would it pay?

PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

CYCLONE Lawn Fence For 1901



Beats anything ever shown, the same as the "Cyclone" Farm Fence excels all others. Don't buy farm and lawn fence until you get our catalogue and wholesale wire prices.

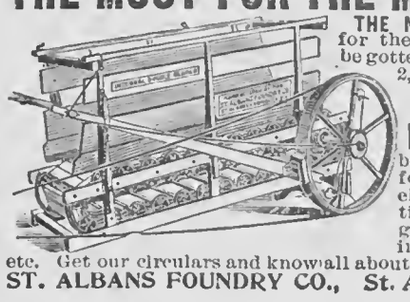
CYCLONE FENCE CO. Holly, Mich. BRANCHES: Cleveland, Ohio. Waukegan, Ill.

"Electric" applied to either Wheels or Wagons

Is a guarantee of excellence. The public appreciates this fact. In 4 years we sold 320,000 Electric Steel Wheels and 30 000 Electric Handy Wagons. We make wheels to fit any wagon. Illustrated Catalog FREE.

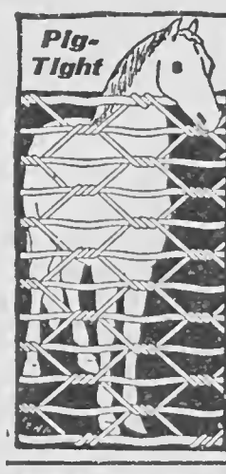
Electric Wheel Co. Box 88, Quincy, Ills.

THE MOST FOR THE MONEY.



THE MOST POWER for the money can be gotten from our 1, 2, 3 and 4-horse TREAD POWERS because safest for dairy machinery, cutting, shelling, grinding, sawing, pumping, etc. Get our circulars and know all about them.

ST. ALBANS FOUNDRY CO., St. Albans, Vt.

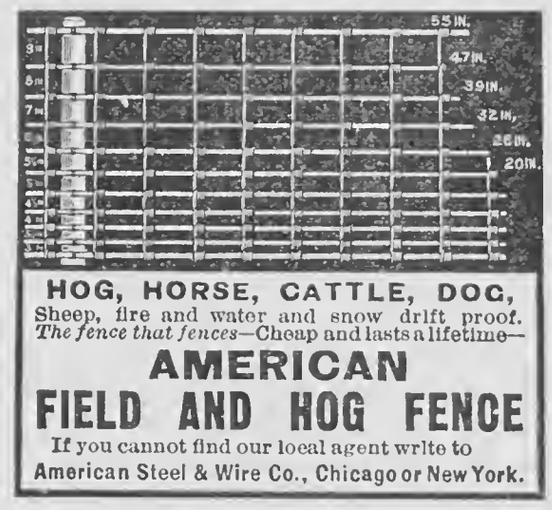


Pig-Tight HORSE-HIGH!

... BULL-STRONG ...

With our **Duplex** Automatic Ball Bearing Woven Wire Fence Machine, any farmer can make 100 Styles, and from **50 to 70 rods a day** of the best and most practical fence on earth at a cost for the Wire to make it of from **20 to 30c. per rod** We sell Ornamental Fence and Gates, Farm Fence and Gates, Plain, Barbed and **Coiled Spring Wire** direct to the farmer at wholesale prices. Catalogue free.

KITSELMAN BROS. Box D 92. Muncie, Ind.



HOG, HORSE, CATTLE, DOG, Sheep, fire and water and snow drift proof. *The fence that fences*—Cheap and lasts a lifetime—

AMERICAN FIELD AND HOG FENCE

If you cannot find our local agent write to American Steel & Wire Co., Chicago or New York.

SELF DUMPING Fencing Machines, S. & B. Earth Auger Sample at cost to introduce. 3 STYLES, 9 SIZES

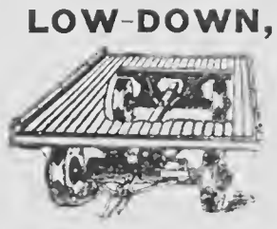
Send for free catalog. Eureka Fence Mfg Co Wire at cost. Box Y Richmond, Ind.

WELL DRILLING Machines

Over 70 sizes and styles, for drilling either deep or shallow wells in any kind of soil or rock. Mounted on wheels or on sills. With engines or horse powers. Strong, simple and durable. Any mechanic can operate them easily. Send for catalog.

WILLIAMS BROS., Ithaca, N. Y.

LOW-DOWN, BROAD-TIRE



Farm Trucks originated with us and we still sell direct to farmers three-fourths of all that are used We build ten styles of farm wagons. we also build steel wheels for old wagons. Send for our free catalogue. It contains 30 photographic scenes.

FARMERS HANDY WAGON CO., Saginaw, Mich.

STEEL WHEELS for your FARM WAGONS

any size wanted, any width of tire. **Hubs to fit any axle. No blacksmith's bills to pay.** No tires to reset. Fit your old wagon with low steel wheels with wide tires at low price. Our catalogue tells you how to do it. Address

EMPIRE MFG. CO., Quincy, Ill.

LIGHTNING WELL MACHY IS THE STANDARD

STEAM PUMPS, AIR LIFTS, GASOLINE ENGINES

WRITE FOR CIRCULAR D3

THE AMERICAN WELL WORKS

AURORA, ILL. - CHICAGO - DALLAS, TEX.

The Rural New-Yorker

THE BUSINESS FARMER'S PAPER.

A National Weekly Journal for Country and Suburban Homes.

Established 1850.

HERBERT W. COLLINGWOOD, Editor.
DR. WALTER VAN FLEET, H. E. VAN DEMAN, MRS. E. T. ROYLE, } Associates.
JOHN J. DILLON, Business Manager.

SUBSCRIPTION: ONE DOLLAR A YEAR.

To foreign countries in the Universal Postal Union, $2.04, equal to 8s. 6d., or 8½ marks, or 10½ francs.

"A SQUARE DEAL."

We believe that every advertisement in this paper is backed by a responsible person. But to make doubly sure we will make good any loss to paid subscribers sustained by trusting any deliberate swindler advertising in our columns, and any such swindler will be publicly exposed. We protect subscribers against rogues, but we do not guarantee to adjust trifling differences between subscribers and honest, responsible advertisers. Neither will we be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent us within one month of the time of the transaction, and you must have mentioned THE RURAL NEW-YORKER when writing the advertiser.

Name and address of sender, and what the remittance is for, should appear in every letter.
Remittances may be made in money order, express order, personal check or bank draft.
THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, MARCH 30, 1901.

SOME of our older readers may remember the old campaign song in which it was stated that

"Van, Van, is a used-up man!"

They need not think that this refers to our associate, Mr. Van Deman, as the result of his outpouring of fruit notes. He is simply catching up with the procession, and is still ready and willing to bud, graft, spray or prune any fruit question that may come his way, whether from Maine or California.

*

HUNG over the desk in a restaurant in Massachusetts we found this little notice:

> IF WE HAVE PLEASED YOU TELL YOUR FRIENDS; IF WE HAVE NOT TELL US.

We feel like adopting that as a plank in our own platform. If we do you good, tell your neighbor about it. If you think we do you harm, give us the first chance to make it right.

*

WESTERN New York fruit growers are up in arms. Not for years have they been so thoroughly stirred up. Crowded meetings are being held, and a strong organization is being perfected. It is an organization for business, and we regard it as one of the hopeful signs of the times that farmers are able to get together for mutual defence. For years the fruit growers have been waiting for the last straw which should break the fence which held them apart. It came with the San José scale, and the proceedings at the Western New York Horticultural Society.

*

CONGRESS is not in open session just now, but secret wires are being pulled all the time. Some of these wires lead up to the chairmanship of the Committee on Agriculture. That chair is now occupied by J. W. Wadsworth, of New York State. He may safely be called the friend of oleo and the enemy of the cow. He is not the man to represent agriculture, but he will probably continue to head that committee unless the farmers run a few live wires up to the Speaker's chair. A "live" wire differs from a dead one in the fact that it is charged with electrical force or energy. The friction of a pen on paper may charge the political wires with political energy. Write a letter to Hon. D. B. Henderson, Washington, D. C., telling him that you protest against Wadsworth as chairman of the Agricultural Committee. Run a live wire into the proceedings!

*

WE made a strong effort this week to clear up the long list of questions which have accumulated. Before we came within sight of the bottom of the pile another mountain had started. They will all be answered in time, and we try to reply to the more important ones by mail. Needless to say that we welcome this great flood of questions. The search for reliable answers is a pleasure rather than a bore. There is no better way for an editor to learn what his readers desire, and no clearer indication of the trend of agricultural thought. THE R. N.-Y. is blessed with a class of clear-headed, bright readers who think hard, and state their wants without reserve. It is a pleasure to serve them. We try to serve all alike; if we had any choice we would prefer to give extra thought and time to the humbler persons who are least able to help themselves, and hence most in need of help from others. A glance through this single issue of THE R. N.-Y. will show how every corner of the country is drawn upon in order to obtain accurate information in many lines.

MAN stamps his trade mark upon every job that leaves his hands. That trade mark is a part of his own life and character. Sometimes one who has bought, stolen, earned, won or inherited the power to manage your labor rules your trade mark out and puts his own in place. Sometimes the laborer loses heart and courage, and cares not whether his trade mark shows or not—still it is there, for no man, however degraded, can be classed as a mere machine. There are some people who perform certain things carelessly—the things they care least about—thinking that it does not matter whether distasteful things are shirked or half done. They will find, too late perhaps, that the trade mark of character is branded on all that we do, and in the great shuffle of life the lowest brands are sure to come on top and shame us.

*

A FARMER who owns the land through which a fine trout stream runs says it is being fished to death by city sportsmen. What can he do about it? There is no such property right in fish taken from a stream that runs through an inclosed field or park where they can pass up or down beyond the limits of the park at their pleasure, as will support an action of trespass against one who catches them and appropriates them to his own use. The owner of the land has a privileged property in the flowing stream only, and may indirectly preserve the fish by action for trespass against those who enter his land against his permission. It is larceny, however, to take fish from a pond, the pond being private inclosed property, and the fish liable to be taken at any time according to the pleasure of the owner. The only remedy is to post your land with the statutory notices warning trespassers against fishing (and hunting) on your premises, and prosecute those who, in spite of this, continue to disregard the notice.

*

IN making up this issue of THE R. N.-Y. we have taken some pains to see how much ground it covers. It appears that the following States are represented either by some question or by an answer:

Maine,	Maryland,	Colorado,
Vermont,	Virginia,	South Dakota,
New Hampshire,	North Carolina,	Idaho,
Massachusetts,	Ohio,	Oregon,
Rhode Island,	Indiana,	California,
Connecticut,	Michigan,	Texas,
New York,	Illinois,	Florida,
New Jersey,	Wisconsin,	Georgia,
Pennsylvania,	Kentucky,	Nebraska,
Tennessee,	Mississippi,	Iowa.
Minnesota,	Kansas,	
Delaware,	Missouri,	

Various Provinces of Canada, Mexico and Cuba were also drawn upon for original information and questions. The fact is that THE R. N.-Y. is the great National agricultural weekly of the country. There is nothing sectional about it except its name. The name of the old MOORE'S RURAL NEW-YORKER was a household word carried into every corner of this country by those who went out from the farm homes of New York and New England. The modern R. N.-Y. has followed their trails, and tens of thousands of personal ties bind it to its readers.

*

MOST people have in their make-up enough of the "snap and snarl" element without cultivating it. It crops out when the least thing goes wrong, makes them disagreeable to others, and doubtless they think unpleasant things of themselves afterward. A certain railroad company has among its officials a man who by long training has so accustomed himself to handling difficult and contrary things that he is a wonder to all who see him under such circumstances. His judgment and general business knowledge may not exceed that of others below him in position, but he can go through mountains of details without becoming "rattled," getting cross, or neglecting the smallest matters. When some particularly difficult thing is on hand, like a public hearing to patrons who have grievances, this man is put in charge, for the company knows that he can straighten out misunderstandings and handle unreasonable and irate people better than anyone else. We have seen some farmers raise such a row over a kicking cow or balky horse, that it would take half a day for the farm to get clear of the atmosphere of vinegar and sulphur.

*

No one regards the common spotted turtle as a specially brainy animal. Many will say that he has no mind, yet it is possible to teach him economical habits. A curious experiment was tried with one of these reptiles. He was placed at some distance from his nest, with boards placed between, so that he was forced to turn four corners and travel back and forth in order to reach it. The first trip took him over an hour. He gained a little on the second, and finally learned to travel on the shortest line, so that the trip was made in three minutes, and again and again he went over it in the shortest time. He stopped in his course frequently, evidently meditating which way to go. The habit of finishing his job in the quickest possible time became fixed. He studied to save steps. There are men who will laugh at the idea of a turtle using his brain to save steps, yet their own work from day to day is a living illustration of the fact that they lack the turtle's ability to learn how to economize time and strength. After five trips the turtle learned to cut corners. After 5,000 trips the man still wears out his heels in a vain effort to save his head.

*

IN all our experience we have never known so many fake "cures" for deafness as are now being brought to the attention of deaf people. These methods of treating the ear are not only useless, but often dangerous. We would not under any circumstances advise our deaf friends to try them without the advice of a skilled aurist. To many this will seem cruel advice, but we believe it is true. Even competent doctors do not pretend to understand the needs of the delicate inner ear. It is folly to poke into it and play with it in testing these so-called "cures." One rogue guaranteed to cure any case of deafness for $18.50. The patient was to take 2,000 pills—one to be swallowed each day. Thus six years are required to bring about the cure, and the skipping of a single day "breaks the charm." Think of it—numbers of people sent money to this humbug! Worse than all this, the post-office authorities say that they cannot show that he is a fraud because they cannot bring anyone to say that he has taken the 2,000 pills consecutively and not been cured! Some people wonder why the deaf will always grasp at a straw. Those who wonder have never known what deafness is!

*

ON page 239 the veteran Jacob Moore brings up the old question of fair compensation for the originator of new varieties. It is a part of the shame of modern civilization that many of the men who have given us the new fruits, flowers and vegetables that have really added to the world's comfort and wealth, have in their old age been deprived of ordinary comforts, or been forced to live upon charity. Others have grown wealthy by handling their productions in a business way, but to the shame of society be it said that the profits and a good share of the glory have gone to the handlers. We doubt whether it is possible to remedy this by law. It is too easy to propagate and spread new plants, and too difficult to distinguish them when small. The nurserymen of the country might well afford to make up a fund out of which prizes or rewards could be paid to those who produce really superior new fruits. A committee of reliable fruit men should decide which varieties are really entitled to such favor, and award the prizes to those who stand head and shoulders above the rest. Does anyone doubt that under such a system the improvement of our fruits in the future would be more rapid? Is there any class of men in this country under greater moral and financial obligations to do this than the nurserymen? Can anyone suggest a better plan?

*

BREVITIES.

We uster make our garden in a little sorter yard,
A great big fence around it, an' we found it mighty hard
To git the men folks started fer ter spade or plow the ground;
They didn't like sech labor an' another job was found.
An' so the gardens languished, an' our garden sass an' greens
Was jest about the measure of a single hill o' beans;
But now we take the garden right out in the open field;
It jest divides the labor while it multiplies the yield.
The men folks chase the horses while they cultivate the crop,
With plow and cultivator, but you couldn't make 'em stop
To work in that yard garden, so it never hed no show.
The men folks are too dignified to handle spade an' hoe.

THE R. N.-Y. Question issue!

WE would not broadcast Kaffir corn.

No greenhorn produces good red apples.

THE world might be just as well off if you loved yourself as you do your neighbor.

A READER says that Mr. Barney's recent articles on cement making are worth enough to pay his subscription for life.

WE agree with Mr. Allen that it would be better for the shipper if he could simply hire the refrigerator car and supply his own ice! Why not?

NOTHING quite equal to the melon-growing business has developed in recent years. Even California now plans to send 1,000 carloads of melons to Chicago.

THE guessers still talk about using a windmill to generate electricity for lighting a house. The electricians, on the other hand, cannot name a case where it has ever been done successfully.

THE man with "a little money" never had a better chance for investment than right now. In stocks and bonds? No; in partnership with some elderly farmer who has a good farm and wants a partner to work it.

"WHAT grass shall I sow under maple trees?" We do not know of anything that will do really well. The maple is about the most greedy tree we have. It takes full possession wherever it is put, and grass has no chance near it.

Events of the Week.

DOMESTIC.—Ex-President Benjamin Harrison died at Indianapolis March 13, after a short illness, of pneumonia. He was born at North Bend, O., August 20, 1833, and began the practice of law at Indianapolis in 1854. He became a soldier in 1862, making a fine record, and took his seat in the United States Senate in 1881. During six years he rendered valuable service in the Senate, and became known as the advocate of protective duties, civil service reform and the restoration of the navy. He was a delegate to the Republican National Convention of 1884, where his name was mentioned for the Presidency, but it was not until 1888 that he was nominated and elected, after an exciting campaign, in which the tariff question was the controlling issue. Among the notable events of Harrison's Administration were the passage of the McKinley Tariff bill, the suppression of the Louisiana lottery, the inauguration of the reciprocity policy, the extension of the new navy, the promotion of civil service reform, the arrangement of the International Monetary Conference, the organization of the Bering Sea arbitration, the difficulty with Chile and the settlement of the Samoan question. Benjamin Harrison was twice married. His first wife was Caroline Lavinia Scott, to whom he was joined in wedlock October 20, 1853. Their two children are Russell Harrison, lately of the United States Volunteer army, and Mary, wife of James R. McKee, of New York. Mrs. Harrison died in Washington, October 25, 1892. In April, 1896, the ex-President married Mrs. Mary Scott Lord Dimmock, a niece of his former wife, by whom he had one daughter, Elizabeth. . . . . Nelson Morris, the Chicago packer, intends erecting a $2,000,000 packinghouse in Honolulu. . . . . Fire in a tenement in Brooklyn, N. Y., March 14, killed three persons and injured several others. . . . . Fire at Cloverport, Ky., March 14, practically destroyed the town; loss amounts to $5,000,000, and 2,000 people were rendered homeless. . . . . A bill was introduced in the lower branch of the Arkansas Legislature, March 14, to regulate the liquor traffic. It is an exact copy of the South Carolina Dispensary law. . . . . A turpentine camp in Baldwin County, Ala., was burned March 15, and 60 persons perished. There was one survivor, who, after lying nearly all day in a swamp, naked and suffering, managed to get across Mobile Bay. It is believed that the fire was started by three negroes, who were turned out of camp, after being badly handled. . . . The Governor of Utah has vetoed the polygamy bill . . . . A disastrous fire started in the Anheuser-Busch brewery at St. Louis, Mo., March 18, spreading to other buildings, and entailing a loss of $100,000. . . . . The Exposition building at Pittsburg, Pa., and half a dozen business buildings, were burned March 17; loss aggregated $250,000. One fireman was killed by an electric wire. . . . . A colony of 100 negroes left Knoxville, Tenn., March 18, for Hawaii, under a three-years' contract to work on a large sugar plantation. . . . . Andrew Carnegie has offered to give $5,200,000 to establish 65 libraries in New York City. He has offered $1,000,000 for a public library in St. Louis. . . . . March 19, a strike and mutiny occurred in the coal mine at the Kansas State Penitentiary at Lansing. The 284 convicts overpowered the 15 guards and held them as hostages for the enforcement of their demands for lighter work and better food. Some of the convicts in the mine are desperate men, already under death sentence for murder, but owing to the Kansas statute are really serving life sentences. The mine in which the convicts are intrenched is 750 feet deep, its mouth being inside the prison walls. . . . . An extraordinary snowstorm occurred in Nebraska March 19, causing stoppage of traffic in many parts of the State. The snow is of immense value to the Winter wheat, but is causing heavy loss among Spring lambs.

PHILIPPINES.—General Chaffee will succeed General MacArthur in command of the army in the Philippines, the latter retaining the position of Military Governor until a civil government shall be established, which is expected within a few months' time. Captain-General Mariano Trias, Commander-in-Chief of the Filipino insurgent forces, with 20 officers, 200 men and 119 rifles, has surrendered to the American forces. The officers took the oath of allegiance and have been given their liberty.

GENERAL FOREIGN NEWS.—The State Department, through Minister Loomis, recently lodged a most vigorous protest with the Venezuelan government against any further interference with Mr. Balz, the United States Consular agent at Barcelona, Venezuela. It appears that he is engaged in business and became involved in trouble with the Venezuelan military by resisting an attempt to collect a forced loan from him. More than a month ago the State Department forwarded its instruction to Minister Loomis to represent to the Venezuelan government that these annoying interferences with our official must cease, but so far no results have appeared. . . . . The revolutionary party is causing much disorder in Russia. In a riot at St. Petersburg, March 18, five students were killed and 80 wounded. . . . . In the Transvaal, Gen. Botha has rejected the peace terms offered by Lord Kitchener, and fighting has been resumed.

FARM AND GARDEN.—A new experiment station has been established at Union, Ore. The climate east of the Cascades is very different from that in western Oregon, and experiments at Corvallis do not form a safe basis for the eastern part of the State.

The fourth annual convention of the Pacific Northwest Wool-growers' Association opened at Pendleton, Ore., March 5, with a large attendance from Oregon, Washington, Idaho, Montana, Utah and Wyoming.

Reports received from all parts of the West show an amazing increase of interest in Alfalfa. Even the local papers are taking up questions concerning its culture, and there is a widespread tendency to test it.

The road bill presented to the Pennsylvania Legislature by Secretary of Agriculture Hamilton has been amended by Representative Creasy, champion of the Grange interests, who has secured the unanimous consent of the House committee on public roads to an amendment by which something like $2,000,000 annually shall be collected by a tax on corporate stocks, bonds and gross earnings, to be employed exclusively for road improvement. It is believed that this law will materially lighten the burden of the farmers, in securing permanent good roads.

At the hearing before the committee of the amended Oleo bill in the Pennsylvania Legislature, a most remarkable statement was made by a wholesale dealer in oleo, of Pittsburg, Pa., who said that he had himself sold during the past year over 4,000,000 pounds of the fraudulent article.

Reports concerning the peach buds in New England orchards state that in the lowlands practically all the buds are killed, while upon high ground they are safe. It is believed that 75 per cent of the buds are killed throughout New England, but from the remainder a fair crop is expected, if no further damage is sustained. The Georgia peach buds are said to be all safe.

The Orleans County (N. Y.) Fruit Growers' Association will meet at Medina, N. Y., March 29; secretary, Wm. A. Lafler, Albion, N. Y. A great and growing interest is shown in the objects of this society.

The Niagara County (N. Y.) Farmers' Club will meet at Newfane, March 30; secretary, W. F. Schultz, Niagara Falls, N. Y. The interest shown at the February meeting was so great that many were turned away, and the March meeting will be held in two buildings, to accommodate the many persons interested.

The interests of the State Fruit Growers' Association are being pushed all along the line. The outlook is very flattering. Ontario County will soon organize a county association, and Oswego County held a meeting March 27. The Wayne County Fruit Growers will meet in the Grange Hall in Newark, N. Y., April 6, for the purpose of organizing a county association, auxiliary to the State Association. A large attendance is expected. L. T. Yeomans, of Walworth, N. Y., is president of this county association.

"THE FIEND WITH THE FALSE LABEL."

The Rights of the Originator.

In my own behalf and that of other fruit originators, I wish to call their attention and that of the public to the fiend with the false label. The late Eugene Glen, as member of the Western New York Horticultural Society, succeeded in obtaining the publication of his plan of protection for new fruits in a former report of its proceedings. This plan, briefly stated, was to give the originator a trade-mark label of the name of his variety to be affixed to the plants in their sale and dissemination. The Society, however, has not yet taken action regarding the plan, owing to the hostility of the managers, principally nurserymen. I have been informed that the late Patrick Barry, the former president, discouraged so doing. His son, William Barry, who has since been chairman, has not pursued a contrary policy. In one of his addresses to the Society, delivered several years ago, the latter stated in substance that the originator of a valuable variety could profit by its introduction, but I have never known him to offer the latter a share of the sales to be made by him sufficient for the purpose. Why should he do so, when he knows that by purchasing a few plants when the variety is introduced he can soon propagate a stock sufficient to supply his demand for it?

My new varieties, not yet introduced, have cost me a lifetime of experiment and thousands of dollars to produce them, therefore, I cannot afford to make them a present to the trade. The idea of the introducer of a new fruit profiting by it has become the scoff of the Rochester nurserymen. They see a large outlay of money in it for advertising to make the merits of the variety known, with the subsequent demand supplied generally by the trade after the variety has been proved valuable by public trial and dissemination, with a resort to the false label by the unscrupulous. The idea that the first sales of a new variety, however valuable, afford the originator a fair opportunity to obtain a recompense, is a mere fiction. Undoubtedly the large firms having thousands of agents can give him such a percentage of the sales for a term of years as will recompense him, but I know of two or three instances only that any of them have done so. The fact that he has no exclusive right to his production, consequently cannot stop them from offering it when introduced, prevents him from securing such terms. Philanthropy is supposed by many persons to be the latter's motive in its production, which is an entire mistake. It is the inventive and artistic spirit which actuates him, and like other toilers he always wants pay for doing valuable work. Philanthropy as a motive for the origination and free dissemination of new varieties cannot be urged, because it simply results in a license to label plants falsely, as aforesaid. The present law may inflict damages, but it does not pay to prosecute in such cases, except when the damage is excessive and fraud can be proven. Especially in the case of fruit trees is the length of time before fruition relied upon to remove all evidence of the varieties purchased. Making the labeling of plants falsely with intent to defraud a misdemeanor might not prove an effectual bar to the practice, as the usual excuse could be offered that it was only a mistake, and not done with criminal intent. Hence, the necessity of giving to the originator the exclusive use of the name of his variety as a label to the plants in their sale and dissemination. It is inseparably connected with the protection of the people in their purchase. Justice to the one means protection to the other from imposition. This argument appears to me unanswerable. The only hope that the Society will ever take action to influence legislation in this direction is that the number of fruit growers will finally increase to a majority, although a minority of the nurserymen belonging to it are among the staunchest friends of the cause here advocated. The Barry medal for a new fruit is a mere bauble, sure to disappoint the winner. It would be only fair for the nurserymen constituting the bulk of the Society to give the winner a purse of $3,000 or $5,000 as an offset against their competition when the variety was introduced. A contribution of $5 or $10 from each would be sufficient for the purpose. Vice-President Willard assured me that the Society would not provide a fund of any amount to be given the winner. I was once a competitor for the medal, but finding that the highest award for new fruits won by me at the World's Fair brought me no recompense, I withdrew from the contest.

I once heard S. D. Willard deprecate, before the Society, the practice of renaming well-known fruits and sending them out as new ones. Mere deprecation will do no good; so doing should be made a misdemeanor. Also, with the exclusive right to sell and disseminate under the name, the law should require that new varieties be submitted to the experiment stations for trial prior to their introduction to prove them to be new. The people have rights in this matter which should be respected. Can the value of successful work in the origination of new varieties be estimated in dollars and cents? Has not the National value of the Concord grape been at least $100,000,000? Surely the creator of wealth is entitled to a share of it. Has not the individual who at great cost to himself has produced a plant which contributes largely to the subsistence of others a just claim upon them for a recompense? None of us liveth to himself; no man dieth to himself. Great as are the issues for the welfare of the people depending on the encouragement of this industry, our legislators do not appear to have given it consideration. Those horticulturists who have gained the requisite knowledge by experience to succeed in the work have been obliged to abandon it, because they have been deprived of the pecuniary results of their labor.

JACOB MOORE.

POSTAL CARDS.

AN analysis of the corncob shows that it contains a large amount of potash. Hence corn fertilizers should have a liberal percentage of this ingredient.

WE got the Ruby Queen rose last Spring; it grew finely; four canes, four or five feet in length. In July I laid two of the canes down and covered them with earth (leaving the tops out, of course) they rooted nicely. Now we have three good plants. S. L. T.
Covington, Ind.

A GARDEN which has been fertilized with barnyard manure alone is likely to be deficient in phosphoric acid, an element especially needed by fruits in which the seeds are numerous and very fully developed, like raspberries, blackberries, strawberries, etc. Try a dressing of good fertilizer containing a high percentage of phosphoric acid.

IF your potatoes were scabby last year, use that piece of land for some other crop this season, and give the scab germs a chance to die out. These germs grow and develop most rapidly in an alkaline soil, hence do not put lime on the potato field. If the land is a little sour, so much the worse for the germs. Some have tried with success the plan of plowing under a crop on purpose to sour the soil before planting the potatoes.

SOME farmers with a scanty supply of stable manure have pieced it out to good advantage by spreading it more thinly than usual, and then adding a dressing of muriate of potash and phosphate rock, the ingredients most lacking in stable manure. Handled in this way the stable manure and chemicals give a good square, well-balanced meal to a larger area than could be properly fertilized if they were used separately.

WE think Alfalfa is king for grazing and hay. We cut three crops without irrigation, and pasture the same ground at least three months each year; it yields about two tons per acre each cutting. I am pasturing 110 hogs on 20 acres already; we think this pretty good considering that this is one of the hardest Winters in the history of California; more than 35 inches rain here since September 1, and freezing between showers. W. L. A.
Redding, Cal.

WE have heard some complaint from those who changed from deep setting of milk to the separator that the butter was not good, and the cream seemed to be bitter. We think this can almost always be traced to putting the cream after separation in the water, and allowing it to remain without stirring or aeration. Cream from the separator will always be bitter unless it is thoroughly stirred while cooling, or run over an aerator.

To one in Oregon it seems ridiculous to talk of splicing scantlings for a silo 32 feet high. On the sidewalk of our main street is a board 1 x 6 inches 80 feet long. This is a slab off some bridge timbers shipped to the East. These timbers were 14 inches square, 80 feet long. It was amusing to see them hauled. The coupling-pole projected 14 or 16 feet behind, and in turning street corners a man held it and cramped the hind wheels to one side or the other as was necessary. S. T. W.

IT is not wise to try to mix wood ashes with any other fertilizer. The best plan is to apply them alone. They are so fine and dusty that it is difficult to mix them well with ground bone or any of the coarser manures; and they should especially be kept away from dissolved phosphate rock or hen manure. When mixed with the acid rock, they are likely to cake into hard chunks, which are more or less insoluble; and if added to hen manure they free the ammonia, letting it escape into the air.

LIVE POULTRY SPECIAL.—The Hebrew Passover, occurring the first week in April, is an important event in the live poultry business. Jelliffe, Wright & Co., of this city, state that there will be a large demand for turkeys, heavy fowls, fat ducks and geese, and but little call for poor stock. This special trade will continue from April 1 to 8. The next Hebrew holiday after this will be the Feast of Weeks, May 24-26, when fat fowls will be in demand, and the market days will be May 20-22.

THE SOUTH CAROLINA CROP.—I have a nice little crop of truck under cultivation this Spring; 220 acres of Spring cabbage; 250 acres of early Spring potatoes; 50 acres Giant Argenteuli asparagus; 30 acres cucumbers; five acre Paul Rose cantaloupes; total, 555 acres. I shipped my first cabbage to New York March 1; second lot, March 9; third shipment, March 16. Cabbage season will be in full blast by April 1 to 10. March 18, some potatoes coming through the ground; a few small shipments of asparagus have gone forward. Farmers are busy planting beans, cucumbers and cantaloupes; railroad busy bringing in cabbage crates and material for crating up the cabbage crop, and new barrels to ship the potato crop in. Everything in the shape of man, woman, girl and boy is busy at something connected with the crop. The cabbage crop looks fine; stock is going to be first class. W. C. G.
South Carolina.

Woman and Home

From Day to Day.

A laugh is just like sunshine,
It freshens all the day,
It tips the peak of life with light
And drives the clouds away;
The soul grows glad that hears it,
And feels its courage strong—
A laugh is just like sunshine
For cheering folks along!

A laugh is just like music,
It lingers in the heart,
And where its melody is heard
The ills of life depart;
And happy thoughts come crowding
Its joyful notes to greet—
A laugh is just like music
For making living sweet!

—St. Louis Republic.

*

ONE of the newer styles of ribbon belts is made of inch-wide satin ribbon laid on a foundation in narrow folds, closing under a full pompon of the ribbon, with four streamers of varying lengths, ending in metal spikes. Although the belts still slope down in front, there is a reaction against the excessively pointed effect, which has been greatly exaggerated, and the belts seem to be growing a little wider.

*

ONE of the favorite arguments of our vegetarian friends (and their numbers increase year by year), is that a man's character is influenced by his food. This argument recalls the following, wherein the idea is carried out to a logical conclusion:

"I think," said A. Bronson Alcott, in one of his conversations, "when a man lives on beef, he becomes something like an ox. If he eats mutton, he begins to look sheepish; and, if he feeds on pork, may he not grow swinish?" "That may be," said Dr. Walker, of Cambridge, who was one of the listeners. "But, when a man lives on nothing but vegetables, I think he is apt to be pretty small potatoes."

*

NEW patterns in printed Swiss are distinguished this year by the use of white designs on colored grounds. Violet, gray, pink, mauve and blue, with designs in solid white, are much more showy than when the coloring is reversed. In materials for shirt waists Roman stripes are to be very fashionable; narrow stripes of vivid red, blue, green, orange, purple, black, yellow and white forming a dazzling combination. The waists are usually made with perfectly plain backs, and the shoulder seams are longer than last year, giving a drooping effect. The sleeves have more fullness, both at the top and around the cuff, the cuff being 2½ inches wide.

*

IN Jane Austen's "Sense and Sensibility" (a book which, with "Pride and Prejudice," we expect to read over again every alternate year of our life), the romantic heroine asserts that a woman who has reached the mature age of 27 could not possibly feel or inspire any warm affection, the period for such sentiment being long past. Concerning this point of view expressed by Marianne Dashwood, a recent writer says that it is one of the conventional ideas that early marriages are more likely to result happily than late ones. There are strong reasons for believing exactly the contrary to be true. The supposedly greater difficulty in mutual adaptation after character has lost something of the pliability of early youth is more than compensated in other ways. In mature life men and women are more reasonable in their expectations than in the twenties, and therefore less liable to disillusionment. They know of a certainty what youth holds as a theory, that "it is love that makes the world go round," but they also know that it is the steady, everyday love of a lifetime, to which the romantic passion of youth bears little resemblance. With the experience which brings a fuller comprehension of life, there is also usually more self-control and greater forbearance toward the defects of others. These are probably some of the reasons for the fact abundantly confirmed by observation that late marriages have, on the whole, equal chances of happiness with those made early in life.

*

FRENCH knots, such as are used in embroidery and lace stitches, are now a very fashionable trimming. On silk or fine cloth rows of them often trim a vest

3740 Infant's Long Dress—one size.

or stitched straps, while on colored linens white French knots are put between rows of braid or insertion. They are very easily made. A needle threaded with double silk or linen is drawn up through the material, the thread twisted twice around the point of the needle, and through these twists the needle is put down again into the material at the point at which it was brought up, fastening securely underneath. With very little practice it is easy to make the knots all even.

*

OPINIONS as to the wholesomeness of food are often the result of personal constitution and healthful environment, as the following quotation will show.

"I'm a confirmed dyspeptic; that's the reason I look so old," said Mr. Collander, gazing almost enviously at the red-bronze face of his former chum at college, who had dropped down from the country into Mr. Collander's city office.

"What you need is simple country food, man," said his old friend, clapping him heartily on the shoulder. "Come and visit my wife and me on the farm for a while, and we'll set you up. It's rich city living that's too much for you. Now take breakfast, for instance. All *I* have is two good cups of coffee, a couple of fresh doughnuts, a bit of steak with a baked potato, some fresh biscuit or muffins, and either griddle-cakes or a piece of pie to top off with. What do *you* have?"

The city man looked at his red-cheeked friend, who stood waiting for the confirmation of his idea.

"A cup of hot water and two slices of dry toast," he responded, soberly. "But if you think a simple diet like yours would help me, I will make one more attempt to be a healthy man."

The Rural Patterns.

Every mother takes delight in fashioning her baby's clothes. The charming little gown illustrated is simple of construction, at the same time that it is in every way adequate to the little one's needs. As shown, it is of French nainsook, with trimming and yoke of fine needlework, but English nainsook, Persian lawn, India linen, dimity and a host of other dainty white fabrics are suitable. The yoke can be made from tucking, all-over lace or needlework, the trimming can be lace or embroidery, as preferred, or flannel gowns can be finished with a simple hem or frill with fine tucks above. The yoke can be square, round or pointed, the pattern providing for all three. The skirt is simply straight and full, the correct outline being indicated at the top for the application of all three yokes. The sleeves are in bishop style, with tiny folds at the hands, and the neck can be finished with a standing or turn-over frill, as preferred. To cut this pattern, 2⅜ yards of material 36 inches wide will be required, with ¼ yard of all-over tucking or needlework, 4 yards of insertion, and 3 yards of wide needlework edging, and one yard of narrow to trim as illustrated. The pattern No. 3740 is cut in one size only; price 10 cents from this office.

The shirt waist shows variations without number, but in all its forms retains the essential characteristics that have endeared it to the feminine heart. The smart design shown is admirable in every way, and will be found generally becoming. The slight fullness formed by the tucks means the soft, graceful folds that are so well adapted both to slender and stout figures, and the back gives just the tapering effect required by the latest mode. As illustrated, the material is French flannel in a pretty shade of pink, the buttons are of dull-finished gold, and the belt of flexible metal braid, showing stripes of pink and and gold, held by a simple dull gold buckle. All the season's materials are suitable, however, taffeta, henrietta, cashmere, albatross, all the soft-finished satins and silk flannels. The waist is made over a fitted lining that closes at the center front. The fronts proper are laid in three tucks at each shoulder, below which they fall free to the waist, where the fullness is arranged in gathers. Down the center is applied a tapering box pleat that is stitched near each edge, permanently to the right front and hooked over invisibly or buttoned on to the left. The back includes three tucks that correspond with and meet those of the fronts at the shoulder seam, are stitched in the back to the waist line, where they lap with slight fullness. The sleeves are in bishop style, finished at the wrists with pointed cuffs. At the neck is a standing collar

3716 Shirt Waist, 32 to 40 in. bust.

that also is finished with a point and is lapped over at the center front. To cut this waist for a woman of medium size four yards of material 21 inches wide, 3⅝ yards 27 inches wide, 2¾ yards 32 inches wide, or two yards 44 inches wide, will be required. The pattern No. 3716 is cut in sizes for a 32, 34, 36, 38 and 40-inch bust measure; price 10 cents.

OUR GRANDFATHERS IN BUSINESS AND SOCIETY

Colonel Thomas Wentworth Higginson

Writes of the social life of the young man of the mid-century.

Mr. Bartlett

Of Hibbard, Spencer & Bartlett, tells of the conditions under which the young man of the period served his business apprenticeship, and compares the old times and opportunities with the new.

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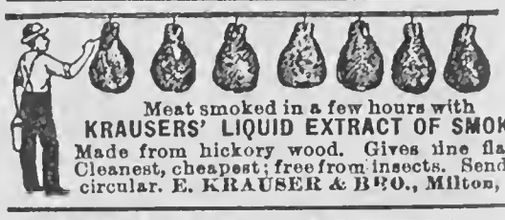

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Rural Recipes.

Hot Cross Buns.—Sift into a large bowl one full quart of flour, half a cupful of sugar, and half a teaspoonful of salt; dissolve one-fourth of a cupful of butter in a generous half-pint of warm milk, and add to the dry ingredients, with the yolks of two beaten eggs; add half a yeast-cake dissolved in a little water, half a nutmeg grated, and the whites of the two eggs, beaten stiff; this should make a very soft dough. Cover the bowl with a clean cloth, place it where it will keep warm, and let it rise over night. In the morning take pieces of the dough the size of an egg and, with a little flour, mold them into round cakes an inch in thickness. Place them on a buttered tin, leaving a little space between. Cover the tins and set in a warm place for the buns to rise; they should be double their original size. With a sharp knife cut a cross in the center of each bun. Bake them in a moderate oven for about half an hour. When the buns are baked, brush the top with a syrup made of sugar and water. A few currants or a little candied peel is usually added to this recipe.

Virginia Beef.—Put a boiling piece of beef in a large, flat kettle with two onions chopped fine, two tablespoonfuls of butter; sprinkle all over with flour. Let onions and butter cook a few minutes before adding meat, which must be well seasoned with salt and pepper. Add one pint of water, cover tightly to retain all juices and steam, and cook four hours. Then add a few mushrooms. Stir into the gravy a tablespoonful of catchup. Pour over the meat and serve hot. Meat should be cooked until it can be cut with a spoon.

Farmhouse Apples.—Peel and core six tart apples and fill spaces with seeded raisins, shredded citron, sugar and a little lemon peel. Stand in a baking tin, pour over one-half cupful of water, dust with sugar. Bake in slow oven till tender, draw to oven door, sprinkle with bread crumbs and dust with sugar and allow them to remain 10 minutes. While baking mix one tablespoonful of flour with one-half a cupful of sugar, pour over it a half-pint of boiling water, boil a minute, take from the fire and pour it over one well-beaten egg, add juice of half a lemon. Pour over apples and serve warm.

Best Doughnuts.—This is a tested recipe from our friend Aunt Ruth: One egg beaten light; one cupful of sugar and a little salt; one cupful of sour milk sweetened with one teaspoonful of soda; two tablespoonfuls of melted lard; flour to make a stiff dough. Fry in hot lard, and dust with cinnamon and granulated sugar. These doughnuts are light and wholesome.

Maple Sugar Fudge.—Measure out two cupfuls of maple sugar broken into small bits, and mix it with a cupful of hot milk. When the sugar is melted in the milk let the syrup boil until a drop hardens when placed in cold water. Add a large tablespoonful of butter, and let the syrup cool until you can bear your finger in it. Now beat it hard for three minutes, then pour it out at once on buttered pieplates. Crease it in inch squares, so it can be easily broken into even pieces when it is cold. A delicious Canadian fudge is made in the same way, using a cupful of cream instead of milk, omitting the butter and adding butternuts to it. Put the butternuts chopped into good sized bits on the buttered pie plates, and pour the fudge over them. Crease it. Let it cool and break the mass into squares.

Bleached Apricots.—Wash a half-pound of dried apricots 24 hours before wanted, and pour over them boiling water; let it stand not more than two minutes, then drain; add cold water to cover well and let stand 12 hours, then pour this water off. Make a boiling syrup of one-half pound of sugar and a third of a cupful of water, then turn it over the fruit and allow it to stand till morning. The fruit needs no cooking and is similar to that sold in the market as "California jellied fruits."

Peach Tapioca.—Soak one-half cupful of tapioca over night in plenty of cold water. Cover the bottom of a buttered pudding dish with a layer of canned peaches, pour over this the tapioca, which has been swectened with one tablespoonful of sugar, put over this another layer of the peaches and bake in a moderate oven for half an hour. Beat the whites of two eggs until very stiff, add two tablespoonfuls of sugar, spread this over the peaches and return to the oven until a delicate brown. Add more sugar to the juice left from the canned peaches, beat one-half cupful of cream until light, pour gradually over it the peach juice, beat all together and serve with dessert. This dish is good served either cold or hot.

Cream Walnuts.—Two cupfuls of sugar, one cupful of lard or butter, one cupful of sour cream or milk, the yolks of two eggs, one teaspoonful of vanilla, and one teaspoonful of soda. Flour to roll. After placing in the pans, stick half an English walnut meat in the center of each. Bake with care.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

A Dish of Greens.

In the Spring nearly everyone begins to think of dandelion greens. They are an excellent appetizer, and we see people out in the fields busily digging them. In many cases it is hard to get enough for a mess; they are small and far apart and it takes much valuable time to get them. This used to be the case with us, but now, in the dandelion season I can go out and get a large dishpan full in 15 minutes or less. The way it came about was this. We sent for a 10-cent packet of seeds, and planted them in a row in the garden. The ground was rich and they were well cared for. They grew to an enormous size, and we had an abundance of greens. Some of them were allowed to go to seed and the seeds blew all about the yard. It is a number of years since we had the cultivated row, but all around in the grass are plenty of plants. They do not grow as large as the cultivated ones, and they do not need as much cooking, but they are larger than the ordinary wild ones. Care should be taken not to plant them where the seed will get into lawns or in other places where dandelions are not wanted. SUSAN BROWN ROBBINS.

Macrame Slippers.

A pretty bedroom slipper may be made of gray linen macramé cord, and be found as soft as silk, and much cooler than those crocheted in worsteds, says a writer in Motherhood. It is done in a simple single crochet, with the exception that each stitch is taken in the back of the loop instead of the front. Begin at the toe of a No. 3 slipper by making a chain of 11 stitches, and in the center of each alternate row add two stitches to widen, until there are altogether 43. Commence the side by taking up 12 stitches, and, after knitting seven plain rows, begin to widen at the top for the heel, which must be four stitches higher than the sides. After widening sufficiently for the heel, which must be done very gradually, knit two rows without widening, and decrease in the same proportion until there are but 12 stitches. Knit seven plain rows and crochet fast to the other side. Of course the work must be measured and graded according to the sole that is to be used. A shell border finishes the top, and an elastic and bright ribbons are run through it and tied with a bow on the instep. A strong cork sole, lined with gray linen, should be used, and care must be taken in sewing the slipper and sole together, so that the stitches may be hidden.

FARM, Stock and Home suggests that killing a toad in a garden is equivalent to bringing in a lot of injurious insects.

AN exchange says that the man-afraid-of-his-conscience ought to be more numerous. How about the man with a conscience that he doesn't need to be afraid of?

A HAPPY CHILD

is one who grows, without interruption of health, from a baby up—except the inevitable diseases of children.

And Scott's emulsion of cod-liver oil has done more, in the 26 years of its existence, than any half-dozen other things, to make such children.

It keeps them in uninterrupted health. It is food that takes hold at once, whenever their usual food lets go.

We'll send you a little to try, if you like.
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MACBETH'S "pearl top" and "pearl glass" lamp chimneys are carefully made of clear tough glass; they fit, and get the utmost light from the lamp, and they last until some accident breaks them.

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Our new book of the "FAMOUS MARYLAND" made-to-order Clothing is ready—it shows the styles that will be worn by the best dressed, and samples of the latest weaves of cloth are attached. We Guarantee to Fit, and Prepay Expressage to your Station. This book also contains some extraordinary values in "FAMOUS MARYLAND" Shirts, Shoes and Underwear, also in Men's, Boys' and Children's ready-made Clothing.

SPECIAL—Men's all wool Tricot Long Suits, round cut sack, satin piped facing, worth $10.00, for $4.75. Send $1.00 with order, and pay balance, plus express charges, to your agent on receipt of the suit. A lifetime's opportunity. Address this way:

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1 Pkt. Pansy—10 colors mixed.
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" Lovely Butterfly Flower.
1 Pkt. Phlox Drummondii.
" Diamond Flower.
1 Pkt. Double Chinese Pink.
" Carnation Marguerite.
" Heliotrope, mixed.
" Poppy—New Shirley.
" Umbrella Plant.
" Giant Verbena, mixed.
" Japan Morning Glory.
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23 BULBS—2 Grand Peacock Iris. 1 Dbl. Pearl Tuberose. 2 Butterfly Gladiolus. 2 Hybrid Gladiolus. 9 Fine Mixed Oxalis. 2 Rainbow Lilies. 1 Elegant Spotted Calla. 2 Climbing Sweet Mignonette Vines. 2 Splendid New Canna Lilies, 1 Crimson, 1 Variegated.

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Cut your corns? How foolish when A-CORN-SALVE takes them out so easily. Free trial box Giant Chemical Co., Philadelphia

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$24.48 with reservoir.

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FREE WRITE TODAY for new Proposition. Sample, etc., so we can start you at once.

GRAY & CO. PLATING WORKS, 991 MIAMI BUILDING, CINCINNATI, OHIO.

[*We recommend the above firm as thoroughly reliable.—Editor.*]

This illustration shows the machine closed to be used as a center table, stand or desk.

SEND NO MONEY

Cut this advertisement out and send to us and we will send you this. OUR HIGH GRADE DROP HEAD CABINET EDGEMERE SEWING MACHINE by freight C. O. D., subject to examination. You can examine it at your nearest freight depot, and if found perfectly satisfactory, exactly as represented, equal to the highest grade sewing machines advertised by other houses at $20.00 to $30.00, and as good a machine as you could buy from your dealer at home at $30.00 to $40.00, the greatest bargain you ever saw or heard of, pay your railroad agent our SPECIAL OFFER PRICE $11.95 and freight charges. Give the machine three months' trial in your own home, and we will return your $11.95 any day you are not satisfied.

OUR $11.95 EDGEMERE SEWING MACHINE is covered by a binding 20-year guarantee, is made by one of the best sewing machine makers in America, has every new and up-to-date improvement, very high arm, positive four-motion feed, is very light running, does any work that can be done on any sewing machine made. It comes in a beautiful solid sawed antique oak, drop head cabinet, as illustrated. Cabinet is beautifully finished, highly polished and decorated with a complete set of the finest colored floral marquetry designs. AT $11.95 we furnish this sewing machine complete with the following accessories: 1 quilter, 2 screwdrivers, 6 bobbins, 1 package of needles, 1 oil can filled with oil and a complete instruction book, which makes everything so plain that a child can operate the machine. For 75 cents extra (or $12.70) we furnish in addition to these regular accessories a complete set of highest grade foot attachments in metal box including: 1 foot hemmer, 1 ruffler, 1 shirring plate, 1 tucker, 1 underbraider, 1 binder, 1 short foot and set of hemmers, different widths up to ¾ of an inch. In ordering say if you want these extra foot attachments at 75 cents additional. ORDER TODAY. DON'T DELAY. Such a beautiful sewing machine was never offered before at anything like the price. Write for Free Sewing Machine Catalogue or send 15 cents for our 1100-page Catalogue of Everything.

This illustration gives you an idea of the appearance of the High Grade, High Arm Edgemere Sewing Machine, which we furnish at $11.95 in the handsome 5-drawer drop head oak cabinet illustrated.

Address, SEARS, ROEBUCK & CO., CHICAGO, ILL.

MARKETS.

The Week's Quotations.

WHOLESALE PRICES.

NEW YORK, MARCH 23, 1901.

GRAIN.—Wheat one-eighth to one-half cent up. Cold weather in western wheat belt, but plant well protected by snow.

Wheat, No. 2, hard, N. Y.	81⅝	@	—
No. 1, Northern Duluth, spot.	90⅛	@	—
No. 1, hard Duluth, spot	92⅝	@	—
Corn, No. 2, mixed	49	@	—
Oats, No. 2, white, in elevator	33½	@	—
Rye, No. 2, Western, c. i. f., N. Y.	—	@	58¼
State and Jersey, track	57	@	58
Barley, feeding, c. i. f., N. Y.	47	@	48
Malting, c. i. f., N. Y.	62	@	70

HAY AND STRAW.—Market weak all around.

Hay, No. 1	85	@	90
No. 2	82½	@	85
No. 3	75	@	80
Clover	70	@	75
Clover, mixed	75	@	80
Straw, rye, long	80	@	85

FEED.—Red Dog 25 cents up. Other grades practically unchanged.

Spring bran, 100-lb. sacks	19 50	@	20 50
Winter bran, bulk	19 50	@	20 00
Spring middlings, 200-lb. sacks	18 00	@	21 00
Red Dog, to arrive	19 25	@	19 50

BEANS.—All grades down but choice marrow five cents. Trade light.

Marrow, choice, per bu	2 35	@	2 40
Marrow, fair to good	2 20	@	2 30
Pea, bags, choice	2 07½	@	—
Red kidney, choice	—	@	2 15
White kidney, choice	2 35	@	2 40

MILK.

New York Exchange price within 26-cent freight zone, 2¾ cents per quart.

BUTTER.—Prices same as last report. Receipts light and trade inactive.

Creamery, extra, per lb	22	@	—
Firsts	21	@	21½
Seconds	19	@	20
Lower grades	16	@	18
State dairy, tubs, fancy	—	@	21
Tubs, firsts	19	@	20
Tubs, seconds	17	@	18
Tubs, thirds	15	@	16
W'n imitation creamery, fancy	18	@	18½
Lower grades	14	@	15
W'n factory, small tubs, fancy	—	@	14½
Large tubs, fancy	—	@	14
Fair to choice	13	@	13½
Lower grades	11	@	12½
Rolls, choice	14	@	14½
Common to prime	11	@	13½

EGGS.—Receipts heavy and business good for consumptive demand.

QUOTATIONS AT MARK.

Nearby, State & Pa., fresh-gathered, fancy white, doz.	—	@	15
Fancy brown, per doz	—	@	14
Average prime	13	@	13½
West'n, regular packings, firsts	—	@	13
Kentucky, fancy marks	—	@	13
S'n, fresh-gathered, avge. best	12½	@	12¾
Poor to fair	12	@	12¼
W'n, fresh-gathered, dirties	—	@	12
Checks	—	@	11
Duck eggs, Baltimore, doz	—	@	30
Western	27	@	28
Virginia and Tennessee	26	@	27
Far Southern	24	@	26
Goose eggs, per doz	60	@	70

VEGETABLES.—Potato market dull. Southern vegetables selling fairly well.

Potatoes, Bermuda, prime, bbl.	5 00	@	6 00
Bermuda, No. 2, per bbl	3 00	@	4 00
Havana, per bbl	3 00	@	4 50
L. I., in bulk, per bbl	1 50	@	1 75
State & W'n, in bulk, 180 lbs.	1 25	@	1 62
State, per sack	1 40	@	1 50
Jersey, prime, per bbl	1 25	@	1 50
Sweets, Vineland, per bbl	1 75	@	2 25
Sweets, other Jersey, per bbl.	1 50	@	1 75
Sweets, Jersey, per basket	75	@	1 00
Asparagus, Ch'n, prime, per dozen bunches	8 00	@	9 00
Cal., large bchs, per doz	5 00	@	8 00
Cal., small bchs, per doz	2 00	@	2 50
Brussels sprouts, per qt	5	@	12
Beets, old, per bbl	75	@	—
Fla. & Ch'n, per 100 bchs	5 00	@	7 00
Carrots, old, per bbl	75	@	1 00
Southern, per 100 bunches	2 00	@	3 00
Cabbages, State, per ton	15 00	@	20 00
Fla., new, per bbl. crate	1 75	@	2 00
Celery, State & Cal., large, doz.	60	@	75
Small, per doz	15	@	25
Florida, per case	1 50	@	2 75
Chicory, New Orleans, bbl	5 00	@	7 00
Cauliflowers, Fla., per bskt	2 00	@	3 00
California, per case	1 00	@	2 50
Escarol, New Orleans, per bbl.	4 00	@	5 00
Eggplants, Fla., per box	1 00	@	3 00
Green peas, Fla., per bskt	1 50	@	4 00
California, per box	2 00	@	3 00
Kale, Norfolk, per bbl	60	@	85
Lettuce, Fla., per ½-bbl. bskt	1 50	@	3 00
Charleston, per ½-bbl. bskt	1 75	@	2 00
Onions, Conn. & L. I., wh., bbl.	3 00	@	4 50
Conn. & L. I., red, per bbl	3 00	@	3 75
Orange Co., yellow, per bag	3 25	@	3 75
Orange Co., N. Y., red, bag	3 00	@	3 50
Peppers, Fla., per carrier	1 00	@	2 00
Parsnips, old, per bbl	—	@	1 00
Parsley, Bermuda, per box	75	@	1 25
New Orleans, per 100 bunches	2 50	@	3 50
Romaine, Fla., per basket	1 00	@	2 00
Squash, Hubbard, old, per bbl.	1 50	@	2 00
Marrow, old, per bbl	1 00	@	1 25
Florida, white, per crate	1 50	@	2 50
String beans, Fla., per crate	2 50	@	5 50
Spinach, Norfolk, per bbl	75	@	1 00
Turnips, Canada, Russia, bbl.	80	@	90
Tomatoes, Fla., per carrier	1 00	@	3 50

HOTHOUSE PRODUCTS.

Lettuce, fancy-headed, doz	60	@	1 00
Average receipts, per case	1 50	@	2 25
Cucumbers, prime to ch., doz.	1 00	@	1 50
No. 2, per doz	60	@	75
Tomatoes, fair to prime, lb	20	@	25
Radishes, prime, per 100 bchs	2 50	@	3 50
Mushrooms, poor to prime	20	@	40
Rhubarb, W'n, per doz. bchs	25	@	60
L. I., per 100 bunches	4 00	@	5 00

DRIED FRUITS.

Apples, evaporated, fancy, lb	6	@	6½
Evaporated, choice, per lb	5	@	5¼
Evaporated, prime, per lb	4½	@	4⅝
Evaporated, poor to good, lb.	3	@	4
Sun-dried, Sn, sliced, per lb	3	@	3¾
Sun-dried, State & Western, quarters, per lb	3	@	3¾
Sun-dried, Sn, coarse cut	2¾	@	3¼
Raspberries, evap'r'ed, 1900, lb.	19	@	20
Blackberries, 1900, per lb	6	@	6¼
Huckleberries, 1900, per lb	14	@	15
Cherries, 1900, per lb	14	@	15

FRESH FRUITS.—Prime apples selling well, but some urging necessary to dispose of lower grades.

Apples, Spitzenberg, per bbl	3 00	@	5 00
Spy, State, per bbl	2 50	@	4 00
Ben Davis, per bbl	2 50	@	4 00
Baldwin, fancy, per d.-h. bbl.	3 25	@	3 50
Baldwin, average prime	2 50	@	3 00
Greening, prime to fancy, bbl.	3 50	@	3 50
Greening, common to fair	2 50	@	3 25
Russet, good to choice, bbl	2 25	@	3 00
Cranberries, Cape Cod, good to choice, per bbl	8 00	@	8 50
Cape Cod, com. to fair, bbl	6 00	@	7 50
Jersey, fair to prime, crate	1 00	@	1 90
Strawberries, Fla., prime to fancy, per qt	22	@	30
Fla., poor, per qt	18	@	20

LIVE POULTRY.—All kinds one-half to one cent higher and trade active.

Fowls, per lb	—	@	11½
Chickens, per lb	—	@	10½
Roosters, per lb	—	@	7½
Turkeys, per lb	—	@	11½
Ducks, avge. West'n, per pair	70	@	90
Average Southern, per pair	60	@	70
Geese, average Western, pair	1 37	@	1 62
Average Southern, per pair	1 12	@	1 37
Pigeons, per pair	35	@	40

DRESSED POULTRY.—Prime scalded fowls scarce. Capons and Philadelphia broilers selling well. Frozen poultry dull.

FRESH PACKED.

Turkeys, W'n, hens, avge. best.	10	@	10½
Western, old hens	9	@	9½
Western, young toms	8	@	8½
Broilers, Phila., under 2 lbs. to pair	30	@	35
Phila., 2½@3 lbs. to pair	25	@	—
Roasting chickens, Phila., selected, large	15	@	16
Phila., medium grades	11	@	13
Fowls, W'n, dry-picked, prime	10	@	10½
Western, scalded, prime	—	@	10½
Western, fair to good	9	@	9½
Old roosters, per lb	6	@	6½
Capons, Phila., large	15	@	16
Small and slips	—	@	12
Western, large	13	@	14
Ducks, Western, prime	12	@	13
Fair to good	8	@	11
Geese, Western, prime	9	@	10
Poor	6	@	8
Squabs, choice, large, dark	—	@	2 75
Mixed, per doz	2 00	@	2 25
Dark, per doz	—	@	1 50
Culls, per doz	50	@	1 00

FROZEN.

Turkeys, young hens, No. 1	—	@	11
Mixed, young hens and toms, No. 1	10½	@	11
Young toms, No. 1	10	@	10½
No. 2	7	@	9
Broilers, dry-picked, fancy	16	@	17
Scalded, fancy	13	@	15
Chickens, fancy, soft-meated	—	@	12
Average, No. 1	—	@	10
No. 2	7	@	9
Fowls, dry-picked, No. 1	9½	@	—
Plain	8	@	9
Ducks, fancy	12	@	13
Geese, fancy	9½	@	10

COUNTRY-DRESSED MEATS.—Many small calves being seized by inspectors, and all under grades dull and weak.

Calves, veal, prime, per lb	9½	@	10
Fair to good, per lb	8	@	9
Common to medium, per lb	6½	@	7½
Small, per lb	4	@	5
"Spring" lambs, fancy, each	7 00	@	7 50
Poor to prime	4 00	@	6 00

BUSINESS BITS.

WHALE oil soap and tobacco are often recommended in THE R. N.-Y. for plant and tree diseases. James Good, 937 N. Front St., Philadelphia, Pa., has succeeded in combining the two. This should make a most useful insecticide and fungicide.

COLD-WATER paint is commanding the attention of paint users everywhere. This paint is sold in powdered form, and mixes readily with cold water. The Swan Brand is non-poisonous, and, of course, is much cheaper than oil paints. Write to The A. F. Swan Co., 116 Nassau St., New York City, and learn about this paint.

THE Cahoon seeder sows wheat, oats, rice, buckwheat, rye, hemp and all other grain and grass seed five times faster than it can be done by hand. Six to eight acres can be covered per hour with ease; sows wheat 40 feet wide and other seeds in proportion. Write to Goodell Co., 14 Main St., Antrim, N. H., for circular and prices.

PERFECT cultivation is the secret of many a farmer's success, which his neighbors fail to understand. A corn crop will laugh at the worst drought if so cultivated as to retain the moisture in the soil. There is no better line of cultivators than the Buckeye. The new pivot-axle riding cultivator is so constructed that the operator can guide it independently of the team. Any user can readily see the advantage of this feature, especially on a side hill. For full information and catalogue write P. P. Mast & Co., 9 Canal St., Springfield, O.

ONE of the best implement catalogues we have seen this season is of the "Planet Jr." goods. This line of cultivators, seeders, wheel hoes, etc., is probably not surpassed by any house in the world; 350,000 of these catalogues have been issued at an enormous expense. Any reader of THE R. N.-Y. who will write S. L. Allen & Co., Box 1711-V, Philadelphia, Pa., can have a copy absolutely free. Those wishing to know about up-to-date farm and garden tools will find the catalogue interesting and valuable. Prices of "Planet Jr." goods have been greatly reduced this year, and can be had from most first-class dealers.

IN all probability the largest single shipment of agricultural implements ever made, was sent out the first week in March from the factory of the Ohio Cultivator Co., at Bellevue, O., when a solid train of 36 carloads of various agricultural implements left, consigned to various points in Kansas. Their make of cultivators, harrows, planters, plows and other agricultural implements is eagerly sought after by wide-awake farmers in all sections of the country. Among the Company's specialties the Famous Ohio hammock-seat cultivator and the Bellevue Anti-friction disc harrow are leaders, and the sales of these worthy implements are constantly increasing. Catalogue illustrating and describing the various lines of implements made by the Company will be sent free on request.

"Is it as good as Mapes?" That is the question which thousands of farmers ask when requested to investigate a new fertilizer. It is all well enough to talk about the per cent of nitrogen, potash, and phosphoric acid, but the word "Mapes" carries a meaning of its own which farmers understand. The chemist at the station prints his analysis and figures out his "trade valuations," but his reagents are not fine or delicate enough to analyze the element "Mapes," which is the skill and care with which the chemicals are mixed and blended. We all understand that two fertilizers may show the same analysis of nitrogen, potash and phosphoric acid, yet one of them may show 50 per cent greater agricultural value than the other. The reason for this is understood by those who realize the difference in the various forms of fertilizing substances. When you see "Mapes" on the bag you may know that the plant food is not all jumbled together like hash or a "boiled dinner," but that the special needs and appetite of the crop have been considered. The name represents the fourth standard element in a balanced fertilizer. The Mapes Fertilizer Co., 143 Liberty St., New York, will send catalogues which tell all about it.

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Market Briefs.

PICKED UP HERE AND THERE.

NEW COLD HOUSE.—Rochester, N. Y., is the center of a section noted for the production of large quantities of excellent apples, and a refrigerator plant is about to be erected in that vicinity that will hold nearly 300,000 barrels of apples, besides other produce. The cost will be not far from $300,000. There is no doubt that the consumption of good apples can be greatly increased by making provisions in the large apple-growing districts, for handling the crop so that it will not flood the market or go to waste at certain seasons; and dealing it out later as the demand requires.

ROUND OR LONG POTATOES.—A reader asks: "Why are round potatoes quoted higher in New York than long ones?" By watching the reports from week to week, it will be noticed that the difference runs from 10 to 20 cents per bushel. A great many of the hotels and restaurants in the city serve whole boiled potatoes. Where the long varieties grow to much size, they have to be cut in two, and then it often happens that one piece is not enough for a portion, while two would be too much. A round potato, unless of extraordinary size, does not need to be divided, as it is just about enough for a portion. Besides, it fits the little dish (used to economize space at crowded tables) in which potatoes are generally served at busy restaurants, and makes a good appearance on the table. Perhaps there are reasons that I have not learned for this discounting of long potatoes for city trade. Certainly it cannot be the quality, for there is no such connection between shape and quality. In some eating houses fried potatoes cut in long slices take the place of boiled, and I have noticed that the long ones are used for this purpose, being cheaper. Anyone who has handled many potatoes knows that varieties inclined to long growth, like Prince Albert, or the old Lady Finger, are awkward to handle, being hard to shovel and unhandy to bag. Varieties striking an average between these kinds and the baseball sorts, which look almost as awkward as the long ones, would seem most desirable to raise for market.

ORANGE MATTERS.—On March 11, 67 carloads of California oranges, not far from 25,000 boxes, were sold at auction in this city. This is said to be the largest sale ever made here in one day, and prices showed an average decline of 25 to 50 cents per box. The reason for the drop in price and haste in selling was the condition of some of the fruit, which showed signs of decay. This demoralized the market to such an extent that even strictly sound fruit suffered more or less. Decay in oranges is not noticed by buyers so readily as in apples and similar fruits. California oranges have an excellent name, retail buyers considering them about as near "straight goods" as it is possible to get. Floridas are all right, but, in buying, none but experts can tell whether they are getting Floridas or not, as they resemble some of the inferior lowland West Indian fruit. Orange dealers here could scarcely make a worse mistake than to try to palm off on consumers fruit in the first stages of decay. A man who gets bitten the first time in this way is suspicious; after the second or third dose, he quits buying, and consumption is materially lessened. The confidence of the consumer, whether of fruit or anything else, is so hard to gain, and so easy to lose, that trifling with it is poor policy. A day or two ago I bought for five cents a large California navel orange, which looked all right. The outside was firm and there were no specks visible, but part of the flesh had a decidedly "old" taste. If much fruit of this stamp is put on the market to sell at a fancy price, trade is sure to suffer. Efforts are being made by fruit men to get quicker freight service between California and this city, the present average time being nearly 14 days. This seems excessive when compared with passenger time. W. W. H.

PRUNINGS.

If in setting a graft one will place the scion at a slight slant, so that the cambium of stock and scion cross, the graft seems sure to grow. Only a slight slant should be given. M. L. P.
Ross Co., O.

THE sentiments of W. S. T. in a recent issue, in regard to plant medicine in small quantities, are mine exactly. I would use a considerable amount of Bordeaux Mixture could I obtain it in small amounts. I hope some manufacturer will see your notes on the matter and help us out. S. E. W.
St. Petersburg, Fla.

THE women folks say that there is only one thing needed to make your paper perfect; that is a little more about flowers and shrubs; a plan now and then of a bed or clump. They were very much pleased with Fig. 38, page 108. I had to sit right down and send an order for the Cannas, etc.
Massachusetts. F. P. B.

SUTTON BEAUTY.—I know nothing personally of the merits of the Sutton Beauty apple, having never fruited it myself, but have heard it recommended very highly by those who have fruited it as being a good bearer of good quality, and also scab-proof, which is desirable these times when fungus diseases are so prevalent. It is not quite so large nor as highly colored as the Baldwin, but will bear younger, and the fruit is smoother; does not require as much spraying. F. H. G.
Holley, N. Y.

AN ILLINOIS MAN'S CONCLUSIONS.—Here are a few things I have learned by experience and observation: Japan pear stocks are hardier than French or American. Pear trees on Japan stocks are hardier than on the above. Kieffer pear needs pollinization, and Vermont Beauty fills the bill. Pears in cultivated ground produce larger and better flavored fruit than when in sod. Pears in cultivated ground are injured by bare ground Winters more than those in sod. Pear trees on high dry ground are hardier than on low ground, and more free from blight. S. E. HALL.
Cherry Valley, Ill.

GILBERT BLACK WALNUT.—B. C., East Freedom, Pa., inquired about the Gilbert Black walnut, page 36. I have the original tree, and have raised a few seedlings thereof, which are not yet of bearing age. I shall try to propagate by grafting this Spring, cutting grafts now, though wood sent out last Spring failed to make a catch. The last two years have been poor nut years with us. On this particular tree the leaf stems enlarge and the leaves curl. I suppose I shall have to spray. Would anybody advise me in regard to material and time when the spraying ought to be done? H. K. G.
Burlington, N. J.

A TOUGH ROSE.—I have an example of hardiness in a Crimson Rambler rose that beats anything I ever heard of. It is growing near my front door, trained against the east side of the house. My thermometer, four feet away from it, has shown six degrees above zero three mornings, four degrees above one morning, and yet there are three young shoots steadily growing about three or four inches long, with small green leaves showing no sign of freezing, though the leaves on main vines are dead, crisp and brittle. The green shoots are close to the ends where the main vines were cut off last Fall, four to six feet from the ground. I cannot understand why they don't freeze stiff these cold nights.
Connecticut. G. A. C.

ROUGH ROAD FOR RUBY.—The Ruby Queen rose that you sent me last Spring was a tiny little plant about four or five inches in length and about as large as Timothy straw. It appeared to be a cutting with a few little roots on it. My little daughter took charge of it, and planted it by the veranda, and the next morning after planting she found that a worm had cut it off and had eaten it right down so close to the bottom that the root was destroyed. I then told her to take the top of it and put it in a pot, put a glass over it, and try her skill to make it grow, which she did for about two months before it showed any signs of growing, but at last it started to grow, and it is now a thrifty plant in good condition for Spring planting.
Essex Co., Ontario. H. S. S.

THE APPLE BOX AGAIN.—Your idea for a box as a package for apples is right. The barrel as a package is becoming a nuisance. The commission men buy the apples and control the barrel supply. Last Fall one commission man of New York bought about all of the apples in this section, paid from 50 to 65 cents per barrel, and found the barrels; had his own men to put them up for him, and sent carloads of barrels here, part of which were hardly fit to store ashes in. They pack everything in, and as you say, the farmer gets the credit for fraud. We need a new style of commission man, not a new style of farmer. My brother, a farmer, would not sell his apples, but put them up himself, shipped them, all good fruit, and received double the price for them. It does not pay to ship poor fruit. Keep at it; the box will be recognized. A. V. W.
Sussex Co., N. J.

I HAVE taken THE R. N.-Y. since 1884; years ago have sent it to my sons in Kansas. They said it was a good paper, but not suited to the West. I think it is getting to be more a National paper, as the years go by. That one piece on hog cholera by Dr. Kilborne in it may save them $50 or more. J. H.

SEEDING GRASS.—The best stands of grass I ever saw were had by seeding Timothy with rye, even as late as December 15. We never sow clover in the Fall, but experiments in Fall seeding prove that such seeding will give a catch about three years in five. Neither Timothy nor clover seem to do well sown with Spring grain in the past 10 years, but 25 or 30 years ago we always had good stands of both sown with oats in April. C. D. LYON.
Ohio.

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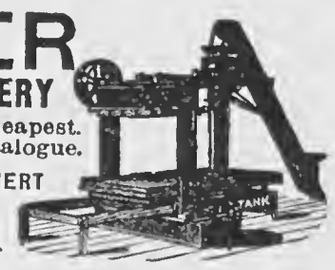

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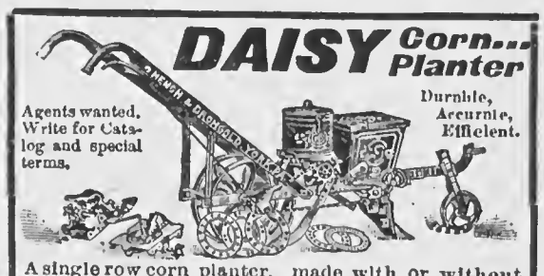

A single row corn planter, made with or without fertilizer attachment. Has either double or concave single wheel. Has 4 rings or dropping dies. Dropping and fertilizer feed regulated by link chain belt. 5 chain wheels for dropping corn. Drops 1 grain from 11 to 19 inches or 2 grains from 22 to 38 inches apart. 3 extra feed wheels for fertilizer attachment drills 20 to 525 lbs fertilizer per acre. Ground wheel in front can be raised or lowered for deep or shallow planting. Extra rings can be supplied for dropping or drilling peas, beans, ensilage corn, etc. Write for Catalogue F
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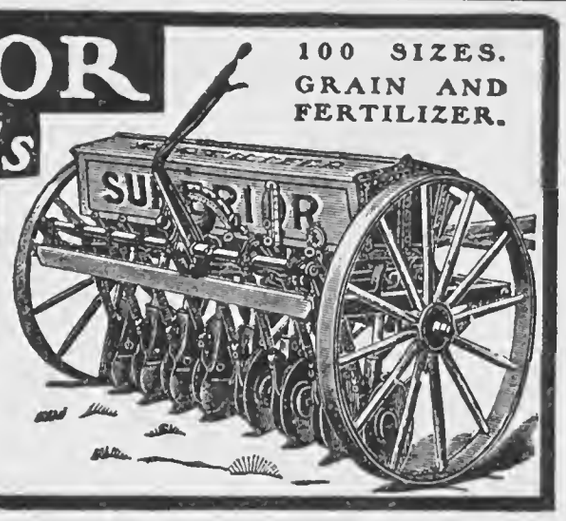

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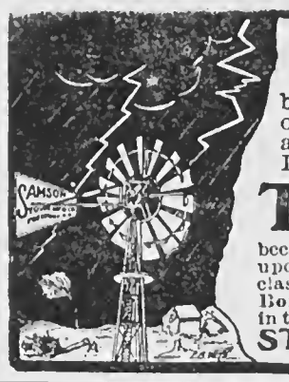

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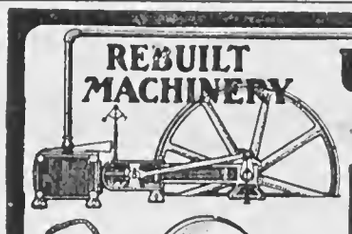

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Restore Your Meadows and Grass Lands by simply Top-Dressing.

It is lasting in effects equally with the best stable manure, but at the same time it is quicker and more effective on the crop to which it is applied. Its introduction some years since marked a new era for restoring grass lands without plowing, among the farmers of Connecticut, New York, New Jersey and Pennsylvania.

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This is a complete manure for corn, and requires the use of no other fertilizer. It contains all the ingredients required to secure the full development of the crop, both in abundance of stalk of improved feeding quality, so important in ***ENSILAGE****, and also in yield of well-filled deep-kerneled ears.*

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This manure is adapted for ***BROADCAST*** *use for growing Corn. Many light, sandy lands, "poor as poverty," like the Hartford "Plains," have by broadcasting three to four bags per acre of this manure, been brought up into good condition for grass or for any crop, and made to pay from the start.*

Read "TWENTY YEARS AFTER" for practical results at Newington, Conn., on seven acres of "the poorest piece of land," with the MAPES CORN MANURE (two tons on the seven acres broadcast harrowed in), two years in succession; then Potatoes (three tons of the Mapes Potato Manure), two years; then Oats (54 bushels per acre); then heavy mowing of hay. This land at first was so poor that nothing but pigeon grass and dewberry vines grew on it.

Lands otherwise practically worthless, made to produce, by annual applications, paying crops of corn from the start after liberal figuring for labor, interest and taxes, and brought up equal to the good lands. This cannot be done by using "a little in the hill," like a superphosphate, "to start the crop with."

The Great Corn Contest of the American Agriculturist.

Crops 213, 119 and 95 bushels each; grown on one measured acre exclusively with the Mapes Corn Manure.

Of this great crop, 213 bushels shelled corn, grown in Yates County, N. Y., with the Mapes Corn Manure (800 pounds per acre) exclusively, the American Agriculturist says: "If we allow only $15 as the value of the tops for fodder, and make no account of bottom stalks, the cost comes within 20 cents a bushel (shelled corn)."

The Largest crop grown with fertilizer, other than the Mapes (45 crops in all) was 84 bushels (chemically dried, 60 bushels.)

Some Large Crops Grown with the Mapes Corn Manure, and reported in the Agricultural Press:

1,040 bushels of corn (ears) on less than 4½ acres, equal to 233½ bushels, or 116¾ bushels shelled corn per acre, grown on farm of Rural New-Yorker, with the Mapes Corn Manure.

Ninety bushels (shelled) with 500 pounds per acre. 150 bushels (shelled) with 600 pounds per acre. Value of the grain alone over five times as much as the cost of the fertilizer.—American Agriculturist.

Eight hundred and fifty-six bushels (ears) on four acres. 159.37 bushels on one acre. 125.37 bushels on one acre. Nothing used but the Mapes.—Rural New-Yorker.

On two acres 600 pounds of Mapes alone, broadcast, 198 bushels shelled corn. On three acres, same fertilizer, same quantity. 489 bushels (ears). Grown by Dr. Henry Stewart.—New England Homestead.

One hundred and eighty bushels of ears per acre; shelled, 98.45 bushels. 2,058 bushels (ears) on 16 acres. Only Mapes (800 pounds per acre) used.—Connecticut Farmer.

The Mapes Potato Manure

Dr. Collier, Director of the New York State Agricultural Experiment Station, on the Large Yields of Potatoes Grown Only With the Mapes Manure at Rural Farm.

"Who can doubt," says Dr. Collier, who was one of the judges in the R. N.-Y. Potato Contest, "that the great yield of potatoes secured at the rate of 645 bushels to the acre of one variety, and 1,076 bushels of another variety, under the conditions of soil and climate obtaining in the locality where the trial was made, was due wholly to the fertilizers applied and the method of cultivation employed?"

It is doubtless true that the results may be less, equal or greater, in the same or another place, and another season might have been modified or omitted entirely without affecting the result recorded above; but Dr. Collier thinks none will doubt that with all the limitations and modifications which science would demand before accepting any conclusion from the trial, IT DOES POSSESS A DECIDED VALUE PRACTICALLY AND SCIENTIFICALLY WHICH WILL BE FOUND HELPFUL IN THE PRODUCTION OF LARGE CROPS IN THE FUTURE.—The Rural New-Yorker.

NOT A SUPERPHOSPHATE WANTED.

E. S. Carman, of The Rural New-Yorker, in commenting upon the large yield of potatoes obtained by him at the Rural Farm, and his trench method and the Mapes Potato Manure, concludes: "But we don't want a 'phosphate' or 'superphosphate' or an Ammoniated Superphosphate, or a 'Swiftsure,' or anything of the kind. We want a high-grade potato manure."—The American Dairyman.

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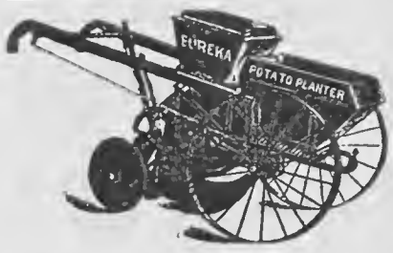

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APR 6 1901

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2671. NEW YORK, APRIL 6, 1901. $1 PER YEAR.

AN EXPERIENCE WITH PEAR BLIGHT.

BENEFITS FROM SULPHUR AND LIME.

Good Work for the Experimenters.

A BAD DISEASE.—There is probably no disease of fruit trees which has been more studied, or about which more has been written, than Pear blight. The study of this disease extends back some time before the beginning of the last century, and to read all the various notions that have been advanced as to its cause, and remedies for its prevention, is very interesting. At the present time I believe the theory that it is caused by bacteria, which gain entrance to the tree through the blossom or the young tender growth, is very generally accepted. The bacterium, which is supposed to cause Pear blight, was discovered during the year 1879 by Prof. J. T. Burrill. It is the purpose of this article to give some of the experiences of "the man with the hoe." In the Spring of 1893 we set a pear orchard of 650 trees, all dwarfs, of the following varieties: Anjou, 250; Angoulême, 150; Louise Bonne, 50; Bartlett, 25; Winter Nelis, 50; Lawrence, 50; Easter, 25; Seckel, 50. Adjoining the pears on the east we set 150 quince trees, one-half each of Orange and Rea. We bought the best trees we could get, and intended to give them the best care possible. None was lost in planting, and they started to grow in a thrifty manner. From the start they were cultivated and sprayed thoroughly, and we gave the closest study and treatment that was within our means of the various diseases with which we had to contend. The trees grew rapidly and promised to make a fine orchard, such as we might be proud of, but during the Summer of 1896 blight began to appear on the Orange quince trees. From where or how it came I know not; neither can I tell why it did not attack the pear trees at the same time, but it did not do so that season.

CLOSE CUTTING TRIED.—As soon as the blight was discovered we began cutting it off, a greater part of the season going over the trees every other day for that purpose. We tried to do the work intelligently by following the directions of Prof. Waite and others, who have published articles on the subject. At the close of the season of 1896 we did not leave any visible sign of blight on the trees. It was confined entirely to the Orange quinces in 1896, and we hoped to keep it there. But in the Spring of 1897 it began to show on some of the nearby pear trees, and spread quite rapidly to other parts of the orchard. It seemed hard at first to mar the beauty of the trees by so much cutting, but we were soon seized with a desperate determination to overcome the enemy, so that cut and burn was the order of the day, and never were orders more faithfully executed. We continued the battle until we went into Winter quarters.

WASHING WITH SULPHUR.—During the Winter of 1898 we gave the subject of Pear blight especial attention, and read everything on the subject we could get. One day, while studying the matter, it occurred to me that if sulphur will destroy the bacteria which cause many of the diseases that human flesh is heir to, why may it not destroy the bacteria which cause Pear blight, if we could only discover the proper way to apply it? This set me to thinking, and I decided to test it for myself. In the Spring of 1898, by a little scouting in the orchard, I soon discovered a few cases of blight that had carried over in the larger limbs of the trees, probably having entered by a small spur which had been cut the Fall before. In these cases the bark was black entirely around the limbs, and if nothing was done it would soon cause the death of the tree. This was early in April. I made a wash of lime and sulphur, using the sulphur freely, and washed the places where the bark was black and the adjoining limbs thoroughly. I watched this closely, and along in May appearances indicated that the disease was being checked. Soon after this we washed the bodies of all the pear trees with this mixture.

A SULPHUR SPRAY.—Again the fight was on; the blight was beginning to show quite rapidly. We were desperate, and felt that something must be done. We could find no doctor who could offer a satisfactory

A PAIR OF OHIO BABIES. FIG. 99.

remedy, so I decided to make a solution of lime and sulphur, and use it as a spray upon the trees with a Pomona spray pump, which we did. This was about the middle of June. I went just ahead of the spraying machine, and cut off all the blight carefully. We had currants growing between the pear trees, and we found that we could not avoid getting the spray upon

PEAR TREE AND BABY AFTER THREE YEARS. FIG. 100.

the fruit, so when we had sprayed one-half of the orchard we decided to postpone spraying until the currants were picked, but I cut all the blight from the trees at this time. Nothing more was done to the blight until after the currants were picked (about July 1), when we commenced where we had left off to finish spraying the pear trees. We found at this time what struck me as a very strong evidence that the first spraying had done some good. On that part of the orchard sprayed two weeks before there was very little or no new blight, but on the part left unsprayed the trees were blighting badly. Here we had the last row of the part which had been sprayed standing next to the first row of the unsprayed part, the one blighting badly and the other showing no blight, and this was very marked when we compared the two parts of the orchard, which contained just 10 rows each. At the time we completed the spraying I again cut all the blight. During the remainder of this season we had very little blight in the orchard.

EARLIER SPRAYING.—I came to the conclusion that we had not sprayed early enough, so in the Spring of 1899 we sprayed just after the blossoms had fallen with the sulphur mixture, spraying all the trees at the same time. We had no new blight this season on the pears, and only a little on the quinces. The season of 1900 we sprayed just before the blossoms appeared, and we had no new blight this season, so we did no further spraying with sulphur. In regard to the few trees that I washed first in 1898, on some of them the bark became healthy, and they have borne fruit each season since that time. At this time we find that we have lost 125 pear trees, besides many others badly mutilated. The varieties most affected were Louise Bonne and Bartlett; the others suffered about equally except Seckel, which had very little blight. The Orange quince trees were nearly all destroyed, while Rea was not much damaged.

EXPERIMENTS SUGGESTED.—In conclusion, let me say that we do not claim to have proven anything, but straws show which way the wind blows. Some of the leading fruit growers in New York State who use lime and sulphur as a wash for their trees say that they have no blight, and William Saunders, who had charge of the Experimental Grounds at Washington, has said that where lime and sulphur was used as a wash for the trees for several years no blight appeared. His experience, I believe, extended over 15 years or more. In correspondence with several of the leading experimenters in this State and elsewhere I find very much doubt expressed as to the efficiency of this remedy, but none of them gives any proof by experiment that it may not succeed. This is not at all discouraging to me, because it is only a few years since we were told that there was no remedy for black knot except to cut it off, and now we know to a certainty that spraying with the Bordeaux Mixture will prevent it. A speaker from Canada said at the meeting of the Western New York Horticultural Society that Bordeaux Mixture would prevent Pear blight. Our experience would seem to prove that it will not, as our orchard has been sprayed with it from the start. I wish to say, however, that Prof. M. B. Waite, of Washington, D. C., was candid enough to admit in a recent letter to me that "Some poisonous mixture in the nature of a sulphur-lime mixture might be used, possibly with some success, to kill the gummy exudation and prevent the dissemination of the disease to healthy trees; but we consider it a much better method when such cases are actually found to cut them out and destroy the germs by burning." It seems to me a much more reasonable way if we have a remedy that will destroy the disease (I must say I believe sulphur will do it), to apply it and save the tree rather than to cut away the large branches and destroy its usefulness. My idea is to get the remedy on the tree in some way before the bacteria gain entrance to it. Our scientific friends tell us that they can make pure cultures of the bacteria which cause Pear blight. I would suggest that some of them attempt to settle this question by experiment in the laboratory (if they have not already done so) and tell us whether the bacteria would be affected by the fumes of sulphur or by contact with it in any way. If the destroying agency can be discovered I am willing to trust to Yankee ingenuity to invent the

mode of its application in the orchard. In the name of science let us stop this mutilation of the trees by discovering a preventive for the blight. I agree with Paul that "If we hope for that we see not, then do we with patience wait for it." D. R. PEASE.

Tompkins Co., N. Y.

DWARF PEARS.

In the establishment of one's own home there is not, perhaps, a single feature that affords more real pleasure than the planting of fine fruits. It is true that among these there are certain varieties from which we may not hope to receive even "advance specimens" until several years have elapsed. However, a well-rounded selection will include a few varieties of the more precocious tree fruits, which supplemented by the various small fruits, will delightfully tide us over the period of waiting. In this capacity the dwarf pear, which bears fruit at a very tender age, certainly occupies an enviable position in the list. It is by no means an unusual occurrence to gather, from tiny trees but two years planted, from one to a dozen beautiful, well-developed specimens of exquisite quality. In Fig. 99 a two-year-old representative of Dale View directs our attention to the essential points in the establishment of these fruit-bearing pygmies. The "baby Angoulême" shown in the picture is typical of the form and relative size of a dwarf pear, as it should appear during the early period of its first season's growth. A lowly-branched head, combined with deep planting, insures a short, sturdy body and blocky form, not only desirable, but necessary in a dwarf. The point at which the pear was budded upon the quince stock should be at least four inches below the surface of the ground.

If the trees have been properly grown in the nursery they will have been "headed" or "branched" at the height of from 12 to 16 inches. At the time of planting these branches should be cut back to three or four buds. As the position of these buds upon the branch quite accurately determines the probable direction in which the new growth will push out, and as the upper bud upon the shortened lateral almost invariably produces the strongest shoot, it should be upon the outer side. By this means the leading shoots of the new growth are directed away from the center of the tree, and form a spreading, open, symmetrical head. Not infrequently these new growths will attain the length of from four to six feet in a single season. The annual pruning of the dwarf pear consists in cutting away from one-half to two-thirds the length of the previous season's growth—always with due regard to the position of the prospective terminal bud. All branches that incline toward the center of the tree should be cut out entirely. At the first indication of blight, which is the most serious enemy to be combated in pear culture, the entire diseased portion should be pruned away, even if it seriously mutilates the tree in so doing. Fig. 100 illustrates the precocity of the dwarf pear under favorable conditions. This photograph, taken three years later, shows the same sturdy little Angoulême, from which the same little lady is gathering pears that won first prize at our county fruit exhibit. F. H. BALLOU.

Ohio.

WEEDING STRAWBERRY BEDS IN SPRING.

One of the greatest drawbacks to successful strawberry culture is the weeds that get into the soil when the same land is used year after year for strawberry growing. It is safer and more economical to use new land every year. Then you avoid the weeds that develop only when the soil has been in cultivation for several years. I believe the very worst weed that infests strawberry beds is the Mouse-ear chickweed. It is hard to get out of the soil, because it seeds before the strawberries are picked. It first appears in the late Fall as a fine spindling weed, covering the whole surface in October like a carpet. If left unmolested, it comes up in the Spring and mats the whole surface with a moss-like covering, and goes to seed about the time that the strawberries begin to ripen. The best plan to fight it is to smother the small weeds as they first appear. This we do by cultivating the middles deeply and hauling earth up on to the rows of runners and plants, covering everything about one inch deep. This smothers most of the chickweed, but the strawberry plants root nicely and grow up through the earth. It also makes the row of plants somewhat higher than the paths between the rows, and thus provides drainage. In the Spring a few of the weeds will come up and should be removed by pulling out by hand. This is very necessary, especially where the bed is on a plot where chickweed has got a foothold. We often find it necessary to weed the fruiting beds twice before the picking season. The illustration, Fig. 101, shows our boys weeding out the fruiting rows in early Spring after they have been dug close for plants. If the chickweed is allowed full sway, it covers the entire surface with a moss-like growth, crowds out the plants, and causes the leaf and fruit stems to rot or damp off at the surface of the soil. There will be one or two berries ripen on a stem, but the rest will wither and never come to maturity. I consider the Mouse-ear chickweed more damaging to the strawberry interests than the White grub.

Oswego Co., N. Y. L. J. FARMER.

ESSENTIALS OF STRAWBERRY CULTURE.

WINTER AND SPRING CARE.—Attention should be given to the fields throughout the entire Winter, that no plants be uncovered by wind, and in case of water settling in low places it should be drained off by surface drains. Many fields are badly damaged by lack of attention to these seemingly insignificant details. When the frost is out and the ground becomes settled the mulch over the plants should be loosened, so that they can grow up through it, but it should not be removed from over the plants unless very thick. When vegetation starts freely the rows should be *thoroughly* hoed and weeded, using the flat hoe shown in my former article, page 51. This hoe can be slipped through and beneath the mulch among the plants, lightly loosening the soil, breaking the crust and destroying any weeds that may have started. Any weeds close about the plants must be carefully removed with the fingers, except dock and others of similar manner of growth, which can best be removed by a stiff, narrow-bladed knife. It is very important that this part of the work be *thoroughly* done and kept free from weeds up to picking time, as the fields are run for two seasons' fruiting, and the cleaner the field is at the end of the picking season the less it costs to clean it out for the next season's crop.

PICKING AND PACKING.—Right here is the final act of the whole drama; very much of the financial success or failure of the crop depends upon proper management at this time. No care or attention should be spared upon any of the details incident to picking or packing, or the grower will surely suffer

WEEDING STRAWBERRY BEDS IN SPRING. FIG. 101.

severely for his neglect. Our pickers are *compelled*, not *asked*, to pick the fruit most carefully with the stems on, to place, not throw, it in the baskets. All small, green, worm-eaten, overripe or otherwise objectionable specimens are put into baskets by themselves by the pickers, and sold as culls to peddlers. No picker is allowed to put any smaller fruit in the bottom of basket than on the top, and is expected nicely to top off each basket by turning the berries on their sides. The picked fruit is removed to the packing shed as rapidly as possible, as the strawberry soon changes color if left exposed to sun and wind after separation from the parent stem; here the baskets are quickly placed in either new or neatly painted crates, the hasps wired down to prevent expressmen and others from sampling. Each crate has a sticker on the front outside, showing the grade and variety, thus rendering opening for inspection unnecessary and saving additional handling.

MARKETING.—The greater part of Oswego County berries go to New York, Boston and Philadelphia in the order named as to quantity shipped. Large quantities are sent to various other points, as Buffalo, Pittsburg, Springfield, Worcester and in some instances Cleveland and Chicago. For New York, Boston and Philadelphia regular trains of iced cars leave every evening, arriving at destination within 24 hours. Much of the fruit is bought outright here by representatives of fruit houses in the various cities, while large quantities are sent on consignment. Each method has its advantages. One thing is absolutely certain; that whichever way the goods are disposed of it is only the best, honestly and attractively packed that brings sure and steady profit.

AFTER PICKING.—Immediately after picking ceases, a mowing machine, with cutter bar set to cut as low as possible, is run over the field. If a tedder is at hand the mulch can be stirred up and dried. The field is repeatedly raked with a horse rake, with an idea of getting rid of all the mulch, and tearing off all the strawberry leaves not already cut by the mower, the design being finally to have the plant entirely free from tops, except a few short leaf stems. The raking also loosens the crust among the plants. Cultivation follows, breaking up well between the rows, but using the narrow tooth cultivator with flat hoes next to the rows, running them not over one inch deep. The rows are hoed with the flat hoes before mentioned, being careful not to cut over one inch deep, as in the cultivating. Many beds are seriously injured at this time by rough handling and deep culture. The plants are then weak from bringing the crop to perfection, and must be carefully nursed by intelligent handling, instead of being abused by careless and rough usage. A mixture of 100 pounds of nitrate of soda and 400 pounds dissolved rock per acre along the rows is very beneficial. Further cultivation consists in keeping a dust mulch about the plants continuously until about October 1, unless the weather be very wet. When the tree leaves are fallen the straw mulch as described in the first year's work is spread. With the details of the first and second season's culture thoroughly carried out the second crop should be at least equal to the first, except varieties of the Crescent and Warfield type, which rarely do much in this section the second season. F. G. TICE.

New York.

ITALIAN LABORERS ON FRUIT FARMS.

I have employed Italians quite largely for 12 or 15 years now, and for all work except the handling of horses they are superior to any foreign or native help I can get. The most valuable man on my place is an Italian, who has been with me seven years, and I have a number of others who have been coming here Summers for from four to eight years. I employ eight or 10 of them six to eight months each season, and often 50 to 60 during the fruit harvest. Two or three who have families I furnish tenement for, and they live on the place the year through; for the others I have cheap barracks with bunks and straw, big cook stove and wood. I charge each man 25 cents per week lodgings and fuel, and pay all first-class hands $1.25 per day; $1 a day to a few, and 75 cents to boys of 14 to 18 years. For extras they sometimes bring in women and children who help in orchard fruit-gathering at 40 to 75 cents per day; or pick beans by the quart. The old regular hands work on garden and lawn from one to two hours each morning before breakfast; do it because they enjoy the work, and want the place to look well. Incidentally they have vegetables and flowers for their own use.

A vineyard of 1,200 vines planted on an almost worthless side hill furnishes a few tons of grapes for wine making, and so the old hands have plenty of homemade wine with their bread and other plain food. In the past 15 years I have probably had 300 to 400 different Italians in my employ; no fights or drunks; politeness and attention, smiles, music, a willingness to work, and an enduring ability to work hard are leading characteristics. Many of them are expert in tree pruning, fruit thinning, picking and packing, and I am confident I could not well replace them with any other class of help. Those from Piedmont, Lombardy, Emilia and sections of northern Italy are best, or at least have proved most satisfactory here. J. H. HALE.

Connecticut.

HARROWING OR WEEDING GRAIN CROPS.

You ask for information on this subject, and I will give you my experience on a limestone, clay soil. Have tried harrowing wheat a number of times, but without satisfactory results. It may be beneficial on some other kinds of soil, where it runs together and the surface needs to be broken up to admit the air and start a vigorous growth early in the season. When clover is sown early enough, say the latter part of February or first of March, it needs no cultivation to get it into the soil. The freezing and thawing does the work, and when the seed germinates it has a good hold on the soil. But to sow now or later on it is a good plan to give the surface slight cultivation, and for this purpose the weeder is the best tool we know. We have also used a light drag when ground was more or less cloddy with good results. The drag thus used does not tear up any wheat or Timothy that the frost has partly raised out of the ground. When the soil is worked either with drag or weeder let it be dry and crumbly, otherwise the working will do little or no good. If wheat is frozen out badly or damaged by fly and doesn't promise much of a crop we would then put on the harrow and work up the soil more thoroughly than the weeder would do it, in order to make a better seed-bed for clover, and this cultivation would check the early sprouting of many weed seeds. We have never got a really good stand of clover sown late in the season, unless the ground was given slight cultivation some way or other, or the seed was sown on the field freshly sown to oats. I do not think Timothy or Red-top started in with the wheat last Fall will be at all injured by using the weeder, as these grasses start in the drill row with the wheat, and are down where the teeth of the weeder will not mash or damage to any great extent.

Indiana. W. W. STEVENS.

GARDEN AND ORCHARD NOTES.

CARMAN POTATOES.—I have much curiosity to know why Carman No. 1 potato is not noised about to a greater extent. An order for Delaware was filled largely with this Carman, much to my joy when I had gained a comparative knowledge of the two kinds. An immediate table test showed the Carman No. 1 to be twice as large and of equal quality. Again, the yield was about double. The next season following (1899) my Carman No. 1 was the only kind of three planted which resisted the rot, conditions the same for all.

POTATO SUBSTITUTES.—What a pity that we can find no true root crop as a substitute for the potato. The potato fails with me one year out of two from rot or drought, one or both. I can raise two bushels of carrots or a barrel of beets as cheaply as a bushel of potatoes, even the best of seasons. I believe the atmosphere of my locality is too dry for the potato at just that limited season when it must be grown, making evaporation too rapid. Another crop would lay to and stagnate for a while to recuperate later. I have often produced two bushels of early peas, selling at from $1.50 to $2 per bushel, on same area and as cheaply as would give one bushel of potatoes as a maximum crop.

EARLY PEAS PAY.—I have found early peas my most remunerative garden crop. I select the right varieties for actual table quality and see that they are picked when not too young nor too old, taking them to the consumer as soon as picked. Any pea that has passed through a middleman's hands is spoiled. The pea picked to-day is always handled so as to be eaten for to-morrow's dinner. I can keep them over a single night by putting in a cellar so cool as to cause a dew upon the pods when brought out next morning. The Premium Gem and Bliss Abundance are the kinds selected, after long searching among varieties. I formerly made successive plantings as late as June 1, but since the advent of the Pea-louse I put in all peas by May 1. This year I shall go light on Abundance and put in a patch of Alaska. If handled quite fresh and swectened a bit when cooking, these will not be complained of. The few peas planted last year I put in the apple orchard and did not see a louse. Shall plant peas more extensively this year, hoping that the shade will again prove effectual. In THE R. N.-Y. for January 12, Prof. Johnson recommends the Alaska as in a certain degree louse-proof. This kind is also of a better eating quality than most of the early, round sorts. Examination shows it to be slightly wrinkled. [Mr. Proctor sells at retail, we believe.—Eds.]

PLANTS IN SHADE.—I find the orchard an admirable place to raise most garden crops. Potatoes may be made to grow fine vines, but a small yield of tubers. The trees both prevent evaporation from the surface and exhaust the moisture from below. A wide diversity of climate may be found between the dense shade and the more open spots. Where vacancies occur corn and squash did well. Lettuce grew nicely where too shady for other crops. Beans and peas take kindly to partial shade. Through a period of 10 years I have found the shade of apple trees an ideal place to grow the Cuthbert raspberry. A little more moisture is needed perhaps, but the vines seem to come through without winterkilling. A like experience with the Agawam blackberry has not proved so favorable. A blight of the leaves has resulted in the fruit taking on tasteless flavor when ripening. This variety I should plant on elevated land with full exposure to sun and winds. But I am disposed to give up the blackberry in favor of more careful attention to the raspberry. Who can tell me whether the Superlative is adapted to general culture? Are its canes as hardy as Cuthbert, and are the berries firm enough for a near market? Is its quality as to both flavor and appearance calculated to take the trade in competition with Cuthbert?

A FINE APPLE.—I have looked through a dozen nursery catalogues in vain to find a description of the Garden Royal apple. While not a market sort, it is the most delicious dessert kind, in appearance like a small overripe Baldwin. Season early Autumn. Nearly sweet, high flavored, of a melting quality, better than a pear. Tree of medium growth, very productive, an annual bearer. Why has this kind been so neglected? Probably, to my mind, as in the case of the Carman No. 1 potato, it has not been boosted to the front with ample capital. Was it the White Mountain grape that was only a poor, modest thing under its first name, to come into deserved recognition when properly boomed? Speaking of grapes, I am going to set a few Campbell's Early this Spring. From all I can learn it must be the one black grape which combines thrift, earliness, productiveness and quality. The Brighton has long been my favorite, but has for several years done poorly; I supposed from some fungous malady, but from a recent hint that its blooms are not self-fertile, it may be from that cause. Who can tell me the proper fertilizer for the Brighton? F. W. PROCTOR.

R. N.-Y.—Garden Royal is described in the latest edition of the American Fruit Culturist as a first-rate dessert fruit of fine flavor, but a poor grower. It originated at Sudbury, Mass., and, perhaps, has not become known far from its birthplace.

STARTING A PINE FOREST.

What is the best way of starting a White pine growth on a sprout lot of 50 acres, steep rocky hillside, from which a heavy growth of beech, maple, ash and hemlock was cut three Winters ago? Could pines, six inches to three feet high, that sprung up thick in a pasture, be transplanted, and how? Could pine seeds be planted right in the sprout lot, and how? The "how" means everything; manner of preparing soil, depth, distance, etc., and always bearing in mind the most economical way. Where can pine seed be obtained?

For forest planting, White pines, two to three years old, are most satisfactory and least expensive to handle. It would not be good policy to take them larger

A WOMAN'S HORSE "THAT IS A HORSE." FIG. 102.

unless expense is no object. The larger-sized material requires more care to handle, especially as regards the root system. On account of better root system, nursery-grown seedlings are preferable to material grown in a pasture. R. Douglas' Sons, of Waukegan, Ill., and David Hill, of Dundee, Ill., besides others, make a specialty of growing such material. White pine seedlings, four to six inches in height, can be had at about $6 to $8 per 1,000, and less for large quantities. Transplant material, which may be preferably used when planting into sprout lands, would come higher. Relying in part on natural growth, the planting of 400 to 600 pines to the acre

ENGLISH WALNUT TREE IN CALIFORNIA. FIG. 103.

would be quite sufficient, care being taken that they should not be overgrown by the neighboring volunteer growth. Sowing pine seeds is less desirable, as it requires a larger amount of seed and a greater loss of plants, and in the end, as regards results, is much more expensive. The planting can be done in unprepared soil, using a grub hoe or a heavy iron dibble, according to the nature of the soil. The New York State College of Forestry has planted nearly 100 acres, and will plant about 200 acres with pine and spruce this year. Last year's planting, material included, with nearly 1,200 plants to the acre, cost $4.85 per acre, less than half the cost of the previous year, showing that cost may vary according to varying conditions. It is quite possible to grow pine seedlings on your own account, but, in the end, the cost of such material, considering the time lost and the attention required, comes very near to the prices charged by reliable nurserymen. Pine seed may be secured through the same firms as the seedlings.

Cornell School of Forestry. B. E. FERNOW.

A BASKET OF FRUIT QUESTIONS.

Late Grafting of Plums.

It was suggested in THE R. N.-Y. last Spring that plums might do as well grafted quite late as very early, according to the usual custom. Having a few dormant scions of the Lincoln plum on hand, I put one into a sprout of a Lombard plum April 24, 1900, after the trees were in bloom. The sprout was growing from the ground, and quite close to the tree, and was grafted six or eight inches from the ground. It made a growth of more than three feet last season. T. O. W.

Manhattan, Kan.

This was a new idea, and I thought it might be practical. I am glad to know that it has been successful in the case mentioned. It would be well to try further, and had I the chance it would be very interesting to me to try it. The scions should be held back in some kind of cold storage until the stocks get well into leaf before doing the grafting. Plums are rather difficult to graft. H. E. VAN DEMAN.

Winter Sunscald; Alfalfa in Orchard.

1. I have some thrifty Hale plum trees that were planted in the Spring of 1898. Part of them are on warm south land, and part on north land. They have made enormous growth. Last Spring I noticed one tree that did not seem to be doing well, and upon examination I found that the bark was perfectly dead entirely round the tree at the ground, and for perhaps a foot from the ground. While pruning, I found two more in the same condition, but the tops were perfectly green and full of fruit buds. I have dug up the trees and will burn them. I am of the opinion that the injury was done to the trees this Winter, as they all held a fine dark green foliage very late last Fall. All the trees that have died were on the warm south land. Can you tell me the cause and a remedy? 2. When a tree dies with yellows, which part, top or root, dies first? The roots of the plum trees I dug up were seemingly in fine condition, and some European plums right by the side of the Hale plums were not injured at all. 3. Would it be advisable to sow Alfalfa in a young plum or peach orchard? 4. Is Japan clover a good thing, or is it a noxious weed? 5. I have a good many Japan plum trees and I fear they will bloom too early for this section. I will give them a trial, and if I find such to be the case, could I successfully top-work them with some European variety? H. J. W.

Pearisburg, Va.

1. While I do not feel competent to make the positive statement that the plum trees mentioned died from what is commonly called Winter sunscald, I think this to be the trouble. If I clearly understand this disease, it is not the effects of a specific germ that works upon the sap and tender tissues, as is the case with some diseases of similar character, but is the result of violent changes of temperature. The location of the trees is circumstantial evidence on this point, which in every case is on the south slope. It was evident that the trouble came suddenly and during the Winter, when there was not sufficient time elapsed to allow either roots or branches to die. It is barely possible that if a good job of bridge-grafting had been done before Spring opened the trees might have lived, and if the injury was merely mechanical, from the separation of the bark from the wood, caused by the sudden changing of temperatures, I fully believe it could have been done. This would be an interesting experiment to try in some future case. 2. Trees that have the true yellows begin to show signs of faint coloring of the foliage, closely followed by weakening of the top growth, and later by death of twigs and the sending out of bunches of slender, wiry shoots along the main branches. The roots seem to be less affected by the disease than the tops. 3. No, I would never allow Alfalfa in an orchard of any kind. It is a very gross feeder, and has seriously hurt many orchards in the Western States, and a few in the East. It is a deep rooter and long-lived. 4. Japan or Burr clover is quite different, being a quick annual grower and is sometimes used in orchards with good effect, especially in California. It can be killed out without very much trouble. 5. Yes, the Japan plum trees can be used as stock for other species of plums with fair success, although there has been but little of it done as yet. H. E. VAN DEMAN.

THE WOMAN'S HORSE.—The discussion under Hope Farm Notes about the animal which "officiates as woman's horse" has waxed warm. We have a number of letters about it, and the farm women certainly seem disposed to stand up for their rights. Now we are pleased to receive a letter from the original horse woman, inclosing a picture of the horse shown at Fig. 102. She says of him: "A farm horse that is a beauty, a great pet, a first-class worker, a good driver and also 'officiates as a woman's horse.'" He certainly is a fine-looking animal, powerful enough to haul his share of the farm load and gentle enough to act as policeman and guide for the women folks.

A CALIFORNIA WALNUT TREE.—About 22 years ago I planted a nursery where the English walnut tree shown in Fig. 103 now stands. All of the other trees I sold or removed to plant on a piece of land that I had bought in 1879. I was then living at home, helping my parents care for a 20-acre orchard. This tree is located in the backyard of a nice residence where my father and mother now live, having built there since I left home. Little did I dream at that time that my own children would be climbing in the branches of the trees that I was raising, 20 years hence. This tree makes a beautiful shade in Summer and bears abundant crops of nuts of good quality. I have a number of other walnut trees raised from the same lot of nuts, and transplanted on my own place, but none of them is quite as large or thrifty as this one. This tree also excels in size and beauty the parent tree, which is still thrifty, although 40 years of age or more. The picture was made at the time of our annual reunion about Christmas time.

California. H. G. KEESLING.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Poison for Cutworms.

J. F. K., Mattoax, Va.—How can I get rid of cutworms and wireworms in a tobacco lot? Bran, Paris-green and molasses, made into balls and dropped every three feet, are advised. Should they be dropped in trench and covered up, or left on top of ground?

ANS.—The poisoned bran balls should be left on the surface of the ground. This method is often quite effective as regards cutworms, but cannot be relied on greatly to diminish the number of wireworms, as they chiefly work under ground. Bits of potato dusted with Paris-green and partially covered with soil will often destroy many wireworms.

Grafting Apples on Mulberry.

D. W. H., Topeka, Ind.—I have a mulberry tree in house yard which answers as a shade tree. The berries do not amount to much. How would it do to graft apples on it, and get some fruit from it?

ANS.—We have never heard of an attempt to graft apples on the mulberry, but it is quite safe to say that the experiment will fail. The apple is a member of the Rosaceæ or Rose family, while the mulberry belongs to the Urticaceæ or Nettle family. There is probably less grafting affinity between the apple and mulberry than any other two tree fruits. The mulberry is not easy to graft even with its own species and varieties.

The Oldenburg Apple.

G. B., Brantford, Ont.—I have 50 Duchess of Oldenburg apple trees which have been planted four years. Would you inform me whether it would pay to graft them with some good Winter fruit, or let them remain as they are?

ANS.—I would say that it would be well to leave the trees as they are, because Oldenburg is a very profitable apple in that section. It bears enormously and will soon begin in this case, as the trees are now four years old. Sometimes the market becomes glutted at the season when this variety ripens, but if the fruit is thinned when the size of marbles, or a little larger, thus giving that remaining a chance to grow large, there will be little trouble in making Oldenburg pay. H. E. VAN DEMAN.

Plaster and Nitrate of Soda.

W. H. H., Oakland, Md.—In what does the chief value of land plaster consist? When and how should it be used? Would it be poisonous if applied to currant bushes when currants were ripening? When is the proper time to apply nitrate of soda to potatoes and blackberries? Should it be mixed with plaster? If so, in what proportions?

ANS.—Land plaster is sulphate of lime. It was formerly used in large quantities on clover. The benefit from this was thought to come from the lime which it added to the soil. Now, it is believed that this benefit is due to the fact that the plaster acts on insoluble elements in the soil, and sets potash free, so that the plants can use it. In recent years the direct use of plaster on the soil has greatly decreased. It is used as an absorbent in stables. When in the presence of ammonia the plaster "breaks up"—that is, the sulphur and lime separate. The former unites with the ammonia and makes the sulphate, in which form the ammonia will not pass off as a gas. We should use plaster only in the stable behind the cows or wherever the liquids stand. It will not "poison" small fruits. We put nitrate of soda on small fruits as they first start in the Spring. Do not put it too close to the plant. Plaster will add nothing to the nitrate except to make it more bulky. We would use nitrogen when planting potatoes, but if when about ready to form tubers they began to look pale we would add the nitrate, scattering it along the rows eight inches or more from the plants.

Grape Grafting and Grapes.

L. B., Webb Mills, N. Y.—1. Will you give full instructions for grafting grapes? 2. Best wash for peach borers? 3. Character of the McPike grape? 4. Would you give a list of peaches, hardiest in bud, that are also good market varieties? 5. Where can we obtain wooden tree protectors, used to protect young trees from the borer?

ANS.—1. Grape grafting should be done as soon in the Spring as Winter is over. The earth should be dug away so as to lay bare the stock to a depth of about six inches. At this place the stock should be cut off with a knife or saw, at an angle of about 45 degrees, and the point squared off a very little. The stump should be split down crosswise of this cut, and the scion set in the split, as in ordinary cleft-grafting, after which a lump of wet clay should be pressed over the wound and the soil firmly packed nearly to the top of the scion, which should extend above the surface of the ground. 2. I know of no good wash to keep out peach borers, except it may be common coal tar. I have found and heard others complain of it being very damaging to apple trees; but, strange as it may seem, it does not seem to act in the same way on peach trees. I have been afraid to try it very extensively on peach or any other trees since it did me great injury in the apple orchard. The knife is the surest and safest means of getting rid of the peach borer, so far as I know, although some like the plan of smearing the bark at and just under the surface of the ground with coal tar. 3. The McPike grape is a very late, large, black variety that is well liked by the few who have been growing it. The quality is fair. 4. Fitzgerald, Crosby and Bokhara are among the hardiest in bud of the good market peaches. 5. Wood veneer tree protectors can be bought of several firms in the Central States. Most of the berry-basket manufacturers make them. Those 10x20 inches and one-twelfth inch thick cost about $3 per 1,000.

Fruits for Connecticut.

H. W. E., Meriden, Conn.—1. Is the Sutton as good quality as the Baldwin? I prefer quality to quantity. Do you think it would be better to plant one-half Sutton, the other Baldwin with Wagener for fillers? Would you set in diagonal or straight rows? Are budded trees stronger and bear earlier than grafted ones? 2. I want a variety of sweet cherries for home use, and wish to know whether Black Tartarian, Napoleon, Windsor, Dikeman, Governor Wood, May Duke and Montmorency are the best? The cherries must be set on south side of a stone wall. How far from it? Can they be set nearer than 30 feet? Shall I put a board fence to protect them from the sun, and plant grapevines for future protection? Will they do as well planted the last of April as the first? Could they be kept two weeks if necessary with roots in soil, tops covered, outdoors or in barn?

ANS.—1. It is generally thought by those who have grown Sutton and Baldwin on the same farm that the former is a more regular bearer than the latter, and fully as good, if not better in quality than Baldwin. Wagener would be very well as a filler, and if I should wish to plant an orchard in Connecticut it is probable that I would set Sutton and Grimes with Wagener between. Square setting is a little less economical of space than by the diagonal system. I do not think that budded trees are better than good ones grown from root grafts. 2. The varieties of cherries mentioned are very good, but Montmorency is not a sweet variety. Perhaps it would do to set the trees within 20 feet of the wall. I do not think it would be necessary to protect by a board fence. Any time in April will probably be about equally good for planting in Connecticut. The trees will do very well if kept several weeks, provided they are securely heeled in out of doors. H. E. VAN DEMAN.

Mr. H. F Hurlbut, of East Freetown, Mass., writes: "I used Bowker's 'Boxal' on potatoes and had a good crop; no rust or blight on the tops. It killed the potato bugs as well as Paris-Green and did not burn the leaves."—*Adv.*

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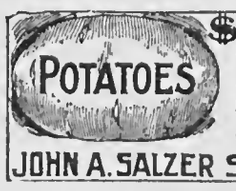

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Conditions for Broom Corn.

J. E. L., New York.—What is the proper time to sow broom corn, and how much seed does it require per acre?

ANS.—The time for planting varies in different parts of the country, according to latitude, season and soil conditions. The only general rule that can be given is to wait until the ground is thoroughly warmed, so that the seed will germinate and grow at once. Otherwise it is liable to rot in the ground; also, the young plant is so weak that it will not amount to anything if made to fight its way the cold nights of Spring. In the Northern States it is the custom to plant any time from the middle of May to June 10. When put in with the planter, if the seed does not contain too much chaff and imperfect stuff, not far from two quarts per acre will be sufficient. Good land, like the deep soils of the West and the river bottoms in the Eastern States, and thorough cultivation are necessary.

Scale Spraying Questions.

G. E. W., Goshen, Pa.—What will kill Oyster shell scale on rose bushes without hurting the plants? What proportion should crude petroleum and whale-oil soap (Good's No. 3) be mixed for San José scale, and does the mixture hurt the foliage?

ANS.—Whale-oil soap, one pound to the gallon of water, will destroy Oyster-shell scale on any plant without seriously injuring the foliage, but it is best used in the above strength when the bushes are in a dormant condition. A solution of two to six ounces to the gallon is safe to use at any time, and proves quite effective against soft-bodied insects, but will not always kill the hard scales. When spraying for San José scale about 25 per cent (one quart to the gallon) should be used to each gallon of whale-oil soap solution, made with one pound of soap to the gallon. This is quite certain death to every scale it touches, but is more or less injurious to the foliage. It is best applied before the buds start in the Spring. If the proportion of petroleum is reduced to 10 per cent (about 12 ounces) to the gallon of soap solution less damage will be done to the foliage.

Spraying, Blight, Bulbs.

A. S. (No Address).—1. In Hope Farm Notes you talk of spraying all trees as a preventive against scale. J. B. Smith, in an earlier issue, said only spray those trees on which the scale actually is. Which is the right thing to do? 2. What insect is it that destroys the bloom on dwarf pears? When bloom is opening, a kind of gummy substance seems to infest it, giving it a brownish appearance, not unlike tobacco liquid. What will prevent this? 3. What is the proper treatment to give the following bulbs after flowering: Narcissus, hyacinths, tulips, Freesias, Easter lilies? Are they all good for another year?

ANS.—1. As all the oily sprays strong enough to kill the Pernicious scale are more or less dangerous to the trees, it seems best to use the stronger solutions or the crude oils only on the trees actually infested, and a less severe application as a preventive. Whale-oil soap, two pounds to the gallon of water, answers very well for the latter, but its effects are not very permanent. 2. The affection of pear blooms described seems to indicate that the opening flowers had been visited by bees or insects carrying germs of the Pear-blight fungus. In that case more or less twig blight would follow. The only remedy would be to cut out and burn every blighted branch in the neighborhood before the blooms open in the Spring. Bees work on the sweet gummy exudate at the junction of a blighted branch with sound wood in the early Spring, and thus become infected. They spread the disease by visiting blooms on other trees. 3. The bulbs named should be permitted to grow on naturally after blooming until the foliage turns yellow or begins to die down, and then allowed to dry up gradually. They may then be laid away in a cool, airy place until Fall, except the lily, which may be planted in the garden, covering five or six inches deep. If found again some of the bulbs may bloom, but will be found much inferior to the first season. As a general rule it is best to throw them away after the first bloom.

For the land's sake, use Bowker's Fertilizers. They enrich the earth.—*Adv.*

Tomatoes for a Cannery.

W. T., Whitesburg, Tenn.—What varieties of tomatoes are best for growing for cannery? What is best fertilizer for tomatoes? Our soil is loamy chestnut land, clay subsoil, well drained, produces about 30 to 40 bushels of corn to acre. Would it pay to buy the ingredients and mix our own fertilizer, and where can we buy the same cheapest? How many pounds would you recommend us to use per acre on above soil? Is nitrate of soda good for tomatoes?

ANS.—Large, bright red tomatoes like Stone and Paragon are generally preferred by canners, and are grown almost to the exclusion of other types. There is some saving in buying chemicals separately and mixing them as used, but it is best to try this method in a cautious manner until experience is gained. At first it will be more satisfactory to buy complete mixed fertilizers from the nearest reliable dealer. A high-grade vegetable fertilizer containing three or four per cent of nitrogen, eight of potash and 10 of phosphoric acid, 1,000 pounds per acre, would not be too much for best results if applied broadcast. Nitrate of soda is of benefit in giving the plants a good start after they recover from setting. A small handful is sprinkled on the soil several inches from the stem, and hoed or cultivated in. Two applications may be made at intervals of three weeks or more, applying first to one side of the plant and then the other. If good stable manure can be had an application of 12 to 20 tons per acre well worked in should insure a good crop. If less manure is used it may be placed in the hill before setting plants.

Stone or Tile Drains.

J. G. B., Millersburg, O.—Can a stone drain be made to work successfully? The circumstances are about as follows: The main would have to be five inches in diameter; laterals about three or four inches. I have plenty of a species of flagstone on the place, which can be split and broken to almost a uniform size. I should have to pay at the rate of 80 cents per 100 feet for three-inch tile, larger tile in proportion, and would have to haul it seven miles Labor of building the drain is not considered. Would there have to be stone in the bottom? Would there be danger of crawfish working dirt up from below, as it would be impossible to make it crawfish-tight?

ANS.—A stone drain can be made to work successfully. We have constructed stone drains in Michigan, and they have for the past 10 or 12 years been doing satisfactory work. We have also had experience with drains laid with brick. While it is possible to make a successful drain by using stone, yet it is by no means certain that success will follow. Underdrainage should be looked upon as a permanent improvement, and when a drain is once laid it should forever after do satisfactory work. While perfection cannot be attained, no matter what is used, yet the nearest we can come to it the better. The greatest item of expense in underdrainage of farm lands is in constructing and laying the drain, and it is far more expensive to make the drain large enough, so that stone can be used, than to open it for tile. We believe that tile should be used instead of stone. One of the hardest jobs we ever tackled was opening up a ditch where brick had been used instead of tile. The brick had become displaced, and it was necessary to take up about one-half mile of the drain before it could be put into working order. The expense of opening up this drain was as much as the tile would have cost originally. If you can purchase three-inch tile for $8 per 1,000 it will, in the end, pay you far better to do so than to use stone in the drain. If, however, you desire to use the flat stones, they would better be laid in close to each other and placed upon edge. This will prevent the stones from being displaced by the pressure of the earth when the drain is filled. The water will percolate through the crevices between the stones, and where the amount of water to be removed is not great this plan will prove fairly successful. But it is not to be recommended in place of the tile drain. Do away as far as possible with the main drains, and use parallel laterals, tile being about three inches in diameter. The main drain is usually unnecessary, and acts only as a conduit and not as a drain.

L. A. C.

A
Potato Bug
is getting to be a hard bug to kill. So many poisons have been tried on him, he has become pretty nearly "poison-proof," but **Bowker's**
"BOXAL" WILL KILL HIM
and at the same time prevent blight of vines and rot of tubers, thus serving three purposes. We have many testimonials showing the truth of this in our catalogue of Insecticides which also contains a hand book of injurious insects and plant diseases, and how to fight them. 40 pages, fully illustrated. Ask for catalogue No. 24. Write to-day.
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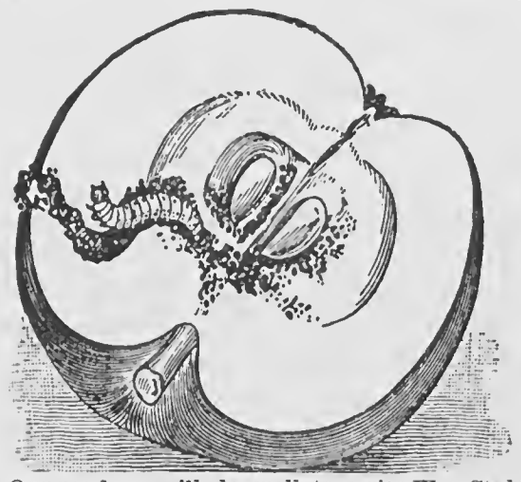

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A Dry Sprayer
No Water or Plaster.
DUSTS TREE, BUSH OR VINE.
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When judiciously applied, these crops will be ready for market two weeks or more ahead of those not properly treated. The best results of *Nitrate of Soda* are obtained when used in combination with phosphates and potash salts.
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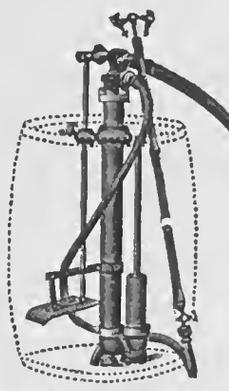

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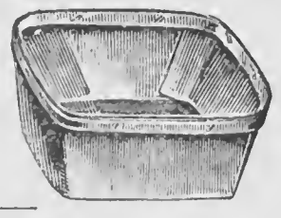

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Killing Grass on Gravel Walks.

A., Massachusetts.—What would be a cheap and effectual application to a gravel walk to kill and prevent return of grass?

ANS.—Experiments at the Vermont Experiment Station show that dry salt will kill most weeds and grass. It must be used heavily, and is slow in its action. A better remedy was found in crude carbolic acid dissolved in water. One quart of the acid in eight gallons of water makes a dose for a square rod. It can be sprinkled out of a watering pot. It makes quick work of the weeds and grass, but does not completely kill out the roots. It has a strong smell which many object to. The acid does not mix well with water, and must be stirred frequently. Arsenate of soda, one pound dissolved in eight gallons of water, destroyed all weeds, but is a dangerous poison.

Growing Cabbage After Cabbage.

J., Boston, Mass.—I have for the past three years raised quite a quantity of cabbages to feed to my poultry during Winter, but am told I cannot continue this crop on same land with any success. If this is true, can it be because the crop takes from soil some known element which, by replacing, will remedy the difficulty, and if so, what application would you advise?

ANS.—It is true that cabbage following cabbage is not usually successful. This is because soil on which cabbage is grown is likely to be infested with the fungus which produces club-root. This bad disease will ruin the crop. Like the scab on potatoes, the germs or spores of this disease remain in the soil and attack the succeeding crop. For this reason cabbage should not follow cabbage, turnips or rape. In some cases the use of lime has prevented or reduced the trouble from club-root, but it is safer to plant on new ground. Cabbage is a heavy feeder, and uses up the soluble nitrogen in the soil rapidly, but if this is supplied other crops can be grown except for this disease.

What Summer Green Crops?

C. F. S., Cockburn, N. Y.—I have been lately interested in the legumes for restoring exhausted land; have been reading about cow peas, Soy beans, Velvet beans, etc. I have a few acres lately purchased that were planted last season with corn that yielded quite a good stand of stalks and a fair yield of grain, for the dry season. I wish this year to plant it to some green crop to plow down. I would like to seed down next Fall with wheat. Which, in your opinion, would be the best of the above legumes for my purpose? I have just been reading an article highly praising the Florida Velvet bean as making a very large growth for this purpose.

ANS.—From our experience we would advise either Early Black or Whippoorwill cow peas—though they may not satisfy you. With us the Soy bean requires good soil—good enough to yield a fair crop of corn. It grows upright and is not so easy to plow under as the cow pea. The latter makes a fair growth oi poor soil, although it may not prove all you desire as far north as you are. The Velvet bean is useful in the far South only. We have grown it several years, and last season it produced a small crop of seeds—but the vines were small, and not satisfactory.

Cement Wall for Bank Barn.

E. W. M., Randolph, Mass.—I wish to build house, barn, henhouse, 300 feet, and brooder house 80 feet. I have round stone gravel and sand on the place; also, after caring for my hens, I have five or six hours per day. Can I build the foundations for my buildings of cement? What should be the thickness of a cement wall for a bank barn, 22x30 wall for one side and both ends?

ANS.—In a case of this kind you must contend against the immense pressure of the dirt piled against the wall for the driveway, and one cannot be over-cautious regarding this point. Such a wall should be two feet thick for the side wall at bottom and 15 inches at top, and it would be well to put all the slope on the inside. Twenty inches at bottom and 12 at top will do for the ends. I would put against the side wall about three feet of dirt as soon as wall was completed, and then no more dirt until the barn was completed. I always prefer avoiding all possibilities of mishaps that I can, and so I would put heavy braces against the side wall before completing the fill for the roadway. This wall, though, would stand as much pressure as one built of stone or brick. Every particle of the cement and gravel, after being thoroughly mixed, should be wetted. It can then be moved with a common shovel. The watery part of grout contains more than its share of cement, and therefore none of it should be allowed to waste. Any size of stone can be used in this wall, only using enough grout to bind them together, but they should not come within a half-inch of the boards or plank that holds the grouting. Plaster as fast as built, and at the stopping place in plastering take a straight edge and cut it off square, so that you will not have to overlap one coat of plaster with the next coat.

S. E. BARNEY.

CHESTNUT CULTURE IN ALABAMA.

The land is a high sandy point that is part of an old-time chestnut ridge; a few big chestnut stumps still remain in among the cotton stalks. At the present time there are not a dozen live native chestnut trees within two miles of the hill, though chestnut posts and chestnut rails are found at odd places throughout the county. Thirty-six trees of the McFarland variety were supplied from Fort Valley, Ga., and also 100 American seedlings. Thirty-six Alpha, two Paragon trees, 100 Parry Giant seedlings and two Cordiformis and two Sieboldii walnuts were brought from New Jersey. All the trees were received in good condition in December, 1899, and were promptly heeled in. The ground was quite moist, and the trees were carefully set, soon after their arrival, in rows 30 feet apart—trees 30 feet in the row. Parry Giant seedlings were also planted in the same rows just half way between the larger chestnut trees. The remainder of the seedlings were set four inches apart, as in a nursery row. All the trees, with the exception of one Alpha, started to grow in the Spring. Cultivation was begun early, and continued up to October 4. Early in April each large tree was given two pounds of acid phosphate and three pounds of cotton-seed meal. The fertilizer was scattered about the tree inside a circle with a two to three-foot radius, and then well hoed into the surface soil. The seedling trees received smaller doses of fertilizer.

Up to the present time there have died no Paragons, six McFarland, 19 Alpha, 69 Parry Giant, 17 American seedlings, and one Sieboldii walnut. The latter, however, was set in a raw, hard spot, and did not have a fair chance. I am not quite satisfied in my own mind as to why so many died, but am inclined to think that there were two causes. In May the cultivation was neglected for a time, because there was so much rain that it was neither necessary nor possible to maintain a dust mulch. Then a short drought came, and before we realized it the soil dried out so that the young grass looked wilted during the middle of the day. Sweeps and hoes were immediately put to work, but I think this accounts for the great mortality among the short-rooted Japan seedlings. Some of the Alphas may have been hurt by this short neglect, but I am inclined to think that the excessively wet season worked the cotton-seed meal down so that it damaged the roots, as some of the leaves took on a sort of scorched look along in June or July.

There is one more point that seems worthy of mention. The Alpha trees were from three to four feet tall, and were all set with only a little trimming up of the head. The McFarland trees were much larger—six to eight feet—and were mostly cut back, some very severely. Four of them were set without any pruning, and two of these died. One of these four, however, was planted in an unfavorable spot, and should hardly be taken into account in considering the effect of cutting back the tops at planting time. The growth of the trees is quite variable, but the more vigorous ones have new limbs over four feet long. Next month the vacant spots are to be reset with pruned trees having the cut limbs carefully waxed. Cotton seed will be used instead of meal, with a light dressing of nitrate of soda in the Spring Cultivation will be continued with all the rows except one, which is to be heavily mulched with peavines. Some of the trees bloomed quite freely, but no burrs were set.

A. M. T.

Calhoun, Ala.

ANOTHER STEAM HORSE.—My experience with a traction engine has been very successful. I have done my own harvesting and similar work for several of my neighbors each year. It is cheap, and the best way I know to harvest in this State. In a 45-days' run I have made an average of 65 acres per day, at the cost of $31.50 per day for help, fuel, etc. I have plowed from 1,000 to 1,600 acres each season with my engine, pulling 18 eight-inch plows, making an average of 40 acres per day at a cost of $18 per day. I harrow from 180 to 200 acres per day, at a cost of $16. My engine is 50 horse-power, and I pull 64 feet of harrow. I don't know of one engine and harvester in this State to be laid aside. Engines are not much used in this country on the farm for hauling loads to the market. They are used for logging and hauling lumber, also for hauling salt.

Chico, Cal. W. T.

THE London Fruit Grower says that a new apple called Armorel is very fine as a late dessert fruit. It is small, with a russet color, and follows Cox's Orange Pippin.

THAT NOTE BOOK.—I would no more think of leaving a small note book out of my vest pocket than I would to leave my knife or my watch at home, and not carry them for the convenience they are to me. The horticulturist loses many valuable thoughts that leave the mind never to return again if he does not note them down at the time. Of course, he thinks he will hold the "new idea" in mind, but often, when he wishes to recall it, other thoughts have crowded it out. Notes as to varieties of fruits and vegetables, the dates of planting, the methods used, the results obtained by following different methods, drop in very nicely to help out in making a better plan for the following year. A note book properly used means advancement and progress to the horticulturist.

C. C. N.

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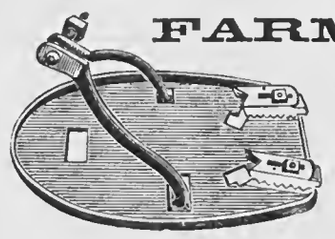

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HOPE FARM NOTES.

SICK FOLKS.—A good friend in Pennsylvania sends me this note of advice and warning: "I hope that the Hope Farmer will use homeopathic treatment for those children of his and not plaster them and give them spoonfuls of nasty medicine, spoiling their young stomachs and making them easy subjects for dyspepsia. Homeopathy is 10 times better for children than allopathy. This I know—have tried both."

So have I—only more so. I was brought up by a man who used sulphur and molasses, "walnut extract" and patent medicines almost exclusively. While I was herding cattle out West I had a case of homeopathic medicines, and a book, and doctored the crowd. I have a dear friend who claims to have performed wonderful cures by means of Christian science, and another who is ready to practice osteopathy at the drop of a hat! My experience shows that there is more in the doctor than there is in the doctrine. It has happened with us that the doctors within reach in whom we have had most confidence have been old school. The big-hearted man who understands the human system and the peculiar needs of his patients is the doctor for me—I care not whether his pills are large or small.

BABY BERKSHIRES.—There were five of them, but one died. I was disappointed in the size of the litter, but the quartette of little blackies are so fat and strong that I begin to think they will make better individuals than would be the case with a larger litter. They are well marked and shaped—perfect little Berks. Some of the farmers who have big and truthful stories to tell about pigs will laugh at our little family. It's all right, gentlemen, if you will tell some of the small stories, too. No man has "good luck" all the time, and if some of these smart men would simply give us the "average" there would be more true information in the world. I fear that we kept that sow too fat. It was our first attempt, and we did our best to follow out what the books and the breeders told us. We learn that the hog herself is a better teacher than any human can be. After this we will let the breeders do the preaching, but the hog will do the teaching.

FINE STOCK.—It is a pleasure to have fine, well-bred stock about! We believe in a republic, but at the same time we have great respect for a worthy pedigree in human, horse or hog. That was our trouble with our black lady. She was so fine and well-proportioned that we hated to see her get too thin. Then, again, we had been keeping some pigs that had more or less scrub blood in their veins. They required lots of food simply to stand still. The purebred sow was such an "easy keeper" that she fattened on the food that kept the others lean and stunted. We have to learn all these things by experience. Hereafter, when I hear these wise men tell just what to do with hogs, am I going to shut my eyes and follow their instructions blindly? No, sir—I'm going to ask the hog about it! If a man gives you a yard of instruction you take an inch of it and let the hog sample it before you try the whole yard! . . . . The almost human intelligence of this sow in caring for her little pigs is good to see. She does everything but take them up in her arms, and is so good-natured and quiet that she will let the children do that. When I see some of the poor little human babies struggling up through life with poor care and poorer attention, I am inclined to take the word "almost" out of that first sentence.

FARM NOTES.—The weather is still moist and sticky. The frost is all out of the ground, apparently, but the heavy rains have beaten and packed the surface hard. There is no plowing in sight for us yet. Still, I know that a few days of really hot sun will work wonders. . . . . I wish to put clover seed on that field where I seeded grass after Mr. Clark's plan. It has been washed by a flood and dug by the frost until there are many bare places. I did not intend to sow clover when I first seeded it, but who can tell in September what he will want to do in April? . . . . Last year I mentioned the disease of the eye which afflicts our horse Dan. It has troubled him quite a little, and he shows the effects of it. In his work with Frank there is little evidence of it, but when driving alone he seems to lose confidence and often shys at obscure objects. Like a blind man, he seems to have confidence in his mate, but fears to travel alone. . . . . I spoke of a small field of Crimson clover that was badly injured by the stock. I carelessly let the horses in on it while the ground was soft, and they quickly trampled out five times as much as they ate of it. I thought it was ruined, but it is actually greening up once more, and I expect to sow Red clover with it during the first week of April. I have never done this before, but it is worth trying. . . . . Last Spring we grafted 50 or more apple trees—using wood of Grimes, Sutton and some new varieties. These grafts have grown well, and we are trimming the trees and getting them shaped for business. We hope to graft more this year, and also graft some cherries which have been started along the stone walls.

POTATO PLANTING.—This year I expect to do something that I have never done before—use stable manure quite heavily on potatoes. Many farmers will smile at that, but in our country the universal rule is to use stable manure on corn and fertilizers on potatoes. That is a good rule, too, but every rule except the Golden Rule can be stretched almost to the breaking point. Our corn land this year is at the end of the farm—up a steep, high hill. I do not think it pays to waste horseflesh in hauling manure so far. The lower part of the farm is fairly level, with quick, easy hauls from the barn. I therefore purpose to crowd the manure on the nearby fields. I know that many good farmers tell us to scatter the manure thinly over the fields. I think it will pay us better to crowd it on the moist lower fields, and leave the hills to cow peas, clover, rye and fertilizers. Last year our potatoes failed us right in the nick of time, because the moisture gave out! It is true that we did not prepare the ground properly, but in any event the hill field was too hard and dry. The moist lower field will stand the drought better, and be closer to the buildings when digging comes. We shall go to the hills for the earliest crop, but later plant the lower field. This field is naturally sour. No potatoes have been grown there for years. I reason, therefore, that if we soak the seed and use sulphur freely on it there will not be great danger from scab. We shall plant in hills this year, as I think that will give us a better chance to hill up on all sides in case we have a very wet season. Mr. DeVoe, the weather prophet, lives in our county, and he tells me that the season will be wet all through! Even a weather prophet is often dishonored in his own county by the elements!

H. W. C.

NOTES FROM THE MOUNTAINS.

UNIQUE COLD STORAGE.—Very few people know much of the immense possibilities of the mountain farms of West Virginia. There are many orchards of apples ranging from 200 to 800 trees of the better varieties, as Ben Davis, Tompkins King, York Imperial, Fallawater, Baldwin, Grimes and Rome Beauty. As yet, however, very few are marketed and nothing is done in the way of cold storage. Yet, near Belington in Barbour County, is a very unique cold storage. The originator, O. W. Werner, owns and operates a sawmill. His apples are packed and barreled, and then put into an old house standing on his place. Here they are allowed to stand until the temperature gets so low as to be in danger of freezing. Then he spreads three or four inches of sawdust on the floor, stands his barrels together and fills in with sawdust, as well as piling it up around them, while over the top he spreads a sort of tarpaulin with thin sawdust covering. In this way he has preserved Grimes and Fallawater apples until June.

GREAT POTATO YIELDS.—In the western county (Garrett) of Maryland are small swamps called "glades." In fact, this has caused the region to be called the "glades lands." These swamps have a black typical celery soil, than which no better can be found for cabbage, cauliflower, onions and general truck produce. U. G. Palmer, owning a tannery and several acres of this land, parceled it out to such of his employees as wished to grow their own vegetables. Among other things planted were potatoes on a fraction of an acre. When dug their yield was so startling as to cause Mr. Palmer to have them very carefully measured; he also had the land measured accurately. He could scarcely believe it when he figured out the yield at 900 bushels on this swamp land which had received no special attention, but after carefully verifying every step he was thoroughly satisfied that his figures were correct. It is only during the past 20 years that these lands have been considered of any use, but their value is positively established now for potatoes, celery, cabbage, cauliflower and onions, and the "glades" are rapidly being brought into cultivation.

CRAB-APPLE JELLY.—All through Garrett Co., Md., and many parts of Preston Co., W. Va., are growing almost impenetrable thickets of wild crab apple. Indeed, this growth, with its slightly yellow and decidedly abundant fruit, is striking to even the most casual observer. Thousands of bushels of these wild crabs go to waste every year. Some few people, however, take advantage of this fruit and make it into the most delicious jelly. Often a cultivated apple is put into it to add flavor, and truly no better jelly can be had. But even knowing this, it is very surprising that more of it is not made. This country, already almost famous for its apple butter, hardly realizes that it has another product, which if worked systematically and marketed, would bring large returns.

G. L. S.

Oranges and Grape Fruit in Florida

As the orange groves of Tampa have not recovered from the freezes of recent years, oranges are scarcer here than in New York, although this locality is near to the Manatee section which escaped the killing frosts. Only last week the thermometer in upper Manatee went down below the freezing point, but not low enough to injure the orange trees, which are now nearly in full bloom. In the State south of this point many new groves have been set out, and it is predicted that in a few years Florida will produce more oranges than ever before. In other sections protection by tents that have been made mildew and waterproof by treatment with paraffin, has been resorted to in some instances, but the cost is high. The editor of a Braidentown (Manatee Co.) paper tells his townsfolk, as a bait for investors, to show the tourists some grape fruit trees each loaded with 1,000 fruit, and tell the tourists that the fruit sold for 25 cents apiece. This figure is a little high for this year. A Braidentown grower told me that they brought $4 a box, and said $1 would pay. Well, Mr. Editor, please, after eating one of those Manatee grape fruit, let us set it down as a fact that one Florida grape fruit is worth more than a dozen grown in California. Had one, the biggest in Tampa, for dessert at dinner, cost 20 cents, weight about three pounds, full of juice, slightly acid, and we scraped it close to the rind to get the bitter taste in our mouths. It certainly was delicious. The grape fruit is undoubtedly anti-malarial and thoroughly wholesome, and supplies a delightful finish to a hearty meal that might otherwise "lay heavy" on one's stomach. Large pineapples, weighing seven to nine pounds, are on the fruit stands. They are of the smooth Cayenne variety, and sell for about $1.25 each. In Jacksonville, which is well supplied with fruit, they are cheaper, selling in the stores for seven cents per pound.

J. YATES PEEK.

HANDLING LEAVES.—My way of handling leaves may not be new to all the readers of THE R. N.-Y., but it certainly is more speedy than any of the plans mentioned and it is so very cheap and simple. First get a four-foot rake with wire loop teeth that will not stick the leaves; rake in to windrows; have prepared a lifter, this is made of two light strips of lumber 1x1½ inch and 10 feet long. Get a piece of light muslin 7x10 feet; tack the poles on the long sides of the muslin, it being same length as the poles. Put a man at each end; let them reach out on each side of windrow of leaves with the poles and (the leaves being dry) it is easy to work the poles up together under the leaves and pick them up. Walk to wagon and tumble them in.

Springfield, Mo. W. H. R.

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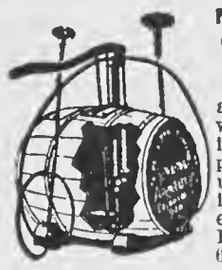

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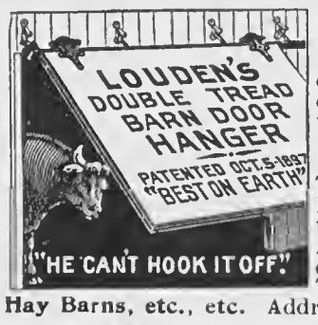

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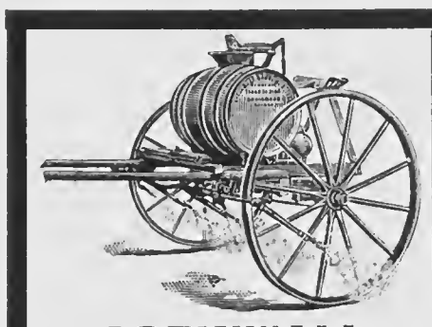

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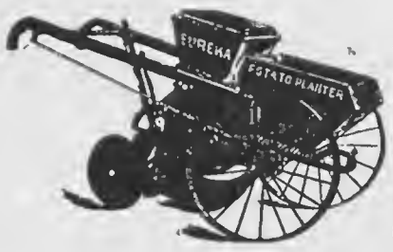

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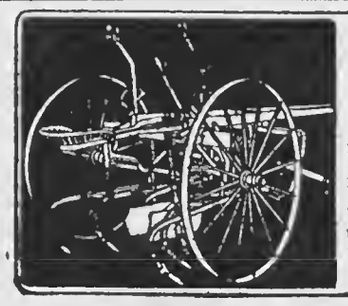

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Ruralisms

NOTES FROM THE RURAL GROUNDS.

NEW HARDY ROSE, GOLDEN SUN.—From John Charlton & Sons, Rochester, N. Y., we received blooms of this unique and interesting hybrid between the Persian Yellow and hardy Perpetual roses. The flowers were large, full, and richly perfumed. The coloring is indeed an odd combination of rose and yellow, resulting in a rich apricot effect. If this extraordinary new rose proves a vigorous grower and free bloomer it will be a welcome acquisition to our narrow list of really hardy, large-flowering varieties. Messrs. Charlton's opinion of this rose is appended:

We herewith mail you a sample bloom of the new rose, Soleil d'Or. We have had many blooms of it this Winter more deeply colored than the one sent; still, we think you can get a fair idea of its qualities. We think it a sensational rose, more so than any rose recently introduced, not excepting the famous Crimson Rambler. It has the odor of cowslips and primroses, and we doff our hat in honor of its advent.

DWARF TOMATOES FOR MARKET PLANTING.—The following account of a commercial test of the new scarlet fruited dwarf tomato, Quarter Century, under adverse conditions, should be of interest to many engaged in the cultivation of this highly developed and most responsive modern vegetable. The dwarf or tree type of tomato, of which the Dwarf Champion has hitherto been the chief representative, has won a merited position in the amateur and kitchen garden, but it has not been considered sufficiently productive in comparison with the standard tall varieties for extensive market planting. With ordinary cornfield treatment this may be the case, but under intensive conditions of abundant fertilization and good cultivation, which can be long continued on account of the compact growth of the plants, the yield of the more closely-planted dwarf kinds may greatly exceed the tall ones. This has been our experience on a considerable scale in a dry season in the South. The root system of the dwarf varieties is apparently as compact as the top growth, and the plant food must be abundant and close at hand if the best results are to be realized. Given the necessary conditions the dwarf tomatoes bid fair to take similar rank with the bush Lima beans in convenience, as compared with the heavy-cropping but troublesome pole varieties, with the added advantage of withstanding drought much better in proportion. The short and stocky plants are more easily and cheaply grown to near fruiting size, as they require less room, and can be handled in dry weather with less labor and chance of loss, as the rate of evaporation in these concentrated plant bodies is relatively less than from the soft and lanky bodies of the tall kinds.

This tomato gave more general satisfaction last season than any other variety we have ever grown. It will outyield all others. We had all the new ones that came out last season, and most of the old standard sorts; in all, 52 varieties. Quarter Century outstrips them all in yield—did not crack, blight or rot; continued to bear longer and held up in size to the very last, when frost killed the vines in the early part of October. The fruit was a good uniform market size, very bright and clean. The stiff upright growth of the plant held its fruit well up from the ground, so there was little or no expense in cleaning for market, and no culls to speak of. Seed that you very kindly gave us, and the small packet I purchased from Burpee & Co., gave me 1,200 good plants. They were planted in the open last of May, 3x3½ feet, same time and field as the other new ones and main crop sorts. Quarter Century began to ripen July 25, only a few days later than Early Freedom, Money Maker and Early Ruby. These last named produced a few early fruits of good size for two weeks, and then played out; blight ruined them. But not so with Quarter Century; from the time it first began to ripen it produced a big crop of fine fruit to the last of the season; in all, about 200 bushels from the 1,200 plants. When you take into consideration the fact that last season was the most severe drought ever known in the history of this section, only 1.01 inch of rainfall from May 20 to October 2, we consider this a wonderful yield! Quarter Century planted 2x2½ feet as I intend to plant this season we feel confident will outyield any other known tomato almost two to one of good average size marketable fruit. MILLER BROS.

Elmira, N. Y.

The Markham Peach.

I notice mention made on page 124 of the Markham peach. I have been fruiting this variety somewhat, having obtained it in northern Michigan. We fruited it last year, and found it in character rather like Hill's Chili, and it is said to be a seedling of this variety. I believe it to be a peach that might easily take the place of Hill's Chili. S. D. WILLARD.

I presume I know more about the Markham peach than anyone else, from the fact that it originated with me. About 20 years ago I set 280 seedlings from pits of Hill's Chili; about 90 per cent proved true, the remainder being mostly white, but among the lot this one tree appeared. After bearing a few years I thought so much of it that I budded and succeeded, and grew 20 trees more, and later I thought so much of it that I propagated about 400 and sold them to my neighbors for 15 cents each. The trees are in great demand. It is a fine yellow peach with medium to large red cheek; very thrifty grower, heavy foliage, bloom same as Crawford; begins to bear as soon as it gets its short clothes off. Very prolific, colors up finely; quality can't be bettered. Pit about one-third the size of Elberta. The Markham will have about two crops on while that variety is talking about it. It ripens just before the Chili and Elberta, although I had the fruit as long as either of them.

Hart, Mich. W. D. MARKHAM.

Three Quinces.

Will you give me an opinion on the relative value of the quinces named, for market: Borgeat, Orange, Alaska? J. N. B.

Tyngsboro, Mass.

The Orange quince is the only one of the three now known in market, and is the standard by which newer varieties will be judged. Alaska is large, hardy and productive, but does not color up so brightly, and is rather off shape, being more or less pyriform in outline. The Borgeat has not been grown long enough in this country to form a comparison. The trees are very handsome and thrifty growers, and the fruits are said to be excellent, but it would be well to wait further trials before planting extensively.

Japan Walnut in Indiana.

Can you tell me anything about the Japan walnut? Is it better than the English walnut? Will it endure this climate in the latitude of Indianapolis, and do well?

Cory, Ind. J. M. B.

The Japan walnut, of which there are two species, Juglans cordiformis, and J. Sieboldii, makes very handsome trees, and appears entirely hardy when established. The foliage is massive and the contour of the head very symmetrical. They grow well where the English walnut or Madeira nut is apt to winterkill, and bear very young. The nuts are not as good in quality, being thick-shelled, small and somewhat oily in flavor, like our butternut. Juglans cordiformis bears the better nuts of the two.

RASPBERRY ROOT GALL.—In regard to the subject of root gall mentioned on page 52 of THE R. N.-Y., I wish to say that it is becoming more prevalent each year. The only exception seems to be the King; in addition to its other good qualities, seems to possess that of being practically proof against the gall. Two years ago I dug up three rows of the Miller, which were destroyed by the gall, and also dug up an adjoining row of King, and found them almost entirely free from it, although but six feet from the Miller. I then replanted the King alongside a patch of Loudon, and last Fall dug up both lots. The Loudon were badly infested, not over 25 per cent being free from galls, and the entire lot was burned. Of the King I did not find 50 plants affected in 20,000.

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THE BREEDER'S WAYSIDE.

Pigs on Rape and Clover.

I have five acres of low land, which I intend to keep for hog pasture, sowing half of it to rape and clover this Spring, and the other half next Spring. Will the clover make a growth while the rape is being pastured, so that it will furnish early pasture next Spring, until the rape in the other lot will be large enough to pasture? If so, could the land be kept up with a fair application of fertilizer every time it is seeded down (which would be every two years)? How many hogs, weighing 100 pounds each, should I be able to keep on the five acres, having one-half in rape and the other half in clover each year? S. H.

Grantsville, Md.

I feel rather doubtful about this experiment, for such it will be. To begin with, Red clover sown this Spring, at its best, will not be suitable for allowing stock to pasture on it before August, and even then clover that has never been cut, and has not stooled much, will not stand rough usage. A field pastured by pigs or sheep is really trodden a good deal, and the chances are that the clover on so small a field would be injured quite a good deal. Again, I am not so sure that rape sown broadcast on this field, after clover seeding, will do as well as when drilled or cultivated in. I assume, of course, that the clover will be sown while frost is on, and that rape will be planted perhaps two or three weeks later. I believe the rape seed should be well covered with mellow soil, and have a good seed bed. If, as the writer suggests in the last part of his letter, which is different from the first, he has half the five acres in rape and half in clover each year, then he may do very well, especially if some clover-top is plowed in every two years, and fertilizer is used to some extent. As to how many pigs he can keep on the land, this is a problem only he can figure out. This will depend on the strength of the soil, and the adaptability of both rape and clover to the local condition. Generally speaking, I do not think rape does as well as far south as Maryland or Indiana, as in Canada, and the more Northern States. It seems quite adapted to our cooler regions north.

I do not think that pigs should be kept exclusively on rape or clover. They should be fed some grain. At the Wisconsin Station feeding experiments with rape have been conducted for two or three years. In the first trial 10 pigs on rape ate in 76 days 1,386 pounds of corn, 690 pounds of shorts and one-third of an acre of rape, and gained 853 pounds. A lot not on rape, penned, ate 2,096 pounds of corn and 1,042 pounds of shorts and gained 857 pounds. The third of an acre saved 1,062 pounds of grain, or an acre of rape would be worth 3,318 pounds of grain. In another trial of two lots of 19 pigs each, for 49 days, the rape lot ate 2,220 pounds of corn, 1,109 pounds of shorts and 0.6 acre rape, and gained 1,066 pounds, while those not given rape pasture ate 3,106½ pounds of corn, 1,553 pounds of shorts and gained 1,076 pounds. The gain is about the same in this experiment also, but the rape saved the use of 886 pounds of corn and 444 pounds of shorts, or showed that one acre of rape is worth 2,217 pounds of grain. Now our friend must do some experimental work in this field, for it is one of those peculiar cases where nothing but personal experience will settle the question satisfactorily.

C. S. PLUMB.

MALT SPROUTS.—We have fed malt sprouts to dairy cows with good results for several years, feed from two to four pounds a day. We feed them mixed with cornmeal dry. Some cows take to them kindly, while others refuse to eat them at first. Pound for pound, we consider them equal to wheat bran. The local breweries sell them at from $6 to $8 per ton.

Eau Claire, Wis. M. A. B.

That "Billion-Dollar Grass."

A word concerning "Billion Dollar Grass." This millet was introduced from Japan by Prof. Brooks, of Massachusetts Agricultural College, and with us is proving of very great value, especially for feeding green. In yield it surpasses all other millets, growing under favorable conditions to a height of six feet. At first Prof. Brooks did not recommend this millet for soil not naturally moist, but the past two very dry seasons proved that nothing except corn would give as good returns. We usually sow from 12 to 16 quarts of seed per acre, broadcast. This amount of seed is ample. It should not be sown till ground is warm and in good condition to plant corn. It is well to sow two or three times at intervals of 10 or 12 days, if intended to feed green. I never have grown it for grain, but at the College I believe they have secured crops yielding 60 bushels per acre, which, bushel for bushel, is about equal to corn in feeding value. I always raise lots of sweet corn to feed to my cows, but cattle will leave the corn for millet every time, and as the stalks are succulent and tender all is eaten, and there is no waste. Milkmen value it very highly, and will sow many acres the coming season. Being so juicy it is almost impossible to cure a heavy crop for hay, yet when seasons are as dry as we had in 1900 it can be done, and feeding gives good results. I would certainly advise everyone to try it in a small way, buying of some reliable seedsman, not "Billion Dollar Grass," but Japan millet (Panicum crus-galli), give it a good chance and you will be astonished at the amount of fodder produced. Begin to cut when it is heading out, and a small patch will feed quite a herd many days.

Massachusetts. E. D. G.

TUNIS SHEEP.—Our friend Clark Allis keeps coming with figures about his grade lambs. On March 13 he wrote: "I killed a Tunis grade lamb to-day that did not appear very fat, but she weighed 46½ pounds full of feed, and full dressed 29 pounds with liver out." On March 19 he reports: "We dressed a grade Shropshire lamb the other day that weighed 52 pounds full and 47 pounds after a ride of nearly 20 miles over and through pitch holes, on two different scales, but I know he weighed 47 shrunk and full-dressed 24 pounds, and as my orders are to send nothing less than 28 pounds full-dressed I thought we were left. I asked the man if we did not have anything that would dress enough and he said no, as the best we had was less than 47 pounds full of feed. I told him to kill that one and it weighed 28 pounds. Tunis grade it was, but that goes without saying."

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Feed Victor Corn and Oat Feed to get stock to market quickly. If yearlings, a third year will reduce the ratio of profit considerably; if store steers, bring them to full feed expeditiously; if oxen, or old cows, push at once. Make the aim always: The most weight in the least time at the lowest cost. Remember this Victor Corn and Oat Feed gives best results.

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Sold only in Sealed and Branded Sacks. Each Sack stamped with analysis of contents, showing guaranteed per cent. of Protein.

If your dealer does not keep Victor Corn and Oat Feed send us his name. We will send you a copy of "Feeding for Flesh" free if you will send your name at once.

THE AMERICAN CEREAL CO.,

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A Really Easy Cream Separator

Easy to Turn,
Easy to Clean,
Easy to Buy,
Easy to Make Pay.

That describes the

Empire Cream Separator,

with its new bowl—the bowl which has solved the separating problem. It has very few parts; it is of small diameter, and is extremely light. It gives the milk several distinct separations.

Send for our catalogue for 1901; it tells lots of things about Separators.

UNITED STATES BUTTER EXTRACTOR CO., Bloomfield, N. J.

SOME CHARACTERISTICS OF FOWLS

Not one of the least among the many interesting surprises that Nature is ever preparing for us practical workers, is that resulting from the study of the individual characteristics of our domestic fowls, and especially their steady resistance—along certain lines—to our efforts at changing special traits to meet our fancied needs. Their habits we can in time modify, but their natures remain the same, and when we have reached a certain point the halt is cried. If we persist the life of the bird is forfeited. It is of first importance to realize at the outset the leading peculiarities—as a class—of the fowl we handle; that we may conform to them on all vital points, and avoid those things that are hurtful. On some of them, however, there seems no diversity of opinion. It is generally conceded, I believe, that a turkey will not live if yarded; that free range is an absolute necessity to its very existence. Also, that with a hen exercise and eggs cannot be successfully divorced. When ducks come under discussion there appears an odd uncertainty about many things, especially as to their hardiness, some claiming that they will stand poorer housing and severer cold than any variety of our feathered family, and that their young will survive almost any amount of neglect, while others hold that there is no fowl so delicate and hard to raise as a duck, especially the Pekin. The facts appear to be that those who consider the bird delicate have infringed, probably unwittingly, on the laws governing their seat of life; while those who have found the bird hardy have cared for it along safe lines. I will explain a few points.

A duck does not "dump around" like a hen or a turkey when sick. It is to all outward appearances well, or it is dead. There is small opportunity for doctoring. Mistakes show up, not in a debilitated flock, but in the speedy return to Mother Earth of practically the whole business. Their care is a much simpler matter than that of hens, but it does not admit of the same latitude of treatment. To illustrate: I had a flock of 10 ducks last Winter housed in a very cold but dry, clean, well-ventilated shed. The thermometer ranged from 15 to 38 degrees below zero; except in blizzards, they were out on the snow all day, squatting much of the time, their toes snugly tucked up under their wings. These birds were a late hatch (July), but they began laying in that inclement place in January! Their food was one-half cornmeal, one-half ground peas and oats, one-tenth beef scrap and one-third the entire bulk of the grain was vegetables (in the morning chopped sweet apples, at night steeped clover) the mixing and drinking water warmed. We fed what they ate and drank up clean. At noon gave about a half pint of shelled corn. A pan of grit or coal ashes was always at hand. Had the birds been shut up in a damp, dirty, ill-ventilated place and their food left for them to gorge and to pick at, not many would have survived till Spring to tell the tale. The other flock of 70 had the same food and care, but warmer sleeping quarters. All have wintered unusually well. We have had a rather interesting development regarding warm food. Two years ago a flock of 70 consumed daily a cold mash of 26 quarts of grain; this Winter 80 birds only ate 21 quarts.

The breeding flock is fed in above proportions the entire year; it has free range and generous shade is provided. Part of the time they are given wheat bran instead of the oats. I have tried several methods in feeding, but the above has furnished the best results. A lighted lantern is always hung at night in their bedroom, and the slightest cause for fright avoided at all times. They are the most timid class of birds in our feathered family. F. E. WHEELER.

CROSS-BRED FOWL we have made up as follows: I took White Wyandotte cocks and crossed them with R. C. White Leghorn hens; they are fine; fair size and splendid layers. C. A. B.

La Paz, Ind.

A Connecticut Hen Record.

On January 1, 1900, I started with 100 Plymouth Rock hens. They gave me four eggs the first day; the following is the year's egg record: January, 516; February, 831; March, 1,820; April, 1,732; May, 1,498; June, 1,397; July, 1,574; August, 1,048; September, 494; October, 322; November, 102; December, 230; making 11,564 eggs for the whole year; 330 chickens were put out in the yard, of which I lost about 25 during the Summer, three or four through sickness, the others by accident. Cash received for eggs was $180.97; for chickens, $102.87; for fowls, $33.25; feathers, $2; fertilizer valued at $10; making a total of $329.09. The feed bill, including animal meal, oyster shells, etc., was $114.47; deducted from the cash received gives $214.62 clear profit for the year 1900.

January 1, 1901, found my stock in good condition, having picked out from the chickens the best pullets in the early Fall. My flock of 100 this year is far better than it was one year ago. I give them warm breakfasts of four quarts mashed potatoes, three quarts bran, three quarts middlings, 1½ quart cornmeal, one tablespoonful each of animal meal. When severely cold I add one teaspoonful per 12 hens of cayenne pepper. At noon they are fed on some kind of greens; for supper whole corn (warmed). The hens were the incubators and brooders. During the Winter they have all the milk they can drink. I feel quite well pleased with the result of our 100 hens' labors in one year, and am starting this year with new courage. On January 1, 1901, 19 eggs were laid, 33 per day is about the average February 1. MRS. C. L. H.

Baltic, Conn.

CONSUMPTION IN HENS.—I read your article on page 131, in the February 23 issue, entitled Consumption in Poultry, and was interested in it, but I did not see that you gave any remedy for it. Is there none? If there are only a few hens in a flock that have it, can it not be stopped so that it will not spread? Does it not affect the eggs? H. S. P.

Millville, N. Y.

There seems to be no remedy for consumption in fowls that is worth considering. Any treatment would probably cost more than the fowls are worth, and the best thing to do with hens afflicted with this disease would be to kill them at once, and burn their bodies. It is not known that the disease would affect the eggs. The chances are, however, that it would. While it has not been demonstrated yet that the germ of fowl consumption will develop in the human system, it is unwise to try any experiments, and, therefore, we would not advise anyone to eat eggs from such hens.

Rain or Shine,

The station agent is on duty. On his exact communication of train orders depends thousands of lives, and millions of dollars in property, each day. In his haste he runs out in the rain or the snow hatless and unprotected. Then comes the sequel—bronchitis, or some other disease of the respiratory organs. The most effective remedy for bronchial or pulmonary disease is Doctor Pierce's Golden Medical Discovery. Almost all remedies prescribed for such diseases contain opium or some narcotic which soothes by stupefaction. "Golden Medical Discovery" contains neither narcotics nor alcohol. It stops coughs by curing their cause. It heals weak lungs, builds up wasted tissues, and promotes the health of every organ of the body.

"I am a railroad agent," writes I. B. Staples, Esq., of Barclay, Osage County, Kans., "and four years ago my work keeping me in a warm room and stepping out frequently into the cold air gave me bronchitis, which became chronic and deep-seated. Doctors failed to reach my case and advised me to try a higher air, but, fortunately for me, a friend advised me to try Dr. Pierce's medicines. I commenced taking your 'Golden Medical Discovery,' and by the time I had taken the first bottle I was better, and after taking four bottles my cough was entirely gone. I have found no necessity for seeking another climate."

Dr. Pierce's Pleasant Pellets regulate the stomach, liver and bowels.

SLOAN'S Liniment

Best Antiseptic Known.

Cures in Man

Rheumatism, cramps, strains, sprains, lameness, and all aches.

For Your Horse

Cures cuts, kicks, bruises; kills a spavin, curb or splint; dispels lameness.

Family size, 25 cents. Horse size, 50 cents and $1.00. Ask your dealer or druggist for it.

Prepared by Dr. Earl S. Sloan, Boston, Mass.

TO GET MORE EGGS YOUR HENS MUST BE KEPT WARM and DRY USE NEPONSET RED ROPE ROOFING

To keep out wind, frost, rain and snow from Fowl-Houses there's no better low-cost roofing and siding than "Neponset." Contains no tar. Given an occasional coat of paint it will last for years. Costs about a cent per square foot. Sold by dealers in rolls of 100, 250 and 500 square feet respectively, each roll containing necessary tin caps and nails. For a permanent roofing and siding use

Paroid Ready Roofing.

Postal brings Booklet, samples of "Neponset" and "Paroid," also name of nearest dealer.

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ZENOLEUM Kills Lice, Ticks, Mites, Fleas, Etc., on all kinds of animals and poultry. Given internally it drives out worms. Cures all cuts, wounds, sores, etc. Non-poisonous. Endorsed by leading veterinarians. "Veterinary Adviser" free. Zenner Disinfectant Co. 100 Bates St. Detroit, Mich.

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The Whole Egg

is contained in green cut bone. Five pounds of it increases laying more than a bushel of wheat. The only means of producing it in a form not dangerous to chicks is the

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Fowls of W. & Bd. Rock, W. & Bn. Leg., W. Wyan. vars., Eggs $1 & 1.50 26. Stamps. Mrs. J. P. Hellings, Dover, Del.

Blanchard's White Leghorns.—The leading strain of heavy layers. Eggs for hatching from finest stock. Ill. cir. free. H. J. Blanchard, Groton, N. Y.

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SILVER WYANDOTTES WANTED AT $8 EACH
See Rural New-Yorker, March 30, page 234.
BEAVER HILL FARM, Beaver, Pa.

TURKEYS—Genuine M. Bronze, Buff Leghorns, Buff P. Rocks. Also eggs. Circular. S. J. B. DUNBAR, Elkhorn, Wis.

EGGS for hatching, 6 cents each. First class stock, *Rhode Island Reds*, Brahmas, Hamburgs, and Rocks. W. Sherman, 25 Boulevard, Middletown, R. I.

EGGS—Fertility guaranteed. By the sitting or hundred. 23 varieties of prize-winning land and water fowls. Big Catalogue free. Our guarantee means something.
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90 Varieties Choice Poultry. Eggs, Pigeons and Belgian Hares. All combined and information in 60 page book, 10 cents. J. A. BERGEY, Telford, Pa.

W. Wyandottes (210-egg strain), B. Rocks, S. C. W. Leghorns, bred from stock which won at N. Y. and Boston 1899 and 1900. D. Brahmas and Pekin Ducks won in 1898. Eggs, 15, $2; 100, $5. Satisfaction guaranteed. D. H. COLT, Elmwood, Conn.

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Eggs from us. Ours are noted for heavy laying. Eggs, fresh and fertile, $1.25 per 15; $2.00 per 30; $5 per 100. Low ex. rates. T. D. Goodwin, Columbia Station, O.

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I breed fine poultry on one of the best equipped poultry farms in the world. Send 8c in stamps for new 1901 Book, telling all about 50 varieties, with special prices on fowls and eggs. B. H. GREIDER, Florin, Pa.

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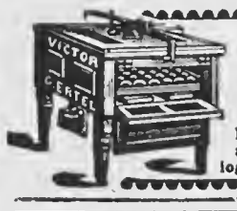

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Perfect in construction and action. Hatches every fertile egg. Write for catalogue to-day.
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ISN'T THIS FAIR?
You get this Bantam Hatcher, fill it with eggs and test it thoroughly. If satisfied you pay us $5 for it. It often hatches 50 chicks from 50 eggs. Send 4 cents for Catalogue No. 23
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have the most scientific system of ventilation, and the most sensitive and simple regulator ever introduced. The Pineland Brooder is not equaled by any other. Get our free catalog, judge for yourself.
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is best because simplest in construction and in operation. Hatches every hatchable egg. Positive directions and no moisture. Perfect hatchers. 60-egg size, $6. Illustrated catalogue *free*.
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250 Poultry Pictures

illustrating every phase of poultry raising and 224 pages of matter telling how, when and what. That and much more is in our "Profitable Poultry Keeping in all its Branches." Tells also about the warranted for 10 years Cyphers Incubator, which is guaranteed to out-hatch any other incubator, or money refunded. Book for 10c in stamps. Circulars free. Address nearest office. Ask for book 101
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represent in their construction the best material, best workmanship and finish and the best general plans we know how to bring together in such a machine. For this reason we say to our customers that if they are not found exactly as represented and don't do all we claim for them after a thorough trial, it is no sale. Eleventh year on the market. We make both Hot Water and Hot Air—take your choice. So simple a child can run it. Send 2c. in stamps for catalogue.
MARILLA INCUBATOR CO., BOX 45 ROSE HILL, N. Y.

Ailing Animals.

ANSWERS BY DR. F. L. KILBORNE.

Lameness Following Scratches.

I have a mare that had scratches last Summer. I cured that, as I supposed, but her leg has swollen on the outside ever since. She is sometimes lame. Can you tell me what to do for it? F. J. L.
Speedsville, N. Y.

Blister severely with ammonia liniment, and repeat in three or four weeks if necessary.

Heifer Blistered With Kerosene.

What shall I do for a yearling heifer badly blistered with kerosene emulsion? Will the hair come out again? Emulsion was used at the rate of one to eight of water. I applied emulsion to three other heifers with no bad results. Can you account for this? F. E. P.
Pine Bush, N. Y.

Heifer must have been very tender, or kerosene not well mixed. If there is any soreness, apply carbolated vaseline until healed. The hair will probably come in again all right.

Garget in a Cow.

I have a cow that is troubled with garget; she has lost one quarter of her udder. She gives gargety milk. One of her fore legs is swollen to twice its natural size now. What is the best treatment for her? W. H. W.
Auburn, Me.

Give the cow one teaspoonful pulverized nitrate of potash with a tablespoonful Epsom salts in feed night and morning. Bathe the udder after each milking with spirits camphor, rubbing it well in. If this fails, try painting two or three times a week with the compound tincture of iodine.

Cow Does Not Come to Her Milk.

I would like to know what to do for my cow. She had a calf in December, and took a chill after it was born. She gave no milk, and gives little now. She eats well, but feels the cold, which she never did before. I have given her grain right along. What can I do for her? C. F.
Ruggles, Pa.

This appears to be a case that requires good care and feeding, rather than medicinal treatment. Inasmuch as she suffers from the cold, she should have comfortable warm quarters, and allowed out of doors only on mild, pleasant days. She will probably not fully come to her milk until after next calving.

Calf Dies Suddenly.

I lost a fine Durham bull calf some time ago, that was taken sick in the morning and died by sundown. It suffered intensely. I found the small stomach very dry and hot on cutting it open as soon as it died; very little gas in the bowels. The calf was seven months old; the liver weighed 13 pounds and the gall was as large as a pint cup. I thought that might have caused death. He was running in the pasture through the day and at night was turned in with the cows, and ate Alfalfa hay. Will you enlighten me as to the cause of death? W. L. A.
Redding, Cal.

Death may have been due to congestion of the liver. The healthy liver of the young animal is relatively much larger than in the adult animal.

Swelling on Mare.

I have a mare 10 years old, with foal, seventh month. About three weeks ago I drew wood with her and mate. The road has one very steep pitch with sharp turn at bottom. The next morning she had a large swelling between the fore legs, caused, I suppose, by the holdback strap. It was large; at least eight inches wide by 18 inches, but little heat and quite hard. The right fore leg was also slightly swollen, and she walked as if stiff in fore legs; strikes toe first on ground. I bathed swelling with camphorated oil and gave her twice a day a mixture of niter and sulphite of soda, equal parts, a small tablespoonful. The swelling is not all gone, and the leg continues to stock some, and the trouble with walking continues. She has had no appreciable fever, has good appetite and seems to feel well; gets six quarts corn-and-cob meal and all the hay she wants. Hay is second quality. How can I reduce the swelling and cure the stiffnessness in walking? A neighbor says a rowel; is it good? Does swelling need lancing, if so how deep? J. W. S.

Rub the swelling and the leg with soap liniment two or three times daily. If any swelling remains after two or three weeks, blister mildly. The stiffness will probably disappear with the swelling. If there is any indication of an abscess, you would do well to call a qualified veterinary surgeon to operate if necessary. A rowel would not be desirable, at least not for the present, if at all.

Alleviating Heaves.

What would be good to give a horse to check the heaves during the Spring work? E. McK.
Canandaigua, N. Y.

Give one tablespoonful Fowler's solution of arsenic on feed once daily for five days; then two tablespoonfuls once daily, and continue for a month or two if necessary. If there is constipation, give pint doses raw linseed oil daily until relieved, or feed a half-pint of oil meal or ground flaxseed in feed night and morning. Feed sparingly of coarse foods, with a liberal grain ration. Chop feed will be the best if you have the conveniences for cutting the hay. Always water before feed, and not more than 10 to 12 quarts at one time.

Collar Boil on Mare.

1. I have a mare that last Fall had a collar boil on her shoulder. I drove her to the beet factory after pulp, and the next morning the shoulder was swollen so that I could not use her. I have used a liniment and iodine, but it did not help her. Would you please give me some remedy? 2. I have a mare that is poor in flesh. I feed her four quarts of corn and oats and Timothy hay, but she does not improve. What would you advise? M. J. D.
Wallington, N. Y.

1. From the history, I judge a tumor or abscess has formed that will require cutting out or opening. Take the mare to a competent veterinary surgeon for examination and operation. 2. Your history and description of the case is too brief to enable me to form an opinion as to the cause of the trouble. Try the following course of powders: Nitrate of potash and dry sulphate of iron, of each four ounces; gentian and ginger, of each eight ounces; mix and divide into 24 powders. Give a powder in feed twice daily. Also give a half-pint oil meal in grain ration night and morning. If there is constipation give pint doses raw linseed oil once daily until relieved.

Chronic Cough in a Horse.

I have a horse that has had a cough for 12 months at times. When I drive him he coughs only when I hitch and let him stand for an hour or two; then when I start off with him he will cough four or five times. It is not a dry hacking cough. His wind seems to be all right, but I am afraid it will turn to the heaves. What can I do for it? A. A. D.
Wyoming, Del.

Give one of the following powders in his feed night and morning: Pulverized sulphate of copper and nux vomica, of each three ounces; arsenic, 90 grains; mix and divide into 32 powders. Blister the throat mildly, from ear to ear, with ammonia liniment. Feed a bran mash or some green food three or four times a week, sufficient to keep his bowels moving freely.

Every year, Bronchitis, under the mistaken name of Consumption, sweeps thousands of people to a premature grave. Dr. D. Jayne's Expectorant nearly always cures this form of disease.—*Adv.*

In every town and village may be had, the

Mica Axle Grease

that makes your horses glad.

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IF SO, let us send you a new catalogue, and also have the nearest local agent personally place the facts before you. Try a machine and decide in that way if you wish.

A De Laval separator is as much superior to other separators as the best of such other separators are to setting methods. The poorer makes of them are mere fakes.

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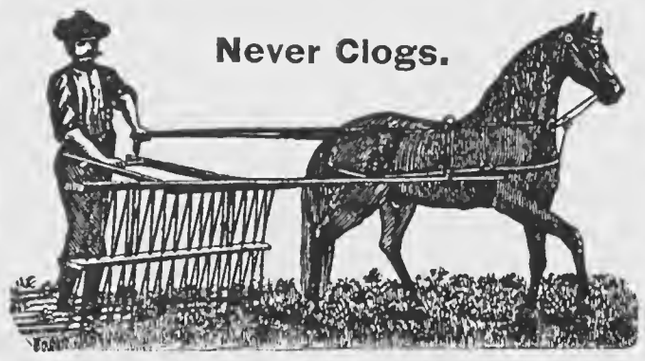
Never Clogs.



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100 SIZES. GRAIN AND FERTILIZER.

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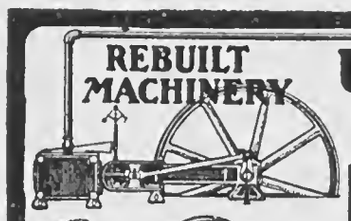

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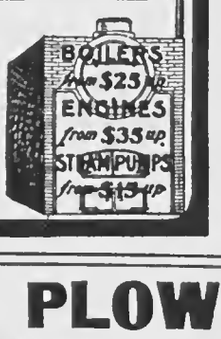
IRON PIPE in all sizes at a saving of 50 per cent.



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with Coulter, Jointer and Ground Wheel.

They are made in two sizes with wheel and coulter, and two sizes, wheel, coulter and jointer.

This is the ideal plow for plowing side hill lands or for plowing back and forth without lands. This plow is equipped with a specially constructed moldboard that makes it work equally as well as the regular sod plow. The reversible jointer is a special new feature of great value. You will see how it operates by looking at the above cut. Send for catalogue, prices, etc.

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Box 75 Chicopee Falls, Mass.

WAGON SCALE $20

JONES HE PAYS THE FREIGHT.
JONES OF BINGHAMTON, N. Y.

WELL DRILLING Machines

Over 70 sizes and styles, for drilling either deep or shallow wells in any kind of soil or rock. Mounted on wheels or on sills. With engines or horse powers. Strong, simple and durable. Any mechanic can operate them easily. Send for catalog.
WILLIAMS BROS., Ithaca, N. Y.

THE LARGEST AND SMALLEST COW

Can any of your readers tell me where I can purchase the largest cow, also the smallest one? There used to be a breed of cows in Venango County, Pa., called the Creepers. I have seen them and they have very short legs. I presume they are the smallest cows in existence. Can anyone tell me where I can purchase one?

New York. E. D. H.

The smallest cow would be a Jersey naturally. There might be a runt of some other breed, and there might be a runt of the Jersey breed. The largest would be of the beef breeds, I think perhaps Short-horn or Hereford might be heavier, and there are monstrosities of either breed. THE JERSEY BULLETIN.

There are freaks—extraordinarily large and small cattle of every breed. There have been some very large Holstein cows exhibited in side-show tents at fairs, also large Texans. The Irish Kerry cattle are very small, as are also a small strain raised in the Shetlands. Highland cows are not large. In all probability your friend wants what are known as sports, and, of course, he would be more apt to find cattle of this description at some of the large live-stock centers than elsewhere.

THE BREEDER'S GAZETTE.

I have seen a few monster Holstein cattle in former years, but I do not know of any of these monstrosities at the present time. The largest Holstein I ever saw was in Holland, and was fully as tall as a good-sized horse. The diminutive cow should be found among the Kerry cattle, some of which have been imported into the United States. In any case if E. D. H. will secure the tallest possible Holstein and then by feeding make it fat, and the smallest possible Kerry cow, he should have to all intents and purposes what he wants.

I. P. ROBERTS.

I think you will find the smallest among the Kerrys of Ireland. I saw some very attractive yet exceedingly small cows among that breed last year. As for the largest cows, I think you would be likely to find them among the old English type of Short-horn. We rarely see any representatives of that strain of the breed in this country, but a few of them have lately been brought over by some of the Canadian importers. They can be found in abundance in Oxfordshire and Gloucestershire, England. C. F. CURTISS.

Iowa Agl. College.

Some Illinois Dairy Problems.

I am much interested in the discussions of the various dairy topics THE R. N.-Y. has contained of late, and hope to see some system adopted for marketing farm products that will shut out fraud on the part of both seller and buyer. It appears to me that prices of milk, butter, and in fact, all produce are too much in the hands of middlemen. They can combine to pay producer what they like, and charge consumers exorbitant rates. We have sold extra creamery butter as low as 15 cents per pound in Summer, and how can farmers be expected to milk cows on that basis? It should never be below 20 cents in Summer and 30 cents in Winter. We get one-fourth-cent less than the going Elgin quotations for extras, net, for our butter from a Chicago firm; but at the present price of butter cows only just pay for the feed if one had to buy it. Our cows about here are mostly beef types, and I suppose a select lot of Jerseys would do better. But if everyone kept Jerseys, butter and milk would become more of a drug on the market than they are now. Some must raise beef.

We have natural Blue-grass pastures, hills and valleys, good water, but nearly always a spell of heat and drought in Summer and Fall. At such a time a cool basement barn to keep the cows from the heat and flies I think would be a nice thing. But many of us are renters and others are in debt as much as they can stand without the added expense of building. We are eight miles from a railroad and 130 miles from Chicago, so we haven't much local market. Corn, grass, oats, hogs and cattle are the staple products, and what milk can be taken from the calves without injuring their future prospects goes to the creameries. As most of the cows come in about March to June we get the bulk of the milk in Summer, when butter is low, so when a cow brings in $20 during the year for milk it is probably a fair average performance. If we weighed and tested each cow's milk we would have to hire extra help, and help is scarce and high, especially girls for farmhouse and dairy work. W. S. S.

Jo Daviess Co., Ill.

The Health Officer and the Dairyman

H. O.—I see you have a bad case of lumpy-jaw, Mr. Dairyman, and I must ask you not to sell the milk of that cow.

D.—Oh, she is not very bad off, and she gives a fine lot of milk.

H. O.—Nevertheless, her milk is not safe to use, and I must insist that you take this cow out of your herd. In mercy to the poor brute you ought to kill her at once, as she will eventually die of the disease.

D.—I have two cows that will be fresh in a couple of weeks; can't I milk her till they come in, as I will not have enough milk to supply my customers if I take her out of the herd now?

H. O.—You use milk in your family, do you not?

D.—Yes.

H. O.—Well, you may use this cow's milk in your own family, but you must not sell it.

D.—Oh, heavens! I can't do that!

DWARF ESSEX RAPE.—Beyond all doubt this is the greatest forage plant for the sheep and shepherd known. Prepare ground as for any other crop, commence sowing April 15, and continue up to August 15; four or five pounds sown broadcast covered with a light spike-tooth harrow in corn, last cultivation. Be sure there is enough moisture for the seed to germinate and come up. Then it will stand more drought than any other plant, and stand as much freezing as cabbage. I advise April, May and June sowing; get the plant growing before drought sets in, and then you have pasture when most needed, and by pasturing not too short, will last all Summer. When first turning sheep on for pasture be careful to let them remain but 20 to 30 minutes at first until accustomed to the feed. It is so good that they eat too much, and bloat. Clover hay should be used, and better a sod field in connection to run on. In a short time they get accustomed, and all goes right. C. H. H.

White Pigeon, Mich.

WHEN you write advertisers mention THE R. N.-Y. and you will get a quick reply and "a square deal." See our guarantee

It is very amusing to see how our "would-be competitors" now prate about

TESTS AND TESTIMONIALS

In the past they have been very fast to advocate tests, but they have been beaten so many times by

The Improved United States Separator

they are now trying to cast slurs on all tests and discredit all testimonials.

When they were competing with inferior separators and they could sometimes beat, then

TESTS AND TESTIMONIALS

were in great favor with them and they were advising everybody to "put it right in the contract," but now that they are competing with a better separator they wish the public to believe that

Tests are Fake and Testimonials are Bought

claiming they are manufactured out of whole cloth and that it is impossible to locate the places or the persons. In this connection we call attention to the following statement and ask if they have any trouble in locating it.

Three U. S. Separators to one of all other makes

POUGHKEEPSIE, N. Y., October 23, 1900.

Fourteen years ago this month we started our creamery on the co-operative plan recommended by your agent, fitting the building with machinery from your Company, and using the Cooley Creamers for the patrons. We have run on this same plan for all these years until a year ago last month we put in separators. **Our patrons are using more than three to one of the U. S. Separators over all other makes and we believe the U. S. Separator to be the best on the market.**

We are still working the cream gathering plan and believe it to be the best for the rural districts, where unavoidably some of the patrons are a long distance from the creamery. We are satisfied with it because we believe it to be the best and the cheapest. No farmer can afford to hitch up and carry his own milk, even if he live within a half mile of the creamery, if he can get it done, as we have this year, at the average cost to each patron per day of 8⅓ cents.

H. R. HOYT, President LaGrange Creamery.

As the main works of the DeLaval Separator Co. are located at Poughkeepsie, they are painfully aware that the LaGrange Creamery is right under their shadow and that there are so many more United States Separators than DeLavals used right around them. They tried hard to keep the U. S. out, having as many as eight men canvassing there in their endeavors to do so, but Mr. Hoyt's letter shows how vain were their efforts.

Merit is sure to win, which is why the U. S. is so popular.

Readers will remember that these "would-be competitors" advertised that the separator business "is perforce productive of fraudulent claims and misrepresentations of facts." The dairymen can judge from this frank admission of theirs what they have been compelled "perforce" to do to get their tests and testimonials.

We have never been compelled to resort to dishonest methods or make dishonest claims or claim a Grand Prize at Paris, as our "would-be competitors" did, when the official lists of awards showed none was awarded them. How is this for a **Fake Claim?**

The Improved United States Separator

has merits sufficient to win without such dishonorable methods. It is acknowledged to be

The Standard Separator of the World

For further information and illustrated circulars, write

VERMONT FARM MACHINE CO., Bellows Falls, Vt.

211

LANSING
Perfect Tubular Silos

are the best that money can buy. Do not be deceived into getting something said to be just as good, for there is none so good as a "Lansing" Perfect Silo.

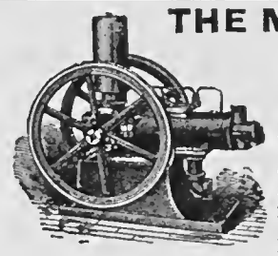
For Catalogue address

A. M. D HOLOWAY,
5 Builders' Exchange, Phila., Pa.

LAND DRAIN TILE

(Car-loads or less).
Sizes, 2, 2½, 3-inch and up to 15-inch.

WILLIAM T. LEGGETT & CO.
1025 Liberty Avenue, Pittsburgh, Pa.



THE MIETZ & WEISS
Kerosene Engines

Cheapest and Safest Power known. For Pumping water, grinding corn, separating cream, sawing wood, *and all power purposes.* Send for Catalog.

A. MIETZ,
128 Mott Street, New York

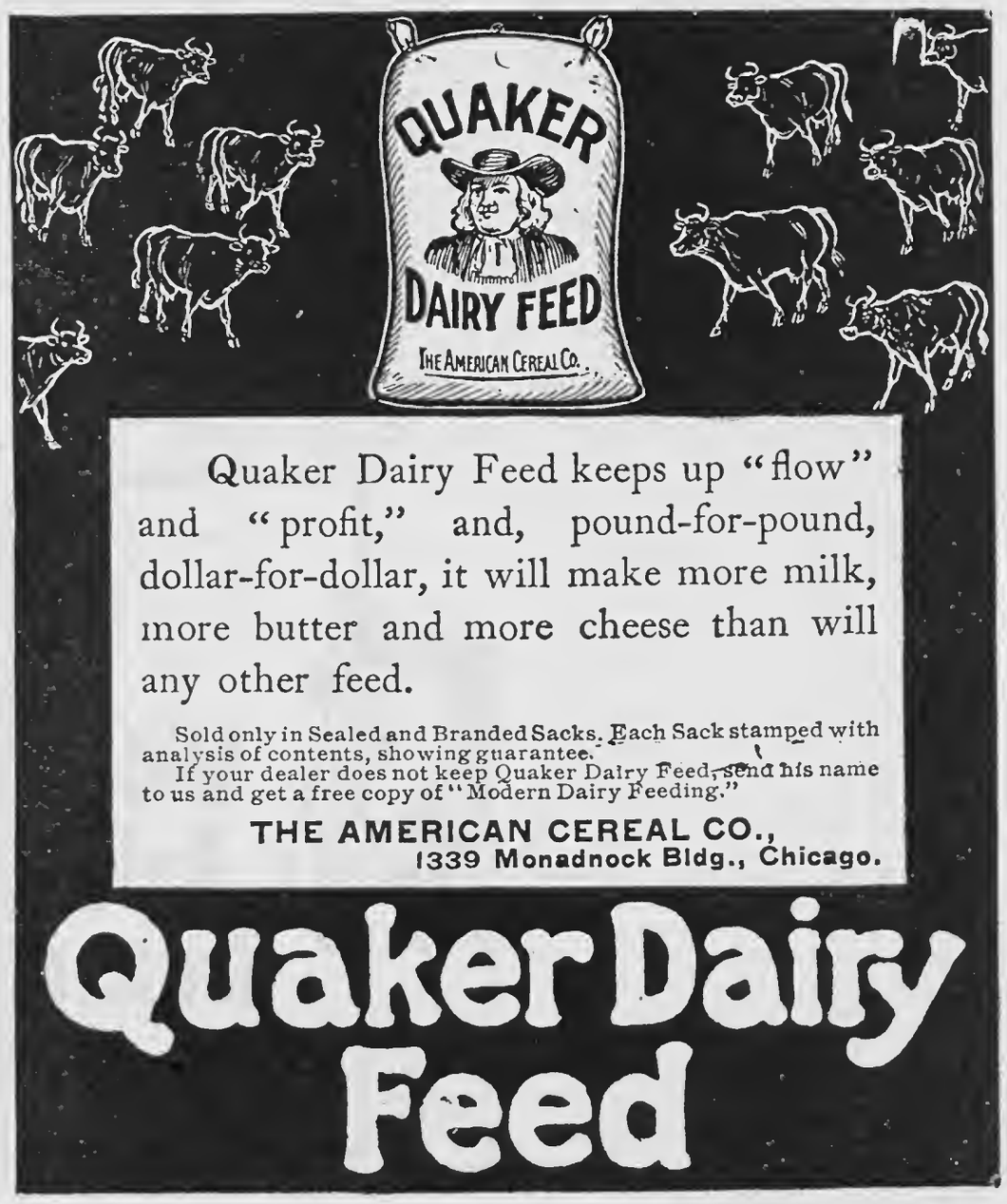
CHARTER
Gasoline Engine

USED Any Place By Any One For Any Purpose

Stationaries, Portables, Engines and Pumps, Hoisters

State your Power Needs.

Charter Gas Engine Co., Box 26, Sterling, Ill.



Quaker Dairy Feed keeps up "flow" and "profit," and, pound-for-pound, dollar-for-dollar, it will make more milk, more butter and more cheese than will any other feed.

Sold only in Sealed and Branded Sacks. Each Sack stamped with analysis of contents, showing guarantee.

If your dealer does not keep Quaker Dairy Feed, send his name to us and get a free copy of "Modern Dairy Feeding."

THE AMERICAN CEREAL CO.,
1339 Monadnock Bldg., Chicago.

Quaker Dairy Feed

National

We want you to know every point about the National Hand Separator, whether you buy it or not. Hence

we'll give you the use of one for nothing,

for ten days; after which you can return it or buy it—as you choose. Write.

NATIONAL DAIRY MACHINE CO.,
Newark, N. J.

Hand Separator

A CITY MAN TURNS FARMER.

PART IV.

In my last letter I had a good deal to say about our horse Ben. Thinking it over since, I have been asking myself some questions. Was it a wise thing, situated as I was, to buy such a horse? Well, no; I don't think it was. Ben was too young—weighing only about 800, knew nothing about farm work, and owing to the Thoroughbred blood in him, was too nervous; the more highly organized the more nervous, man or animal.

What did you do it for, then?

For two reasons, didn't know any better, and loved a good horse.

What ought you to have done?

Bought a regular farm-bred horse, weight 1,100 or 1,200, trained to farm work. As these articles are written with the idea that my experience may possibly be of value to those who are looking forward to a country life as a means of livelihood, the above is inserted for their benefit.

Slowly it dawned upon us that our hired man was a "dead beat," and I informed him that "we must dispense with his services, as we could not continue to pay $8 a month." His reply was that he "had been thinking about that, and was just going to offer to work for his board the rest of the Winter." But Edith and I had learned how to milk and we felt that we could run the farm without his assistance, and prudence compelled us to discharge him. Edith was a rapid and skillful milker, I a poor and slow one; and as she liked to do it, she gradually took the milking entirely upon herself. My wife was immediately successful as a buttermaker, though without any previous experience. We had good grade Jersey cows, and I remember what a delight it was to us city folks to see the rich cream, as thick almost as sole-leather; slipping a knife around the margin to free it from the pan, we could fold it over twice and take the entire cream off in one piece. The restaurant man soon ceased to take our butter, claiming he could get it cheaper, but we easily found private customers, and our butter soon acquired such a reputation that we could not supply all that was wanted. We raised the price five cents a pound, and did not lose a single customer. But oh, the long, cold rides in Winter, to the manufacturing village where we sold the butter! How I came to dread them! Sometimes we would get a mile or more on the way only to find the road so blocked with snow as to oblige us to turn back and try another road. Sometimes we would "wait till to-morrow," only to find it storm harder when to-morrow came. But Edith was always ready, and I have known her, when the weather was so bad that I would not go, to get a neighbor's daughter for company, drive to the village, and coming back with rosy cheeks and shining eyes, say "Gramp, here's the money, the butter is all delivered." For, strange to say, a woman rarely refuses a chance to ride. I have found it so with our Summer visitors; without exception the women always consider it a great pleasure to go driving, and Edith would do almost anything if she could take Ben and go riding with a girl friend as a reward.

So far our dozen hens, a mixture of almost every variety, had laid fairly well, and the seven years we have been on the farm, there has never been one day that we did not get any eggs; though three or four times in that period they only laid one egg, just enough to save the record. With the advent of Spring the farm took on a new aspect; the dark brown earth grew warm to the touch; robins and blue birds flew around the house and the robins nested in the apple trees; the cherry buds swelled to bursting and soon the trees were a mass of blossoms. A pair of orioles hung their nest from a tree in front of the house, and looked like sheets of flame as they darted through the branches. The resurrection of nature was at hand. But there was little time for dreaming; no fear of being "out of a job" on a farm. I wanted to increase my flock of fowls, and a new poultry house must be built. The small 6x8-foot house which was on the farm, had caught fire while being fumigated, and the whole inside burned to charcoal, but was saved before it was burned through to the outside anywhere. During the Civil War we had lived in a village near New Haven, Conn., and had kept fowls for years. One of the lessons of my apprenticeship to that business I will repeat for the benefit of beginners. Noticing how white-faced one of my hens was, I caught her and found the sides of her head covered with lice and nits. Greasing her well with lard, in a few days these actually peeled off in flakes. Having about 70 eggs within a week of hatching, I greased all the hens thoroughly to make sure the young chicks would be free from lice, and satisfied that I had done a good thing, waited for the eggs to natch. Three days after they were due, I began to break the eggs and found a two-thirds-grown chick in nearly every one. Of course the grease had closed the pores in the shell, and they had all died for lack of air.

G. A. C.

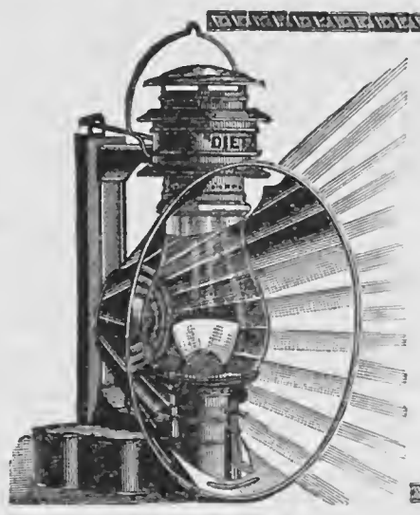
A LOST-PEDIGREE GUERNSEY. FIG. 104.

A Lost-Pedigree Guernsey.

The Herd Register of the American Guernsey Cattle Club prints the picture shown at Fig. 104. This cow is Buttercup, owned by E. R. Strawbridge, Morristown, N. J. In referring to this very fine cow, Secretary W. H. Caldwell says:

Buttercup is a cow whose pedigree is *lost*, and the breed thereby loses a good deal. With her third calf she milked 11,762 pounds in a year, 47 pounds a day and *no forcing*. Her food was dry hay in Winter, without roots or silage, about 12 pounds of grain, at the highest, and that mainly cornmeal and bran; in Summer, pasture and nearly four pounds of bran, and only milked twice a day. Part of the Summer she was stabled during the day on account of flies, and fed cut green stuff, but did better when allowed to graze. Her bull calves are in demand to head unregistered herds, and her heifers *not for sale*.

It would be interesting to know how the pedigree of such an animal came to be lost. She is a fine specimen of the breed, and her milk record is a good one. Certainly her daughters ought to be too good to sell at average prices for milkers.



Cheaper than Darkness.

The first cost of our Lamps is not high, and they burn kerosene (coal oil) which is cheap and good.

Our No. 3 Street Lamp should be in every farm yard.

Our Search Lights will enable you to do your work in barn, stable or cow shed comfortably in the light at a trifling expense.

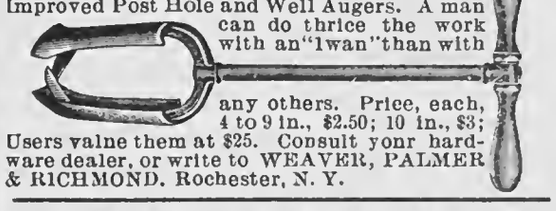
We offer special prices on these Lamps to introduce. Catalogue Free.

R. E. DIETZ CO.,

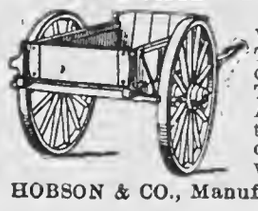
87 Laight Street, New York.

(ESTABLISHED 1840.)

$25 to $50 Per Week.—That's what agents can makeselling the Iwan Pat Improved Post Hole and Well Augers. A man can do thrice the work with an "Iwan" than with any others. Price, each, 4 to 9 in., $2.50; 10 in., $3; Users valne them at $25. Consult yonr hardware dealer, or write to WEAVER, PALMER & RICHMOND. Rochester, N. Y.



STANDARD HORSE-CARTS.



Twelve Styles—2 and 4 Wheel—Wide and Narrow Tires—Steel Axles. Low rates of freight from our Works—Tatamy, Pa.—to all points. Adopted by farmers, contractors, miners, gardeners, cemetery authorities, etc., wherever the best is wanted.

HOBSON & CO., Manufrs, 19 State St., New York

Barns of Plank save timber and cash. Best, cheapest, strongest. 4,000 in use. Book for stamp. SHAWVER BROS., Bellefontaine, Ohio

LAWNS, PARKS, CEMETERIES

and all enclosures are both protected and beautified by using this

HARTMAN STEEL ROD LAWN FENCE.

Strong, serviceable and lasts indefinitely. Catalogue mailed free.

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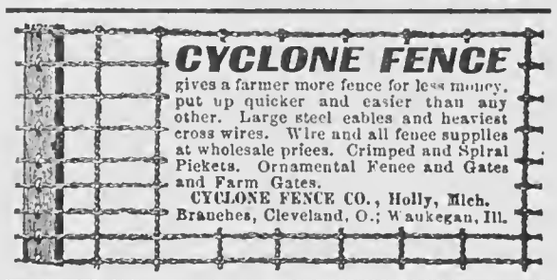
Or Room 70, 809 Broadway, New York City.

SILOS

HOW TO BUILD ASK WILLIAMS MFG. CO., KALAMAZOO, MICH.



CYCLONE FENCE

gives a farmer more fence for less money, put up quicker and easier than any other. Large steel cables and heaviest cross wires. Wire and all fence supplies at wholesale prices. Crimped and Spiral Pickets. Ornamental Fence and Gates and Farm Gates.

CYCLONE FENCE CO., Holly, Mich. Branches, Cleveland, O.; Waukegan, Ill.

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of any fence is the life of its weakest parts. Nos. 12 to 14 soft tie wires will not stand the elements more than three or four years Our catalogue will tell you of a fence that will last a lifetime.

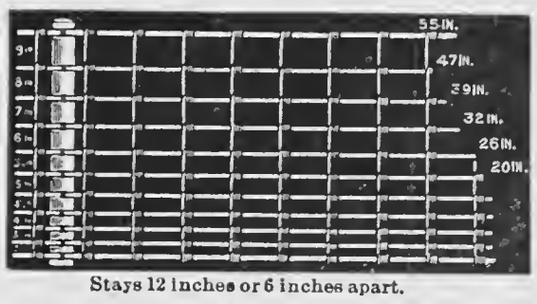
THE FROST WIRE FENCE CO., Cleveland, Ohio.

Toothache nor Grip

do not cause half as much swearing as poor wire fences. Use Page Fence and avoid blasphemy.

PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

LOWEST Price. **HIGHEST** Efficiency. **GREATEST** Durability.

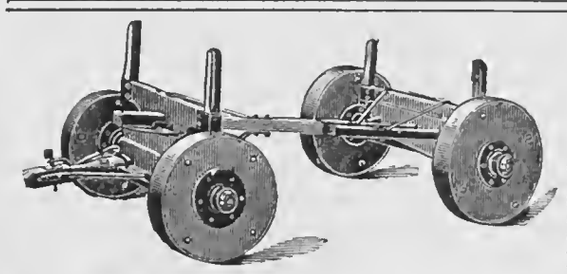


Stays 12 inches or 6 inches apart.

AMERICAN FIELD AND HOG FENCE.

Now is the time to put it up. It will stay up a lifetime. All best steel wires—heavily galvanized—**fully guaranteed.** Resists animals, resists rust, provides for expansion and contraction. Sold by agents everywhere. If no agent in your town write to the makers.

AMERICAN STEEL & WIRE CO., Chicago or New York.



100 Uses for the **FARMERS HANDY WAGON**

can be found on every farm. Suits any kind of soil. Carries the heaviest loads without sinking in. Special introductory prices in new territory. Book about it, free. Good agents are in demand. We also sell metal wheels to fit any wagon.

FARMERS' HANDY WAGON CO., Saginaw, Mich.

You get the Profits

No. 3034, Price $38.30 with leather quarter top.

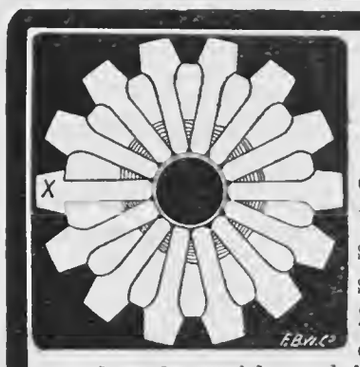
Under our plan of selling carriages, buggies and harness, *you* get the profits. The jobber and retailer are cut out. By dealing direct with our factory, you pay only the cost of making with a moderate profit added; and you take your choice from the biggest stock and fullest assortment. Our plan of

Selling Carriages Direct

insures satisfaction—your money back if you are dissatisfied. Our complete illustrated catalogue, showing many styles of high grade vehicles, harness, robes, blankets and horse equipments, with detailed descriptions of each, mailed free.

THE COLUMBUS CARRIAGE and HARNESS CO., P. O. Box 772, Columbus, O.

No. 240 Single Strap Buggy Harness Price $7.95



Just About Spokes.

The weakest point in a spoke is at the shoulder, just where the spoke enters the hub. This is specially true of the old style square tenon spoke. We don't have any weak point in our spoke for we use the **Famous Studebaker Slope-Shoulder Spokes** which are heavy and doubly strong at the point of greatest strain. The cut we show herewith explains this better than words. The spoke marked with an X is the common square shoulder spoke used on other wagons. All the others are the slope shoulder spokes used on **Studebaker Wagons** only. You can see at a glance why "Studebaker" spokes do not break at the shoulder and why "Studebaker" wheels outwear all others. Then, too, our spokes are made of best selected Indiana white oak, thoroughly seasoned in the shade. They are driven into the hubs thoroughly glued, with a powerful driver. The effect is to make a union of spoke and hub like a weld of iron. This same superiority and careful construction enters into every part of the **Studebaker Wagon.** Ask your nearest dealer for them. If not there, write us direct and we will inform you where you can get them in your locality.

STUDEBAKER BROS. MFG. CO., South Bend, Ind., U.S.A.

The Rural New-Yorker

THE BUSINESS FARMER'S PAPER.

A National Weekly Journal for Country and Suburban Homes.

Established 1850.

HERBERT W. COLLINGWOOD, Editor.
DR. WALTER VAN FLEET, H. E. VAN DEMAN, MRS. E. T. ROYLE, } Associates.
JOHN J. DILLON, Business Manager.

SUBSCRIPTION: ONE DOLLAR A YEAR.

To foreign countries in the Universal Postal Union, $2.04, equal to 8s. 6d., or 8½ marks, or 10½ francs.

"A SQUARE DEAL."

We believe that every advertisement in this paper is backed by a responsible person. But to make doubly sure we will make good any loss to paid subscribers sustained by trusting any deliberate swindler advertising in our columns, and any such swindler will be publicly exposed. We protect subscribers against rogues, but we do not guarantee to adjust trifling differences between subscribers and honest, responsible advertisers. Neither will we be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent us within one month of the time of the transaction, and you must have mentioned THE RURAL NEW-YORKER when writing the advertiser.

Name and address of sender, and what the remittance is for, should appear in every letter.
Remittances may be made in money order, express order, personal check or bank draft.

THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, APRIL 6, 1901.

As you pass out at the door of a large store in this city you come face to face with this little sign:

HAVE YOU
FORGOTTEN ANYTHING?

We put it here, thinking that it might suggest something in connection with your own subscription, or that of some neighbor who is not now a subscriber.

*

WHEN you put a few No. 1 apples in a package marked No. 2 you do a good thing—it is business life. When you put a few of No. 2 into a package marked No. 1 you give your reputation a kick—it is business death. In one case the buyer looks up the brand to order another package. In the other he makes sure so as to avoid it.

*

A KANSAS paper unkindly asserts that in consequence of the Minnesota wolf bounty ($3 for cubs and $7 for full-grown wolves) farmers in that State have started raising the animals. There is an annual appropriation of $6,000 to pay the bounty, and the State is already $17,000 in arrears. So far the wolf raisers have not held a bench show or breeders' convention, but there appears a fair amount of profit in raising the stock.

*

SHIPPING fruits and vegetables in refrigerator cars is a part of the modern fruit-grower's business. It has been wonderfully developed during the past few years—there will be still further developments in the near future. The shipper should have the privilege of hiring the car alone and providing his own ice if he cares to do so. At present the company that furnishes the car insists upon furnishing the ice and loading it. It does not require skilled labor to put ice into a car—why should not the shipper do this work himself if he is willing to take the risk?

*

THOSE "Polar creamery" sharks have their teeth drawn now and then. Here is a spicy account of their doings in Pennsylvania from one of our readers:

> After they had told their story and sung their song, I told them I had no use for them or their so-called refrigerator. It took them two hours to tell their side of the tale; it took me about two minutes to tell my story, and then it was about three minutes' work for them to load up and go.

Five minutes of that time were certainly gloriously spent. That two-minute story must have been eloquent. That's the way to treat a rogue. Be your own policeman and read your own riot act.

*

THE agricultural division of the new census shows that, during the past 20 years the number of farms operated by tenants has largely increased all over the United States, except in the Far West. In the last 10 years the percentage of tenant farms has increased twice as fast as that of farms operated by their owners. The chief statistician of the agricultural census considers that this does not show any degradation of the rural population, but rather an uplifting, as these tenant farmers must consist largely of southern negroes and other laborers who have started farming on their own account. In the Middle West, however, many middle-aged farmers rent their farms and move into the small towns, thus imposing upon the land the support of two families, and country merchants complain that their trade suffers by this. The tenant farmers do not always pay their bills as promptly as the men farming their own land; they do not improve their places with the same energy, nor do they conserve the value of the land so carefully. There seems no reason to doubt that the man who cultivates his own farm or he who rents with the idea of future ownership, adds more to the permanent wealth of the Nation than one content to be a tenant only.

*

A MAN is selling ice cream. There is a demand for chocolate and strawberry. The maker colors them, and is obliged to have uniform and standard colors, for his customers demand uniformity. Another man is selling butter fat obtained from cream and churned into butter. The natural color of this fat will vary from a bright yellow, the standard, to a pale tint. This difference will depend upon the season, the food and the condition of the cow. Just as in the case of the ice cream, customers demand a uniform color, and the dairyman adds enough color to give the desired tint. A rival of the ice cream man starts to mixing a little cream, a little milk and a quantity of cornstarch and other materials. He does it skillfully, colors it red, and sells it for "strawberry ice cream." Another man mixes lard, suet, cotton oil and a little milk, colors it yellow and sells it for "butter." In one case the object of the color is to keep up a standard, and is legitimate use. In the other it is an effort to imitate the standard with a cheaper and inferior article. Yet there are good men who cannot or will not see the distinction.

*

WE have spoken of the awe and false respect some country people have for a high hat. A "stove-pipe" hat is hollow. It contains nothing but air, and adds nothing of brains or character to a head. Yet the empty head of the know-nothing or the cunning, rascally brain of the fraud seem to be twice armed for evil when decked with this polished headpiece. Truly, as one of our readers writes:

> Farmers by reason of their isolation and consequent lack of information and cohesion, are far too backward in enforcing their claims. They stand too much in awe of the man from the city, even though it may be lately one of themselves. His surface polish and assumption of knowing it carries too much weight in their estimation of him, and they just let him impose on them, while he takes all as his natural right by virtue of his superiority.

Not all farmers believe that brains and character are inoculated into a man's head through a "stove-pipe" hat. There are still some who seem to think so, but their numbers grow less. Rural mail delivery, telephones, good literature and similar things are bringing farm homes closer together, and teaching lessons in character building that few of us are able to estimate.

*

MORE than a year ago we printed an interview with Dr. S. M. Babcock, in which he intimated that time would bring an important discovery in cheese making. Dr. Babcock's work in perfecting a simple method of testing milk has added millions to the value of our dairy products, and made it possible for the individual to draw a premium on his skill and care. It seems hardly possible that the same man should discover a principle that is likely to revolutionize cheese making, yet it would appear as though this had been done. We are informed that Dr. Babcock has discovered in milk a digestive ferment known as galactose. This substance acts like the secretions of the stomach to render the casein in the curd thoroughly digestible. Dr. Babcock's studies with this galactose show that cheese ripening is not the work of bacteria. At the freezing point the bacterial action in cheese stops, and in time the bacteria die, while this degree of cold does not stop the action of the galactose. When cheese is held at a low temperature this digestion goes on until the cheese is well-nigh perfectly digestible. It is claimed by those who ought to know that this discovery will bring about great changes in the business of curing cheese, and greatly increase the use of that article as food. It is certainly evidence of the great value of the work done by our scientific men.

*

WE hear much of the unfortunate farmer who is under the heel of a mortgage. There are sad and gloomy days in the life of such a man. Disease or disaster holds the whip over him. The loss of an eye or a foot may cripple him so that the long struggle for his home may end in failure. This man will envy the lot of his neighbor who, after years of toil and self-denial, has paid his mortgage; yet the latter has troubles as well. Not until that mortgage was paid did he realize how much of his life and his best energies were grafted into it. When at last the supposed burden was lifted, something that gave force and character to life went with it. It sometimes happens that a man's best love and ambition become absorbed in the honest desire to pay for his home. It becomes, without his meaning that it should, the one great object of living, and when the last dollar has been paid the man may stand for a time as one dazed—for the great ideal of his life has been gratified. Then the true character of the farmer shines out. Relieved of the load that so long bent his shoulders, he will find that he cannot stand still. He will take up some other load—either a cross for the uplifting of his family or humanity or a knapsack to gratify his own selfish ends. It will be a high ideal or a commonplace idea. It would be interesting if we could look into the heart of every mortgaged farmer, and know just what they would do if their debt were wiped out to-morrow.

*

THE end of Winter finds many farmers in a blue and discouraged frame of mind. The world has gone wrong with them. Age is creeping on, and they realize that their powers are failing. Spring, which means so much of hope to the young and buoyant, brings to such men gloomy forebodings, for it opens a new round of their hard struggle for existence. We can well understand how such farmers dread to face the future. The haunting shadow of disappointment is ever with them. And yet, could they but realize it, the shadow falls from their own mind, and could be lifted by obtaining a clearer view of the real blessings which life has left them. Could we only learn to magnify our blessings as we do our crosses, how life would bloom, and how society would be uplifted! We thought of this in connection with the following letter from one who must carry that hardest cross to the ambitious man—loss of hearing:

> I have made up my mind that there is no help for it, so I am not going to be discontented, but enjoy all the other blessings of this life so far as I can. I saw in THE R. N.-Y. some time ago that some persons said they would rather be blind than deaf. Well, I would not, for as it is, I can work and make a living for my children, and if I cannot hear what is going on, thank God I have a pair of good eyes, and as my parents gave me a good education, I can read—while others talk.

We have often said that the first requisite of successful farming is the ability to be happy on the farm. Hope is moral humus for the home. It is needed in both soul and soil on the farm.

*

BREVITIES.

RURALETTES.

The proof of the pudding is not in the eating,
Never mind what the old sayings state;
The compliment setting the cook's heart a-beating
Is the call for a big second plate!

* * *

Do not sow Crimson clover in the Spring,
'Tis a cold weather plant and will not stand
Hot sunshine—which most certainly will bring
The plant to head untimely—hold your hand.
And keep the Crimson safely in the bag
Until at least July—then, in the corn,
Sow it and cultivate, but do not brag.
For of all willful crops that e'er were born
Crimson is most inconstant—at her best—
She cloaks the whole farm with a cloth of green,
While if she will she takes a lazy rest—
The keenest disappointment ever seen.

* * *

ALL experience was once experiment.

THE cannery shark grows a crop of "greens."

YES, we believe it pays to put sulphur on potato seed.

How much a man can really do when he *has to!*

PUT a good name on poor apples and the apples absorb the name.

WHEN is the best time for the first spraying with Bordeaux Mixture?

MR. PEASE makes a good showing for lime and sulphur for pear blight.

WHAT is the object of a law? To protect the weak or help the strong?

A MUTUAL admiration society is about the limit of some efforts at coöperation.

THE fruit growers are rising up to criticise Mr. Hoyt's scheme of crowding apple trees.

MONEY may be the root of all evil! That explains why some of the suddenly rich show root gall.

IT'S a good plan, in road making, to screen the gravel when it can be done and use the coarse by itself.

AT 45 begin to prepare for the time when some younger hand must take the reins. Don't hang on too long.

Is there any nitrogen in a hoe? Yes, indirectly—when you scratch up the soil you admit air, which hastens nitrification.

EXPERIMENT station people tell us that the bulletins on the use of clover and other legumes for fertilizing are about the most popular of any.

WE assume that questions sent us are asked soberly and in good faith, and we try to answer them fairly, no matter how simple they may be.

IT is said that Westmoreland Co., Va., has a dog tax law which provides so much revenue that it will pay for a new court house in three years.

Is it not somewhat of a crime for a man to be made rich unless he has in mind and heart some wise and true plan for giving his wealth away?

FREEZE out the freezoids and freezines, and all the other food preservatives by letting them alone. They contain borax, which no sensible man wishes to put into his stomach; or formaldehyde, an active principle in embalming fluid, and a poison used to kill the germs of smut in seed grain. Leave embalming to the undertaker, and don't try to help him out by starting at the job while you are alive.

Events of the Week.

DOMESTIC.—The Jenks shipbuilding plant at Port Huron, Mich., was destroyed by fire March 19; loss $75,000. . . . . Recently, in Montana, cattle rustlers stole more than 1,000 beef cattle belonging to the Crow Indians, which were worth about $37,000. The rustlers had changed the brands on the cattle, and were preparing to run them out of the State and ship to Chicago in small bunches. State and Federal officers recovered a large quantity of the cattle. . . . . The town of Tipton, Tenn., was entirely destroyed by fire March 19; loss $150,000. It is believed that the fire was incendiary, and that it was started by negroes, in revenge for a lynching. . . . . By the explosion of 50 pounds of dynamite on a farm near Kokomo, Ind., two men were blown to pieces March 21. . . . . Domestic rates of postage and classification now apply to all mail matter passing between the United States and Cuba. This order went into effect April 1. . . . . The Minnesota State Senate, March 23, reconsidered and finally passed Senator Chilton's bill prohibiting the marriage of insane, epileptic and idiotic persons, and requiring a medical certificate of all applicants for marriage licenses. Amendments were adopted making the physicians' certificate not quite so sweeping, and to permit the marriage of any feeble-minded person over 45, the bill originally having extended such permission only to women. The bill passed by a vote of 34 to 17. . . . . F. M. Player, dispenser at Kingstree, S. C., has been found guilty of breach of trust with fraudulent intent, and sentenced to three years and a half in the penitentiary. This is the first conviction of the kind since the dispensary took the place of ordinary liquor laws. . . . . A disastrous tornado swept over Birmingham, Ala., March 25. It cut a path 150 feet wide, continuing for six miles. The estimated damage is $250,000; 18 persons dead and 35 injured, seven fatally. Great damage has been done to farmhouses and growing crops in the vicinity. . . . . A gas explosion in a coal mine at Connellsville, Pa., March 25, killed one man, and shockingly injured 16 others. . . . . The blizzard raging at Julesburg, (Col.) and vicinity March 25-26 was the worst storm known since 1890. Many cattle have perished by drifting with the storm. Others have been smothered in snowdrifts in ditches and the river. Huge drifts eight to 10 feet high blocked all roads. No trains were coming in, and eight or 10 passenger trains were blocked at Juleshurg. In several instances residences were completely surrounded by huge banks of snow.

ADMINISTRATION.—The objections of the British government to accepting the modified Hay-Pauncefote treaty were made public March 25. The British contend that the Clayton-Bulwer treaty is still "an international compact of unquestioned validity," and cannot be abrogated without the consent of both parties. The Davis amendment would be distinctly unfair to Great Britain, it is claimed, while there is no analogy with the Suez canal in regard to fortifications. . . . . The State Department, March 26, made public a note sent to the Chinese Minister February 19, warning the Chinese government against entering into any private, territorial or financial arrangements without the full knowledge of all the Powers.

PHILIPPINES.—General Funston has gone into Isabella Province, Luzon, with 10 men and a company of native scouts, on a daring attempt to capture Aguinaldo. . . . . The Spanish Minister in Washington on March 23 received from the Secretary of State the payment, on behalf of the United States, of $100,000 for the final cession of the islands of Cagayan-Sulu and Sibitu, in the Philippines, and the signed copies of the treaty were exchanged. . . . . While Major-General MacArthur is meting out heavy sentences to Filipinos caught gathering information within the American ranks, the United States Government is employing spies, and officially admitting the fact, to obtain information relative to the plans of the insurgents. Formal recognition of the employment of spies by the United States is made in the last army appropriation law. An appropriation of $2,400,000 is authorized for incidental expenses, among which are "hire of laborers in the Quartermaster's Department, including the hire of interpreters, spies or guides, for the army."

GENERAL FOREIGN NEWS.—March 20, the British steamer Tay sunk off the English coast after a collision with the German steamer Chemnitz; 14 lives lost. . . . . The St. Petersburg police have discovered a plot against the life of the Czar. Lots were drawn by students, and the fatal choice fell on the son of a loyal Russian general, who informed the Czar and implored him to flee. There was a sanguinary encounter in the Russian capital March 23 between disorderly paraders and troops, during which 100 workmen are said to have been slain or wounded. . . . . The latest reports from South Africa indicate a renewal of active military operations between the British and Boers. A town in Cape Colony is fortified to resist a threatened attack by the burghers. A considerable British casualty list has been issued in London.

FARM AND GARDEN.—The Short-horn breeders recently in convention at Kansas City, Mo., passed a resolution petitioning the agricultural departments of the United States and Canada so to modify their quarantine regulations as to abolish the tuberculin test.

At a meeting of the Chautauqua County (N. Y.) Grange, held in Sheridan Center, March 20, resolutions were adopted calling on the members of the Legislature from that county to secure the enactment of laws protecting skunks in that county for the next five years. The farmers complain that grain, corn and meadows are being destroyed by the white grubs, and say that skunks are known to be destroyers of this grub. Consequently the farmers want the skunks protected from the numerous hunters who have been killing them for their skins.

Rain fell through Oklahoma March 19 for the first time in more than a month. It was accompanied by hail, which did no damage to orchards. Unusually heavy winds and dust storms prevailed almost daily during the first three weeks in March. It was feared that the wheat crop would be injured. The fear was groundless, however, as wheat got such a fine stand last Fall that it could not blow out. There was enough moisture in the ground to carry the wheat safely through another month of dry weather.

Reports from Australia state it is officially estimated that the wheat yield will reach 17,790,576 bushels, or an increase of 2,552,628 over last year's yield.

The twenty-fifth annual meeting of the Cattle Raisers' Association of Texas, in session at San Antonio March 19, adopted a resolution recommending that Congress provide for an assistant to the Secretary of Agriculture to have charge of the live stock interests of the country. The following officers were unanimously elected: President, Murdo MacKenzie, Trinidad; first vice-president, W. W. Turney, El Paso; second vice-president, John T. Lytle, Lytle; secretary, John C. Loving, Fort Worth; treasurer, S. B. Burnett, Fort Worth. Resolutions were adopted pledging the assistanee and good will of the Association to seeure a continuation of free distribution of blackleg vaccine to cattlemen, the maintenanee of the feeding-in-transit privilege, the assurance that the duty will not be removed from hides and the defeat of the Grout bill. Fort Worth was selected as the meeting place of the convention in 1902.

The American Rose Society, at its recent meeting in New York, elected the following officers: President, F. R. Newbold, Poughkeepsie, N. Y.; vice-president, Carl Stoeckel, Norfolk, Conn.; secretary, L. Barron, 136 Liberty Street, New York; treasurer, J. N. May, Summit, N. J. E. M. Wood and R. Craig were reëlected members of the executive committee. Among other business transacted a board of trustees was elected with B. Dorrance as president.

Up to March 20, the Georgia peach buds were entirely uninjured by the cold snap. It is reported that the North Carolina strawberry acreage is only about two-thirds of what it was last year. The growers pull up their two-year-old plants and replace them with new ones. These new plants were almost entirely killed by the prolonged drought of August and September last, and the two-year-old plants pulled up at the end of last season have in reality never been replaced. Charleston is said to have had its berry acreage sadly decreased from the same cause. Potato acreage in the same State is short, on account of the heavy plantings of cotton.

Michigan has again enacted a law prohibiting the manfacture or sale of oleo made in imitation of yellow butter. This act became a law in March when it passed the Legislature by a large vote. The victory is a triumph of the dairymen and other farmers who supported the measure against the city members and influences of the cities working to defeat any measure that would make it illegal to manufacture or sell in the State oleomargarine colored to imitate butter.

The Argentine government has reduced the export duty on wool 33 1-3 per cent. Owing to shrinkage in values, however, it is claimed this is equivalent to an increase of from four to six per cent.

The Spoor trophy, awarded by J. A. Spoor, president of the Union Stockyards, Chicago, to the winner of the annual intercollegiate stock-judging contest, has just been received by the department of animal husbandry of the University of Illinois, which won the championship of America in the contest held last December in Chicago. The trophy, a bronze bull on a marble pedestal, was modeled by Isadore Bonheur, at Paris, France, and was purchased through Tiffany for $1,000. The trophy is to be competed for annually, and will be awarded to the institution making highest aggregate standing, with three men entered in all classes. The height of the trophy, including the pedestal, is about six feet. The stock-judging department was added to the college of agriculture two years ago, W. J. Kennedy, who won the world's championship for Iowa University in 1898, being put in charge.

COLD STORAGE IN TRANSPORTATION.

A HELP TO FRUIT TRADE.—The use of cold storage in the transportation of fruits has increased greatly of late years, and we find a growing interest in this business from Canada to the South. Perishable products are thus put into distant markets, and the season during which they may be had by consumers is very much lengthened. Take strawberries, for example. Instead of having them in the New York market for three months, as would be the limit, if we had to depend on what could be sent here without ice, they are on hand for eight months, although part of the time too expensive to be used by people of moderate means. Still, there are many who are willing to pay 30 to 60 cents per quart for strawberries in January. A few years ago the quantity received during the Winter season was very limited, and these sometimes sold as high as $5 per quart.

A BOOM FOR GROWERS.—As soon as the growers found that the fruit, of which they could sell but a small quantity at home, could be sent to distant points so as to arrive in good condition and bring a price that would give fair pay for their time and labor, those who had been raising only garden patches branched out into acres, and from Florida and the Carolinas the output increased from now and then a scattered carload, to dozens and scores. This put new life into sections of the South that had been practically dead, so far as outside trade was concerned; labor was in demand, farm property increased in value, and in many places these conditions still hold good. Of course, as always happens, there were some who went into this business too deeply on the start, and suffered severe loss.

HOW SHIPMENTS ARE MADE.—The earliest strawberries come from Florida and California the latter part of December. At that season the quantity shipped is so small that no grower has a carload at any one time, so he uses the refrigerator chest. This is a heavy box made in various sizes from 48 to 100 or more quarts. The first of these cases made were crude affairs. The berries got badly shaken in handling, and the water from the melting ice soaked them, so that they were in bad shape when opened. Improvements have been made to such an extent now that the berries are not damaged at all, opening up in as fine condition as when packed. As cold naturally goes down instead of up, the ice is put in a tight galvanized iron tray in the top of the chest, and the cover shuts down closely upon this. As the ice melts, the water drains from a hole in the pan into an iron pipe, through which it runs out of the bottom of the chest. As soon as there is enough fruit for carload lots refrigerator cars are used. In these the whole interior of the car is cooled, and the ice does not come in contact with the produce shipped. These have been long used for beef and other perishable foods.

COST OF TRANSPORTATION.—There is no doubt that the railroads get their full share of the profits out of all the stuff they carry to market for the farmer. The following facts in regard to expenses were obtained from a southern shipper. The charge made by the railroad companies for hauling refrigerator cars from South Carolina points to New York and Philadelphia is $1.25 per bushel crate, the minimum carload being 100 crates. The express company furnishes the car, ice, etc., and looks after the re-icing in transit at 25 cents per crate. This is in addition to the charge made by the railroad company. Figuring on the minimum rate of 100 bushel crates, the transportation charge between the points named would be $25 for rent of car, ice and re-icing on the way, and $125 to the railroad company for hauling, making $150 per car, or a trifle over 4½ cents per quart. Of course, this can be reduced by putting more crates in the car, but there is a danger in overloading, and it is considered that the berries arrive at their destination in far better shape where they are not crowded to the top of the car, and a little space is left between the crates. Refrigerator chests are made in various sizes. Those holding 48 quarts will weigh, iced, 200 pounds; 80 quarts, 300 pounds; 100 quarts, 350 pounds, and 140 quarts, 500 pounds, and the transportation charge is 76 cents per 100 pounds from South Carolina points to New York and Philadelphia. The shipper furnishes his own ice and must provide for icing on the way, the railroad assuming no responsibility for the giving out of the ice provided their train is nearly on time. Taking all things into consideration, the shipment in the iced chests is the most expensive, and it is said that but few use them who have sufficient quantities of fruit to use the iced cars. However, these refrigerator boxes are of great value to small shippers, and they are coming into use more and more, not only for shipments from the South but from northern points. We have recently had letters from people in Canada who were making arrangements to use these chests in shipments to markets in the United States. One wished to know whether it would do to paint or oil the inside of the chests to make them impervious to moisture. We have not seen any on which this has been tried, and all the receivers with whom we have talked seem to think that it would not be a good plan, as anything so penetrating as oil would be likely to affect the berries, which are nearly equal to milk for absorbing odors. Lining the chest with heavy clean paper is a good plan. Some claim that shipments of berries in refrigerator boxes have sold at higher prices than those sent at the same time to the same market in ordinary crates in iced cars, but we are not able to find any instances of this discrimination that cannot be traced to the difference in quality of the berries. Probably the man who ships comparatively few and uses the box takes a little more care in grading than the one who sends a carload. This has been our observation in regard to the berries we have seen opened here. W. W. H.

FACTS ABOUT POTATO SCAB.

It is a skin disease, known wherever potatoes are grown.

It does not affect the eating quality of the tubers, but may cause them to rot quicker.

The disease spreads from one tuber to another by means of germs or spores. Vast numbers of these are left in the soil after the crop.

The germs do not move or "crawl" in the soil, nor do they grow "spontaneously." They can only be added to the soil on scabby seed. Manure from animals fed on seabby seed is not likely to be dangerous.

The disease is found on beets, and probably on turnip, radish, cabbage and carrot. The germs may live in the soil for five or six years.

Heavy soils are most favorable to scab. The germs do not thrive in a sour or acid soil.

A green crop plowed in just before planting will check the scab. So will acid fertilizers.

Stable manure, wood ashes and lime are likely to increase the scab by giving it a better chance to develop.

Some varieties are more liable to it than others. In general the round, rough-skinned varieties are less likely to be attacked.

To prevent it, plant on soil that is free from the germs, and kill those on the seed potatoes. Plowing under a green crop may keep the germs inactive, but will not kill them. It is not wise to follow a scabby potato crop with potatoes.

To disinfect the seed potatoes, soak them in some solution that will kill the scab germs, yet not injure the sprouts. Corrosive sublimate or bichloride of mercury will do this. Dissolve an ounce of this chemical in a gallon of water. Then add water enough to make seven gallons. Keep it in a wooden vessel and soak the potatoes in it for 90 minutes. Then cut and plant. We like formalin or formaldehyde better. This is a liquid. One half pint is mixed with 15 gallons of water. It readily dissolves. Soak the potatoes for two hours and cut soon after soaking.

We like the plan of dusting the cut pieces freely with flowers of sulphur. This has some value in reducing the scab, and also helps preserve the seed piece.

Exposing the tubers to sunlight for several weeks before planting will destroy many scab germs and make the sprouts thick and strong.

A new way of killing the scab germs is to fumigate them with formaldehyde gas. This is done by putting the tubers in a tight box and burning tablets of chemical in an alcohol lamp. The fumes work all through the box among the tubers.

PEA GROWING.—As to which is the more profitable way to grow peas for the cannery, to have a viner at 2½ cents per pound or a huller at $1 per barrel, would say my judgment would be for the viner. Peas are grown very extensively in Maryland for the cannery. I do not know of any grower who has a viner on his own premises. They are expensive to handle, and are generally run by the canning establishment; the grower hauling the crop to the cannery. In most instances the price is so much per pound for the peas, and the peas are hulled out by the establishment. In this way the cost of gathering the crop is reduced to a minimum. JAMES S. ROBINSON.
Maryland.

Woman and Home

From Day to Day.

UNCLE BIJAH'S TRIUMPH.

"Things'll come out all right some day,"
Uncle Bijah used to say:
"No use howlin' before you're hit,
No use frettin' about
The price o' the crop that ain't thrashed yit;
Nor even begun to sprout—
No use pokin' in every hole,
A-spyin' fer trouble there—
Cold days comin', but lots o' coal
Down in the mines somewhere—
Things'll come out all right some day,
If you'll jes' let 'em come that way.

"Things'll come out all right some day,"
Uncle Bijah used to say:
"'Tain't every cloud that brings a flood
Ner every breeze a blight;
Better wait and risk some loss o' blood
Than fall down dead o' fright;
No use frettin' 'cause things are not
The same as they used to be,
Or settin' and dreadin' to think o' what
Is coming fer you and me—
Things'll come out all right some day,
If you'll jes' let 'em come that way.

"Things'll come out all right some day,"
Uncle Bijah used to say:
He gained no wealth, he won no fame,
And small was the world he knew;
He managed to set no stream aflame,
But he laughed when the sky was blue!
He coveted naught that his neighbor had,
Nor grieved at unseen ills,
But whistled away and kept a glad
Song echoing o'er the hills—
And whispered: "Things are all right," the day
That he smiled as he went away.

—Chicago Times-Herald.

*

THE San José (Cal.) Farmers' Club recently held a prize competition for the best way of cooking prunes. It is said that 101 different kinds of cooked prunes were entered in the contest, varying from plain stew to soufflé, pie, ices, pickles and salads.

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A FRIEND asks us what can be added to soapy water used for making soap bubbles that will give the bubbles more permanence. A few drops of glycerine, shaken up in the soapsuds, will toughen the bubbles. The water should be very soapy.

*

A GIRL who has been visiting in the South says that she saw a tombstone in a Savannah cemetery which made her think that extreme thrift is not confined to New England. It was a plain stone bearing the inscription: "Sacred to the memory of Sarah, beloved wife of John Smith, and of Jane, equally beloved second wife." A man who couldn't buy a separate tombstone for a second wife really seems to possess a strikingly frugal mind.

*

MERCERIZED pongee is one of the new Summer fabrics; it is cotton, but as fine and smooth as thin silk. It is usually seen in bright or delicate evening tints, and costs 35 cents a yard. Another new material is an old one under a new and fanciful name; it is a satin-striped barége, and is now called edelweiss. Among heavy linen materials are crash suitings in all the colors seen in tweed and homespun, with a dash of bright color, green, blue, scarlet or crimson, forming a faint uneven check on the plain ground. This material costs 40 to 60 cents a yard, and is admirable for jacket suits or separate skirts.

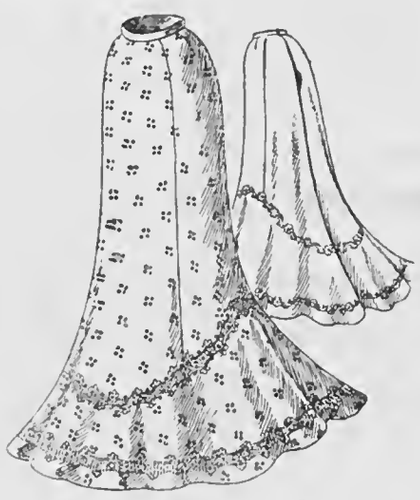
*

A NEW bedcovering that is commendable for its economy of labor is the hospital spread, made of crinkled cotton, almost like a cotton crépon. It can be washed as easily as a sheet and does not require ironing. It comes in the full width, wide enough for a bed, but where this is not obtainable ordinary cotton crépon may be joined by machine stitching to make the size required. A light, easily-laundered bed-cover is very necessary in the Summer. The bed is often trimmed with a valance of the same crépon, but we do not really care for any bed valance. The fewer hangings and dust catchers about a bedroom the better.

The Rural Patterns.

The circular flounce with its many variations makes an accepted favorite of the season. The tendency is toward a snug fit above the knees and all the flare possible below. The skirt shown exemplifies one of the latest forms of the flounce and is cut in five gores above, a model that has been found to give more general satisfaction than any other that has ever been devised. The original is made of foulard in pastel blue and white and is trimmed with appliqué of point de Venise lace, but silks, wool fabrics of various sorts and all the cotton and linen materials offered are equally appropriate. The upper portion of the skirt is perfectly smooth at both front and hips, the side portions being fitted by means of short darts and the fullness laid in an inverted pleat at the back, but the latter may be gathered if so preferred. The flounce is shaped in graceful and becoming lines and falls in soft undulating folds to the floor. To cut this skirt for a woman of medium size 9 yards of material 21 inches wide, 8 yards 32 inches wide or 5¼ yards 44 inches wide will be required. The pattern No. 3773 is cut in sizes for a 22, 24, 26, 28 and 30-inch waist measure; price 10 cents from this office.

The smartest, most fashionable shirt waists for morning wear are simple in the extreme, and somewhat severe. The attractive and serviceable model shown includes all the latest features and is adaptable for all cotton and linen stuffs, for wash silks, for taffeta and fine Scotch and French flannel. As illustrated, it is of mercerized madras in dull



3773 Five-gored Skirt,
22 to 30 in. waist.

blue and white, and is worn with a white collar, black tie and belt, and is unlined; but made from taffeta or flannel will be found more satisfactory made over the fitted foundation. The lining is cut with fronts and backs only, and is fitted with single darts, under-arm and center back seams. The back proper is smooth across the shoulders, with scant fullness drawn down in gathers at the waist line. The fronts are gathered at the neck and at waist line, where the waist blouses slightly at the center. The front edge is finished with the regulation box pleat and the closing can be accomplished by means of studs or buttons and buttonholes, as preferred. The sleeves are in bishop style, with narrow, pointed cuffs that lap and close on the upper side. The neck is finished with a high turn-over collar. To cut this waist for a woman of medium size 3⅝ yards of material 21 inches wide, 3½ yards 27 inches wide, 2½ yards 32 inches wide, or 2 yards 44 inches wide, will be required. The pattern No. 3734 is cut in sizes for a 32, 34, 36, 38, 40 and 42-inch bust measure; price 10 cents.

Household Accounts.

New Year resolutions may not be wholly out of fashion, but certainly they are not so prominent in the current literature of early January as they were once upon a time. However, the first weeks and months of the new year offer a convenient season for a survey of our household possessions, a sort of taking account of stock, and planning improvements for the future. There seems to be a popular impression that women are averse by nature to anything like keeping accounts. An extremely aggravating book based on that idea was written not long ago by "a mere man," and entitled "The Domestic Blunders of

3734 Shirt Waist
32 to 42 in. Bust.

Women." Though it contains some truth its conclusions are unfair and illogical. Even if the women of past generations were lacking in business ability, that is hardly true of the modern woman, and will be still less a failing of those of the next generation. Women to-day are receiving a more businesslike education and are gradually learning to think in percentages, and to study their own affairs impersonally.

Many clubs and individual housekeepers, recently, have been studying the problems outlined in a little book by Mrs. Ellen H. Richards on "The Cost of Living." This is a valuable aid in the apportionment of the family income. Any housekeeper wishing to put her personal account in good form will find "The Twentieth Century Expense Book," arranged by Miss Mary Dewson, a great help in adjusting each item to its proper place. A perusal of these books would convince even the most careful housekeeper that there were some phases of housekeeping which she had not mastered. Average housekeeping is not based on any definite plan; it is haphazard. We buy articles, food, clothing or furniture, without due regard to their harmonizing with what we already possess. Even where we have a fairly definite income we do not begin by assigning a certain per cent of it to each of the principal departments of our housekeeping. How can we begin a reform? Perhaps this is more easily done in the food supply than in the general expense account at first. A review of the receipted bills for the past year, which every thrifty housekeeper files away, will give a basis on which to plan future expenditures. If our family is larger or smaller than last year the supplies must be proportionately increased or decreased. Any change in price of the standard articles must be reckoned. When the price of milk is higher the monthly cash apportionment must be larger, eve though the daily quart be still sufficient. We may find from our bills that the weight of butter consumed each month is about the same, although it was bought in irregular quantities at greatly varying prices. Provided we have a proper place to keep it we may gain something this season by buying a full supply for the month at one time. And so we may go on through the list of standard groceries. All this is equally true of articles produced on the farm, which should be reckoned at fair market prices in these accounts.

Anyone who has not thus studied the household accounts will be surprised to see how nearly uniform in a normal family, are the quantities of butter, sugar, coffee, tea, potatoes, flour and the cereals. The quantity of meat and vegetables likewise will be fairly uniform, though prices may vary greatly, but these also may be brought within a fixed sum for the week or month. Where we know how much money we have to spend, and what these 'constants" or standard articles are likely to cost, we can give ourselves a definite margin, little or much, to spend for extras or the unforeseen. By a little forethought our closets can be kept stocked with various "flavorers' which do so much to vary a monotonous diet. A study of the dietary series of bulletins issued by the United State Department of Agriculture will point out many places where we can secure a better balanced ration with no more outlay.

ANNA BARROWS.

Carrie Nation and Kansas

By William Allen White

The author of "What's the Matter with Kansas?" brings the discussion up to date in an able special article, which will appear in an early number. Mr. White will be a frequent contributor to

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An Incident of Prairie Life.

It was a dry, stifling day on the prairie. The south wind, blowing with hot, irritating persistency across the plains, raised clouds of dust that almost hid the view from the woman at the window of the sod house. Sarah Preston's lips were tightly compressed and there was a sad look in her eyes. That south wind was blotting out from her view more than the flower-dotted landscape. It seemed to dim all remembrance of the long days of perfect weather, when the prairie seemed an Eden and strength and hope grew large with the fresh, bracing air. Some one came in with a heavy, weary step and stopped a moment on the threshold to look at the drooping figure. Then he approached her with awkward tenderness, laying his toil-roughened hand on her shoulder.

"What's the matter, Sarah?" he said, softly.

There was a smothered weariness in the tones, but her ears seemed deaf that morning to anything but the wind's piercing voice. Half unconsciously she drew a little away from his hand.

"It's everything," she said, "everything! Why did we ever come here, to such wretchedness as this?"

He did not attempt another caress, except with his anxious eyes, and her face was turned away from them, hidden in her hands. She would have called after him and clung to him if she could have seen the look on his face as he went out—all the patience and weariness of it. In just a few minutes he was back at her side.

"Sarah," he said, rather anxiously, "what would you say to letting two people come in for a little rest? They've stopped the wagon just a little way from here. She seems a childish young thing, and he looks as if the world had been too much for him—he's so thin and sickly looking. What do you say to bringing them in?"

"O, John, how can we, when it's so hard to keep up as it is? But go ask them in. If we can make it a little easier for them, we ought to, I suppose."

"You come with me," coaxed John. "Go get on your hat, and we'll ask them together."

She gave a slight, protesting laugh, but went, nevertheless, clinging to his arm, and almost resting her face sometimes on his shoulder.

They were very near the travelers now. The tired horses, with dejected, down-bent heads, were snatching what little rest they could. In the covered wagon sat the man and woman—such a hollow-cheeked, large-eyed man, and such a little slip of a wife! The hot wind flapped the canvas cover and sent swirls of dust over the two occupants and their scanty possessions. Some of the self-pity that had darkened Sarah's face all the morning faded out of it, and was replaced by a purer, nobler look.

"You must be tired out," Sarah began, without preamble. "We want you to come up to the house for a little rest and to have dinner with us. Won't you?"

A pleased smile breaking over the young wife's face seemed almost to fade out the little worried line between the dark eyes. An answering gleam stole over the worn face at her side, but they both protested faintly. They couldn't give so much trouble; it would not be right.

"You come right along!" said John, with kindly authority. "We want you, so don't make any fuss about it. We'll take the horses into my barn, let 'em try my feed and a good bucket of my well water.

The two men went off together, Sarah and the little wife beating their way back to the sod house. A look of cheer and comfort seemed to be in its brown walls now. "How good it will seem to rest in a house!" said the little wife, with a happy sigh.

"Wouldn't you like to lie down a little while till dinner is ready?" said Sarah. "Come right into my room and just feel that you are at home." A protecting kindliness had sprung up in her heart for this little creature with the appealing eyes. "You must be so hot and uncomfortable! There's cold water in that pitcher, and I'll bring you some warm. No, it isn't a bit of trouble. Then you must rest until dinner."

Unpleasant thoughts were far away as Sarah prepared the simple dinner, trying to make it as attractive as possible. She would get out some of her wedding china—why not? John would enjoy a bright spot in the day for the strangers. She even picked a bunch of Astragalus, making a centerpiece of the white furry leaves. A sprig of wild geranium was laid at each plate. There were cheery faces around the table, and Sarah's was not less bright than the others. The gaunt stranger sat a little more erect now, and his face, even after this brief rest, seemed less sharply outlined. The warm, human kindness as well as the outward comfort had wrought the change, and in some way made easier to remember in whose larger protecting care they were and would still be when rolling over the brown prairie. Bit by bit their story came out. The man told how he had been a carpenter and builder in Iowa; what a happy little home it had been, and why they were flying now to the untried world of Colorado, that Mecca for consumptives. The gaunt man and the young wife avoided the dread word; they said, instead, "people with any sort of lung trouble."

As they went back to the sitting room John and Sarah talked cheerily of the prospective home in Colorado, and brought out a book of views of the wonderful scenery. The gaunt man and his little wife bent over them with keen interest. "It'll be a great move for us," he said. "It seemed to be the only thing for us to do, and I'm glad we're so near there. I feel more heartened up to-day than any time since we started. We won't forget your kindness, I can tell you."

"Oh, pshaw!" said John, and "Don't speak of it;" said Sarah, in a breath. "It's been so pleasant for us to have you!"

It was necessary to take up the journey again. The two men went out to the barn together. The eyes of the little wife sought Sarah's. "You have been so good," she said, almost in a whisper, "so good to take us in. This awful dust and the heat. I wouldn't have minded them so much for myself, but it has been so bad for him. It makes the cough worse and that always frightens me. All these days that we have been on the way I have been longing so to reach Colorado. I have felt as if I couldn't wait, when the waiting might mean everything to him, and it has been so hard, almost impossible, to keep cheerful before him! That is always very hard, don't you think so? When your life is all wrapped up in somebody else's to keep that one from feeling how you suffer? And, of course, if they know that would make it all so much worse."

How the poor young thing was emptying her heart out! It was as if all the grief and anxiety of the days in the covered wagon, rolling over the brown plains, had burst its bounds and must pour itself out to this listener.

"I wanted you to know," the excited little voice ran on, "how kind you have been—what a comfort it has been to me! Don't you see how much less tired he looks? And he hasn't coughed near so much; not near! You have cheered us up, too; it has been so strange—all this journey; every day taking us farther away from home, and the trying to choke down the homesickness—and—" She broke off short, with gratitude and tears shining in her eyes.

There was just time for Sarah to take the little brown hand in hers and press it close, when the two men came back. The man with stooping shoulders and the flush on either cheek went up close to the little woman with bright, eager eyes.

"Well, little woman, are you 'most ready?" he said, patting her shoulder. "You've had a fine rest, haven't you?" He coughed sharply as he spoke, but she smiled up at him brightly, that he might not know how much more it racked her chest than his.

"You'd better get on your bonnet, little woman," he said; "it's time we were going. I don't know how we're to thank you and your wife, Mr. Preston, for all you've done for us, but we feel it, sir; we feel it."

"It wasn't anything at all!" John protested. "It has done us good to have you here."

Sarah and the little wife went into the tiny bedroom together. The wind had stopped its maddening song outside, and the air was clear again from its burden of dust. The furniture would have to be dusted for the third time that day, but the thought brought no scowl to her forehead now. The little traveler pinned on the rusty black hat, and turned to hold out both hands impulsively to Sarah. "Thank you again," she said, and then, in a whisper: "Colorado is a wonderful place, isn't it? Haven't you heard about the way people get cured there—people just as bad off as George, or worse? You feel sure it'll do him good, don't you?"

She searched Sarah's face as if to read her fate there. It was hard to meet the girlish eyes.

"I've never been farther west than this myself," she said, "but everyone says it's a wonderful climate in Colorado for people with trouble with their lungs. I'm so glad you're going there, and when he's grown well and strong, you'll be coming back this way to see us."

The delight of that possible future was in the young wife' eyes. "If he only does!" she said. "Oh, if he only does!"

There were hearty handclasps exchanged a few minutes later. Then the "prairie schooner," with its freight of human love and anxieties, rolled slowly away. The two left behind in the little sod house stood at the window till the wagon was seen, a dark blot, above the sharp horizon. With a quick, impulsive movement, Sarah's hand stole into her husband's.

"How good you are!" she said, almost solemnly. "And while I have you what do I care for other things?"

Far off in the big wagon a little woman sat with her round cheek pressed against a shabby coatsleeve, and the cry of her heart was like that of Sarah's. "What are other things," she was whispering, "while I have you, dear?"—Colorado Springs Facts.

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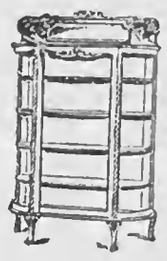

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MARKETS.

The Week's Quotations.

WHOLESALE PRICES.

NEW YORK, MARCH 30, 1901.

GRAIN.—All grades of wheat down one-fourth to one cent. Corn up three-fourths cent.

Wheat. No. 2, hard, N. Y.	80⅞	@	—
No. 1, Northern Duluth, spot.	88⅞	@	—
No. 1, hard Duluth, spot	92⅜	@	—
Corn, No. 2, mixed	49¾	@	—
Oats, No. 2, white, in elevator.	33	@	—
Rye, No. 2, West'n, c. i. f., N. Y.	—	@	58¼
State & Jersey, track	57	@	58
Barley, feeding, c. i. f., N. Y.	47	@	48
Malting, c. i. f., N. Y.	62	@	68

BEANS.—The general tone of the market is slightly stronger, though there is no advance in prices.

Marrow, choice, per bu	2 35	@	—
Marrow, fair to good	2 20	@	2 30
Pea, bags, choice	2 05	@	—
Red kidney, choice	—	@	2 15
White kidney, choice	2 30	@	2 35

FEED.—Trade dull at present high prices.

Spring bran, 100-lb. sacks	19 50	@	20 50
Winter bran, bulk	18 50	@	23 00
Spring middlings, 200-lb. sacks	19 50	@	20 00
Red Dog, to arrive	19 00	@	19 50

HAY.—Offerings large and market weak.

Hay, No. 1	85	@	90
No. 2	80	@	85
No. 3	75	@	80
Clover	70	@	75
Clover, mixed	75	@	80
Straw, rye, long	75	@	85

SEEDS.

Clover, per lb	9½	@	10½
Timothy, per lb	4	@	4¾
Red Top, per lb	10½	@	—
Flaxseed, whole, bu	6 50	@	7 00
Millet, per lb	2	@	2⅛
Rape, German, per lb	3½	@	3⅝

MILK.

New York Exchange price reduced one-fourth cent, or to 2½ cents within 26-cent freight zone.

BUTTER.

NEW.

Creamery, extra, per lb	22	@	—
Firsts	21	@	21½
Seconds	19	@	20½
State dairy, tubs, fancy	21	@	—
Tubs, firsts	19	@	20
Tubs, seconds	17	@	18
W'n imitation creamery, fancy.	18	@	18½
Lower grades	14	@	15
W'n factory, small tubs, fancy.	14	@	—
Large tubs, fancy	13½	@	13¾
Rolls, choice	—	@	14
Common to prime	11	@	13½
Renovated butter, fancy	17½	@	18½

OLD.

Creamery, Summer made, finest.	19	@	20
Summer made, common to prime	12	@	18
State dairy, tubs or firkins, finest	14	@	14½
Tubs or firkins, com. to good.	11	@	13½
Western factory, Summer made.	9	@	12½

EGGS.—Market firm. Receipts decreased on account of Western speculative movement.

QUOTATIONS AT MARK.

Nearby, State & Pa., fresh-gathered, fancy white, doz.	—	@	15½
Fancy brown, per doz	14½	@	15
Average prime	13¾	@	14¼
W'n, storage packings, fancy.	—	@	14
Regular packings, firsts	—	@	13¾
Kentucky, fancy, marks	—	@	13¾
Southern, fresh-gathered, average best	12¼	@	13½
Poor to fair	12¾	@	13
W'n, fresh-gathered, dirties	—	@	12¾
Checks	—	@	12
Duck eggs, Baltimore, per doz.	—	@	30
Western	27	@	28
Virginia & Tennessee	26	@	27
Far Southern	24	@	25

LIVE POULTRY.—The market is overstocked with light and inferior fowls.

Fowls, heavy, per lb	12	@	—
Light, per lb	11	@	11½
Chickens, per lb	—	@	11
Roosters, per lb	—	@	8
Turkeys, per lb	—	@	12
Ducks, avge. West'n, pair	70	@	90
Average Southern, per pair	60	@	65
Geese, avge. West'n, pair	25	@	50
Average Southern, per pair	90	@	1 00
Pigeons, per pair	35	@	40

DRESSED POULTRY.—Receipts of fresh-killed poultry are moderate and there is a real scarcity of fancy dry-picked fowls. Trade in frozen poultry is slow.

FRESH PACKED.

Turkeys, W'n, hens, avge. best.	10	@	10½
Western, old hens	9	@	9½
Western, young toms	8	@	8½
Broilers, Phila., under 2 lbs. to pair	30	@	35
Phila., 3½@4 lbs. to pair	18	@	20
Roasting chickens, Phila., selected, large	15	@	16
Phila., medium grades	11	@	13
Fowls, W'n, dry-picked, prime.	10½	@	11
Western, scalded, prime	11	@	11½
Western, fair to good	9	@	10
Old roosters, per lb	6½	@	7
Capons, Phila., large	15	@	16
Small and slips	—	@	12
Western, large	13	@	14
Ducklings, L. I., & other nearby, per lb	20	@	22

FROZEN.

Turkeys, young hens, No. 1	11	@	11½
Mixed, young hens and toms, No. 1	10½	@	11
Young toms, No. 1	10	@	10½
No. 2	7	@	9
Broilers, dry-picked, fancy	16	@	17
Scalded, fancy	13	@	15
Chickens, fancy, soft-meated	—	@	12
Fowls, dry-picked, No. 1	9½	@	—
Ducks, fancy	12	@	13
Geese, fancy	9½	@	10

COUNTRY-DRESSED MEATS.

Calves, veal, prime, per lb	—	@	9½
Fair to good, per lb	8	@	9
Common to medium, per lb	6½	@	7½
Small, per lb	4	@	5
"Spring" lambs, fancy, each	7 50	@	8 50
Poor to prime	4 00	@	7 00

VEGETABLES.

Potatoes, Bermuda, prime, bbl.	5 00	@	6 50
Bermuda, No. 2, per bbl	3 00	@	4 50
Havana, per bbl	3 00	@	4 50
S'n, second crop, per bbl	1 50	@	2 00
State & W'n, in bulk, 180 lbs.	1 25	@	1 50
State, per sack	1 40	@	1 45
Sweets, Vineland, per bbl	2 00	@	2 75
Sweets, other Jersey, per bbl.	1 50	@	1 75
Sweets, Jersey, per basket	75	@	1 00
Asparagus, Ch'n, extra, per dozen bunches	7 00	@	8 00
Ch'n, prime, doz. bchs	4 00	@	6 00
Ch'n, culls, dozen bunches	2 00	@	3 00
Cal., prime, doz. bchs	4 00	@	4 50
California, culls, doz. bchs	2 00	@	2 50
Carrots, old, per bbl	75	@	1 00
Southern, per 100 bunches	1 50	@	3 00
Cabbages, State, per ton	12 00	@	17 00
Charleston, per bbl. crate	1 00	@	1 75
Florida, per bbl. crate	1 50	@	1 75
Celery, State & Cal., large, doz.	60	@	75
Medium, per doz	30	@	50
Small, per doz	15	@	25
Florida, per case	1 25	@	2 25
Chicory, New Orleans, per bbl.	5 00	@	7 00
Cauliflowers, Fla., per basket.	2 00	@	3 00
California, per case	1 00	@	3 00
Escarol, New Orleans, per bbl.	3 00	@	5 00
Eggplants, Fla., per box	1 00	@	3 00
Green peas, Fla., per basket	1 50	@	3 50
California, per box	1 50	@	2 50
Kale, Norfolk, per bbl	25	@	50
Lettuce, New Orleans, per bbl.	4 00	@	5 00
Fla., per ½-bbl. basket	1 50	@	3 00
Ch'n & N. C., per ½-bbl. bskt.	1 50	@	2 00
Onions, Conn. & L. I., wh., bbl.	3 00	@	4 00
Conn. & L. I., red, per bbl	3 00	@	3 25
Conn. & L. I., yellow, bbl	3 00	@	3 50
Orange Co., yellow, per bag	2 75	@	3 00
Orange Co., N. Y., red, bag	2 50	@	3 00
Havana, per crate	—	@	2 75
Parsley, Bermuda, per box	75	@	1 25
New Orleans, per 100 bunches.	2 50	@	3 50
Romaine, Bermuda, per crate.	1 00	@	1 75
Florida, per basket	1 00	@	2 00
Squash, Hubbard, old, per bbl.	1 50	@	2 00
Marrow, old, per bbl	1 00	@	1 25
Fla., white, per crate	1 50	@	2 50
String beans, Fla., per crate	2 50	@	5 00
Spinach, Norfolk, per bbl	40	@	90
Tomatoes, Fla., per carrier	1 50	@	4 00
Havana, per carrier	1 00	@	2 00

HOTHOUSE PRODUCTS.

Lettuce, Eastern, per case	2 25	@	3 00
Cucumbers, pme. to choice, doz.	1 25	@	1 37
No. 2, per doz	60	@	75
Tomatoes, fair to prime, lb	15	@	25
Radishes, prime, per 100 bchs	2 50	@	3 00
Mushrooms, poor to prime	10	@	35
Rhubarb, W'n, per doz. bchs	25	@	60
L. I., per 100 bunches	4 00	@	6 00

DRIED FRUITS.

Apples, evaporated, fancy, lb.	6	@	6½
Evaporated, choice, per lb	5	@	5½
Evaporated, prime, per lb	4½	@	4⅝
Evaporated, poor to good, lb.	3	@	4
Sun-dried, S'n, sliced, lb	3	@	3¾
Sun-dried, State and Western, qrs., per lb	3	@	3¾
Sun-dried, S'n, coarse cut	2½	@	3
Raspberries, evaporated, 1900, lb.	19	@	20
Blackberries, 1900, per lb	6	@	6½
Huckleberries, 1900, per lb	14	@	15
Cherries, 1900, per lb	14	@	15

FRESH FRUITS.—Florida strawberries plenty and lower. Prime apples scarce.

Apples, Spitzenberg, per bbl.	3 00	@	5 00
Spy, State, per bbl	2 50	@	4 00
Ben Davis, per bbl	2 50	@	4 00
Baldwin, fancy, per d.-h. bbl.	3 25	@	3 75
Baldwin, average prime	2 50	@	3 00
Greening, prime to fancy, bbl.	3 50	@	5 00
Greening, common to fair	2 50	@	3 25
Russet, good to choice, bbl.	2 25	@	3 00
Cranberries, Cape Cod, good to choice, per bbl	7 50	@	8 50
Cape Cod, com. to fair, bbl.	6 00	@	7 00
Jersey, fair to prime, crate	1 00	@	1 90
Strawberries, Fla., prime to fancy, per qt	30	@	35
Florida, poor to fair, qt	25	@	28

FURS AND SKINS.—Advices from European sale unfavorable and market weak.

Badger	75	@	1 25
Otter	8 00	@	10 00
Beaver, large	7 00	@	8 00
Medium	6 00	@	7 00
Small	3 00	@	4 00
Silver fox	50 00	@	200 00
Cross fox	8 00	@	25 00
Red fox	1 75	@	2 00
Gray fox	80	@	90
Fisher	8 00	@	10 00
Wolf, prairie	1 00	@	1 10
Timber	3 00	@	4 00
Wolverine	6 00	@	8 00
Lynx	4 00	@	6 00
Wild cat	50	@	60
Marten, dark	6 00	@	10 00
Pale	3 00	@	4 00
Skunk, black	1 40	@	1 50
Half-striped	85	@	90
Long-striped	80	@	90
Striped	45	@	50
White	20	@	35
Raccoon	75	@	1 00
Opossum, large	30	@	40
Medium	20	@	25
Small	8	@	10
Mink	1 00	@	2 00
Muskrat, Winter	11	@	12
Fall	8	@	9

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LABOR 1-2 SAVED.

Also best Horse-power, Thresher, Clover-huller, Dog-power, Rye Thresher and Binder, Fanning-mill, Feed-mill, Saw-machine (circular and drag), Land-roller, Steam engine, Ensilage and fodder-cutter, Shredder, Root-cutter and Corn-sheller.

GEO. D. HARDER, Manufacturer, Cobleskill, N. Y.

☞ Please tell **what** you wish to purchase.

BUSINESS BITS.

THAT'S a fair offer made by the 1900 Washer Co., 143 E. State St., Binghamton, N. Y. They offer 30 days' trial and pay freight both ways if you are not pleased with it. Write for particulars.

A GOOD cart is essential on many farms, and would come in handy on all. Hobson & Co., 19 State St., New York City, make 12 styles, with two or four wheels as desired. The factory is at Tatamy, Pa.

THE Aspinwall Mfg. Co., Jackson, Mich., claims the distinction of being the only house with a full line of potato machinery. If you grow potatoes you can get any machine required of this company. The Aspinwall planter has a world-wide reputation and the digger, sprayer, sorter, etc., were withheld from the market until they had reached the same state of perfection as the planter. Write for new catalogue.

"SPLIT HICKORY" is the keynote of the Ohio Carriage Company's advertising. Hickory is known by everyone to be tough and lasting, and, of course, when split instead of sawed, there is no possibility of a cross grained stick. The new catalogue, showing split hickory styles, is a most valuable book. A copy will be sent to any interested reader who addresses the Ohio Carriage Company, 39 West Broad St., Columbus, Ohio.

OUR Hope Farm man is well pleased with windmill power for supplying both house and barn with water supply. He has never failed to have a full supply since the windmill was put up. There are many mills upon the market differing as widely in plans of construction as the individual ideas of the various manufacturers, but there is probably no more reliable all-around perfect mill than the Samson. It is made by the Stover Mfg. Co., Freeport, Ill. The Samson art catalogue describes the mill in detail.

CLARK O. PORT, of Earlville, N. Y., writes to Dr. B. J. Kendall Co., Enosburg Falls, Vt., under date of March 11, 1901, as follows: "Some years I ago I used your Kendall's Spavin Cure on a horse that had two bone spavins, and it removed them entirely. These spavins had been on him from birth, and were of 10 years' standing. I now have a case of a mare that was injured by falling through a bridge, and am going to give her complete treatment with your spavin cure. Please send me a copy of your Treatise on the Horse and His Diseases."

THE American Agricultural Chemical Company, since its organization, has introduced the best machinery and methods into its various factories. As they are now under one management it has been possible to establish higher standards and weed out some of the many duplicated brands. The heavy operations of this great company enable it to buy and manufacture raw materials in large quantities, so that while most raw materials have increased in price the mixed goods are cheaper or much the same as before. This company is in a position to serve the farmers well by reducing prices and raising the quality standard.

A VALUABLE little book is "Modern Dairy Feeding." In it the scientific and the practical are so happily combined that the problem of feeding for milk is clearly and logically explained in a most interesting manner. The definitions and explanations of the different elements of feeding stuffs and their effect upon the animal are pure and lucid, and certainly of immense value to the dairyman. The book is replete with valuable information and should be in the hands of everyone engaged in feeding for milk. It can be obtained free by any reader of THE R. N.-Y. simply sending name and address to The American Cereal Co., 1339 Monadnock Building, Chicago, Ill.

FROM the time the frost goes out of the ground in the Spring until the last Fall grain is sown there is work for the weeder. It can be run over the grain when seeding to clover or Timothy. When seeding oats with grass we like to work the oats in with some heavy tool, then sow the grass seed and use the weeder. It may be run over the young strawberries, and before the potatoes or corn appear, it will mellow the ground and kill thousands of weeds. From then on until the plants are too large, and later, in the Fall seeding to grain and grass, the weeder does its duty. There is no tool on the farm that can be made to do so many different things. The discovery of this principle of cultivating with limber fingers is one of the great events of modern farming. There are many different kinds of weeders, but for all-'round every-day work the "Anti-Clog," made by D. Y. Hallock & Sons, York, Pa., seems the standard.

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I have for sale some very choice Stallions, Blacks and Dark Grays, from 1 to 7 years old, of the highest breedings; grandsons of Brilliant and La Ferte. Prices reasonable. Correspondence solicited. HENRY A. ROHRS, Breeder and Importer, Napoleon, Henry County, Ohio.

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136 Acre Fruit Farm and country home, 60 acres fruit all bearing, good building, desirable location, $13,600. F. A. CHAPMAN, Wellsburg, W. Va

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I Can Sell Your Farm for cash no matter where located. Send description and selling price, and learn my wonderfully successful plan. W. M. Ostrander, 1215 Filbert St., Phila., Pa.

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Market Briefs.

PICKED UP HERE AND THERE.

POTATO PRICES.—The rise, which many people were expecting, has not come yet. In fact, potatoes are lower now than they were a few weeks ago, and the market is weak. It certainly looks as though those who sold early in the season did a wise thing. Many farmers have found it a pretty safe rule to sell early if anything like a fair price is offered. In this way they get rid of the waste, shrinkage and danger of loss by freezing. The ideal way is to dispose of the crop right out of the field, without storing at all, but it is not often that this can be done with a late crop, as the market at that time is likely to be flooded. Choice Vineland sweets are selling at $2 to $2.50 per cloth-top barrel, and we hear now and then reports of $3 being obtained, but not enough of these to warrant a quotation. There is a good supply of new potatoes from Bermuda and Cuba. Some Bermudas bring as high as $6.50 per barrel, but the quality of many of those from Cuba has been very inferior, prices ranging from $3 to $4.

THEY HANG ON.—An Indiana man makes a unique defense in favor of the Ben Davis apple. He admits that the quality is no good, but says that they are better than none; and, as they stand heavy winds better than most other varieties, every farmer ought to have a few trees in case the rest of his crop is blown off and ruined. He says that a heavy storm in his vicinity removed nearly all except this variety. Now he and his neighbors who planted Ben Davis are eating apples, while others who called him foolish for setting out such a worthless variety, are either buying or going without. For insurance against storms, however, we once saw a seedling apple which would discount Ben Davis. Nature had glued the fruit on this tree in a most remarkable manner. The quality was not considered good enough to warrant picking except in case of failure of all others, but those apples stuck to the tree like grim death. At least one-third of them hung on during the Winter, and it was nothing unusual to find a few still there when the new crop was full grown the next Fall.

EGG NEWS.—The States of the Central West produce great quantities of eggs, and the output this year is said to be larger than usual. The consumptive trade has been good, and prices have been a little too high for storage buyers to operate to any great extent. A number of large deals, however, have been made in western markets on the basis of 12½ to 13 cents. This speculative buying for storage has caused a marked difference in receipts at New York for the past few days, as it has held back large quantities that would otherwise have been shipped here. There is no scarcity for current trade, but the market shows such firmness all around that few eastern cold-storage men care to do much until there is a decided change in conditions. No doubt after the close of the Lenten season, the call for eggs will fall off considerably, but it is not probable that there will be any landslide in prices for a time at least, as western speculators will absorb the surplus there as soon as any mark below 12 cents is reached.

W. W. H.

The New York Rose Show.

The second annual exhibition of the American Rose Society was held in the Waldorf-Astoria Hotel, New York, March 19 to 22 inclusive, under the direction of the patronesses of the Charitable Annex of the Loomis Sanitarium for Consumptives. It was a great success, financially and horticulturally, the flowers being even better than those shown last year. The center of interest was as usual in the huge and perfectly-grown American Beauties, with their immense stems and glossy foliage. The new pink sport of this favorite variety, Queen of Edgely, was shown in great perfection, but while it retained the form and high perfume of the parent, it seemed to lack warmth of color. The various Tea and Hybrid Tea roses were perfect in finish and enormous in size. Robert Scott, bright coral pink, and Ivory, white, a sport from Golden Gate, seemed the best of the newer ones. The new crimson Liberty was liberally shown, and excited much admiration for its size and perfect finish as well as its depth of color. Some fine decorative effects were shown, especially in orchids, which have never been displayed to better advantage in the city. A Crimson Rambler rose in bloom trained to represent a ship under sail was very much admired. A collection of rare plants from the New York Botanical Garden, including some large cacti 10 feet or more tall made a very interesting addition to the general effect. The display of carnations was magnificent, and it is a question whether this flower, as now developed, does not have the advantage in coloring over the rose. Certainly the yellows are better and the dark reds fully equal in richness of tinting to any of the roses, and the range of shading is nearly as great. A multitude of special prizes and premiums, some of considerable value, was offered by various members and patrons of the society, and they were in the main very worthily captured. A great feature of the show was the elaborately planned and executed Italian garden filling one of the larger assembly rooms of the building. Tall hedges of cedar and laurel, many feet high, inclosed a labyrinth of beds of blooming roses, Azaleas, lilies, lilacs and bulbous plants, while the requisite formal effect was strengthened by statuary, vases, palms, clipped conifers and bay trees. The rich purple Bougainvillea was used in great profusion, and contrasted well with the feathery white blooms of the lilacs and Japan cherry trees. The Italian garden was a most commendable addition, and was undoubtedly of much educational value.

W. V. F.

OYSTER SHELL SCALE.—Last May, just after the scale hatched out and began crawling up the body and the limbs of our four-year-old apple trees, I made a wash of strong soap suds and whitewash applied with broom; it was perfect.

La Paz, Ind. C. A. B.

A MAIL CARRIER TALKS.—I have been pleased at what you have said about free rural mail delivery, and if you could induce the powers that be to pay the carriers a fair living salary, you would receive their blessings; $500 a year for two teams, their feed and repairs, also wife and baby to take care of, makes mighty close figuring to keep square, to says nothing about something for a rainy day. The carriers have to work all holidays, nor do they get 15 days' vacation "with pay," as other Government employees. Surely, Uncle Sam has ground them down pretty low.

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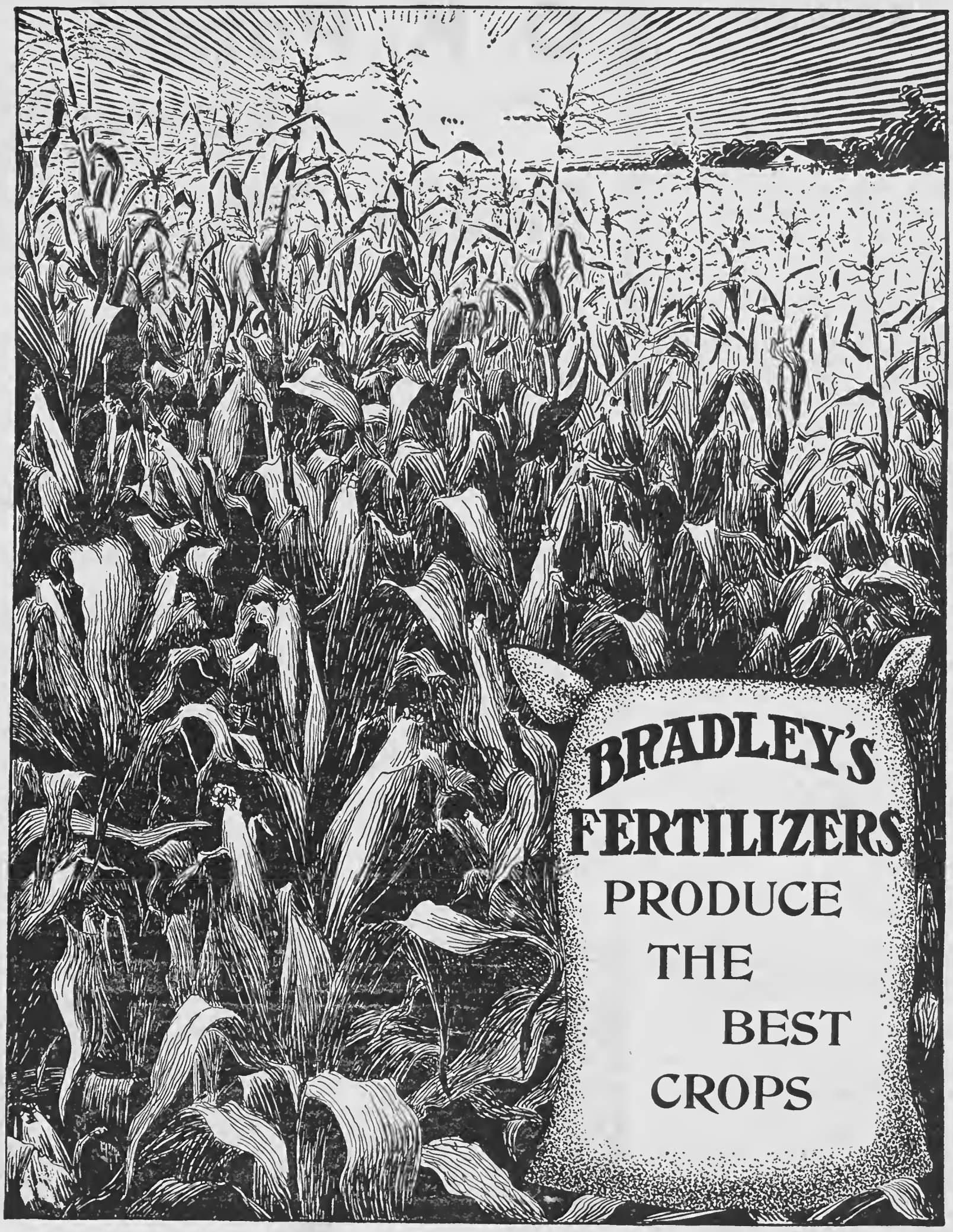

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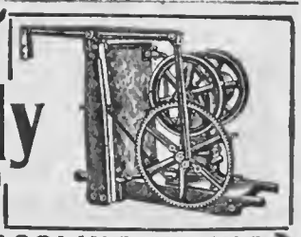

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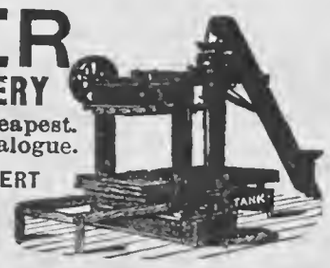

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The rain, though raining every day
Upon the just and unjust feller,
Falls chiefly on the just, because
The unjust takes the just's umbrella.
—Credit Lost.

TEACHER: "Now boys, who can tell me which is the most difficult thing to acquire in cycling?" Chorus of Yells: "The bicycle, sir."—Motherhood.

CLARENCE: "Did my proposal surprise you, Clarissa?" Clarissa: "Indeed it did, Clarence; honestly, I didn't expect to get it without hinting for it."—Credit Lost.

"A NEW YORK boy thawed out an old shotgun on the kitchen stove." "What was the result?" "Funeral at convenience of the family."—Cleveland Plain Dealer.

"MRS. PENDEE has suffered a great loss through the death of her husband." "Yes; but, fortunately, the loss is fully covered by insurance."—Philadelphia North American.

CONTRACTOR: "You won't sell me a carload of bricks on credit?" Dealer: "No. Me an' my bricks are very much alike. We're hard pressed for cash."—Philadelphia Record.

SCHOOLMA'AM (encouragingly): "Come now, Harold; spell chickens." Harold: "Please, ma'am, I'm not old enough to spell chickens; but you can try me on eggs."—Leslie's Weekly.

WICKLER: "Beastly weather, isn't it?" Stickler: "Why will you insist upon using those idiotic expressions? How can the weather be beastly?" Wickler: "Well, it's raining cats and dogs."—Philadelphia Press.

"MAMMA," called three-year-old Margie from the top of the stairs, "won't you please come up and sit with me till I go to sleep?" "No, darling; mamma's busy now," was the reply. "Run back to bed; the angels will watch over you till you go to sleep." "That's what you said before, mamma," answered the little miss, "but the angels didn't show up, and I'm just awful lonesome."—Motherhood.

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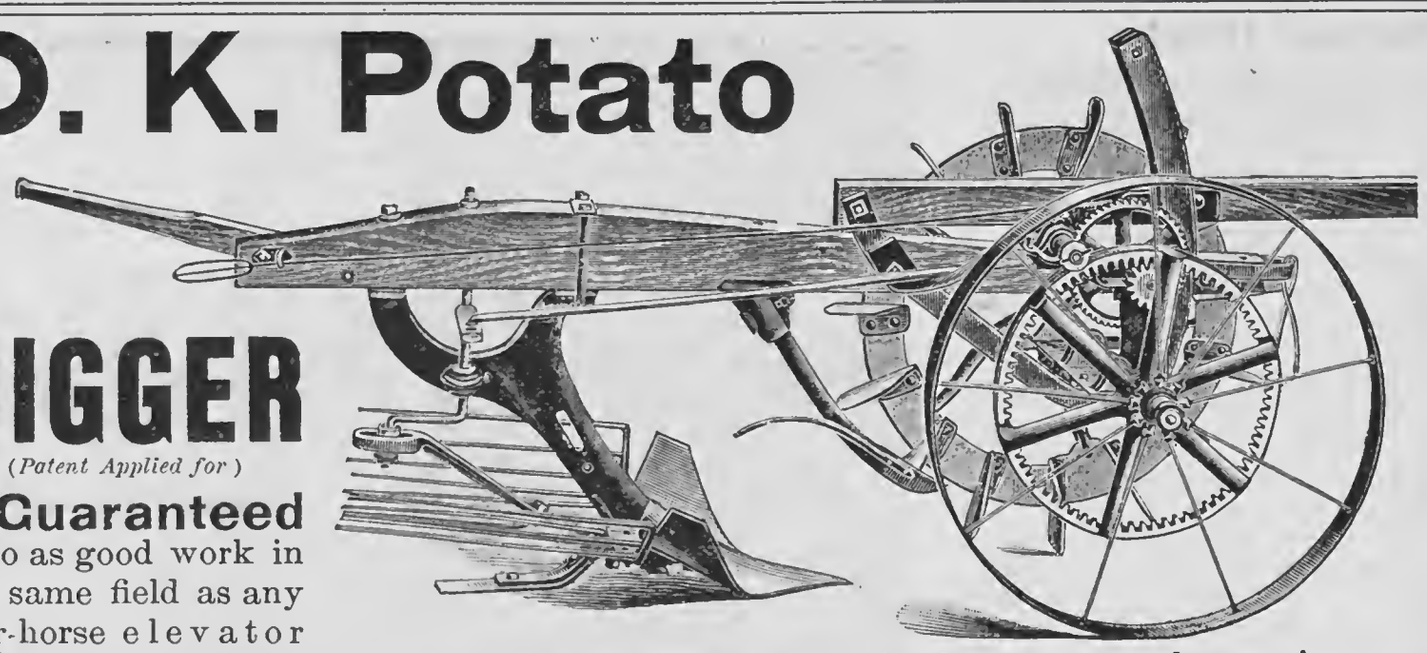
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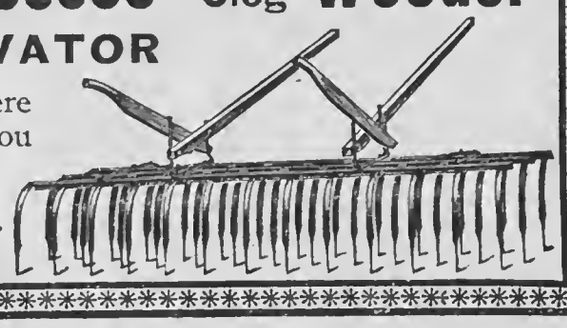
HALLOCK WEEDER & CULTIVATOR CO.
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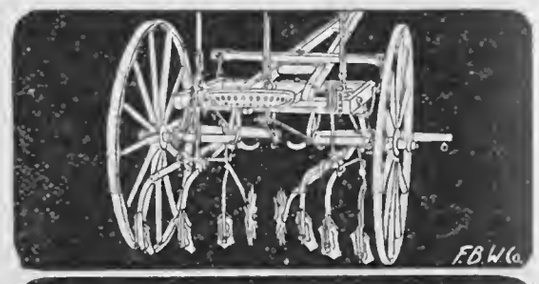
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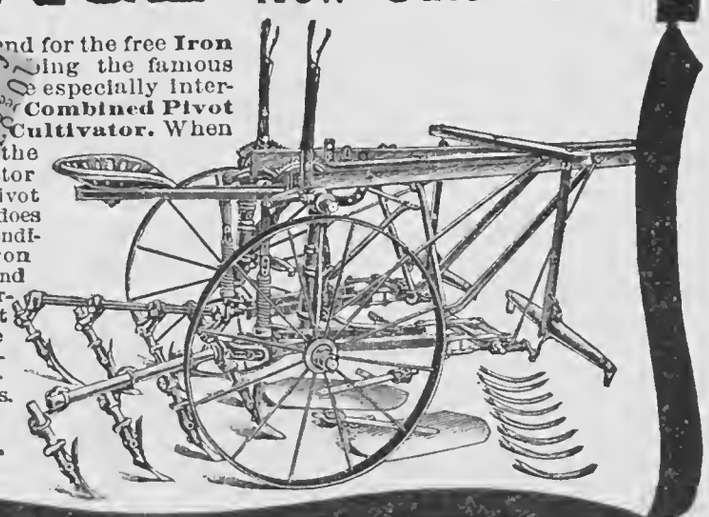
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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2672. NEW YORK, APRIL 13, 1901. $1 PER YEAR

AN EXPERIENCE WITH MELON BLIGHT.

WHAT A MICHIGAN MAN DID.

Fighting Insects and Disease.

We have received many requests from readers for information about Melon blight. F. A. Sirrine, of the New York Experiment Station at Jamaica, L. I., sends in the following letter from Holmes Bros., of Ypsilanti, Mich., who are large melon growers. This treatment is based on the work done on Long Island by Mr. Sirrine,

INSIDE "WORKS" OF A POTATO. FIG. 107.

who says: "Some pickle growers on Long Island, who took the precaution to spray their cucumber vines to prevent the downy mildew of the cucumber, obtained a yield of 100,000 pickles per acre, while many who did not take the trouble to spray had no pickles to pick. The latter were so much in the majority that pickles were worth at least their weight in silver, if not in gold."

PREPARATION AND PLANTING.—On our land, which is sandy, we use 15 cords of coarse straw and stalk manure per acre, spread broadcast and plowed under to a depth of seven inches. In addition we use about 300 pounds of home-mixed fertilizer per acre applied by means of a grain drill. We have been quite successful with 800 pounds of good home-mixed fertilizer per acre used alone, 1,200 pounds per acre gave us ranker vines but no more melons; but we have better results as a whole when we use plenty of coarse straw and stalk manure with a small amount of fertilizer. We fit the ground about the same as for corn, in addition we give thorough tillage. We start our melons in cold frames, planting the seed about April 20, and transplant to the field from May 20 to June 5. We have nearly 23,000 melon boxes made, which will give us plants enough for about 18 acres; planting in rows six feet wide and five feet apart in the row. We plant Emerald Gem, Paul Rose and Osage. The Paul Rose is our best basket melon, as it grows more uniform in size than the Emerald Gem. The Emerald Gem is a little earlier with us, and of better quality.

FIGHTING INSECTS.—The striped beetle has given us much trouble, but we have always heretofore controlled it by the use of carbolized lime sifted on the hills, combined with decoy squash vines planted on the margins of the field; we also plant one row of squashes through the middle of each field. In addition the squash vines are used for lures for the Black squash-bug. The latter are picked from the vines while pairing, and from under decoy shingles, persistently. In addition we watch carefully for the eggs and pick them; one needs sharp eyes for this work. It is quite a task to hand-pick these bugs from trap plants around fields of 14 or 15 acres, but we do it, and find that it pays us. The past season's work shows that the spraying with Bordeaux Mixture is even more effective in driving off the striped beetle than is the carbolized lime. We have been troubled very much with the aphis, or plant louse. The only way we could control it was to pull the vines on which its work is first seen. One can readily distinguish its work by the color and appearance of the vines, and at the first sign we pull them, pile, and cover them with kerosene.

FIGHTING DISEASES.—Diseases first showed in our fields in small patches about three years ago, and have been increasing very rapidly ever since, until last season (1899) we lost several acres almost entirely. What melons we did get were poor in quality. In 1899 our Osage field was literally covered with full-sized melons that were not marketable on account of a disease. All the southern melons that came into this market last year were also off quality. We learned of the work done by the New York Agricultural Experiment Station on the downy mildew of cucumbers, and after receiving the bulletins, together with a letter on spraying, we decided to try spraying our melons. We commenced spraying about June 12, 1900, and sprayed once each week until we com-

POTATO WITH A BONE TO PICK. FIG. 108

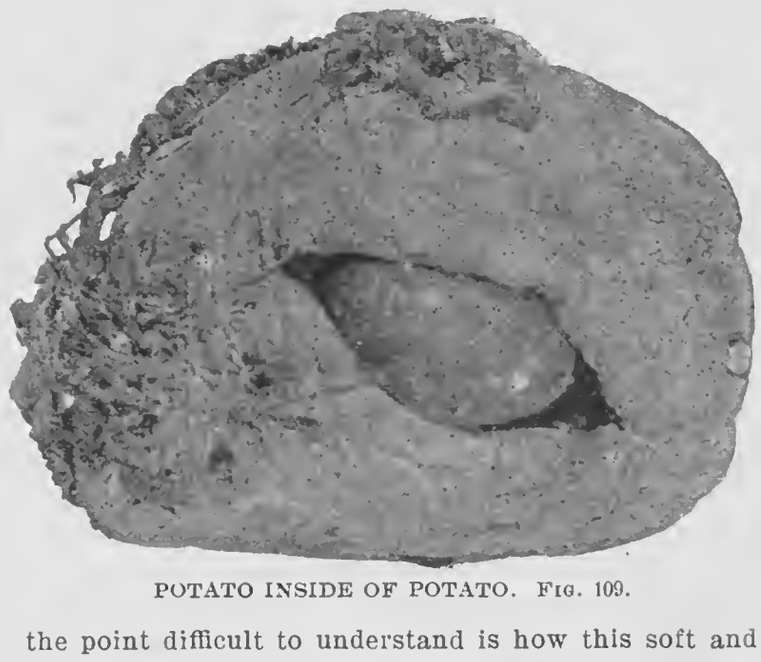
menced to pick, August 3, making six applications in all. We are convinced that it would have paid us to make two more applications. We used the one to eight formula in preparing the Bordeaux Mixture, but there were indications that this strength injured the leaves, especially when applied to the under surface of the leaf; hence another year we shall spray with the one to 12 formula and commence the spraying before transplanting to the field.

The last of June and the first of July a cold wind whipped the vines of our Osage and basket melons, in exposed places, destroying the first set of melons. The result was a partial failure of the crop. On matured vines that held the first set of fruit we obtained very satisfactory results; holding their flavor until the last. The damaged vines grew considerably after the spraying was discontinued, and gave us a fair demonstration of what the spraying was doing for us; around the center of the hills, which usually go first, the leaves stood up finely, while the unsprayed tips died down completely. Furthermore, the spraying appeared to check the blight after it appeared on the leaves. We think no mildew showed on our fields the present year, but the Alternaria (the so-called Cantaloupe blight) continued gradually to kill off the old leaves; but, as a whole, we are sure that the spraying helped to save our crop last year. The blight usually makes its appearance in our vines about the middle of July, but we noticed it the past season about June 25. We used the Eclipse pump made by Morrill & Morley, of Benton Harbor, Mich. It is important to have a high pressure pump in order to get a satisfactory spray. We built a spray cart especially for the purpose. This cart has a tread of six feet, that being the width of the rows. The thills are placed one side, so that the horse is in front of one wheel and travels between the rows. We obtained one-fourth inch web hose, using two leads of it Each lead is 25 feet long, but it is so light that it does not drag the vines enough to cause any injury. The nozzles were attached to the hose by means of a short brass rod provided with a stop cock. We also have a frame to which we tie each lead of hose. This helps very much in carrying the weight of the hose. Our year was not as successful as we would like, as the cold weather in June retarded our transplanted melons, while the favorable weather of July and August advanced hill-planted melons so rapidly that the two crops came in together. The spraying of 18 acres (including price of machine) cost us $150.

HOLMES BROTHERS.

SOME FREAK POTATOES.

The cuts on this page illustrate potatoes grown under unusual conditions. Figs. 107 and 109 show views of a young tuber developed within its parent. The section, Fig. 107, shows how the bud started under the skin from the opposite side of the potato, and grew through the flesh until a new tuber was formed and grew large enough to burst the old potato. Just why this bud grew through the flesh instead of directly out of the potato is not easy to determine, but it was evidently one of the ordinary accessory buds with which the usual potato "eye" or buried branch is provided. The specimen was found in a cellar while preparing potatoes for seed, and it is possible that the direction of growth was caused by the potato lying on the side from which the bud started, thus forcing it to grow upward through the flesh, if it developed at all. The potato in Fig 108 was evidently on a hunt for phosphoric acid, and has wedged itself so tightly in the femur of some animal that it has burst its bony casing, which was still quite rigid and firm. A potato is neither a root nor a true tuber, but merely a dormant branch swollen and stored with starch and reserve materials, preserving its bud axes in the form of the "eyes" we are all so familiar with, but



POTATO INSIDE OF POTATO. FIG. 109.

the point difficult to understand is how this soft and watery growth is able to exert sufficient pressure to burst anything so firm as this bone must have been. These interesting specimens were kindly sent THE R. N.-Y. by Prof. C. L. Newman, of the Arkansas Experiment Station, at Fayetteville, Ark.

THE LAND OF THE ROME BEAUTY APPLE.

Where This Famous Variety Thrives.

HIGHLAND ORCHARDS.—A man must like his business if he attains much success. I was raised on one of the high hills of southern Ohio and there were 50 or 75 acres in apple orchard on my father's farm at my earliest recollection. Nearly all the trees were the new apple then, Rome Beauty, which originated in this county, and I think it holds its place to-day as strongly as it did 30 years ago. Our highest land is suited to the Rome Beauty. It attains good size, takes on a beautiful finish in coloring, which makes it sell well; it keeps well when properly sprayed and grown, and is fair in quality. If I were in a different locality I might be in favor of the Baldwin, Ben Davis, York Imperial and other varieties, but here they will not compare with Rome Beauty in the same orchard from a commercial standpoint. Grimes, in a small way in our local markets, will pay as well as Rome Beauty, but Ben Davis has not given half the profits one year with another, as it has had the bitter rot badly where not sprayed, and much worse than Rome Beauty; is frequently rough, and will not keep as well when grown in the same orchard and given the same treatment. The best varieties to grow are the ones suited to the soil and the demands of the market, a red apple being preferred.

SETTING THE TREES.—Good trees, healthy and thrifty, should be transplanted when two years old, and the tops cut back severely. We have set our orchards 20 feet apart for 20 years, and unless the ground is very rich, or the variety a strong grower, that distance is great enough for the best results. Our land is naturally thin, and underlaid with slate or sandstone, and in some places the stratum of rock is on top; so trees do not live long for us here. Drought, root rot, starvation, borers and the Woolly aphis soon cause the trees to be thin enough on the ground. Our trees usually begin to bear when four to six years old, if given good culture.

HUMUS AND FERTILITY.—We grow cow peas in our orchards to furnish humus and trap nitrogen, but we think it best for us to leave the vines on the ground till Spring and use a Cutaway harrow to incorporate them with the soil. When the growth needs turning under in the Fall the limbs of the trees are usually bent down with their load of fruit, and the trees being so close together it is not possible to do a nice job plowing it under. We must have Orchard grass or something, and I don't know anything better, to prevent the soil on our steep hillsides from washing away. The orchard should be cultivated when young, and continued as long as the circumstances will allow, but something must be grown for humus, as that helps to hold the water supply needed by the trees in ripening their fruit. Either an earth mulch or a shade from plant growth, such as cow peas, or a mulch formed by mowing Orchard grass and clover, and leaving it on the ground, conserves moisture, and will be a great help to the trees, not only in ripening the crop at that time, but in future.

SPRAYING.—The trees should be pruned so as to form a low head; then the pruning in later years, the spraying, the thinning and the picking can be done to better advantage. We commenced spraying 10 years ago under the direction of Prof. W. J. Green, of the Ohio Experiment Station, and have been using the dilute Bordeaux Mixture to prevent fungous growth, with an insecticide added to help destroy the Codling moth, curculio, canker worm, bud moth and caterpillars. Last year we used arsenite of soda for the first time, and I am confident it is better for us than Paris-green. I know that every dollar invested in spraying in our orchard for the past two years increased our proceeds at least $10. One year with another, $100 worth of apples can be sprayed for $5, and if they had not been sprayed they might not be worth more than $50, and will rarely bring over $75. We spray four times, and last year completely prevented the bitter rot, while neighbors lost nearly all where not sprayed. The fruit so treated keeps much better after it is picked, the foliage of such trees will be healthy, and the fruit can keep growing till the weather conditions call a halt, and it will hang on till late in the season, be better in color and quality, and will sell for more money.

THINNING.—I have heard it said that fruit strengthens the nerves, but I have not seen but very few persons engaged in fruit culture who had the "nerve" to thin the fruit as it should be for best results. When trees set heavy crops of fruit it will pay to remove at least three-fourths of the small apples early in June or July. If three times as many as look necessary are pulled off at that time, provided they have been well sprayed, the trees may be too full at maturity, the fruit will be worth more on account of size and perfection, and the trees will be in better condition to bear the following year. A man working in a lumber yard may be able to carry loads of 75 pounds day after day, but if he tries to carry 175 pounds at the same rate of speed he will soon have to rest a few days to be able to work at all. If a tree produces such a heavy load of fruit that it takes all its energy to mature the fruit, there will be no fruit buds formed for the following year, and it will have to rest a year or two, if it doesn't get an eternal rest, before it can bear another crop. I believe if trees are given good culture they will not set so many fruit buds and overbear so much; the large amount of thinning will not be necessary, and the trees will be more likely to produce crops or partial crops every year.

PICKING AND PACKING.—In picking our apples we go over the trees as soon as possible, leaving the small and green ones, and gather what is fairly well colored and ripe enough by putting the thumb or finger against the stem and pulling so as to break the connection between the stem and twig on which it grew; otherwise the stem will often pull out of the apple and cause it to rot prematurely. In two or three weeks we go over the trees again and find nearly as good fruit as was picked at first. We believe in packing the fruit in the orchard as soon as it is picked from the trees, and taking it to where it is to be stored or put on the market at once. If it is left in the field awhile it will soon begin to ripen and decay, but if put into cold storage at once the ripening process is postponed and the perfect fruit will remain sound for months. We always grade our fruit, and mark the package so we know what it contains, and put the grower's name on it as a trade mark. We sell our fruit for what it is worth or a little more; and back the quality with the pocketbook if necessary. The best grade always sells best, and if second-grade fruit is put in the package with first-grade fruit all will sell as second grade. Last year we packed our apples in boxes for the first time, the size being 22x 11x10¼ inches. Apples 2½ inches and over were put into one box, and the smaller ones put into another. These boxes are too small to suit many dealers, and it would be best, it seems to me, to have boxes holding a full bushel, or possibly a half barrel. It will be cheaper to use larger boxes, and probably it will prove to be best to pack only the large specimens with good color that way, and put the smaller and green ones into barrels. We made as much if not more, clear money by boxing, than we could have made by barreling. Wholesale men want to make as large a profit on a box as if it were a barrel, and grocers and consumers will not pay it, so the barrel is preferred by them. Another crop we hope to have larger boxes and some barrels also; then people can take their choice of packages. Transportation companies charge more freight on apples in boxes than in barrels, except in car lots. Between two points one road charges 47 cents per 100 in boxes and 16 cents in barrels, less than car lots. Other roads charge about twice as much. If the box is to become the common package, they will have to be shipped in car lots or sold in the local markets, unless the freight rate is changed.

Lawrence Co., Ohio. U. T. COX.

THOSE CROWDED APPLE TREES.

Mr. Lee, of Carroll Co., Ohio, asks whether I know of an orchard 25 or 30 years old on which my plan has been carried out. I have never seen my plan for greatest profit from orcharding carried out any further than he has done. I have seen 206 barrels of apples picked from 90 trees, 30 each of Baldwin, R. I. Greening and Roxbury Russets, the eighth year from setting, and 60 barrels the sixth year from setting. The trees were set 18 feet apart each way, occupying two-thirds of an acre. Had one acre been planted with same varieties, using 135 trees, the yield would have been 309 barrels, while if planted 35 feet each way the yields would have been only 80 barrels. There is no reason to believe the yield would have been any larger the eighth year if the trees had been set farther apart, for there was ample room for each tree. When trees begin at three years to bear and bear every year, as they should do, and as Mr. Lee says his orchard did, until it became too thick, it can be easily figured that the orchard set with 135 trees (18 feet apart) would produce more profit up to 15 years of age than one set 35 feet apart would produce in 25 or 30 years. If when the trees begin to crowd the orchardist has not the courage or business sagacity to trim off the tops from every other tree, or cut down and take out every other tree, he must, of course, suffer the consequences. It is no fault of the close planting. Mr. Lee says he "likes the theory, but would like to know how it works in practice. My own experience and my neighbor's failed through no fault of ours." There was no failure up to the time the trees began to crowd each other, but rather there was great gain in profit, as Mr. Lee must know. The failure was in not taking out the trees at the proper time. Had this been done, the orchard would now be as though planted 35 feet apart at first. The fault cannot justly be placed with the trees, or to the close planting system. It is simply the fault of the orchardist. The day has gone by in New England for cropping the land occupied as an orchard, after the trees come into bearing. Spraying, fertilizing and cultivating, which are so necessary for successful orcharding here, cannot be profitably done, with only 35 trees to the acre without some other crop being raised on the same land. There is but little or no profit in growing any other crop we can grow in competition with our western farmers. Therefore push the orchard for all there is in it, and get all we can and as quickly as we can from it. This can be done more surely and effectively by close planting.

Connecticut. EDWIN HOYT.

Fruit Notes By An Old-Timer.

Give Mr. Hoyt my compliments, and tell him that *sunlight* is better than Bordeaux to raise fine fruit. Let me suggest to any nurseryman who tells the fruit grower the importance of thinning fruit, that we appreciate the importance of the advice, and as a return favor, that the nurseryman set a good example and thin his long list of varieties, and not claim the privilege of substituting varieties which without that help could never be sold. How long could a fruit grower do business who advertised fruit to be shipped from his storehouse, and claimed the privilege of substituting any old kind for the variety ordered? A pound of practice is worth a ton of theory in raising Baldwin apples 18 feet apart. Good culture and high feeding delay the bearing age of apples. Different varieties of apples require different treatment for best results. Make the variety fit the location. The best quality fruit is grown on trees well laden with fruit. An overfed tree is no better than an overfed horse for profitable results. Poor apples—poor prices; no good name improves them. H. O. MEAD.

THE USE OF FERTILIZERS.

An article on page 207 of THE R. N.-Y., March 23, on "Who Shall Mix Fertilizers," is weakened by the conclusion, which reads as follows: "The soil may have four aches—requiring nitrogen, potash, phosphoric acid or lime to cure them. Unless you *know* which particular ache your farm has, you would better use all four." This strikes me as remarkable advice, and likely to mislead. The soil may have the four aches, but ordinarily these aches are all the result of improper handling, lack of tillage, or deficiency of humus. Many soils abundantly rich in all four of the materials mentioned fail to give results because of poor tillage or lack of humus. To attempt to make commercial fertilizers amend for the wrong conditions is what causes many farmers to lose confidence in commercial fertilizers. When a soil is found to be producing unsatisfactory crops the first thing which should receive attention is the humus supply. If no cover or green manuring crops have been plowed under in recent years, or if no barn manure has been used, it is very probable that the ache is caused by lack of organic matter in the soil. To remedy this ache apply stable manure, grow cover crops upon every possible occasion, and in this way bring up the percentage of organic matter in the soil. If the cause of the ache is not deficiency of humus then poor tillage may be the cause. As a matter of actual experience we have found that these two things mentioned are very often the source of trouble. In the article above referred to we are told "unless you *know* what particular ache your farm has you would better use all four" (nitrogen, phosphoric acid, potash, lime). Our advice would be, unless you know what particular ache your farm has, find out. If it is found that nitrogen is needed use nitrogen; if potash is needed use potash; in other words, *find out* what is needed and then apply the remedy. If a man is sick it would be poor advice to recommend that he go and buy a patent medicine guaranteed to cure everything from chilblains to liver trouble and consumption. Better locate the cause of the ache and apply a specific remedy. This principle applies to soils as well as to men. The Cornell University Experiment Station, Ithaca, N. Y., is sending to farmers circulars telling how the soil may be tested and how the farmer may definitely learn what the soil needs. L. A. CLINTON.

WEEDING THE WHEAT.—If I had a piece of Winter grain on which the Fall sowing of grass seed had caught well, and withstood the Winter favorably, I should hesitate long before going on it in Spring with weeder, preferring to watch my chance and sow clover seed in the usual manner; that is, when surface soil was honeycombed with frost. I have known good results obtained by running the Thomas smoothing harrow over the surface of a clayey wheatfield after it had dried sufficiently in Spring, before and after sowing clover seed, but there had been no grass seed sown in Fall, and have heard men make great claims in favor of the practice as to the increased yield of wheat resulting therefrom, but I have not been able to put my hand on any well-authenticated case where the scales, and measuring line were employed to test the results of such treatment on a field of uniform fertility. I hope this may bring out some facts, as well as figures. M. GARRAHAN.

POTATO GROWING ON LONG ISLAND.

The beauty of the potato farming as our potato-raisers practice the crop, is that when the potatoes are planted the ground is all ready without further fertilizing, for the crop of wheat and the grass crop, which, as a rule, with us follow it. This is not invariable, for one man told me that his wheat and clover would lodge if sown after potatoes, and he practiced seeding down with Timothy and Red-top on that account. He uses about a ton to the acre of fertilizer, and, as he said, all the coarse manure he could make. We have a variety of soil, from that so sandy that in a dry season, like the last, the crop will be almost a failure, to heavy loam almost clear from any grit, and the methods of manuring and planting vary with different farmers. Many use their horse manure plowed in and from 1,500 to 2,000 pounds of fertilizer to the acre in the drill. Some say 1,500 pounds will produce as many potatoes as more, and others will laugh at the idea. Some put part in the drill and broadcast the rest. I suppose that a ton to the acre is about right of a good potato fertilizer, and the best way to use it on his own soil each man can find out for himself. From 250 to 300 bushels to the acre is considered a good yield, although that is sometimes exceeded, while often the crop is less. The kind planted at present is Carman No. 1 almost altogether by those who have tried it, and those last year who planted other kinds were sorry, so far as I have talked with them, that they did not plant No. 1 only.

If you want to see what pluck, push and potatoes can do just come to Long Island and we can show those who started with little or no capital who have now nice houses and other buildings, carriages and horses, machinery, windmill, etc., proving most surely that the cry which some farmers raise that farming is "played out" is all moonshine. They raise from 25 to 40 acres of potatoes, sell quantities of wheat, straw, hay and other products, and in a general way are giving the farmers a lesson which many of them very much need. Tell the person who wants to experiment with one-half acre of potatoes to put one ton to the acre in drill on part of it; one ton broadcast harrowed in on part; one-half ton in drill, one-half ton broadcast on another, 1,500 in drill, 500 broadcast on another and note results. B. C. F.

Water Mill, N. Y.

WANTED! AN IDEAL FARM HAND.

I have 320 acres, follow general farming, keep one man by the year, and others by day or month as required. I keep a married man by the year; furnish house, firewood, keep for cow and calf, fruit, and an acre of ground, with team when needed to cultivate the same, besides other privileges that generally go on a farm. I pay $15 per month cash; man boards himself. I work 10 hours per day in Summer, from 7 A. M. to 6 P. M., with one hour at noon; shorter hours in Winter. I do no dairy work; milk but two cows, which the yearly man does before 7 A. M. and after 6 P. M. That and caring for his team is all the choring he does in Summer, so he knows exactly what his work is. Now, I don't think my system is hard, and while my men by the day or month usually work pretty well, yet I have plenty of trouble with the man by the year. He does not seem to be satisfied that he has a good thing, and "soldiers" on me at every good opportunity, especially if I am away from the farm. He is exceedingly careless with horses and tools, continually having accidents and losing time, and sure to make the wrong move unless I am there to direct. I find that various articles disappear from time to time, such things as a bag of flour, corn, bran, oats, and other little things that "will never be missed." All of this is very unsatisfactory, and, of course, I would not tolerate it for a week if I could avoid it, but I seem to be helpless. Men are scarce, and the natives, except on short jobs, act as though they expected to loaf at their work about half of the time. I would like to try Germans or Swedes, young married men. Do you think it advisable? Do you know anything about that class of help? Could I get information from Commissioner of Immigration, Castle Garden?

MICHIGAN FARMER.

R. N.-Y.—Four out of five farmers could tell about the same story with some slight changes. It is easy to talk about the ideal farm hand, but the fact is that there are not men enough of this type to go around. In hiring help there are two essential points; what can he do, and is he to be depended upon? Plenty of men can do a good day's work if they have a mind; but will shirk unless watched; or, after a holiday or a trip to town at night, there is no certainty that they will be able to work the next day. Others work just as well alone as when the boss is around, and do not misuse team or tools, but they can't do much work. A farm hand who is smart to work and can be trusted is such a scarce article that he can take his pick of the best farmers in the neighborhood, often at $5 per month above ordinary wages. The conditions named in the question are not hard, but probably this employer cannot get a satisfactory year man at the price. He will either have to increase the pay, or take some one who is honest and can be depended upon, but not much of a worker. The ability to be trusted and to use good judgment brings a proportionately higher price than the power to do actual work. A railroad or bank president draws a large salary not on account of the amount of work he does, but because the stockholders feel that they can depend upon his integrity and judgment. In a farm hand there is not so much at stake, but if it is worth anything to a farmer to feel that he has a man who can be depended upon, he must expect to pay cash for it. The better class of English, German and Swedish laborers make excellent help, but they are soon picked up at

COWS DISHORNED WITH CAUSTIC POTASH Fig. 110.

high prices, or get into other lines of work in which there is more money. In getting immigrant help a person runs some risk, as often a man who starts out fairly well, turns out to be worthless. You should write to W. H. Meara, 45 Pearl Street, New York, and tell him what you want. He is at the head of a Labor Bureau maintained by the German Society.

THE WEEDER ON CANADIAN WHEAT.

As to using the weeder on wheat in Spring, I would say yes, most decidedly, provided that the wheat had a heavy top in the Fall, in which case the snow would beat it down so closely that the clover seed would be slow in working its way to the ground. Should this be the case, I would advise sowing the clover first, and then use the weeder freely. This will give the clover seed a chance to take root before the surface of the ground is dried out. As to the weeder injuring the young grass I think there is no danger whatever. Some farmers here use a heavy iron harrow on their wheat in the Spring, and I have never heard any complaints about the injury done to the young Timothy. Should the growth of the wheat be light in the Fall, however, I would not consider it

COWS DISHORNED WITH CLIPPERS. Fig. 111.
For Description see Page 277.

necessary to use the weeder in the Spring. The general practice here is to sow the clover seed on the snow and leave it to work its way into the soft surface of the ground when the snow melts off. A good shower of rain at this time of year would be almost certain to give the seed a good start. J. J.

Esquesing, Ontario.

New Cement Over Old.—S. E. Barney, page 225, says: "Cement will not adhere properly to any smooth surface. Remember, you cannot overlap one coat of cement on another after the first is set." I made a cement walk in November, and it froze before well seasoned. In the Spring and following Summer it roughed up and cracked badly in places. The next year I procured a barrel of the best Portland cement, and put a half-inch coating on the walk the whole length, which united firmly and has not cracked in the three years since. I made a thin wash of cement and painted the top first; then when commencing to set I put on the addition, making an even surface over all—lapping on, and making it thinner on the good spots. The old and new, where thick or thin alike, became as one solid piece. C. E. CHAPMAN.

PEA LOUSE IN FIELD PEAS.

For two years we have tried oats and peas, both for feeding green and for hay, and for two years I have sung their praises, till I am in danger of becoming an oat-and-pea crank. Nor am I done yet. For a few months, though, I have sung very softly, and the reason is this: Last Fall we sowed a piece of barley and peas. They started nicely in spite of the dry weather, for we fitted the ground very thoroughly and used a fairly good supply of stable manure. After a little I noticed that the peas were dying, and upon closer inspection, found that the Pea louse had put in an appearance. It completely spoiled the peas. Since then I have been in doubt whether we can raise oats and peas as formerly. One of my neighbors says he has read in The R. N.-Y. that early peas grown for canning and for market were not affected seriously by the Pea louse, and Prof. Voorhees informs me that he finds his fields of oats and peas are not attacked by it, provided the seeding is not made later than the middle of April. But that is down in New Jersey, where the Hope Farm man lives. Up here in central New York, where we have numbers of months of Winter and other months of "very-late-in-the-Fall" weather matters are different. It is seldom that we do any sowing as early as the middle of April. Most years much of it is done after May 1. Will the Pea louse delay its activities to accommodate our later season? We haven't had experience, but I believe it will. At any rate we shall sow our oats and peas this season as heretofore, except that we shall sow as early as possible. I expect to meet with success. It is our only chance, so far as I know, to grow much protein food except what little clover we can get, and we must make the most of it. Then, too, oats and peas are ready to feed green at just the time when something is needed on a dairy farm, and before corn is ready. H. H. L.

Facts About Maple Sap.

Can the sugar in maple sap be taken out by centrifugal force like the cream from milk by a separator?

Prof. J. L. Hills, of the Vermont Station, says of this: Inasmuch as the sugar is dissolved and not, like the fat in milk, in an emulsion, there is no likelihood that, like the fat in milk, it can be removed by centrifugation.

How much sap is there in a maple tree?

The same authority states that in January the wood is saturated with sap—about 40 per cent of its weight being water. A big tree weighing 10,000 pounds would contain 4,000 pounds of sap. If this contains three per cent of sugar there would be 120 pounds of sugar in the tree.

Does the sap move within the tree at this time?

During the sugaring season there is probably little movement of the sap within the untapped tree, but this sap may be under great pressure. The pressure, on a good sap day, may rise in such a tree to the startling amount of over 20 pounds to the square inch.

Then tapping relieves this pressure?

When this pressure is relieved by tapping at any point there is a tendency to drive the sap from all directions out through the tap-hole. Careful experiments indicate that the sap moves very easily and rapidly with the grain of the wood, but very slowly if at all across the grain and that, as a result, the sap flows into the tap hole from above and below, but not to any appreciable amounts from the sides. Two or more tap-holes on different sides of the tree will therefore drain more sap from the tree than will one hole.

An Experience with Oat Smut.

I notice in Hope Farm Notes that you are having a number of queries regarding the remedy for oat smut, and possibly our experience last season may be of some value. When it came planting time I found I had neglected to order the formalin, and was obliged to use the hot water treatment. As this method is so fully described in Farmer's Bulletin No. 75, entitled "The Grain Smuts,' and as it is free to all by application to the United States Department of Agriculture, I will not describe the process now. The water was kept hot by steam from our boiler, piping it to a tub, and supplying cold water through the hose and dipping this boiling water into the barrel where the oats were soaking. Through some oversight we did not treat a sufficient quantity of oats, and the last of the field was sown without being soaked. Stakes were placed where the sowing of the untreated oats began, and as harvest time approached, the line of smut, beginning where the prepared oats gave out and the untreated were sown, was as distinct as if a line were drawn across the field. The stakes were unnecessary. The smut told the story. We examined the field several times, and failed to find any smut where the treated oats were planted. This method is, of course, more laborious than soaking the seed in formalin, but in our case it was effective. F. C. C.

Maine.

R. N.-Y.—The water must not go over 135 degrees nor below 132 to kill the germs, and not injure the oats. With the facilities on the average farm it is hard to secure this exact temperature. Exposure to high dry heat will also kill the germs.

Don't be discouraged if cow peas do not do well with you the first year. After two or three trials, tubercles usually appear on the roots, and in time they develop, covering the entire ground, so that the peas do their best work in gathering nitrogen from the air. It is not necessary to send away to get soil containing these tubercles, as they will develop of their own accord with continued cropping.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Danger from Green Pea-Louse.

F., Melford, Conn.—Last season we had some trouble with Pea louse, but were able to control the insect with whale oil and a bush. We had a piece of an acre of oats and peas—fodder—in which the peas were annihilated as we could not get at them. Where those oats and peas were last year is an ideal place for my early market peas this year, and the ground is in good heart. Will the presence of louse last year on that field make a serious risk this year? Will not the early pea, Nott's Excelsior or Gradus, for instance, get practically ahead of the louse? It did last year. What should you do? My peas, early and late, were alongside of this acre of oats and peas last season, and we had peas on market after all others were gone.

ANS.—The presence of the Pea louse last year on a given piece of land would not in my opinion render peas planted there this year any more likely to suffer injury than if planted elsewhere. If F. successfully raised Nott's Excelsior alongside of oats and peas which were injured by the louse last year, there would seem to be no reason why he cannot be as successful this season. I certainly would plant the peas as I saw fit, and then be prepared to fight the louse with brushing and whale-oil soap. The past Winter here has been very favorable to the louse, and unless we have a wet Spring I think it will be as injurious as last year, though, of course, this is largely guesswork. Though Prof. Johnson condemned spraying for the louse, Blakely & Son, of Bordentown, N. J., used large quantities of whale-oil soap against it last year with good success, and have placed a large order for soap this year. I shall experiment with it extensively if louse appears, and am not yet convinced that spraying is not practicable against it early in the season. E. DWIGHT SANDERSON.

Delaware Exp. Station.

"Steely Bugs" and Rose Bugs.

W. J. M., Stamford, Ont.—I have been greatly troubled with the Steely bug on my grapes for the last two years; also the Rose bug. How should I deal with them this Spring? I have been told to put salt around the vines. Is salt any good as a fertilizer for grapes?

ANS.—The grapevine "Steely bug" is the small dark-blue beetle which often literally nips in the bud a grape crop. The beetles hibernate in rubbish and other sheltered nooks, and appear on the opening buds of the grape in Spring. One beetle will soon eat the heart out of several buds, and often not a leaf will start on a vine until a second growth appears late in the season. The Steely beetles often ruin most of the buds before the vineyardist realizes what the trouble is. Fortunately this serious pest can be controlled by prompt and intelligent treatment. On small areas one can go over the vines every day and jar the conspicuous blue beetles into a pan of kerosene. Again, one can save most of the buds from their hungry jaws by coating the buds with poison and thus killing the beetles. Paint or spray the buds with Paris-green at the rate of one pound in 75 gallons of water; disparene or arsenate of lead would make an excellent poison for this purpose, using it at double the strength recommended for ordinary spraying. Get on the first dose of poison as soon as the buds begin to swell, and surely before the beetles get the start of you. Two or three applications of the poison at short intervals may be necessary in some cases. One can save a majority of the buds by thorough work with the poison, then a little later a very effective blow can be hit at the progenitors of the crop of beetles which would eat the buds the next year. But few grape-growers concern themselves about the insect after the beetles disappear in the Spring, but these beetles lay their eggs in the cracks of the bark near the buds, and the brown grubs which hatch therefrom eat small holes in the leaves about three weeks after the work of the beetles on the buds. These grubs transform during the Summer into the beetles that go into hibernation, and finally nip in the bud next year's crop of fruit. Hence, every one of these brown grubs we can kill means one less beetle to eat the buds the next Spring. The grubs readily succumb to a poison spray of ordinary strength applied on the leaves where they are feeding. If grape-growers would be on the lookout for these grubs and take the little trouble that is required to kill them, they would strike the most effective blow possible against this serious pest. Keep the opening buds painted with poison and poison as many of the little brown grubs on the leaves as possible. The Rose bug or chafer, is a much harder problem to solve. In Ohio the beetles are said to succumb when hit with a spray of whale-oil soap, half a pound of soap in a gallon of water. But this injures the foliage and blossoms of the grape. Usually, however, the beetles begin their ravages in a certain portion of the vineyard, perhaps a few vines on one side, and one could well afford to use the soap on these vines and thus check the advance guard of the enemy, even if some injury was also done to the vines by the spray. Some have reported good results from using the poisons, where the chafers are not too thick; the arsenate of lead mentioned above would be the best and safest poison to use. It seems to us as though much could be done against this Rose bug by finding its breeding grounds and putting these areas into thorough cultivation with some suitable crop. The grubs which develop into the beetles feed upon the roots of grasses and similar vegetation, and usually breed in sandy soils. As the insect is a local pest, that is, occurs in injurious numbers only in limited areas in New York and Canada, its breeding grounds are doubtless some sandy field nearby the crops it ravages. It would seem not a difficult matter to trace the swarm of beetles back to these breeding grounds and break up the latter by a quick rotation of crops over the area. This plan seems to us a feasible one for northern regions, but it may be more successful and easier in theory than in practice. Salt placed around the vines would have no effect on either the Steely beetle or the Rose bug, as they are not there to be salted. Salt is not a fertilizer in the same sense as nitrate of soda or similar substances; salt acts in a more mechanical way, probably sometimes helping to unlock the stores of foods in the soil. It might be helpful to the vines, but probably not.

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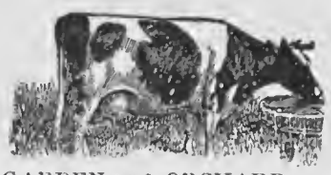
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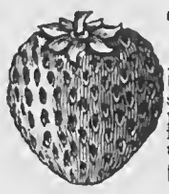
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Van Deman's Fruit Notes.

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Grafting Apples and Pears.

R. W. S., Albion, N. Y.—Is there any objection to top or cleft-grafting Seckel pear on Kieffer, also Lady apple on Roxbury Russet? The Kieffers are two to 2½ inches in diameter, and have been set three years. The Russets are 30 years old, and very thrifty. Some people tell me that a delicate apple like Lady, will not do well on a tree like Roxbury Russet.

ANS.—I would have no hesitancy about grafting the Seckel pear on the Kieffer. I have tried it with very good success, and also upon the Le Conte. Although I have never tried grafting the Lady apple on Roxbury Russet I do not doubt of its success. I would try it if I had the trees that I desired to change in this way. The Lady has a very upright habit, and is a shy or fickle bearer, but fruit would be right in character.

Misnamed Apple Tree.

J. S. J., Greensboro, Md.—I have a four-year-old apple tree that was set for Fameuse, but does not put out any leaves or show any signs of buds for 10 days after the others have leaved out and bloomed. The other trees bought for the same variety bore a few fruit last Fall, which I consider a fine Winter apple that keeps well. This late tree in putting out leaves is different in growth from the others, being an upright grower, and has never bloomed. Would you consider the tree worth leaving for further trial?

ANS.—The tree that is so late in starting in the Spring is almost beyond doubt Northern Spy. It is very late in bearing. The fruit ripens too early in the Fall south of New York, to be a true Winter apple, but is very good for Fall use. There being only one tree of it in the orchard it would be well to let it remain as it is.

Changing High-Headed Apple Trees.

G. W. McA., Randolph, Mass.—I wish to change the tops of 30 apple trees. They are from three to 12 inches in diameter. How large a limb or trunk can I graft? They are headed too high. They were just clusters of trees; I cut off at the ground all but one or two, leaving a good top.

ANS.—It is not well to graft a branch over two inches in diameter, except in very rare cases. It is better to go a little higher and cut two or more branches of smaller size than to cut a very large one. I never make a square cut nor put in more than one scion in any stump. I cut with a slope of 45 degrees or more, and square off the point just enough to receive the scion. Such a stump will usually heal over in one season, and without a fork, which is impossible where two or more scions are inserted. In a case where the tree is headed too high I would set the scion where I wished the head to be, if the size of the trunk was not too large. If it was too large then I would go a little higher than I preferred and set several scions in as many branches.

Apples for Southern Pennsylvania.

B. C. N., East Freedom, Pa.—We are located in southern Pennsylvania about 35 miles north of the Mason and Dixon line, and where almost all kinds of fruits do well. We wish to know whether the Albemarle Pippin and the Yellow Newtown are one and the same apple? Would you advise planting 600 Albemarle in an orchard of 4,000 trees? We want quality, and as much quantity as we can get, regardless of color. How does this apple compare with the Peck Pleasant in bearing and quality? Do you think these varieties will do well in this locality?

ANS.—Yellow Newtown is the true name and Albemarle a synonym of it, although some stoutly contend to the contrary. This has been proven by experiments. The region mentioned is indeed a very good one for apples and many other fruits, but this variety does not succeed there. It has been tried in all the apple-growing sections of the country, and proves to be suited only to certain localities along the Hudson River in New York, in the Blue Ridge country, and in the higher parts of the apple sections beyond the Rocky Mountains. Peck Pleasant does quite well in most sections, but is not as good in quality and appearance, or so prolific as Grimes. If I wanted to plant an apple orchard in which quality was to be the prime requisite, it would be largely of Grimes. From Maryland northward it will be late enough to meet with ready sale if properly handled.

Tobacco Dust on Peach Trees

A. B., Gibson, Mich.—1. I am going to plant a young peach orchard this Spring, and was planning to put a pound or two of tobacco dust around each tree, in order to get ahead of the root aphis. But I have been told that this would kill the tree, so I thought it would be better to find out something about it before doing anything. Could you tell me whether there is any danger in using tobacco dust around the roots of young trees or not? If there is, how shall I proceed to secure the benefits without the danger? I have lost one orchard through the aphis, and I don't purpose to let them beat me again if I can help it. 2. Also, should I be reasonably safe in borrowing money to buy nitrate of soda to apply to bearing peach orchard, say, at the rate of 200 pounds per acre? I am giving a dressing of about one-half bushel of unleached wood ashes per tree. In the eight years since the trees were planted I have twice applied stable manure and twice ashes. The soil is naturally very poor and sandy, but is in fair mechanical condition. Suppose I should apply it, and there should be no crop this year, would the trees be in enough better condition to pay for it another year? I have never used nor seen nitrate used on trees. Of course, no fertilizer could increase the number of peaches on a tree, but would it increase the size? 3. Would you recommend the Fitzgerald peach?

ANS.—1. I do not think there would be any danger in using a pound or two of tobacco dust about each tree if well mixed in with the soil. It is a rank poison to animal life, and an excellent manure for plants and trees. I have never known of a case of injury to trees from the application of tobacco, although I do not say that such a thing is impossible. 2. Money invested in manures that are properly applied is usually well spent. Borrowing money to buy nitrogen to apply to a bearing peach orchard in the form of nitrate of soda might be wise or unwise, according to the state of the trees. If they have grown well for the last year or two, I would think potash and phosphoric acid would be better; although all three might be useful. If the trees are not thrifty then the nitrate of soda would be needed, and 200 pounds per acre would be about right, either for a present or future crop of fruit. It would increase the size of the fruit. 3. Fitzgerald is a very good yellow peach, and is well liked by some who have tested it in commercial orchards in Michigan.

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Sprayers. Mix thoroughly and make fine spray. No scorching. No rubber or leather valves—something better. Brush keeps strainer free. Book on Spraying and agents' terms free.
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Two hundred bushels of potatoes remove eighty pounds of "actual" Potash from the soil. Unless this quantity is returned to the soil, the following crop will materially decrease.

We have books telling about composition, use and value of fertilizers for various crops. They are sent free.

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in Florida and Georgia are very profitable crops if produced early in the season. The best fertilizer to force their early growth and maturity is

Nitrate of Soda,

which should be used with the proper proportions of potash salts and acid phosphate. When properly applied it cannot fail to develop the largest and finest yields for the early market.

Full particulars free upon application to **John A. Myers,** 12-O John St., New York City. *Nitrate of Soda for sale by dealers*; we send you a list of them.

THE "HARDIE" Spray Pumps

are the most powerful, easiest worked, most modern, simplest in construction and moderate in price. DON'T BUY A PUMP until you have sent for our catalogue "C" and treatise on diseases of fruits, etc., sent FREE. Hardie Spray Pump Mfg. Co., 66 Larned St. W., Detroit, Mich.

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A Dry Sprayer

No Water or Plaster.
DUSTS TREE, BUSH OR VINE.

Two rows of potatoes as fast as you walk, wide or narrow planting. Agents wanted. Catalogue and spray calendar free.

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SPRAY YOUR FRUIT TREES & VINES

Wormy Fruit and Leaf Blight of Apples, Pears, Cherries and Plums prevented; also Grape and Potato Rot—by spraying with Stahl's Double Acting Excelsior Spraying Outfits. Thousands in use. Catalogue, describing all insects injurious to fruit, *Free.* Address WM. STAHL, Quincy, Ill.

1901
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FRUIT CARRIERS AND BASKETS
PETERSBURG, VA.
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have increased 25 to 50 per cent. when they began to spray *the right way*—with the right sprayer, the PEPPLER AND CLIMAX SIX-ROW SPRAYERS. They will do as much for you. Read how they spray 30 acres a day, how they save ⅓ the poison, increase crops one-half, pay for themselves in one season. Catalogue contains spray calendar, formulas, etc. Sent free. I also manufacture the improved Riggs Plow and Riggs Furrowers.
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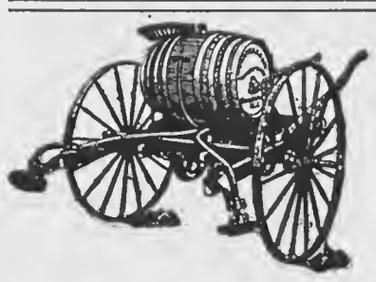

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The "SCHANCK" 8-row will spray any kind of liquid poison.
IT has no small nozzles to stop up.
will not spray on horse or driver.
has no pumps, pipes, blowers nor cog-wheels.
will do more work better and with less trouble than any other sprayer. Price, $55. Send for circular.
JOHN R. SHANCLE, Mfr., Hightstown, N. J.

Catalogues for 1901.

[CONTINUED.]

S. Y. HAINES & Co., Minneapolis, Minn. Catalogue of flower seeds; 18 pages. Devoted exclusively to choice flower seeds and plants.

RIDGE NURSERY, Tobinsport, Ind. Catalogue of strawberry and fruit plants, eight pages. Standard varieties exclusively are offered.

W. W. BARNARD & Co., Chicago, Ill. Catalogue of seeds; 106 pages. A very complete collection of standard and rare seeds and various garden essentials.

D. M. ANDREWS, Boulder, Colo. Catalogue of rare native and exotic hardy plants. Always an interesting publication, offering many rare and beautiful native plants and a fine collection of hardy cacti.

S. G. HARRIS, Tarrytown, N. Y. Catalogue of bulbs, plants and seeds; 36 pages. A handsome catalogue mainly devoted to ornamental seeds and plants. Many new and beautiful photographic illustrations are included.

F. BARTELDES, Lawrence, Kan. Catalogue of Kansas Seed House; 82 pages. An extensive general list of seeds for garden and farm use. Chiefly standard kinds are quoted, but there is no lack of tested novelties.

EDWARD GILLETT, Southwick, Mass. Catalogue of hardy ferns and flowering plants; 33 pages. One of the choicest collections of native and exotic hardy plants is offered in the pages of this neat and modest catalogue.

FRANK S. NEWCOMB, Vineland, N. J. Circular and price list of sweet potato plants. No less than 11 very distinct varieties are offered. A specialty is made of the new Vineland Bush variety, which is gaining many friends.

PHOENIX NURSERY Co., Bloomington, Ill. Price list of nursery stock and bedding plants; 26 pages. The new hybrid geranium, H. Trego, is offered as the best double scarlet in existence. One of its parents is P. Crozy, a hybrid ivy-leaf geranium.

RAKESTRAW & PYLE, Willowdale, Pa. Catalogue of fruit trees and nursery stock; 50 pages. This neat and well illustrated nursery catalogue lists an extensive but conservative and practical collection of fruit and ornamental trees and plants.

JNO. W. HALL, Marion Station, Md. Catalogue of second-crop seed potatoes and berry plants; 30 pages. The collection of varieties is conservative and reliable. Mr. Hall is an earnest advocate of the superiority of second-crop southern-grown potatoes for seed purposes.

THE W. H. MOON Co., Morrisville, Pa. Catalogue of Glenwood Nurseries; 48 pages. This is one of the handsomest trade publications that has come to our hands this season. The illustrations are very beautiful and the varieties of trees, shrubs and plants offered are of the most worthy character.

THE ELM CITY NURSERIES, New Haven, Conn. Catalogue of fruit and ornamental trees and plants; 24 pages. A beautifully printed and illustrated nursery catalogue, listing many choice and rare things. The Meeker cherry and Worden Seckel pear are made prominent features and, in addition, most of the late promising novelties are offered.

THE MUNSON NURSERIES, Denison, Texas. Catalogue of nursery stock, new hybrid grapes, etc., 32 pages. One of the most interesting catalogues received. In addition to a well-chosen selection of fruits and ornamentals, extended descriptions are given of Prof. Munson's new hybrid grapes, some of which are proving of exceptional value. Several new plums, mostly combining native and Japanese blood, are offered as real acquisitions.

J. BOLGIANO & SON, Baltimore, Md. Catalogue of farm and garden seeds; 60 pages. A full list, particularly strong in market vegetables. Many specialties are offered, some of which are selected strains developed during the 83 years this house has been in the trade. Bolgiano's New Green Mountain Triple parsley is considered a gem of beauty and utility, being exceptionally easy to grow. Bolgiano's new Prosperity potato and New Century tomato are also of extraordinary local excellence. The description of Bolgiano's new Glory tomato is limited to the statement that "Nothing has ever been produced in the world to equal it," and only 100 packets of seeds are offered at 25 cents a packet.

JOHN A. SALZER SEED Co., La Crosse, Wis. Catalogue of farm and garden seeds; 130 pages, colored cover and plates. A large catalogue, full of the most astonishing pictures and statements that can be imagined. Salzer's Million Dollar potato, the astounding feature of last year's issue, gracefully retires to make way for the stupendous claims of Salzer's Billion Dollar grass, a Japanese form of the common Barnyard millet, long naturalized in this country. This grass, Panicum crus-galli, will grow very large in rich moist soil, but is not at all adapted to general planting. Other wonderful plants, all attached to the name of Salzer, are offered throughout the book. Aside from this unpardonable exaggeration, Salzer's catalogue is crowded with the best staple varieties, and customers who are in a position to make allowance for this useless emphasis will doubtless be well served.

Causes for Knotty Quinces.

F. S. S., Rocky Hill, Conn.—What is the cause of knotty quinces, and remedy, if any? The orchard has been well cared for, and for the first few years bore fine fruit; then it degenerated and has done nothing since. The trees have been pruned and have been sprayed with Bordeaux Mixture, one year five times, to no good.

ANS.—It is probable that the cause of the quinces being knotty is the work of the Quince curculio. This is smaller than the Plum curculio, and does its work mainly while the fruit is quite small. Spraying will not kill them, nor prevent them from laying their eggs in the fruit in any considerable degree. Jarring is thought to be the only practical remedy, and this is tedious and not very satisfactory. However, some who have jarred their quince trees faithfully have found it quite successful. A catcher like an inverted umbrella is put under the trees, and the jarring is done by pounding with a mallet on the stump of a branch that has been sawed off. This causes the bugs that are on the tree and some of the badly stung fruit to fall off, and be caught in a pocket in the center of the machine. In some cases there are other causes for the knots, such as we know little or nothing about, but they are often supposed to be fungoid in their nature. If such is the case I believe spraying with Bordeaux Mixture at the right time would be a help.

H. E. VAN DEMAN.

DEERING AT PARIS IN 1900

The famous Chicago Harvester Company Received More and Greater Honors than Were Ever Before Accorded an American Exhibitor in the History of Expositions.

America may well feel proud of the interest which her citizens took in the Paris Exposition and the elaborate exhibits which were prepared with consummate skill and displayed in a manner not excelled by any other country. Those of Harvesting Machinery in particular were most complete and interesting. The Deering Harvester Company, of Chicago, America's foremost manufacturer of this line of goods, was accorded the position of honor, having contributed more to the advancement of the art of harvesting than any other manufacturer, living or dead, and with a greater array of important inventions to its credit than any other company in the world.

Visitors to the Exposition were prompt to accord the Deering exhibits supreme honors, and it only remained for official mandate to ratify the popular verdict, which was done in a manner as substantial as it was well-merited. Each one of the seven Deering exhibits secured the highest award in its class.

In addition to four high decorations, the Deering Harvester Company received 25 awards, or 29 in all, as follows: Decoration of Officer of the Legion of Honor, Decoration of Chevalier of the Legion of Honor, two decorations of Officer of Merite Agricole, a Special Certificate of Honor, the Grand Prize, Six Gold Medals, Six Silver Medals and Eleven Bronze Medals, including Deering Collaborator Medals.

The Decoration of the Legion of Honor was instituted by Napoleon Bonaparte when First Consul in 1802, and is only conferred in recognition of distinguished military or civil achievements. It is the highest distinction in the gift of the French Republic.

The Decoration of Merite Agricole is an honor of but slightly less importance which is conferred upon those who have contributed greatly to the advancement of agriculture.

An Official Certificate of Honor was accorded the Deering Retrospective Exhibit, which showed the improvements in harvesting machinery during the past century, and excited the highest praise of the French Government officials who had entrusted to the Deering Harvester Company the preparation of this most important exhibit. By special request this exhibit has been presented to the National Museum of Arts and Sciences at Paris, where it has become a permanent feature of that world-famed institution.

The Deering Twine Exhibit and Corn Harvester Exhibit, both of which received the highest awards, have by request of the French Government been presented to the National Agricultural College of France.

There was no field trial, either official or otherwise, in connection with the Paris Exposition, but the most important foreign contest the past season was held under the auspices of the Russian Expert Commission at the Governmental Farm of Tomsk, Siberia, August 14th to 18th. All the leading American and European machines participated and were subjected to the most difficult tests by the Government Agriculturist. The Expert Commission awarded the Deering Harvester Company the Grand Silver Medal of the Minister of Agriculture and Domain, which was the highest award.

The Deering Harvester Works are the largest of their kind in the world, covering 85 acres and employing 9,000 people. They are equipped with modern automatic machines, many of which perform the labor of from five to fifteen hands.

This company is also the largest manufacturer of binder twine in the world, having been first to produce single-strand binder twine, such as is in general use to-day, making over a third of the product of the entire world. The output of its factory for a single day would tie a band around the earth at the equator, with several thousand miles to spare. The annual production would fill a freight train 20 miles long. Made into a mat two feet wide, it would reach across the American continent from ocean to ocean.

Deering machines are known as LIGHT DRAFT IDEALS, consisting of Binders, Mowers, Reapers, Corn Harvesters, Shredders and Rakes.

This company exhibited at the Paris Exposition an Automobile Mower, which attracted much attention, and exhibitions were given with one of these machines in the vicinity of Paris throughout the season.

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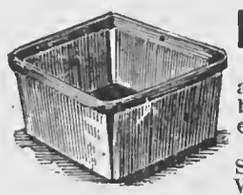
CHOICE RE-CLEANED SEED FOR ALL PURPOSES
Dreer's Permanent Pasture Mixture cannot be excelled for producing abundant hay crops, and luxurious aftermath. Full line of all Grasses and Clovers, also special mixtures for Lawns, Golf Links, etc. Circular and prices on application HENRY A. DREER, Phila., Pa.

THE LIGHTNING COMPRESSED AIR SPRAYER. Patented 1900. Holds four gallons. Pump in a little air with the pump which is attached to the reservoir. No more labor required. Will kill all kinds of insects. Will spray two rows of potatoes at one time and as fast as the operator can walk. Big money for Agents.
D. B. SMITH & CO., Utica, N. Y., U. S. A.



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Write for Descriptive Catalog.
WEBSTER BASKET CO.,
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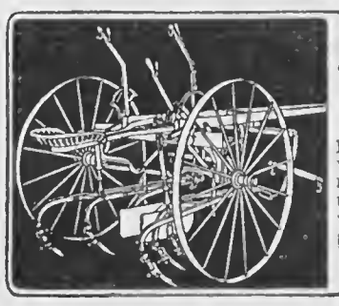

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The Akron Cultivator Co., Dept. D, Akron, O.

25,000 CUTHBERT RASPBERRY PLANTS. 50 cents per hundred. G. L. A. QUINN, Olean, N. Y.

Thirty-four varieties of choice A No. 1 **RASPBERRY** Plants C. C. NASH, Three Rivers, Mich. Catalogues for five years to come, free.

PLANTS.—Strawberry, cabbage, tomato, pepper, sweet potato, cauliflower, celery and egg plant. Asparagus roots. Catalogue free. CALEB BOGGS & SON, Cheswold, Del.

The Minute Man Strawberry.
Best Northern-grown Strawberry Plants and Asparagus Roots. All sorts of Small Fruit Plants and Nursery Stock, grown and for sale by GEORGE M. WHEELER, Concord, Mass.

PEACH TREES, Kieffer Pears, and **Japan Plums.** R. S. JOHNSTON, Box 4, Stockley, Del.

FINE NURSERY STOCK—Fruit Trees, Berry Plants and Asparagus Roots. Special prices on one-year-old Kieffer. DOVER NURSERY, E. H. Atkinson, Prop., Dover, Del.

TREES, PLANTS and SEEDS.
Catalogue Free.
T. C. FURNAS & CO., Sheridan, Ind.

OUR FRUIT TREES GROW.
We have thousands of all the best varieties of TREES and PLANTS. APPLES 8c., PEARS 9c., PEACHES 4c., etc. We can save you money. Handsome illustrated catalogue FREE. Send for it to-day. HIGHLAND NURSERY Co., Dept. D, Rochester, N. Y.

450,000 TREES
200 varieties. Also Grapes, Small Fruits, etc. Best rooted stock. Genuine, cheap. 2 sample currants mailed for 10c. Desc. price-list free. LEWIS ROESCH, Fredonia, N. Y.

For Sale—1,000 bu. Clover Seed @ $6 to $7 per bu.; 500 bu. Crimson Clover Seed @ $5 per bu.; 2,000 bu. Cow Peas @ $1.25 to $1.75 per bu. J. E. HOLLAND, Milford, Del.

FOR SALE—200 lbs. of Giant Argenteuil Asparagus Seed. This variety of asparagus is the earliest, largest and most prolific asparagus grown on the American continent. Price, $1 per lb. Address WM. C. GERATY, Youngs Island, S. C.

Packard's Ensilage Seed Corn
write to-day for circular and sample. My seed corn ALWAYS GROWS. If you own a silo, you need my Early Mastodon corn. Makes one-third heavier crop than Leaming. Other varieties.
PACKARD, Seed Grower, Dover, Del.

Cabbage Plants.
Large transplanted plants, well hardened; will stand freezing weather. Early Jersey Wakefield, Charleston Wakefield and Henderson's Ea. Summer, ready now. Price, per 100, 40c.; 1,000, $3. Write for catalog of transplanted vegetable plants.
J. E. HUTTON & SON, Conyngham, Pa.

Carman No. 3 Seed Potatoes First-class, large size, 48c. per bu. A. L. MAXSON, Little Genesee, N. Y.

CARMAN No. 3 $3.00
Sir Walter Raleigh and Early Bovee $4.00 per bbl. all bbls. 4 bu. Dewey, the great cropper. Wholesale list *free*. GEO. A. BONNELL, Waterloo, N. Y.

NORTHERN GROWN SEED POTATOES
Sir Walter Raleigh and Carman No. 3; bu. 80 cents; bbl., $2.25; 5 bbls., $10. Buy direct from grower of 15 years experience and get seed true to name.
J. H. ARBOGAST, Coral, Montcalm Co., Mich

Imes' Blight-Proof Seed Potatoes 1901 Catalogue, Free, gives particulars.

SEEDS. The *best* field and garden seeds at *Wholesale Prices*. The BEST 90-day CORN KNOWN. *Seed Potatoes that are unequaled.* The W. E. Imes Seed Co., Smith, Mich.

SEED POTATOES
Bovee, S. W. Raleigh, Carman's and other standard varieties at very reasonable prices. Price-list. F. H. THOMSON, Fairview Farm, Holland Patent, N. Y.

HOPE FARM NOTES.

DIGNITY AND WORK.—We are still selling chestnut poles out of our woods. A year ago I hated to see one of these trees come down, but I decided after some thought that we can hardly afford yet to let any of the Hope Farmers stand about on their dignity. Some of our trees, stripped and pruned for business, stand along the road in the valley holding up telephone wires. They are not so handsome as they were when they stood idly in the woods, but since they peeled their coats and walked down the hills to do their share of the world's work they have ceased to be chestnuts or back numbers, for they are up with the procession. Labor dignifies even a chestnut tree. The wind that swept through their branches as they stood in the woods sang a song that added nothing to the world's comfort or progress. The harping on the telephone wires is a true song of labor. Besides all this each tree drops coin in the Hope Farmer's hat as it walks down hill. A poet might call that "a vulgar incident," but as we are not poets we decide that the only vulgarity about it would lie in a wrong use of the money. So down they go. . . . Last year I was quite a little concerned about some old pear trees that seemed all ready to dry up and die. We cut them back, Fall-plowed the sod, manured them well and did our best to give them a start. The start is coming. They are putting out little shoots of new wood and shaking themselves for a new struggle. The sight of this new wood on these old trees does me as much good as it would to see old Major kick up his stiff heels to show his appreciation of his Winter's care.

FARM NOTES.—Spring has seemed late this year, but, as usual about April 1 the sun came out bright and clear, and a dry breeze sprang up that quickly took the moisture out of the upper fields. The orchard of big trees near the house is on naturally moist ground, but it dries out as quickly as the lighter ground above it. This is not surprising when we realize how those big trees are pumping water out of the soil and draining it like so many big tile drains. . . . We sow oats with Orchard-grass seed in this orchard. There are some good reasons why grain and grass should not be sown in an orchard. Probably five times out of seven clean cultivation is better for an orchard, but we have, I think, one of the two cases where seeding to grass of some sort will prove a good policy. I sow Orchard grass because it does best in the shade, gives a fair quality of hay and is cut early in the season. . . . I put some clover seed in with the Orchard grass, but the question of clean clover-seed at $8 per bushel is after all a tough one. It ought not to be, for any farmer knows that there is a whole bag of fertilizer in a pound of clover seed. Probably if we could not possibly get it for less than $20 per bushel it would be fair business to pay that for it. Still, I suppose it is human nature to make a fuss when prices for what we buy go above the average. . . . After their long struggle the Winter oats show up in a badly battered condition. Where they were sown alone only one narrow strip at the upper end of the field is left. There is a better stand where they were mixed with the rye, but they cannot be called a success with us as a *Winter* grain. For Fall pasture they are excellent. I have heard farmers call for some crop that would make a heavy Fall growth, cover the soil through the Winter and die out so as not to interfere with Spring cultivation. The Winter oats will fill this bill to perfection. . . . Ours is not much of a grain section, but nearly every farmer has more or less rye. As a rule it has not wintered well. Most of it is on hillside fields, which have washed more or less. Most of our own rye was seeded with Winter oats or with Crimson clover. It will all be cut early and cured for hay. We have hauled some manure on this rye and after it is cut the ground will be plowed and planted to late potatoes or sweet corn, to be again seeded to rye and clover. . . . On April 1 our four little baby Berkshires weighed 31 pounds. They were then 12 days old. We estimated their weight when one day old at 14 pounds. They grew like debts. I never saw such perfectly-shaped pigs. What a contrast between these square blocks of pork and some of the scrubs we see on farms! These little fatties have bulging hams and shoulders, because their ancestors for many generations back have been ham fat. There is no accident about it. I mean to weigh the little fellows every week to see how fast they gain.

HEN NOTES.—The hens laid 527 eggs in March. They were worth a trifle over 1½ cent each. The cost was a little less than for February. . . . The first plowing done on Hope Farm will be in the large chicken yard, which is to be used as a garden this year. It will be broken up early so as to give the hens a good chance to scratch it over. A good coat of manure will be put on, and this will be plowed in. Then the hens will be put in another large yard, alongside the one where they now are, and the first one planted with garden seeds. Later, when the low-growing crops are out of the way the hens may come back among the sweet corn and Lima beans while their second yard is being seeded to clover and rape. . . . As I walked through the chicken yard a few days ago I felt a shock as though a baby battering ram had struck me. It was the old Wyandotte rooster Don. He seemed to think that I had no place in that yard, so he came at me with both spurs. He fought me all the way to the gate. He is a game old bird, and I have great respect for him. . . . Wherever I go I meet people who tell great stories about the use of hen manure on potatoes. There are farmers who claim to raise larger crops than I have ever dug by using a large handful of hen manure in the hill. When I say that the addition of potash and dissolved rock ought to give still better results such people say "theory." The truth is, that we are all after actual rather than theoretical potatoes. Will pure hen manure bring them? I would like to find out this year, and I want to ask a number of rows right in the field. I want to take several rows and put hen manure alone in every hill. In other rows I shall add potash, in others acid rock, and in still others both. Then we can compare the yield with that from the high-grade fertilizer.

"FIVE ACRES ENOUGH."—As may be supposed, I receive all sorts of letters containing praise, blame, criticism and ridicule. Here is a note from a man who evidently has an idea, and in theory it is a good one:

> I like to read your Notes because they are so home-like and practical; but there is a large class of people, and growing larger (that is, an increased per cent), that such as you do not have any impression on whatever; they need your advice, but you might as well talk to the Heathen Chinee. They are the laboring men without a home they can call their own; even our western towns are getting full of such. They work for wages and pay rent for their homes, and perhaps will work a piece of land on shares; but never have a home of their own. I have of late said that five acres of land is amply sufficient to support a family. It is just fun to think of the replies I get on questioning them; there is not one in 10 that will give a decent reply. Even our scientific agriculturists are loath to say how much land will support a family; they will show that an acre of ground will keep a cow the year around; but they have no time for the poor man without any land. There is a great difference between the commercial farmer and the farmer who is satisfied to make a good living; I am 68 years old, and when I look on my life and see the great mistake that was made in influencing me to make money on the farm, I want to spend the rest of my life in telling others of the failures that I have made. Money is a poor standard by which to estimate the value of things that are necessary in this life. U. T.

Cannon Falls, Minn.

I do not attempt to preach or talk directly at anyone or any class of people. I simply relate some of the thoughts and doings of a farm family made up of widely different characters and curiously bound together. Our friend seems to think that five acres ought to provide a good living for an average family. If I were to cut Hope Farm up into 18 lots of five acres each there are not more than two of them that would probably give the living. The land below the spring might be irrigated and put in celery and strawberries, but the hill fields would never feed one person to an acre unless the farm and others too were all thrown together and run on a coöperative basis. If all men were equally willing to work, and the smart and the strong loved to stop and help the weak as well as they do to crowd on and help themselves, I will not say that the five-acre scheme would be impossible, but as social conditions now are I should say —Heaven help the 18 average-sized families who tried to live on our 90 acres! That is the same thing as saying that they would have to be satisfied with the living which their conduct earned for them! H. W. C.

A PLANK DRAG.—I had a plank drag made this season that I have found efficient and useful. Being intended for one horse it is of a size to correspond. I used hemlock planks, because they are cheap. It is made up of eight pieces of two-inch plank, 10 inches wide and four feet in length. They are arranged clapboard fashion, overlapping one another four inches. The peculiar feature of the article consist in the way the pieces of plank are held together. The bond that connects them is strap iron 2½ inches wide, 14 pieces each 16 inches in length, and bored with two holes near each end for large screws (each pair countersunk on the reverse sides) and with two holes in center for ⅝-inch bolts, one five inches from each end. These straps are inserted, two between each pair of the planks six inches from either end, so that they lie on the top of the plank in front, and underneath the plank next in rotation behind. The effect is that the bolts, except those passing through the first and the last planks, go through the strap iron above and below each plank. Having the strap-iron cut into pieces of the required length, and the holes bored, which a machinist could do in a few minutes, the construction is simple and easy. The expense is trifling for the material. For the draft I had two holes bored in the first plank, and then adapted a spare cow-chain as the medium of connection between the plank and whiffletree replacing the wings on the one branch of the neck part with an extra "T." For rubbing down and crushing lumps that the Acme harrow knocked to one side without breaking, and that a roller pressed down into the softer and looser earth unchanged, this plank drag has served an excellent purpose in preparing a seed bed and rendering the working of a Summer fallow more effectual. W. O. E.

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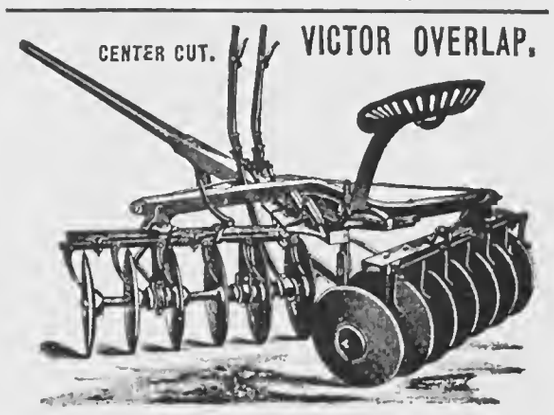

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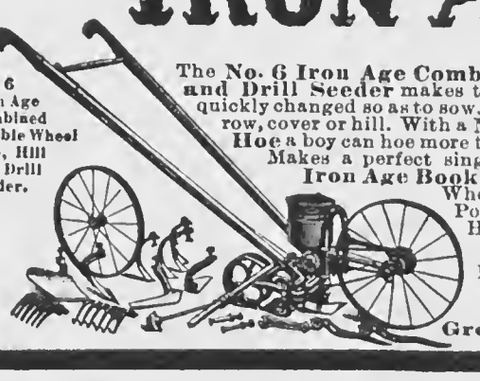

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No. 1 Iron Age Double Wheel Hoe.

Ruralisms

NOTES FROM THE RURAL GROUNDS.

THE FIRST SNOWDROP.—The first snowdrop of the year opened March 10; not a specially early date, as they came in bloom in February last year, but it is quick work in the development of a flower, considering the ground had been constantly frozen for several weeks previously. The clumps now in bloom are in a well protected situation near the south wall, and only waited for a brief cessation of freezing weather to peep out. There is something very inspiring about the advent of this hardy and yet delicate little flower each season. It is the first really tangible sign that Winter's grip has relaxed. There may be frosty flurries yet in store, but one instinctively feels that the pulse of Spring has surely began to beat.

INTEREST IN SAN JOSE SCALE.—Widespread interest in the Pernicious or San José scale is indicated by the number of twigs sent to THE R. N.-Y. for identification of diseased conditions. They have come in by the score lately, but in only two instances have the specimens received been infested with the true Pernicious scale, the others carrying ova of aphides, or being covered with the Oyster-shell and less dangerous scales. It is very encouraging to note the determination on the part of so many growers to find out just what ails their trees. In our humble opinion neither the spread of the Pernicious scale, nor of any other dangerous plant infection will be checked until the growers interest themselves sufficiently to identify and fight the pest without depending on official or legislative action. Radical laws, such as are now in force in Maryland and portions of Canada, are decidedly offensive to most people, as they place the cultivator at the mercy of irresponsible officials, with all the possibilities of discrimination and blackmail which such extraordinary powers of invasion of private property for the purposes of inspection and destruction of infested trees or plants may invite. The Pernicious scale is very inconspicuous until the trees become encrusted, but it can easily be found where present if carefully searched for by one acquainted with it, and everyone who cares to grow fruit will soon have a chance, as it is spreading in a very persistent manner, and it looks as though every fruit tree, as well as many ornamental species, will demand special attention if the owner wishes them to thrive. With every fruit grower looking after his own trees, and the development of possible natural parasites, this dangerous pest may be controlled. In the light of present limited experience we can only advise the spraying of badly infested trees before growth commences with either fresh crude petroleum alone, or a 25-per-cent emulsion of the same. For trees on which only a few Pernicious scales can be found, or those affected with other scales or insects, a solution of whale-oil soap, two pounds to the gallon, can be recommended. Even in this strength, the soap does does not usually kill all the Pernicious scales, but it is safe and tolerably effective in checking their spread. The petroleum is not free from danger, and has killed many trees even when carefully applied, but it destroys the scales effectually and the treated trees are protected by the greasy residue deposited on the bark for the remainder of the season at any rate.

NEGLECTED NATIVE BULBS.—The Camassia, or Indian quamash, is a most worthy native bulbous flowering plant, not hitherto sufficiently appreciated. Several species are known, ranging from southern Pennsylvania west and south to the Pacific Coast. They are generally found in rich, moist natural meadows, and thrive best where the wet soil dries out to a considerable degree in Summer. They are very hardy and, in cultivation, will grow well on any good loamy soil if set about five inches deep and not disturbed for several years. Strong or rank manure should not be used, but leaf mold and fine old manures are generally beneficial. The commonest species, C. esculenta, is now freely offered in the Fall bulb catalogues at a very reasonable rate. It is the one most frequently cooked and eaten by the Indians and is, in some respects the best of the genus. It grows in cultivation from 12 to 18 inches high, and produces a handsome spike of bright purplish-blue flowers, nearly two inches in diameter. Good specimens will carry as many as 40 flowers on a spike. They are arranged like a hyacinth, but the petals are widely expanded in the manner of the Scillas, to which genus Camassias are more nearly allied. The foliage is very good. C. Cusickii has very large bulbs, some weighing as much as eight ounces, and makes a tall spike, often more than two feet high. The flowers are of a delicate, pale porcelain blue and very numerous, often approaching 100 to the spike. They are quite crowded and are smaller than those of other species. The leaves are large and light bluish-green in color. C. Leichtlinii is slender and tall-growing in habit, strong bulbs sending the flower spikes three feet high. The flowers are large and flat, generally more than two inches across. The coloring ranges from a light cream to pure white, and makes a handsome contrast to the darker varieties. The species above described are now in trade and can be readily obtained. There are several other species, but they differ little from the type of C. esculenta, and there is much confusion as to their identity. The Camassias force very easily, and we have just bloomed a collection of the different species in pots. They would be admirably adapted for cutting were it not that the flowers fade soon after becoming pollenized. Possibly in time sterile varieties may be bred with more lasting blooms.

PRUNE YOUR HONEYSUCKLES.—Most gardeners agree that the climbing Loniceras or honeysuckles are the most desirable of all vines for porch or trellis decoration, but the best effect is often lost by lack of proper pruning. L. Japonica, the Chinese honeysuckle and its variety, Halliana, are probably the most popular on account of the constant production of their very sweet-scented white and yellow blossoms, and the almost evergreen character of the glossy foliage. These varieties in particular make a thick growth of slender branches after they have acquired strength, and in successive years these branches die out for lack of air and sunshine. If they are trimmed off every Spring before growth starts close to the main stems the branchlets are rapidly reproduced, and the smooth and compact effect is very gratifying. Honeysuckles may even be induced to take on a tree-like form by methodical pruning, but the effect is generally too stiff. Close pruning on a trellis or other support gives the best effect.

W. V. F.

A Very Bad Combine
is that of
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THE BREEDER'S WAYSIDE.

Dipping Sheep.

Sheep are subject to two animal parasites that cause them much irritation, and, oftentimes, suffering, viz., ticks and scab. Ticks are common on sheep generally, but scab is not so common. Ticks are very irritating, and cause sheep to rub off wool and feed badly. Scab causes the wool to peel off in bunches, and sheep so affected become pitiable objects if the trouble is not stopped. Scab is a contagious disease, and is so regarded by the Bureau of Animal Industry of the United States Department of Agriculture. So serious is this disease regarded that at all stockyards of importance sheep to be sent away as stockers or feeders must be dipped under the eye of a Government inspector. The Union Stock Yards at Chicago have fine accommodations for doing this work, and the rule for dipping is rigidly enforced. Formerly, when this rule was not a law, many scabby sheep were sent from great stockyards into the country for feeding purposes, where they introduced the trouble among healthy flocks and so contaminated farms and districts.

HOMEMADE DEVICE FOR DIPPING SHEEP. FIG. 112.

Scab makes its appearance in a very insidious manner, so that it may be in a flock some time before it is discovered. In the last address made by the late Governor Mount, of Indiana, who was an extensive sheep feeder, he stated to the Indiana Wool Growers' Association that he had bought sheep in Chicago that were apparently all right, but that scab appeared later on, and did him great damage, so that he had to ship the sheep back to Chicago. This occurred before the present dipping law now in force. Many flock owners never dip their sheep, although the practice is becoming more and more common. Yet everyone should, for if this were done the amount of scab or ticks would amount to an insignificant trouble. One can dip a good many sheep in a short time with comparatively simple conveniences. The illustration in Fig. 112 is a representation of quite a cheap yet convenient arrangement suited to any farm. On the left is a small pigpen, in which is a gate about 2½ feet wide. A small hole has been dug in the ground in front of this gate in which is placed a steel sheep-dipping tank, one end of which comes to the gate. Backed up against the end of the tank on the right is a common wagon body, such as is in general use all through the West. This is placed so as to incline slightly toward the tank, with one side a bit higher than the other. A rough, inclined platform then extends from the front of the body of wagon to the ground. The sheep to be dipped are placed in the pigpen, and one at a time are pushed into the dipping tank, where for a minute or so it is well soaked with dip, the solution being deep enough entirely to submerge each sheep. When non-poisonous dips are used the head of the sheep should be pushed under the dip at least once or twice. After the sheep is well soaked it is led up the inclined end of dipping tank into the wagon box, where it will drain off, and the liquid will run back into the tank for use again. As fast as the sheep drain off the heavy dripping dip, they can be let out the front end of the wagon box over the inclined way to the ground.

One may make his own dipping vat, but for a comparatively small sum a steel tank can be bought that will be far better than one of wood, for it will leak less, be easier to shift about and last longer. There are numerous good commercial sheep dips sold on the market, and these can be purchased to advantage, especially for use when dipping simply for ticks. The dip for scab is a more serious matter. Where scab occurs the sheep should be dipped twice, at 10-day intervals. A homemade tobacco dip may be made for scabby sheep by taking 20 to 24 pounds of tobacco, and soaking in sufficient water to cover for a day, followed by boiling for an hour and drawing off after six to 10 hours. This should be diluted to 100 gallons, and its effectiveness may be increased by adding 20 pounds of flour of surphur to the dilute liquid. Dips should be warm, at 90 to 100 degrees temperature. All sheep should be dipped right after shearing, and the suckling lambs also, for the ticks go from the shorn ewes to the lambs. I also regard it as a highly desirable process to dip all the sheep in the Fall after frosts have come on, just as the sheep go into Winter quarters. The writer has handled and owned sheep for years, and can speak from experience in this matter.

It is not a difficult thing to dip sheep, and the benefit from the operation is so great no farmer should for a minute regard it as too much trouble. Incidentally, it will be appropriate to state here that I have our pigs dipped also, to kill lice, and more than once we have dipped our chickens. Some of the commercial dips made from coal-tar preparations can be used in this way to advantage, for if the animals or birds swallow a bit of the dip it is beneficial in case they have worms or anything of that sort. Zenoleum is a good dip. Persons interested in this subject can no doubt secure a free bulletin on sheep scab from the United States Bureau of Animal Industry, Washington, D. C., by applying to this address. The Indiana Agricultural Experiment Station can also send out a limited number of bulletins on this same subject to those who apply. Persons desiring special help in this matter can no doubt obtain it by addressing their respective State agricultural experiment stations. It really is a most important matter.

C. S. PLUMB.

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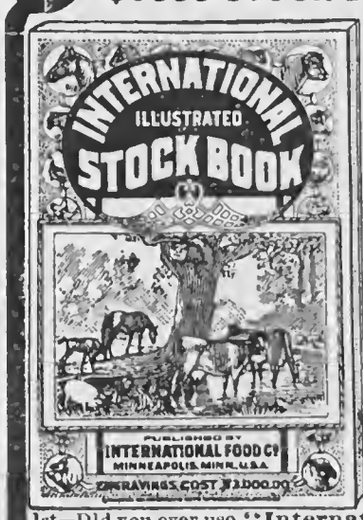

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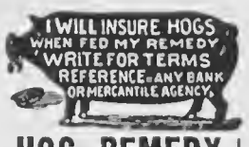
Runts are Unprofitable; Dead Hogs a Total Loss.



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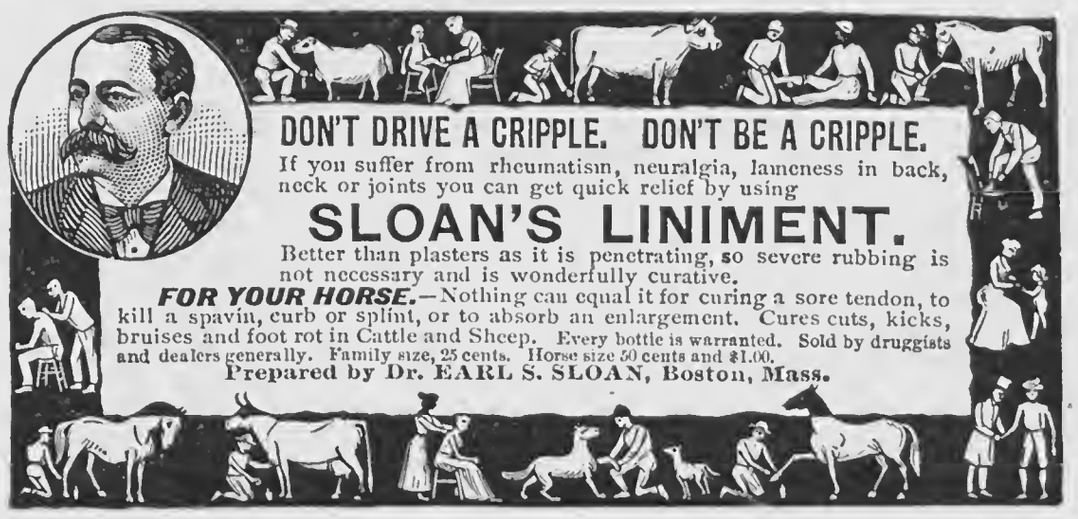

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Canada. B. R. S.

You will need a perfect hen to fill the bill here outlined. If white is the desired color we suggest the White Wyandotte as better than the White P. Rock as a whole.

Some Sick Hens.

Can you tell me what is the matter with my hens? They seem first to get lazy, throw their heads with bill apart, and then get blind, sometimes in one eye and then again in both. A white scale seems to grow over the eyes and then it turns black. Some have died, and some get over it. Is there a remedy? D. A. A.

Lockport, N. Y.

This flock seems to be suffering from colds and improper diet. For the first try boric acid; put about one-fourth pound of the powder in a quart bottle of water, let it stand three hours, pour the liquid into a dish; immerse and hold the invalid's head under until it breathes. Two or three of these treatments for from two to five successive days should effect a cure. The bottle can be refilled with water till the powder has entirely dissolved. To remedy improper diet, keep the birds in dry, draftless, well-ventilated quarters, with good, sharp grit, charcoal and clean water before them. Give them nothing to eat for 24 hours, and after that feed sparingly hard grain thrown in clean litter. W.

Facts About Hens.

Our 50 pullets laid 150 dozen eggs during January and February of this year. They are "a mixed lot," as the Hope Farm man would say, but there is a predominance of Barred Plymouth Rock blood, with some White and Brown Leghorn and also a trace, I think, of Black Spanish. I have been introducing fresh blood for two or three years, with a view to increasing their size. I have now two purebred Buff Plymouth Rock cockerels at the head of two small pens this season, and have two other pens headed by White and Brown Leghorn cockerels of uncertain degrees of purity. One of the latter is a pen of 25 yearlings which have been boarders in the fullest sense of the term. It takes a long time for us to learn some things, and we now feel humiliated to learn how stupid we have been all these years in keeping a lot of superannuated fowls on the strength of their good looks. Our success this Winter in securing eggs has not been due to any one cause, and I fear that we could not enumerate them all if we tried, but this we do know, that more time, care and study have been put into our care of our feathered servants than we have ever given them before. The "Madame" contributed her full share to our success, having sole charge of them during their chickenhood days, and through all the stages of their growth and development. Yes, and keeping their egg record, which showed us "where we were at." Our conclusions are, that Winter eggs may be profitably secured if the following conditions are faithfully observed: Vigorous pullets (fully developed), clean quarters, small flocks, nitrogenous food in great variety (mixed with brains), clean litter, constant scratching and diligent, watchful care. N. C. VARY.

Crowing Hens.—As to the Michigan bird described on page 111 the fact that this bird lays, and is in every respect feminine, except the crowing, is, I think, sufficient evidence to warrant the conclusion that a dissection would not reveal any abnormalities of the genital organs. I am inclined to consider the crowing as an aberration of function rather than a result of any anatomical defect.

Mass. Agl. College. JAS. B. PAIGE.

Southern Hens Moulting.—There really is no definite time for hens moulting in the Far South, neither do they as completely shed their feathers as they do in colder climates. Old hens generally shed their feathers from the latter part of July on to the middle of September. Hens that have been sitting in the Spring will not moult until late in the Fall; Spring-hatched chickens will shed some of their feathers during the Winter months. Then, too, the moulting season varies according to the change of the second season of the year, which may occur in the latter part of July or the second week of August.

San Saba, Tex. J. J.

Indian Runner Ducks.—On page 234 of your issue of March 30, A.W. inquires for a "new duck." Many farmers have found that the Pekin duck is not a satisfactory farm bird. They certainly are unexcelled as a market bird when handled skillfully, but seem to deteriorate when given the little care that most farmers are able to give to them. The Indian Runner ducks, while not so heavy as the Pekin (only reaching five pounds) are certainly well fitted to hustle for a living. They will lay almost as many eggs as a Leghorn hen, and are thrifty and hardy under the most adverse conditions. I discarded the Pekins some time ago for the same reasons as A. W., and find that the Indian Runner suits me exactly. J. H. J.

Brighton, Md.

Clipping the Wing.—The notes on page 177 in regard to cutting chickens' wings at the first joint reminds me of my experience in that line. I tried it in a small way, and am satisfied not to try it again. The chickens certainly do not enjoy it, and I do not believe it is any benefit to them. They did not bleed very badly, but when they are so small it seems as though it must be some injury to them, and it also injures some of them for market purposes. The end where the cut is made is very apt to become bruised at any time, which often leaves a place which is unsightly after the chicks are dressed for market. Clipping the flight feathers of one wing is just as effectual and not much more bother. I have very little trouble in confining even the Leghorns with a five-foot picket fence, if one wing is kept clipped and the fowls are given everything they need, so that they are always contented. S. S. C.

Hardwick, Vt.

Raising Chicks.—To the busy farmer who has the milking and chores to do, and is his own plowboy, the care of young chickens is often a great inconvenience. From my own experience I believe that the matter can be much simplified, and the labor lessened. From two years' trial I feel confident that the whole thing lies in proper care. My plan is to be in no hurry to take chicks from the nest. Nature has supplied them with food to last a day or two. I never feed soft food. From the beginning I feed good clean wheat, ground so that one-third or more of the grains remain whole. With the first feed I give some grit, and see that the chicks are well provided with it at all times. I confine the hen in a coop three or four feet square for about two weeks. I never feed oftener than three times a day. Water is kept before them all the time. I like an old kerosene can, and turn the faucet so that the water drips a drop at a time. Of course one has to keep the chicks free from lice. By this method last year I did not lose one in 100 of the chickens hatched. After the chicks are two weeks old I let them run as they please, and they seldom get grain, except at morning and evening. S. T. W.

Oregon.

Sowing Rape.—Most farmers now know something of the value of Dwarf Essex rape as pasture for sheep or swine. A bulletin from the Indiana Experiment Station tells how to sow the crop. In central Indiana it is sown not before the middle of April. It does best in drills, and may be sown at intervals of 10 days to two weeks. Rape may be sown in the corn just before the last cultivation. If the soil is not too dry, it will grow well unless the corn is very large and thick. Where thus sown it makes splendid pasture for lambs from September till cold weather. Some men have had success in sowing rape with oats. This, however, is not a sure way, as the season will have much to do with it. It is a good plan to have the rape patch near the barns and alongside of the pasture. This brings the animals under the stockman's eye, and if a lamb "bloats" he is there to give it attention. If the stock can go freely back and forth between the pasture and rape, it will save trouble, time, labor and even loss. Rape thus supplements the pasture, making fat lambs and good pigs. Where sheep have access to both rape and grass, they should not be turned on the rape until the middle of the day, when the animals are not hungry enough to gorge themselves, and the rape is free from dew. If they do not have the run of the pasture, turn them on the rape for an hour a day, gradually increasing the time, until they become accustomed to it. Then keep them on it continuously till the end of the season.

The distress, apprehension, inconvenience, and danger of Asthma, can all be overcome by Dr. D. Jayne's Expectorant if administered according to directions.—*Adv.*

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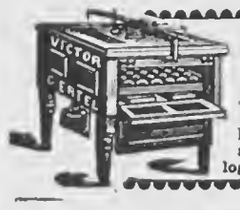

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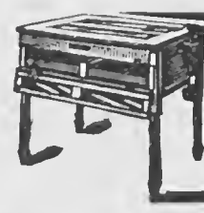

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A CITY MAN TURNS FARMER.

PART V.

It is a great advantage to a farmer to know how to use tools. Having learned the carriage-making trade in early life, I had kept my kit of tools, though it was more than 30 years since I had worked at it, and now on the farm built my own poultry houses, wagon sheds and made alterations in the house without being obliged to hire a carpenter. I hired the cow barn built, and found that the cost for labor about equaled the cost of material. My first poultry house was 10x 10 feet on the ground, giving 100 feet of floor surface; the front sloped backward three feet; that is, if the front had been perpendicular there would have been only 70 feet of floor surface. I figured that this extra 30 feet only cost for lumber 56 cents. I am aware that most poultrymen have discarded the sloping front houses—probably on account of rains beating in when windows are open in Summer; but I find that the sun in Winter strikes the glass as nearly a right angle, the whole interior is flooded by the life-giving rays, the coops are much warmer, and as my windows are arranged to slide, I often go and slide the windows over the openings when I see a shower coming in Summer. If left open, what little rain gets in will soon dry off in hot weather. I should never have any but an earth floor in a poultry house. I sunk chestnut boards 20 inches wide into the ground just inside the house, to keep out moisture and frost, and there is never a day in Winter that I cannot spade up the ground inside any of my poultry houses, and the whole floor surface is used by the hens for a dust bath. Why chestnut? Because pine would rot in one season, chestnut will last for years. In a dry time late in Summer I cart about two wagonloads of sand and sifted loam into each house, and as often as the surface gets foul it is removed. This dry earth is sifted a half-inch deep on the droppings boards, and the whole cleaned off once a week. When a barrel is about filled, a little dry earth sifted on top will prevent escape of the ammonia.

I often read in the agricultural papers questions as to how best to utilize the hen manure, usually answered by telling the inquirer to dry the manure, spread it on the barn floor and beat it fine with the back of a shovel. My way avoids all that back-breaking job. A week before I wish to use the manure I pour a pailful of water on top of the full barrel; if the manure is very dry, use two pails of water; in a few days it soaks it all through, the manure heats and crumbles, and although mine is half earth, it is impossible to see any difference in it, it becomes one nomogeneous mass in perfect condition to scatter in a furrow or on the surface. I always have excellent results when using it for corn, potatoes, onions, beans or any garden crop. Of course, all this was not learned that first year on the farm.

The question has been asked: "How did you live that first Winter? You had no crops, had to buy your potatoes and everything, didn't you?" Yes, we did; but we had two large hogs; we sold one, the other furnished us with lard and fresh meat, hams, etc., for a good part of the Winter; a barrel of flour we had brought with us, the sale of the butter and eggs brought in a little money every week, and Mr. Curtis had left a small patch of turnips, about 20 feet wide by 30 feet long, from which we pulled over 20 bushels; some were nearly as large as a man's head. It was virgin soil, that had never been plowed before in a pasture lot. As may be imagined I was greatly pleased to see the way those turnips heaped up, because it showed what the soil of my new farm was capable of doing. I sold most of them for 40 cents a bushel to a butcher, and took part of the pay in meat. So we experienced no difficulty in getting along, and when Spring came started in to see what "city folks" could do at farming.

Two or three years previous Mr. Curtis had plowed a strip 100 feet wide by about 250 feet long in a field just north of the house, being the highest land on the farm, and sloping—as does the whole farm—gently to the south, and planted potatoes and garden truck. The next year it was left untouched, and Mr. Curtis assured me that without any seeding at all clover came in so thick that he cut fully three-fourths of a ton from that strip. I could see the deep potato furrows, all over the piece, and a good clover sod on the ground. At the upper side of this lot were four large peach trees, in a heavy grass sod, one Late Crawford, two Early Crawford and a most delightful white peach. We had so luxuriated on those peaches that I determined to have that clover sod plowed and plant more peach trees. I had never bought a tree or planted one in my life, and had no idea whether the roots would require a hole as big as a barrel or larger. But so that there should be no delay when the trees came, I dug 35 holes three feet in diameter by 18 to 20 inches deep. We have laughed about those holes many times since, but I didn't find the digging of them any laughing matter.

G. A. C.

Color of Belgian Hares.

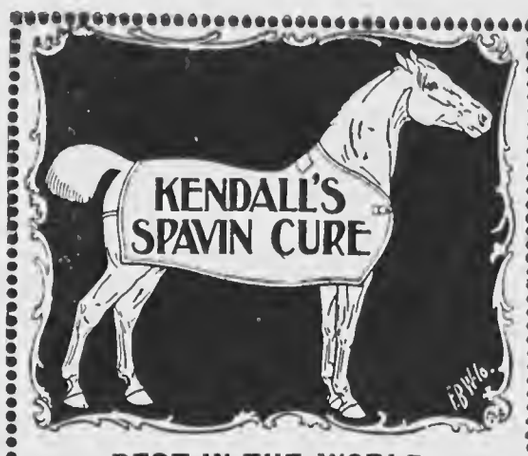
Is a dark gray Belgian hare purebred? I have one that represented a pedigreed stock, and is dark gray. My does are a sort of red. The young from the buck are the same color.

H. H. S.

Manchester, Iowa.

It is very common for purebred Belgian hares to sport in color from light gray to dark mouse color, and sometimes to pure black. It is the practice of some breeders occasionally to use a coal black buck on a light doe to retain the black tips in the hairs of their progeny.

H. E. VAN DEMAN.



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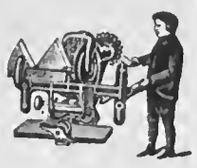

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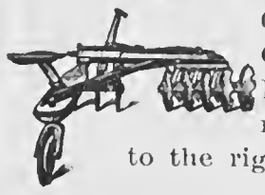

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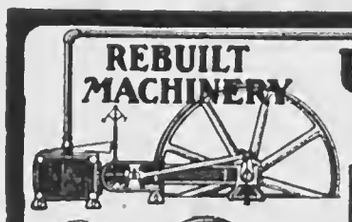

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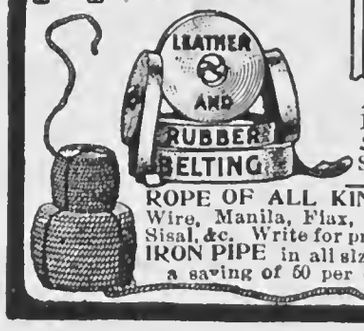

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THE EXTREMES OF DAIRYING.

Which Class Are You In?

THE AVERAGE COW'S YIELD.—For a long time careful statisticians claimed that the average production of milk per cow in New York State was 3,000 pounds. Because there were many dairies producing more than this, there must have been many which produced less. The later opinion is that the amount is nearer 4,000 pounds. The average price of milk to the producer will not exceed one cent per pound; in many cases not near that is obtained at the shipping stations. The cost for food is usually considered to be $35 per year, varying according to size of the cow and notion of the feeder as to the desirability of wearing her out in a short time. Cows giving below 3,500 pounds of milk at $1 per 100 pounds do not return enough to pay the market price for their food. Strange to note, lots of them are kept. Cows giving 4,000 pounds pay a fair price for the hay and grain, if one is willing to care for them for the manure; and is not particular about loss by accident, depreciation in value by age, and interest on their (investment) value, which reduces price received for the food below market value again. The only excuse for keeping such cows is the fact that they furnish a home market for much which is not readily salable, nor easily marketed, and furnish employment. In short, they are the "scavengers of the farm," turning raw material, not first-class, including much time of hired help, mornings and evenings, into a cash product, but the owner of such cows pays for the manufacturing, in the lessened price received for his own labor and all first-class stuff required to finish out the year.

AN ESTIMATE.—At Bridgewater institute Mr. Sholes gave his reports in answer to the question: "What does a quart of milk cost?"

The cost of running my farm for 1900 was:

Interest on farm and stock	$450.00
Depreciation on stock and repairs	200.00
Taxes	50.00
Paid for help and board	619.00
Twine	10.00
Fertilizer	33.80
Grass seed	23.50
Feed	323.00
Total cost of milk	$1,709.30
81,364 qts. milk, cost, per qt., .021	
Received for milk	$1,753.23
Net profit	$43.93

This shows that the milk sold for but little above actual cost of production. With extreme care and experience a few can equal this record.

FARMER'S SALARY.—Mr. Southworth, in reply to the question: "What can a dairy be made to pay," gave the figures for 16 cows for 1900:

Sold from March to March.

Milk	142,226 lbs.
Amount per cow	8,889 lbs.
Received for milk	$1,481.89
Average price, per 100 lbs	1.04
Average per cow	92.61

Cost of Milk.

Feed purchased	$438.79
Paid for grinding	34.19
Thrashing and silo filling	24.60
Phosphate	29.20
Hay, 3½ tons	35.00
Help, farm and house	274.00
Personal salary	240.00
Interest	185.00
Total	$1,264.78
Received for net profit	217.11
Average cost of feed purchased, per cow	$27.42
Average received per cow, less purchased feed	65.19

Instances of dairymen making interest on investment and a net profit are rare enough to provoke discussion, and a "salaried farmer" an innovation.

HOW IT WAS DONE.—A group of farmers were seated in the sunshine after dinner, and I listened with interest to their opinions. "I thought I had a good herd; my record is 7,500 pounds," said one. "I had nearly 8,000 pounds," said another, "but I had nothing to say when he was done." "My boy and I work every minute, and just live, just come out even. I do not believe the yarn," said a third—tired, hard-worked, wistful-looking farmer. There were eight in the group, and all but this one owned up to a record of over 7,000 pounds, wore good clothes and were contented looking. There seems to be more satisfaction in the higher class!

"Southworth doesn't keep a poor cow. He buys and sells. If a cow dries up or goes wrong, she goes. When she has milked nine months he trades for a fresh one," said one. "That is so! But I have known of him selling a cow fresh only a week, if he got his price," said another. Hence I conclude the first reason for Mr. Southworth's success is that he is a good judge of a cow, and he uses his knowledge. I know of cows in my own neighborhood with only two teats which give small messes, that have been retained several years.

"He feeds more dollars' worth of grain per cow than some farmers do of all food combined. That would ruin me," remarked one.

"He knows just what each cow will do and will not feed a cow unless she will pay for it. Failure to pay ruins the cow, not *him*," was the reply.

"He cuts his hay green—has oats and pea hay, a good quality of silage and does his part so a cow has no excuse," drawled another. "Most of us are too lazy to do our part."

"He has a river-bottom farm and can grow more soiling fodder on one acre than the hill farmer can on four. There is where his advantage comes in," remarked one.

"I think it's because he keeps grades from Holsteins. They swill down the milk."

"His are not all Holsteins, and once in a while he gets hold of a good milker among other grades." Inquiring around I found that the man who could only make a living had a farm purchased at about $7 per acre, and that some of the first importations of Holsteins were brought into this section, and left their impress on the cows of this county. It is plain that a farmers' institute left an impress on a man, and that the cows and the man were making an impression on the whole neighborhood.

C. E. CHAPMAN.

A NEW dairy law in Oregon compels dairymen to put up butter in one or two-pound rolls, full weight. Heretofore they have sold by the "roll," and though the rolls were supposed to contain one or two pounds, they were often short weight. The new law requires every roll to be full weight, and also that every roll be wrapped in paper stamped "Oregon Creamery Butter, Full Weight."

BUYING BUTTER.—Let me commend your answer to the Indiana boarding-house keeper on "Oleo," page 149. As one who boarded for nearly 16 years, while pursuing his studies and beginning his professional life, I have had some opportunity of seeing the deceits that have been carried on by those who have intentionally or unintentionally sold adulterated or misrepresented goods. If the Indiana boarding-house keeper cannot get good butter out there, I can direct her to a Boston house that has creameries as far apart as New York and Iowa, that can serve her an honest article at a living price. Of course, she wants no other kind and under no other condition.

F. W. M.

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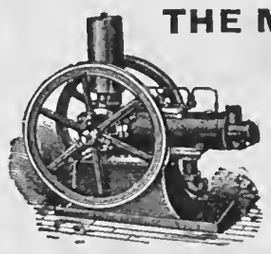

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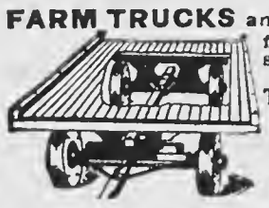

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Test the National by the side of any other separator made. If you don't say the National is the best machine we'll take it back cheerfully. Write now.

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Milk will keep fresh and sweet that much longer when treated with our **Champion Milk Cooler and Aerator.** It takes out and kills the germs which make sourness—the first element of decay. Works automatically. Kills stable and other odors. Free Book on "Milk and Its Care." Ask for it.
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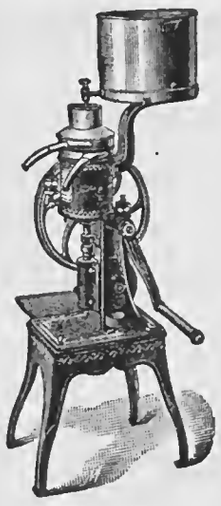

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SOME NOTES ON DISHORNING.

Dishorning has rapidly grown in favor during the past few years, and at the present time it is commonly practiced in many sections. The prejudice and exaggerated ideas as to the severity of the practice are gradually giving way as instruments for doing the work improve, and farmers and dairymen become better acquainted with the operation. In our own experience we have found it to be practical, rendering the animals, especially bulls, more quiet, and making them less capable of injuring each other or their attendants. During our first experience in dishorning the horns were removed with a saw. While the operation was successful, and no serious results followed, it required considerable time and was evidently quite painful to the animal. Later a pair of Keystone clippers were secured, and three cows and one bull were dishorned. It required but a second to remove a horn after the clippers were placed over it, and the whole time required for operating on a single animal did not exceed more than four or five minutes, except in case of the bull, where greater precaution was taken to make the animal secure. All the wounds bled at the time of the operation, but not to such an extent as to cause the animals to show signs of weakness. They did not appear to be in much pain except at the moment the clipper was in process of closing. When taken to the stalls after the operation two of the cows ate as though nothing had happened while the third refused a part of her feed for a day, but her usual appetite soon returned. The operation had a marked effect on the three-year-old bull. Previous to dishorning he was inclined to be ugly, but after the removal of his horns he was comparatively quiet and docile.

Complete records were kept of the yield of milk from the three dishorned cows for 20 days previous to the operation, also for 20 days following, and it is interesting to note that the decrease in the yield of milk from these cows was 3.3 per cent greater than for three other cows not dishorned and giving practically the same yield at the time of the operation, showing that the milk flow was but slightly affected. This difference might have been due, in part, at least, to some other cause. The simplest and most humane way of destroying the horns seems to be to prevent them from developing when the animals are young. This may be done by the use of caustic potash (in the form of sticks), which rapidly destroys the skin and other tissues when kept in contact with them. The method of applying the potash is very simple. The hair is clipped away from the young horn, so that the potash may come in immediate contact with the parts to be treated. The stick of potash is rolled up in a piece of paper, so as to leave one end exposed. The exposed end is moistened slightly and rubbed on the embryo horn for a few seconds, or until the skin begins to start, care being taken that the whole of the border is included in the treatment. A surface about three-fourths of an inch in diameter will cover the parts in calves a few days old. In our experiments, six calves have been treated; their ages ranged from three to 18 days. Healing soon followed the operation, and smooth polls have resulted in every case. The best time to apply the potash is between the fifth and tenth days, although it has proved effectual even on the eighteenth day. On page 267 are shown, in Figs. 110 and 111, calves dishorned with caustic potash and cows dishorned with the clippers.

C. B. LANE.

New Jersey Exp. Station.

HOW TO HANDLE SORGHUM.

A recent writer advocates sowing sorghum broadcast, mowing it and putting it in large cocks without stacking and feeding direct from the shock. Sorghum is all that this writer claims for it—when properly handled—but is not a very superior feed when handled as he advises. When ripe, sorghum is full of sweet juices, very fattening and palatable, but whenever a cut, break or bruise occurs to the shell of the stalk, air is admitted and fermentation begins. After a hard freeze has occurred the whole stalk undergoes this change, hence sorghum is not a good feed after really cold weather has set in, and should always be fed up early in the Fall. Any other cause that tends to rupture the shell of the stalk and admit air will also cause the sweet juices to sour. When sown broadcast and cut with a mower, the freshly-cut swath is next driven over by the team and two heavy wheels of the mower; then the two horses and the rake travel over it, breaking all stalks that escaped the team and mower wheels; then the bunching with team or with forks about completes the breaking or bruising of every single stalk on an acre. Just think of deliberately or unknowingly destroying 90 per cent of the food value of an acre of forage!

Here is the only correct way to handle broadcast sorghum: Cut with a revolving reel-rake reaper, same as is used for oats, flax and wheat. The reels will gently press the cane down on to the table, and the fourth reel rake will sweep it gently off to one side without fracturing a single stalk in the whole field, out of the way of the team and wheels, and then the bunches, when properly cured, should be set up in a large cock by hand without the use of any tool, simply the gloved hands. When treated this way and fed before Winter it is a valuable feed. I practice listing sorghum in quite thickly, and the disk cultivator fills the trenches, and ridges it up when laid by, so that it never breaks over, all standing up nicely. The corn binder cuts and binds in bundles that are set up in shocks. When dry it is run through a feed cutter, cutting as short as possible, then mixed with ear corn in the mill, and all ground up into meal. This is "pie for stock as compared with other feed, and when a few Soy beans are ground up with it, it becomes a perfect balanced ration, very appetizing and healthy. When steamed and fed to hogs a gain of four pounds a day per head can be made, and is the next thing to putting molasses in mush and milk for hogs.

When I was a boy in Maine the Yankees used to boil and mash small potatoes, add to them some cooked cornmeal mush, a cupful of New Orleans molasses, some skim-milk and feed to the hogs while warm. My father fed a hog thus that gained four pounds per day from birth, and took the first premium at the State Fair, being a wonder to all who saw it. When cold weather has spoiled the sugar in the cane, sorghum molasses can be substituted for the cane when feeding hogs.

Moran, Kan. J. CLARENCE NORTON.

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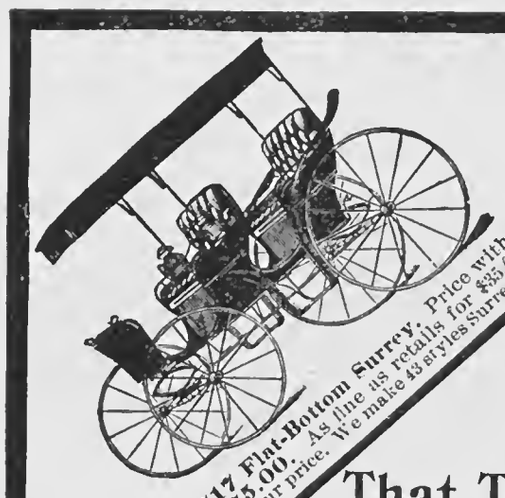

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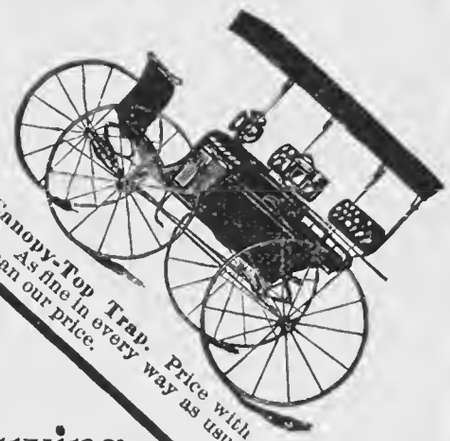

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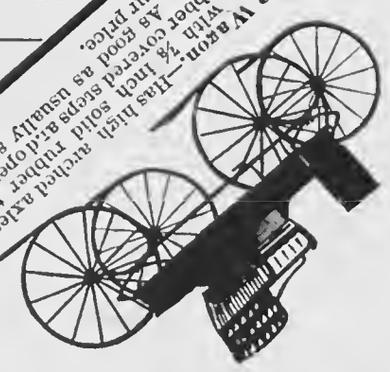

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The Rural New-Yorker

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THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, APRIL 13, 1901.

WE are beginning to get reports from farmers who tried the so-called Clark method of seeding grass. Some few carried out Mr. Clark's plan exactly; others followed his advice to the extent of using more seed and working the ground twice as much as ever before. So far as we have heard all speak well of the plan, though it is too early to give a fair report yet. In our own case this method of seeding has not proved all we hoped for, but is much better than the grass on nearby farms seeded in the old way.

*

WE are informed that the Grout anti-oleo bill—probably under some other name, since Mr. Grout will not be in Congress—will be introduced in December, as soon as Congress meets. It will go through this time. There will be some delay if J. W. Wadsworth remains chairman of the Agricultural Committee. Farmers should begin to grub the stumps out of the road now. The stump-puller in this case is Hon. D. B. Henderson, Washington, D. C. This stump-puller will not work unless power is brought to bear upon him. The power of 10,000 strong letters protesting against Wadsworth will start him!

*

WE have several times referred to the great stone dam which the English are building across the Nile in Egypt. It is a mighty stone wall one mile and a quarter long and 90 feet high above low water level. It will hold back 1,000,000,000 tons of water—forming a lake 144 miles long. When this dam is completed millions of acres of now barren land will be made fruitful. As the result of this work the crops of Egyptian grain and cotton will be tremendously increased, and it is probable that within a few years this country will feel the effects of it in a loss of trade in agricultural products. Ever since our Civil War England has been searching the earth for a spot where she can supply her own mills with cotton. The Germans, too, are experimenting in Africa with the same end in view. The saving and use of the Nile water will make Egypt one of the grain bins of the world, and a strong force in agriculture.

*

IN many sections of western New York farmers say that there is an increased demand for farms. Prices have, in some cases, risen $5 to $10 per acre; farms are being sold and are considered better security than for some years. There are many reasons for this. Fruit lands are valuable because it is well understood that choice Winter apples are likely to be good property for several years to come. Electric railroads are stretching out through the rural districts, and telephones ring their bells in many a lonely farm home. Rural mail delivery is also becoming a fixture. All such things bring the farm and its occupants closer to the city or town, and thus give greater value to the farm and a broader life to the farmer. Take the rural telephone alone. Few who have not enjoyed its benefits can understand what a convenience and blessing it is to the farm home. Not long ago we asked a farmer to tell us how the small grain and grass were looking. We expected only a report from his immediate locality, but in a few minutes he "phoned" all over his county, and was then prepared to give accurate information. Many a farmer who formerly loaded his wagon with produce and hauled it to market at a venture can now learn by telephone just what the dealers want, and arrange his load accordingly. In most sections the town has for years been gaining at the expense of the country. We think that the tide is now beginning to turn, and that the telephone, the trolley and other conveniences will give the country something of its old power and position.

MR. Chapman gives us, this week, some notes on the cost of a quart of milk, which were picked up at the institutes. One of the men he quotes figures a salary for himself as a part of the total cost. This idea of drawing a salary out of the business will be new to most farmers. The small dealer or storekeeper in town, with about the same money invested in his business that the farmer has in his farm, does not usually figure a salary for himself. The farmer's time ought to be worth more than that of the hired man. Yet, unless he puts a certain amount of cash aside out of the year's income his estimates of cost will be more or less guesswork. Such estimates are interesting and good comparison, but they do not compare in accuracy with the estimates of manufacturers who deal only with dead things. There must be more or less guesswork in estimating the cost of living things.

*

WE have had a large correspondence with farmers who say they wish to find good steady farm hands or partners. As a rule such people say they do not want married men with children. In many advertisements the same statement is made—childless people are desired. This is probably natural enough. In many cases children are annoying, especially if they are not well trained. Yet, in most cases, the man who loves his children and has ambitions for them, will make the best farm help. We cannot afford to shut out the children if we wish to encourage steady young men to make a useful mark on our farms either as hired help or partners. We have no doubt but that this decree against children has caused a good many young men to turn away from farm labor and seek employment in some other line of industry. There is no better place for the little folks than on a farm—whether they be the children of the boss or of the hired man. Older people whose own children have either died or gone from home will often find a real blessing in helping the little ones of others.

*

THERE are a few sour-spirited individuals who seem to think that agriculture is "played out," and that the old-time spirit and independence of the American farmer is a myth. Such people ought to attend a meeting of the Niagara County (N. Y.) Farmers' Club. They would receive a mental and spiritual shaking up that would sweeten them for the rest of their days. We attended the March meeting at Newfane. It was held at a small hamlet, and the roads were knee-deep with mud, but how those farmers did turn out! They packed two large churches to the doors and some could not get in at all. It was an audience that would inspire any speaker—clean, clear-headed, prosperous farmers and their wives and daughters. "How do you manage to do it?" we asked. "Well," said one farmer, "farming is our *business*. We believe in it. We think we have the finest country in the world! We are proud that we are farmers and we are glad to get together and prove it." We could not help thinking how agriculture would be ennobled and benefited if just such a club could be maintained in every farming county in this country. Truly, the farmer will be destined to sit on a far-back seat if he waits for the middleman and the politician to carry his flag. Yet, how that flag would wave on the heights if he would carry it forward himself!

*

THERE has been a lively "milk war" in Boston during the past 10 days. In that city, as in most others, the contractors or dealers have controlled the market and screwed the producers down to a mere pittance. The latter organized to protect their rights and endeavored to keep back enough milk to prevent a surplus, and thus force the dealers to offer fair terms. As usual, the dealers attempt to secure the needed milk by going out along the railroads and offering higher prices to distant farmers. They hope, in this way to obtain milk enough to beat the producers, and having done this they will control the situation once more, and screw down prices to suit themselves. The president of the Milk Producers' Union sent out the following letter:

To the farmers and milk produeers of Maine, Vermont and New York:

Brothers: In this section we are making a fight for a fair deal and a chance to live. The milk produeers of the seetion supplying Boston have many grievances, and have been to a great extent under the thumb of the milk trust, a trust by which the eonsumer does not gain by lower prices, and the producer is serimped down. This trust is trying to deprive the producer of a fair living. We are fighting for our lives. If the farmers are true to eaeh other we shall win. We know the farmers of this seetion—we know they are true—and we feel confident that we shall win. To you the trust is appealing. They are offering you big money for your milk and extra favorable terms. We believe that you will refuse their bribes, that you will reject their "30 pieces of silver." Were you on strike we would not sell your foes milk at $5 a can. Will you help us now by doing as we should do? Next year you may have the same fight as we are having now. Do unto others as you would have them do unto you.

That strikes the nail right the head, and it will be both sad and strange if any of these distant milkmen are so shortsighted as to sell out their brothers in Massachusetts. As we go to press it looks as though the milk producers would win at least part of their demands. Victory would be sure if the farmers would only hold together.

*

EVERY year or so some one starts a fierce discussion as to the evils attending the use of tobacco. After many hard words from either side the discussion dies out, and the use of tobacco goes on as before. Personally we have no use for tobacco except for killing certain insects. We never acquired the tobacco habit or "slavery," and after listening to all the arguments from those who use tobacco we have no wish to begin. Last Summer about 1,000 Cuban teachers attended a Summer school at Harvard College. While there they were accurately weighed and measured in order to compare them with American teachers. Among other striking results it was shown that the average American woman was about the same size and weight as the average Cuban man. In giving the reasons for this small size of the average Cuban Dr. Sargeant mentions the excessive use of tobacco:

Tobaeeo may be a solace to the aged, a foree regulator for many, and even a food to some persons, through the property it possesses of lowering organie aetivity. But this is the very reason why it should not be used by aspiring youth who wish to attain a vigorous manhood. Exeessive smoking produees disturbanees in the blood, mucous membranes, stomach, heart, lungs, the sense organs and in the brain and nervous system. When indulged in freely by the young, the habit of smoking causes impairment of growth, premature development and physieal prostration. This eustom alone, if universally practiced by one or two generations, would eertainly tend to dwarf the people who become enslaved by it.

We believe that this statement of the case is perfectly true. Tea and tobacco, when used by the aged, seem to prevent wastes of the body, and thus actually save food. For the young, however, we question whether there is any worse indulgence than tobacco, and especially cigarette smoking. The nation that permits it will be sure, in a few generations, to degenerate into a race small, nervous and weak.

*

BREVITIES.

The famous eows of Denmark,
  Are fed on Yankee grain;
We ship it o'er the oeean,
  And baek it eomes again
In yellow balls of butter,
  For England and the South,
To fill to over flowing
  The market's yawning mouth.
We feed the eows of Denmark
  We help the Dane to churn;
We ean't dis Dane our market
  Thought he disdains our turn.
Have we no Yankee bossies
  To eat our corn and bran?
Where is our four-legged partner?
  Where is our dairyman?
Here's to the Yankee heifer,
  Here's to the Yankee cow;
Bother the herds of Denmark
  Stay with the home kine now.

OUR first plowing was done April 2.

WE hear much eomplaint of cane blight in bush fruits.

Is it a part of duty to help one who will not help himself?

IT is the little wormy apple that makes the market drag.

No man ever advances any worthy cause by mere imitation.

THE Hessian fly has done some damage in western New York.

THE indications are that the Pea louse will be lively this season.

NEITHER a blind man nor a blockhead can hold the spray nozzle and win.

YES, he who gives a bag of flour or of potatoes to a poor widow is sack-religious.

SOME of those who "want the earth" must "eat dirt" and still remain unsatisfied.

MIGHTY few saloon patrons among those who love apples and eat them regularly.

WHAT think you of "G. A. C's" argument for dirt floors in poultry houses on page 277?

WHY buy or sell wood ashes or hen manure by the bushel? Weigh a bushel of it and bargain by the pound.

A MUCH advertised bedbug poison consists of an ounce of corrosive sublimate dissolved in a half-pint of alcohol and one gill of oil of turpentine.

A WESTERN reader tells the Hope Farm man that five acres of land will provide a living for an average family. How many five-acre lots on your farm would do it?

SOME farmers will shudder at the advice to use a ton of fertilizer to the acre as our Long Island friend advises—page 267. Yet, that's the way they do it on the Island.

MOST farmers find an objection to sowing clover seed on the snow. When the snow melts the seed is likely to wash together and grow "bunchy." The plan of sowing when the ground is honeycombed with frost and filled with little cracks seems most popular.

Events of the Week.

DOMESTIC.—The gunboat Scorpion was ordered to La Guayra, Venezuela, March 28, to investigate the case of the United States consular agent Baiz, who was recently arrested for the second time by the Venezuelan government. . . . . Ten survivors of the wrecked Italian bark Maria Madre B. were landed at New York March 28. They were four days in an open boat without food or water. . . . . A trolley car on the Slate Belt road jumped the track, near Bangor, Pa., April 1, and the motorman and conductor and everyone of the 70 passengers were injured by the car rolling down an embankment. . . . . The large irrigation canal in Arizona was opened April 1, and the waters of the Colorado River turned in at the head gates, below Yuma. The canal is 60 miles long and navigable to small boats. . . . . April 1 there was a heavy snowfall in Kansas, which caused great suffering among range cattle. . . . . Municipal elections were held April 2 in Illinois, Wisconsin, Kansas, Nebraska and other Western States. In Chicago, Carter H. Harrison was reëlected Mayor by about 28,000 plurality. A majority of the Nebraska towns voted for liquor licenses. . . . . The public health report of the marine hospital service shows that there have been 10 cases of bubonic plague in San Francisco since January 1, all being fatal. . . . . The Rev. John Jasper, the aged negro Baptist preacher, who held the theory which he expressed as "The sun do move," died in Richmond, Va., March 31, aged 89.

ADMINISTRATION.—The Spanish War Claims Commission, of which ex-Senator William E. Chandler, of New Hampshire, is president, has received from the State Department a full list of the claims against Spain growing out of the insurrection in Cuba which were filed in the Department up to March 15. These claims are all those of American citizens, for under the treaty of Paris the governments of the United States and Spain undertook to adjust the claims of their own citizens. The grand total of these claims is about $30,000,000, and included in the list are five claims in excess of $1,000,000. Mrs. Ruiz, widow of the dentist who was killed in a Havana prison, is a claimant for $75,000. The largest single claim is that of John W. Brock, on account of property losses, estimated at $2,162,514.

PHILIPPINES.—Aguinaldo, the Filipino rebel leader, was captured by General Funston in his hiding place in Isabella Province, Luzon, March 23. He arrived at Manila on the gunboat Vicksburg, March 28. In January, from his hiding place, Aguinaldo wrote letters anathemizing the sub-chiefs who had taken the oath of allegiance to the United States. Later, Aguinaldo ordered certain insurgent forces in southern Luzon to join him at a rendezvous in Isabella Province. The rebel officer entrusted with these orders secretly negotiated with the Americans. On securing necessary information General Funston planned Aguinaldo's capture. It was arranged that Aguinaldo's emissary, with the native scouts, should pass themselves off as insurgent troops, who, having captured General Funston and others, were taking them as prisoners to Aguinaldo. At the right time, when brought before Aguinaldo, General Funston was to give a signal, when the tables were to be turned and Aguinaldo was to be seized. Six days' march into the interior was contemplated. Treachery was considered possible, but every precaution was taken. The troops in New Vizcaya and Ecija and the gunboats Vicksburg and Albany were to coöperate with General Funston's forces. . . . . April 2, the Filipino leader swore allegiance to the United States. . . . . A number of rebel leaders have surrendered, with their commands, since the capture of Aguinaldo. . . . . A Manila despatch says extensive frauds have been discovered in the Commissary Department there. A number of arrests have been made, including a captain of one of the volunteer infantry regiments, a prominent contractor, a number of commissary sergeants and civilian employees and several storekeepers. . . . . Admiral Remey cabled from Manila April 1 news of the death of Lieutenant-Commander Jesse M. Ruper, as a result of an heroic effort to save the men on the gunboat Petrel, of which he was commander, a fire having occurred in the sail room. Twenty-two other officers and men were prostrated. The damage to the vessel was immaterial.

FARM AND GARDEN.—March 28, the New York State Senate passed Assemblyman Fancher's bill transferring from the State Board of Health to the State Agricultural Department the work of suppressing contagious and infectious diseases, especially tuberculosis in cattle. The Agricultural Commissioner is empowered to enforce rules regulating the sanitation of buildings used for the stabling of cattle. He is to appoint three inspectors of condemned cattle and other animals. who are to receive $5 a day for each day actually employed. No animal ordered slaughtered shall be appraised at more than $60 a head if purebred, or $40 if of common stock. Post-mortem examinations are to be made of all slaughtered cattle suspected of being tuberculous, and if it is found that they have the disease or any other infectious disease that would warrant their destruction no appraisal is to be made. The Buffalo stock yards men gained a victory in having the bill amended in the Senate so as to eliminate the provision that in order to secure an appraisal for cattle destroyed on account of being tubercuIous or suspected of being such they must be owned in the State one year.

The American Flour Manufacturing Company, of Vineland, N. J., has just been incorporated with an authorized capital of $1,000,000, for the making of flour from sweet potatoes. The Vineland mill, which started up the last week in March, is said to be the first of its kind in the country. The company was organized by H. S. Morris, a member of whose family invented and patented the process. The flour is bright golden yellow and has a sweet taste that is very pleasant. The farmers of South Jersey are jubilant over the organization of the company, which proposes to erect mills throughout the sweet-potato-growing belt.

On account of the reported existence of rinderpest in the Philippine Islands, Secretary Wilson some time ago recommended to the Secretary of War that such action be taken as might be necessary to prevent the introduction of the contagion into the Hawaiian Islands and the United States by animals brought on government transports. He also requested the Secretary of the Treasury to direct that special precautions be taken on the Pacific coast to prevent the landing of susceptible animals without their being turned over to the Department of Agriculture for quarantine under the supervision of the Bureau of Animal Industry. Rinderpest is the great cattle plague of Oriental countries which has frequently swept over Europe, destroying nearly all bovine animals, and has attracted special attention during the past two or three years by its ravages in Africa, where in many sections it destroyed from 90 to 95 per cent of all the cattle.

The oleo people, having been beaten in the Pennsylvania Legislature, have introduced a bill providing the following: "The substance known as butter shall be held to be and understood to mean the food product now known as butter which is made exclusively from the unadulterated milk from the cow or cream from the same, either with or without salt and with no other article admixture substance or compound added thereto. It shall be unlawful for any person, firm or corporation to add any material article or substance whereby the natural color or butter as such butter is herein defined shall be changed."

The Oregon hop vines are coming out of the Winter in excellent condition, and growers are looking for a good yield. There is some business being done in new crop contracting, but growers are in so much better condition financially than they have been for a long time that dealers are having more difficulty than usual in making contracts.

Sheep owners in the Willamette Valley, Oregon, are suffering considerable loss from fluke, which seems unusually prevalent. One man in Linn County is said to have lost 1,000 animals from this cause.

CONDITION OF GRAIN CROPS.

Wheat and rye are both looking well, as the snow has been gone but a few days, and if the weather is favorable a little longer there will be a good yield of grain. The newly-seeded grass fields have come through the Winter in fine condition. The practice here is to sow clover and Timothy seed with wheat in rotation.

Bergen, N. Y. J. S. W.

The early and protracted drought has caused a partial and, in many fields, a complete failure of grass seeding, and will reduce the product of old pastures and meadows for the coming season. The Winter has been favorable for both grass and wheat. Wheat and rye are looking well. H. P. T.

East Onondaga, N. Y.

Wheat has a very brown appearance, and was hurt somewhat by the fly, and by the long drought of last Fall. Rye looks much better. The continued freezing and thawing many injure the crop to a large extent yet. There is great complaint among farmers that their seeding was all burned out by the drought of last Fall, except on very rich or newly cleared land, and in most cases that sown on Fall grain was best. W. H. R.

Cohocton, N. Y.

Our wheat and grass are both coming out this Spring looking very well. Some of our wheatfields, however, showed the effects of the fly last Fall, and what the outcome will be is hard to tell. We sow Timothy here in the Fall on our wheatfields, and clover in the Spring, and almost always get a good catch; but the dry weather we have had for the last two Summers has ruined our new seeding, especially clover. A. G. S.

Byron, N. Y.

Fall-sown grain and newly-seeded grass fields have stood the Winter well, and are now in good condition. Our farmers usually sow Timothy in the Fall with wheat, and clover in early Spring. Fruit farmers who do not raise grain sometimes sow grass seed alone in the Fall, adding clover in the Spring, and obtain excellent results. I think a better meadow can be obtained in this way, and a crop of hay will be obtained the first year, instead of the second as with grain. W. T. M.

Barker, N. Y.

We should judge that wheat and rye have wintered well here. New seeding went into Winter in a rather weak condition, owing to the drought of last Summer, but appears to come out this Spring about as well as last Fall. Judging from present appearances I should say that there is a fair chance of a good crop of wheat and rye. In regard to seeding, the plan that seems to succeed best here is to sow as soon as the ground gets dry enough in the Spring to work without packing; harrow in lightly with spike-tooth drag, and roll. If the seeding is with wheat the harrowing is a benefit to the wheat.

Locke, N. Y. D. A. B.

At the present time wheat and rye look promising, but the ground has been covered with snow most of the time, which has protected it from hard freezing. The snow is gone now, and it is the warm days and cold nights that cause most damage. New seeding is generally poor, as the result of last year's drought. Wheat and beans are our main crops, and grass seeding is generally done in the Spring with wheat, clover and Timothy mixed, but some prefer to sow Timothy in the Fall, frequently to the detriment of the clover catch. The frost is nearly or quite out of the ground, and the indications are for an early Spring. E. G. M.

Perry, N. Y.

I have not, in a long time, known the conditions for Fall-sown grain to be more satisfactory than during the past Winter. It has been protected from November to March 20 by a good cover of snow. This prevented the wheat from freezing out, and as no crust formed on the snow at any time, the wheat did not become smothered, as is frequently the case. Indeed, along fences, where the snow has lain during months three or four feet deep, the grain is injured but very little. Of course, there may be hurtful freezes in April, but at present, the prospect for a good crop is encouraging. The conditions stated above have had a like effect on grasses and young clover, and any crop which went into Winter in good condition, is looking well now. I have five acres of Crimson clover, which is looking very thrifty. It is customary in this locality to seed the wheat ground lightly in the Fall with Timothy, and early in the Spring to sow heavily with Medium clover, but owing to the deep snow on the fields, and their muddy condition since the snow melted, there was very little clover seed sown up to April 1. J. C. J.

Genesee Co., N. Y.

Wheat, notwithstanding constant exposure during Winter, bids fair to be an average crop. Rye is looking fine; very little alternate freezing and thawing during March. New seeding is coming out much better than anticipated in the Fall. The clover catch was a failure in many cases, but Timothy took well where Fall-sown The grass-seeding methods of our forefathers are still in vogue here, namely, Fall sowing of Timothy on wheat and rye, clover in the Spring. The Clark method of seeding is being talked of, but not tried as yet to my knowledge. W. A. B.

Seneca Co., N. Y.

The Fall-sown grain has simply been revivified in the last two weeks. We had a day or so of nice warm weather and a day's rain, that put a greenness over the wheat and rye fields that was marvelous. The prospect now is that we shall have good crops of both on an acreage of probably 90 per cent of the usual crop. The freezes last Winter have been so dry that the wheat was not heaved out a particle, so that when it at last got warm and then moist it "got a hump on itself!" I like to seed with Spring barley if I sow it or prefer to sow my clover on the wheatfields in February if I can catch the ground right. W. E. C.

Cook, O.

Winter grain in this section is looking bad. Unless the Spring is very favorable we shall not secure more than 75 per cent of an average yield. I think the cause is due mostly to the lack of moisture while preparing the seed bed, and lack of rain after seed was sown. This has been a very trying month, both for grain and newly-seeded grass fields. The freezing and thawing has heaved the roots badly. Our soil in this section is of a heavy nature. Some practice seeding when Fall grain is sown, with both clover and Timothy. Others seed in Spring on last snow. I have had best success seeding after snow is gone, but sow the seed while ground is frozen, so the seed will drop down into the honeycombed soil, and is covered when land settles. A. H. R.

Canastota, N. Y.

All Fall-grown grains went through the Winter in good condition. Snow has covered the ground at nearly every freeze. My Crimson clover will do for pasture early in April if ground is dry enough. I never saw it look fuller. Our clay land is very hard on Winter-sown grains unless well covered. Last season the damage done by Hessian fly to Winter wheat was great; that, with hard Winter, made the wheat crop shorter than for many years. Last Fall was quite favorable for the fly, but Prof. Webster, at the Ohio Experiment Station 25 miles south of here, reports that when bringing wheat plants into the insectary and hatching out the fly a large number of parasites is developed. If this means that the fly will be destroyed, with the good Winter a fair crop of wheat may be harvested. The almost universal practice for seeding is by sowing the grass seed (Timothy and clover) in Winter wheat; in fact, the farmers in this locality seem to know no other way. I wish to try the Clark plan another Fall if possible. E. C. G.

Medina, O.

Wheat, rye and meadows have come through the past Winter in excellent shape. I never saw wheat reach the latter end of March with less loss by freezing and a finer, richer green color. Snow protection during most of the severest freezing weather is how I account for it. Hay and straw have been very scarce the past year, but present prospects indicate a year of plenty in this line. I do not grow much wheat myself, but when I do I like to sow clover early in the Spring; latter part of March, and, if possible, choose a morning to sow when the ground is slightly frozen; thus allowing the seed to fall into the little crevices of frost, and when it thaws the seed will be nicely covered in most cases. I have frequently had good success with clover sowing it in with oats in the Spring. I want the soil in the very best shape. It is very wasteful to sow grass seeds on rough ground, much of it getting covered so deeply that it can never grow. I also try to avoid sowing oats so thick that they will lodge, and thereby smother the clover; this is the worst thing to contend with in sowing clover with oats. E. M. B.

Greenville, O.

The Winter has been favorable for the Fall-sown wheat and grass, they having been covered with snow most of the time. Many deferred sowing wheat from two to four weeks later than usual, to avoid injury from the Hessian fly, and consequently there was not as large a growth in the Fall as though it had been sown earlier. Considering the present conditions everything seems favorable for a fair crop. Seeding for Timothy meadow is usually done with the wheat in the Fall, as being the surest way to prevent winterkilling, both being sown at the same time with the drill. The wheat acts as a sort of protector for the newly-seeded grass, in case of cold winds with freezing weather and the absence of snow. Except as a matter of protection from the cold in the Winter, I cannot say that it is an advantage to have any kind of grain growing with newly-seeded Timothy meadow. I noticed that where the wheat had been almost entirely destroyed by the Hessian fly last season the Timothy seeding was much the best where there was no wheat at the time for harvesting. If the only object is to get the largest yield of wheat to the acre I would not advise sowing any kind of grass seed with it; but let it have all the nourishment that there is while it is growing. H. B. S.

Goldwood, O.

THE plan of spraying Bordeaux Mixture and crude petroleum together in order to do away with insect, scale and blight at one shot, has not been a success thus far. The petroleum gathers in spots, and there are parts of the plant where nothing remains. The "cure-all" for plants has not yet been invented.

Woman and Home

From Day to Day.

The pathway to the Land of Life
  Passes the threshold of my door.
It turns down yonder narrow street
  Hedged by the dwellings of the poor.
It winds beside the house of woe,
  Under lit panes where watchers wait.
Who strives too swiftly on that road
  Reaches the end too late.

But he who pauses, turning back
  For deed of love, for word of cheer,
Faithful, unhasting, unafraid,
  Nor wondering if the end be near—
Lo! where the shadow blackest falls,
  While yet he seems midmost the strife,
Enters through the uplifted gates
  Into the Land of Life.

—The Independent.

*

SPRING walking suits are made this year with a skirt that barely touches at the back, and clears the ground at front and sides. Elaborate skirts are still long and flaring, but the sensible outing skirt has greatly modified walking dresses by force of example.

*

A FRIEND in New York State says that she finds the following remedy very useful in cases of croup: Equal parts of syrup of ipecac and wine of antimony: dose one-half teaspoonful every 15 minutes until vomiting commences. This is a standard remedy for spasmodic croup. It must be borne in mind that membraneous croup, which is always dangerous and often fatal, is a totally different disease, being diphtheritic in character; therefore remedies applicable to the distressing spasmodic croup would have no efficacy with the graver disease of similar name.

*

AMONG the Spring novelties shown at one well-known shop in New York are corsets of silk batiste, trimmed with Duchesse lace, and fastened with jeweled gold clasps—price $185 each. They are not likely to become a prevalent mode. Among extravagances of style noted were sets consisting of hat, parasol and boa to match in a combination of pink, blue and lavender. All three were made of tulle, one shade over the other, so that a clouded effect was given, the parasol having an outside framework of rose stems with realistic thorns, and a bordering wreath of roses and violets. The boa was a wreath of roses and violets in a frame of shaded tulle, and the same idea was carried out in the hat. Spring boas of tulle and flowers are seen in all the millinery displays; they are very pretty, very perishable, and quite useless.

*

THERE is a farmer down in Maine who does not like a certain neighboring shipmaster, and many are the mean things he says about him. Here is one of the tales he tells, according to a contemporary:

"Why, he bought a cow of a man down my way; good critter—nothin' the matter with her. But it seems the captain's wife, one day, thought the milk tasted funny, and suggested that p'r'aps she'd been eatin' spruce boughs; said the milk tasted like spruce. And what does he do but go out in the pasture to watch the cow, to see what she did eat.

"The cow was layin' down, chewin' her cud, and he went along and run his finger in her mouth to see what she was eatin'. Then he was mad. He put a rope on the cow, and started off with her.

"'Where are you goin' with the cow?' says a neighbor.

"Goin' to take her back to the feller that sold her to me. He's cheated me, and I won't stand it!'

"The man wanted to know what was the matter, and he went on to tell about it. 'She wasn't eatin' boughs,'' he says, 'she was chewing gum; that's what the matter with the milk and makes it taste like spruce. And,' he says, 'that ain't all. She's so addicted to the habit that she's worn all her teeth out. She ain't got an upper tooth in her head. Back she goes, quick!'

"Of course, the man told him that it was all nonsense; that cows never had no upper teeth. But he didn't believe a word of it, and went on and had a tarnal row with the man that sold him the cow. Guess he was never satisfied about it."

*

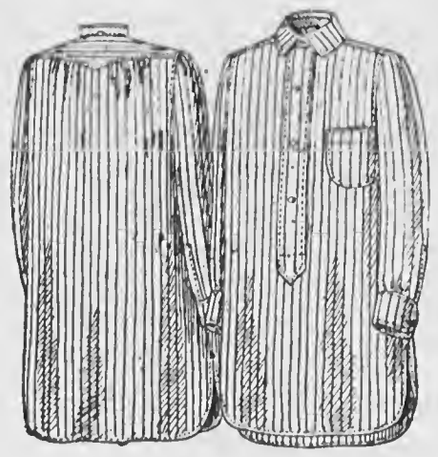
AN original form of wishbone penwiper, recently seen, was an Indian brave. A small ball of red sealing wax is put on the top to form the head, and, while it is still warm, mouth, eyes and nose are marked in the wax. A black line marks the eyebrows, and the eyes are darkened. Pad the wishbone with cotton for the body and leave the ends of the bone for legs, covering them with fringed chamois. The body is covered with a piece of fringed chamois, fastened behind, and a fringed square of the chamois is put over the shoulders shawl fashion, fastened with a gay bead. Strands of black silk form the hair, which is decorated with a tiny feather, and the feet are covered with moccasins of chamois fastened with red silk. The penwiper is hidden under the robe.

*

CHARLOTTE Mary Yonge, author of "The Heir of Redclyffe," "The Daisy Chain," and a long list of other books for young people, died at Otterbourne, England, March 25, aged 78. Miss Yonge did much for children of school age in bringing history, both ancient and modern, within the range of their interest and comprehension. While, to an older reader, the too obvious moral inculcated sometimes weakens the literary force of her fiction, it is always wholesome reading, and recognition of her influence was shown a few years ago by the erection of a girls' school in England, as a testimonial to her. Miss Yonge gave liberally of the proceeds of her work to charity, the profits of the "Daisy Chain" being devoted to building a missionary college at Auckland, New Zealand, while the profits from "The Heir of Redclyffe" were used to fit out a missionary schooner, the Southern Cross, for Bishop Selwyn of New Zealand. Miss Yonge had been occupied in literary work for over 50 years.

The Rural Patterns.

The useful outing shirt shown is cut with a shallow, pointed yoke at the back, below which it falls with slight fullness. The front fits smoothly, the opening being finished with an applied box pleat, which is extended below the waist line to give a shirt-waist effect when worn without a waistcoat. On the



3746 Man's Outing Shirt, 34 to 44 in. breast.

left side is placed a patch pocket that is finished with stitched edges. The sleeves are in regulation shirt style, finished with slightly rounded cuffs. The neck can be completed with a soft, rolling collar or a neckband, to which separate collars can be attached with studs, as preferred. To cut this shirt for a man of medium size 5⅛ yards of material 21 inches wide, 4⅛ yards 27 inches wide, or 3⅜ yards 32 inches wide will be required. The pattern No. 3746 is cut in sizes for a 34, 36, 38, 40, 42 and 44-inch breast measure; price 10 cents from this office.

Russian blouse costumes are very popular for small girls. The pretty and stylish little model given is cut on Russian lines with the long waisted effect now fashionable, and so conforms to the latest demand while being childlike and becoming to an unusual degree. As shown, the material is cotton cheviot in dull blue with bands of embroidery, but all cotton fabrics, madras, chambray, percale, piqué and the like as well as flannel and such woollen materials as cashmere and henrietta are entirely appropriate. The simple little blouse fits

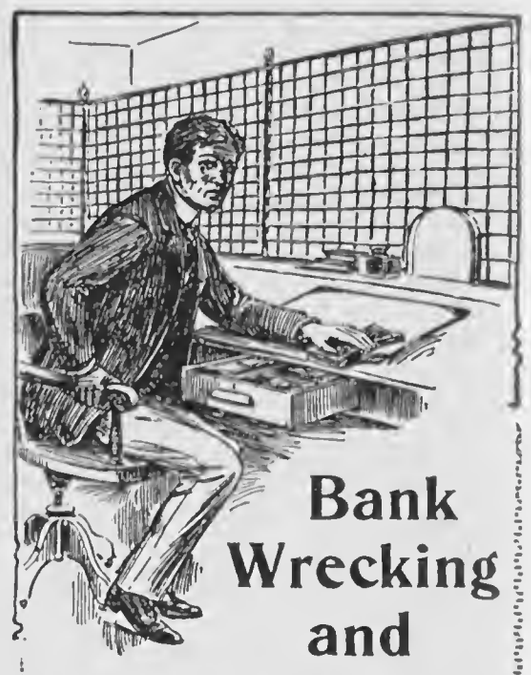
3769 Girl's Russian Costume, 4 to 12 years.

smoothly across the shoulders at the back, but includes fullness at the neck in front, and is arranged over the body lining that closes at the center front, the lower edge being gathered and the fullness distributed to give the best effect. The skirt includes a smooth front, but is gathered at back and sides and joined to the waist, where a curved belt conceals the seam, and the entire gown laps over from the center to close in a continuous line at the left side. The lining is essential, as without it the skirt cannot be kept in place, but, if preferred the skirt alone can be attached, the blouse gathered at the lower edge and completed separately, with the belt attached to its lower edge, or finished and adjusted over the waist after the gown is closed as may be desired. To cut this costume for a girl of eight years of age 4½ yards of material 27 inches wide, four yards 32 inches wide, or 2¾ yards 44 inches wide will be required. The pattern No. 3769 is cut in sizes for girls of 4, 6, 8, 10 and 12 years of age; price 10 cents from this office.

If I can put one touch of a rosy sunset into the life of any man or woman I shall feel that I have worked with God. —George Macdonald.

To reprove a brother is like as when he has fallen to lift him up again; when he hath broken a bone to help set it; when he is out of the way to help put him in it; when he has fallen into the fire to pluck him out.—Henry.

No one can tell the unending power for good which each of us may have in our homes, among our fellowmen, by faith in them,—how far we can strengthen their feeble desire for God and all good. Care, then, for the soul of people, and for the soul of what they do, as well as of what they are.—Henry Wilder Foote.



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Ex-Comptroller of the Currency

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" Diamond Flower.	

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Rural Recipes.

O baker, you haven't, in all your shop,
A cookie fit to be tried,
For the art of making them came to a stop
When my Aunt Lucinda died.
I can see her yet, with her sleeves uprolled,
As I watch her mix and knead
The flour and eggs with their yolks of gold,
The butter and sugar, just all they'll hold,
And spice them with caraway seed.
—Colorado Weekly Times.

Ginger Snaps.—A reader asks for a desirable recipe "A Woman Farmer" sends this: Beat together one cupful of sugar, one egg, and one tablespoonful of ginger. Heat one cupful of molasses to the scalding point, stir into it one teaspoonful of soda or saleratus, and, while it foams, pour it over the butter and egg, and beat together. Add a tablespoonful of vinegar, and stir in lightly enough flour to roll out and cut the dough.

Hot-Pot Mutton.—This recipe is from the Boston Cooking School. Cut 2½ pounds of mutton from the fore-quarter into pieces for serving. Dredge them lightly with flour and brown in two tablespoonfuls of hot fat. Peel and cut five potatoes into slices a fourth of an inch thick and parboil them six minutes. Cut an onion in slices after peeling and parboil for 15 minutes. Place a layer of the meat in the bottom of a granite baking dish, add a layer of the potato and onion slices, drained from the water in which they were cooked, and continue the layers until meat, potato and onion are all used. Season each layer with salt and pepper, using a rounded teaspoonful of salt and a saltspoonful of white pepper. Have the last layer of potato placed like shingles, one slice slightly overlapping another. Dot the top with a tablespoonful of butter cut into bits, and cook covered for nearly three hours in a very slow oven, removing the cover for the last half-hour that the potato may brown.

Jugged Rabbit.—Select a plump tender rabbit. Wash, wipe dry, and cut into well-shaped pieces. Have ready a teaspoonful of salt and one-fourth teaspoonful of pepper and rub this into the rabbit pieces. Put four tablespoonfuls of flour on a plate and roll each piece in this. Heat half a cupful of butter in frying pan; when hot fry the rabbit, browning on both sides, being careful not to burn the butter. As soon as it browns put the rabbit into a stewpan and into the hot butter stir what is left of the flour in which the rabbit was rolled; add three teacupfuls hot water and cook 10 minutes. Pour this over the rabbit, adding two cloves, one-half bayleaf, two or three allspice, one teaspoonful salt, one-fourth teaspoonful pepper, a slice or two of onion. Cover closely and simmer for an hour and a half. Add one teaspoonful lemon juice and one tablespoonful good catchup. Remove the rabbit to a hot platter; strain what liquid is left, add to it a teaspoonful each of butter and flour rubbed smooth and a cupful of hot water; boil up once, pour over the rabbit and serve.

Dried Beef with Egg Sauce.—Put one tablespoonful of butter into a hot frying pan; when melted add two ounces of dried beef, chipped thin and torn into small pieces. Break one egg into a teacup, beat slightly, and fill the cup with sweet milk, season with one saltspoonful of pepper. As soon as the beef is frizzled, pour the egg and milk over it, and cook slowly until a thin custard is formed. Prepare five nicely-browned and lightly-buttered pieces of toast, pour the beef over it, and serve at once.

Martha Washington Biscuit.—Sift one pint of flour with one tablespoonful of sugar, one teaspoonful each of baking powder and salt. Rub into it one tablespoonful of lard. Mix with one well-beaten egg and one cupful of water; roll one-fourth of an inch in thickness and cut with small round cutter. Fry in hot fat until cooked on one side, turn and brown.

Prune Sago.—This is a Scotch dessert. After washing one-half pound of prunes put them to soak till well puffed out, then put them into a stewpan with enough cold water to cover them. Cook till soft; pass the fruit through a fine sieve, after stoning it. Mix with it some pearl sago that has been well boiled. There should be equal quantities of fruit pulp and sago. Heat up, but do not boil; if too stiff thin with a little milk or water, season with lemon juice; it will be sweet enough for ordinary palates. Pour into a jelly mold and when cold turn into a glass dish. Serve with whipped cream or boiled custard.

Date Cake.—Two cupfuls sugar, one cupful shortening, creamed together, three eggs, well beaten into sugar and shortening, three teaspoonfuls baking powder, 3½ cupfuls flour. To this add one cupful of stoned and finely-chopped dates, floured. Bake in five layers and put together with plain or boiled icing. This recipe is sent us by Mrs. C. S. Perry, of Georgia, in response to a recent request in THE R. N.-Y.

Practical Home Dressmaking.

THE REQUIREMENTS.—Every well-regulated home should have a spacious, well-lighted room set apart exclusively for dressmaking. In this room should be closets, racks, cutting and sewing tables, machine, tracing-wheel, cutting system, patterns, tape line, scissors, chalk and a variety of good-quality sewing material. If there are daughters in the family they should all be taught to assist the mother or sewing woman employed so as to obtain a practical knowledge of the art of dressmaking. The plan of parceling out the work of a home among the daughters—one to do the milking, one the cooking, one the laundry work, and one to do the dressmaking, is not commendable—all should be given practical lessons in dressmaking.

HOW TO MAKE A WAIST.—Lay pattern on lining crossways of the goods to avoid splitting. Pin pattern on and trace in every perforation. Cut and baste up lining, commencing at top of darts and baste downward, keep tracing of each side together. Commence at the waist line and baste upward, and again at the waist line and baste downward, until the garment is basted together, keeping the waist line straight to prevent the waist from being crooked. Fit lining to the form, pin the corrections on the form, remove and alter or take up the corrections. In tracing the corrections be careful to have each side to match. The next step is to take lining apart and lay on and cut the goods to match. Baste in all the tracings on the lining, then baste up as you did the lining; seam, press and fit again. Bind seams with seam binding. An important matter in the fit of a dress waist is in placing the whalebones. The whalebone should be a little fuller than the goods, so as to provide for expansion of the goods and avoid wrinkles. Cut lining for sleeves, trace in perforation, baste inside seam, lay flat on table, material upside down, pin the upper side of sleeve to under side, so the fullness will come to the elbow. Fit the lining and take up the corrections as before, and then take apart, lay on goods and cut; baste seam, press and fit again and sew in.

THE SKIRT.—For a walking or rainy-day skirt use a five-gore pattern. Cut lining, baste, fit form, take up the corrections around hips and waist, and get correct measure for the band. Pin up one side right length around bottom. Remove, trace all corrections around top of skirt, run thread around bottom when pinned up. Take out pins and pin together carefully and true. Trace around bottom where the basting is; secure right length all around. Take apart and cut goods by lining. Baste up the outside like the lining, seam the outside, press and stitch on each side of seam as often as is conducive to the taste. Baste up the lining, seam and press; be careful that both are alike. Cut haircloth crossways six inches deep, sew together, bind at top, and place at bottom of skirt where marked for the length. I recommend hair cloth for bottom of skirt for the reason that it wears better and is lightweight. I fit the haircloth separate from the skirt, stitch the seams flat and bind at top to avoid the hair penetrating the goods. Then lay back on lining and tack it at every seam, and two or more times between each seam at top. If goods are flimsy, line with crinoline all the way through, but to make the flare stand out round the bottom, put lightweight linen canvas (linen color) about four inches wide around the flare at the bottom. Baste on the goods, turn up the hem over the hair cloth, baste down smooth and solid, press and stitch to suit fancy. Join the lining to outside by basting the seams together. Turn lining in round the bottom and fell it down, put on braid; press and put on band. Heavy goods will require no lining. In that case the goods must be cut direct from pattern. These are the distinct steps to be taken in making a suit. No one with a fair degree of skill need fail in practical home dressmaking by the pattern system. ALICE M. LONG.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

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[*We recommend above firm as reliable.—Editor.*]

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This illustration gives you an idea of the appearance of the High Grade, High Arm Edgemere Sewing Machine, which we furnish at $11.95 in the handsome 5-drawer drop head oak cabinet illustrated.

MARKETS.

The Week's Quotations.

WHOLESALE PRICES.

NEW YORK, APRIL 6, 1901.

GRAIN.—Wheat down one to two cents, and market generally weak. Ohio crop reports favorable for Winter grain.

Wheat, No. 2, hard, N. Y.	79¾	@	—
No. 1, Northern Duluth, spot.	86½	@	—
No. 1, hard Duluth, spot	90¼	@	—
Corn, No. 2, mixed	49	@	—
Oats, No. 2, white, in elevator.	33	@	—
Rye, No. 2, W'n, c. i. f., N. Y.	—	@	58½
State & Jersey, track	57	@	58
Barley, feeding, c. i. f., N. Y.	47	@	48
Malting, c. i. f., N. Y.	52	@	61

BEANS.—Choice marrow five cents up. Other grades unchanged and trade inactive

Marrow, choice, per bu	2 40	@	2 45
Marrow, fair to good	2 20	@	2 30
Pea, bags, choice	2 05	@	—
Red kidney, choice	—	@	2 15
White kidney, choice	2 30	@	2 35

FEED.—Arrivals from the West light, and prices remain high.

Spring bran, bulk	18 50	@	19 50
Winter bran, bulk	21 00	@	23 00
Spring middlings, 200-lb. sacks	19 50	@	21 00
Screenings, 100 lbs	30	@	80
Unsound wheat, 100 lbs	67	@	70
Linseed meal, ton	24 50	@	—
Cottonseed meal, ton	25 00	@	—

HAY AND STRAW.

Hay, No. 1	85	@	90
No. 2	80	@	82½
No. 3	75	@	77½
Clover	70	@	72½
Clover, mixed	72½	@	77½
Straw, rye, long	75	@	85

SEEDS.

Clover, per lb	9½	@	10½
Timothy, per lb	4	@	4¾
Red Top, per lb	10½	@	—
Flaxseed, whole, bu	6 50	@	7 00
Millet, per lb	2	@	2⅛
Rape, German, per lb	3½	@	3⅝

MILK.

New York Exchange price reduced one-fourth cent, or to 2½ cents within 26-cent freight zone.

BUTTER.—Receipts from the West light owing to bad roads in producing districts. General tone of the market is stronger, but prices practically unchanged from last report.

NEW BUTTER.

Creamery, extras, per lb	22	@	—
Firsts	21½	@	—
Seconds	19	@	20½
Lower grades	16	@	18
State dairy, tubs, finest	21	@	—
Tubs, fresh, firsts	19	@	20
Tubs, fresh, 3ds to 2ds	15	@	18
W'n imitation creamery, finest	18	@	18½
Firsts	16	@	17
Lower grades	14	@	15
Western, factory, fresh, small tubs, fancy	14	@	14⅝
Large tubs, fancy	13½	@	13¾
Fair to choice	12¾	@	13¼
Western factory or dairy, lower grades	11	@	12½
Rolls, fresh, choice	13½	@	14
Fresh, common to prime	11	@	13
Renovated butter, fancy	17½	@	18½

OLD BUTTER.

Creamery, Summer made, common to prime	12	@	18
State dairy, tubs or firkins, finest	14	@	15
Tubs or firkins, common to gd.	11	@	13½
W'n, factory, Summer made	9	@	12½

EGGS.—Market steady with a slightly firmer feeling on fancy western brands.

QUOTATIONS AT MARK.

State & Penn., prime	13½	@	14
Western, fresh-gathered, 1sts	—	@	13½
Storage packed, fancy	13¾	@	14
Ky., closely graded, fancy	—	@	13½
Ky. & Tenn., avge., prime lots	—	@	13¼
Southern, fresh-gathered, common to prime	13	@	13¼
W'n, fresh-gathered, dirtics	—	@	12½
Fresh-gathered, checks	—	@	12
Duck eggs, Baltimore, per doz.	—	@	30
Western	27	@	28
Virginia & Tenn., per doz	26	@	28
Far Southern, per doz	24	@	26
Goose eggs, per doz	70	@	75

POTATOES.

Porto Rico, fair to fancy, bbl.	7 00	@	8 50
Bermuda, second crop, pme, bbl.	6 50	@	8 00
Second crop, No. 2, bbl	3 00	@	4 50
Havana, fair to prime, bbl	3 00	@	4 50
Southern, second crop, bbl	1 50	@	2 00
State, round, per 180 lb	1 37	@	1 62
Long, per 180 lb	1 25	@	1 37
Michigan, round, per 180 lb	1 50	@	1 62
Long, per 180 lb	1 25	@	1 50
State & W'n, per sack	1 25	@	1 40
Sweets, Vineland, cloth-top, bbl.	2 00	@	2 75
Other Jy & Del., cloth-top, bbl.	1 50	@	1 75
Jersey, per d.-h. bbl	1 50	@	1 75
Jersey, per basket	75	@	1 00

VEGETABLES.

Onions, Conn. & L. I., wh., bbl.	3 00	@	5 00
Conn. & L. I., red, bbl	3 00	@	3 75
Conn. & L. I., yellow, bbl	3 00	@	3 50
Orange Co., red, bag	2 50	@	3 50
State & W'n, yellow, bbl	2 75	@	3 00
Bermuda, crate,	3 00	@	—
Havana, crate	2 65	@	2 75
Squash, marrow, bbl	1 00	@	1 25
Hubbard, bbl	1 50	@	2 00
Florida, white, crate	1 50	@	2 50
String beans, Fla., crate	2 00	@	5 50
Turnips, Canada, Russia, bbl.	80	@	90
Peppers, Fla., carrier	1 00	@	2 00
Celery	15	@	90
Florida, case	2 00	@	3 00
Egg plant, Fla., box	1 00	@	3 00
Green peas, Fla., bskt	1 00	@	4 00
California, box	1 50	@	2 50
Spinach, Norfolk, bbl	50	@	75
Lettuce, Fla., ½-bbl	1 00	@	2 25
Charleston, basket	1 25	@	2 00
North Carolina, ½-bbl	50	@	1 00
New Orleans, bbl	4 00	@	5 00
Parsnips, bbl	—	@	1 00
Cabbage, State, ton	12 00	@	16 00
Florida, new, bbl	1 00	@	1 75
Charleston, bbl	1 00	@	2 00
Tomatoes, Fla., carrier	1 50	@	4 00
Chicory, New Orleans, bbl	5 00	@	7 00
Beets, old, bbl	75	@	—
Florida, crate	75	@	1 00
New Orleans, 100 bchs	3 50	@	4 50
Romaine, Bermuda, crate	1 00	@	1 75
Florida, basket	1 00	@	2 00
Escarol, N. O., bbl	3 00	@	5 00
Okra, Havana, carrier	1 00	@	2 00
Parsley, Bermuda, box	75	@	1 25
New Orleans, 100 bchs	2 50	@	3 50
Kale, Norfolk, bbl	60	@	75
Cauliflower, Fla., basket	2 00	@	3 00
California, case	1 00	@	3 00
Asparagus, Ch., pme, dz. bchs.	4 00	@	7 50
California	2 00	@	4 50

HOTHOUSE PRODUCTS.

Lettuce, per case	2 25	@	3 00
Cucumbers, fair to choice, doz.	1 12	@	1 25
No. 2, doz	60	@	75
Tomatoes, com. to prime, lb.	10	@	20
Radishes, 100 bunches	2 50	@	3 00
Mushrooms, lb	25	@	40
Rhubarb, 100 bunches	5 00	@	6 00
Mint, dozen bunches	25	@	37

DRIED FRUITS.

Apples, evaporated, fancy, lb	6	@	6½
Evaporated, choice, per lb	5	@	5½
Evaporated, poor to good, lb.	3	@	4¼
Sun-dried, Southern, sliced, lb.	3	@	3¾
Sun-dried, State &Wn, qrs., lb.	3	@	3¾
Sun-dried, S'n, coarse cut	2½	@	3
Chops, per 100 lbs	1 00	@	1 62½
Raspberries, evaporated, 1900, lb.	19	@	19½
Blackberries, 1900, per lb	5¾	@	6¼
Huckleberries, 1900, per lb	14	@	15
Cherries, 1900, per lb	13	@	15

FRESH FRUITS.—Apples plenty and dull for any but best grades. Florida strawberries firm on light receipts.

Apples, Baldwin, bbl	2 50	@	3 50
Greening, bbl	2 50	@	5 00
Spy, bbl	2 50	@	4 00
Ben Davis, bbl	2 50	@	4 00
Spitzenberg, bbl	3 00	@	5 00
Russet, bbl	2 25	@	3 00
Cranberries, Cape Cod, bbl	6 00	@	8 50
Jersey, crate	1 00	@	1 90
Strawberries, Florida, qt	20	@	40
Pineapples, Fla., red, 24s, crate.	4 50	@	5 00
Florida, red, 30s, crate	4 00	@	4 25
Havana, extra, pine	15	@	18
No. 1, pine	12	@	15
No. 2, pine	10	@	12
No. 3, pine	6	@	7

LIVE POULTRY.—Market badly blocked with all grades. Receipts in excess of demand for Jewish holiday trade, and probably 15 or 20 carloads will have to be held over until next week. Prices two cents below last report.

Fowls, heavy, per lb	—	@	10
Light	9	@	9½
Chickens, per lb	—	@	9
Roosters, per lb	—	@	6
Turkeys, per lb	—	@	9
Ducks, Western, per pair	70	@	90
Southwestern, per pair	50	@	65
Geese, per pair	75	@	1 25
Pigeons, per pair	35	@	40

DRESSED POULTRY.—Receipts moderate, but demand so light that market is very weak, both on fresh-killed and iced stock.

FRESH PACKED.

Turkeys, Western, young hens, average best	10	@	10½
Western, old hens	9	@	9½
West'n, young toms, prime	8	@	8½
Old toms	—	@	8
Broilers, Winter, under 2 lb., pr.	30	@	35
Phila., 3½@4 lb., pair, lb	18	@	20
Roasting chickens, Phila., selected, large	15	@	17
Medium grades	11	@	13
Fowls, State & Pa., gd to pme.	10	@	10½
W'n, dry-picked, small, fancy.	10	@	10½
W'n, scalded, small, fancy	10½	@	11
Heavy	—	@	9½
Old roosters, per lb	6½	@	7
Capons, Ohio, large, per lb	14	@	15
Other Western, large	13	@	14
Western, mixed weights	11½	@	12½
Western, small and slips	10	@	11
Ducklings, L. I., and other nearby, per lb	20	@	22
Squabs, choice, large, wh., doz.	2 75	@	3 00
Mixed, per doz	2 00	@	2 50
Dark, per doz	1 50	@	1 75

FROZEN.

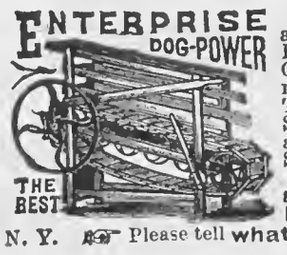
Turkeys, young hens, No. 1	11	@	—
Mixed, young hens and toms, No. 1	10½	@	11
Young toms, No. 1	10	@	10½
No. 2	7	@	9
Broilers, dry-picked, fancy	16	@	18
Scalded, fancy	13	@	15
Chickens, fancy, soft-meated	—	@	12
Average, No. 1	—	@	10
No. 2	7	@	9
Fowls, dry-picked, No. 1	9½	@	—
Ducks, fancy	12	@	13
Geese, fancy	9½	@	10

COUNTRY-DRESSED MEATS.—Spring lambs in heavy receipt and lower.

Calves, veal, prime, per lb	9	@	9½
Fair to good, per lb	8	@	8½
Common to medium, per lb	7	@	7½
"Spring" lambs, fancy, each	6 00	@	6 50
Poor to prime	3 00	@	5 50

FURS AND SKINS.—Market weak and outside prices realized for only finest skins.

Black bear	15 00	@	25 00
Badger	75	@	1 25
Otter	8 00	@	10 00
Beaver, large	7 00	@	8 00
Medium	6 00	@	7 00
Small	3 00	@	4 00
Silver fox	50 00	@	200 00
Cross fox	8 00	@	25 00
Red fox	1 75	@	2 00
Gray fox	80	@	90
Fisher	8 00	@	10 00
Wolf, prairie	1 00	@	1 10
Timber	3 00	@	4 00
Wolverine	6 00	@	8 00
Lynx	4 00	@	6 00
Wild cat	50	@	60
Marten, dark	6 00	@	10 00
Pale	3 00	@	4 00
Skunk, black	1 40	@	1 50
Half-striped	85	@	90
Long-striped	80	@	90
Striped	45	@	50
White	20	@	35
Raccoon	75	@	1 00
Opossum, large	30	@	40
Medium	20	@	25
Small	8	@	10
Mink	1 00	@	2 00
Muskrat, Winter	11	@	12
Fall	8	@	9
Kits	3	@	—



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"DON'T have sour milk." This is the motto used by the Champion Milk Cooler Co., Cortland, N. Y., in advertising their Champion milk cooler and aerator. The Champion is an implement which ought to have a place on every farm where cows are kept. It takes out all animal heat, foul odors, and retards the development of the germs which cause milk to sour. Send for their free booklet on "Milk and Its Care."

WHEN you are called upon to paint a house, do you prefer the combination paint made from zinc white and so-called "inert pigments," that will surely involve the use of the dangerous gasoline torch, when removal becomes necessary, or the pure white lead, that affords more perfect protection for the wood, during a longer period, and which can be repainted whenever it may be desired, without incurring any risk? The brands of pure white lead manufactured by the National Lead Company are made by the "old Dutch process" of slow corrosion, and are uniformly the best white lead it is possible to manufacture. Use them, and you will insure permanent satisfaction.

VERY many farmers buy a set of low wheels for use on the farm, and a set of high wheels for road hauling. The advantages of wide tires and low-down wagons have been so thoroughly discussed in the press and at institutes and clubs that there is small need of repeating them here. It has been demonstrated time and again that they mean easy loading and easy hauling; they save the man, they save the horses, they save the fields, for they do not "rut" nor cut up the ground as a narrow tire does. If you have not a low-down handy wagon we know that it will pay you to investigate. Send for the Electric catalogue. It's free. Address Electric Wheel Co., Quincy, Ill.

FOR the last two or three years, Dr. Sloan has sent free to anyone who requested it, his "Treatise on the Horse," and wherever it has gone it has been prized for its valuable advice on the care, comfort and health of the horse, and what methods and medicines to use when the animal is sick. It has saved many people money which they would otherwise have spent on a veterinary. Now, Dr. Sloan has written another book just as valuable for the woman of the house, entitled "Sloan's Handy Hints and Up-to-to-date Cook Book." It is a book of 48 pages, illustrated throughout with original sketches, and giving all the latest recipes from the making of bread and rolls to the newest thing in salads, pickles and ices. By sending your name and address written plainly on a postal card to Dr. Earl S. Sloan, Boston, Mass., you will receive one of these valuable books.

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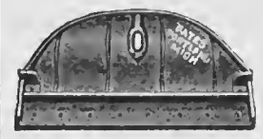

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Market Briefs.

PICKED UP HERE AND THERE.

LARGE SEAL CATCHES.—Reports from Newfoundland state that 10 sealing vessels have returned to port with a total catch of over 220,000 seals. Ten or a dozen more vessels are still out, and it is probable that the entire fleet working off Labrador this season will bring in nearly 500,000 hides.

LONDON FUR SALES, held during the latter part of March, resulted in lower prices on most furs. The exceptions were prime otter and mink, the latter being 25 to 40 per cent above last year's figures. Fox, lynx and seal, which brought such enormous prices a year ago, have declined in some instances 50 per cent. The greatest cut was on Silver fox, of which a large number were held over from last year, a wide range of price was quoted, from $50 to $200. Skunk and raccoon sold at a discount of 10 to 15 per cent, although prices in this market are not materially affected. Muskrat sales were at January prices.

RUBBER AFFAIRS.—The rubber trust is evidently running against numerous snags, which interfere with smooth sailing. Their troubles are caused by a dozen or more independent concerns, which show no disposition to be either coaxed or driven into the combination. Within a short time the trust has made three cuts in price as a result of the competition of these outside concerns. One of these cuts was said to be partly caused by the decline in the price of crude rubber, but it is doubtful whether the reduction would have been made if stock had been entirely in the hands of the combination. The receipts of Para rubber for the month of March were about 4,000 tons.

TIN-CAN COMBINE.—The manufacture of cans for packing tomatoes and other fruits and vegetables is now practically in the hands of one concern. The small can makers have been gobbled up or frozen out, and prices of cans have gone up to such an extent that it is thought the output of tomatoes will be considerably decreased. Packers will have to advance prices to such an extent that trade will suffer. Many people buy canned tomatoes because they are cheap and wholesome, rather than that they prefer them to anything else in the fruit or vegetable line, and, with any decided increase in price, will turn to fresh fruits. It is not likely, however, that can makers will long stick to a policy which would cut off trade in their goods. As soon as the effects of a prohibitory price are seen, those in control will see that enough reduction is made to counteract this.

SHORTAGE OF CARS.—Every year, when large quantities of goods are to be shipped from any one section, there is a complaint of scarcity of cars. Of course, railroad companies wish to transport all they can with the facilities they have, and do their best to handle the cars so that they may be had where most needed, but it is a difficult problem, and there is often considerable hard feeling worked up on the part of both shippers and railroad officials. It is commonly thought that the would-be shipper does all the worrying, while the railroad man takes things easy. This may be so to a certain extent, but it is doubtful whether railroad people can get much comfort out of having a lot of fruit growers, whose products are spoiling for lack of transportation facilities, hammer away at them day and night for more cars. California orange growers have just been going through a siege of this sort. They had any quantity of fine fruit; but the markets were hundreds of miles away, and it was apparently impossible to get cars enough to handle the crop at the time when the biggest shipments should have been made. The growers simply had to see their fruit spoil, and some that reached New York was too ripe when shipped, and should not have been sent at all. The railroad people claimed that the shippers were partly responsible for the trouble, on account of diverting the cars from the points to which they were originally shipped, and delay in unloading. Anyone who unnecessarily delays the unloading of a car under such circumstances is doing an injustice to both shipper and railroad company. It is difficult enough to handle a big crop of perishable stuff a long distance from market when all concerned coöperate to the best advantage. There are now between 4,000 and 5,000 refrigerator cars in use in the California fruit service, and preparations are being made to increase the supply.

W. W. H.

PACKING LEAVES.—Tell Hope Farm man he wasn't in it in gathering leaves. Let him take two slats one inch square and three feet long, and cut open one of the big phosphate bags; tack the same to the slats with leather washers. Then take slats in about the middle with each hand; make a grab and drop into the box. The leaves can be picked up clean.

G. S. S.
Millersburg, Pa.

Work of the Wind.

The New York Sun thinks that the colored rain which recently fell in Italy was caused by dust which blew across the Mediterranean Sea from the Desert of Sahara. It says: "Perhaps we do not commonly appreciate what an active agent the wind is in the removal of matter from one place to another unless this activity takes the form of a hurricane or tornado. Several years ago a considerable shower of barley fell from the heavens in a district of southern Spain. The source whence the barley came was a mystery till it was learned, a little later, that a whirlwind in Morocco had swept clean a number of thrashing floors where the farmers with their flails were separating the grain from the straw. This was probably the solution of the phenomenon observed in Spain. The grain had been carried across the Mediterranean from Africa to Europe. It is well known now that the wind as a carrier of matter plays an important part, in the course of ages, in determining the topographic aspects of the earth's surface, and thus helps to distribute the industrial features of life. A great deal of the dust of the Sahara has helped to make the fine soil that produces two crops a year on the banks of the Nile. The vast accumulations of loess, among the most fertile of the soils in China, which in some places are as much as 2,000 feet thick, are deposits of dust blown southward from the rainless regions in the heart of the continent. This has been proven by the fact that the organic remains found in them are never marine, and are very rarely even of fresh-water origin. They consist almost entirely of land shells, with now and then the bones of some land animal."

WHY IS THIS?—I had a few years ago a bushel box of Early Ohio potatoes in the cellar and on top of them a box of Carman No. 1, which I was saving for seed. When I went to get them I found that the rats had gnawed a hole in the box of Ohio and had eaten some of them, but had not touched the Carmans, which they could have got at without gnawing. After planting what I wanted, I had some left of each kind, which I gave to a neighbor, who put them into his cellar that night. The rats carried off every piece of the early Ohio, and did not touch one of the Carman. The rats must be experts at the business to tell the difference between one kind and another.

V. E. H.
Lakeport, N. H.

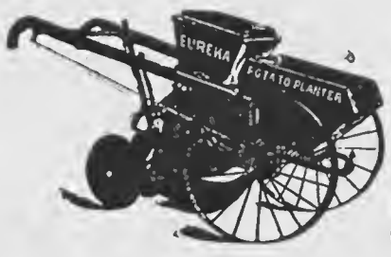
A Happy Mother

Frolicking with her baby makes one of the prettiest spectacles ever seen in the home. But nothing is sadder to see than the unhappy mother, weak and nervous, striving in vain to hush the cries of her weak and nervous babe. There can be no happiness for either mother or child without health. Doctor Pierce's Favorite Prescription "has done wonders" for many a woman, by restoring her health and opening for her the way to happy motherhood. This really wonderful medicine is not a cure-all. It is a preparation specially designed to cure diseases peculiar to women. It dries debilitating drains, heals inflammation and ulceration, cures female weakness, and removes the causes which generally make women nervous and sleepless.

There is no alcohol in "Favorite Prescription" and it contains no opium, cocaine or other narcotic.

Mrs. James W. Blacker, of 629 Catherine Street, Syracuse, N. Y., writes: "Your medicines have done wonders for me. For years my health was very poor; I had four miscarriages, but since taking Dr. Pierce's Favorite Prescription and 'Golden Medical Discovery,' I have much better health, and now I have a fine healthy baby."

Use Dr. Pierce's Pleasant Pellets with "Favorite Prescription" if the bowels are inactive or irregular.



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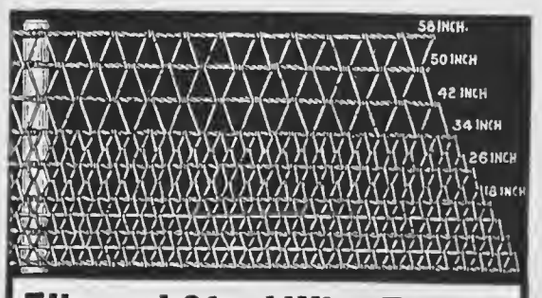

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Six styles—18 to 58 inches—best steel wires, heavily galvanized. Expansion and contraction provided for. Every rod guaranteed. Sold by local agents. If no agent in your town write to the makers.

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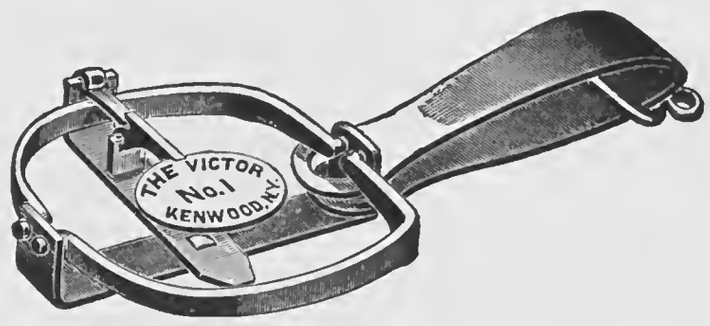
should be forced forward as rapidly as possible in order to get them quickly to market. The profits of the crop frequently depend on a gain of ten days in marketing. This can be accomplished by the judicious and liberal use of

Nitrate of Soda,

applied in proper proportions with phosphates and potash salts. Every gardener should use it. Pamphlets and full information free on application to **John A. Myers,** 12-O, John Street, New York City. ***List of dealers*** in *Nitrate of Soda* will also be furnished.

Victor Steel Trap Free.



This reliable and popular Steel Trap is just the thing for farmer boys who wish to make money by trapping muskrats for their fur. It is also of great use to the farmer in ridding him of skunks, weasels, rats, woodchucks and such other animals as may visit his poultry houses and barns. They are supplied with strong chain about 2½ feet long. You can get this trap absolutely free. Get a neighbor who is not now taking THE RURAL NEW-YORKER to give you his subscription. Send us his name and his dollar and we will send you the trap prepaid.

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$2 Book for $1

We have yet some copies left of a lot of slightly shelf-soiled books of **Horses, Cattle, Sheep and Swine,** by Curtis, that we will mail postpaid as long as they last for $1. This book is the standard work on live stock. It is used as a text-book in almost all agricultural colleges, and is indorsed by all leading authorities on live stock. It is a large book, fully illustrated, and requires 16 cents to pay postage alone. These copies are in condition for any library, and will be reserved for subscribers alone. They will not be sent at this price to dealers. They are a great bargain at the price for anyone who wants to make a study of animal husbandry.

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Humorous.

An urchin with a puzzled look
Unto his father sald,
"Why is it, upon all the coins
They stamp a woman's head?"
The father thought a moment, then
He gave him this reply:
"My child, they say that money talks,
I think that must be why."
—Leslie's Weekly.

"I SEE that Wisconsin finally has a law taxing bachelors." "Sort o' single tax, ain't it?"—Cleveland Plain Dealer.

TEACHER: "If you are polite and kind to your young comrades what will be the result?" Bully Jones: "They'll know they can lick you."—Puck.

TEACHER: "Thomas, what are 'parts of speech?'" Tommy Tucker (after an exhaustive mental effort): "It's the way a man talks when he stutters."—Chicago Tribune.

BILL: "I saw Gill use a ten-dollar bill to light his cigar." Jill: "Isn't he extravagant?" "Oh, no; it was a bill some fellow sent him for groceries."—Yonkers Statesman.

LITTLE NEPHEW: "Is it true, uncle, that the bark grows thickest on one side of a tree?" Old Uncle Grout: "Yuss!" Nephew: "Which side, uncle?" Uncle Grout: "The outside."—Judge.

ARABELLA: "George, dear, I want some money." George: "Why, I gave you a check yesterday." Arabella: "Yes dear, I know, but the doctor said I was to have plenty of change."—Pick-Me-Up.

"WHAT would you say," began the voluble prophet of woe, "if I were to tell you that in a very short space of time all the rivers in this country would dry up?" "I would say," replied the patient man, "'Go thou and do likewise.'"—Philadelphia Press.

"WHAT's your man's specialty?" asked the Mayor of Hot Dog. "Liftin' horses," said the advance agent of the strong man. "Well," said the Mayor, "I shore admire your gall fer ownin' up to it, but I'll tell you beforehand that liftin' hosses is a mighty unhealthy game in this here section."—Indianapolis Press.

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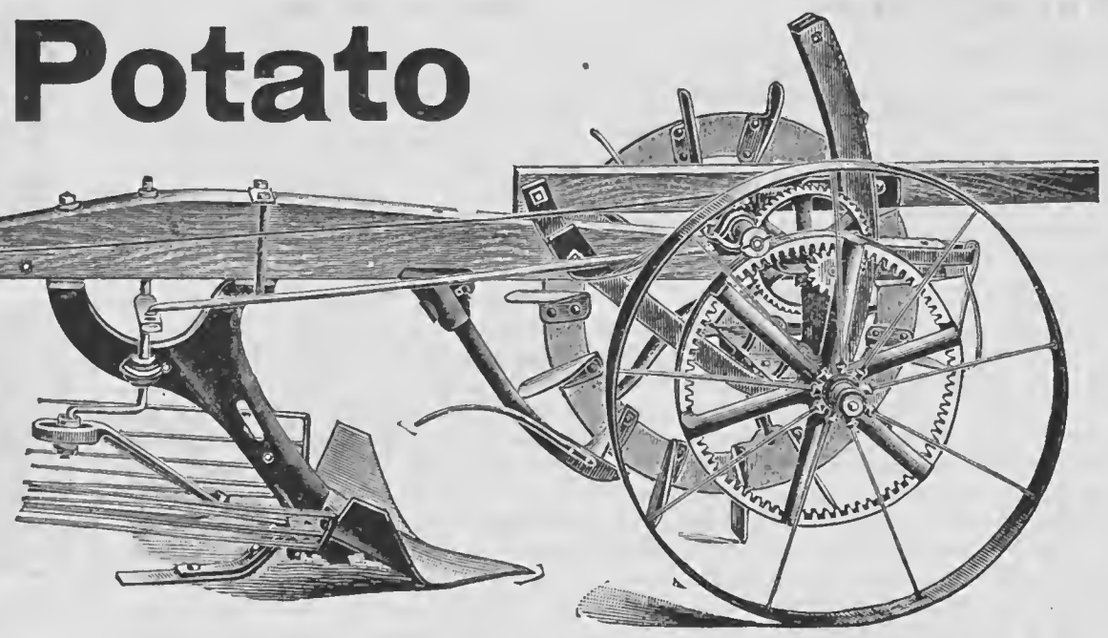

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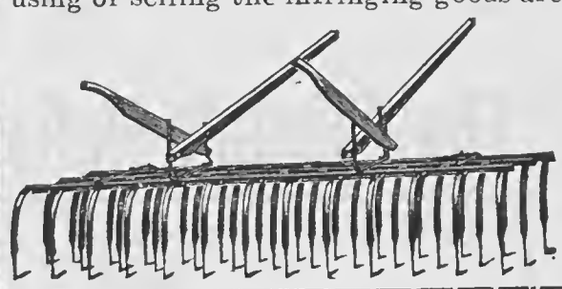

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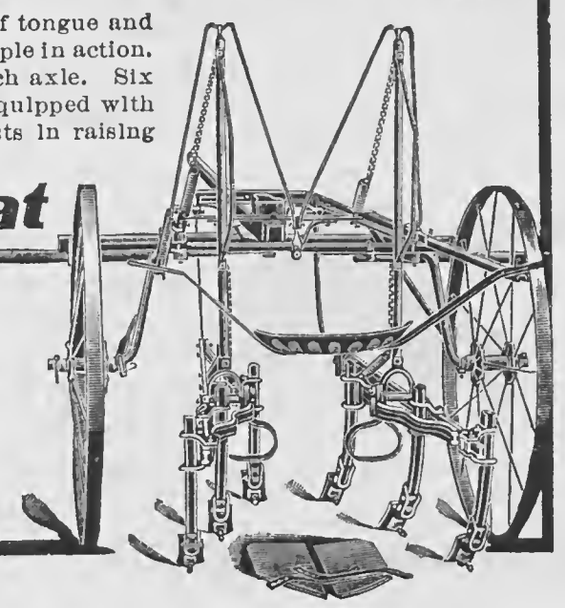

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2673. NEW YORK, APRIL 20, 1901. $1 PER YEAR.

POTATO GROWING IN CENTRAL ILLINOIS.

SEED FROM THE BEST HILLS.

Culture, Cure and Handling.

SEED SELECTION.—We very much prefer selecting our seed potatoes just a little before they are mature; going over the field just as the vines begin to ripen, choosing the best hills as to vine, size and number of tubers to the hill, time of maturity, and always to an ideal type. One will soon learn to know the best hills from the appearance of the vines, etc. Having our seed dug, we store the tubers in bushel crates in very strong light, but not in the direct rays of the sun, and let them remain till danger of frost, when we move the tubers in the crates and store in the cellar. Exposing the tubers to light will help to destroy scab spores, will ripen the crop better, and prevent sprouting so early in Spring. When stored in the cellar they are kept at a temperature of from 35 to 40 degrees. On cold, dry days the cellar is opened and allowed to ventilate as long as possible without becoming too cold, when it is closed and held near an even temperature of 38 degrees. Of course it would ruin potatoes for table use to expose them to strong light, but for seed this exposure is a great help.

HIGH GROUND PREFERRED.—Though an occasional variety of potato may be found that will do well if planted on low ground, a high piece of ground (as high ground goes in Champaign and Douglas counties) is much preferable, if very fertile, or if made so. The low-lying grounds of the corn belt of central Illinois have not enough sand in them, I think, to produce the best results with potatoes, but this can be partially made up for by cultivation. *No green manure* should ever be used on potato ground, but too much can hardly be applied if it be thoroughly rotted; and potatoes will respond very thankfully in large returns, for heavy applications of thoroughly rotted manure, as they are great feeders. [Why not use green manure?—Eds.]

SOIL PREPARATION.—The ground should be plowed quite deeply either in Fall or Spring, preferably in Fall. If plowed in Fall, no stock should be allowed to run over the ground, whether hard frozen or not; for if it be frozen and stock allowed, they will sift the fine dry dirt into the crevices and thus prevent the action of the frost. Eight inches is none too deep to plow. As soon as the soil will work well in the Spring, begin to prepare the seed bed.

PLANTING.—A good many people suppose that a potato grows upon the root of the plant, but this is not the case. A potato is the swollen end of an underground branch, and the eyes of a potato are simply the buds of this branch. As the sprout or branch from a potato eye comes up through the ground, it makes nodes, joints or buds, and from these underground buds new branches start, of which the swollen end is the potato. In some varieties these underground buds are much farther apart than in others; hence we must needs study our variety to know how deep to plant to get a good yield. As a rule, those varieties that grow compactly in the hill are the ones that grow these buds closest together, and may be planted shallowest; while those that grow the tubers scattering in the hill are opposite. However, the best average depth to plant is four to five inches. Varieties that grow small vines may be drilled much closer together in the rows than those with rank vines. If to be planted by hand, drop pieces of one to two eyes from 10 to 18 inches apart. The seed or blossom end of each potato should be cut off and thrown away. However the planting may be done, either by machine or hand, a good ridge should be thrown up over each row, as it will be of much use when we come to the cultivation. Before the potatoes are up and weeds start, harrow twice by lapping the harrow half way, and as you have a ridge to guide you keep the horses off the rows. As soon as you can see the potatoes in the rows harrow as before and keep the horses off the rows. I desire especially to emphasize *keeping the horses off the rows.* Continue cultivation with any tool that will cultivate very shallow until vines prevent or the crop is ripe. Cultivate often, level, shallow and especially as soon as the ground is in fit condition after each rain. Frequent culture will be an advantage with respect to

INSECTS AND DISEASE.—Any injury to the vines is a check to the growth, and I would advise for killing the bugs: 11 ounces acetate of lead and four ounces arsenate of soda dissolved, each in two or three gallons of water, to which is added enough water to make 150 gallons in all; then add one gallon of cheap molasses and spray the vines. The only thing we know to do for blight, is to spray with Bordeaux Mixture; and the only thing we *need* to do for scab, is to immerse the potatoes before they are cut for 1½ hour in the following: In two gallons of boiling hot water dissolve two ounces of corrosive sublimate, to which add 13 gallons of cold water, and it is ready for use. I very much prefer to have the tubers dry before cutting.

THE EFFECT OF SOUTH DAKOTA CLIMATE ON A POTATO. FIG. 115.

VARIETIES.—I give herewith a list of varieties we have been using for our crop alone, and list none that have not been given a thorough trial: Extra early, Acme and Burr's No. 1; second early, Early Norther and Express; first late, Livingston's Banner and Livingston; late, Rural New-Yorker No. 2 and Pink Gem.

Tolono, Ill.

Getting Ready to Plant Potatoes.

Last Spring many farmers waited until time to plant before making any preparations for treating the seed for scab. Then when the ground was fitted and marked out, it was found that no formalin nor corrosive sublimate was on hand, and it was then decided to forego the seed treatment for "this time." This decision saved a little time and extra trouble, but did it pay, in a majority of cases? Most certainly it did not. In several instances farmers have stated to us, during the past Winter, that it was the last time they would fail to treat their seed potatoes before planting. Some of them declared they lost enough in the yield and sale of marketable tubers to pay for treating the seed many times over. We have repeatedly tried all plans, and found the best one to have the formalin procured early and treat the seed just before planting. We prefer formalin to corrosive sublimate, every time. It bothered us to procure the formalin last year in Battle Creek, as the druggists kept it only in limited quantities. For the last two years we have had to order from Chicago or Detroit firms. We have notified our druggist early this season, and he will have a supply on hand when wanted. Several other farmers in this section have asked us to order for them, so that we believe formalin will be thoroughly tried by potato growers hereabouts.

Last Spring we used two oil casks to soak the potatoes in. Each cask was filled a little less than two-thirds full of water. We used about one-half pint of commercial formalin to each 15 gallons of water. As the casks were large, we used binder twine sacks to hold the potatoes in the solution, putting three bushels in each sack. The seed was soaked for two hours, exactly, and one man attended to this job, occasionally churning the sacks up and down in the casks, so as thoroughly to soak the whole surface of each tuber. When ready to commence soaking, we had a big load of potatoes in bushel crates on the low-down truck. These we unloaded near the barrels, and the soaked seed was spread over the truck platform to dry. As soon as a load of treated seed was ready it was taken to the center of the potato field. Commencing on the rear end of the truck, two men cut the seed as fast as needed for use in the two-horse planter. Considerable seed had been cut the day previous, so that the planter was kept constantly busy all day. So far we have cut all our seed by hand, and have never had any experience with the machine cutters. We endeavor to cut pieces to two eyes, but is is difficult to pay close attention to this rule when in a hurry.

Some of our seed two years ago was quite scabby. Fig. 117 shows how bad some potatoes were. They were all Carman No. 3, and Fig. 118 shows some fine specimens. Some of the scabbiest potatoes were treated with formalin and planted in a row by themselves. When dug, the potatoes in this row were just as large and smooth as the others. We prefer to use formalin because it is not so dangerous to handle as corrosive sublimate, and can be put into almost any kind of a receptacle. We do not find germination materially retarded by soaking seed in the formalin solution. Last year we cut some seed potatoes directly they were taken from the solution, without any injury to the hands or clothes. Formalin cost us about 50 cents a pound two years ago, and 40 cents last year. We used nearly two pounds to treat about 45 bushels of seed. This is a little stronger than may have been necessary, but it did no harm, and accomplished an immense amount of good to the resultant crop, and to our own feelings as well. For planting a large acreage, we should arrange to handle the seed

more conveniently when soaking in the formalin solution, so as to avoid lifting heavy sacks full of potatoes in and out of the barrels. However, we had very little trouble in this respect. We expect to plant the Carman No. 3 again this year for our main crop.

Michigan. J. H. BROWN.

SPRAYING FOR THE SAN JOSE SCALE.

Crude petroleum was applied to peach trees for the San José scale in the latter part of March. Fruit buds are backward and in good condition. The oil is put on mostly by kerowater pumps, but occasionally it is sprayed with a plain pump or brushed on with a brush. Last season's treatment of the scale was not very satisfactory. In no case has it been entirely killed, and in many cases not even checked by the use of petroleum. This is not because the oil will not kill, but because of the virulence of the pest and the extreme difficulty of touching all the scale on the tree with fatal effect. Another explanation of the discouraging results of last Spring's work is the unusually favorable season we had last Fall for the late development of the scale. One large peach orchard belonging to the president of the Tidewater Oil Co., was sprayed with everything favorable to a successful job. Now many of the trees are dead with scale, and the orchard is being sprayed again. A striking test of what difficulties are in the way of eradicating the San José scale is seen in the case of a small peach orchard near here, two years old last Spring. The owner, a careful man, painted the trees with undiluted petroleum from the ground to the tips of the branches, taking plenty of time, and doing a thorough job. I walked through that orchard the other day, and found every tree healthy, but there were few on which scale could not be detected. There seemed to be more near or under the buds than anywhere else, but there were enough if they are going to spread as they did last season, soon to overrun the orchard.

In four different orchards that came under my notice, trees, in greater or less numbers, were killed by the oil, which was due, no doubt, as Prof. Smith has explained in THE R. N.-Y., to an impure grade of oil. I have not learned of any trees being killed by oil that was sprayed on. The fruit grower who spoke of the San José scale as a "bugaboo" is living in a fool's paradise. Constant watchfulness and much labor will be required to save our fruit trees from destruction.

Whitehouse, N. J. G. D.

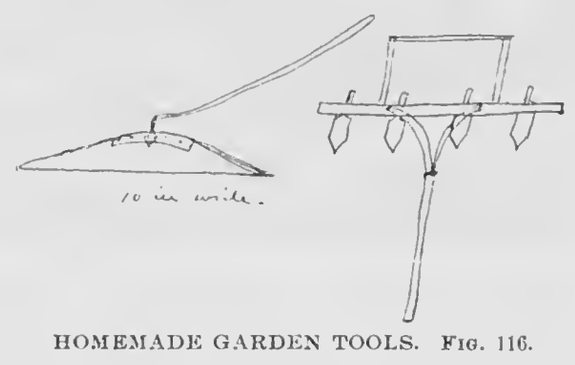
A NORTHERN FARMER'S GARDEN.

How Planted and Cared For.

BEST OF THE FARM.—I consider the garden the best paying part of the farm. I keep the soil rich; every year I put on as much barnyard manure as I can plow in. I plow it with a sidehill or reversible plow, turning the furrows all one way. I plow it deep and fine, not cutting a furrow over four or five inches wide. This makes the ground light. I do not drag it, as the horses walking on it, would make it hard. I rake it off well with a garden rake, picking out roots, sods and stones if I find any. I begin in the middle and rake each way, and when it is raked there is not a track upon it. Then I put a line across one side, mark it straight, take a homemade "marker" that marks and makes the drills at the same time. I make this marker and driller out of a piece of 3x3 timber, about 4½ feet long, I bore four one-inch holes, 15 inches apart, for the markers, two other holes for the handles and two holes for the tongue that I draw it by. The markers are one inch thick, four inches wide and about 12 inches long, and cut down to a point to make the drills. The handles are two feet long with a cross piece from one to the other. The tongue is about six feet long, of green timber. I slip an iron ring down about 18 inches on one end, split that end and spread it to make the tongue bracing. It is shown at Fig. 116. Then I get some one to draw or hold it for me, run outside leg or driller in straight mark I have made and then turn back across the garden, making three drills each time, and running one leg in last drill made. This keeps them all even and saves a lot of work.

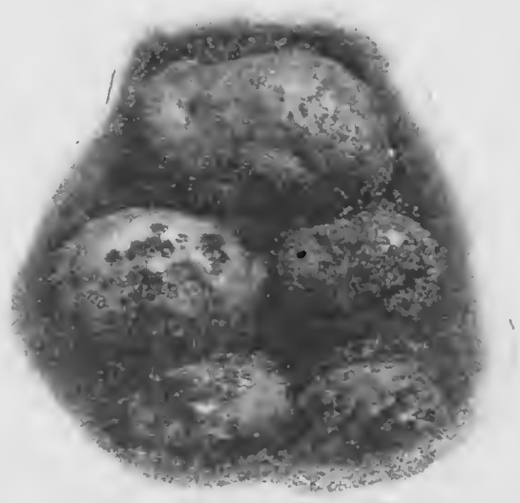
SOWING THE SEED.—In these drills I sow my seeds. Usually in the first drill I sow radishes, next drill lettuce, two drills; salsify, two drills; parsnips, onions, beets, carrots, mangels, beans, tomatoes, cabbage, all in these straight drills 15 inches apart. Then I cover carefully with a hoe, patting the drills smooth and pressing the earth down on the seeds, and when it is all done it looks very well. Sometimes I sow fertilizer in the drills; sometimes I use hardwood ashes. It makes the plants grow and worms and bugs do not like it. In another part of the garden I plant melons, cucumbers, sweet corn, more beans, Summer squash, etc. I sow the garden peas in straight drills, drive stakes, stretch a wire over each drill and hang the brush on the wire. Now as I have all this weeding to do, with no help from the women, I am careful not to let the weeds get much start of me. I have a hoe that I had the blacksmith make. It is made of the point of a cradle scythe with shank riveted on to drive into hoe handle. It is thin, and I keep it sharp by grinding. It cuts about 10 inches wide, and is made like Fig. 116. It is light, the points are sharp and you can hoe up to a plant and not touch it. This worked so well that I had another made of the wide part of the blade for general hoeing. I can do more work and do it easier than I can with a common hoe.

THE CROP.—We dig none of our salsify or parsnips until Spring. They are fine. As soon as snow is off



HOMEMADE GARDEN TOOLS. FIG. 116.

the chives start up, and cut up in vinegar they are a very good substitute for onions. We start tomatoes in boxes, but for two years now I have sown one drill when I made my garden; did not transplant, or fuss with them much, but got our best crop from them—later, of course, but more of them, better and firmer. I plant four varieties of sweet corn, and we have it until frost comes. With this marker I can put in a large garden in a few hours. I can hoe it quickly, if taken in time, and not much weeding to do. But when I am so busy at other work that I cannot



POTATOES FROM UNTREATED SEED. FIG. 117.

attend to it at just the right time I am sorry for myself. On one such occasion I made a weeding stool that was a source of comfort to a weary spinal column. I set my cabbage plants about 2x2½ feet apart; put hen manure mixed with barnyard manure in the hills and get good cabbage. If the cutworms trouble them, I take a teaspoon and put a row of fertilizer around each plant as close as I can and not touch the plant. Cutworms do not enjoy it and do not seem to crawl over it. It makes the cabbage grow. If the green worms appear on the leaves we sprinkle, while dew is on, with fine black pepper; use no poison on cabbage. In this garden we raise more vegetables than we can use; give some to the neighbors and sell some and find it profitable as well as pleasurable. Last year the worms or maggots commenced on my Black-

POTATOES FROM TREATED SEED. FIG. 118.

seed onions. I put unleached ashes upon them, scattered it right on to the tops, and it stopped their work. I sow Black-seed thick, and then thin out later when we want the little onions to eat. I leave them pretty thick. I have seen nice onions grow where there were five onions in a bunch, four of them upon the ground and the fifth on top, only touching the ground where the roots went down between the others. I have set my cabbage on same ground for 10 to 12 years, and no club-foot has appeared. I often have to pull them a little to keep them from bursting open. S. C. A.

Riparius, N. Y.

THE GREAT NEED OF VEGETABLE MATTER

Great Success with Cowhorn Turnips.

A great deal of discussion is constantly going on in the agricultural papers about the improvement of the soil by means of green manuring. Most of the writers on the subject advise the use of legumes, to the exclusion of other plants. At the farmers' institute held here last February, Mr. Seeds, a farmer from Juniata County, presented another feature of the subject, viz., the raising of the potash from the subsoil and placing it where surface-growing plants could make use of it. Mr. Seeds was crowded into his method by the lack of means and the inability to get a satisfactory stand of legumes. On a hard clay loam, where four inches was the depth that could be plowed, he commenced operations. He first used the Purple-top Strap-leaved turnip, but discarded it because it grew on top of the ground. Something with a long root that would mature in the Fall, so that the ground could be used in the Spring was desired. A search of the catalogues revealed the Cowhorn turnip, which bid fair to meet the requirements. Seed was purchased and sown in the corn at time of the last cultivation. This proved successful. Individual specimens measured over three feet, with one-half or more beneath the surface. Here was a plant breaking up the subsoil, raising the potash, and adding humus to the soil at the estimated rate of $50 worth of fertility per acre at a cost last year of only 54 cents per acre. There is no hauling manure or bothering with fertilizers. There is no lime or wood ashes to blind one when spreading them, but $50 worth of fertility right where you want it, to say nothing of the benefits gained by loosening up the soil. In five years this farm has been raised from a deserted spot to a profitable home.

With the turnip seed is now sown Crimson clover, and Mr. Seeds assured his audience that the one field of oats that more than paid expenses last year in the Juniata Valley was the one on his own farm, of which he exhibited a photograph. He attributes his success to "vegetable matter in the soil." Other photographs of a field of Red clover as high as his waist, a field of corn, and his field of Cowhorn turnips certainly were encouraging to men on run-down farms. If a man can't grow Crimson clover let him grow what he can—corn it may be—and keep at it until he can get what he wants. I send you these few remarks to help others who are perplexed about these problems. Look at the woods, they are fertile, and most of the farms we have were woods once. What has become of their fertility? Nature hauls no manure or lime, yet keeps her whole farm in excellent shape. Man alone cries that the land is worn out. Put more vegetable matter in the soil and you double up from both ends—less work and more returns. It seems to me this method is worthy of the widest application.

Shawnee, Pa. CHARLES JOHNSON.

R. N.-Y.—We have heard of cows that tossed a mortgage on their horns, but this story of salvation by the Cowhorn turnips beats the record. We know how this turnip grows.

Facts About Clover Seeding.

I do not know of any case of sowing clover seed as early as December or January in this latitude. I am fully persuaded that most clover seed is sown too late. Ours was put on the ground about middle of March and five or six inches of snow have fallen since. No heavy rains, as yet, have compacted the surface soil; therefore I think the ideal conditions are present with us this year for securing good germination. If ground designed for seeding with clover is thoroughly prepared and is moist in the last of July or August, the best seeding can usually be secured by sowing then. Harrow the seed in lightly and roll. The plants will usually get large enough before Winter to keep them from being injured. I think a part of the trouble we have experienced in recent years in securing a good catch of clover seed is due to lack of humus in the soil. I find that wherever the soil has been kept filled with humus by means of manures or cover crops, or both, we get good seeding, and in near-by fields that are dry and compacted because of this lack of humus the seed either failed to germinate or died later because of the bad physical conditions of the land.

Cornell University. I. P. ROBERTS.

PAT'S CHOICE POTATO.—W. H. Heald, of Sanborn Co., S. D., sends us the odd specimen which is pictured on first page, Fig. 115. It weighed 22 ounces as we received it. Mr. Heald says that the potato was kept in his living room from October until April, so that it was badly wilted. He says it is a late variety, of fine quality. We shall plant it this year. We have formerly received some tremendous tubers from Dakota. The tendency there seems to produce great things, but we have not before seen a tuber that tried to sprawl all over as this one has.

THE COST OF SPRAYING TREES.

Better Hire by the Hour.

Have you any knowledge of the probable cost of spraying apple trees, say of medium size? We are thinking of buying a spraying outfit for general work, and several persons wish us to do work for them, and ask what we are going to charge. As the matter is new to us we shall have to depend on the experience of some who have done spraying. H. B. B.

Rockville, Ind.

I think two cents per tree for 100 or more is the price, not including chemicals, but from what I heard last year, I would prefer to furnish pump and hire help. The tramp sprayers do not do thorough work unless watched, as they want to cover as many jobs as they can. J. GAILEY.

Cayuga Co., N. Y.

As trees vary so much in size and the facilities to get water conveniently are so different I think spraying could be done more fairly to both parties by the day or hour. I should judge that as spraying rigs are now so cheap (that is, a small pump on a barrel) each would prefer to own his rig. Again, the time is so limited for the most important spraying (that is between falling of blossoms and closing of calyx end) that one machine could not cover many orchards.

Wayne Co., N. Y. B. J. CASE.

Accurate Figures From Pennsylvania.

I have never done any spraying for others, and there is no one in this neighborhood who makes a business of it, so I can hardly say what would be considered a fair price for such work; but I have kept a very careful record of time and expense on my own trees, so can tell exactly what it cost me. I will take my oldest apple orchard for an example. This orchard contains 440 trees 25 years old; they are large and thrifty. It required two days for three men, a two-horse wagon and barrel pump throwing two streams to go over it once. Allowing $1 per day for each man and 75 cents for each horse the cost of applying the liquid was $9. It required 22 barrels of liquid, or one barrel for 20 trees; one barrel of sulphate of copper solution cost 20 cents; one barrel of Paris-green and lime (one-fourth pound Paris-green, three pounds lime) eight cents; one barrel Bordeaux Mixture cost 36 cents; one barrel ammoniacal solution carbonate of copper, 24 cents; so that it cost me to spray this orchard of 440 trees with sulphate of copper solution, $13.40; with Paris-green and lime, $10.76; with Bordeaux Mixture, $16.92; with ammoniacal solution, $14.28. This is the actual cost of spraying an orchard of large trees on level ground, with water and everything convenient, and the mixture properly made and carefully strained—so that there was no delay from clogged nozzles, etc. The cost per tree would vary, according to the size of the orchard, the size of the tree, the character of the ground, the ease with which water could be procured and the time required to get to and from the orchard, so that it would be very difficult to fix a definite price per tree. It seems to me the only fair way would be to charge for the material by the barrel, and for the labor required to apply it by the day or hour. GABRIEL HIESTER.

Pennsylvania.

Exact Item of Expense.

We consider the value of the labor of spraying 25-year-old apple trees three times to be 10 cents per tree. If the sprayer furnish the material, using the Bordeaux formula with three-fourths of a pound of Paris-green added to the mixture, the charge will be seven cents extra, making the total cost for three sprayings of each tree 17 cents. When spraying has been done at so much per tree, it has proved a very unsatisfactory method in this locality. The proper way to hire spraying done is to pay a fixed price for a day's labor; two men, $1.50 each, $3; one team, $1.50; one day's labor, $4.50. This includes the use of the spraying machine, but not the cost of the mixture. The mixture we prefer is made as follows: Four pounds blue vitriol; four pounds fresh lime; one pound Paris-green to 50 gallons of water. The more lime the better if it does not clog the machine. Keep well mixed. Spray thoroughly, so that the trees will drip with the mixture. This should be done when five-sixths of the blossoms are off. The differences in the opinions regarding spraying are due to the slipshod methods used by some. Last Spring I sprayed a block of 200 apple trees, using 20 pounds of Paris-green, 60 pounds of blue vitriol and 100 pounds of lime. I sprayed these trees but once, and not a wormy apple was to be found at picking time. The cost of spraying this orchard was $30. I sold from it 900 barrels. The trees were 25 years old. A neighbor having an orchard of 150 trees (also 25 years old) which had been bought at the same nursery and set out at the same time, sprayed once, but instead of using the Bordeaux formula he used a solution of one-fourth pound Paris-green to 50 gallons of water. The work having been poorly done, the result was that he had only 130 barrels of second-grade apples to sell. Another neighbor hired a man to spray his orchard of 300 trees, paying him $10 for labor and material. The man doing the spraying drove through the rows as fast as his horses could walk. The result was unsatisfactory and unprofitable. That man says it does not pay to spray. Spray the trees as you would a small bush. Cover them completely with the fluid. One spraying well done is better than three half done. The spraying not only kills the egg, but keeps the fly from the orchard. I have seen the flies on unsprayed trees at twilight, busy doing their work, while at the same time, on trees sprayed, not one was to be found. M. R. F.

Rushville, N. Y.

Cost of Spraying in Illinois.

The cost of spraying apple trees depends entirely upon the skill of the workman, the efficiency of the apparatus, and the cost of material, including, also, proximity to water supply. We find that some people never learn how to spray economically. Others get at it easily, and soon develop a skill which enables them to do the work cheaply. Our best orchardists in this State are spraying their trees at a cost of about 7 1-5 cents per tree for 10-year-old trees, three sprayings, using Bordeaux-Paris-green solution. I find, however, many people in this State who do not succeed in making the three applications for less than 11½ cents, some even getting as high as 20 cents per tree. This is, of course, the actual cost, and if one were doing it as a business he should have something additional for his trouble. That additional cost would be governed entirely by circumstances, and would vary in different localities. I know of no persons in this State, who are doing the spraying for the entire neighborhood. We, at the University, do not believe in this plan, as it means that some people would have their spraying done at the right time, while others would have to wait for their turn. We are, therefore, doing everything in our power to encourage each grower of fruit to have his own outfit and do his own spraying. We also believe that he is a better man if he has learned to spray. J. C. BLAIR.

Illinois Experiment Station.

A Charge by the Hour.

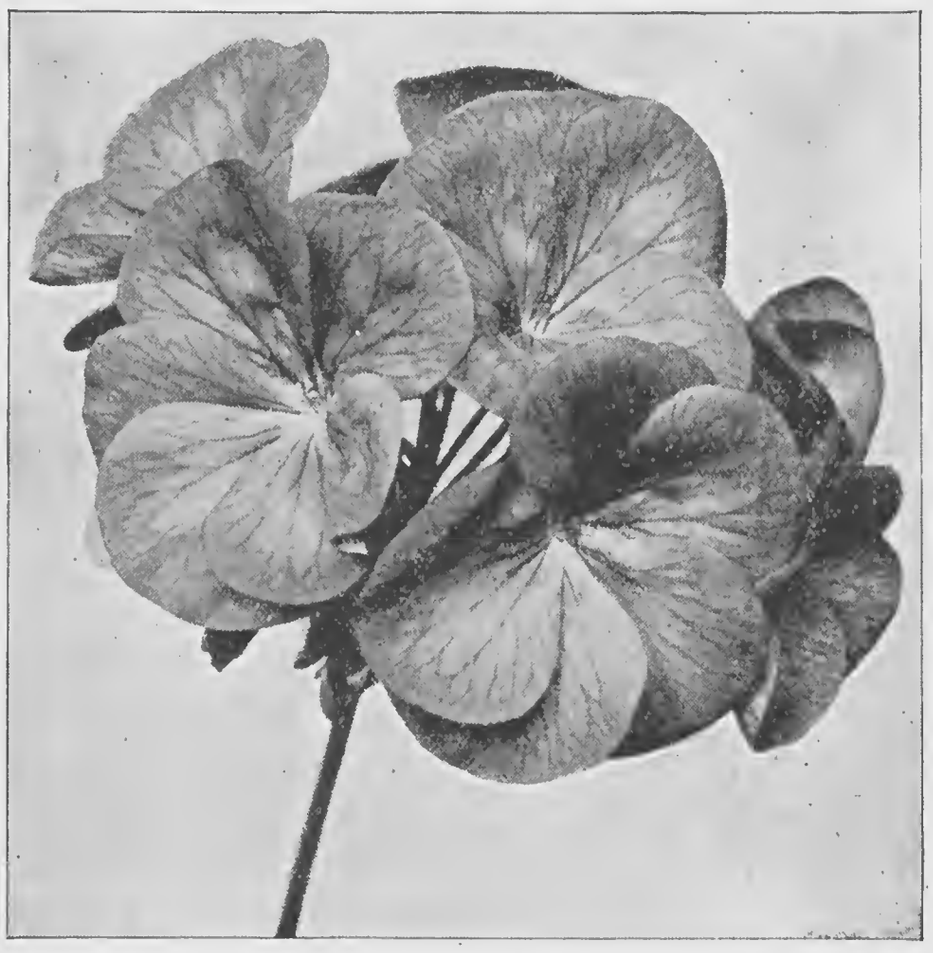
A little experience ought soon to teach a man what he can do it for, and upon what basis to make the charge. If done by the tree everything depends on conditions; whether trees are in full leaf, half leaf, or buds just swelling; large or small; how often he would have to fill up, and how handy the water, etc. Our own experience would lead us to say that it should be done by the day or hour somewhat on this basis: For team, outfit and man (who superintends mixing and directs nozzle), 40 cents per hour. Owner of trees to furnish ingredients and man to pump, or he could furnish team and wagon and proper deductions made for these. If the man who owns the pump furnishes the ingredients, he can charge for what they cost him, including mixing. A self-measuring graduated barrel will be found useful in this case. Spraying has been done in this vicinity at the rate of $1.50 per day for pump and man who directs nozzle. But this seems too low. Brawn will run the pump, but it takes brains to do the mixing and direct the nozzle. The man who does the latter is, in one sense, a professional in his line, and he has a right to charge for his services accordingly; 20 cents per hour for man alone is none too much. At this price he has no sinecure, as those who have followed the wearisome, monotonous job hour after hour can well attest.

Seneca Co., N. Y. W. A. BASSETT.

Own Your Own Pump.

There has been some little spraying done for neighbors who have no sprayer of their own, but so far as I know it has not been very satisfactory. I think in a few cases orchards have been sprayed as low as five cents per tree, and money made for the sprayer at that, but the work was poorly done. I hardly know what would be a fair price for thorough work. I think the most satisfactory way is to own a pump of some size, or at least a half interest in one. I tried owning one with a neighbor for a couple of years, but did not like it. I find it important to be ready at the proper time, and then do thorough work. Unless you have a pump of your own you must wait your turn, and if the weather is not right you are likely to get left. There are times when there will only be one or two days in a week suitable for spraying, owing to wind or rain. I would advise anyone having one acre of orchard to own a good barrel pump and then be ready to spray at the proper time, or as near as possible. F. E. VAN EPS.

Ontario Co., N. Y.



GERANIUM HALL CAINE, CONSERVATORY TYPE. FIG. 119.

SEE RURALISMS, PAGE 292.

AN EXPERIENCE WITH THE PEA LOUSE.

Two years ago we grew peas only for our own use and a few for the neighbors, and the louse just cleaned us out of main crop—Heroine—before we knew it, not giving us a pea. Last year we grew for market in a modest way an acre or less. We were on the watch for the louse, and found it first in the oats and peas, and plenty of them. When oats were cut there wasn't a peavine there. Alongside that field were our market peas, Nott's Excelsior, Advancer and Heroine. Excelsior was practically safe when the louse first appeared. The insects were first seen, of course, next the oat field, a 16-foot grass strip (old hedge) between. I got a "concentrated" whale-oil soap, costing 25 cents per pound, and made a solution of three-fourths pound to five gallons of water, and tried it on the ends of two rows next to oats. It destroyed the louse, but proved too strong for the vines, spotting them somewhat, though not seeming seriously to injure growth. I used a good sprayer and fine spray, spreading the solution freely and saturating the vines. Two days later I added 25 per cent more water and went over the whole piece. Lice were more or less all over it, and ready for business. This application did not seem to injure the vines—spotting them but slightly—but did worry the louse. A few days late I repeated the dose, this time "bushing" the vines with a cedar bush first, and following the bush with the sprayer immediately. Fully 50 per cent of the lice were thrown to to the ground, and as the thing was done in hot part of the day, between the hot ground and oil they staid where they lit. Experiment seemed to show that the hot, hard ground would finish them anyway, but we want in so dry a time to keep the ground soft and consequently it will be a little cooler, so that my dependence was really upon the whale oil. We had peas after all others were through, and our vines were green and reasonably thrifty, notwithstanding the continuous absence of any rain. Those peas were remarked by passing people. The thriftiness (in a dry time) I in part charge up to the use of Clark's Torrent plow in preparing the ground, as well as to holding the louse in check. But my pea ground for this season is that oat lot. I shall plant out that lot and have a supply of whale-oil soap ready, and a cedar bush or two. The raising of peas and oats came up in our Grange recently and I strongly discouraged growing them together, as it makes an ideal breeding place for the louse. One or two made a trial last season, but thought they did not use seed enough. I suspect the louse had something to do with the supposed lack of seed. I make two plantings of Heroine—the second for a late crop—as I like it better than the taller varieties, and I can handle the louse better. S. E. F.

Connecticut.

GRASS AND MAPLE TREES.—A reader has a contract to keep a fine grass sod on a lawn where there are several large maple trees. This is one of the most difficult things to do. The maple trees starve out the grass. Our friend thinks of trying the following grasses: For one plot, one-third each Kentucky Blue grass, one-third Perennial rye grass, one-third R. I. Bent. Another plot, one-half Kentucky Blue grass, one-half R. I. Bent. A third plot, Perennial rye alone, and another plot, two varieties of the dwarf wood grasses. Can anyone tell what grass will beat a maple tree?

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Feeding Peach Trees.

S. D., Greene Co., N. Y.—Will you tell me how to fertilize my peach orchard to get the most money from this year's crop, without regard to the future of the trees? Soil is dry and gravelly and rather poor.

ANS.—Nitrate of soda is the best whip to force the last bushel out of poor soil. Tenant farmers on the last year of their lease have been known to use nitrate alone and thus obtain a good crop, though they left the soil nearly exhausted. You can use 300 pounds or more per acre of nitrate and force those trees to do their best, but if you use it alone you are likely to hurt them.

Fighting the Plum Curculio.

P. P. W., Chester Valley, Pa.—Have any of the readers of THE R. N.-Y. had any experience in destroying the Plum curculio with a solution of gas tar and water? I see it recommended.

ANS.—The notion that the Plum curculio can be kept away by bad-smelling applications is an old one, and various substances have been tested, but with uniformly negative results. The amount of gas tar that one would care to apply on foliage and young fruits would not deter the curculios from stinging the fruits for half a day, we believe. The tar would act only as a repellant, for it would not be safe to apply enough to kill the beetles. We do not believe it would give results sufficient to pay for the application. M. V. S.

Phosphate in Place of Plaster.

S. D., Oak Hill, N. Y.—I find acid phosphate much better than plaster to use in stables, so far as saving ammonia is concerned, but is there not danger of injury to animals' feet from the acid?

ANS.—We know of several farmers who use acid phosphate in this way. It gives good satisfaction. When used behind the stock and in the manure in reasonable quantities no trouble is reported. There is a waste product in the manufacture of phosphorus that is used by some dairymen. It is a sulphate of lime containing a small amount of phosphoric acid. This answers all the purposes for which plaster is used. It is a dirty brown in color and not so neat as the white plaster, but otherwise just as good. In some cases the raw ground phosphate rock or "floats" is used.

Stove for Heating Greenhouses.

A. M. A., Point Breeze, N. Y.—I am thinking of building a small greenhouse for growing cucumbers and early vegetable plants. I would not care to start it up until about March 1. Would it be practicable to heat it with an ordinary coal heating stove by having the stove at one end and run the pipe across to the other end as low down as possible, having the beds for the plants on the ground? I intend building a house about 10x25 feet.

ANS.—It is entirely possible to heat a greenhouse of the above dimensions by means of a coal stove at one end, with piping carried through the length of the house at a sufficient incline to secure a fair draft, for the few weeks of cold weather following the beginning of March. The main requisite is to prevent injury from escaping gas; therefore the stove should be a good one, and the pipe joints close-fitting. The pipe should be carried three or four feet above the ridge after it emerges from the building, and have as few angles as possible.

What Blistered the Trees?

F. P. M., Buffalo Gap, Va.—I have an apple orchard of 425 trees, which I purchased from an Ohio nursery company; 200 I set last Fall and 225 the Spring before. Out of that number I have lost 50 trees. The 50 trees which died had large black blisters on them which looked as though they were burned with fire, or as though they had been standing close to fire and been blistered; and in looking over them this Spring I find some more with blisters on them. Will you tell me what is the matter with these trees, and a remedy?

ANS.—What is the real cause of the blistered appearance I am unable to say positively, but it may be that the trees had been taken up for sale and lined out in nursery rows when they were left over unsold, which might have had such an effect, if they were rather carelessly replanted. Or, it may be that some scale insect is working on them. It would be well to send specimens to the State Experiment Station at Blacksburgh, Va., which might enable the scientists there to determine the cause of the trouble. Good cultivation may be all that is necessary to do and that is needful in any case. H. E. VAN DEMAN.

Apples for Rhode Island.

L. J. W., Summit, R. I.—Which are the best apples for market in Rhode Island? There are two distinct soils suitable for apple raising in Rhode Island; one is heavy black loam, underlaid with blue hardpan, on which apples do well if the land has a good slope. The other is a stony, gravelly formation with sandy subsoil, land which in any of the newer sections of the country would not be considered worth cultivating, and yet oak and chestnut make a rapid growth on it and make timber of the very hardest, toughest and best quality. Winter apples are likely to fall from the trees early on such land, but I think spraying will help that. How about planting Rome Beauty, York Imperial, Jonathan, Fameuse, Stayman, Wagener and Grimes? Red Astrachan pays me well. Will Yellow Transparent come earlier or pay better? Everybody around here says Baldwin, Baldwin, nothing but Baldwin, but I see other apples bringing better prices in the city. The question is, will it pay to raise apples of higher quality and spray and take the necessary care, or will it pay better to take the same care of Baldwins, and by raising a fancy quality, try to get fancy prices for them?

ANS.—I would say that both plans suggested as to varieties to plant would be better to follow than either one to the exclusion of the other. Baldwin is a good apple for the region of Rhode Island, and will be popular for many years to come, and it will doubtless pay to plant it, thin the fruit when it overbears, spray thoroughly and thus grow the very best of that variety. But there are apples of better quality that will grow and bear well in Rhode Island. All the late varieties mentioned are probably of this character. Stayman and Jonathan are less likely than the others to attain proper development. Grimes and Rome Beauty would be my choice for an extensive trial; and especially Grimes, because of its extremely high quality and rich color. It will bear regularly and heavily enough. Among the early kinds Yellow Transparent is one of the most precocious. I have known it to bear a peck to the tree when only set three years. In this respect it is far ahead of Red Astrachan. The gravelly soil is perhaps better than the tough clay for apples, but it is harder to cultivate, because of the stones it contains. H. E. VAN DEMAN.

A List of Apples.

W. M. S., Clintonville, Conn.—I intend to set out an orchard, this Spring, of about 100 apple trees. I am situated about eight miles from salt water. How about the Stayman, Sutton and Esopus, (Spitzenburg), here in southern Connecticut? Are you acquainted with the following apples; if so, which would you set out? McIntosh, Walter Pease, Fameuse, Wealthy, Wolf River, Walbridge, Sutton, Tompkins King, R. I. Greening, Pound Sweet, Roxbury Russet, Baldwin.

ANS.—For market purposes the list given is much too long, and some of the varieties are, in my opinion, of indifferent value. Stayman is not probably suitable so far north as anywhere in Connecticut. McIntosh is an apple of bright red color and quite good quality,

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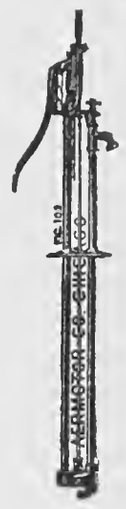

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but it can hardly be rated more than a family variety. Esopus (Spitzenburg) is excellent, but it does not usually bear well. It is all right for home use there. Walter Pease is only under trial. Fameuse is very badly given to scab. Wealthy is only a Fall apple, but an immense bearer and at an early age. Wolf River is large, showy, coarse and a Fall variety. Walbridge is a good bearer but not large nor high in quality. Tompkins King is tender in the trunk and drops its fruit badly, but large, showy and of good quality. Pound Sweet is not generally desirable. Rhode Island Greening is an old favorite. So is Roxbury Russet, but it is not so popular as a red variety. Baldwin we all know to be a good Winter apple in the true Northern States east of Lake Michigan, but it has the fault of fickle bearing. Sutton is new, but of much promise for the Baldwin section. If I should plant a general-purpose apple orchard of varieties that would ripen in Winter in Connecticut they would probably be largely of Sutton, Baldwin, Rhode Island Greening, Hubbardston and Grimes. The latter is of the highest quality and a rich golden color; besides being a good bearer and a healthy tree. It is a Winter apple in Connecticut, but a Fall variety in the latitude of Maryland.

Four Fruit Questions.

H. G. H., Cadiz, O.—1. Will you give a short description of the following fruits? Have you fruited the Worden Seckel pear, and can you recommend it as superior to the ordinary Seckel? 2. Is Carrie Silvers strawberry the same berry listed as Carrie, for several years in the fruit catalogues? If not, can you recommend it as superior to Haverland? 3. What can you say of Palmer's Early strawberry? Has THE R. N.-Y. ever seen the fruit or tested it? 4. I am not a plant seller, but I have been growing strawberries for market ever since 1882, having tested 123 varieties, and here are my three varieties for profit: Haverland, Ridgeway and Tennessee. If THE R. N.-Y. has anything that will beat them under ordinary culture it is just what we want. It makes me sad when I look back over the long past years and think of the money I have paid out and lost for sueh varieties as Big Bob, Jumbo, Jewell, James Vick, Bidwell, Warren, Hart, Jersey Queen and scores of others I might mention. Now it is my decided opinion that exceedingly large fruit is not the kind for general cultivation. The Ridgeway and Tennessee are large enough to stand the test, and I believe such varieties as the New York, Corsican, Edith and all the extremely large-fruited berries will become obsolete, while such a variety as the Dunlap, of which the fruit is only medium in size, will most probably occupy the front rank. Am I not half way right? If you can name a good early sort to beat Haverland, speak it out!

ANS.—1. The Worden Seckel pear is a new variety which was originated in Canada. It has been fruited by a very few of the more progressive experimenters, but as yet not on the Rural Grounds. The fruit is of much the same shape and color as its parent, the Seckel, but it is larger in size; and being fully as good in flavor and later in ripening it is thought to be more desirable than that delicious little pear. It ripens in October in New York, and may be kept until December, but in Ohio it would not be so late. 2. Carrie Silvers is a strawberry that was introduced by a New Jersey nursery firm, and has been tested on the Rural Grounds for six years past. It did very well there and proved to be larger, firmer and brighter than Haverland. It is also very vigorous and productive. It is imperfect in flower. Carrie is a seedling of Haverland, originated in Virginia and is of most excellent character. I grew it for several years beside its parent, which it seemed to exceed in both color and quality. It is also earlier. 3. Palmer's Early strawberry I do not know. 4. The point to be aimed at in growing strawberries for market depends largely upon the kind of market to which one is catering. There is no doubt that the ordinary trade calls for a medium-sized berry like Haverland or Warfield, which yield much heavier per acre than large kinds like Marshall or Sharpless, and bring about two-thirds as much per quart as the very large ones. But in the fancy market the difference is in favor of the large kinds. Excelsior would be a good kind to test, as it is earlier than any of those mentioned, and a good shipper.

THINGS I HAVE TRIED.

The old-time method of brushing peas, with which the older boys are disagreeably familiar, has become a back number. I now drive four-foot stakes three paces apart after the peas are planted, and then tie the top and bottom wires of the two or three-foot light chicken-wire fencing firmly to them. This serves the purpose, is durable, and best of all can be put up quickly during the usual hurry of Spring work. A decided advantage of this method of supporting the peavines is, that after the peas are picked, tomato seed can be planted three feet apart in the row, or small plants may be set, and a late maturing crop of tomatoes for Fall and early Winter use can be grown. The wire netting to which the vines are to be tied, obviates the use of a stake at each plant.

The Satsuma plum tree in the chicken yard, the ends of whose branches were disposed to humble themselves by bending nearly down to the ground, had to have this tendency checked. This was done by ripping open some light, inside coffee sacks, cutting them into strips six inches in width and tying enough of them together, to make, when twisted, a soft rope that could be passed entirely around the branches of the tree, and after they were drawn together sufficiently, the ends could be firmly tied. When the trunk of the tree was about two inches in diameter two of these ropes were sufficient. The ropes have now rotted off and there seems to be no further need of them.

My plan of manuring the garden in the Fall and spading or plowing the land up into ridges, which are four or five feet from center to center, has this Spring, as usual, put the soil in the finest possible condition even though the land is not underdrained. These ridges run from east to west. By leaving the north half of them intact and opening a deep furrow on the south side, I have a sheltered, warm place for early potatoes, peas or other early vegetables. I know of no method that involves so little expense or, in the absence of hotbeds and other conveniences, that is so productive of good results. The principle of filling the soil with well-rotted manure each Fall and ridging up the land to be acted upon by the Winter frosts, is one, which, if once adopted, will be indefinitely continued, especially on clay soil.

One of the most successful plans in this locality, and which would be likely to prove still more advantageous in the cotton-growing States, is the barrel method of growing cucumbers and Summer squashes. As soon as the soil in the garden can be worked, take a flour or apple barrel, remove the upper head only, and bore a three-quarter or inch hole in the center of each stave midway from the bottom to the top of the barrel. Wherever the soil is the poorest I dig a hole deep enough to have the augur holes six inches below the general surface of the ground when the barrel is set. I now fill the barrel nearly full with stable manure and pack it down firmly, not forgetting to add an occasional layer of coal ashes and chicken manure from the poultry house. Next, enrich the soil about the barrel to a width of 12 to 14 inches, make it fine and plant the seeds. Begin the subsequent irrigation of the young plants by filling the barrel nearly full of soapsuds and rinsing water each week. The liquid manures flows out of the holes and comes in direct contact with the roots of the plants. This has resulted so far, in protecting the young plants from insects and producing an abundant supply of fine, crisp cucumbers. The barrel for the Summer squashes is set at the other side or end of the garden and treated in the same manner. This supplies the table with squashes until the frost kills the vines. J. W., JR.

Glencarlyn, Va.

For the land's sake, use Bowker's Fertilizers. They enrich the earth.—*Adv.*

A
Potato Bug
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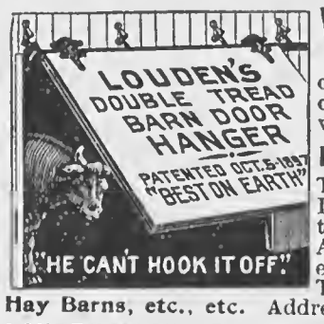

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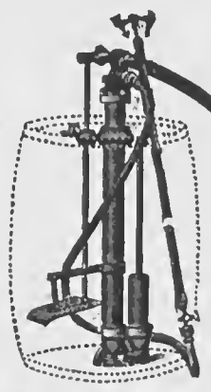
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The Cornell Reading Course.

Edited by John Craig, Professor of University Extension, and Editor Farmers' Reading Course, Cornell University, Ithaca, N. Y.

INTRODUCTION.

Many of THE R. N.-Y. readers know about the Cornell Reading Course for farmers. This is a correspondence course in agriculture. It is a development of the last five years. It is significant of substantial progress in farming. The fact that over 25,000 farmers of New York State think it worth their while to bother with the lessons—nay, more—study them carefully, indicates that the movement is growing, and that the old-time prejudice against "book farming" is gradually disappearing. The question and answer department of a school of this kind must be very instructive. While each farmer looks on his own difficulties as being peculiar to himself, they are in fact but a reflection of his neighbor's troubles emphasized and colored by local surroundings. Interchange of thought and experience therefore cannot fail to be valuable. This column will be devoted to answering questions and exchanging experiences in fruit and gardening matters. THE R. N.-Y. has always given a prominent place to horticultural questions, and it is fitting, and also a matter of self-congratulation, that we find ourselves able to use such an excellent medium for exchanging confidences. The fruit interests of the State are constantly enlarging; new problems are appearing, old problems recurring under new guises, and the fruit grower finds that the price of success is industry, common sense and vigilance. A few readers will always find in the queries and experiences old material, but they will be new and instructive to the many. Come into the circle, friends, and turn the searchlight of experience and science on dark places in farm practice.

McPike Grape.

Do you know the McPike grape? Describe it and give your opinion of its value.

Medicine Lodge, Kan. J. L. B.

In August, 1900, while connected with the Iowa Agricultural College, I made a special trip to the grounds of the originator of this grape, H. G. McPike, Alton, Ill. Mr. McPike informed me that the grape was grown from the seed of Worden. It resembles the parent in foliage and color of wood. The fruit is also like Worden in color and form of bunch. The berry is much larger, fully as large as the one-time famous Eaton. Most of the McPike vines in the originator's vineyard are on Concord roots. They were crown-grafted; they were fruiting heavily at the time of my visit, both on this root and on their own roots—although there were comparatively few vines in the latter condition. The original vine, eight or nine years old, is still standing in Mr. McPike's vineyard. This variety appeared to me to have unusual promise. Mr. McPike's vineyard is favorably situated on the Missouri River bluffs, on well-drained loess soil. The possible weak points about this variety, as they appeared to me, were thinness of skin which might injure its shipping qualities and weakness of growth. Now the latter character was not apparent, it was only suggested. And the foliage in every instance was perfectly vigorous and almost entirely free from fungous disease.

The Neglected Orchard.

I have an orchard of Greenings and Baldwins 25 years planted. It is in sod, has not been cultivated or sprayed, and is not giving satisfactory returns. What course of treatment would you recommend?

New Hurley, N. Y. H. M. G.

If I had this orchard I would plow it as early as possible in the Spring. Throw the sod from the trees, and as you approach the trees plow lightly. Soon after it is plowed I would, with a disk harrow, cut up the sod as thoroughly as possible. Where the plow would not reach, the sod should be removed with a mattock. After the disk harrow is used, the work of keeping the surface free of weeds and in a fine state of tilth can be best accomplished by using a smoothing harrow. The trees should be sprayed with Bordeaux Mixture and Paris-green before the buds open. Two or three applications of the same mixture should be made at intervals of two weeks after the blossoms fall. If the trees need pruning, it could be done any time between now and the beginning of active growth. I would not prune very heavily at this time, merely removing such branches as are weak or are interfering with each other. At the close of the season's growth, which is usually about the first of August, I would seed the orchard to Mammoth clover. If the ground has been kept in a good state of cultivation, sufficient moisture will have been preserved to ensure with favorable weather a good clover catch. This clover will form a cover for the ground and will return, when plowed under next Spring, a large amount of nitrogen. It also makes a good ground cover during picking time.

Deep Versus Shallow Cultivation of Beans.

The raising of beans has become quite an industry in this part of the country. There are various opinions in relation to cultivating them. Some say that two cultivations are better than more on account of destroying the roots; others think they need more. Late cultivation does injure the roots somewhat. W. F. H.

Brockport, N. Y.

In dry seasons the success of the bean crop, like corn or other hoed crops, depends largely on the amount of moisture in the soil. Moisture can only be preserved after the crop is planted, so far as man's efforts are concerned, by thorough tillage. I believe that we can cultivate so deeply as to injure the roots of the plants, but thorough cultivation does not necessarily mean deep cultivation. Surface tillage is nearly always preferable to deep tillage. If you can use an implement which will just stir the top of the soil and preserve the dust mulch, there can be no question about the benefit of this kind of tillage in dry seasons, but if large shovel cultivators are used, and run deep, then unquestionably the cutting off of the feeding roots of the plants will result in direct injury and lessened yield.

Getting a Catch of Alfalfa.

I have a piece of clay loam (rather heavy) which was well manured and planted to corn last year, which I would like to try with Alfalfa this season. It is not just the best soil for the crop, I expect, but it is the best I have. What do you think I would best use for a fertilizer to get a good stand? The soil is not sour.

Neills Creek, N. Y. O. W. A.

If the piece of land you describe gave you a good crop of corn last year, it ought to be in good condition to give a good catch of Alfalfa this season. If you plowed it last Fall, I would work it with a spring-tooth or disk harrow as early as possible this Spring, and get the Alfalfa in while there was plenty of moisture in the ground. The Winter snow has been heavy and the Spring rains have been abundant. Our soils are soaked with moisture, and we ought to hear small complaint this season regarding unsatisfactory stands of grass and clover seed. While it does not seem to me that this soil needs anything particular in the way of a fertilizer or amendment, it might be desirable to dress it with a superphosphate at the time of seeding; 300 or 400 pounds per acre would be a liberal application. I would certainly use not less than 15 pounds of Alfalfa seed to the acre.

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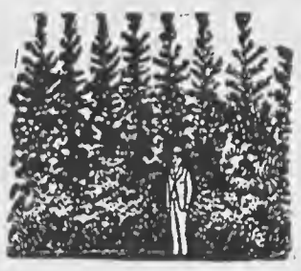

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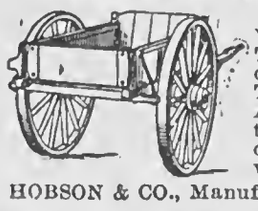

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HOPE FARM NOTES.

WET GOODS.—Easter Sunday found Hope Farm like a great sponge. We started the plow on April 2—plowed the chicken yard and a few rounds in the orchard, and then had to make for cover. The rain fell steadily for the rest of the week. It would pelt hard until all out of breath, and then drizzle while getting ready for another round. Young rivers poured down the hills, and the roads were great beds of deep mud. It was hard to watch that flood of water and realize how it kept our work back. The oats ought to be in, and yet it was impossible to turn a furrow. The grass and grain stood up and jumped as the rain fell, but we did not seed half as much as we should have done last Fall. The trees were thriving and the wells and springs were filling up, but we couldn't get half the comfort we wanted out of that. So when Easter opened with more rain—well, we didn't like it. The Madame and Hugh went to church, but they didn't have any new bonnets or clothes to spoil, and that was a small satisfaction at least. In the afternoon I tramped through the mud over the farm. I tried to whistle, and say: "This is just the thing for our peach trees—planted on that Stringfellow plan!"—but the words nearly stuck in my throat when I saw how the water had gashed the hillside and washed the grass seeding. Verily, man is hard to please. In drought he prays for rain. When Nature pours rain with a liberal hand he growls. When he gets weather just to his taste how often does he give thanks for it? Mighty seldom, I fear.

FARM NOTES.—The first run of the incubator gave us 103 chicks. We put 200 eggs in, but only about 130 tested fertile. They were purchased eggs—Wyandotte and White Leghorn. The Leghorn eggs proved the better. This hatch doesn't size up very well by some of the reports we read about—but we give the facts. A hen sitting on 15 of the same lot of eggs hatched nine chicks. . . . We are often told that it is possible to sow rye very late in the Fall and still get a fair yield. We have about two acres which were sown November 1. The stand is fair, but the plants are small and spindling as compared with the earlier-sown grain. This rye may come to the front yet, but it ought to go in earlier. . . . The Crimson clover, seeded with the rye after early potatoes is fine. The rains are bringing all grass and grain out. This Crimson is particularly good. It will be cut with the rye for hay or green fodder—in fact, I expect to cut all our small grain this year for hay. The oat hay this year was so satisfactory that I think it paid better than the grain and straw would have done separately. . . . We are still feeding cabbage and yellow turnips to the pigs. This cabbage was kept in an old chicken house. It froze solid, and is not salable in the market, but a good proportion of it is fit for the sows, and they eat it readily. We boil the yellow turnips and mix them with bran and middlings. . . . I still think that we kept our Berkshire sow too fat, but we do not purpose to repeat the mistake with the others, and they are living on what they evidently call short commons. They have plenty of raw cabbage—and a fair feed of boiled turnips and bran. Corncob ashes are on hand for them. . . . I do not intend to sow many of the much-praised fodder crops this year. I have yet to find any late-sown crop that will make more good fodder to the acre than our Rural Thoroughbred corn sown in drills. When used after oats or other grain, or following a meadow, it will make an abundance of feed, and rye can be seeded in it at the last cultivation.

TOO MUCH FAT.—Side by side in our barn stand two heifers which seem to teach a lesson in feeding. They are sisters—daughters of our old Jersey—their father being a Holstein. The older one is fat and beefy-looking. Her neck is heavy and her back and quarters are thick and coarse. The younger heifer is thin and fine—a picture of the old cow. Breeders tell me that sisters will frequently vary in this way. In fact, we see many cases of such variation in human families. I think, however, that in this case the trouble is largely due to feeding. I think the older heifer had too much food, so that during her early life she took on the beef or fat-making habit, which made her coarse and gross. The little one has not had so much milk, and has had to hustle more. She will make the better cow of the two. No use talking, many of us feed too much fat and foolishness to our young stock—brute and human—so that when the whip of necessity urges them on to do their share of the world's work they have flabby flesh or fooling habits when they should have muscle of body and brain. The trouble is, too, that we feed foolishness to the child out of our own example! In crossing two breeds as we did in the case of these heifers we cannot tell which parent they will most resemble.

KEEP GOOD NATURED.—The wet weather is bad enough, but it would be worse if we let it dry up our faith in the outcome. Some folks seem to think that the wife and daughters are responsible for the weather, and they go into the house and growl like bulldogs at the women folks. I wish the farm women all over this country would turn on such fellows and make them understand that weather growls are for outdoor consumption. There is far more sense in trying to be cheerful and keeping on top of the weather, than in letting it ride you. Why, we might work ourselves into the belief that we are worse off than other folks, when thousands of farmers are wetter than we are, and further behind with their work! Here is a man from a section of New England where on April 3 they had five inches of snow! Yet he comes forward with the following:

At present we have two horses, four cows, two yearlings, four calves, 45 sheep, nearly 200 hens, a brood sow, a pig, and a duck. This duck, though she comes last on the list, is by no means the least among us. She has a record of two eggs a day, and is in every way a bird of superior qualities. She rejoices in the name of "Knox," for two reasons: First, she is named after a friend, and second, she just "knocks the spots" off all the other ducks hereabouts. Last year this duck formed a strong attachment for a White Leghorn rooster; in fact, the admiration seemed to be mutual. This unusual friendship tempted me to perpetrate poetry.

A PARADOX.

A cute little duckling called Knox
Fell in love with a rooster named Cox;
They were wedded one day
In the regular way;
And now they raise chicklings by flox.

R. W. R.

I wish I could write poetry under such depressing circumstances! You will see that "Knox" keeps right on doing her duty through rain or shine. Would that more of us had oil on our faith, so that wet weather would drop off without taking the starch out.

ANOTHER WINTER JOB.—Suggestions for new jobs come rolling in. Here is a good old job in a new light:

I see at Hope Farm you want a side line that will keep you busy in Winter. I do not think much of witch hazel, broom making, mail order, etc., but if you keep a dairy and retail your own milk to a medium class of people who take only pints and quarts I guarantee you will not only have all the work you want in Winter, but work in Spring, Summer, Fall and Winter; Fourth of July, Christmas, Sundays and everything else thrown in. I speak from experience; have about 25 cows and retail about 130 quarts of milk daily to that class of people, which means that I must climb in and out of the wagon over 100 times in a day. We try to raise enough roughage for the 25 cows, three or four heifers, a bull and four horses; keep a few pigs and hens, and raise three acres of potatoes. We do not take anything to make us sleep at night. W. E. G.

I know that by experience. I once drove a milk wagon and milked my 20 cows a day. You don't need any "knock-out drops" when night comes if you are brother to the cow. There are many worse sisters in this world, however, than old bossy. I am not hunting a job for the mere sake of working, but we all know that Winter is the dull season on most farms, and I would gladly make it profitable for all our folks if possible. H. W. C.

ARMSTRONG & McKELVY Pittsburgh.
BEYMER-BAUMAN Pittsburgh.
DAVIS-CHAMBERS Pittsburgh.
FAHNESTOCK Pittsburgh.
ANCHOR, ECKSTEIN } Cincinnati.
ATLANTIC, BRADLEY, BROOKLYN, JEWETT, ULSTER, UNION } New York.
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THE experience of practical painters has proved that thin coats of paint, well brushed out, give the most durable results. Because of its great spreading capacity and its extreme density, Pure White Lead is the pigment best adapted for this method of painting.

The brands shown in the margin are genuine *"old Dutch process" White Lead*, the best it is possible to manufacture.

For any color or shade required, use NATIONAL LEAD COMPANY'S Pure White Lead Tinting Colors. Pamphlet sent free upon application.

National Lead Co., 100 William Street, New York.

Twin Pipe Sprayer.

The pipes are spread so as to spray a greater width than others.

Dewey Sprayer.

The only hand sprayer that will make a mechanical emulsion of kerosene and water. Simply fill small reservoir with oil, large with water. Can be used without oil for other purposes.

Jumbo Duster.

To operate from a wagon, weighs about 30 pounds. Will dust any dry powder, Paris-Green, etc., on tall trees, cotton, potatoes, etc., spreading powder from 12 to 15 feet wide.

Churn Sprayers.

Work by compressed air, and throw a continuous spray. Distribute oil and water, producing a mechanical emulsion. May also be used with water and Paris-Green or other insecticides. 1, 2 and 10 gallon sizes.

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For dry insecticides. For farm, garden, orchard, tobacco field. Will green two rows at once as fast as a man walks.

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Smaller and differently constructed from the Champion. Dusts any dry powder, two rows at once.

A full line of circulars furnished on application.

AGENTS WANTED.

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Buy a Planter

THAT PLANTS all kinds of corn, for all purposes, on all kinds of ground and in any soil and save time, labor and money. The SPANGLER CORN PLANTER fills the bill to the letter. You always know when it's working properly because you can see the corn on its way to the ground. With or without fertilizer attachment. New device for sowing peas, beans, ensilage corn, etc. Also make Spangler Broadcast Fertilizer Distributer, Spangler Single Row Fertilizer Distributer, Spangler Low Down Grain and Fertilizer Drill. Write for circulars.
SPANGLER MANUFACTURING CO., 505 Queen St., York, Pa

Barns of Plank save timber and cash. Best, cheapest, strongest. 4,000 in use. Book for stamp. SHAWVER BROS., Bellefontaine, Ohio

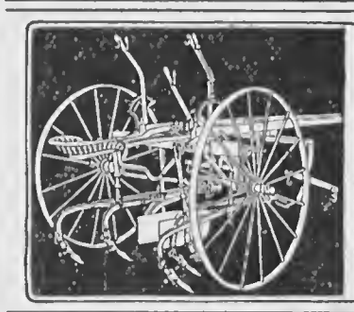
STAR PATTERN BILLINGS **Planter and Fertilizer**

Is the latest, and it drops at twelve different distances.

For CORN, BEANS, PEAS and BEET SEED.

If you want them, we furnish Marker and Trip Attachment for rowing both ways. Send for Circulars.

AMES PLOW CO., Boston and New York.



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both as to construction and ability for working row crops, finds its complete embodiment in the

KRAUS Pivot Axle CULTIVATOR

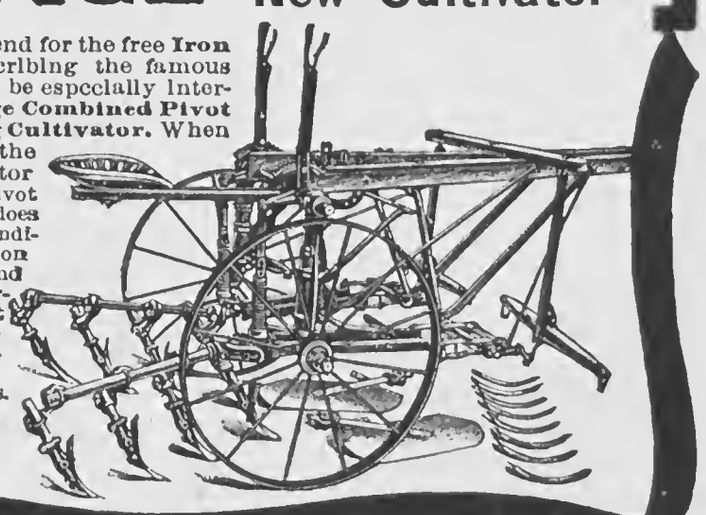
The pivot axles make it the easiest to guide and handle, moving the wheels and shovels simultaneously. It will stick to the steepest hillside row and not crowd out the plants. Convenient levers for handling the gangs. Center lever spreads or closes gangs to suit wide or narrow rows. Two, three or four shovels on each gang. Made pin or spring hoe and spring tooth. Full description in our free catalogue. We also make the Carpo Walking Cultivator.

The Akron Cultivator Co. Dept. D, Akron O.

IRON AGE News about the New Cultivator

Progressive farmers who send for the free **Iron Age Book for 1901**, describing the famous Iron Age Implements, will be especially interested in the novel **Iron Age Combined Pivot and Fixed Wheel Riding Cultivator.** When used as a fixed wheel it is the best Fixed Wheel Cultivator you can buy. When used as a pivot wheel, again it is the best. It does perfect work under every condition that confronts the farmer on any soil or surface, any crop, and rows of any width or irregularity. The book that describes it tells about all the Iron Age Seed Drills, Wheel Hoes, Riding Cultivators, Potato Planters, Horse Hoes and Cultivators.

BATEMAN MFG. CO., Box 102, Grenloch, N. J.



Ruralisms

NOTES FROM THE RURAL GROUNDS

Rambler Roses in Winter.—Since the introduction of that most distinct and valuable hardy rose, Crimson Rambler, which is understood to be a climbing form of the Chinese Rosa multiflora, often catalogued as R. polyantha, many seedlings and hybrids from it have been grown with a view of getting something still better, or at least sufficiently distinct to make a good companion. Several hundreds of cross-bred Crimson Ramblers have been raised on the Rural Grounds; beginning in 1894, the Rambler blooms being pollenized with almost every species and variety that could be secured. While some very pretty things have turned up none show sufficient improvement to warrant propagation except one rather dwarf specimen which produces dense clusters of deep crimson flowers, much more double, and in every way superior to the type, in the opinion of those who have seen it, but it has not been long enough in cultivation for its real value to be determined. Several new single and double-flowered seedlings of Crimson Rambler have lately been announced in Europe, and will doubtless soon be offered here. Helene is a German production of this character, and has been grown in this country for the last two years. It is certainly valuable, as it is as strong a grower as its parent, but less rigid in outline. It seems to be entirely hardy in this latitude, and possesses better foliage than Rambler, being more resistant to mildew and insects. The canes are practically thornless; a great advantage when planted about the house. The flowers are larger than Crimson Rambler, and are produced in immense clusters, almost covering the plant. The color is a blush rose with a violet tinge. They are very double, but the bright yellow anthers show through, making a pleasing contrast. The buds are bright carmine. We have just tried Helene as a Winter bloomer, and find it rather more free in bloom under the same conditions than Crimson Rambler, but the flowers are scarcely as durable and the color effect is naturally less striking, though this defect is offset by a delicate perfume, quite lacking in the parent Rambler. The Yellow Rambler, formerly known as Aglaia, has also considerable fragrance, and is really very attractive when in bloom. The buds are bright yellow and very pretty, but the flowers open quite pale. It is much less inclined to bloom under the Winter forcing treatment, and we have only been able to secure a single bloom in two attempts with strong, well-established plants. It blooms very well outside, but not until it has made considerable growth. The White and Pink Ramblers are also acceptable for outdoor planting where there is plenty of room, but like the yellow one, they do not force well, as they must make strong wood before blooming. They are also of Multiflora parentage in some degree.

Crimson Clover and Crab Grass.—Notwithstanding the severity of the high February winds, and the frequent sharp freezes following, the several small plantings of Crimson clover on the Rural Grounds are coming on vigorously, but the best lot is in a rather neglected strip where Crab grass was allowed to overtop the young clover during the Fall months. It was planned to pull the grass out before it seeded to any great extent, but other work prevented, and the benefits of protection are now plainly apparent. It is quite certain we have not learned sufficiently to appreciate the possibilities of this ever-present and most energetic exotic grass. In a previous number of The R. N.-Y. (page 770, November 17, 1900) an account was given of the preference some New Jersey farmers have for a covering of Crab grass to prevent the blowing away of their light soils during Winter. Crimson clover does not hold on sufficiently, and is too uncertain in starting during dry Autumns to be depended on in this locality, and Crab grass, while an effective Winter cover, does not add appreciably to the fertility of the soil. If it is practicable to combine the advantages of both with additional protection for the clover by sowing the latter early on ground naturally well seeded with Crab grass it is easy to understand the benefits likely to arise from the partnership.

Geraniums as Decorative Plants.—Many beautiful varieties of Zonal Pelargoniums, popularly known as geraniums, are introduced every year, but make little progress in cultivation, as they are not able to endure our severe climate when treated as bedding plants. In other words, they are not "sunproof," and in consequence are quickly discarded, but this is too great a loss, as they can usually be grown to great perfection in the conservatory or window garden. Fig. 119, page 287, shows a type of bloom of this large-flowering, decorative class as grown by Henry A. Dreer, Philadelphia, Pa. The variety is Hall Caine, cherry-red in color, with florets 2½ inches across. The coloring of some of the new kinds is wonderfully delicate in the light shades and vivid in the darker tints, while the habit of plant and form of truss leave little to be desired. So many new ones are coming out that it is not desirable to describe varieties which may be quickly superseded, but all now offered seem worthy of trial.

Care of Young Rose Plants.—Plants of Ruby Queen rose are now being mailed to new subscribers, and to those who failed to get it last year. While Ruby Queen is one of the hardiest of roses when established these young plants are mailed directly from the warm greenhouses, where they have been propagated during the Winter, and should have some special care and protection when received. The plants as sent out have been grown in two-inch pots, and it is best to repot them in a new three-inch pot, if procurable, using light, rich soil, well worked among the roots and firmly packed, leaving a half-inch space at the top to receive water. Soak the earth well, and place the pot in a light window, out of direct sunlight, until the plant straightens up. Keep the soil fairly moist, but never sodden, and by the time it is safe to plant outside it should be well-established and in good condition to bear the change. When a small pot is not at hand a convenient substitute may be found in a condensed-milk can, with the bottom plentifully pierced with holes for drainage, though there is more difficulty in getting the plant out later than with the conical pot. If a greenhouse, hotbed or cold frame is available the rose can be cared for with the other plants more easily than in a window, as it will require less special attention. If received after outdoor plants began to grow the Ruby Queen rose may be planted directly where it is to bloom, watering well and protecting slightly from chilly nights and harsh winds until a new growth starts. No rose came through the past Winter better on the Rural Grounds. Our solitary plant is clean and bright, and the buds are pushing vigorously this first week in April. It had no protection whatever, and is so placed as to receive the full sweep of the bitter north winds.

W. V. F.

CAULIFLOWER SEED
High grade Danish seed by mail, direct from the grower in Denmark, to your address, postpaid.
Danish Snowball, ¼ oz. 50c 1 oz. $1.50 1 lb. $18.00
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CLOVER and TIMOTHY
Beardless Barley, Bromus Inermis, Field Peas, Spring Rye, Crushed Oyster Shells, Poultry Bone, Crystal Grit. Every kind of grass and clover seed. Catalogue free THE KELLY CO.
Seed Merchants, 150-152 Sheriff St., Cleveland, Ohio.

Trees Shrubs Vines Hedging

Trees, Shrubs, Vines, Hedging.
2,000 Beech. European and Purple-Leaved.
3,000 Elms. American and European.
500 Japan Ginkgo.
2,000 Lindens. American and European.
1,000 Magnolias. In variety.
50,000 Maples. Norway Sugar, etc.
10,000 Oaks. Pin, Red, Scarlet and English.
10,000 Oriental Plane. 6 to 12 feet.
75,000 California Privet. 1 and 2 years.
1,000,000 Shrubs. All varieties and sizes.
10,000 Clematis Paniculata.
10,000 Rosa Wichuraiana, and Hybrids.
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5,000 Dahlias. Whole roots.
100,000 Asparagus. Very strong, 5 varieties.
2,500 Rhododendron, Azaleas and Kalmias.
500,000 Evergreens, of all sizes, including Hemlock, Norway, Colorado Blue, Oriental and Weeping Spruces, Arbor Vitæs, Retinosporas, Pines in variety, Root-pruned and sheared specimens.
New Illustrated Descriptive Catalogue sent on application
THE WM. MOON CO., MORRISVILLE, PA.

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contains a thorough description of all the good fruit for commercial and garden purposes; also descriptions and illustrations of ornamental trees, plants, vines, etc., for beautifying the home grounds. Mailed free to all who apply for it, and mention The Rural New-Yorker. This book is useful and instructive. The colored plates are works of art. Do not fail to write for it at once
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TREES that Live, Grow and bear the kinds of fruit you buy. **Hardy Trees,** that fruit **Early.** Why? Because budded from bearing trees of **Early Fruiting Habits.** Prices! Well, a **Peach Orchard,** 100 trees, best kinds, $4.00. Apple Pear and Cherry; 3 *Clifton Park Peach* mail for 50c.; former price 50c. each. *All Stock Fumigated, unless otherwise ordered.*
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We paid from $1 to $5 apiece for trees when introduced, and many times that for experience. We give away the experience, and sell the trees at a nominal price. We have some varieties we know are good, and plenty we know nothing about, if you prefer to pay for your own experience. FREE CATALOGUE—Fruit Trees, Berry Plants, Gladioli, Dahlias. Roses, Shrubs. Seed Potatoes, Baskets, etc.
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ALL LEADING KINDS. From $1.50 to $4 per 1,000. General line of Nursery Stock. Catalogue free
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First-Class Trees at Low Prices.
In addition to a good assortment of all kinds of Nursery Stock, I am pleased to quote as follows:
Kieffer, extra, ¾ to 1 inch.....$20 per 100 | Plum, extra, ¾ to 1 inch.....$15 per 100
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Asparagus Roots, 2-year, $2.50 per 1,000. Send for my 1901 Catalogue.
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TREES $7 PER 100—APPLE, PEAR and PLUM, 3 to 5 feet high. HEALTHY and TRUE TO NAME. Best varieties
We sell all kinds of trees and plants at lowest Wholesale prices. Don't buy until you get our Catalogue, which is free, or send list of wants for special price. Address RELIANCE NURSERY, Box 10, Geneva, N. Y.

For Sale About 300 bushels Extra Choice Early Bovee Potatoes, free from disease and scab. For prices etc., address
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Seed Potatoes.—Bovee, White E. Ohio, Peachblow, Minister's Commercial and others. Sample tuber 6c., lb. 20c. List free. J. W. HARTMAN, Sligo, Pa.

POTATOES—Bovee, Carman, Cobbler, Harvest, Six Weeks, Ohio, Rose. Astonisher, 85 kinds.
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Potatoes—True seed of Carman No. 3 and Sir Walter Raleigh potatoes. Bushel, 70c., f. o. b.; large quantities cheaper.
LUTHER J. LEWIS, Copenhagen, N. Y.

THE ADMIRAL DEWEY POTATO Best this season. Yields Big crops. Ask for testimonials. 40c. per lb.; 3 lbs., $1, postpaid; ex. or frt., peck, 75c.; 1 bu., $2; bbl., $5. Ad. introducer, C. M. Robinson, Manorville, L. I., N. Y.

FARMERS—30 choice standard varieties, Raleighs, Giant, E. Harvest, E. Cobblers, Commercial. Tuber free (remit only postage), White Star Oats tested with 10 varieties: sample and descriptive list free, and 5c., packet seed free. Save $1 per bbl. 4 varieties of fowls. SMITH POTATO FARM, Box C, Manchester, N. Y.

B 4 U BUY see my circulars and prices. Carman and Sir Walter Raleigh Potatoes. Eggs from high-scoring, prize-winning, White Wyandottes and fine flock of White P. Rocks. Vegetable Plants and money-making Seed Specialties. Seed and Plants of the most profitable Cauliflower grown. Investigate if you want the best on the market.
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10,000 GREGG and KANSAS Raspberry Plants.
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Everyone should set a bed of **PENNELL STRAWBERRIES** this year. Send for Circular and Supplement, What the Growers Say, to JOHN W. PENNELL, South Norwalk, Conn., Rural Del. 37.

PALMER VERY EARLY STRAWBERRY
Your money back, 1902, if you don't claim it as we do to be the Largest best Early berry on Earth. Ripens here in New Jersey May 25. Three plants, $1; six plants, $1.75; 12 plants, $3; 24 plants, $5.50; 48 plants, $10. 96 plants, $15. By mail. List free.
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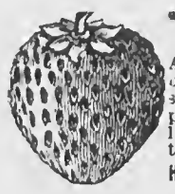
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A large, handsome, delicious strawberry. Splendid shipper. Eagerly sought by city trade. Commands top price. Send for free catalogue describing 50 other varieties. Everything for the orchard and garden.
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GROFF'S GLADIOLUS HYBRIDS
I have arranged with Mr. Groff for the sale of his products in the United States and invite orders from the most critical. My bulbs are not from seed disseminated by him, but from stock grown on his trial grounds. Catalogue and particulars on application.
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We offer 8,000 each Elberta, Stump, Chair's Choice and Crawford's Late; 3,000 each Beer's Smock, Salway and Ford's Late; 1,000 and up of nearly all of the other leading varieties in the very best grades for orchard use. We offer standard Pear, Plum, Cherry, Concord Grapes and Houghton and Downing Gooseberry in good supply, and we have 50,000 medium apples, including 10,000 York Imperial. Prices right, and trees clean and well grown. Send list of wants when writing for catalogue.
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ASPARAGUS Roots.
Address CHAS. H. MATHIS, Blackville, S. C.
Mention this Paper.

STARK TREES SUCCEED WHERE Largest Nursery. OTHERS FAIL.
Fruit Book Free. Result of 76 years' experience.
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TREES
300 ACRES.
For more than 50 years we have grown nursery stock—only varieties of known worth. Fruit, Ornamental trees, Shrubs and small fruits. October Purple Plum, fruited with us last year, excels Abundance and Burbank in every way and is one month later in ripening. We have large stock of two-year old trees. Extra fine stock of Green Mountain Grape. Catalogue free.
STEPHEN HOYT'S SONS,
New Canaan, Conn.

Live Stock and Dairy

THE BREEDER'S WAYSIDE.

Feeding Pigs Without Milk.

We have a dairy farm of 21 cows from which the milk has formerly been made into cheese, the whey being fed to hogs. Last year the milk was sold outright, and the tenant states that he cannot raise hogs profitably (if at all) without the whey. For grain, corn and oats are raised on the farm, and we usually buy some middlings for the young pigs. We have a good hog house. Will you inform me what to feed the hogs in the absence of whey, and what the milk should sell for, to make it less profitable to raise hogs than to feed all the grain to the cows when dressed pork is worth seven cents per pound? When we had whey to feed the hogs, the tenant probably sold 1,000 pounds of pork, and we thought it well worth while to keep hogs. M. E. H.

Herkimer Co., N. Y.

I should say something was the matter with either the kind of pigs fed, or the man feeding, rather than the feed used. Not one pig in 10,000 ever has had a taste of whey, and while it has some value as a food, that value is slight. Skim-milk and buttermilk are very valuable adjuncts to pig feeding, as the casein, which goes into cheese, is very valuable in food constituents. For an extensive feeding experiment with pigs last year, where a mixture of cornmeal and shorts, half and half, was fed, or of shorts and hominy fed in the same proportion, the writer produced pork for as low as $2.87 per 100 pounds, and no milk or whey was fed. Sixteen pigs were fed, and from January to late in June, and during all that period, the highest cost of production was $3.04 per 100 pounds. Our feeding was of course done with judgment, and we had good pigs, but our results are not at all remarkable. Yet these figures show these pigs to have been fed with profit when pork was quoted at the lowest figures usually listed. For Chicago pork has now climbed to over $6 per 100 pounds. Think of the profit in feeding pigs at that price!

If the pigs are kept dry and clean, and in a place not too warm or too cold, and not drafty, and are from fairly good stock, and fed by a man with reasonable judgment, they should make a satisfactory profit, with pigs at $3.50 to $4 per 100 live weight. The tenant who says he can't feed pigs profitably without using whey, stands alone in a class by himself. Most other feeders can. Without the whey, cornmeal and shorts will probably be your most available food. Fine bran may be used in place of shorts, but it is not so good as shorts, middlings or ship stuff. So far as selling the milk is concerned, I should continue selling it. Skim-milk is worth as high as 20 cents per 100 pounds for pig feed, and if you can skim some of the milk and sell the cream, and feed the milk to the pigs, you will have a valuable addition to your feeding stuffs. But this is not really essential, unless to young recently-weaned pigs, or sows suckling pigs. You certainly can't afford to feed them whole milk.

C. S. PLUMB.

"ONE OF THE MILLION."

A Road to Successful Farming.

A recent article in THE R. N.-Y., written by Prof. Roberts, was very interesting to me. This is probably due to the fact that I am one of those "in competition with the million." In June, 1898, I finished a four-year course in agriculture at the New Hampshire College. At that time I was confident that there was money in farming, and engaged myself in practical farm work at once after leaving college, having taken the home farm for two years in company with a younger brother. The lease began the first of May previous to the 1898 commencement. We went into potatoes and dairying. The first season we had nine acres of potatoes and 17 cows. In the Spring of 1899 we leased another farm, put in 20 acres of potatoes, and milked a few more than 40 cows on the two farms. About these these two years I will say but little save that we made only fair day wages. These returns were not satisfactory. Nevertheless I was still confident that with better cows and cheaper roughage better returns were possible. Consequently I again leased the last-named farm for two years. The agreement, among other things, states that the owner should furnish 24 good cows and build a silo. I got a set of dial-spring milk scales and have since been keeping individual accounts with the cows. The first year is not up until May 1 next, but the figures already are sufficient to show wherein the majority fail to make money in dairying. Estimates have been made for the full year based on what has already been done.

The cows were picked up about here, and are generally considered to be good ones. Not over one-half of the number will stand my figuring and return any profit whatever. They have been well-cared for and fed in a general way according to scientific principles of feeding. The hay and silage have been supplemented with nitrogenous mill feeds. Most of the Winter the cows have had 10 pounds of hay, 30 pounds of silage and four pounds of meal composed of mixed wheat feed and cream gluten, equal parts by weight. Cows in full flow of milk get eight pounds of this mixture instead of four. The above ration was found to be much more profitable than the following, which was fed for a time the first of the Winter: 20 pounds of hay, 30 pounds silage and 1½ pound mixed wheat feed. It is astonishing how the scales, Babcock test and a few figures will throw light on a subject. One soon learns to tell by a glance at the record of a cow whether she is being fed at a profit or a loss. A short time since it was noticed that one cow was being fed as above at a loss. Her grain feed was cut down one-half, and she then failed to pay her way, but the deficiency was not so great. This cow is not in the herd at present. Last Spring there was placed at the head of the herd a registered Holstein bull with a double line of good ancestors. This was done with a view to raising up some better cows. The result thus far is satisfactory as the calves are nearly all extra good ones.

I am making a specialty of raising potatoes for seed, as the land is naturally adapted to potato growing. In this branch there is one departure from the ordinary. Each hill is dug by itself, and potatoes are selected only from superior hills. There are many things about both cows and potatoes that are of much interest. Unless the writer is very much mistaken, this is one of the roads leading to a more profitable system of farming. BURTON A. CORBETT.

New Hampshire.

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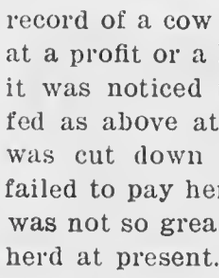
Your Horse



may "throw a **curb**," "start a **splint**," "sprain a **cord**," "develop a **spavin, thrush,** or **grease heel.**" etc. They are all bad, but don't be alarmed. Get a bottle or two of

Tuttle's Elixir.

It cures all these troubles and Colic, Distemper, Founder, Pneumonia, &c
Used and endorsed by Adams Express Co.

Dr. S. A. Tuttle. Wolcott, Vt., July 15, 1898.
Dear Sir:—I have doctored horses for the last 25 years, and I think your Elixir the best liniment I have ever used, and I would recommend it to any one. C. M. GUYER.

TUTTLE'S FAMILY ELIXIR cures rheumatism, sprains, bruises, etc. Kills pain instantly. Our 100-page book, "Veterinary Experience," FREE.

Dr. S. A. TUTTLE, 30 Beverly St., Boston, Mass.
Beware of so-called Elixirs—none genuine but Tuttle's.
Avoid all blisters; they offer only temporary relief if any

VICTOR CORN & OAT FEED

Hogs, Horses, Cows, Calves.

The best general feed on the market for horses, hogs, cows and calves is acknowledged to be Victor Corn and Oat Feed. It is an "all around" feed. It has been tried under all conditions and never fails to yield a profit. Stock fed on Victor Corn and Oat Feed make constant gains.

Try Victor Corn and Oat Feed and watch the results.

Sold only in Sealed and Branded Sacks. Each Sack stamped with analysis of contents, showing guaranteed per cent. of Protein.

If your dealer does not keep Victor Corn & Oat Feed send us his name. Write for a free copy of "Feeding for Flesh."

THE AMERICAN CEREAL CO.,
1339 Mondadnock Bldg., Chicago

Makes Bone and Flesh.

Cure Barren Animals

THE LOSS SAVED IS CLEAR PROFIT.

Others Cure their Animals, WHY BUTCHER yours? Thousands of cows, mares, sows, etc., restored to breeding in the past 20 years. The best stock farms in the world are our patrons, why not you? ABORTION: Every cow that aborts should be treated with this remedy. You cannot afford to experiment, profit by the experience of expert breeders. Treatment by mail, $1.10. Other remedies just as reliable. Ask for circulars any way.

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Wilder's Stanchion
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REG. GUERNSEYS—6 Cows in milk; 1 Heifer, soon due; 5 Heifers, bred; 2 Heifers, 6 and 8 months old; 2 Bull Calves, 4 and 6 months old. A. J. SNYDER, Plumsteadville, Pa.

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Registered Jersey Cattle.
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ready for service, and a fine lot of Bull Calves. Best of breeding, and from deep producing families.
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150 Dellhurst Holsteins
for sale, including young Cows, Heifers and a great lot of BULL CALVES—several now ready for service—sons of "DeKol's Butter Boy", and the famous "Royal Paul" out of advanced Registry cows. Catalogue.
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For Sale—Bull Calf, and young Bull ready for service. Eurotas, St. Helier and Coomassie blood, high testing dams with big milk records. Also a few heifers of quality. If you want something of high quality at a reasonable price, write for particulars to E. W. MOSHER, Aurora, N. Y.

Chester Pigs—Brood Sows, Collie Pups, PAINE, So. Randolph, Vt.

Reg. P. Chinas, Berkshires and *O. Whites*, Choice Pigs, 8 weeks old, mated not akin. Bred Sows and Service Boars. *Poultry.* Write for *hard times prices* and free circular.
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Runts are Unprofitable; Dead Hogs a Total Loss.

DR. JOS. HAAS' HOG REMEDY
Is Guaranteed to prevent and arrest disease, stop cough, expel worms. Increase appetite and growth.
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stamped with any name or address with consecutive numbers. I supply forty recording associations and thousands of practical farmers, breeders and veterinarians. Sample free. Agents Wanted.
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50c and $1.00 a Bottle.

if suffering from an enlargement can be quickly put on his feet. No need to blister or fire. The enlargement will be quickly absorbed by

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Sold by Druggists and Dealers generally.

The Chicken Yard.

EARLY LAYING PULLETS.

How Grown in a Cold Country.

For two reasons I try to have my pullets begin laying early, having found that yearling hens rarely get over moulting in time to lay before cold weather. The first reason is that Fall and Winter eggs bring the highest prices, the second that from pullets which have laid well all Winter I can select my eggs for hatching, and secure strong fertility. One must begin with the hatching to accomplish anything. The chicks must be March or April hatched, whether by hen or incubator matters not. I, however, have never been fortunate enough to get mine hatched before the middle of April and oftener the end of the month. The eggs set must be from vigorous, healthy stock, and of as good a strain of layers as is procurable. When the chicks are hatched, if by a hen, then the trouble begins. No need of feeding them first thing. If they are not fed for 24 or 36 hours they will be all the better for it. If brooder chicks it is much easier to attend to them. For the first few days, or even a week, I feed stale bread soaked in water and squeezed out so it crumbles. Then gradually give rolled oats, wheat, millet, johnny cake and dry bran. Have coarse sand accessible at all times. One lot of chicks I gave no drinking water till they were two weeks old. Late-hatched ones, however, can have water when a day old. Chicks should be fed what they will eat up clean four times a day for the first two weeks, then three times till two months old.

Young chicks should be kept warm and free from lice. If hatched by the incubator the matter is very easy; having been free from vermin at first it is simply a question of keeping the brooder clean. If taken care of by the hen it is much harder, as the hen and chicks will have to be dusted with some lice powder every week or so. Chicks should be kept warm, especially in early Spring If brooder chicks they must be taught to run into the brooder, which may be much cooler than at night. With brooder chicks the mistake must not be made of getting them used to too warm an atmosphere at night, as it makes them more susceptible to cold when out doors. At about four weeks I began to give a mash of one-quarter middlings, one-half cornmeal and one-quarter bran mixed with skim-milk or water for one feed a day, and cracked corn and wheat several times a day. At first chicks had only a limited range, but as they grew older they had the run of a nice lawn, and later the gardens, somewhat to their detriment.

When the chicks were about 10 weeks old I fed only one meal a day, and that merely to keep them tame and in the habit of looking for feed from the house. All table scraps were thrown out to them, and as they had access to the barnyard and barns they did not lack for grain feed, and gathered up much of what would otherwise be loss. Water was placed where they could get at it at all times. A very good drinking fountain for young chicks was made from baking powder cans notched a little on one side and set into a saucer or tin-pail lid.

One year I was forced to buy about 50 April-hatched chicks when they weighed 1½ to two pounds apiece. They were put into the barn to sleep, as we had no suitable house for them. From that they began following the cows to pasture, and particularly into a small marsh. Here they found plenty of grasshoppers, and I never had such healthy chickens, or any that grew so well as they did. When I began to feed corn in the Fall they had to be taught to eat it. About the last week of September I begin to feed an evening feed of grain, usually corn, and as the days get colder a morning mash of middlings, ground corn and oats. Pullets and cockerels roost in trees till the cold weather comes on, when I usually succeed in capturing them and putting them into the henhouses. For the past two years this has been about the middle of November, but it is far the best to have them in Winter quarters about November 1. My chickens were incubator and brooder chicks the past year, and so tame that the handling necessary to get them from roosting places and into coops did not disturb them in the least, for the pullets began to lay the next day. I had found an occasional egg at odd times for a week before housing, so that they were ready to lay by the middle of November. When I get them housed I like to feed whole wheat for one feed a day, and the mash is then composed of one-half middlings, one-half cornmeal and oats ground together with any kind of scraps, vegetables or whole grain as a relish, and sometimes I add a little oil meal to the mash. We usually raise oats and wheat together, cutting and curing when ripe, then stacking till Winter, when it is thrown into pens for scratching material. The way to get Winter eggs, I find, is to feed regularly, keep plenty of fresh drinking water or skim-milk, grit and wood ashes containing charcoal before them at all times, and give them plenty of scratching to do.

MRS. G. L. ROSS.

Wisconsin.

A CITY MAN TURNS FARMER.

PART VI.

When the peach trees came I had abundance of room to spread out the roots and had to half fill the holes with good loam to prevent getting them too deep. Of course all this was fine for the young trees, and they made a growth in the next three years that was the astonishment of all who saw them. An old fruit grower from New Jersey said he never saw it equaled. Branches six to seven feet long, five-eighths to three-quarters inch in diameter as the result of one season's growth were common. I planted sweet corn and garden stuff among the trees, and that clover sod, with the cultivation, did the business. I was very proud then of my trees, and used to take pains to show them to callers; now I know that a much smaller growth would have been better for the trees. Although I pruned heavily, cutting away half of each season's growth, ice storms in Winter have pruned still more heavily, splitting some of the trees down to the ground, and breaking great limbs off others, until there are not 20 whole trees left out of the 35. Still, although last year there was only a partial crop of peaches, we got about 50 baskets from those six-year-old trees.

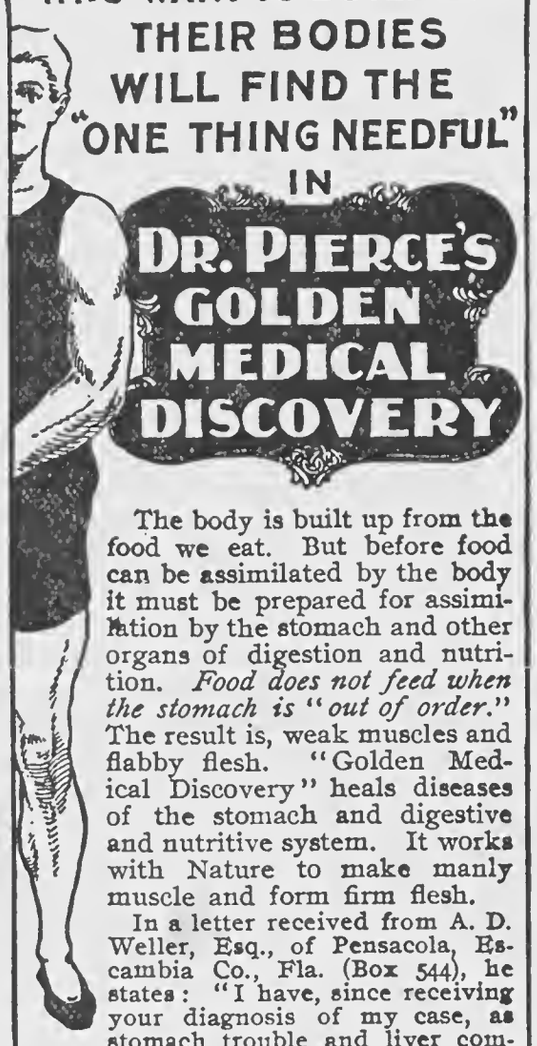
We had planted some potatoes on a small piece at the bottom of the same lot, which had been cultivated several years, and when they came up and got big enough to hoe, a rainy season set in, and the ground was too wet to work for a couple of weeks. When it became dry enough, and I started to hoe them, not a potato plant could be seen, nor a square inch of bare ground. The whole piece was a mass of charlock, a weed with a large leaf something like turnip. Cultivating it was out of the question, as it was impossible to see where the rows were. I had to pull the weeds with my hands until I could find the potato rows, and then it required slow and cautious work to hoe them. It was a back-breaking job, and I have never allowed a crop to get away from me like that since that first experience.

Our first calf was a wonderful creature. How the children would run out the first thing in the morning, and as soon as they returned from school, to fondle and pet little Buttercup, as they named her! Nothing was too good for her, and we spoiled her with good feeding, so that when she was two years old, and began to give milk, she was a fat beefy creature with a neck so thick that I had to widen the space in the stanchions two inches, although it was wide enough for any of the cows. When Buttercup was about eight weeks old we had her tied out where she could get grass and run as far as the rope would allow. One day she got loose, and went down the road with about 30 feet of rope trailing after her. As it chanced, my wife was the only one who saw her, and she went out and got hold of the rope when the calf was the length of a city block away from the house, and turned her toward home. Now, of all the things the Lord ever made that can *pull*, it seems to me a young calf is the worst. When they neared the house the calf started to run. Mother was too "game" to let go of the rope, and she came up the hill, taking steps nearly 10 feet long, eyes protruding, hair flying and screaming, "Stop her! stop her!" while the children just laughed until they fell down on the grass. We put the calf in the barn at night, and I remember having hold of the end of the rope when Buttercup started to run. I braced myself and when the rope straightened out the calf shot up in the air and turned a complete somersault, while I went down on my face. After that the children were out every evening to see me take in the calf. We were compelled to sell Buttercup for beef, as she gave so little milk, and never would have made a good cow. Here was another lesson for us in farming. The mother of Buttercup was an extra good cow, but we had spoiled the calf with what we thought was kindness, as many a child is spoiled.

Experience has taught us that skim-milk is better than whole milk for the calf that is to become a cow, and that great care must be taken that the flesh-forming habit is not fastened upon it during its young life. We have found that skim-milk and a gruel made of common wheat middlings *thoroughly cooked* by boiling for 15 minutes will fatten a calf for the butcher without any trouble from scours, and fatten it so well that the butcher would scarcely believe me when I told him it was not a whole-milk calf. An ordinary cow will make a pound of butter a day during its best flow of milk, and in eight weeks it amounts to 56 pounds at 25 cents, $14. As the price of a skim-milk calf is only a cent a pound less, the loss on a 200-pound calf is only $2, showing a gain of $12 to pay for the trouble of butter-making, warming skim-milk for the calf, etc.

G. A. C.

FLABBY FELLOWS
WHO WANT TO BUILD UP THEIR BODIES WILL FIND THE "ONE THING NEEDFUL" IN
DR. PIERCE'S GOLDEN MEDICAL DISCOVERY



The body is built up from the food we eat. But before food can be assimilated by the body it must be prepared for assimilation by the stomach and other organs of digestion and nutrition. *Food does not feed when the stomach is "out of order."* The result is, weak muscles and flabby flesh. "Golden Medical Discovery" heals diseases of the stomach and digestive and nutritive system. It works with Nature to make manly muscle and form firm flesh.

In a letter received from A. D. Weller, Esq., of Pensacola, Escambia Co., Fla. (Box 544), he states: "I have, since receiving your diagnosis of my case, as stomach trouble and liver complaint, taken eight bottles of the 'Golden Medical Discovery' and must say that I am transformed from a walking shadow (as my friends called me) to perfect health."

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Temperance Medicine.
CONTAINS NO ALCOHOL.

ZENOLEUM Kills Lice, Ticks, Mites, Fleas, Etc., on all kinds of animals and poultry. Given internally it drives out worms. Cures all cuts, wounds, sores, etc. Non-poisonous. Endorsed by leading veterinarians. "Veterinary Adviser" free. Zenner Disinfectant Co. 100 Bates St. Detroit, Mich.

Death to Lice on Hens and Chicks 64-page Book FREE. D. J. LAMBERT, Box 307, Apponaug, R. I.

Fowls of W. & Bd. Rock, W. & Bn. Leg., W. Wyan. vars., Eggs $1 & 1.50 26. Stamps. Mrs. J. P. Hellings, Dover, Del.

S. C. White Leghorn Eggs, 26 for $1. MAPLES POULTRY YARDS, New Britain, Conn.

EGGS—20 for $1; $3 per 100. White Wyandotte and S. C. Buff Leghorn. Belgian Hares, $2 per pair. JOHNSON & ORR, Collins Center, N.Y.

EGGS—100 Eggs, $4; 45, $2; 15, $1. Thompson's strain Barred Rocks. WILLIAM PALMER, Grooms, N. Y.

Blanchard's White Leghorns.—The leading strain of heavy layers. Eggs for hatching from finest stock. Ill. cir. free. H. J. Blanchard, Groton, N.Y.

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90 Varieties Choice Poultry. Eggs, Pigeons and Belgian Hares. All combined and information in 60 page book, 10 cents. J. A. BERGEY, Telford, Pa.

SILVER WYANDOTTES WANTED AT $8 EACH
See Rural New-Yorker. March 30, page 234.
BEAVER HILL FARM, Beaver, Pa.

S. C. Brown Leghorns Exclusively. Eggs from high scoring yards, $1.50 per 15. Poor hatches duplicated. D. P. GROFF, North Star, Ohio.

EGGS—Fertility guaranteed. By the sitting or hundred. 23 varieties of prize-winning land and water fowls. Big Catalogue free. Our guarantee means something. PINE TREE FARM, Box T, Jamesburg, N. J

W. Wyandottes (210-egg strain), B. Rocks, S. C. W. Leghorns, bred from stock which won at N. Y. and Boston 1899 and 1900. D. Brahmas and Pekin Ducks won in 1898. Eggs, 15, $2; 100, $5. Satisfaction guaranteed. D. H. COLT, Elmwood, Conn.

EGGS from choice heavy laying S. C. White Leghorns, Silver Wyandottes and Buff P. Rocks. $1 00 per 15; $2 per 30. Safe arrival and good fertility guaranteed. T. D. GOODWIN, Columbia Station, Ohio.

Partridge Wyandotte Hens.
The Large Money Makers.
Write for circular. C. G. LORING, Dedham, Mass

BROOKSIDE'S WHITE WYANDOTTES please every one because they are carefully bred for business as well as fancy. Eggs that hatch from the choicest matings, $2.00 per 13. Almost their equals for business, $1.00 per 13, $5.00 per 100. J. E. STEVENSON, Columbus, N. J.

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We breed only from the large true egg type. Six hundred to select from. Only one breed. We try to make that the best. You get the benefit of our years of careful selection and feeding. WHITE & RICE, Lock Box A, Yorktown, N.Y.

TURKEYS—Genuine M. Bronze, Buff Leghorns, Buff P. Rocks. Also eggs. Circular. S. J. B. DUNBAR, Elkhorn, Wis.

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I breed fine poultry on one of the best equipped poultry farms in the world. Send 8c in stamps for new 1901 Book, telling all about 50 varieties, with special prices on fowls and eggs. B. H. GREIDER, Florin, Pa.

THE BANTAM HATCHER
The 50 egg $5 machine that hatches equal to the highest priced made. Has hatched 50 chicks from 50 eggs hundreds of times. SENT ON 30 DAYS FREE TRIAL. Catalog No. 23, 4c. Buckeye Incubator Co., Springfield, O.

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BROODERS FROM $3.80 UP.
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Hatch every fertile egg. Simplest, most durable, cheapest first-class hatcher. Money back if not positively as represented. Circular free; catalogue 6c. GEO. ERTEL CO., Quincy, Ill.

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Stationaries, Portables, Engines and Pumps, Hoisters
State your Power Needs.
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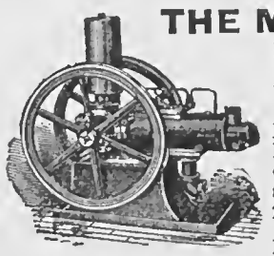

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Hatch-All Incubator Co. Toledo Ohio.

GALVANIZING A LOAFER FIELD.

One of the most serious problems on our own farm is—what shall be done with the loafer fields? By a "loafer field" we mean one that formerly helped support the family—producing crops that were a credit to the farm—but for some reason has fallen out of service. Nature takes hold of these loafers when man abandons them, and covers them first with weeds, then briers, and finally with trees. When we came to the farm we found at least half of it "loafing" in this way. It was necessary to turn that loaf into a bread-earning capacity, for there was not enough smooth land to produce needed crops. Besides this, we knew well that fields are like men. The longer they loaf the further does nature carry them back toward the point where they are of little value to civilization. We started at once to bring those fields into cultivation. On most of them we tried what we may call the slow-and-sure process. We know it is slow and we *think* it is sure. This consists in roughly plowing the ground in the Spring and sowing cow peas. We prefer to use with the peas a dressing of fertilizer low in nitrogen but high in potash and phosphoric acid. The peas are plowed in, and the following year peas can be sown again, or corn planted with a fair amount of corn fertilizer. This fertilizer will be necessary on such soil to give a fair crop.

Some human loafers are put back into useful work and habits by this slow method, but we probably all know of cases where they have been seized by some sudden ambition or powerful motive, which lent them energy and sent them at once into useful work. Was there any way to galvanize those loafer fields, and make them produce food at once without waiting for the slow process of green manuring? We decided to find out, so we took one field containing about 2½ acres for an experiment. It was a poor light loam—stony and overgrown with brush and briers. It was at the back of the farm, and most old farmers in the neighborhood considered it unfit for cultivation. This field was plowed in May, but instead of sowing cow peas, as was done in the other, we broadcast about 500 pounds per acre of the Mapes corn fertilizer. This was harrowed in with the Acme, the ground marked and planted with Rural Thoroughbred flint corn. This variety does not give a heavy yield of grain, but is the best for silage or fodder that I know. The corn was well cultivated and grew rapidly. By September 1 it stood, in parts of the field, over 12 feet high—the most remarkable tribute to the value of a high-grade corn fertilizer that can well be imagined.

On the north is a field that had not been touched. It was simply a tangled mass of briers, cedars and birch. At the south a neighbor's field was in corn, without fertilizer. This field had been well tilled; but the stalks would barely average shoulder high! At the east is one of the loafer fields which is undergoing the "slow-and-sure" treatment. A few hills of corn planted here were but little over waist high, with mere nubbins in the way of ears. In the midst of these poor surroundings stood the green forest of fertilized corn so thick and tall that a man on horseback riding into it would be lost from sight! We have no platform scales, and could not measure the yield from this field. The stalks, after husking, were run through the St. Albans shredder, giving a roughage which we consider nearly equal to Timothy hay for Winter feeding. We fed no hay at all until March 1, when oat hay was ready. This "loafer field," under the galvanic influence of the corn fertilizer, gave us shredded fodder enough to provide roughage for all our stock for 50 days! Left to itself it would not have fed one rabbit for 10 days. Without the fertilizer it would not produce corn enough to pay for the cultivation. Any farmer who has stock to feed while hay is worth $15 or more per ton, will realize the profit in "galvanizing" a loafer field so that it will leave the haymow free to pay taxes and interest.

This Spring we are following the corn with oats—using more fertilizer. Will this plan of handling abandoned land pay better in the end than the slower way of breeding up the soil with green manures? I cannot answer that until the cow-pea fields have been cropped, but that is not all the story. There are times when we must start *at once* and make such back fields produce a crop from the very start. The soil is in about the condition which doctors term "suspended animation," and galvanic treatment pays in such cases when you *must* have results. I know I obtained such results at a profit. It was the corn fertilizer that induced that loafer field to pull off its coat and walk down to the barn with its load of fodder. H. W. C.

A Practical Dairyman.

About a month ago H. G. M. had an article on weighing the grain ration, and on page 215 someone suggests that probably H. G. M. was a "book farmer," and that he would know more if he got up at four o'clock in the morning to milk, and then carted the milk to the cars or a creamery. I would like to say that H. G. M., with his father, Edward Manchester, and his brother, George E. Manchester, who is secretary of the Connecticut Dairymen's Association, compose a firm of as hustling dairymen as it is easy to find in our State. A year ago last Winter I spent one night at their place. I got there at sundown, one of the coldest nights of the Winter. G. E. M. was in the creamery. The milking of about 40 cows was going on, the "Safe" engine and separator were running. G. E. M. was putting up a special order for brick ice cream. He is the butter maker. H. G. M. and his father have charge of the cows and the feeding and milking, with several helpers, and H. G. M. peddles the skim-milk in the morning. The next morning the mercury was minus eight degrees, and H. G. M. was up before five o'clock, at least, milking. Instead of his usual peddling that morning he was off by train at seven o'clock to speak at an institute in another county. I understand that this firm has increased its herd to about 100 cows since a year ago, and anyone wishing to study a business dairy will be instructed by a trip to Winsted. But the correspondent above referred to should not be entirely condemned for his supposition. We have so many cases of muscular paralysis arising from book education that the business farmer looks askance at the applicant for a job who has been through a college as H. G. M. has. E. C. BIRGE.

Connecticut.

I FEED about a peck of malt sprouts a day to a cow. I feed them dry. A cow will eat them dry after she gets used to them, as well as soaked. I think the reason so many are used is because there is no bad effect from them like corn feed. Most dairymen in this part of the country feed them. I would say 50 carloads are used every year at this station. M. M.

Monroe, N. Y.

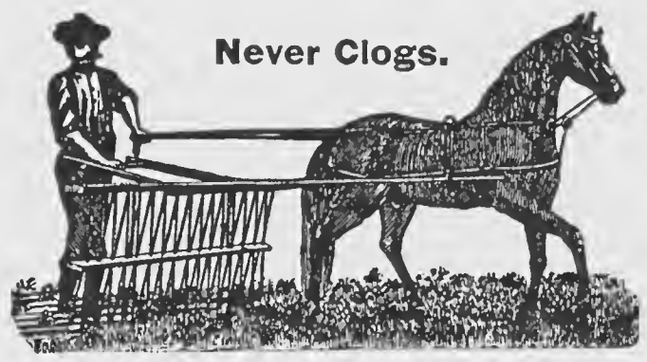
Easy Harness

All harness, old or new, is made pliable and easy—will look better and wear longer—by the use of

Eureka Harness Oil

The finest preservative for leather ever discovered. Saves many times its cost by improved appearance and in the cost of repairs. Sold everywhere in cans—all sizes.

Made by STANDARD OIL CO.



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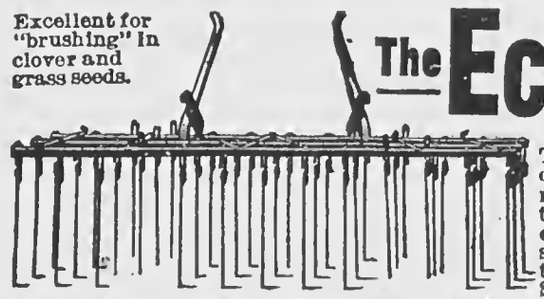
UNIVERSAL WEEDER CO.,
32 S. Market Street, Boston, Mass.

Excellent for "brushing" in clover and grass seeds.



The Eclipse Weeder

Adopts an Entirely New Principle in Weeders.

The teeth are adjustable so that those coming immediately over the plants in the row may gradually be raised as the plants increase in size. I means that this weeder may be used long after the utility of all other Weeders has ceased. Has 39 oil tempered spring teeth, all adjustable to be raised or lowered, to stand straight, or slant to or from the plants. Stirs, fines and pulverizes all the top soil and kills all weeds, quack grass, etc. Adjustable Shafts—fit any horse. Send at once for *special weeder circulars, &c.*

THE BELCHER & TAYLOR A. T. CO., Box 75, CHICOPEE FALLS, MASS.

It Stands the Storms

better than any wind mill ever invented. This is not only true because of the unusually well constructed and thoroughly trussed and braced angle steel tower, but because of the great strength of the mill itself. It has a way of adapting itself to severe shifting winds.

The Samson Wind Mill

because of its many points of superiority, sprung into popular favor immediately upon its introduction, and is now the recognized leader among machinery of this class. The powerful Double Gear with center line draft, long Interchangeable Boxes, freedom from all torsion and overhanging strain, make it the strongest in the world. Don't buy until you investigate this mill. Samson Art Catalog free.

STOVER MFG. CO., 502 River St., Freeport, Ills.

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Even Little Hogs

don't often go through Page Hog Fences. They are spaced to catch 'em. Try our 9 bar 30 inch.

PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

We are the largest manufacturers of Steel Wheels and Truck Wagons in the World. Write for Catalogue.

Havana (Ill.) Metal Wheel Co.

"KEEP OFF THE GRASS"

That unsightly sign will not be needed if you have the

HARTMAN STEEL RODLAWN FENCE.

Keeps off everything but sunshine and rain. Best for Lawns, Schools, Churches, Cemeteries, etc. Steel Posts and Gates. Catalogue free.

HARTMAN MFG. CO., Box 18, Ellwood City, Pa.
Or Room 70, 0 Broadway, New York City.

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Best and cheapest. Send for catalogue.

BOOMER & BOSCHERT PRESS CO.,
118 Water Street,
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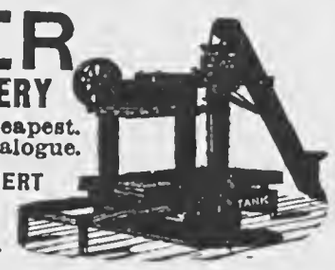

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to buy a fence that will last a lifetime, buy the FROST, containing twice the strength of woven wire fences. Heavy Hard Spring Wire, and large size uprights. Send for catalogue.

THE FROST WIRE FENCE CO., Cleveland, O.

SPECIAL PRICES 30 Days Trial. Guaranteed. Double and Combination Beam.

OSGOOD SCALE CO., 103 Central St.
Catalog Free. Write now. BINGHAMTON, N.Y.

WAGON SCALE $20

JONES HE PAYS THE FREIGHT.
JONES OF BINGHAMTON, N. Y.

WELL DRILLING Machines

Over 70 sizes and styles, for drilling either deep or shallow wells in any kind of soil or rock. Mounted on wheels or on sills. With engines or horse powers. Strong, simple and durable. Any mechanic can operate them easily. Send for catalog.

WILLIAMS BROS., Ithaca, N. Y.

AMERICAN FIELD AND HOG FENCE

FULLY GUARANTEED.

Best steel wires heavily galvanized. Strong, economical, efficient, durable. Local agents everywhere. If no agent in your town write to the makers.

American Steel & Wire Co., Chicago or New York.

Sharples "Tubular" FARM Cream Separators

The Wonder of the New Century. Greatest step ever made in advanced Cream Separator construction.

Superior as the Sharples Separators have always been, these Tubular machines are far ahead and completely distance every competitor. They are worth double the money because guaranteed under usual conditions to produce enough more butter than the best competing separator to pay fully six per cent interest on the whole first cost of the machine.

We absolutely warrant it and give free trial to prove it.

Our factory is running double turn, one gang all day and one all night, for the dairyman who sees this machine buys it.

In addition to yielding more butter it is very light running. A 600 lbs per hour Tubular turns as easily as a previous 300 lbs per hour machine No disks to hother with and get out of order, no complications. Washed in two minutes. Top of milk vat waist high.

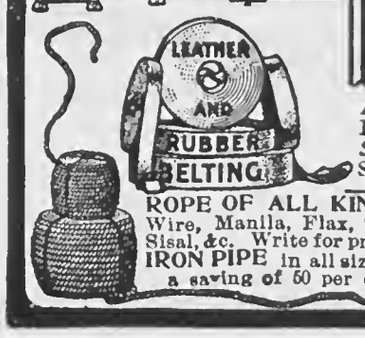
Highest award—Gold medal and special Knights decoration at Paris Exposition. Valuable book "Business Dairying and catalog No 153, free.

Sharples Co., Chicago, Ills. P. M. Sharples, West Chester, Pa.

REBUILT MACHINERY

UNLIMITED SUPPLIES at BARGAIN PRICES

Bought at Sheriffs' Sale— 5,000 squares BRAND NEW STEEL ROOFING. Sheets come in assorted sizes only. We sell it either Flat, Corrugated or "V" Crimped, complete with paint and nails, Per 100 Square Feet $1.75 We have higher grades also.



A million feet of Brand New and Second Hand RUBBER, LEATHER and COTTON STITCHED BELTING, bought at various Sales. We guarantee to save you from 25 to 50 per cent. We have a job in ENDLESS THRASHER BELTS.

ROPE OF ALL KINDS, Wire, Manila, Flax, Tow, Sisal, &c. Write for prices. IRON PIPE in all sizes at a saving of 50 per cent.

ASK FOR FREE ILLUSTRATED CATALOGUE No 57

CHICAGO HOUSE WRECKING CO.
WEST 35TH & IRON STS., CHICAGO.

PRIZE CREAMERY BUTTER.

How Milk and Cream Were Handled.

Our milk is received from about 25 small dairies consisting of from two to 35 cows each, and the practice has been to deliver at the creamery only every other day in Winter, while some dairies only deliver once in four or six days. This renders it impossible to make the highest quality of butter, as some of the patrons become a little careless, and the milk is not delivered in the best condition, and often the cream is somewhat frozen. Nearly all the cows from which our milk is received have a little Jersey blood mixed in with a few Holsteins and some native stock. About one-fourth of our patrons are using silos, and all seem to be well pleased with this method of keeping their corn fodder. By the use of silos they are enabled to keep more cows on the same land. As to the quality of milk produced from silage I have no objections to offer provided the silage is good. I can often detect it in the milk when receiving it, but if from good silage it is a flavor which improves rather than injures the butter, as it more nearly approaches green corn or grass, but if from moldy or spoiled silage it is certainly a damage to milk and butter. In making a silo it should be the aim to make it as nearly airtight as possible, even at a little greater cost. Our experience has shown very little advantage in keeping the corn trodden down during filling over the plan of filling slowly and allowing the corn to settle of itself. We find apple pomace makes a very good covering, if put on immediately after filling. Several of the stave silos are being built around here, giving good results.

After the milk is received, weighed and sampled with a milk tube, it is run into the receiving vat together until enough is taken in to keep a United States separator running; then the separator is started and milk taken in as fast as separated. From the receiving vat the milk goes through an Ideal milk heater, where it is warmed to 80 degrees in Summer and 90 degrees in Winter by a jet of steam running directly into the milk. From the heater the milk enters the separator, from which the cream goes into a cream vat and the skim-milk into a vat where the patrons take it, sweet and warm. The cream is held until the next morning, 24 hours, at about 60 degrees, as most of our customers like butter from well-ripened cream. It is churned at about 55 degrees in Summer and 58 to 60 degrees in Winter, well worked in a Fargo worker and packed. We never work but once, as there is no danger of mottled butter if the churn is stopped before the butter is gathered too much, and the wash water is cold enough to prevent further gathering. We salt in the worker, about 1⅛ ounce to the pound, varying somewhat with the conditions of the butter.

Our butter is nearly all sold to local dealers, who order one week ahead, and furnish jars. A noticeable change in the butter trade is the rapidity with which the print butter is increasing. Nearly all retail dealers handle the pound prints now, thus saving all waste and time of cutting out; besides the butter is in much better shape for table use. After the samples of milk are taken at the weigh can from each patron's milk they are placed in a glass bottle and kept for two weeks by the use of bichromate of potash. At the middle and end of each month a Babcock test of this composite sample is made, which gets an average test of all milk delivered, from which each patron's amount of butter is computed, the overrun being given to the patrons, usually from eight to 12 pounds to the 100 or 108 to 112 pounds of butter from 100 pounds of butter fat, as butter only contains about 85 per cent butter fat. W. G. COMSTOCK.

Chuckery, N. Y.

Milk Notes.

DURING the recent "milk war" in Boston the New York dealers shipped a good many carloads of milk to help out the Boston dealers.

THE question is up as to whether a milk producer should pay himself a salary. It won't take the milk dealers long to answer that question.

WE are selling our milk to a New York dealer at Exchange price less one-half cent per quart, and are dissatisfied with the price, which seems to be about the situation here at present. W.

Valley, N. J.

THE milk producers seem to be powerless to fix and maintain a living price for their product in New York and other cities. We are simply being skinned alive by these New York dealers, who are growing rich at our expense. G. B. M.

I AM glad you are after the "Polar Creamery" sharks. They were all around here in December; they did not do very much in this neighborhood. I think they sold two within five miles of here. They claimed they had sold over 200 in Clearfield County, and about 40 in Jefferson County, when they were here. Their mode of business was very similar to that of a certain steel range company who canvassed this section in 1892 and 1899-00; their prices, agreements, warrantees, are almost identical. J. G. W.

Pennsylvania.

LAST October the Scranton Dairy Company commenced to buy milk at Fosters, Pa., and agreed to pay $1.15 per can until April 1, 1901. They took the milk, from upwards of 80 producers, until December 8, and then notified the patrons that they would not take it longer, except at butter prices. Most of the patrons withdrew and test suits were instituted against the company, and they agreed to settle and pay for the milk through December at full price as agreed upon, but did not, as they found the farmers were afraid they would lose their money, so they made them an offer of 70 per cent, which most of them took. Others who held off awhile got more, some of them 90 per cent, but two farmers of Brooklyn and eight farmers of Dimock brought suits against them, and have just recovered full pay with interest and costs, and damage enough to more than pay their attorney. F. H. B.

ABOUT the middle of December the milk producers of this section formed a stock company with a capital of $10,000 to go into the manufacture of soft cheese and butter. We opened our factory April 1 and are getting about 7,000 pounds of milk daily. We expect about 2,000 more in the flush. Our building is 92x98 feet and two stories including cellar. It is equipped with 35 horse power boiler, 12 horse power engine separator, four large cheese vats, twin cream vat, Simplex combined churn and worker, De Laval separator. The officers of our company are: D. W. Matteson, president; L. E. Carpenter, secretary and manager; W. S. White, treasurer. The foreman of the factory is Wm. Bilyou, an expert Neufchatel maker. Henry Eiderman has charge of the Brie department. We employ nine hands at present. Our goods are handled by A. L. Reynolds.

So. Edmeston, N. Y. W. S. W.

I AM well pleased with the show-up of my fodder-roofed shed in THE R. N.-Y., page 205. I commenced feeding the roof off three days ago. There is but little of the fodder damaged. Next week I expect to sow 11 acres to Spring barley and Alfalfa. A good many are making a start that way. March 29 I sold 90 lambs in Cincinnati at six cents per pound; the remainder, 18, $5.50 per 100. This is much better than I could have done by shipping to eastern markets. JOHN M. JAMISON.

It Will Cost You Nothing

to skim all your milk for ten days with the

NATIONAL Hand Separator

You may have one absolutely without cost (you'll be under no obligation to buy) to thoroughly test for ten days. Return it if you're not satisfied that it's the most profitable machine to buy. Write now.

National Dairy Machine Co., Newark, N. J.

BIG USERS OF CREAM SEPARATORS

The Continental Creamery Co., Topeka, Kan., uses 175 De Laval Power Separators. The Elgin Creamery Co., Chicago, uses 150. The Borden Condensed Milk Co. uses about that many. The Beatrice Creamery Co., Lincoln, Neb., uses 135.

The Franklin Co. Creamery Association, St. Albans, Vt., uses nearly 100. So does the Standard Butter Co., Owego, N.Y.

The Brady-Meriden Creamery Co., Kansas City; Parker Creamery Co., Hutchinson, Kan; and John Newman Co., Elgin, Ill., all use over fifty machines each.

The St. Mary's Creamery Co., St. Mary's, Ont.; Fairmont Creamery Co., Fairmont, Neb.; McCanna & Fraser Co., Burlington, Wis.; Belle Springs Creamery Co., Abilene, Kan.; Forest Park Creamery Co., Edgerton, Kan., and the Hesston Creamery Co., Newton, Kan.; all use from 25 to 50 machines.

All these are large Power machines, costing $500 to $800 each. In addition, some of these concerns have hundreds of "Baby" De Laval machines scattered among their patrons.

Every concern named, as well as every other large user of separators, now uses and purchases De Laval machines exclusively.

THE DE LAVAL SEPARATOR CO.

RANDOLPH & CANAL STS., CHICAGO. 103 & 105 MISSION ST., SAN FRANCISCO.

General Offices: 74 CORTLANDT STREET, NEW YORK.

1102 ARCH STREET, PHILADELPHIA. 327 COMMISSIONERS ST., MONTREAL.

HAVE YOU SEEN

The New Bowl?

That's the question you now hear wherever cream separators are used. It refers to the light and easy-running bowl now used on the

EMPIRE Cream Separator

—the bowl with few parts, and perfectly smooth surfaces—the bowl which gives the milk several distinct separations.

Our new catalogue for 1901 shows why the EMPIRE is the most practical, the easiest-running, the most efficient for the farm. May we not send you a copy?

United States Butter Extractor Co., BLOOMFIELD, N. J.

Quaker Dairy Feed

TESTIMONY

BENSON, Md., March 21, 1900.

GENTLEMEN:—

I have been feeding Quaker Dairy Feed to my herd of cows since the first of last December and have had most excellent results from it.

I have fed it mixed with mill feed and cob meal, also unmixed. I can readily notice the increased flow and quality of milk in each instance, but I think the best results I have obtained is when I used it with my rough feed. I expect to continue feeding Quaker Dairy Feed during the coming summer, and I cheerfully recommend it to dairymen as a profitable feed to use. Very respectfully,

JOSEPH B. HOSKINS.

OUR GUARANTEE.

Sold only in Sealed and Branded Sacks. Each Sack stamped with analysis of contents, showing guaranteed per cent. of Protein.

If your dealer does not keep Quaker Dairy Feed send his name to us and get a free copy of 'Modern Dairy Feeding."

THE AMERICAN CEREAL CO.,
1339 Monadnock Bldg., Chicago.

CHEESE CHEESE BUTTER BUTTER CHEESE CHEESE

Ailing Animals.

ANSWERS BY DR. F. L. KILBORNE.

Wart on Cow.

I have a cow that has a wart growing on one of her teats. The roots grow into the end of teat and stop the flow of milk. I have tried almost everything. What would you advise me to do for it? The wart has been on about a week. A. W.
Ludlowville, N. Y.

Apply night and morning, after milking, a lotion of carbolic acid one part, and castor oil three parts, well shaken up together.

Horse Out of Condition.

I have a mare 11 years old; she has been out of condition since last November with some kidney or bladder disease. Her coat is smooth but her body is thin; eyes dull; has not much life in her; seems to be stiff through the body and down the hind legs; is not weak in the back; passes urine often but little at a time. Has not a very good appetite; lies down during the night as usual; goes on the road as if tired. I do not work her much at present. I have been feeding various kinds of condition powders, but all failed. I feed her three quarts of wheat bran and corn and oats daily, and all the upland hay she will eat. Is there any medicine that will cure her?
Libertyville, Ill. A. S.

Give one of the following powders in feed twice daily: Powdered nux vomica and nitrate of potash, of each four ounces; gentian and ginger, of each eight ounces; mix and divide into 24 powders.

Horses Fail to Shed Coat.

My horses do not shed their hair well every Spring. One is a gelding, nine years old; he does not digest well, but is in good flesh and stands work. Another is a mare with foal; she has a spot that is a little scabby on udder and neck She is eight years old. The third is a colt that will be one year old in May that looks rough and drowsy; it seems to have worms. The last is a mare; she is otherwise all right except in shedding. I feed corn for grain and corn fodder and cut sheaf oats. Give cause and treatment. READER.

Give one of following powders in feed once daily (the colt should receive only one-fourth of a powder): Arsenic, two drams; powdered nux vomica, four ounces; gentian, 16 ounces; mix and divide into 40 powders. The animals should receive a thorough grooming daily. Replace one-half of your corn with oats or bran, or a mixture of both. A handful of oil meal added to the grain ration twice daily will materially improve the appearance of the coat.

Indigestion in Cows.

Several of my cows, one after another, lose their appetites; eat hay well, but not silage or grain, especially grain. Feed three quarts twice per day when they will eat it; gluten, oat feed, bran, corn meal and linseed. Feed seems to do them no good; they grow poor and shrink in milk. They grate their teeth frequently; sometimes are troubled with a good deal of gas. Voidings for the most part are natural. Bright and active, but coats rough. They have roomy, light, sunny and well-ventilated stable. Some of them when turned out eat dry leaves and such rubbish. What is the trouble, and what the remedy? Are cows ever afflicted with stomach and intestinal worms? If so, what is the remedy?
Holden, Mass. H. A. R.

The cows are suffering from indigestion. There would appear to be some fault in the care or feeding of the cows, possibly in the feed itself, but what I am unable to say from your description. Call in a competent veterinarian personally to examine the herd, and the conditions under which they are being fed and cared for.

SILAGE AGAINST STONE WALL.

B. W., on page 213, asks what to do about silo with a stone wall at the bottom. Prof. Clinton thinks that possibly air gains entrance at the junction between wood and stone. This is probably the source of the trouble, rather than the stone wall itself. In our silo at my old home we had a clay bottom, a clay wall plastered with cement on one side for about seven feet in height, stone walls on two sides 10 feet high, and the remainder of the 25 feet was two thicknesses of lumber with tarred paper between. The joint between the stone wall and the wood was made as shown in Fig. 120. A represents the stone wall, B double plank for sills, C studding, D and F the two courses of boards, with the tar paper, E between them. G represents patent dovetailed lathing, which is simply good stock boards with dovetailed grooves to hold the clinches of the plaster. This lathing was put on in place of the inside boards for about 1½ foot above the wall, and lapped over the joint between stone wall and sills—a jog being left in the stone wall for the purpose, as shown in Fig. 120. Then the inside of the wall was plastered with a coat of cement, which was run up as high as the patent lathing, as shown. This made a perfect joint, and we never could see any difference between the silage which was against the wood or

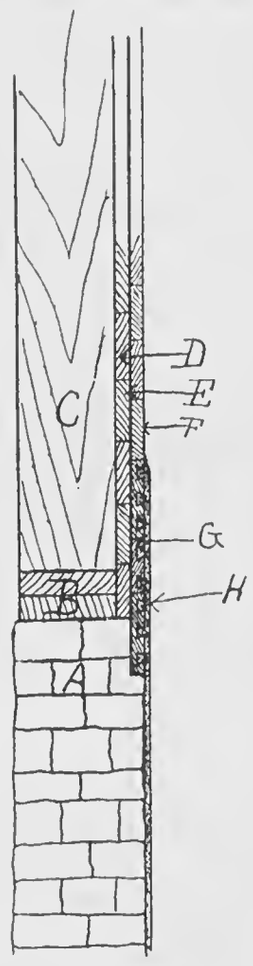


Fig. 120.

stone or clay. About two feet of silage was once left in the silo three years, and was in perfect condition against the clay bottom. J. M. DREW.
Minnesota.

Branding the Oleo Frauds.

The following rogues have been convicted for selling bogus butter or adulterated milk in the Borough of Manhattan:

OLEO.

O. F. Kivlon, 1728 Park Av.	$50 and costs
P. J. Sloyan, 104 West 134th St.	50 and costs
W. McGowan, 1405 Second Av.	100
G. Strunck, 359 First Av.	50
M. Marlow, 580 Amsterdam Av.	25
L. Katz	75
J. F. Ryan, 783 Columbus Av.	25
W. Reffelt, 610 E. 17th St.	50 and costs
H. Boschers, 221 Ave B.	45 and costs
T. Kiernan, 416 E. 16th St.	50 and costs
H. Krinsky, 232 Christie St.	30 and costs
C. H. Youngs, 489 Third Av.	100 and costs
O. M. Bochow, 47 First Av.	100 and costs
J. Ludeman, Elm St., Richmond Hill	50 and costs
P. Sellers, 44-46 Main St., Flushing, L. I.	100
M. Meyer, 1931 B'way, B'klyn.	100 and costs
T. Murphy, Jersey City, N. J.	200
J. Reicherter, Fulton Av. and Mill St., Astoria	25

MILK.

William Schmidt	$50 and costs
Reuber Satenstein	50 and costs

SOILING AND PASTURING.—An acre of ground is in grass or some cultivated forage crop. You cut this green fodder, carry it to the stock and let them eat it. That is soiling. You turn the stock into the field and let them eat the crop at will—that is pasturing. Which is more profitable? The Nebraska Experiment Station, after testing it carefully, says: "A comparison of the relative amounts of feed produced by several forage crops when pastured and when soiled indicated that the latter practice secures two to three times as much feed from the same area of land The same tests indicated that the average daily production of milk and butter fat was greater for the same feed when the cow was pastured than when soiled. This on an average amounted to 1.17 times greater butter-fat production from the pastured than from the soiled crop."

WHEN you write advertisers mention THE R. N.-Y. and you will get a quick reply and "a square deal." See our guarantee

South Dakota Adds Another Stone to the United States Triumphal Arch

A separator contest was held at Oneota Hall, Aberdeen, S. D., March 18, 1901, to determine the comparative merits of the United States, Sharples and DeLaval Separators. Mr. A. W. Burnham, a prominent and well-known citizen, was appointed by the farmers and separator men present to act as "Dairy Expert" and take charge of the contest and give official results of the same. As will be seen by the report given below,

The Improved United States Separator

Again Proved its Superiority over all others and

Was Awarded First Place

Make of Separator	Selling Price	Rated Capacity	Capacity During Test
United States No. 6,	$100.00	350-400	408
Alpha Baby No. 2,	125.00	450	448
Sharples Tubular No. 6	175.00	650	628

THE U. S. AHEAD.

A. W. BURNHAM, Dairy Expert.

WITNESSES { S. A. STEARNS, J. M. HURST, D. G. VAUGHAN, JOHN GAULY, C. N. GAMBLE, F. H. LEACH. GEO. W. MANTOR, C. A. MCARTHUR,

The United States run over its highest advertised capacity and skimmed the cleanest while the others run under their advertised capacity.

Notice how much larger capacity the U. S. gives for the money, in addition to its cleaner skimming, than the others. To have equalled the United States it would have been necessary for

The DeLaval to have skimmed at the rate of 610 lbs. instead of 448 lbs.
The Sharples " " " " " " " 714 " " " 650 "

All of which goes to prove the correctness of our claim that when utility and price are considered the

IMPROVED U. S. CREAM SEPARATOR IS THE MOST PROFITABLE TO BUY

WRITE FOR CIRCULARS

VERMONT FARM MACHINE CO., Bellows Falls, Vt.

212

DEAL DIRECT with the Makers.

No. 3034 Buggy. Price $38.30 with leather quarter top.

When you buy a carriage, buggy or harness. Choose from the biggest stock and fullest assortment, and pay only the cost of making, with but one moderate profit added. Our plan of selling direct from the factory insures satisfaction—your money back if you're dissatisfied with your purchase—and enables you to **save the dealer's profit.**

Our complete illustrated catalogue, showing many styles of high grade vehicles, harness, robes, blankets and horse equipments, with detailed descriptions of each, mailed free. Write for it and learn how cheaply you can buy when the jobber's and dealer's profits are cut off.

THE COLUMBUS CARRIAGE AND HARNESS CO., Box 772, Columbus, O.

No. 240. Single Strap Buggy Harness. Price $7.95.

QUALITY

Carriages and buggies which are right all the way through. That describes the famous

Split Hickory Vehicles

In material and construction they are as good as American skill and enterprise can produce. They have a dozen little things about them which add to their durability, safety, comfort and appearance. Don't buy a vehicle before you have investigated the SPLIT HICKORY line.

Ohio Carriage Manfg. Co.,

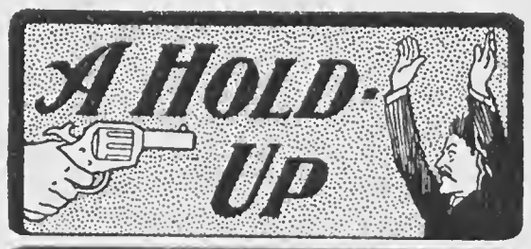
PRICE

We sell direct from the factory and save you all of the dealers' and jobbers' profits, and WE SHIP

On Approval to Anybody.

If you are not perfectly satisfied return the vehicle at our expense. Send for our illustrated book of Vehicle and Harness Bargains. It contains many things concerning vehicle values, which you ought to know, whether you buy of us or not. It will save you dollars.

39 W. Broad St., Columbus, O.



Is not always the work of a highwayman.

When a dealer charges you from 35 to 50 per cent more for a carriage or harness than we would charge you direct for the same, or better, you are certainly being held up. This however, is not the dealers fault. He must live, but why at your expense? We sell our vehicles at factory prices and save you both the jobber's and dealer's profit. We do still better; we send our vehicles on **10 Days Free Trial.** Try it before you buy. If not wholly satisfactory return it at our expense. Write to-day for our free illustrated catalogue.

Kalamazoo Carriage & Harness Co.,
Box 30, Kalamazoo, Mich.

STUDEBAKER QUALITY

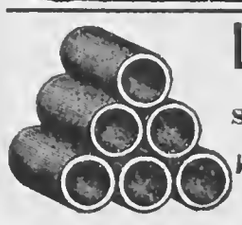
Do You Use THE STUDEBAKER?

If so, cut this out, and enclose it with your letter, stating from whom you purchased the wagon, date of purchase, and its condition to-day, and we will send you free of charge

The Studebaker Almanac,
The Studebaker Grand March,
The Studebaker Twentieth Century

circular which tells you all about this great wagon.

STUDEBAKER BROS. MFG. CO., South Bend, Ind., U. S. A.



LAND DRAIN TILE

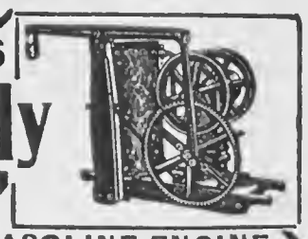
(Car-loads or less).
Sizes, 2, 2½, 3-inch and up to 15-inch.

WILLIAM T. LEGGETT & CO.
1025 Liberty Avenue, Pittsburgh, Pa.

SILOS

HOW TO BUILD ASK WILLIAMS MFG. CO., KALAMAZOO, MICH.

WEBSTER'S "Handy Man" GASOLINE ENGINE



with walking beam Pump Jack and gasoline supply tank, all on one base. It is the handiest, most complete, economical and efficient small power made. Engine 1½ actual h. p. By disconnecting pump jack and putting belt on fly wheel pulley it is ready for **grinding, shelling, cutting feed, separating cream, churning, cutting green bone**—anything not requiring more than 1½ h. p. Costs little for fuel and requires no experience to operate. We also make other sizes of vertical and horizontal engines for all purposes. Send for large catalogue.

Webster Mfg. Co., 1091 West 15th St., Chicago, Ill.
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The Rural New-Yorker

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We believe that every advertisement in this paper is backed by a responsible person. But to make doubly sure we will make good any loss to paid subscribers sustained by trusting any deliberate swindler advertising in our columns, and any such swindler will be publicly exposed. We protect subscribers against rogues, but we do not guarantee to adjust trifling differences between subscribers and honest, responsible advertisers. Neither will we be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent us within one month of the time of the transaction, and you must have mentioned THE RURAL NEW-YORKER when writing the advertiser.

Name and address of sender, and what the remittance is for, should appear in every letter.
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THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, APRIL 20, 1901.

ON page 297 we print the names and addresses of 20 rogues who have been found guilty of selling oleo or watered milk in this city. They have been well punished and we are glad to hold them up in black ink for the scorn of their fellow-men. One name, "Satenstein," is peculiarly appropriate for a man who would engage in such a business. That is not a bad name to give some of the big rogues in Congress who do more damage by their voting and wire-pulling than these little men do by selling!

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As will be noted on page 290, we begin this week a new department of Nature Study edited by Prof. John Craig, of Cornell. THE R. N.-Y. has always regarded this method of teaching the principles of soil culture as being a connecting link between the college and experiment station and the common people. We take pleasure in introducing Prof. Craig and his 40,000 pupils, to the readers of THE R. N.-Y. As usual we make no claims or promises for the new department beyond the statement that we believe it will contain the cream of the enormous correspondence which this popular course is bringing out.

*

SECRETARY Wilson, of the Department of Agriculture, intends to put in operation next year a new plan, being the distribution of young trees throughout the country. The distribution will be made in a manner somewhat similar to that employed in the free seed distribution authorized by Congress. Especial attention will be given to the nut-bearing trees, and to those suitable for shade, efforts being made to select those specially suited to different localities. Secretary Wilson believes that the plan will prove very popular, and that it will be of decided benefit to the country. The diminishing forest reserves suggest that we need encouragement in tree planting.

*

A MAN owns an ornamental hedge so covered with San José scale that it is a menace to an entire neighborhood. His next-door neighbor is desirous of planting trees and shrubs extensively but he is afraid to do so, because this would only invite further spread of the scale. Moral suasion has no effect on the owner of the hedge, who refuses to destroy it, and though a State law orders the destruction of such infested plants, there is some doubt whether such a law is constitutional, nor is there money to enforce it. The result is that a would-be planter looks sadly at barren lawn, which he would gladly plant with handsome shrubs, and some nurseryman loses the chance of a good order, while one selfish owner views complacently a slowly-dying hedge, which is industriously infesting its plant neighbors. What can they do about it?

*

THERE are many people still who know very little about the work done by the American experiment stations. Some interesting figures are given by A. C. True in a recent bulletin from the National Department of Agriculture. There are 54 of these stations, with 693 workers. The total income from all sources last year was $1,170,857.78, and it was practically all spent. The National Government provided $719,999.07, and the various States $247,281.46 more. From the farms connected with these stations $90,088.84 worth of farm products were sold. During the year 386 bulletins and reports, covering 14,172 pages, were issued. There are 562,851 names on the combined mailing lists of the 54 stations. These figures give but a faint idea of the vast and elaborate system of scientific investigation that has been organized in the past 15 years. The time has come when every farmer who takes pride in his profession should acquaint himself with the station work. It is surprising that with the millions of people depending directly upon the soil for their support, such a comparatively small number should receive the station publications. The highest single list is 36,000 names for the Geneva (N. Y.) Station, while more than half the number have less than 10,000. What can be done to bring the help which the station offers closer to the farmer who needs it most?

*

HERE is a case similar to that of the man who fell overboard with a bag of money, which, as he refused to drop it, dragged him under before help could reach him. A liquor dealer in Brooklyn, N. Y., was lifting on a barrel of whisky, when the chine happened to press on a large diamond ring he was wearing, in such a way that the ring cut his finger severely. He died from the effects of the wound, as blood poisoning set in. Of course such an accident might have happened to a grocer in handling a barrel of sugar, but as a rule grocers do not wear diamonds and are not so thoroughly pickled with liquor that slight wounds refuse to heal. There are saloonkeepers who never touch the stuff themselves, but they are exceptions.

*

WE are asked whether the export trade in ginseng root is likely to be kept up by foreign demand. Thousands of people, apparently, are planting seeds or roots of this plant. Our opinion is that the great majority of them do not realize the care required in growing this crop, and that they will fail; still, the output is quite sure to be increased. What about the future demand? Most of our crop is sold in China. As we understand it, the root has but slight medicinal value. The Chinese demand is based largely on superstition. As the Chinese Empire is opened or carved up by the swords of modern civilizers we think this superstition will die out, and that modern ideas of medical practice will prevail. Judging from past experience, increased exports of whisky and beer are more likely to "follow the flag" than any larger trade in ginseng.

*

THE steel industry of this country has just been organized with a capital stock of more than a billion of dollars. This "infant industry" now is under the direct control of one man. He is protected by a liberal tariff, from foreign competition. At home he has no rivals or competitors. Every individual who uses a pound of steel will pay tribute to him. This will apply to the United States Government, which is a customer for material for battleships, as well as to the farmer who purchases a plow, a reel of wire fencing, or even a pound of nails. When first announced the country was startled with the magnitude of this combination of capital, and the individual control of so large and important an industry. But there is already under way another project that will compare with the steel combine in proportion as a camel would to a gnat. This is no less than the consolidation of all the main lines of railroads in the country under one corporation. These enormous combinations of capital all lead to one final result—government control and government ownership of public utilities.

*

IN the latest issue of the Review of Reviews K. L. Butterfield describes what he names "the Hesperia Movement." Hesperia is a town in western Michigan—a small village a dozen miles from a railroad. It is surrounded by good farms, and the Grange is strong thereabouts. It happened that about 15 years ago the teachers in the rural schools about Hesperia were a very bright and original group of young men and women. They formed an association of their own, and concluded to ask the farmers to meet with them. This idea was carried out, and the meetings became popular, for both teacher and parent were represented on the programmes. The result was a permanent association which has held regular meetings and achieved results of great practical value. As many old teachers well know, the parents in many rural districts take little personal interest in the school. The tax-payers often growl and the parents find fault, yet the teacher is unable to coöperate with them as he would gladly do. The object of this "Hesperia Movement" was to bring tax-payer and home-maker into an association with the teacher, and this seems to have been a great success. There are better schoolhouses, better school yards, better fixtures and better teachers. Better books are read and there is a higher standard of citizenship. Life is better worth the living, for the people have higher and nobler ideals. This movement has spread into several counties of Michigan—always with good results. The Grange has proved helpful—in fact, without its aid this movement would probably have failed, since the Grange had tilled and fertilized the soil in which the seed was planted. This movement is commended to other localities. It is always desirable to bring pupil, parent and teacher closer together.

*

WE probably have more questions from would-be farmers—city men who wish to try country living—than any other paper in the country. It would be very easy to set such men wrong. They are eager, and look upon farming as an easy job. The grass and the trees grow easily, they reason, and therefore it must be easy to steer nature into profit. The advice we give may be estimated by the following note from one of our readers:

> Three years ago I asked your advice in regard to the purchase of a small farm as a future home in declining years. Your advice was to go slow, "as the pay days are wide apart and sometimes do not come at all." All you said I have found correct. In three years the pay day has not come; corn, wheat and potatoes have not paid. I now want to try grass.

This man, like many others, must learn that years are required to master the business of farming. A long lifetime finds most men so far short of mastery that untimely frost or drought may upset their best plans. The man who plants an apple tree knows that he must work 10 years before he can hope for a good crop. We do not realize that we must also work more than 10 years with strawberries or potatoes, or cabbage, or grass, before we can master the foundation principles, and really understand the crop. Too many of us raise three crops and then stop studying—thinking that we know it all!

*

BREVITIES.

Here are some certain rules of health;
Take them—they're better far than wealth,
Don't overeat, don't overdrink,
Don't overwork, don't overthink.
Be not afraid of honest sweat;
Run like a deer from shame and debt.
Let not your right hand ever know
What gifts through your left hand may flow.
Beware of bigness of the head;
Get bigness of the soul instead.
Shun whisky as you would a curse,
And no tobacco funds disburse.
Love and respect your fellow man,
Or come as near it as you can.
Eat two good apples every day
And take two solid hours for play;
And keep this thought in mind, my friend,
That when your busy life shall end,
The prize will not be held by one
Who what men brand "success" has won,
But by some humbler one who yet
Leaves to the world least to regret.

WE are what life makes us.

SUGAR plums never cured one of a bad habit.

WE like to see a man's character "sparkling with do."

WHO ever learned a real lesson except through suffering?

"DO men gather grapes from thorns?" Yes, sour grapes.

PEOPLE of the Russian steppes show a desire to make the Czar walk Spanish.

THE strength of the will power is determined by the ability to say "I won't."

SOME folks make their bed and then instead of lying in it try to lie out of it.

GRIND the family skeleton into bone meal and use it to fertilize true repentance.

THE best work most of us do is squeezed out of us by the pressure of hard conditions.

A MAN in this city who has lost his left arm and the left leg is nick-named "all right."

THE ability to live on the farm—you can make it a glorious privilege or slavery—as you will.

RAISE fruit that suits some well-heeled fellow's fancy, if you would pocket price and profit prancy.

THE keystone of American citizenship is the hearthstone. Too many town dwellers never know what this is.

ONE man objects to THE R. N.-Y. because "there are so many good things in it that it causes me to burn up good oil."

MANY maple trees in New York State are reported so damaged by storm or forest worm that they will not be tapped at all.

"THE evil that men do lives after them." One reason for this is the fact that most of us publish the evil about others and lock up the good.

MR. CORBETT, on page 293, backs up the recent article by Prof. Roberts in a striking way. It is wonderful how the scales, test and pencil will show up the robber cows.

ENGLISH farmers are demanding seed testing stations. It seems that English farmers can obtain good seeds if they are willing to pay enough for them, yet a vast amount of worthless stuff is sold.

IT is said that the oldest English advertisement is a "lost, strayed or stolen" notice inserted by King Charles II. for a little dog he had lost. We are not told whether this advertisement paid.

POMELO is the proper name for what the market calls "grape fruit;" but what would you get if you called for it properly in the average fruit store? It would be like asking an Italian peanut man for a pint of legumes.

NEW YORK STATE FRUIT PROSPECTS.

Early Outlook is Favorable.

The New York State Fruit Growers' Association has begun active work. Branch societies have been formed in several counties. Wayne County fruit growers met last week at Newark and organized successfully. Niagara, Oswego, Orleans, Ontario and other counties are moving. One object of the Society is to gather reliable statistics. We give herewith the first report of the new parent Society. The following brief statements are typical. In general the reports are favorable. Peaches do not promise a heavy crop. Apples are well budded, but indications are that insects will be numerous and deadly. Small fruits are fair in some sections—poor in others. The Hudson River Valley reports a poor outlook for strawberries. Bush fruits have suffered from drought and disease. The Winter has, on the whole, been favorable to fruit, yet it is altogether too early to make definite statements. On April 1 about all salable apples were out of farmers' hands, with probably 40,000 barrels left in cold storage in Orleans and Niagara counties. The interest in spraying is growing. Next week we shall give a report on this part of the business. Reports from the country at large show that fruit buds generally look well, especially in the large orchard States. As a rule, small fruits, especially strawberries, are not promising.

The first of the northern Florida strawberries reached New York, April 11. It will be at least two weeks before any of the Charleston crop come in, the usual time being May 1. Ten days or two weeks after this the line of ripening will strike the North Carolina fields, where it is said that the drought of last season injured the stand of plants.

Speaking of the work Wayne County is doing, L. T. Yeomens, president of the Fruit Growers, says:

"I am proud of old Wayne; she has nearly 50 members of the New York State Fruit Growers' Association, and more to come. Wayne County had an old Fruit Growers' Association, dead for past year or two. We revived that as a starting point."

I have examined buds on peach and pear trees, and have found them all in good condition, and the prospects are for a good crop of blossoms at least. A. C. P.
Oswego Co.

Fruit is coming through in fair shape. Our old peach trees broke badly in Winter by ice; fruit in general damaged from the same cause. E. F. F.
Ontario Co.

Peaches, plums, and in fact all small fruits have wintered well, and the prospect is good for a fine crop. From present indications there will be a fair blossom of apples and all trees in fine condition. S. W. W.
Monroe Co.

Small fruits came through the Winter in fine condition; trees of all kinds are looking well. As far as I have noticed most of the apple trees bid fair to give a moderate bloom. A. D. C.
Wayne Co.

Small fruit has wintered in this district of Seneca very well; the lowest temperature at my place was three degrees above zero. Fruit trees appear to be all right. In my orchard the trees are mostly Baldwins and Greenings.
Seneca Co. J. W. S.

The small fruit seems to have come through the Winter well, but does not seem to be as full of fruit buds as last year; in fact, all trees are not as full of fruit buds as last season, except those that did not bear. E. A. C.
Niagara Co.

The May frosts we fear for our grapes. By covering, the most tender varieties winter well. Plums bore a heavy crop last year, but show some buds now, most of which came through the Winter all right. Apples are going to bloom somewhat; pears also. D. W.
Onondaga Co.

Small fruit came through the Winter well, with the promise of a fair blossoming. Pears, peaches, plums and cherries will blossom for a medium crop of fruit. The prospect for apples is not as good; the promise for a Baldwin crop is very small in this part of the county.
Monroe Co. C. S. W.

Small fruit has wintered in good condition, and the outlook was never better for trees, especially where sprayed; and about 25 per cent of the fruit growers spray, which embodies about 50 per cent of the trees, and about 25 per cent of the trees, we think, are sprayed successfully. J. G. W.
Albany Co.

Small fruit came through the Winter well. The temperature went but few degrees below zero at any time during the Winter, and the climatic conditions have been such that fruit buds at the beginning of April showed no development, which fact insures them to a large extent against the danger of a late frost. A. H. MCM.
Wayne Co.

Strawberries will be a light crop. Blackberries are badly winterkilled, or by drought last Summer. Raspberry prospects good; currants, average crop. A great deal of cane blight last season. Peaches, young trees, look well, old trees are in bad shape from dry season last year; sour cherries seem to be all right; pear buds look well. J. A. H.
Ulster Co.

Small fruits have gone through the Winter in good shape and show a fair average of blossom buds. The Greening apples show prospect of full amount of blossom buds, while the Baldwin shows a light one, also Spy and Roxbury Russet. Taking it all in all present indications go to show a fair average all-around fruit crop, whatever may happen later on. C. W. O.
Niagara Co.

Strawberries, where not mulched with straw, are not in good condition. The plants, owing to the extreme drought of last Summer and Fall, rooted very shallow, and where not covered have heaved out badly. Owing to scarcity of straw most beds were left uncovered. Raspberries, red and black, are all right, and promise a good crop. Peaches and plums have not been injured by cold, but it is doubtful whether there is vitality enough in the buds to set fruit, owing to the long-continued drought, although freedom from fungus trouble last year may help them out. G. H.
Onondaga Co.

There is not a very large show of fruit buds on the apple trees; peaches are full of them and all trees came through the Winter in fine condition. Pears are not grown to any extent here. All of the berries made small growth last Summer, and the heavy snow broke the canes down considerably. Raspberrics blighted badly last Summer, many shoots of some varieties dying. Peaches are probably the only fruit in this section that can make a full crop. J. Q. U.
Ontario Co.

Fruits are apparently in satisfactory condition. On a few low fields not well drained strawberries suffered from freezing nights, but there is little of that kind of land hereabouts. Raspberries of all sorts have wintered finely. The fruit tree buds are 100 per cent good, so far as my investigation goes, with slight exceptions in apricots. Best of all, I find no eggs of the tent-caterpillar, but occasionally a cluster of shells from which the eggs appear to have been taken. J. T. R.
Onondaga Co.

We have had an idcal Winter for the fruit business, with no low temperature to kill even so much as a bud on the peach trees. Strawberries that were set early last Spring, and well cared for and mulched last Fall, give promise of a good crop; otherwise not, for we had a severe drought last Summer. Where other small fruits were not allowed to overdo last year the outlook for a crop is first class. Where apples and pears were well cared for with cultivation and spraying, and not allowed to overbear, they seem well loaded with fruit buds.
Oswego Co. C. B. C.

Orchards are in good condition. Greenings are very full; Spy, King and some other varieties are well budded. Baldwins overbore last season, and many of the trees have no fruit buds. I think the above will apply to this section, except perhaps some King and Spy which bore heavily last season will fail. Our peach trees, consisting of Elberta, Crosby and Wager, are well budded. Crosby and Wager were very full last season. As nearly all peach orchards about here were either cropped or received no cultivation last season, and were overloaded, I do not think many of them will bear. Plums and pears are well budded. C. R. W.
Ontario Co.

POSTAL CARDS.

CERTAIN farmers in California grow what is called the pie melon for stock food. It is said to be a cross between watermelon and citron with a vine much like the former. Cows and hogs are both very fond of it.

A READER wishes to know whether it will do to sow Alfalfa on wheat or rye the same as is the custom with Red clover. No, Alfalfa does not wish to play second fiddle to any crop, and must be seeded on fresh ground, which it thoroughly monopolizes.

IT is safer to buy wood ashes or hen manure by weight than by the barrel. First-class, unleached wood ashes are worth $8 or $9 per ton, and average hen manure $6 or $7, varying according to the way it has been kept and the amount of feathers and dirt contained in it.

IT often happens that on light soils the best fertilizers will not produce a good crop in a dry season. This may not be the fault of the fertilizer, but because of lack of humus in the soil. This vegetable matter holds water like a sponge, giving it out to the roots of the plants as needed.

NO, we would not advise anyone to plant a field of artichokes unless he wishes it to remain in artichokes all the rest of his life. This plant will take a rod for every inch given, and hold on with a death grip. The best place for artichokes is a hog yard. They make fair hog food, and, if the hogs are not rung, they will enjoy rooting out the tubers.

AMMONIA and nitrogen are not identical, as some fertilizer makers attempt to make farmers believe. Nitrogen is a single element, while ammonia is a mixture of hydrogen and nitrogen. Every pound of ammonia contains about one-fifth hydrogen, which has no value as a fertilizer. Also, sulphate of potash contains only half its weight of actual potash, the remainder being a worthless form of sulphur.

NO, Crimson clover should not be sown in Spring. It is a cool-weather crop. The heat of Summer will make it head out and go to seed when only three or four inches high. Any time after July 1 it may be sown safely with a fair chance for success. Then it will make its growth in the cool weather of Fall. It is a good plan to sow it in the cornfield at the last cultivation. It will thus furnish a cover crop for the field during the Winter.

ABOUT the only plant food in coal ashes is a small quantity of lime. The prehistoric plants which by their decay through thousands of years have formed the beds of coal we are now mining, apparently contained but little potash or phosphoric acid, and what there was leached out as the coal was formed. The chief value of coal ashes is in their mechanical action. When mixed with some light sandy soils they help them to retain water. Also, they are useful as a mulch for currant bushes or pear trees. They pack down close to the ground, and help retain moisture in time of drought.

A FERTILIZER for long-growing crops should contain plant food in a variety of forms so far as solubility is concerned, so that it may become gradually available during the season. Otherwise in justice to the crop several applications would be necessary. Nitrate of soda is the most soluble form of nitrogen, and becomes immediately available to the young plant, no matter how cold or backward the season. By the time this is exhausted, the sulphate of ammonia has become soluble, feeding the plant through May and early June. Next come the organic forms, such as blood, tankage and cotton-seed meal, which require heat and chemical changes in the soil before becoming suitable plant food, and, in the case of potatoes or corn, take care of the plant until the tubers or grain are formed.

Events of the Week.

DOMESTIC.—A terrific windstorm swept over Charleston, S. C., April 2, doing much property damage. . . . . In northern Kansas, two feet of snow fell April 2; many cattle died on the ranges, and a food and fuel famine followed. . . . . April 3, there was a heavy snowfall in Pennsylvania, Maryland and West Virginia. . . . . April 6, a trolley car broke through a bridge at Syracuse, N. Y., precipitating 40 persons into the bed of the Oswego Canal, 30 feet below. The canal was dry; 30 persons injured. . . . . A fire at Lisbon Falls, Me., April 6, destroyed 28 buildings in the business section of the town; loss, $250,000. . . . . Boer representatives at New Orleans have brought injunction proceedings against the shipment of mules to the British army in South Africa. . . . . April 7, sparks from a locomotive set fire to a great grain elevator on the river front at St. Louis, Mo. The building was destroyed, together with 800,000 bushels of grain. The loss is estimated at $650,000.

ADMINISTRATION.—The President has signed the commission of Frederick Funston as Brigadier General of the United States Army. . . . . Philander C. Knox, of Pittsburg, Pa., has been appointed Attorney General, to fill the office left vacant by the resignation of Mr. Griggs. . . . . The Cuban constitutional convention has rejected the relations insisted upon by the United States, and it will now be necessary to continue the military occupation.

PHILIPPINES.—Instructions have been cabled by Secretary of the Navy Long to Rear Admiral Remey, Commander-in-Chief of the Asiatic station, authorizing him to enlist 500 natives of the Philippines for service on board the former Spanish gunboats and other small vessels which are to be maintained exclusively in the Philippines. Rear Admiral Crowninshield, Chief of the Bureau of Navigation, says that, besides resulting in the Government obtaining efficient service, the employment of natives will spread respect for the American flag and create a strong feeling of loyalty. Reports received from Rear Admiral Remey have shown that Americans, especially those serving in the fire rooms, become quickly debilitated, and it is necessary to send them to the United States or Japan to recuperate. It is believed that the health of the Filipinos will not suffer, because they are acclimated, and if they do become ill it will be an easy matter for them to recover in the Philippines.

FARM AND GARDEN.—The Delaware State Board of Agriculture has decided to send Prof. Wesley Webb, the Board's specialist on diseases of fruit trees, to the Pan-American Exposition, at Buffalo, to find out what sort of an exhibition of agricultural and horticultural products Delaware should make.

A trust or combine has been formed by fruit package makers, which takes in practically all of the large manufacturers.

At Albany, March 29, Senator Ambler introduced a bill providing that all transportation companies within New York State receiving or carrying nursery stock from any point without the State to any point within the State, shall immediately on receiving such consignments, notify the Commissioner of Agriculture of the fact that such consignment is in their possession, giving the name of the consignor and consignee and the point of destination.

The French government has conferred the decoration of the Order of Merite Agricole upon the following officials of the Department of Agriculture for services performed at the Paris Exposition: H. E. Alvord, chief of the dairy division; G. B. Brackett, pomologist; W. A. Taylor, assistant pomologist; M. A. Carleton, cerealist; John I. Schulte, one of the associate editors of the Experiment Station Record. The decoration has also been conferred upon James L. Farmer, assistant director of agriculture for the Paris Exposition.

John S. Harris, well known among Minnesota horticulturists as a practical worker and occasional contributor to horticultural literature, died at La Crescent, Minn., March 24, aged 75. Mr. Harris was born at Seville, O., but went West in 1851, after serving in the Mexican War. He was a pioneer fruit grower and nurseryman, and one of the founders of the Minnesota State Horticultural Society.

Chicago capital has become interested in irrigation of land in Idaho and surveying is in progress near Boise for a large irrigation ditch.

The horse abattoir at Linnton, Ore., which was shut down last Fall, has started up again. About 800 cayuse ponies have been sent in from the ranges, and it is probable that 10,000 will be slaughtered this year. It is estimated that there are more than 500,000 cayuse ponies ranging over the country tributary to this market. Stockmen are anxious that these horses should be driven away to preserve the ranges for cattle and sheep.

The twenty-sixth annual convention of the American Association of Nurserymen will be held at Niagara Falls, N. Y., June 12-14.

Two oleo bills are now before committee in the Pennsylvania Legislature. One, known as the Senate bill, passed that body with but one dissenting vote; the other is the one that the State Department of Agriculture wants. The Grangers, Pure Butter Protective Association and majority of farmers want the former bill. A hearing will be given the oleo people and the pure butter makers this week. The new Road law was reported out of committee this week.

Dr. John A. Myers, head of the Nitrate of Soda Propaganda, died in California recently, after a short illness. He was at one time director of the West Virginia Experiment Station, and was a prominent figure among agricultural chemists.

HENS sometimes eat their feathers through mere idleness, when they are confined in small quarters where they have no chance to scratch. Another reason is lack of meat or animal food in their ration. The remedies are plenty of exercise and some animal food in their diet. Scatter the grain into the litter so that they will have to scratch for it. Some wash the feathers of the neck and breast with an offensive liquid like alum water, tobacco tea or quassia.

Woman and Home

From Day to Day.

Not hers the New Time's lofty lot—
To questions big replying;
She only knows to keep the cot
And soothe the children's crying.

Not hers to stand in temples bright,
Sad strife for strife returning;
She only knows the lamps to light
And keep the home fires burning.

Not hers to move with iron will
In paths of strange endeavor;
She only knows that Home is still
The sweetest name forever!

There are her joys, and there her tears—
A life so sweetly human,
The world shall whisper through the years:
"God bless that little woman!"
—Atlanta Constitution.

*

NEVER use soap in washing windows. Washing soda and kerosene are both better for this use. If the soda is used, dissolve a little in the water, and wash the glass with a flannel cloth. Kerosene is very effectual in removing dust and grime; wet a cloth, wring it partially dry, pour a little kerosene on it, and rub the glass. Chamois first dampened with water and then with a little ammonia, is also good for the same. A good polisher for glass is whiting moistened with tea, to be rubbed on with a rag, and rubbed off again with dry flannel. Heated vinegar will remove specks of paint or plaster, hardened upon the glass. Chamois skins cut and shaped into a sponge-like ball are sold especially for polishing windows.

*

IN making wash dresses, a good effect is gained by taking a couple of little tucks on the inside seam of the sleeve at the elbow, and in this way giving a slightly puffed effect outside. In little girls' guimpe dresses the prevailing style still continues to have a gathered straight skirt and baby waist, cut round in the neck, as before, with a deep ruffle for finishing. In several smart little frocks noted, instead of a little sleeve puff, the armhole was finished with a four-inch frill, which would set out over the sleeve of the guimpe. A child's fine white frock has a very stylish appearance when trimmed with black ribbon velvet of baby width. One little frock for a girl of six or eight, made of white Persian lawn, had two rows of lace insertion at the head of the hem, with several rows of black ribbon velvet between them; the belt was formed of the ribbon velvet, having in the back a puffy little rosette of white satin; a similar satin rosette was put on the bertha or frill around the yoke, a little at the left of the front.

*

WE have had something to say, from time to time, concerning the Sunshine Society, which now claims a large membership throughout this and other countries. Just as charity begins properly at home, so may mental and moral sunshine. Many good people seem to think that man was made to mourn, and that it is a sign of innate frivolity to greet unkind fortune with a smiling face. How often have we eaten solemn meals in unsmiling households, where the slightest attempt at a joke seemed as explosive as a dynamite cracker, and where apparently each member of the family carefully selected the most depressing fact within his experience, as his contribution to the general conversation! In working households, the entire family is rarely assembled save at meals, and it is the plain duty of each person present to make the assemblage as pleasant as possible. We cannot expect hardworked, over-tired people to devote their thoughts to the art of conversation, but they may, at least, avoid "trouble, sorrow, need, sickness, and all other adversity." If we all determine to save up pleasant happenings, innocent jokes, kindly thoughts and interesting things seen, heard or read, as our contributions to the family table, we may reap both mental and physical benefit, for when we eat in company with peace and happiness, then, most surely, does "good digestion wait on appetite, and health on both."

*

IT was recently asserted, at a meeting of a Chicago women's club, that good home cooking is becoming one of the lost arts. The reason offered for this

3755 Tucked Shirt Waist,
32 to 40 in. bust.

pessimistic opinion is that formerly women used to spend their days in the kitchen in constant practice, whereas they now devote their attention to other things. It was also said that the modern gas stove could never equal the old brick oven for baking. The mention of the brick oven brought out reminiscences concerning pie, and one woman present told how her grandmother made 40 or 50 mince pies at Thanksgiving, so as to have enough to last over Christmas. This seemed too much for the belief of some of the modern housekeepers present, but another speaker said that in her New England home they made enough pies at once to last from Thanksgiving to the last of March! They were stored in long rows up in the attic, where they always froze hard, and it was further asserted that there never was a pie equal to one of those that had frozen, and been thawed out just before dinner.

*

A GOOD many intelligent people will sympathize with the point of view expressed by Mr. Jowders, as thus recorded in the Youth's Companion:

Mr. Jowders looked gloomily at the letter to which he had just painfully affixed his signature, and then cast a dubious glance at his wife.

"Do you want to just run this over before I send it to son James?" he inquired; and when Mrs. Jowders shook her head, he hastily folded the sheet, which bore the marks of hours of toil, and thrust it into an envelope, which he sealed with trembling expedition, and then leaned back in his chair with an air of relief.

"I was afeared you'd want to read it, and then most likely 'twould be all to do over again, mother, like the last one," he said. "But I'm glad James wrote he didn't mind a word misspelled here an' there. There's some things I *can* do, but I never could seem to get a good purchase on the system of spelling, someway.

"As I view it," continued Mr. Jowders, "there's some words you can spell by the looks, and some you can spell by the sound; them I can most gen'lly manage. But when you come to spelling by jedgment and main stren'th, my chances are about as slim as they make 'em."

BY desiring what is perfectly good even when we don't quite know what it is and cannot do what we would, we are a part of the divine power against evil—widening the skirts of light, and making the struggle with darkness narrower.—George Eliot.

The Rural Patterns.

The finely tucked shirt waist has a vogue which few styles can rival. The charming model illustrated is of linen batiste, with trimming of needlework, but is entirely suitable for all the thinner, finer washable fabrics, and for soft-finished silks. When made from cotton or linen it should be left unlined, but silks look better and wear better when made over a fitted foundation. The simple lining is correctly fitted with single bust darts, under-arm, shoulder and center back seams. The back proper is laid in two groups of five stralght tucks, the fronts in three groups each, with larger tucks between extending to yoke depth only. The sailor collar is entirely separate and could be omitted if a plainer waist is preferred. The shirt waist sleeves are in bishop style with invisible openings at the back, finished with straight cuffs. At the neck is a stock collar covered with the tucked material. To cut this waist for a woman of medium size 4¼ yards of material 21 inches wide, 4 yards 27 inches wide, or 3⅜ yards 32 inches wide, or 2¼ yards 44 inches wide, will be required. The pattern No. 3755 is cut in sizes for a 32, 34, 36, 38 and 40-inch bust measure; price 10 cents from this office. Shaped and tucked flounces not alone hold the fancy of the hour, they also promise to retain their supremacy for many months to come. The graceful example illustrated combines the favorite points with tucks in a way that means a peculiarly graceful result and can be relied upon to give certain satisfaction. The original is made from satin foulard and is trimmed with lace insertion, overlaid with strips of velvet ribbon; but all silk and lightweight woolen materials as well as such cotton and linen fabrics as batiste, mull, madras, foulardine, lawn, dimity and the like are entirely appropriate to the design, while the trimming can be varied again and again. The skirt is cut in seven gores and is snug

3776 Seven Gored Skirt,
22 to 30 in. waist

and close about the hips, while it flares freely and gracefully below the knees. The fullness at the back is laid in an inserted pleat after the latest accepted style. The flounce is circular, with groups of tucks arranged to meet each alternate point, and is designed to be applied over the skirt in the outline indicated in the pattern, but, if preferred, can be cut away beneath and the flounce seamed to the pointed edge. To cut this skirt for a woman of medium size 11½ yards of material 21 inches wide, 10½ yards 27 inches wide, 10 yards 32 inches wide or 7½ yards 44 inches wide will be required. The pattern No. 3776 is cut in sizes for a 22, 24, 26, 28 and 30-inch waist measure; price 10 cents from this office.

Ironing Table Linen.

Many people have difficulty in ironing table-linen so that it looks nice, but it is really easier to iron it well than ill. In the first place the pieces should be dampened thoroughly—a small whisk-broom makes the best kind of a sprinkler—and then rolled very tightly and left over night. When the time comes to iron them, do not iron them all over, as then when they are folded they will be dry and springy and the folds will not crease well. Fold once, then iron, fold again and iron, and so on. In this way the article is gone over but once and each surface is moist when it is ironed, with the result that when the work is done the linen is glossy and the creases sharply defined. Why do most people fold their tablecloths lengthwise? It is much less awkward to handle them if they are folded across, with the hems together. S. B. R.

A BAYBERRY BAG.—During my Autumn walks I like to gather a few handfuls of bayberries. I tie them up in a piece of strong cotton cloth to use when I am ironing. It is as good as beeswax, and it gives out a delicious fragrance when rubbed on the hot iron. In ironing starched things the iron is very likely to get rough and sticky. A piece of fine sandpaper and this bayberry bag will remedy the difficulty very quickly.
S. B. R.

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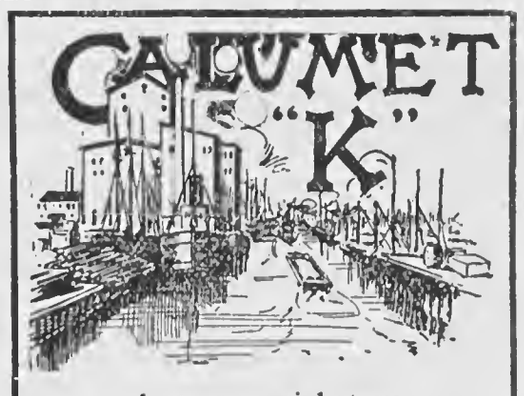

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Rural Recipes.

Othello Cake or Devil's Food.—In response to a request for this, Mrs. Josephine Yates send us the following recipe: Part first—Onc cupful of dark brown sugar; one-half cupful of butter; one egg and yolks of two; one-half cupful sweet milk; one teaspoonful soda, two cupfuls flour, measured before sifting; two teaspoonfuls vanilla extract. Part second—One cupful dark brown sugar, one cupful grated chocolate, one-half cupful sweet milk. Grate the chocolate, add milk and sugar, put in a double boiler, and place on the back of stove until dissolved; but do not boil. Prepare this first and have dissolving while preparing part first. To mix part first, cream the butter, sugar and eggs together, dissolve the soda in milk, and add to butter and sugar. Add the flour tablespoonful at a time until all is in, beating lightly. Beat part second into part first and bake in two layers.

Corn Chowder.—One can of corn, one cupful of diced potatoes, 1½ inch cube of fat salt pork, one tablespoonful of onion juicc, four cupfuls of scalded milk, two tablespoonfuls of butter, a teaspoonful of salt and a saltspoonful of pepper. Cut pork into small bits and fry until nicely browned, add onion juice and milk and potatoes, which have been boiled in salted water until tender; corn, salt and pepper. Lct all just come to the boiling point. Put a few oyster crackers in each platc and pour chowder over them. Tomatoes may be added if liked. Hot water may be added if too thick.

Poached Eggs in Glasses.—Add a few grains of salt to the white of an egg (a level saltspoonful to five eggs) and beat until dry; turn into a buttered glass and form a nest on the top for the yolk, which must be kept whole. Put the glass on a trivet, or an inverted tin cover, in a covered dish of lukewarm water, letting the water come to within half an inch of the top of glasses, and let cook until the egg is set and rises in the glass. Do not allow the water which is around the glass to boil. Serve at once. Prepare as many eggs in glasses as there are persons to be served. Dainty and wholesome for invalids.

Baked Beans with Cream.—Soak and parboil a pint of navy beans until half cooked; drain, dash over a quart of cold water, drain again and add the last water (boiling) with two heaping teaspoonfuls of salt, one-eighth teaspoonful pepper, one large sprig of thyme (minced), two tablespoonfuls of beef drippings or the clean, browned trimmings of fat from roast beef, and fried steak may be used instead of the drippings; when beans are cooked tender turn all into a covered bean pot and bake in a very moderate over five hours. Then pour over the beans a cupful of sweet cream and bake an hour longer.

Raisin Pie.—One cupful of nice raisins; wash quickly, cover with boiling water, cook until tender; remove seeds; moisten a cupful of bread crumbs with the water, add one-fourth cupful of sugar, one egg (beaten), one tablespoonful lemon juice and the raisins, cut in two or three pieces each; an upper and lower crust of tender pastry and a satisfactory bake make a most delicious pie.

Kenilworth Pudding.—Two cupfuls of light chopped bread, one-half cupful chopped suet, taking care to free it from all strings, one-half cupful of molasses, one egg, one cupful raisins, seeded or the seedless, one cupful sweet milk, with one-half teaspoonful soda dissolved in it, one-half teaspoonful powdered cloves, one teaspoonful cinnamon and a pinch of mace and salt. Mix thoroughly and boil two hours in a tin pudding dish. Eat with foamy sauce.

He who, having lost one ideal, refuses to give his heart and soul to another, is like a man who declines to build a house on the rock because the wind and rain have ruined his house on the sand. —Constance Naden.

American Opals

In a recent issue of the Saturday Evening Post, it is said that some of the finest opals in the world are now being mined in Washington, Oregon and Idaho. In the last-named State some remarkably beautiful specimens have been obtained from a bed of volcanic ashes, near Moscow, and thousands of dollars' worth of the gems have already been taken out. The precious material is supposed to have been deposited by water when the rocks were still hot, and masses of cinder when broken open reveal the stones, many of which are of the quality known as "noble" opal. This kind of opal is whitish, translucent, and shot through with small and brilliant gleams of all the colors of the rainbow. Gem experts say that the colors described are due to myriads of minute cracks in the body of the stone, the edges of which reflect the light at different angles. Similar tints may be obtained by partially fracturing a chunk of glass with a hammer. Recently a German chemist, by evaporating ether from silica, has obtained beautiful specimens resembling opals and showing all of the exquisite hues.

That opals hardly deserve their unlucky reputation is indicated by the escape of a big jewelry establishment in New York a few years ago from a fire which, while destroying all the rest of the building in which the jewelry establishment was housed, left its quarters and stock untouched—not withstanding the fact that the firm had on exhibition at the time one of the greatest collections of opals in the world. One of the stones in the collection was the great Hope opal, which is said to have been an ornament of a Persian shrine in the seventeenth century. It is oval in shape, an inch long, and represents the sun, with a full face carved on its surface, the rays being supplied by an antique gold setting. It is said that the opal was not considered unlucky in England until the notion was started there by the publication of Anne of Geierstein. On the contrary, it was believed by the ancients to render its possessor lovable and to bestow the gift of invisibility. To jewelers, however, it is liable to prove unfortunate, for the reason that a fine stone will sometimes split in two while being ground. Owing to their peculiar structure, opals easily crack, and it is not advisable to sit in front of an open fire with a ring containing one of these gems.

Mosquito Bars.

If one's men folks are handy with tools, it is an easy matter to have home-made screens which are fully as satisfactory as the boughten ones. Get "clear" spruce an inch square at the lumber yard. The screen frames should be made to fit the windows and always put in the same ones, being plainly marked. Little triangular pieces in the corners make the frame firm. Most of our windows are old-fashioned ones with immovable upper sash, and without weights. The screens are fastened in when the proper time in the Spring comes and then there is no more bother with them till Fall, when they are taken out and packed away for the Winter. The first cost of the wire screen is more than cotton, but it is cheaper in the end, as with care and an occasional coat of screen black they will last many years. It is better to turn in the screen about half an inch when tacking it on the frames, as it is less likely to break off. Tacks a little smaller than carpet tacks are suitable. We have one weighted window, and for this one we have a screen frame which covers the entire window. It fits the outside of the window frame and is held in place by six screws. We can have this window open at either top or bottom without any bother with the screen. This plan would not be practicable, however, if there were blinds on the house.

SUSAN BROWN ROBBINS.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

A "Swap" Party.

Why not the word "exchange" instead nobody knows, but at all events it has become very popular alike with old and young, says Table Talk. Every guest brings four or five little neatly wrapped and tied bundles. The more misleading in shape as to contents the better. The packages may contain anything from candy to soap, starch, tea, book, handkerchief, sun-bonnet, etc., the more absurd the funnier. Each person recommends his own bundles describing the contents as wittily and in a way to deceive as much as possible. The bargaining becomes very shrewd and merry until all the parcels have been swapped, oftentimes more than once. Then they are opened, the best bargain winning first prize, the poorest compelling the holder to tell a story, suggest a game, sing or recite for the entertainment of the company. The universal verdict—"no trouble and lots of fun!"

A game, suggested by the same authority, is that of numbers. Each guest draws from a basket on the table a slip of paper bearing a number and a half minute is allowed to give some old proverb, adage, fact or rhyme containing the number. If the player fails to respond within the time, a forfeit is required and afterward redeemed in some manner to entertain the company. To make the game more clear the number drawn is ten, quickly follows "ten cents make one dime." If number nine—"Of the muses of old, there were nine we are told." If number two—"Two is company, three is none." If number one—"One, two, buckle my shoe." It seems easy, but one must think quickly to give the required proverb, fact or whatever it may be in the time allowed.

CONSUMPTION

is almost as deadly as ever, although physicians know they can cure it generally, beginning when most of the lungs are still sound, and even sometimes when a great deal of damage is done.

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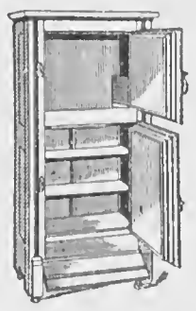

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AT $11.25 WE FURNISH THIS SEWING MACHINE Complete with all accessories, including 1 quilter, 2 screwdrivers, 6 bobbins, 1 package of needles, 1 cloth guide and screw, 1 oil can filled with oil, and a complete instruction book, which makes everything so plain that even a child without previous experience can operate the machine at once. FOR 25 CENTS EXTRA, we furnish, in addition to the regular accessories mentioned, the following special attachments: 1 thread cutter, 1 braider, 1 binder, 1 set of plain hemmers, different widths up to ⅜ths of an inch.

SEWING MACHINE DEALERS who will order three or more machines at one time will be supplied with the same machine, under another name, and with our name entirely removed, but the price will be the same, viz., $11.25, even in hundred lots. ORDER TODAY. DON'T DELAY. Such an offer was never known before.

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MARKETS.

The Week's Quotations.

WHOLESALE PRICES.

NEW YORK, APRIL 13, 1901.

GRAIN.—Trade in wheat active, and prices down one to two cents. Corn firm and higher.

Wheat, No. 2, hard, N. Y.	78½	@	—
No. 1, Northern Duluth, spot	84¾	@	—
No. 1, hard Duluth, spot	88	@	—
Corn, No. 2, mixed	49¼	@	—
Oats, No. 2, white, in elevator	32½	@	—
Rye, No. 2, W'n, c. i. f., N. Y.	—	@	58¾
State and Jersey, track	57	@	58
Barley, feeding, c. i. f., N. Y.	47	@	48
Malting, new crop	62	@	70

BEANS.—Business dull. Red kidneys and mixed lots sell slowly.

Marrow, choice, per bu	2 40	@2	45
Marrow, fair to good	2 20	@2	30
Pea, bags, choice	2 05	@	—
Red kidney, choice	—	@2	10
White Kidney, choicc	2 30	@2	35

FEED.—All grades $1 to $2 lower, and market quiet and firm.

Spring bran, 100 lb sacks	18 50	@20	50
Winter bran, bulk	18 50	@22	00
Spring middlings, 200 lb s'ks	18 00	@20	00
Red Dog	19 00	@19	25
No grade Flour	—	@22	00
Linseed meal, ton	—	@26	00
Cottonsced meal, ton	25 00	@	—

HAY AND STRAW.

Hay, No. 1	92½	@	90
No. 2	85	@	87½
No. 3	75	@	80
Clover	65	@	70
Clover, mixed	75	@	80
Straw, rye, long	85	@	90

SEEDS.

Clover, per lb	9½	@	10½
Timothy, per lb	4	@	4¾
Red Top, per lb	10½	@	—
Flaxseed, whole, bu	6 50	@7	00
Millet, per lb	1¾	@	2
Rape, German, per bu	3½	@	3⅝

MILK.

New York Exchange price reduced one-fourth cent, or to 2½ cents within 26-cent freight zone.

BUTTER.—The receipts of State dairy and fresh table grades are increasing. Quality seems to be fairly regular and prices remain about the same as at last report.

NEW

Creamery, extra, per lb	22	@	—
Firsts	21½	@	21¾
Seconds	19	@	20½
Lower grades	16	@	18
State dairy, tubs, finest	21	@	—
Tubs, fresh, firsts	19	@	20
Tubs, fresh 3ds to 2ds	15	@	20
West'n im'tion crmry, finest	18	@	18½
Firsts	16	@	17
Lower grades	14	@	15
Western factory, fresh large tubs, choice	—	@	13½
Fair to choice	12¾	@	13¼
Lower grades	11½	@	12½
Rolls, fresh, choice	13½	@	—
Fresh, common to prime	11½	@	13
Renovated butter, fancy	17½	@	18½

OLD.

Creamery, Summer made ch.	17	@	18
Summer made, com. to pr	12	@	16
State dairy, tubs, firkins, finest	14	@	15
Tubs or firkins, com to good	11½	@	13½
Western, fctry. Sum. made	10½	@	12½

EGGS.—Market weak, and retail trade has dropped off decidedly, particularly on medium grades. Many dealers have surplus stock that was held over from the Easter week.

QUOTATIONS AT MARK.

State and Penna., prime	14	@	—
Western, fresh gathered, 1sts	13¾	@	14
Western, storage packed, fcy	—	@	14
Kentucky, closely graded, fcy.	13¾	@	—
Ky. and Tenn., av. pme. lots	—	@	13½
Southern, fresh gathered, common to prime	13¾	@	13½
West'n, fresh gath dirties	—	@	13
Duck eggs, Baltimore, per doz	—	@	20
Far Southern, per doz	16	@	17

POTATOES.—Receipts of old stock are decreasing and prices are firm.

Porto Rico, fair to fcy, bbl	7 00	@	8 50
Bermuda, prime, bbl	6 50	@	8 00
Havana, fair to prime, bbl	3 00	@	5 00
Southern, 2d crop, per bbl	1 50	@	2 00
State, round, per 180 lb	1 37	@	1 75
Long, per 180 lb	1 25	@	1 37
Michigan, round per 180 lb	1 50	@	1 62
Long, per 180 lb	1 25	@	1 50
State and Western, per sack	1 40	@	1 60
Sweets, Vineland, cl.-top bbl.	2 00	@	2 75
Other Jer. & Del. cl.-top bbl.	1 50	@	1 75
Jersey, per d.-h. bbl	1 50	@	1 75
Jersey, per bskt	75	@	1 00

VEGETABLES.

Onions—Orange Co., red, bag	3 00	@	3 75
State and W'n, yellow, bbl	3 25	@	3 35
Bermuda, crate	2 50	@	2 65
Havana, crate	2 40	@	2 50
Egyptian, bag	2 25	@	2 50
Squash, marrow, bbl	1 00	@	1 25
Hubbard, bbl	1 50	@	2 00
Florida, white, crate	1 50	@	2 50
String beans, Fla., crate	1 00	@	4 50
Turnips, Canada, Russia, bbl	80	@	90
Peppers, Fla., carrier	1 00	@	2 00
Celery	15	@	85
Florida, case	1 00	@	2 00
Egg plant, Fla., box	2 00	@	4 00
Green peas, Fla., bskt	1 00	@	4 00
Spinach, Norfolk, bbl	20	@	65
Lettuce, Fla., ½bbl	1 00	@	2 50
North Carolina, bbl	3 00	@	4 50
Parsnips, bbl	75	@	1 00
Cabbage, State, ton	12 00	@	16 00
Florida, new, bbl	1 25	@	2 00
Charleston, bbl	1 25	@	2 00
Beets, old, bbl	75	@	—
Tomatoes, Fla., carrier	1 50	@	3 25
Florida, crate	75	@	1 00
Charleston, 100 bchs	3 00	@	7 00
Parsley, Bermuda, box	75	@	1 00
New Orleans, 100 bchs	2 00	@	3 50
Kale, Norfolk, bbl	20	@	50
Cauliflower, Fla., basket	2 00	@	3 00
Asparagus, Ch., prm, dz. bch.	3 00	@	7 00
California	2 00	@	4 00

HOTHOUSE PRODUCTS.

Lettuce, per case	2 50	@	3 00
Cucumbers, fair to ch'ce, doz.	1 12	@	1 37
No. 2, doz	60	@	75
Tomatoes, com'n to prime, lb.	10	@	20
Radishes, 100 bunches	2 00	@	3 00
Mushrooms, lb	30	@	35
Rhubarb, 100 bunches	5 00	@	5 50
Mint, doz. bchs	25	@	37

FRESH FRUITS.—The better grades of apples are held for top quotations, but there are numerous reports of cut prices on the lower qualities.

Apples, Baldwin, bbl	2 50	@3	25
Greening, bbl	2 50	@	5 00
Spy, bbl	2 50	@	3 50
Ben Davis, bbl	2 50	@	3 50
Spitzenberg, bbl	3 00	@	4 50
Russet, bbl	2 25	@	2 75
Russet, bbl	2 25	@	2 75
Cranberries, Cape Cod, bbl	6 00	@	9 00
Jersey, crate	1 00	@	1 75
Strawberries, Fla, quart	20	@	35
Pineapples, Fla., red, 24s crt	4 50	@	5 00
Florida, red, 30s, crate	4 00	@	4 25

EVAPORATED FRUITS.

Apples, fancy	6	@	6½
Choice	5	@	5½
Low grades	3	@	4
Sun dried, quarters	3	@	3¾
Sun dried, sliced	3	@	3¾
Raspberries, lb	19	@	19½
Blackberries, lb	6	@	6¼
Apricots, boxes, lb	6½	@	14
Bags, lb	6	@	12
Peaches, Calif, unp'ld, bxs	6	@	8
Bags	4¼	@	6
Peeled, per lb	11	@	18
Pears, California, per lb	5	@	10

LIVE POULTRY.—Trade quiet all around, as is usual after a holiday week.

Fowls, heavy, per lb	—	@	10½
Light	—	@	10
Chickens, per lb	—	@	9
Roosters, per lb	—	@	6
Turkeys, per lb	—	@	9
Ducks, Western, per pair	70	@	80
Southwestern, per pair	50	@	65
Geese, average weight, pair	1 00	@1	12
South'n & S'w'n, per pair	30	@	35
Pigeons, per pair	30	@	35

DRESSED POULTRY.—Receipts of all grades moderate and prime medium weight fowls scarce.

FRESH PACKED—ICED.

Turkeys, W'n, hens, av. best	10	@	10½
W'n, young toms, prime	8	@	8½
Old toms	—	@	8
Broilers, Wntr, under 2 lb to pr	30	@	35
Phila., 2½@3 lb pr. lb	25	@	—
Phila., 3½@4 lb pr, lb	18	@	20
Roast, chick., Phila sel. lge	15	@	17
Fowls, State & Pa gd to prm	10	@	10½
Wstrn, dry pcked, small fcy	—	@	10
Wstrn, scided small fcy	10	@	—
Old roosters, per lb	—	@	6½
Capons, Ohio, large, per lb	14	@	15
Other Western, large	13	@	14
Western, mixed weights	11½	@	12½
Western, small and slips	10	@	11
Ducklings, L. I. and other nearby, per lb	22	@	25
Squabs, choice lge, white, doz	2 00	@2	50
Mixed, per dozen	2 00	@	—
Dark, per dozen	—	@1	50

FROZEN.

Turkeys, young hens, No. 1	11	@	—
Mixed, yng hens & toms, No. 1	10½	@	11
Young toms, No. 1	10	@	10½
No. 2	7	@	9
Broilers, dry picked fancy	16	@	18
Scalded, fancy	13	@	15
Chickens, fancy, soft-meated	—	@	12
Average, No. 1	9	@	10
Fowls, dry-picked, No. 1	9½	@	—
Ducks, fancy	12	@	13
Geese, fancy	9½	@	10

COUNTRY DRESSED MEATS.

Calves—Veal, prime, per lb	8	@	8½
Fair to good, per lb	7	@	7½
Common to medium, per lb	5½	@	6½
"Spring" lambs, fancy, each	5 00	@	—
Poor to prime	3 00	@	—

LIVE STOCK.

Native steers	4 50	@	5 65
Oxen	4 50	@	4 75
Cows	2 10	@	4 00
Veal calves	3 50	@	6 50
Little calves	—	@	3 00
Sheep, common to prime	4 00	@	5 35
Lambs	5 00	@	5 75

FURS AND SKINS.—Market dull and outside quotations seldom reached.

Black bear	15 00	@	25 00
Cubs and yearlings	5 00	@	10 00
Badger	75	@	1 25
Otter	8 00	@	10 00
Beaver, large	7 00	@	8 00
Small	3 00	@	4 00
Silver fox	50 00	@	200 00
Cross fox	8 00	@	25 00
Red fox	1 75	@	2 00
Gray fox	80	@	90
Fisher	8 00	@	10 00
Wolf, prairie	1 00	@	1 10
Timber	3 00	@	4 00
Wolverine	6 00	@	8 00
Lynx	4 00	@	6 00
Wild cat	50	@	60
Marten, dark	6 00	@	10 00
Pale	3 00	@	4 00
Skunk—black	1 40	@	1 20
Half-striped	85	@	90
Long-striped	80	@	90
Striped	45	@	50
White	20	@	35
Raccoon	75	@	1 00
Oppossum—large	30	@	40
Medium	20	@	25
Mink	1 00	@	2 00
Muskrat, Winter	11	@	12
Fall	8	@	9

BUSINESS BITS.

IN the manufacture of hand-power cream separators no feature has given rise to so much perplexity as the construction of the bowl. The new bowl used in the Empire seems to solve the problem in a practical and simple manner. The catalogue recently issued by the United States Butter Extractor Co., Bloomfield, N. J., gives full information in regard to its construction and workings. This new bowl is not an experiment, as it has been used several years abroad and has been subjected to exhaustive tests by experts in practical every-day use on dairy farms. We believe it will hasten the day when a separator will be found on every farm where cows are milked.

DON'T wait until your berries are ripe before making arrangements for your berry baskets. You can, as a rule, buy on more satisfactory terms early in the season. Coles & Company, 109-111 Warren St., New York City, handle the output of 27 factories, and they will treat you right.

CORN-planting time will soon be at hand. To get the corn in quickly a good planter is necessary. For those not planting sufficient acreage to afford a two-horse planter the Spangler will be sure to please. It has fertilizer attachment and does its work in a satisfactory manner. Spangler Mfg. Co., York, Pa., is the maker.

THE farmer or chicken raiser who is not familiar with the Victor incubators and brooders should write at once to George Ertel Co., Quincy, Ill., for the 178-page illustrated descriptive book of incubators and brooders. It is "chokefull" of poultry lore. It will tell you how to increase a hatch in almost any machine that is made anywhere near right. There is much in it, too, about hatching and raising ducks, how to build poultry houses, etc.

IT is claimed that the greatest exhibit of pleasure vehicles ever assembled in one building is the current stock of the Columbus Carriage & Harness Co., Columbus, O. More than 2,000 pleasure vehicles of all sorts and styles are shown. The great success of this company is due to their plan of selling direct to the user, thus saving the buyer the entire middleman's profit. A very handsome illustrated catalogue and price list will be sent on application.

Notes by the Doctor.

If in the event of an accident the one hurt should vomit soon thereafter, the injury is likely to prove serious. If a limb be injured so that some deformity results, it is probably either fractured or dislocated. If fractured a comparatively slight amount of force will be required to restore it to its natural shape, but it will only remain so while the force is kept up. Its natural mobility will be found by the one examining it to be the same as ever, except for the pain attending the movement, together with some mobility that is not natural. In the case of a dislocation the mobility of the limb is lessened. There is a fixedness of the joint at the seat of the injury that is unusual and the normal shape or contour of the limb cannot be restored by any moderate degree of force. A flushed face does not necessarily imply the existence of fever; neither is the lack of color a guarantee that fever is not present. In the absence of a clinical thermometer, or the skill requisite for its correct application, the hand of the nurse, if warm and placed on the body of the patient under the arm, will serve the purpose fairly well. Before the clinical thermometer came in this rough test of the temperature was the only one available to us.

W. O. E.

A chronic, "tearing" Cough, can be so alleviated that it will be scarcely felt, while the way is being paved for a perfect cure with Dr. D. Jayne's Expectorant.—*Adv.*

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100 FOR SALE WESTERN RESERVE FARMS in the Mahoning Vy. Send for list. Dennison & Miller, Warren, O.

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Residence or Business Property for Cash, no matter where located. Send description and selling price, and learn my successful plan of selling property. W. M. OSTRANDER, 1215 Filbert St., Phila., Pa.

For Sale—A Bargain in Small Fruit Farms One orchard of 16 acres, and another of 8 acres in the best fruit County of the State, will be sold cheap. Both are well located for shipping and with excellent home markets. Trees mostly in bearing. Owner is engaged in other business, requiring his entire time.
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COMPETENT GARDENERS.—The comforts and products of a country home are increased by employing a competent gardener; if you want to engage one, write to us. Please give particulars regarding place and say whether single or married man is wanted. We have been supplying them for years to the best people everywhere. No fee asked. PETER HENDERSON & CO., Seedsmen and Florists, 35 and 37 Cortlandt St., New York.

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The only perfect continuous open-front Silo made. See Open-Top Patent Roof. Ask for catalogue. **E. F. SCHLICHTER,**
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Friends with a Long Memory.

"One thing the Pan-American movement has done," says a Buffalo paper, "it has persuaded Buffalonians that they have not been forgotten by outside relatives and friends." In the same way letters received by T. W. Lee, General Passenger Agent of the Lackawanna Railroad, asking for information about the Exposition, seems to show that the traveling public has not forgotten the Lackawanna as the shortest and most picturesque route to the grounds.

Five through trains daily between Buffalo and New York, equipped with Pullman drawing room, sleeping and observation cars, magnificent dining cars and vestibuled coaches.—*Adv.*

SEND NO MONEY cut this ad. out and send to us, state whether you wish Gent's or Ladies' Bicycle. (LADIES' WHEELS 50 Cents EXTRA), color and gear wanted and we will send you this **HIGHEST GRADE 1901 MODEL EDGEMERE BICYCLE** by express C.O.D., subject to examination. You can examine it at your nearest express office, and if found perfectly satisfactory, exactly as represented, the equal of bicycles that sell everywhere at $20.00 to $40.00 the MOST WONDERFUL BARGAIN YOU EVER SAW OR HEARD OF, then pay the express agent **OUR SPECIAL PRICE, $11.75** (or $12.25 for ladies), and express charges; express charges are only 50 to 75 cents for 500 miles.

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Market Briefs.

PICKED UP HERE AND THERE.

APPLE WOOD.—A reader says that a large number of apple trees in his vicinity have been blown down by a storm, and he wishes to know whether the wood can be sold to advantage in this city. We looked this matter up several months ago, but were unable to find any dealer who was willing to pay enough for this wood to warrant shipping it any great distance. At one time it was largely used in the manufacture of pipes, but other woods have taken its place. Makers of tool handles use some apple wood, but most of these factories are in smaller towns and they get all that is needed from the surrounding country, often at a trifle above cord-wood rates.

REFERENCE WANTED.—We are asked to look up the business standing of Chas. H. Lyons, dealer in butter, cheese and eggs, at 264 Greenwich St., New York. He may have a first-class standing and references, but thus far we have not been able to find them or him either. On the ground floor of the number given is a Chinese laundry and a tailor's shop. At the door of the hall leading to the upper stories, is Mr. Lyons' sign and an iron box to receive letters. Every time we have tried the door, however, it has been locked, and signs on the building indicate that the upper rooms are vacant and to let. He is evidently doing a mail business, however, for letters were seen through a crack in the mail box beside the door; but where he receives his goods or has his office we are unable to say.

CUT IN RAISINS AND PRUNES.—The California Cured Fruit Association have struck a hard row to hoe. They have now on hand 900 carloads of raisins, more than the ordinary trade will require before the new crop. The only thing seemed to be to cut prices so as to induce consumers to use more raisins. The present reduction is only on seeded raisins, the price to seeders being made three cents per pound. This would allow retailers to sell pound cartons at about 10 cents. It is thought that at these figures most of the surplus will be worked off, so as to be out of the way of the new crop. Great dissatisfaction is expressed at the manner in which the Prune Association has handled matters. It is said that one-third of the growers have not received pay for the last crop, and the courts have decided that contracts for this season may be canceled. If this decision holds, the Association will practically go out of existence.

DEAD LETTERS.—Every year thousands of letters are sent to Washington as "dead," because of wrong address or removal of person to whom written. All this might be saved if the sender would put his name and address on the left hand upper corner of the envelope. Then the letter would be returned to him if it could not be delivered. There is another reason why this should be done. Suppose a man sends goods to a commission merchant, and is unable to get any reply to his requests for account of sales. If his name and address and a request for return are on the envelope, he may be quite certain that the letter will be delivered or returned as "not found" or "refused." If the party to whom the letter is addressed receives it, or refuses it, and gives the shipper no satisfaction, he then has a case which the postoffice inspector at the general postoffice in this city will take up, and, if fraud is found, the mail of the guilty party will be stopped, thus making things highly uncomfortable for him. The idea is that scalawags must not use the mails to carry on their fraudulent work. Of course these inspectors are provided only to take charge of clear cases of fraud, and under no circumstances would they be employed to settle petty disputes between people. If those who come across clear cases of swindling of this sort would report to the postmaster at the office where the fraud is being carried on, giving full details, it would materially help to make life miserable for those who carry on a scheme of systematic robbery through the mails.

W. W. H.

CONDITION OF GRAIN CROPS.

The wheat and rye, in so far as I can see and learn, have wintered unusually well, and are starting up nicely now. Most of that early sown (before September 25) was hurt in the Fall by the fly, and that is looking bad. A majority of the acreage was sown late; the Winter was very favorable, freezing up early and remaining so. There was light snow in January; February 3, 12 inches of snow, increased a week later to 18 to 20 inches on level. The ground remained covered until about the middle of March. Newly-seeded clover has wintered well also. Prospects are more favorable for wheat than for several years, unless fly gets to work late. In seeding grass on heavy land most sow the latter part of February, or fore part of March when ground is honeycombed; on light soils about April 1, after harrowing thoroughly with spike-tooth harrow. I prefer latter method.

Wolcottville, Ind. J. C. G.

Wheat and rye have gone through the Winter in good condition, and are looking promising now. The acreage of wheat will not be more than 50 per cent. Last Spring grass seeding was generally a failure due principally to grasshoppers. The ground sown to grass then will be put to corn, making a large acreage of corn and a short hay crop. Grass seed is sown with small grains, being harrowed before and after sowing. For the past 10 years it has been almost impossible to get a catch of clover on the prairie and the openings just on the edge of prairie. Timothy is sown generally in October on the young wheat, and the clover the last of March or first of April. J. S.

Lima, Ind.

The Fall-sown grain in this section is looking very well this Spring, and the newly-seeded grass is good. I sow my grain with a drill and always sow the Timothy in the Fall and clover in the Spring, and go over the field with the weeder after the clover is sown, if the ground is dry enough for the weeder. The smoothing harrow is good, but the slanting tooth will destroy some grain in turning around at the end of the field. In order to get a good stand of grass I should first plow the ground and then harrow it very thoroughly to kill all weeds; then sow 600 pounds of some good grass fertilizer per acre broadcast, and harrow it in; then 12 or 16 quarts of Timothy about August 25, and go over it with the weeder. E. P. B.

Columbia Co., N. Y.

There was a very small acreage sown to Winter wheat last Fall in this county (Menard), on account of Hessian fly and chinch bugs. Wheat wintered well and is looking fine. Rye looks well, but small—not much grown in this vicinity. Clover seeded last Spring is looking fine. Clover is generally seeded broadcast on Winter wheat or rye, and when sown late in March or early in April, and the ground is dry enough, is generally harrowed in, but when sown earlier, and ground is cracked, the rains and action of frosts cover the seed sufficiently. Considerable clover was seeded in this vicinity last Spring with oats, mostly early oats, and the clover is looking fine. Timothy is generally seeded in the Spring on Winter wheat. Our soil is mostly black loam. A. D. A.

Sweetwater, Ill.

Winter wheat and Fall seeding are looking remarkably well in this vicinity, and also in adjoining towns, as far as I have observed. With the same showing 20 years ago we certainly would have expected a yield of 35 or 40 bushels per acre. We sow our wheat from September 10 to October 1, and sometimes later, now that fertilizers are almost invariably used. Timothy is sometimes sown by seeder attachment on drill, or within a week or more by wheelbarrow sower. All varieties of clover are sown about April 1, and if favorable weather follows we are almost sure of a good catch. I sow four quarts Timothy, three to four quarts Medium, and 1½ Alsike clover per acre. This makes a choice quality of mixed hay for one or two years, after which clover dies out, leaving a strong Timothy sod that will cut a good crop of hay for six or eight years if not pastured too close in the Fall. Our soil is clay loam.

Lima, N. Y. W. H. D.

The Winter this year has been an extremely favorable one for Fall-sown crops. The prospects now are that there will be a large crop of Winter wheat this coming season, in this section of Illinois. Wheat never came through the Winter here in better condition. Apparently, the Hessian fly will not trouble us this season. There were many of these flies last Fall in all of the wheat sown in this section, but wheat in which they abounded last Fall, when taken into warm quarters this Spring, fails to bring forth any flies. Our crop was practically ruined last season by this pest, but this year it has seemingly disappeared from some cause. If one variety is in any better condition than another it is the Harvest King at the present. This variety is recommended by our experiment station. Fall-sown Alfalfa, clover, Timothy and Red-top are also in excellent condition. Those who tried the Clark method of seeding last Fall think it a good one. I believe that it will be more largely followed yearly. The general practice of farmers of this locality is always to make a good seed-bed for all grain and grass seed sown. Our soil (bottom land) has just enough sand in it to make it friable, and we rarely fail to get a good stand. A common expression of farmers here is: "Do half of the tending of your crop before it is planted!" Little rye sown here, but this looks well. Corn is our staple crop with wheat a very close second. R. O.

Bluffs, Ill.

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Please your customers by saving barn room and ease of handling straw. We make a machine that we guarantee to thrash wheat perfectly clean and not bruise or break the straw, that will bind it again in bundles. The same machine thrashes rye and preserves the straw, straight, bound in bundles, and is also changed in 15 minutes to a spike-tooth oat and wheat thrasher Send for Catalogue B. Free

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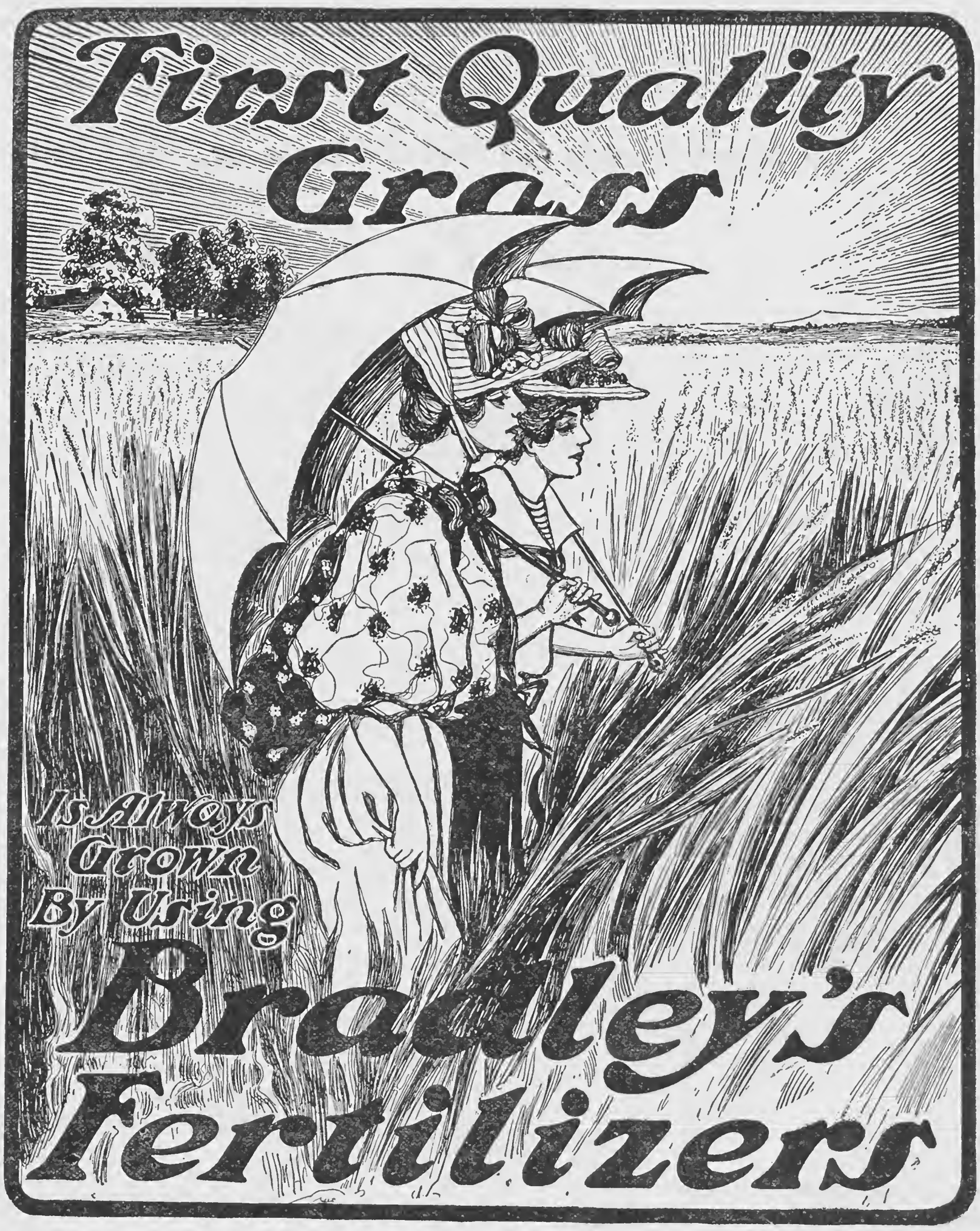

The Mapes Corn Manure.

This is a complete manure for corn, and requires the use of no other fertilizer. It contains all the ingredients required to secure the full development of the crop, both in abundance of stalk of improved feeding quality, so important in ***ENSILAGE,*** *and also in yield of well-filled deep-kerneled ears. Also adapted for Clover, Turnips, Etc*

To Grow Paying Crops of Corn and Bring Up Poor Land.

This manure is adapted for ***BROADCAST*** *use for growing Corn. Many light, sandy lands, "poor as poverty," like the Hartford "Plains," have by broadcasting three to four bags per acre of this manure, been brought up into good condition for grass or for any crop, and made to pay from the start.*

Read **"TWENTY YEARS AFTER"** for practical results at Newington, Conn, on seven acres of "the poorest piece of land," with the **MAPES CORN MANURE** (two tons on the seven acres broadcast harrowed in), two years in succession; then Potatoes (three tons of the Mapes Potato Manure), two years; then Oats (54 bushels per acre); then heavy mowing of hay. This land at first was so poor that nothing but pigeon grass and dewberry vines grew on it.

Lands otherwise practically worthless, made to produce, by annual applications, paying crops of corn from the start after liberal figuring for labor, interest and taxes, and brought up equal to the good lands. This cannot be done by using "a little in the hill," like a superphosphate, "to start the crop with."

The Great Corn Contest of the American Agriculturist.

Crops 213, 119 and 95 bushels each; grown on one measured acre exclusively with the Mapes Corn Manure.

Of this great crop, 213 bushels shelled corn, grown in Yates County, N. Y., with the Mapes Corn Manure (800 pounds per acre) exclusively, the American Agriculturist says: "If we allow only $15 as the value of the tops for fodder, and make no account of bottom stalks, the cost comes within 20 cents a bushel (shelled corn)."

The Largest crop grown with fertilizer, other than the Mapes (45 crops in all) was 84 bushels (chemically dried, 60 bushels.)

Some Large Crops Grown with the Mapes Corn Manure, and reported in the Agricultural Press:

1,040 bushels of corn (ears) on less than 4½ acres, equal to 233½ bushels, or 116¾ bushels shelled corn per acre, grown on farm of Rural New-Yorker, with the Mapes Corn Manure.

Ninety bushels (shelled) with 500 pounds per acre. 150 bushels (shelled) with 600 pounds per acre. Value of the grain alone over five times as much as the cost of the fertilizer.—American Agriculturist.

Eight hundred and fifty-six bushels (ears) on four acres. 159.37 bushels on one acre. 125.37 bushels on one acre. Nothing used but the Mapes.—Rural New-Yorker.

On two acres 600 pounds of Mapes alone, broadcast, 198 bushels shelled corn. On three acres, same fertilizer, same quantity. 489 bushels (ears). Grown by Dr. Henry Stewart.—New England Homestead.

One hundred and eighty bushels of ears per acre; shelled, 98.45 bushels. 2,058 bushels (ears) on 16 acres. Only Mapes (800 pounds per acre) used.—Connecticut Farmer.

The Mapes Formula and Peruvian Guano Co., 143 Liberty St., New York.

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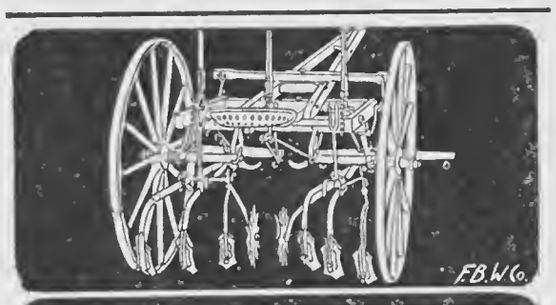

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in cultivating, any crop, on any kind of land and in any soil, are derived from using this
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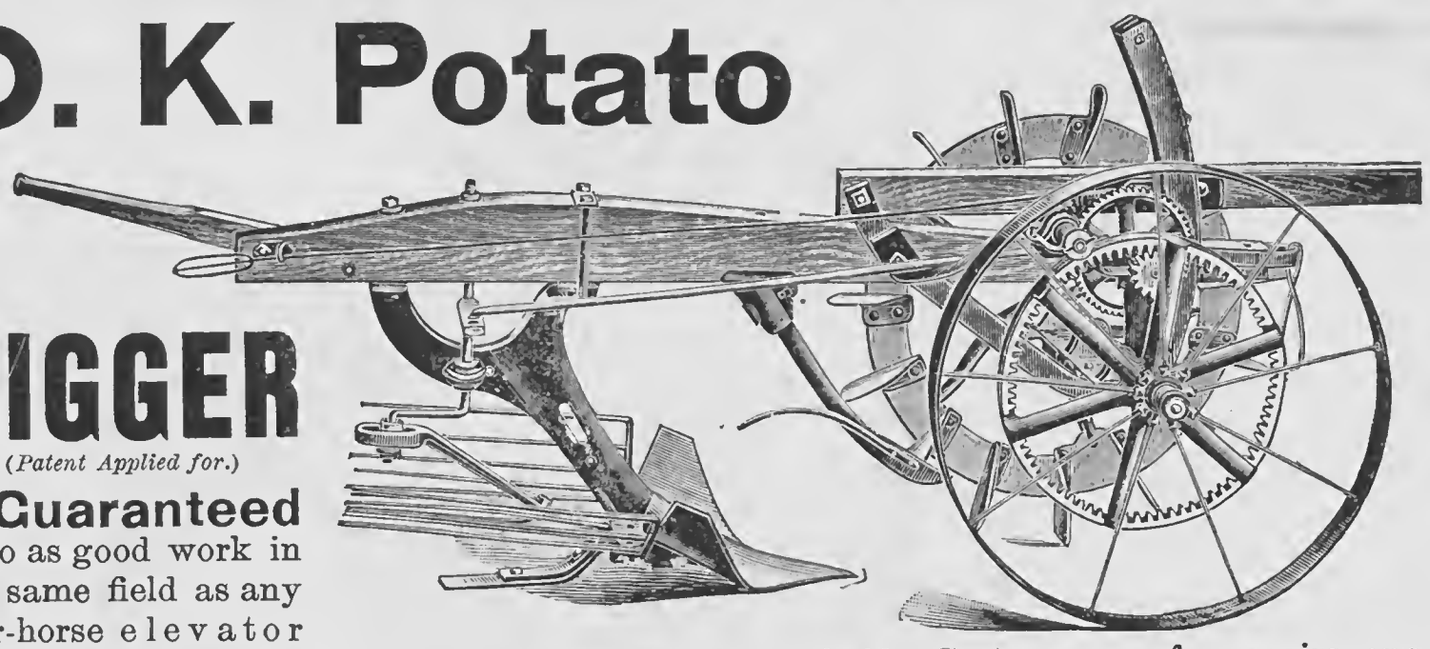

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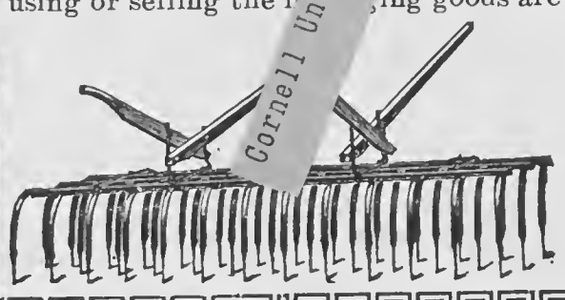

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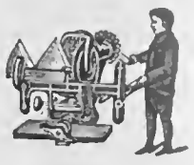

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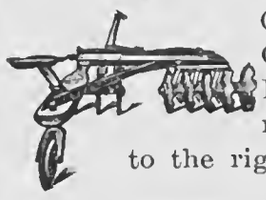

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CORNELL UNIVERSITY
APR 26 1901

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2674. NEW YORK, APRIL 27, 1901. $1 PER YEAR

ESSENTIALS OF SUGAR-BEET CULTURE.

GREAT CARE IN PREPARING THE SOIL.

Special Needs of the Crop.

SOME PECULIARITIES.—The first thing is to learn the habits of the plant. It is different from anything else I have ever tried, and does not appeal to the average grain and stock raiser. Sugar beet seed germinates slowly, and the young beets make but little growth for a few weeks. One cannot wait for them to be of good size before cultivating, as the weeds will be too large. They grow into the ground, and the top root may be two feet long, which enables them to withstand drought and the effects of the weeder without injury. Breaking off the leaves is often a benefit, and abroad they are picked off and fed to the stock. The effect is to cause greater root growth, and for this reason one need not handle them as he would eggs. It is intensive farming, and the most successful, so far, are foreigners, market gardeners and vegetable growers, who understand the necessity of, and saving in thorough preparation before sowing the seeds.

SUITABLE SOIL.—A soil which is loose, and 10 or more inches deep before the harder subsoil is reached, will grow sugar beets if naturally drained enough for crops of corn or potatoes. Fields approaching in color and texture a black muck swamp which have clay loam, or sand enough to make them hold together, so as to form a firm seed bed, are nearest our ideal, but heavier clay loams, with more labor and proper care produce fine yields. Dry hills, stony, shallow soils and heavy clays, are not suitable, and gravel is uncertain. Perhaps the best soil is a dark, sandy loam. Stone and uneven surfaces do not prevent growth, but are objected to because of the inconvenience of working the crop. Sod ground plowed deep, and preferably, in the Fall, will answer, but my first choice is a corn, potato or buckwheat stubble, and it is all the better if it was highly manured. Subsoiling does not pay where one can plow nine inches deep, and the bottom of the furrow is not hardpan or hard clay. Clay loams with solid subsoils are benefited. The concensus of opinion indicates that farm manure is the best fertilizer for large yields, and phosphatic next. Too much use of nitrogen is often an injury.

A GREEN CORN SANDWICH FOR MASSACHUSETTS COWS. FIG. 123.

A PERFECT SEEDING.—The profit of the crop depends on getting a perfect stand. They are not worth enough to pay to transplant; and vacant spots, if seeded the second time, give indifferent results. To insure plenty of plants, use plenty of seed, and have the best possible seed bed. The profit of the crop depends also on the cheapness of growing. Thought and care must be given at every point to reduce cost. As soon as the soil is dry enough to work plow and harrow the field. When the weeds have sprouted, harrow and kill them. In a week harrow again. Do this as many times as possible before time to sow, which in this section is May 20. The last two workings harrow lightly. Weed seeds which are three inches below the surface will not grow, and should not be brought up to the top. The aim is to firm the seed bed, and free it from weeds before the beets are sown. All things considered, a grain drill is the best and cheapest machine for seeding with. Use 10 to 14 pounds of seed per acre, and have the rows 21 inches apart, or every third tooth. Let the commercial fertilizer run in all but the seed tooth, and, if applied in small amounts, in all. Care must be taken not to get the seed too deep, and we roll the ground before seeding, so the wheels will run even, and not sink so deep. Cover the seed to the depth of one-half to 1½ inch, according to the state of the soil. If very dry and rains not probable they should be planted deeper than if soil is moist. Should a crust form, or weeds start before the beets prick through to the surface, use the weeder, going once across the rows, about four days before the beets appear. This crust, if hard, especially on clay loam, must be broken.

MUST NOT BE CROWDED.—Prompt action in thinning will save many days' labor, and the blocking out with the hoe can be done faster before than after the first cultivation. While the beets are in the second and third leaf run the weeder across the rows and tear out half the beets. In three days, if there is a good stand, use the weeder the second time, and then cut out seven-inch spaces with a hoe, leaving as small a space as possible in the block, which will contain from one to four beets. With a narrow hoe cut out all but the most vigorous plant in each block. The plants would then average eight inches or more apart. In blocking out save vigorous plants, even if spaces are not regular, but be sure to give space, for a large growth. With large beets the yield will be greater, and more easily and cheaply handled. By prompt action in thinning, nearly, if not all, pulling out by hand can be avoided. The seed required costs but little, and plenty should be used (especially with large drills which may cover a portion too deep) to secure a continuous row. If the drill tooth is set to point back as far as the angle will let it, the neck-yoke straps lengthened so as to drop the end of the tongue lower, and the tooth chains are drawn up a few links and tied, there need be no trouble to sow at any depth desired. Planet Jr. steels an inch wide can be purchased for eight cents each, and their beet-hoe teeth for 25 cents. Either of these can be attached to any cultivator, and are all the tools needed. Two or three cultivations following the thinning at intervals of a week, should be sufficient, and work done on them after that time usually adds nothing to the yield unless Summer weeds or a crust comes on.

ECONOMY IN HARVESTING.—With the team walking, one horse each side of the row, run the land side of the plow close to or a little under the beets, and a boy following can lay the beets over out of the way nearly as fast as the team will walk. By using a subsoil plow a number of rows can be loosened ahead before any are laid over. The beets should be laid with the tops all one way, and several rows laid together. A low table or bench is placed by the side of the windrow, on which two men can work facing each other. A sharp hatchet is used for trimming, and one stroke is sufficient. Where the beets are laid in regular order there is no turning or pulling them out of a heap, and one gains much time. Where the beets are loosened ahead the boys place the beets directly on the table. The beets are thrown in piles, covered with tops and drawn directly from the field to the car. The tops should be piled immediately in small piles and drawn as wanted for feeding. They will heat and spoil in large piles, or in the barn.

C. E. CHAPMAN.

OHIO GRASS AND GRAIN.

Fall-sown wheat and rye in this part of Ohio stood the Winter very well, and are now looking fine. Fields sown after September 20 are now green with the growing grain, and give promise of an abundant harvest; clover sown last Spring made a good growth, went into the Winter in good shape, and in going over my fields I notice very little of it raised out of the ground by freezing. Where the land was well tile-drained there is none heaved up at all. While we had no great amount of snow, there was enough to protect the growing wheat, rye and grass. I run my farm on the four-year rotation of crops, viz., clover, corn, oats and wheat; sow clover seed on the wheat, and have had the best success, or rather have had best results, sowing seed the latter part of January and first of February, should there be no snow. I would not like to sow on snow; the melting of it causes the seed to bunch. It floats together too much. If I cannot sow in January or February I wait until the last of March or first of April, in order to avoid the freezing weather that we often have at that time. That catches the seed when germinating, and not sufficiently rooted to stand the exposure. I am guided by the conditions I have to meet. I prefer the early seeding; use the Cahoon broadcast seeder, and sow from five to six quarts of seed per acre. I usually mix about eight quarts of Timothy seed with each bushel of the clover seed; thus both are sown at the same time. If we want a permanent pasture we sow more Timothy; in time the clover gives way to the Timothy, and the Timothy is crowded out by the Blue grass. With us here it is useless to sow the Kentucky Blue grass, from the fact that the native Blue grass supersedes it. The native Blue grass is indigenous to our soil, and will cover a field in three or five years, if left to itself and not disturbed by cultivation.

R. C. P.

Camden, O.

MY plums are mostly Lombards, and they rot badly, but bear regularly. The blue plums are preferred in the market. I think the Abundance is the best of the Japans; the Satsuma does no good for me yet. P. H.

SHALL WE THIN STRAWBERRIES?

The Demand for Large Fruit.

Do you know of any case where strawberry growers have cut off the fruit or blooms for the purpose of obtaining large and perfect fruit? One of our readers has had more or less trouble with his plants setting a large amount of bloom and producing only a heavy crop of small inferior berries. He says that as it pays to thin out apples, plums or peaches, it might also pay to thin out or cut off a portion of these fruits, hoping thus to obtain a large size for those left on the plant. Do you know that this has ever been done? Do you think that it would pay where one has a market for fine berries?

Thinning blossoms is done more particularly to obtain exhibition berries, not only to get larger berrics but those of better shape. The thinning should be done after the berries are formed, cutting out the small and deformed ones. I do not think the thinning is done much for market purposes; a liberal supply of manure with lots of water will pay better for the market. You must give the plants plenty of room. After the berries are well set watering with liquid manure will help out the size of the fruit. Water has more to do with the size than any one thing. If people should set out a few of different varieties they would soon learn the best kind for them to adopt.

Weston, Mass. S. H. WARREN.

As neither variety nor method of culture is given it is difficult to suggest a remedy. With us the large fruited varieties rarely set more specimens than they carry through to perfection in a favorable season. In hothouse culture the fruit is always thinned, but I feel sure it would not be profitable in a commercial sense in field culture. I think the best way the inquirer can attain his object is to keep his plants thin either by using a very narrow row or thoroughly thinning the plants in the wider row if he grows them so. We find that the largest and best fruit is produced upon strong, well-developed plants as near 12 months old at the time of fruiting as possible, and our smallest and most numerous on large stools or hills with the runners cut. F. G. TICE.

Oswego Co., N. Y.

I have no experience on this particular line, but I have no doubt it would bring the desired effect. I am inclined to think, however, that the remedy would cost more than the patient would sell for. A far more practical plan would be to plant varieties that do not overburden themselves with fruit or manure and irrigate to bring the immense loads of fruit to perfection. Irrigation would scarcely be more expensive, and would at least double the crop. It would be a tremendous job to thin the blossoms on an acre of strawberries grown in the matted-row system, or even if grown in hills. Furthermore, this would have to be done every year. I would advise that if the market is good enough to justify the expense of thinning to improve the quality, the more practical thing would be to irrigate. W. F. ALLEN.

Maryland.

This would not be my way to produce such results, and I do not think it would pay. There are ways that are practicable and will pay. Your correspondent undoubtedly has too wide rows and too many plants in the rows. Grow the plants in narrow rows, set plants three feet apart in the row, and fertilize liberally, and enough plants will grow to make all the row needed for good results. If the trade will pay for the extra trouble set plants three feet apart in the row and set first runner plants in a single row about six inches apart, and take off all runners that start on the plants afterward. Rows may be two to 2½ feet apart. To sum up the matter, reduce the number of plants in the row, and feed them liberally. This is the key to success, provided they are given proper cultivation and climatic conditions are favorable.

Dutchess Co., N. Y. WALTER F. TABER.

I have never seen the fruit or blooms of strawberries thinned for the purpose of obtaining large, perfect fruit, neither do I think the practice would pay, even if it would accomplish the desired result, because such work could only be done by the most careful workmen, and must be done at the very busiest season of the year, when such workmen cannot be spared. It is easy to grow large strawberries for a near-by market without thinning—this is the method I followed for a number of years very successfully: Select perfect-flowering varieties; these do not set too many fruit stalks. Plant in the Spring in rich, well-prepared ground, and cut off *all the fruit stalks* the first year as soon as they are in full bloom (this work can be done by boys and girls very cheaply). Keep clean and well cultivated during the entire season. As soon as the ground has frozen sufficiently hard to bear a horse and cart, cover the entire surface of the ground with fine horse manure at least two inches deep (I use manure from a livery stable bedded with sawdust); allow this mulch to remain on the ground. The plants will grow right up through it in the Spring; the Spring rains will wash it thoroughly, leaving a surface of clean sawdust for the berries to ripen on. The nitrogenous manure produces a large stalk with rank foliage, the mulch holds the moisture, and the result is large berries. Of course strawberries grown this way will be soft, and cannot be shipped long distances, but will command high prices in near-by markets. Ninety per cent of the strawberry is water; the heavy mulch recommended above, placed on top of a soil well-filled with humus, will furnish a large supply of water to the crop, and in my opinion is cheaper and better than thinning the blooms or fruit on an unmulched patch. GABRIEL HEISTER.

Pennsylvania.

ADVERTISING AT FARMERS' INSTITUTES.

Farmers' institute programmes often have advertising matter printed on them, the result of solicitation among local business men. In recent attendance at a local Indiana institute the writer found a scheme new to him, that had been tried, of having farmers advertise their goods for sale on the programme instead of town merchants. The accompanying illustration, Fig. 124, shows a page from this programme. The idea is an excellent one and should be taken up by farmers. They not only help support the institute by doing this, but they also let their friends and neighbors know what they have for sale.

C. S. PLUMB.

I have a
Work Horse and a Fine Brood Mare for Sale.
Both six years old. Also Pedigreed Hereford Cattle.
G. M. Naber, - - Treaty, Ind.

For Sale
One three-year-old heavy draft gelding. Also Barred P. Rock poultry. Eggs in Season. Write your wants.
H. E. Jackson,
Somerset, Ind.

70 Acre Farm for Sale
Good Soil, well ditched, good fences, fair buildings.
J. M. CRUMRINE, - - Somerset, Ind.

One Milk Cow for Sale.
Will be fresh soon.
NOAH FRANK,
Somerset, Ind.

FOR SALE.
One 12-horse traction Engine, Advance thrasher and stacker and one clover huller. Does good work.
ALONZO CRUMRINE, Somerset, Ind.

FOR PURE BRED
Plymouth Rock Chickens and Bronze Turkeys. See
Mrs. W. E. English, Treaty, Ind.

COW LUNCH IN THE PASTURE.

The practice of "soiling" or cutting and carrying green crops to stock is increasing, as farmers realize how much more food can be obtained on an acre in this way. A few dairymen grow a great variety of crops, so that from the earliest rye until the latest barley and peas there is always a supply of green food. Many, however, are satisfied with rye, corn and millet. No doubt corn is the best single crop for this purpose, but it should be pieced out at either end of the season, and in order to do this crops must be grown that will stand the frost. Our picture, Fig. 123, shows a Massachusetts hillside pasture in which the cows are taking their green lunch. Our western readers will smile at the rocks which stick their noses out of the soil of this pasture! The cows know their business, however, and are not afraid of the stones. They will put that corn sandwich just where it will do the most good. Mr. Nichols, who owns the cows, writes this note about the corn:

"This corn that the cows are eating grew in a field beside the pasture, and I had only to throw it over the fence. I do not advocate always feeding the corn to the cows in the pasture, as the stronger cows get more than their share; but when it is first large enough to use, it is so tender they will eat it up clean, or if any is left they will finish it next morning. It is very convenient to do this when the cornfield happens to be alongside the pasture. I generally plant about two acres of fodder corn for Fall feeding, and have it ready for use about August 1, when the pasture begins to dry up. I feed it once a day, giving each cow all I can possibly lift with both arms. Except occasionally, as you see it fed in the picture, I bring it to the barn with a wagon, and have it for the cows when they come from the pasture at night. I had on these two acres last Fall about five tons. It grows from six to 12 feet high. I feed it green until the frost takes it, then cut, bind and stook the balance. I use western yellow corn for seed. Some of the readers may think that it is a great temptation to have the cornfield beside the pasture, and the cows I had corn on three sides of the pasture, and the cows did not break into the corn any more than they did into the mowing or road. I generally keep my eye on them, so they never do any great damage. Once, when some berry-pickers left the bars down the cows passed through the cornfield and never molested it. They passed through two other fields into a field of cabbages, where they filled themselves in grand style."

SPRAYING TREES IN FEBRUARY.

A Call for Information.

On page 207 Edwin Hoyt says: "Spray in February with Bordeaux Mixture." Is this sound advice, or a slip of the pen? Imagine getting out the spraying rig and attempting to spray an orchard in snowbanks three feet deep, to say nothing about the frosty air and howling winds incident to the season. But this is not the point. Why the need of a fungicide in February? We read that the fungous diseases are most active in damp muggy weather and are practically dormant through the Winter, or until about the time the buds begin to swell in Spring. But, granting the need of a fungus spray in February, why the lapse of from eight to 10 weeks, when the blossom buds appear, before Mr. Hoyt advises the second spraying? Be it remembered that Bordeaux Mixture is not a cure, but only a check to fungous growth, and if there be need of a spray in February why not a similar need every two or three weeks thereafter until the blossoms appear? Mr. Hoyt further advises the application of Paris-green "after the blossoms fall and fruit is well formed." To beginners and all looking for advice on the subject we urgently advise especial heed of the first part of the clause, "after the blossoms fall," and not wait until "fruit is well formed." Our best scientists have observed that from 75 to 85 per cent of the worms of the Codling moth enter the apple, that is, take their first meal, through the blossom end. Therefore, to make the application most effective, here is where the sprayer should lodge most of the insecticide. Now then to lodge the spray in the blossom or calyx end of the little apple it must be done within a week after the blossom falls, or it will then be too late, as close observers have noticed that immediately after the blossom falls the calyx cup in the miniature apple begins to close up, and is almost completely closed up in a week or 10 days. It is obvious, then, if we wait until the "fruit is well formed" before applying the poison our opportunity will have passed.

In the light of our experience, and in that of other orchardists with whom we are conversant, we would make the first application of Bordeaux when the buds first show signs of swelling, which is in this latitude about April 10 to 15; the second when blossom buds show red ends; (we apply poison also with these applications for bud moth, tent caterpillars, etc.), the third immediately after blossoms have fallen; and fourth about 10 days or two weeks later. These are not iron-clad rules, but are modified according to the weather and season. Some of the best orchardists omit the first application named, while others substitute this for the second, thinking it more important. We make these comments not in any unfriendliness to Mr. Hoyt, but to bring out whatever is to be learned on the subject. What all good orchardists want to know is *just* when and *only* when it is necessary to spray. W. A. BASSETT.

Seneca Co., N. Y.

Mr. Edwin Hoyt Talks.

That is quite right, Mr. Bassett. If you do not believe a thing which you see written, or do not understand it, then pitch in and dress out the writer. That is the way to draw out the discussion. But you are doing well, very well. You spray your trees four times in the season. That is much better than very many orchardists do. If that accomplishes all to be desired in spraying then do as you are doing; I have no criticism to make. I made no slip of the pen, however, when I said spray the apple trees in February. I am advising from my section, where we seldom have "snow banks three feet deep or howling winds" in February, so that there are not some days in the month fitted for orchard spraying. If in the latitude of Mr. Bassett it is impracticable to spray in February, then do it as soon as it is practicable. It is not absolutely necessary to do it in February, but it is advisable to do it some time while the trees

are in a dormant state. Mr. Bassett says: "We read that the fungous diseases are most active in damp, muggy weather and are practically dormant through the Winter, or until about the time the buds begin to swell." Exactly. But where are these dormant fungus spores? We read, also, that they are fastened to the underside of the loose or partly lifted bark; in the crotches of the limbs where any foreign matter like small leaves, pieces of bark, moss or other dirt may lodge, and in various other places where one's eye would not detect them; that while the tree is dormant a much stronger solution of sulphate of copper can be used in spraying than when the tree is in foliage, and that by spraying in February or March (as best suits the locality), the destruction of these dormant spores, so far as the tree sprayed is concerned, is sure; for if the spraying is thoroughly done, every part of the tree can be hit with the copper solution. Again, we also read that it is wise to rake up all fallen leaves lying under the trees and burn them, as they also harbor or contain myriads of these fungus spores which "lie dormant until about the time the buds on the trees appear." Do not, however, try to burn them when covered with snow or the howling winds are raging. It would not be practicable.

There is no need of spraying but once in the Winter, as one spraying, if thoroughly done, will be sufficient, until the warm weather comes and the undestroyed fungus spores wake up and make ready to do their Summer work. About this time the tent caterpillars hatch out and commence their work of eating the little leaves as they push out, which is about the time the blossom buds show some red. Then spray the second time with the regular Bordeaux Mixture with five or six ounces of Paris-green added to 50 gallons. This spraying will destroy the caterpillar and serves to keep in check the fungous. The next or third spraying use the same mixture as the second, and spray after the blossoms have fallen and the fruit is formed (I will leave out well, as it was not properly interpreted); this spraying will not only destroy many of the Codling moths, but the Canker worm, which (if it come), appears about the last of May. The fourth spraying, in about 10 days later. Now I do not see that Mr. Bassett and myself are very far apart in this spraying business. He sprays four times, twice before and twice after the blossom falls. I advise for first spraying in February. He sprays first about April 10 or 15. In February we have many pleasant days, and nothing driving in our work. In April I am in the middle of plowing, sowing, planting, etc. Time is with me worth more in April than in February. Is the spraying any more effectual in April than earlier? Not at all, but rather the strong solution of sulphate of copper used (say double the strength used when the foliage is out), has longer to work and act upon these "dormant" spores than if used six or eight weeks later. If Mr. Bassett has no other farm work to do than attend to his orchard (as I believe no thorough and large orchardist should have), then spray the first when most convenient to do it, yet I fully believe if done a month earlier than he does it, it would be rather more effectual. EDWIN HOYT.

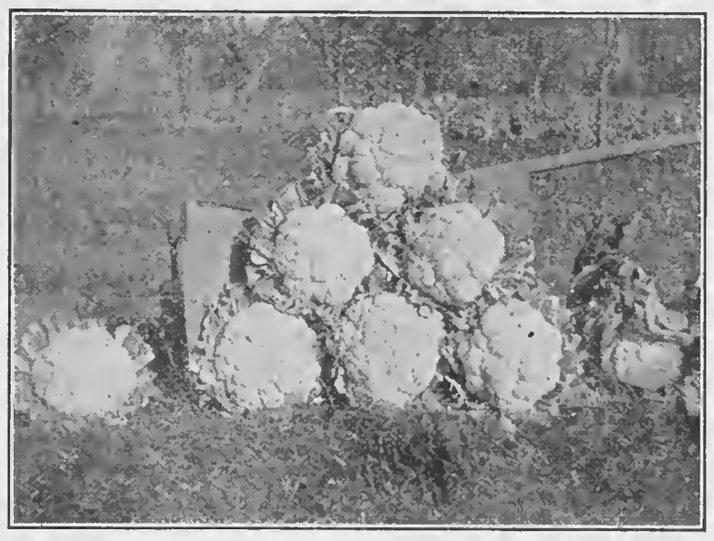
Fairfield Co., Conn.

THE STAYMAN AND SOME OTHER APPLES.

The Stayman apple, which is referred to in THE R. N.-Y., March 23, has wholly superseded the old Winesap here, being (as Professor Van Deman states), equal to it in every respect, and superior in some. As between Stayman and York Imperial, the latter has a little advantage in the red being rather more brilliant, but in quality it is somewhat behind Stayman, and in the growth of the tree a good deal behind; while the peculiar oblique form which York Imperial usually assumes is against it as compared with the smoothness and symmetry of Stayman. A choice early Winter apple about which not much has been said is Evening Party. It is a most beautiful fruit, bright, dark red, over the whole surface generally, with a bloom, and is just the right size for a dessert apple. The texture is very tender, and the mingling of sweet and acid—the latter slight but distinct—makes it welcome to young and old. It originated in Pennsylvania, but was received here (20 years or more ago) from the late I. D. G. Nelson, of Fort Wayne, Ind.; a man who had a just appreciation of fine apples. The tree is a beautiful, upright grower and a profuse though somewhat tardy bearer. Another choice apple which usually lasts until the middle or end of April, is Stuart's Golden. It is an Ohio variety, having originated in Fairfield County, about 40 miles southeast of Columbus. In color it resembles Grimes Golden, but it generally has a blush; and in quality it is worthy to stand with any of the varieties mentioned. The tree is a vigorous, spreading grower, and an early and profuse bearer, not dropping its fruit as Grimes does. It was named from the family in whose orchard the original tree grew; and Mr. Downing placed it in his large work, "Fruits and Fruit Trees of America." The outline there is below the usual size.

About the only kind troubled with twig-blight here is the fine old Fall Pippin. Its place can be taken, however, by the excellent variety raised by Dr. L. S. Mote, of Miami County, Ohio, and named Celestia by Dr. John A. Warder, author of "American Pomology." It is less acid than Fall Pippin, and not quite so desirable for the kitchen, but better for eating out of hand. It is about the same color as Fall Pippin, and many specimens closely approach it in size. The tree of beautiful, vigorous growth and a good, but not very early bearer. Lankford, recently introduced from Maryland, hardly sustains its reputation thus far, but it may do better after a further trial. Tompkins King and Tolman Sweet are comparatively of no account here. The best Winter sweet apple is Broadwell, a variety said to have originated on the Ohio River above Cincinnati. It usually keeps until April. Baldwin is generally on the ground at picking time, and beginning to decay; too far South of its native locality. The same may be said of Palouse, the beautiful variety from the Valley of the Columbia, in eastern Washington, where it keeps until April, but ripens here in September. It is thought to be a seedling of the old Bellflower. Two others, known to be seedlings of Bellflower, Marshall (from California) and Dickinson (from near Philadelphia), are promising, but have not borne sufficiently yet to fix their standing. Arkansas Beauty is superior to Arkansas Black, though hardly as brilliant in color as represented though still a "beauty." It is a very promising apple, and bids fair to be a very early bearer. One three-year-old tree (which had not been moved), bore three apples in 1899, and last season it bore no less than 13. R. J. BLACK.

Fairfield Co., Ohio.



THE MATTITUCK CAULIFLOWER. FIG. 124.

SOME COW-PEA FACTS.

Are you still advocating the use of cow peas?

Certainly. Reports are nearly all favorable.

What soil are they best adapted to?

The lighter, poorer soils of the farm. We would not sow them on good corn ground. Put them on the poorest field in the rotation.

ROPING A COW'S TAIL. FIG. 125. SEE PAGE 319.

Do you advise their use as fodder or hay?

No, not in the North, though some northern farmers have found them very useful. At the New Jersey Station an acre of cow peas gave 16,000 pounds of green forage per acre, or 384 pounds of protein. This would equal the protein in 2,500 pounds of wheat bran. At the Nebraska Station cow peas were used as a pasture for cows. It was found that an acre of cow peas produced more milk than an acre of sorghum fed under the same conditions.

What would you plant cow peas for, if not for hay?

To plow in as manure, or to make a hog pasture. In an inclosed field near the house the hogs might run on the cow peas and eat them to advantage. Usually such fields will produce corn or some better forage crop. We plow the cow peas in as manure.

What are they worth as manure?

At the Louisiana Station it was estimated that the leaves, stems and roots of an acre of drilled cow peas furnished 108½ pounds of nitrogen, 25 pounds of phosphoric acid, and 123 of potash. The yield was below the average.

What does that mean?

It would require more than 10 tons of average stable manure to provide this amount of available nitrogen and potash.

Suppose the crop had been cut for hay?

In that case, most of the nitrogen would have been taken from the field. The roots of the cow pea are comparatively small. The nitrogen, which is taken from the air, comes into the plant by means of the roots, but is found at maturity in leaves and stems.

Are such experiments conclusive?

No. They are more or less estimates. A pound of nitrogen in cow-pea vines may not be equal to a pound in manure; still, from our experience, we would as soon have the crop grown on the average acre as the 10 tons of manure.

But doesn't the cow pea demand the use of the land for a whole season?

Yes, in order to make seed, but a fair manurial crop can be grown after an early crop, and before frost.

Do you know that?

Yes, we have grown a fair crop of cow peas after early potatoes, also after picking strawberries. In the South cow peas are drilled in the corn after the last cultivation, or dropped in the hills when hoed.

Have others done it?

Yes; Prof. Cottrell, of the Kansas Agricultural College, tells of 15 acres of cow peas that were planted in Kansas on oat stubble. The planting was done July 16. The variety was Whippoorwill. By October 4 the vines covered the ground, and yielded more than one ton of hay per acre. One great virtue of the cow pea is that it makes a fair growth in a dry season. Most people are inclined to sow it too early. It is a bean, and will not stand frost or cold soil.

NOTES ON POTATO GROWING.

A POTATO ISLAND.—Victoria Island, about 20 miles west of Stockton, Cal., is said to contain the largest potato patch in the world. The land is "new," having been reclaimed from swamps. This year about 40,000 acres will be planted in potatoes.

The tracts are divided into districts, and small camps are established in each district. A white foreman is put in charge of several Chinamen, who are paid a certain sum for each acre they care for, and in this way the results are said to be far better than any other ever attempted. The payments for the work are made at intervals, and the services include planting, cultivating, digging and sacking the potatoes. When the tubers are ready for the market the final payments are made to the Chinese bosses, who distribute it among the laborers.

These potatoes are sent to San Francisco and shipped all over the Pacific country.

DIGGING IN SOUTH CAROLINA.—Our labor is very much opposed to potato diggers, thinking they are to take the place of the laborers in handling the potato crop. I can dig and sort, pick up and load into cars 1,000 to 1,500 barrels of potatoes per day by hand, digging with a potato fork, at about 12 cents per barrel. A man and two boys or girls will dig and sort 30 to 40 barrels of potatoes per day. We pay them 10 cents per barrel for digging, sorting and putting the potatoes into barrels. It costs about two cents per barrel to cover and haul the potatoes to the car, which is never over one-quarter of a mile from the potato field, as I haul spurs all through my fields. A man and two small boys or girls will earn $3 to $4 per day digging with forks, and they will not pick up the potatoes behind a potato digger. I have offered them 10 cents per barrel to pick up behind the digger; they say nothing, but simply walk out of field and leave mules and diggers alone. In the Fall I use the diggers all right, and gather my potatoes for about five cents per barrel, but cannot do it in the Spring when the whole country is planted in potatoes. W. C. G.

Youngs Island, S. C.

THE MATTITUCK CAULIFLOWER.—Fig. 124 shows heads of the Mattituck cauliflower grown by C. Weckesser, Wayne Co., O., who writes us that he grew about 2,200 of this sort, side by side with about 3,000 plants of Erfurt and Snowball. The Mattituck is exceptionally solid, single heads weighing 10 pounds, and it proved a favorite in the fancy trade, selling for a higher price than other varieties. The originator, Mr. March, has selected the strain of seed very carefully, and Mr. Weckesser says it gives uniform results which he has not heretofore obtained with American seed. Hereafter he thinks he may grow no other cauliflower unless it loses its present high qualities.

THE STRINGFELLOW METHOD.—I would say to those intending to experiment with root-pruned trees that it is not necessary to pound the ground except where it has been deeply plowed before. If already settled and firm, drive the holes about eight or 10 inches deep and use sand instead of soil to pour in with the water. Sand settles compactly, but I find that loam or soil will shrink. If such is used, then ram earth around the trees at the bottom, before watering. Fertilize well on top, mulch, or keep a three or four-foot circle clean, and this is all that is necessary. My trees, so planted a year ago, now have nice heads, and several peaches to the tree. I hope every reader of THE R. N.-Y. will risk at least one tree.

Texas. H. M. STRINGFELLOW.

The Cornell Reading Course.

Edited by John Craig, Professor of University Extension, and Editor Farmers' Reading Course, Cornell University, Ithaca, N. Y.

Orchard Management.

1. I have some apple trees that are full of blossoms every year, and set enough fruit, but keep falling the whole season until there is none to pick by the time they are ripe, which is August 25. I do not know the name of them. What is the matter? 2. Are Gano and Stayman good varieties of apples for this district? 3. What is the remedy for Woolly aphis? 4. I have been told that it is best to use lime on the ground where cow peas are to be plowed under, or they will sour the ground. Let me know how you handle them. 5. What kind of fertilizer would you advise using on a peach orchard, three and four years old? Would I receive any Benefit from wood ashes used this Spring in this year's crop? F. G. S.

New Hurley, N. Y.

As a rule the loss from dropping of early apples is much greater than that of Winter fruit. This loss may be traced to two principle causes: First, imperfect pollination; second, injury due to insects and fungi. Imperfect pollination means partial self-sterility. The blossoms are unable to fertilize themselves. This may be overcome by intermingling varieties which blossom at or about the same time. The second difficulty is overcome by spraying. No fruit grower or farmer with an orchard can afford to omit this necessary farm practice. In Bulletin No. 114, Cornell Experiment Station, directions are given for the preparation and application of sprays which destroy insect and vegetable parasites. 2. Gano and Stayman are two varieties of apples belonging to the Ben Davis type. They are favorites in the Southwest. I think they will give less satisfaction in New York than in the Mississippi Valley. They need a hot and dry season to give them quality. Scions may be secured of any of the western nurserymen. S. D. Lake, Shenandoah, Iowa, or C. L. Watrous, De Moines, Iowa, can no doubt supply you with scions or root-grafts of these apples. 3. Apple roots which are infested with Woolly aphis can be treated before planting by dipping the roots in kerosene emulsion. If they are discovered on the roots after the trees are planted the cheapest way to eradicate them is to dig the trees up and destroy them. The roots infested with Woolly aphis become knotty and gnarled, and the entire growth of the tree is stunted. The tendency is, of course, for the insects to spread from one tree to another. 4. There is no more reason for using lime on ground where cow peas are to be sown than in the case of any other crop. Lime is not a direct fertilizer. It is an amendment; that is to say, it tends to make available other elements of fertility in the soil. In this way it is valuable, but all soils do not need it. In some soils there is an abundance of lime present. There is also some danger of using too much lime on land, because the more plant food released, the more humus is used up, and if this practice is continued without adding humus to the soil by turning under green crops, the land may soon reach a worn-out condition. 5. One cannot answer a question of this kind satisfactory without knowing the character of the soil and the condition of the trees. If an orchard has been planted on a soil that has been cropped for a number of years, then on general principles I would use a nitrogenous fertilizer. If, on the other hand, the ground is in good heart, it is quite probable good results might be secured from the application of wood ashes. The best guide in this matter is the growth that the trees are making. If they are growing vigorously you will probably not make any mistake in applying wood ashes. If, on the other hand, the growth is not all that you might desire, then I would use some form of nitrogen, either barnyard manure, bone meal or nitrate of soda. The potash in wood ashes dissolves readily and should affect the growth of the trees the same season if applied in the Spring.

BEDBUGS AND THEIR KILLING.

It is doubtful whether there is any other insect inhabitant of temperate climates, so thoroughly hated by human beings as the bedbug. In the South there are many worse pests in the shape of bugs, ticks and spiders, some of them so small as to be invisible to the naked eye, but making a most distressing skin irritation. In large towns and cities bedbugs are a great nuisance, and, in houses where there are a number of people who go to work every day in different parts of the city, the housekeeper has to be constantly on the lookout for bugs. Many of the street cars are so infested that anyone who occupies a seat for only 15 minutes is liable to take home enough vermin on his clothes to stock the house. It is comparatively easy to keep country houses free from these pests, as there is not so much going and coming, and, if a house is once thoroughly freed from them it is easily kept so, something impossible in many city houses. Nearly all the drug stores sell preparations for making way with these insects, and there are various simple remedies, which are more or less effective. Benzine or turpentine will do the business, and may be put on furniture or cracks in the woodwork of a room without doing damage. Corrosive sublimate solution is not clean and rather unpleasant to use, but it leaves a coating of poison wherever it is put, which lasts for some time, and no bugs will come near it. For a building that is badly infested, however, there is probably no better remedy than a thorough fumigation with hydrocyanic acid gas. This is largely used in the fumigation of railroad cars, as it penetrates to every crack and does not injure furniture or hangings. This gas is formed by the union of cyanide of potassium with diluted sulphuric acid. It is a most deadly poison to everything that breathes, and must be used with the greatest care. Following are directions for fumigating a room with this gas: Find the cubic contents of the room by multiplying the height, width and length, in feet, together, divide this product by 200, and the result will be the number of ounces of cyanide of potassium needed. In the center of the room put an earthen jar containing twice as many ounces of water as the cyanide required. Add to the water 1½ time as much strong sulphuric acid (about 1.8 specific gravity), as the cyanide required. Stop up all the cracks in doors and windows to prevent the gas from escaping, throw open closets and toss up the bedding. Open doors and windows of the other rooms to allow a free circulation of air through the halls. Have the cyanide of potassium in a piece of paper; put it into the jar of acid and water; leave the room at once, and shut and lock the door. Be sure to *hold your breath* from the time the cyanide touches the liquid in the jar until you are out of the room, as the deadly gas is instantly generated, and one good whiff might be fatal. In about an hour and a half, open the room and air thoroughly. The gas will not injure carpets or curtains, but it is a good plan to set the jar containing the acid into a larger vessel, so that there will be no danger of the acid spattering on the carpet when the cyanide is put in.

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Fruit Varieties for Maine.

J. S., N. Woodstock, Me.—1. What kind of apples would you advise me to plant in this latitude? Baldwins do well, while R. I. Greening is a total failure. Beauty of America does well. 2. Would peaches stand 20 degrees below zero on a dry hill farm? The land is good for corn and other hoed crops. If peaches would stand the climate, what kind would it be best to plant, and how should they be cultivated? 3. What kind of currants would you advise anyone to plant on dry upland, or would raspberries do better?

ANS.—1. North Woodstock is in one of the best apple-growing sections of Maine, and, unless for special local conditions on the farm in question, any of the standard varieties will do well. For market, plant few varieties. Baldwin is one of the best general-purpose apples for your section. Ben Davis is profitable, though of inferior quality. Tolman Sweet, Bellflower and Gravenstein may also be profitably grown. For home use add one or two trees each of Fameuse, Mother, and Winter Sweet Paradise, with Oldenburg and Munson Sweet for Summer and Autumn. 2. Peaches would be very uncertain in your section, though they are grown, to a limited extent, in York, Androscoggin and Cumberland counties. 3. The Fay currant is more largely planted than any other variety in Maine. It has the fault of breaking down badly in Winter, and should be protected from snow by tying a cord about the top of the bush in Autumn. Prince Albert is one of the most valuable sorts; a little later than most others, and retaining its foliage well. President Wilder is good, as is also Moore's Ruby. W. M. MUNSON.

Maine Exp. Station.

The Disk Harrow on Alfalfa.

I have about three acres of Alfalfa next to river bottom land. Will it do to cut it up with a disk, then sow more seed and harrow in? I also wish to add another strip, same kind of land, but at present it is in Timothy sod. Will it do to break this sod, harrow well, then sow to Alfalfa? At what time should such work be done? Anderson, Ind. G. M.

The Alfalfa root forms a crown above the surface of the ground. From this crown the stalks of Alfalfa grow, sometimes as many as 140 stalks growing from the crown of a single stalk, and often only five to 10 stalks growing from a crown. By disking the Alfalfa these crowns are cut and wounded, and new stalks thrown out. At the same time the disking makes a good earth mulch, and destroys weeds and grass. In our experiments we have disked Alfalfa two years from seeding and older. We have not tried to disk one-year-old seeding, as we were afraid disking might be too severe for the young roots. We issued a bulletin March 1 giving the results of our work. Since that date we have received several letters from Alfalfa growers who report that they have found it profitable to disk one-year-old Alfalfa. From the reports received it seems perfectly safe to disk year-old Alfalfa if care is taken to split the crowns, but not to sever the roots. We have tried sowing seed at the time of disking but without success. The seed germinates well, and while the old Alfalfa is small the little plants grow rapidly. After the old Alfalfa begins to shade the ground the little plants begin to die, and by the time the Alfalfa is cut the second time, all the young seeding has disappeared. A few farmers report success in thickening a poor stand of Alfalfa by sowing the seed at disking and then treating the old Alfalfa as though it were weeds—mowing it every 10 days until September. In this way the young Alfalfa gets a good start, and is not injured by shading. I should expect a failure from sowing Alfalfa on freshly-turned Timothy sod. If possible G. M. should raise a leguminous crop between the Timothy and the Alfalfa. Either Soy beans or cow peas are good. Alfalfa needs an easily available supply of nitrogen during the first six months of its growth. After that it will take care of itself. If it is not practicable to raise either of these crops then grow corn or some other crop that can be given clean culture. H. M. COTTRELL.

Kansas Exp. Station.

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WE ARE HEADQUARTERS for these and all Southern specialties, including Soja Beans, Velvet Beans, Pearl or Cat-tail Millet, Teosinte Bermuda Grass, Ensilage Corn, Spanish Peanuts, Chufas, Sorghums, etc. Write for prices, and our interesting Catalogue giving full information about these crops. T. W. WOOD & SONS, - Richmond, Va.

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First Introduction to America of

Black Soluble Insecticide Soap.

Awarded Grand Prize at Paris Exposition, and winner of Gold Medals at International Expositions of Rome. Recommended as efficacious by largest European Nurserymen and Growers, including Messrs. Vilmorin, Andrieux and others. All pests of outdoor or indoor plant life, including San José scale, succumb to the effects of this remedy. Fruit Growers and Horticulturists send for pamphlets, prices and other information.

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THE LIGHTNING COMPRESSED AIR SPRAYER. Patented 1900. Holds four gallons. Pump in a little air with the pump which is attached to the reservoir. No more labor required. Will kill all kinds of insects. Will spray two rows of potatoes at one time and as fast as the operator can walk. Big money for Agents. D. B. SMITH & CO., Utica, N. Y., U. S. A.

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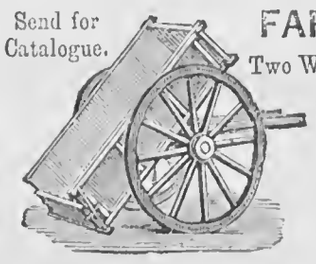
If you have the right pump

With or Without Truck.

Our No. 305 Outfit is as good a pump as ever was sold, and you will be surprised when you learn the price. We sell Pump, Barrel, 5 feet of Hose, Graduated Nozzle, which throws a spray as fine as mist, Extension Pipe for high trees and with first order from every town, 10 lbs. of Paris-Green Free. Write for 100-page Catalog, free, telling all about it, and how and when to spray. Also other valuable information. ROSS BROS., Front Street, Worcester, Mass.

Send for Catalogue.



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POTATOES—Bovee, Carman, Cobbler, Harvest, Six Weeks, Ohio, Rose, Astonisher, 85 kinds. C. W. FORD, Fishers, N. Y.

Farmers 30 choice standard varieties. Carman No. 3, $1.85 bbl. *See last week's ad* S. J. SMITH POTATO FARM, Box B, Manchester, N. Y.

POTATOES—Grown especially for SEED, 14 varieties, early and late. Prices right. List free. GEO. H. COLVIN, Box 57, Dalton, Pa.

For Sale About 300 bushels Extra Choice Early Bovee Potatoes, free from disease and scab. For prices etc., address J. D. MILTON, Seneca, Ont. Co., N. Y.

CARMAN No. 3 $3.00

Sir Walter Raleigh and Early Bovee $4.00 per bbl. all bbls. 4 bu. Dewey, the great cropper. Wholesale list *free*. GEO. A. BONNELL, Waterloo, N. Y.

Imes' Blight-Proof Seed Potatoes 1901 Catalogue, Free, gives particulars

CARMAN No. 3. To prove superiority of our *Seed Potatoes*, we offer 2,000 bu. at $2.50 per 4 bu. bbl., f. o. b. The W. E. Imes Seed Co., Smith, Mich

SEED POTATOES

Bovee, S. W. Raleigh, Carman's and other standard varieties at very reasonable prices. Price-list. F. H. THOMSON, Fairview Farm, Holland Patent, N. Y.

B 4 U BUY see my circulars and prices. Carman and Sir Walter Raleigh Potatoes. Eggs from high-scoring, prize-winning, White Wyandottes and fine flock of White P. Rocks. Vegetable Plants and money-making Seed Specialties. Seed and Plants of the most profitable Cauliflower grown. Investigate if you want the best on the market. CHRISTIAN WECKESSER, Marshallville, O.

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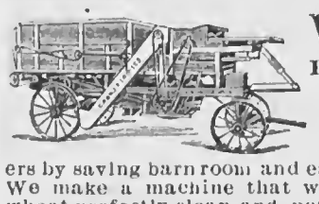
We offer Seed Potatoes: Bovee, Harvest, Michigan Fortune and Columbia, all early; Sir Walter Raleigh and Carman No. 3. Choice stock; guaranteed true to name. 50c. per bushel in barrels. True Dwarf Essex Rape, 6½c. per pound; 15c. for bag. Mammoth Yellow Corn, $1 per bushel. Clydesdale Oats, 60c. per bushel, bags free. Cash with order. Will take 2c. stamps for less than $3. Money-order office Caledonia, N. Y. *This ad. will appear but once.* D. C. McPHERSON SEED CO., Garbutt, N. Y.



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Page Stock Fence much to fell a tree across it. We will stand the damage for the first ton men who try it. Who'll duplicate this "ad?" PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

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THE POULTRY-HOUSE **ROOFING**

As a water-proof covering for Poultry-Houses, RUBEROID has no equal. Keeps the houses cool during the warm weather, and warm in Winter, and the chicks dry and comfortable. The sun cannot melt it.

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Fowls of W. & Bd. Rock, W. & Bn. Leg., W. Wyan. vars., Eggs $1 & 1.50 26. Stamps. Mrs. J. P. Heilings, Dover, Del.

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SILVER WYANDOTTES WANTED AT $8 EACH

See Rural New-Yorker, March 30, page 234. BEAVER HILL FARM, Beaver, Pa.

INCREASE YOUR INCOME Brown Leghorns will do it. I have them. Eggs for hatching. 65c. per 15. Circular free. H. W. Phillips, Bird's Run, O.

90 Varieties Choice Poultry. Eggs, Pigeons and Belgian Hares. All combined and information in 60 page book, 10 cents. J. A. BERGEY, Telford, Pa.

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W. Wyandottes (210-egg strain), B. Rocks, S. C. W. Leghorns, bred from stock which won at N. Y. and Boston 1899 and 1900. D. Brahmas and Pekin Ducks won in 1898. Eggs, 15, $2; 100, $5. Satisfaction guaranteed. D. H. COLT, Elmwood, Conn.

BROOKSIDE'S WHITE WYANDOTTES please every one because they are carefully bred for business as well as fancy. Eggs that hatch from the choicest matings, $2.00 per 13. Almost their equals for business, $1.00 per 13 $5.00 per 100. J. E. STEVENSON, Columbus, N. J.

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EGGS—Fertility guaranteed. By the sitting or hundred. 23 varieties of prize-winning land and water fowls. Big Catalogue free. Our guarantee means something. PINE TREE FARM, Box T, Jamesburg, N. J

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ZENOLEUM Kills Lice, Ticks, Mites, Fleas, Etc., on all kinds of animals and poultry. Given internally it drives out worms. Cures all cuts, wounds, sores, etc. Non-poisonous. Endorsed by leading veterinarians. "Veterinary Adviser" free. Zenner Disinfectant Co. 100 Bates St. Detroit, Mich.

"FUMA" kills Prairie Dogs, Woodchucks, Gophers and Grain Insects. "The wheels of the Gods grind slow but exceeding small." So the weevil, but you can stop their grind with **"Fuma Carbon Bisulphide"** as others are doing. EDWARD R. TAYLOR, Penn Yan, N. Y.

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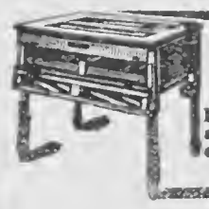

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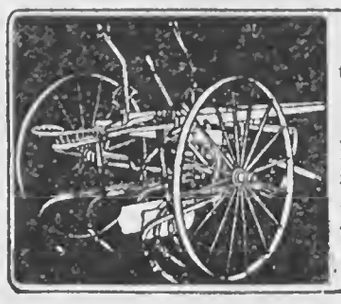
SPECIAL PRICES for next 30 days on HATCH-ALL INCUBATORS and WARM-ALL BROODERS. Send at once for free Catalog No. E-33. It will surprise you. Hatch-All Incubator Co. Toledo Ohio.

$5.00 Compressed Air Sprayer for $3.75

It is admitted by all classes of fruit growers and farmers that my 5 gallon compressed air sprayer is the most durable made. This reduction is made for a limited time only. Take advantage of the liberal offer—it may be your last opportunity to get the sprayer at the reduced price. $3 75 for galvanized steel, $5.00 for copper. **Will throw a good stream 25 to 30 feet.** Good pressure 20 to 30 minutes. **The tallest fruit tree can be sprayed.** Order to-day. Salary to reliable men. Address MARTIN WAHL, Rochester, N. Y.



DON'T HIRE A MAN to run this cultivator. Your little boy can do it just as well. That is because the **KRAUS Pivot Axle CULTIVATOR** is easier to operate than all others. A slight touch of the foot moves the entire machine to right or left instantly. Only successful cultivator for working hillside rows. Each gang has convenient lever for lifting and regulating. A center lever for spreading or closing gangs to suit wide or narrow rows Unusually strong and well made. Pin or spring hoe or spring tooth. Two, three or four shovels on each gang. We also make the Carpo Walking Cultivator. Write for free catalogue. The Akron Cultivator Co., Dept. D, Akron, O.

Ruralisms

NOTES FROM THE RURAL GROUNDS.

A FINE TOMATO.—We have just ripened a perfect specimen of the Ponderosa tomato, weighing a trifle over 14 ounces. It was quite smooth, colored to the stem, and contained less than 30 seeds, so that its solidity and high table quality are at once evident. This is, of course, not an unusual specimen as regards size, as Ponderosa tomatoes have been grown weighing three to four pounds under the most favorable garden conditions, but this one was produced on a cutting growing in a seven-inch pot. The Ponderosa does not usually produce enough pollen for self-fertilization under glass, and is not at all adapted for Winter forcing, though it is constantly growing in favor with amateurs who take pleasure in bringing it to perfection in their gardens by careful culture and training on a stake or other support. The large size and good quality of Ponderosa are very taking characteristics when it ripens thoroughly without the hard green core about the stem, which may result from unfavorable conditions. The particular fruit in question would be worth about 15 cents at this season in the local grocery, and it certainly required an expense in greenhouse space of several times that amount to produce it. The object in growing the Ponderosa was to secure a cross with other desirable varieties, which has been effected. Our plants of Combination x Best of All have been very productive, considering the harsh weather conditions, and bid fair to earn more than $1 per plant, based on local prices for Winter tomatoes. The Ponderosa plant shows an inclination to redeem its reputation by setting more fruits, which should ripen long before the garden tomatoes may be expected.

THE GREAT JAPANESE PARLOR FLOWER.—At this season, when the commuter's fancy lightly turns to thoughts of gardening the sidewalks of the various city streets leading to the Jersey and Long Island ferries are at times almost blocked with stacks of roses, shrubs, evergreens, fruit and ornamental trees, all with their roots tied up in moss and earth ready to be taken home and planted, as well as vast lots of Summer-blooming and left-over Fall bulbs. The dealers who offer these odds and ends of horticultural merchandise usually have a very casual idea of the proper names of the varieties, and some extraordinary and original labeling results therefrom. When one was asked the names of some dried-up Crocus corms he replied that he "didn't know just exactly, but he thought they were called Parotitis," which is a very good medical name for the disease commonly known as the mumps, but had never before been applied to the modest Crocus. A chronic offender is always offering bulbs of the "Great Japanese Parlor Flower." The attention of possible purchasers is assisted by a large and highly-colored painting, apparently representing a cross between a hollyhock and the brilliant South African orchid, Disa grandiflora. The bulbs offered by this ingenious fakir vary according to the season, from several species of Narcissus to lilies, Crinums, and occasionally the Elephant's Ear, Colocasia antiquorum. As most of the bulbs sold seem to be already dried up or dead, it is probable that flowers are not often produced to disappoint the buyers with their lack of resemblance to the painted representation.

MORE JERSEY ASPARAGUS.—That our Monmouth County asparagus growers are not discouraged by the fight with rust is evidenced by largely increased planting about Morrisville and Holmdel, not far from the Rural Grounds. These hamlets have long been noted for asparagus production, and the famed Conover Colossal variety first appeared in the vicinity. The Conover has been grown almost to the exclusion of other varieties until the advent of the rust, four years ago. Observation of different plantings, as well as information received from the State Experiment Station at New Brunswick, has convinced these practical men that the Palmetto and Argenteuil varieties resisted the rust much better, and they are now being planted locally to the exclusion of all other kinds except McDonald's Elmira, which is being cautiously tried by a single planter. Something more than 64 acres are now being planted with Palmetto and Argenteuil, preference being given to the first-named variety. These farmers say that more asparagus is being used than ever before. The crop is reasonably sure if the soil is congenial and the cultivation thorough. The profits are not great, but are less uncertain than in many other crops. These Jerseymen think by planting resisting varieties, shortening the cutting season, and keeping up high culture with thorough fertilization the ravages of rust may be greatly reduced. They don't take much stock in the practical economy of spraying for Asparagus rust, but may come to it in time.

ENDURING SPRING BULBS.—Quite a collection of hardy Spring-flowering bulbs was planted six years ago, tucking the groups away in odd corners, and the smaller varieties in little clumps under the grass of the lawn. No culture has since been given, and the only care taken at the time was to set each variety at the proper depth in fairly good soil. Most of the tulips and Narcissi remain to gladden us each Spring, though they have so increased that the foliage overshadows the blooms. The hyacinths have all disappeared except the Grape and Musk varieties, which hold on bravely. Among the minor species the snowdrops and Chionodoxas have alone survived. All the Crocuses, Irises and Scillas vanished after the second bloom. The Chionodoxas have sturdily increased, and quickly follow the snowdrop, opening before all the blooms of the latter have faded. They are very pretty with their intense blue flowers borne six to 10 on each spike. The bright color is relieved in some species by a conspicuous white center. C. Sardensis is all deep true blue. C. Luciliæ and C. gigantea both have the white eye, but the latter has the largest blooms of the genus. These charming little bulbs come from Asia Minor and the Island of Crete. They are now sold very cheaply under the popular name of Glory of the Snow. They hybridize at times with species of Scilla, but the hybrids are of little horticultural value.

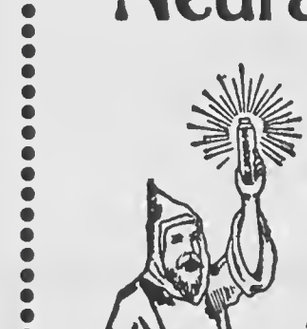
W. V. F.

WHEN you write advertisers mention THE R. N.-Y. and you will get a quick reply and "a square deal." See our guarantee

For the land's sake, use Bowker's Fertilizers. They enrich the earth.—*Adv.*

Sudden and Severe attacks of
Neuralgia

come to many of us, but however bad the case
St. Jacobs Oil
penetrates promptly and deeply, soothes and strengthens the nerves and brings a sure cure.



A Dry Sprayer
No Water or Plaster.
DUSTS TREE, BUSH OR VINE.
Two rows of potatoes as fast as you walk, wide or narrow planting. Agents wanted. Catalogue and spray calendar free.
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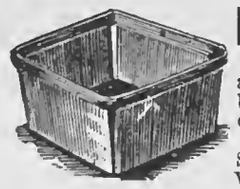
301 Pearl St., New York.

SWAN BRAND WEATHERPROOF COLD WATER PAINT
TRADE MARK
Send for color card and price
THE A. F. SWAN CO.
116 NASSAU STREET, NEW YORK.

TRADE INDURINE MARK
PAINT IT WITH INDURINE
and it will stay painted. It will neither wash, rub or wear off; will not scale or blister. It is weatherproof and fireproof. It costs 65 per cent less than lead and oil paints and lasts longer and looks better. It is a powder and prepared for use by simply mixing it with cold water. Furnished in brilliant white and colors. Suitable for all inside and outside surfaces. Best thing on earth for houses, barns, dairy buildings, poultry houses, picket fences, etc. Send at once for color cards, circulars, etc. Ask your local dealer for "Indurine." If he does not keep it write us direct. We will see you supplied.
Casein Company of America, Box 17, Bellows Falls, Vt.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Wire-stapled Berry Baskets are the best in the market, being uniform in size and unequaled in strength.
PRICE, $12 FOR 5 M.
Special Price on Car Lots.
Write for Descriptive Catalog.
WEBSTER BASKET CO.,
Monroe Co. (Lock Box 43). WEBSTER, N. Y.

DO YOU SPRAY? Use the best. Ripley's Compressed Air Sprayer and Whitewashing Machine throws the finest spray and uses less solution. Continuous stream 30 ft. Tested to 60 lbs. Holds 5 gals. Has safety valve; can't burst. Guaranteed. Made of copper & galv. iron. Circulars free.
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FINE AS FOG
covering every bit of foliage with the most thoroughly mixed spray, easy to work, long lived and durable. These are the strong points of the
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It's the only pump with an Automatic Agitator and Brush for strainer. Brass valves. No rubber or leather to rot. All styles and sizes of sprayers. Book on Spraying free. Write us.
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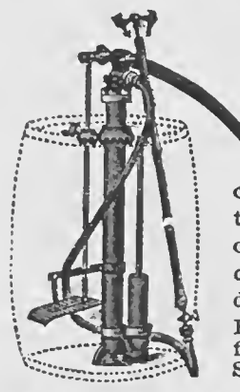
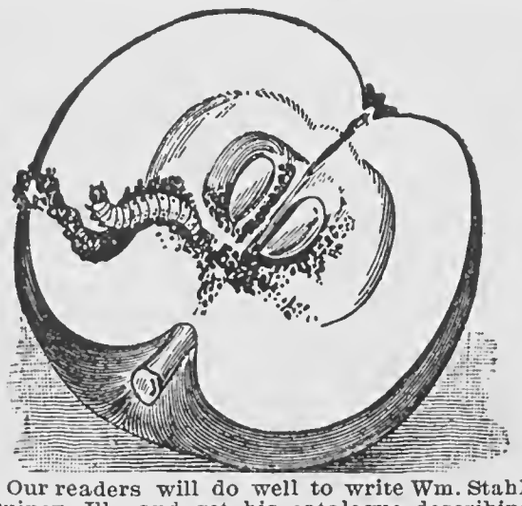
Buy a Good Spray Pump

—don't experiment—costs money. We have done the experimenting—used the common spray pumps in our own orchards, noted their defects—then invented the ECLIPSE. You get the benefit of our experience free. Send at once for catalogue.
MORRILL & MORLEY, Benton Harbor, Mich.

SPRAYING FRUIT TREES.
The question of spraying fruit trees to prevent the depredations of insect pests and fungous diseases is no longer an experiment but a necessity.

Our readers will do well to write Wm. Stahl, Quincy, Ill., and get his catalogue describing 21 styles of Spraying Outfits and full treatise on spraying the different fruit and vegetable crops, which contains much valuable information, and may be had for the asking.

No crop can be grown without Potash. Supply *enough* Potash and your profits will be large; without Potash your crop will be "scrubby."
Our books, telling about composition of fertilizers best adapted for all crops, are free to all farmers.
GERMAN KALI WORKS,
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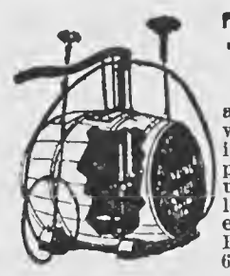
That Drouth
which usually strikes the *Eastern States* early in June, and always damages crops, can be mitigated by the judicious use of 150 lbs of
Nitrate of Soda
per acre about the middle of May. It invigorates the growth and enables the plants to pass through this trying period unscathed. Try it on your potatoes and garden crops. A request for free literature and *list of dealers* will receive prompt attention if made to **John A. Myers**, 12-O John St., New York City.

TOBACCO DUST
KILLS WOOLY APHIS, HEN LICE, AND ALL GARDEN PESTS.
H. A. STOOTHOFF. Tobacco Dust
116 West St., N.Y.C. Hobbyist.

A POTATO BUG
is most useful when he is dead. Kill him with "BOXAL," and prevent blight by the same same operation. $1 buys 10 pounds.
Catalogue No. 24 free.
BOWKER CHEMICAL CO., Boston.


THE "HARDIE" Spray Pumps
are the most powerful, easiest worked, most modern, simplest in construction and moderate in price. DON'T BUY A PUMP until you have sent for our catalogue "C" and treatise on diseases of fruits, etc., sent FREE.
Hardie Spray Pump Mfg. Co., 66 Larned St. W., Detroit, Mich.

SPRAY PUMPS.
All BRASS; three BEST made.
New Wonder, with air chamber, $7; **Little Giant**, lever pump, one line hose, $9; **Defender**, lever pump, two lines hose, $12. Express prepaid. Satisfaction guaranteed, or money refunded. Write for Catalogue and get treatise on Spraying. Mention this paper.
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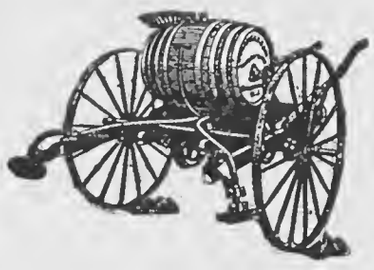
FRUIT CARRIERS AND BASKETS
PETERSBURG, VA.
WRITE FOR CATALOGUE AND PRICES


A Perfect Sprayer.
The "SCHANCK" 8-row will spray any kind of liquid poison.
IT has no small nozzles to stop up.
will not spray on horse or driver.
has no pumps, pipes, blowers nor cog-wheels.
will do more work better and with less trouble than any other sprayer. Price, $55. Send for circular.
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have increased 25 to 50 per cent. when they began to spray *the right way*—with the right sprayer, the PEPPLER AND CLIMAX SIX-ROW SPRAYERS. They will do as much for you. Read how they spray 30 acres a day, how they save ½ the poison, increase crops one-half, pay for themselves in one season. Catalogue contains spray calendar, formulas, etc. Sent free. I also manufacture the improved Riggs Plow and Riggs Furrowers.
THOMAS PEPPLER, Box 60, HIGHTSTOWN, N.J.

Hope Farm Notes

HIDDEN TREASURE.—When we came to Hope Farm we found an old hogpen by the side of the old barn. It was about 10x20, with two ilttle houses in it. The floor was broken, and it had evidently been in service for years. There was a big crop of weeds growing shoulder-high in it. We have kept pigs there, though they were never comfortabie, but when the new hog-house was bullt we moved them all up to it, and pulled down the pen. We thought there might be two or three loads of manure, but a pick driven into the soil showed it rich and black, and we kept on digging and hauling until 11 good two-horse ioads had been hauled out. I would much rather have it than an equal number of loads of ordinary manure, as I think it is richer, and it certainiy spreads over the ground more evenly. I believe that fat iayer of soil and manure was worth $25 at least. It was mostly leachings through the broken floor, for we have cleaned the pen out several times.

LOST FERTILITY.—The remarkable mine underneath that hogpen makes me shut one eye and look at the two barns! When we came here we found stalls for 23 animals, and there were plenty of auger holes to let the liquids off easily. The barns are built on flat ground, and have no cellars. The soil beneath them must be as black as my hat, and as rich as a fertilizer factory. People in the South have told me how, during the Civil War, they leached compost heaps and the soii under them in order to obtain nitrate of potash for making gunpowder. Thus it was that the patient mules and motherly cows of the South provided some of the force that drove the builets and cannon balls home. There are nitrates enough under my barns to blow a big hole through the mortgage if I could only get them out and aim them properly. But, seriousiy—what an awful mistake we eastern farmers make when we let the manure leach down in this way, and then pay our good money for nitrates. Why, no nitrate of soda that ever was dug out of the South American desert into which Nature packed it can whip up crops any faster than the nitrates which have gathered under my barns. Yet, how are we to get at this wonderful store of fertility without tearing the barns down? One of them will need a new floor before long, and then we can tap that safety vault. The soil under that hogpen has made me love cement and hate an auger hole.

DRY UP!—I spoke last year of our damp cellar. It was a constant annoyance and we were always afraid of it. Every time the children had a cough or a cold the Madame would look at me and make an assault with the word cellar! The soil near the house is rocky and springy. Water seeps in from the sides and rises at the bottom. There were two large cisterns, which we have never used since our well was drilled. The formation of the ground made it impossible to put tiles under the cellar floor, as is often done. We dug a deep ditch from one side of the house, so as to give drainage from the cellar floor. A four-inch tile takes care of all the water that could come in. Then we put a thick coat of cement all over the cellar floor, grading it so that all water must run down to the opening in the tile. This has settled it. A little water works in at one side, but it cannot stay. The tile provides air drainage, and there is a current of air passing through which dries the cellar quickly. The stone cistern has been emptied, and I hope to have a hole broken through one wall so as to make a milk room out of it. It is a great satisfaction to be dry below stairs. The Madame can no longer remark "Damp cellar" when one of the Hope Farmers begins to feel his bones!

FARM NOTES.—The rain finaliy let up, and the sun and wind took the sap out of the soil so that we were able to plow for oats. It was raw weather, but Charlie tried to have the job well done. We formerly sowed grain and grass by hand, but this season we have a Cahoon broadcast seeder which does fine work. . . . . Nothing shows how "streaky" the farm is like the effect of a drying wind in early Spring. Here and there are fields or strips through the farm where the soil is ready to plow, while other fields or strips nearby are still soggy. Some fields receive the full force of our prevailing northwest winds, but I think the chief reason is that in places the rock comes quite close to the surface. There were some things about our potato field that I could not explain last year. I now see that in parts of the field the rock bulges up, so as to leave but little soil. When you come to understand a farm you can arrange crops and methods to far better advantage. . . . . I have mentioned a field at the far western end of the farm where we had cow peas last year. I had intended to put corn there, but finally changed to oats. It does not seem desirable to put a crop that one must cultivate or hoe so far away. It makes too long a journey in getting there. Some crop that will take care of itself is better. I want that field in Alfalfa some day. . . . . We have been planting some peach trees on the Stringfellow plan, or as near as we could get to it. I am frank to say that this kind of planting was done against the advice of every northern peach grower I consulted. Therefore, I am not going to say a word about it until it is too late in the season for setting others at it. I'll tell all about it later. . . . . A friend in Connecticut asks which he should sow for early hay—oats or Japan millet. "Oats every time!" would be my vote. We find oat hay very useful—but the seed oats must be treated in some way to destroy the smut germs. Japan millet, which I understand is the same as "Billion Dollar grass" makes a heavy growth on good moist soil. It is a useful green fodder, but hard and coarse for hay—in fact, it is not a good hay plant. I do not care for it, as I think the Thoroughbred flint corn grown in drills will make more and better fodder. . . . . In seeding the orchard we first plowed and then put the oats broadcast on the rough furrows. Then we harrowed both ways with the Acme. The Orchard-grass seed and clover were then put on and worked in with the Hallock weeder. It is often desirable to use the roller after grass seeding, but in this case the field was a little too damp, and I knew that the roller would pack it down too hard for the light seeds.

CLEAN GRASS.—What about our grass seeding after the Clark method? The lower field is a pretty sick-looking place. The grass started well, but the open Winter and the Spring floods have heaved and hauled and plowed and flooded it until it shows more of what Nature can do at its worst rather than what Mr. Clark could do at his best. On the higher parts of the field the grass is fine, but where the floods got at it there is little left. This failure is not the fault of Mr. Clark's system, nor is it entirely our fault. We might have ditched that field, or tiled it, yet we have had so much rain this Spring that more or less wash was unavoidable. Clark's method is all right if we understand that it means ideal conditions all around. We hear about big yields of potatoes or corn or fruit, but they are not obtained on ordinary soil or with ordinary care. That is also true of grass. If Mr. Clark's grass field had secured the flooding which Hope Farm has had this season he could show clean culture—that is, it would be mighty clean of grass. The grass field higher up on the hill looks better—in fact, it promises to give a good yield. I must state, however, that Charlie claims that the grass will still come up. He has more faith than I have.

WAXING FAT.—We have been interested in weighing the four baby Berkshires at intervals to see how fast they gain. Here are a few records: March 19, 14 pounds; April 1, 31 pounds; April 8, 45 pounds; April 15, 60½ pounds. One thing I am trying to get at is the amount of milk the old sow gives. She must be giving a good mess to provide this increase of young pork, for the little fellows have had nothing else thus far. I would like to know how this increase of weight compares with others. If there are others who have weighed young animals in this way I wish they would let us have the figures. Why do I want to know how much milk a sow gives? Am I going to boom the Hope Farm Berkshires as dairy animals? Well, not exactly, though good dairy qualities are desirable both in sows and ewes. I do a good many things that are more interesting than profitable at the moment, yet I find that most of them finally pay. H. W. C.

A FEW farmers of this locality will be short of hay this Spring, but those who have silos will have fodder enough. The corn crop was a remarkably good one, and all silos were filled. Many fields of fodder corn are in sight where no silos have been built by these farmers. More than a dozen will be built the coming Summer. With a silo filled with well-matured corn, so that but little heat and less acidity is developed, the farmer has a product which goes a long way towards reducing his feed bills, and helps materially in solving the problem of producing cheap milk. The corn fodder referred to has furnished a good shelter the past Winter for mice, and helped greatly in carrying the crows through the severe weather. It looks like a wicked waste of time and money for farmers to work hard all Summer that these pests may have a good shelter and enough to eat at his expense. Can any farmer afford to do business in this way?

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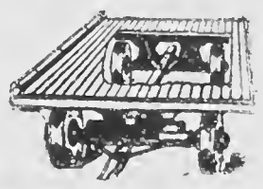

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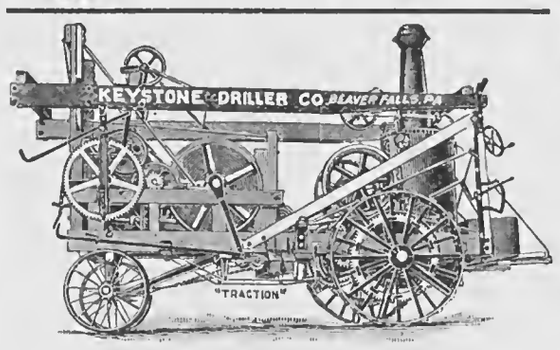

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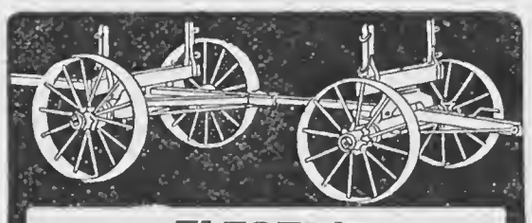

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THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, APRIL 27, 1901.

WE understand that Congressman Tawney, of Minnesota, will introduce the anti-oleo bill as soon as Congress meets, so it will be the "Tawney bill" this time. That's a good name for it. Webster defines "tawny" as matter that looks as if it had been tanned. That will describe the appearance of the oleo people when that bill runs over them. Mr. Tawney has been an active champion for honest butter.

*

Now the Secretary of Agriculture is preparing for a free tree distribution, in addition to his free Government seeds, and perhaps, in the course of time, we may see a free distribution of hammocks, garden settees, spike-tooth harrows, spraying outfits and grafting wax. Or perhaps Uncle Sam may further gladden us with a free distribution of outing hats, bicycle tires and tennis rackets. Why not?

*

READERS will remember that last Winter H. M. Stringfellow, of Texas, issued a challenge to peach growers who would plant trees according to his system of close root-pruning. Two Maryland growers have accepted the offer. One is in the mountains and the other on the lower level lands of Kent County. The trees have been planted. The Hope Farm man has also planted several hundred trees in this way. We hope to give regular reports from these experiments.

*

THE Jewish agricultural school at Woodbine, N. J., has set an example in business which other schools might copy. This school seeks to fit boys for a job and then fit them into one. They advertised, and as a result we understand that every boy who was ready found a good place. Some of the agricultural colleges are trying this method; it would pay them all to try something of the sort. The teachers in the Jewish school go further. They start their graduates with a year's subscription to THE R. N.-Y.—often paying for it out of their own pocket. That is what you might call giving a boy a liberal education in agriculture and then nailing it in.

*

THE American Grocer gives the following estimate of the value of some of the beverages consumed by the people of this country in the year 1900:

Alcoholic drinks	$1,059,563,787
Coffee	125,798,530
Tea	37,312,608
Cocoa	6,000,000
Total	$1,228,674,925

Probably the amount expended for "soda water" would bring this total nearly to one billion and a half of dollars. A few other figures taken in connection with this drink bill are interesting. The total value of all paper money in this country March 1 was $1,455,188,260. On July 1, 1900, our total interest-bearing public debt was $1,023,478,860. One year's consumption of alcoholic drinks would pay every dollar and square up last year's interest charge of $33,545,130. Here are the total values of certain farm crops:

Total value of cotton crops	$334,847,868
" " Potato crops	90,811,167
" " Wheat crops	323,525,177
" " Oat crops	208,669,233
" " Barley crops	24,075,271

A farmer, while following the plow, has much time for reflection. We have often wondered what the plowman has in mind. It might not be a bad plan for him to turn this thought over in his mind as he watches the furrows fall: "The money spent for liquor last year in this country did no one any real good. It would have paid our National debt. All the five crops named above could have been purchased with it, and there would have been enough left to buy all the sheep in the country; at the same time there were thousands of people living on charity and thousands more without food or clothing."

*

AT the last session Congress gave the National Agricultural Department authority to inspect butter for export. When such butter is found up to the required standard the Department inspectors may certify, grade and label it. This authority will go into effect July 1. The Department regulations have not yet been formulated, but efforts will be made to promote the export of the kind of butter which foreigners desire. Of course any butter may be exported whether inspected or not, but naturally the butter guaranteed by the Department would have the preference. For some years now the Department has been studying the foreign butter markets. The idea of this new plan is to give the foreign trade a chance to buy certified products if they desire to do so.

*

WE have read newspaper statements about the dog tax law of Westmoreland County, Va. One report stated that the tax was so large that the dogs would soon pay for the new county buildings. The fact is that this tax (50 cents and $1) brings in about $800 per year. Thus far it has been largely evaded. When heads of families are asked whether they own the several dogs known to lodge at their home they often claim that the curs are owned by members of the family whose names are not on the assessor's list! Hereafter all dogs on the premises will be assessed as the property of the head of the family. This will add at least one-third more to the income from this tax. The object of the tax was not revenue so much as a desire to get rid of as many sheep-killing curs as possible. Still, if the curs can bark out $1,000 revenue so much the better!

*

THE New York Legislature has finally killed the proposition to spend $26,000,000 for improving the Erie Canal. Two classes of citizens combined to defeat this measure—the farmers, who do not want any money spent on the canal, and city people who want a great deal more than the bill called for. The State Grange and other agricultural organizations took strong grounds against any appropriation. The farmers can see no benefit to agriculture from any canal, for it will simply aid in bringing western food products into the territory properly fed from their own farms. The New York City commercial associations want a great barge canal, which would cost the people of the State $100,000,000, more or less. It seems like an outrage to saddle this tremendous expense upon the State when the benefit if any would go to New York City and the western shippers. If such a canal is built it should be a National ditch—the expense borne by the entire country.

*

THE Governor of New York has signed the bill providing that milk cans stamped with the name of the owner must not be used by others without the owner's consent. Another good move is now in order, namely, a law to compel receivers of milk in this market to turn a jet of live steam into every can before it is returned to the farmer. This would be no special hardship, for connection with live steam may be had without great cost at most of the receiving stations. If the cans are allowed to stand several days unwashed the milk dries and they never get thoroughly cleaned. Live steam is the stuff for this business. Some of these cans are sent back in a horribly filthy condition. We have seen them partly full of swill and garbage from restaurants. The law forbids the selling of skimmed or separated milk in this city, even for what it is, and hundreds of people are thus deprived of a cheap and wholesome Summer food, yet there is no law to keep the dirty old milk can from traveling back and forth, peddling and mixing with the milk cartloads of filth and germs.

*

A LAW in Minnesota prohibits pool-selling and book-making on the fair grounds. For six years this law has been enforced, with the result that the State Fair has been a great success. The friends of the gamblers and the "tough" element have tried again and again to have this law changed. This year they waited until six days before the end of the session, and then put in an amendment. They called it "An act to encourage horse breeding," but it would probably have killed the original law. They thought it was too late to bring farmers and their friends together, but they forgot the rural telephone. As soon as the nature of that bill was known the telephone wires began to hum! By the time the Senate committee got together for a hearing their room was crowded with people who had come to protest against that bill. They had talkers with them, too, and when a few of them finished the pool sellers never said a word and the bill was killed by a unanimous vote. That was a glorious day for the telephone and the tongue. Whenever the farmers of this country will get together and talk up fairly and fearlessly they will defend their rights successfully.

*

A CITIZEN of Minnesota, Samuel Haugdahl, won great fame at Paris as a butter maker. His tub of creamery butter traveled all the way from Minnesota, stood up against the work of the best butter makers of Europe, and bowled them all over—winning the grand prize. In referring to this the Minneapolis Journal well says:

> If the victories of peace are no less than those of war, Kansas may have her Funston, Georgia her Hobson and Iowa her Calvin Titus. Minnesota is quite content with her matchless butter maker.

Unfortunately the "victories of peace" are not so popular as those of war. In our opinion the man who writes his country's history in butter is far more deserving of applause than he who smears it in blood. Yet, the white apron of the butter maker must take a back seat for the soldier's blue uniform! Which, say you, was more productive of good to the plain farmers of this country—the capture of that Paris dairy prize or the capture of Aguinaldo?

*

AMONG the many bad bills proposed by the present New York Legislature few were more worthy of unqualified condemnation than the so-called Stranahan mortgage tax bill. This measure proposed to levy a nominal tax on mortgages for State purposes and to exempt them from local or municipal taxation altogether. It also proposed to exempt from taxation altogether mortgages held by insurance companies, title guarantee companies, savings banks and similar institutions. By the first condition this gives mortgages a preference in the matter of taxation, above all other kinds of property, and by the second claim gave insurance companies, banks and trust companies a virtual monopoly of real-estate mortgage investments. These favored monetary institutions operate for the most part in cities. On the other hand, farm mortgages are mostly held by individuals who would be taxed, and they would find in this an excuse for advancing the rate to the legal limitation. The city owner would probably be able to borrow, at as low a rate, as before, from the favored institutions by bearing the entire burden of local taxation, while the holder of his mortgage escaped the tax collector entirely. The farmer, however, would bear the burden of local taxation just the same, and would suffer besides an advance of interest rate.

*

BREVITIES.

Hans brought his fortune on his back,
Down at the bottom of his pack,
Wrapped in a bag beside his shirt,
He kept two quarts of German dirt,
Brought from his own loved Fatherland;
And with his hard and clumsy hand
A rose he planted in it—then
He said, the happiest of men,
"I pring dot soil mit Chermanie
To dake me pack mit memory.
Dot rose from Cherman soil he grow
Der true Amerigan—dot's so!"
So may the swarming hordes that come
From Fatherland to find a home,
Root like the rose in memory
Of all things good across the sea,
Yet grow to noblest type of man
Worthy the name—American!

THE robber cow can't fill the can.

DON'T think that the letter *I* is the "key note."

A COWARD can turn even a bubble into a trouble.

MR. Hoyt and Mr. Bassett discuss the spraying problem.

THROW light into dark places—especially when seed potatoes are there.

THERE has been much complaint about adulterated clover seed this year.

THE California fruits have ruined the market for evaporated raspberries.

A GOOD sign—most of the experiment stations are issuing bulletins on Summer forage crops.

THE hen puts all her eggs in one basket—but then the hen knows more about eggs than you do!

"THERE is that scattered that increaseth!" For instance, your own strength when you give it to others.

TOTAL money cost of the war in the Philippines to date about $280,000,000. Total cost to England of the Boer war $725,000,000!

WANTED! Information from those who have used a spray pump for putting on whitewash or paint. What nozzle? How thick is the wash made?

REPORTS accumulate of hens that make a good living on cow peas! We have made some claims for cow peas in our day, but for us they have not laid eggs.

WE feel sure that we can raise crops for less money by putting the manure over more ground and piecing out with potash and phosphoric acid in chemicals.

THE recent article on Pear blight by D. R. Pease has called out many questions about the use of lime and sulphur. Another article next week will answer them.

Events of the Week

DOMESTIC.—The United States transport Rawlins took fire at her dock in Brooklyn, N. Y., April 10. She was pumped full of water and sunk, with a total damage, including cost of raising her, of $70,000. . . . . Woman suffrage was again defeated in the Wisconsin Assembly April 9, the Evans constitutional amendment permitting women to vote being killed by a vote of 61 to 30. A similar amendment has already been killed by the State Senate. . . . . Governor Hunt has issued a proclamation abolishing martial law in Shoshone County, Idaho, which was established at the time of the riots of two years ago. . . . . An avalanche near Adelaide, Col., April 12, buried a work train, killing three men and seriously injuring four others. . . . . April 12, the weather cleared at Denver, Col., after a snowstorm of 96 continuous hours, being the heaviest April snowstorm for many years. . . . . George Q. Cannon, leader of the Mormon church, died in California, April 12, aged 74. One of the first emigrants to Salt Lake, he soon acquired the position of a leader among the Mormons. In 1865 and the five succeeding years he was elected to the Legislative Council of Utah, being at the same time a Regent of the Deseret University. He was a member of the State Constitutional Convention of 1872, and was elected a delegate to present the Constitution and a memorial to Congress for the admission of the Territory into the Union as a State. He was elected delegate to several Congresses, beginning with the Forty-third, but he had to leave the Forty-seventh because he admitted that he was living with four wives. His second wife was the daughter of Brigham Young. . . . . The Federal court at New Orleans has decided that the shipment of mules to the British in South Africa cannot be stopped by injunction, the court having no jurisdiction. . . . . A student at the University of Michigan, Ann Arbor, contracted bubonic plague from an accident with plague bacilli in the laboratory. He will recover, and there is no fear of further spread of the disease. . . . . It is said that gold has been discovered in paying quantities along the Kaskaskia River at Pana, Ill., assaying $4 to $12 a ton. . . . . Phineas M. Blodgett, whose father was a member of Washington's army, died April 16 in Chicago. He was born in Groton, N. Y., in 1809, and had voted for 18 Presidents. . . . . An express train ran into a wagonload of Indians April 16 at a crossing near Blue Jacket Station, Indian Territory, killing two men and seriously injuring a woman and child. . . . . A head-end collision at Woodbine, Iowa, April 16, between two Illinois Central passenger trains, resulted in the death of one man, probably fatal injury of another and the serious injury of several passengers. . . . . Four persons were killed and seven injured April 17 by an explosion on a steamer near Vancouver, B. C.

PHILIPPINES.—The chief of staff of the insurgent, General Mascardo, has surrendered at the town of Marivales, in Bataan Province, Luzon. He said that Mascardo's band of followers, now greatly diminished, are in a bad way. It is impossible for them to elude the Americans; they are unable to obtain food, and want to surrender. It is expected that General Mascardo himself will surrender shortly. A court-martial has been convened at Manila, and met April 18 to investigate the commissary frauds. A number of army officers and civilians are implicated.

ADMINISTRATION.—There is no present prospect that a new isthmian canal treaty will be negotiated with Great Britain before Congress meets, for the reason that Senators continue to tell Secretary Hay that no treaty different from the amended one which Great Britain rejected could be ratified by the Senate.

GENERAL FOREIGN NEWS.—The Republic of Mexico signed the convention of the Peace Conference at The Hague April 17. China, Luxembourg and Turkey are now the only countries which have not signed. . . . . A South African Blue Book has been issued by the British government reviewing the situation in the Boer war as presented by Sir Alfred Milner. While assured of ultimate success, he says the work will be slow and costly, and he admits that during the last six months there has been retrogression in the campaign.

FARM AND GARDEN.—Chicago packing houses have been advised by their agents in London that the British government has excluded all beef except home-bred from army contracts. The Agricultural Department at Washington has been notified. The value of our exports of live animals to Great Britain amounts to $40,000,000, while the total of animal products exported from the United States to Great Britain is stated to be, in round numbers, $200,000,000. It is believed that this proposed embargo may really be a sequel, in greater or less degree, to the proceedings instituted at New Orleans against shipments of horses and mules from that port for use in the South African campaign. It is pointed out that if the English really decided to take the action reported, the British might turn to Australia for their meats. It is claimed, however, that meats cannot be got there in as good a quality or as cheap as in the United States.

Frank D. Gardner, of Illinois, an expert in the Soils Division of the Department of Agriculture, has been appointed to take charge of the experiment station work in Porto Rico.

American corn is now the object of attack of the French agrarians. United States Consul Thackera, at Havre, makes this subject the basis of a considerable report to the State Department. He says, in brief, that the French agrarians and some other interests became alarmed some time ago at the increasing use of foreign corn, and have succeeded in having two bills reported for passage, the first regulating the temporary admission of corn, and the second fixing the duty on grain at 96 cents instead of 58 cents per 100 kilogrammes, and increasing the duty on flour made from corn from five francs to eight francs per 100 kilogrammes.

The combination sale of "all Scotch" Short-horn cattle was concluded April 6 at the Chicago stock yards, 46 animals being sold for an average of $719 each. Thirty-seven cows were sold for an average of $710 each, and nine bulls sold for an average of $754 each. The highest-priced cow was "Victoria of Hill Farm Sixth," sold for $2,100, to Frank Bellows, of Maryville, Mo., and the highest-priced bull was imported "Fearless Archer," sold for $1,650 to Alexander Bruce, Buenos Ayres, South America.

A notable sale of pine trees has been made at Scio, Allegany County, N. Y. Lucius and Ebenezer Norton, owners of 490 trees which are the remnant of the original forest on the Allegany hills, sold them for $7,500. The trees are to be hauled to Wellsville and Belmont, and it is expected that 720,000 feet of lumber will be obtained from them. The price paid probably was the highest ever secured for pine on the stump, the average price per tree being $15. Pine lumber is worth $70 per 1,000 feet. These trees are the last clump of virgin pine in Allegany County, the other trees having been bought in the past three years owing to the increase in the price of lumber. The largest pine cut thus far measured 16 feet in circumference at the butt, and the rings indicated that it was more than 295 years old. There is now little standing timber in the county, the telegraph companies and railroads having used most of it for poles and railroad ties.

The directors of the Wholesale Seedsmen's League, representing all the great seed houses in the United States, met at the Astor House, New York City, April 11, and adopted a resolution declaring that the Secretary of Agriculture of the United States, through the manner in which he is allowing the contract to be filled for seeds for free distribution this year, has brought the seed division of his department into disrepute and departed from all precedents in any department.

The firm of Segarl, Stich & Meyer, of New Orleans, received two barrels of new potatoes April 3 from the "Home Place" on the Louisiana lower coast. They were the first arrivals this season, and of course brought a fancy price. But in this case the sale was made at $14 per barrel, which smacks much more of Boston or New York values than any former New Orleans price.

Reports have been sent to the Middle West to the effect that the Secretary of the Interior is the Government official who is dispensing vaccine for protection of cattle against black-leg. The Secretary has been obliged to direct scores of those who inquire about the matter to the Department of Agriculture. He suggests that matters would be greatly facilitated if those who want the vaccine will address that department direct, as his department has nothing to do with the doctoring of cattle.

Peoria, Ill., purposes to hold, in 1902, an exposition which shall represent the labors of the corn-growers throughout the great Western corn belt. Next year is considered an off year in big expositions, and the movement now under way gives promise of success. The proposed exposition finds an enthusiastic promoter in E. S. Fursman, president of the Illinois Corn Growers' Association, who has been in charge of the exhibition for three years, and who is to superintend Illinois' corn exhibit at the Pan-American Exposition this year. The plan for the proposed corn-belt exposition includes the organization of a strong stock company to stand behind the enterprise.

The farmers of the Kansas wheat belt will organize on May 16 at Salina, and arrange for independent shipment of wheat to market. They favor direct shipment to Liverpool by many of Gulf ports, avoiding eastern markets.

The annual meeting of the American Guernsey Cattle Club will be held at Fifth Avenue Hotel, New York City, May 15, 1901, at 10:30 A. M. Besides the usual routine business, there will be some matters of great interest considered. The results of the home butter contest, ending May 1, will be announced, and the establishment of an advanced register for Guernseys will be discussed.

The New York State Fair Commission met at Albany, April 17, and elected the following officers: President, Lieut.-Gov. Woodruff; vice-president, Charles A. Wieting, State Commissioner of Agriculture; secretary, S. C. Shaver, Cobleskill; treasurer, A. R. Brown, Batavia; superintendent of grounds, H. A. Moyer, Syracuse; superintendent of races, Theodore Coleman, Hornellsville; superintendent of horse show, Ralph Hyde, New York. The commission meets in Syracuse, May 2.

HOW AND WHEN THEY SPRAY.

What New York Fruit Growers Report.

The following reports from members of the New York Fruit Growers' Association give a fair idea of the practice of spraying:

About all fruit growers here spray the last week in March to middle of April; spray for leaf curl on peach trees. No power sprayers used in this section.
Ulster Co. J. A. H.

I do not know of an orchardist who does not spray, and the power pumps are used to some extent, but not more than one in a hundred. I do not believe they are profitable in our ordinary-sized orchards. S. W. W.
Monroe Co.

I do not care to spray until the blossoms fall. Most of the fruit growers through this section spray, but no steam or gasoline engines are used for that purpose, so far as I know. A. D. C.
Orleans Co.

Probably three-fourths of our fruit growers spray their trees at present, both peach and apple trees. There are only two power sprayers in our vicinity. Most of the people use hand pumps, as they think they are the most economical. C. J. M.
Niagara Co.

About 90 per cent of the fruit growers spray, commencing just before the bud opens for blossoming. There are only a few steam or gasoline sprayers in this section, but more are coming into use every year. They seem to be expensive for the farmer with a small orchard.
Orleans Co. C. S. W.

I think nine-tenths of the growers spray. There is no spraying done by steam in this section. I know of but four that are worked by power, and they are attached to the wheel of the wagon. I spray the first time just as the apple buds separate; I mean by this when the leaves unfold. The blossom bud is like a round ball, and in a day or two they separate so one can get the spray in and all around the buds. I treat my pears and plums in the same way. E. A. C.
Niagara Co.

At least nine-tenths of the fruit growers in this county spray, and all by hand power. The first spraying is done immediately before the buds begin to swell, which last season was April 25, the day I commenced spraying the first time. I should not consider power spraying profitable only in very large orchards. C. W. O.
Niagara Co.

Nearly all growers spray. None use power pumps. The large double-action hand pump is used in nearly all cases. We spray with Bordeaux Mixture as soon as the ground will bear up the team and wagon. I used arsenite of soda last season, and would not think of going back to Paris-green. It is much more effective; does not precipitate; more convenient and cheaper. C. R. W.
Ontario Co.

Half the orchards (barring a few old abandoned ones) are sprayed, but very few are done thoroughly. I expect to spray apples just before the buds open. There are no power sprayers in this neighborhood, but I consider it the best way to use power pump or steam pump on account of the fineness of spray and thoroughness with which it can be done. J. Q. W.
Ontario Co.

Spraying for leaf-eaters and the Codling moth is practiced by possibly 10 per cent of our farmers, and by all of our fruit specialists. Spraying for blights is confined to a few vineyardists, who make about three applications of Bordeaux, the first one soon after tying up. Apple scab was very prevalent for many years, but is little seen recently. I think there are no engine-power sprayers in this county, though our largest vineyardists are considering the advisability of better equipment. A public sprayer would find large patronage. J. T. R.
Onondaga Co.

From 50 to 75 per cent of our fruit growers spray in this section, but only a small percentage spray thoroughly and with Bordeaux. We like to spray for the first time just as early as the ground is in shape to drive over; the second time just before the blossom opens. There are no steam or gasoline engines used for the purpose of spraying in this section; the best apparatus for the purpose in this locality consists of a tank holding about 300 gallons, surmounted by a staging six feet above tank for the men holding and directing the nozzles to stand upon. The man who drives does the pumping, using a good pump (Eclipse or Pomona) with two lines of hose 25 feet each in length. A. H. McM.
Wayne Co.

I think about two-thirds of apple growers sprayed their orchards last year. A good many new spray tanks are going out this Spring, which makes me think that more people are preparing for spraying this year. Most apple growers spray before buds open; then just as soon as blossoms fall; then again about 10 or 12 days after second spraying. I never have heard of any spray rigs run by gasoline; knew of one man who had an oil burner to run his spray rig, but did not like it, and substituted a coal burner. I know of three coal burners, 1½ horsepower, running last year. If ground is soft it needs three horses to draw spray rig; tanks holding 250 gallons are pretty generally used for large orchards. I hear of four new coal burner sprayers having been ordered for this Spring's use. F. G.
Orleans Co.

THE VALUE OF QUOTATIONS.

Considerable has been said on this subject of market prices quoted for country produce, yet it does not seem to be generally understood. The only way to get an absolutely correct report would be to see all dealers in a certain market every day and get a full account of sales and prices. No commercial daily, however, claims to do this. It might be done in a small town, but in a large market like New York or Philadelphia, the undertaking would be enormous, and the space required to print all the facts greater than any market paper could give. Of course, the prices of grain, butter and eggs are made daily on the produce and mercantile exchanges, and wholesalers throughout the city take these figures as a basis for the day's business. They may now and then get a higher price for a certain grade from a customer who needs it badly, or they may have to cut in order to make a sale, but this exchange price is taken as a sort of par value for the day. On other products, such as fruits, vegetables, etc., the usual plan in quoting is to give a range of prices covering both high and low. There are extreme prices, however, on both ends that it is not thought wise to give, as they are more likely to mislead than help. A reader says that for a certain grade of sweet potatoes his neighbor has been getting 25 cents per barrel more than the market prices quoted. However, sales as a rule would not warrant quoting such a figure. This man evidently had better potatoes than most of that grade. His agent in this city saw that they were worth more, and held them for the higher price. Some men in preparing a certain grade of produce for market make it as poor as they can without being put in a lower class, while others make it really better than is necessary, and frequently get no returns for their extra trouble. Where the selling agent takes an interest in the matter, and is willing to do a little extra work to get what the stuff is really worth, the careful and honest packer usually gets pay for his extra trouble. Another man may send stuff which is graded in the same class, yet at the foot of the class, and on this account fail to get the premium his neighbor did. Of course, all produce ought to be sold on its merit, or lack of merit, but in order to quote it, there must be some grading, and where such a wide range of quality is allowed in one grade, such a grade cannot be connected with anything definite in the way of prices. No one claims that this is as it ought to be, but an effort is made to give a fair range of prices, and the matter should be studied from all sides by shippers. W. W. H.

Woman and Home

From Day to Day.

HEAVEN'S DISTANT LAMPS.

We see but dimly through the mists and vapors,
Amid these earthly damps;
What seem to us but dim, funeral tapers,
May be Heaven's distant lamps.

There is no death! What seems so is transition;
This life of mortal breath
Is but a suburb of the life elysian,
Whose portal we call death.

She is not dead—the child of our affection—
But gone unto that school
Where she no longer needs our poor protection,
And Christ himself doth rule.

In that great cloister's stillness and seclusion,
By guardian angels led,
Safe from temptation, safe from sin's pollution
She lives, whom we call dead.

Day after day we think what she is doing
In those bright realms of air;
Year after year, her tender steps pursuing,
Behold her grown more fair.

Thus do we talk with her, and keep unbroken
The bond which nature gives,
Thinking that our remembrance, though unspoken,
May reach her where she lives.

Not as a child shall we again behold her,
For when with rapture wild
In our embraces we again enfold her,
She will not be a child.

But a fair maiden in her Father's mansion,
Clothed with celestial grace,
And beautiful with all the soul's expansion
Shall we behold her face.

—Longfellow.

*

A good many industrial facts imparted by the geographies puzzle the young mind, and we can all sympathize with the small girl who read in her lesson that "Yarmouth is celebrated for the curing of herrings." "Oh, how funny it must be," she exclaimed, "to see the little sick herrings sitting around getting better!"

*

What is said to be the first laundry school ever established has been fitted up by the League for Social Service in New York City. The women employed are required to take a course of training in different branches of the work, being paid while learning. The idea of the League is to provide a place where women may secure training that will enable them to procure self-sustaining employment. In all cities there appears to be a scarcity of competent laundresses, especially of those able to do fine ironing or to wash flannels, and training in such lines is much needed.

*

One of the newest Spring styles in neckwear is a tie of grass linen in its natural ecru shade, having a narrow hemstitched border of contrasting color. The tie is three or four inches wide and a yard long; it is put around the neck once and tied in a little bow, or arranged like an Ascot. Batiste sailor collars or revers seem to be as popular with Spring jackets as last year, some being simply hemstitched and tucked, others inset with lace or embroidery. They are a handsome addition to an Eton jacket, and are especially used on the little silk Etons so fashionable.

*

An Alsatian proverb says that, to make a durable pair of shoes one should use for their sole the tongue of a woman, since it is the one substance that never wears out. There is nothing new under the sun, and such gibes at feminine loquacity were old when Solomon added his testimony to them. Most of us have more reason to watch the quality than the quantity of what we say. It is the woman who talks perpetually of trivial and uninteresting matters of whom the sage spoke when he said: "As climbing a sandy way to the feet of the aged, so is a wife full of words to a quiet man."

The Rural Patterns.

Box-pleated frocks for little girls are both fashionable and becoming, and the model illustrated shows the popular long French waist. The original is made of linen duck in pale blue and is trimmed with white needlework edging and insertion, but piqué, lightweight linen, madras and all similar washable fabrics are eminently appropriate, while

3780 Girl's Box Plaited Dress, 4 to 12 years.

cashmeres, henriettas and the like make most admirable materials for cooler weather wear. The fronts and back are lad in two straight box-pleats that extend from the shoulders to the edge of the skirt, being stitched on their underfolds to the belt line and falling free below. The stylish adjustment is accomplished by shoulder and under-arm seams only, slight fullness being gathered under the belt and stitched to position. The fronts are cut away at the top and closed in double-breasted style, the closing below the belt being invisibly accomplished, that above by means of pearl buttons and buttonholes. At the neck is a big sailor collar, beneath which the shield of embroidery is attached. The sleeves are in bishop style with narrow cuffs, which match the standing collar. At the waist is a belt that passes through straps at the underarm seams which serve to hold it in place. To cut this gown for a girl of eight years of age four yards of material 32 inches wide or 3⅜ yards 44 inches wide will be required. The pattern No. 3780 is cut in sizes for girls 4, 6, 8, 10 and 12 years of age; price 10 cents from this office.

The shirt waist shown is a popular model in the new Summer garments. The smart model shown is made of white lawn with revers of all-over tucking, while shield, collar and cuffs are of fine embroidery; but the same design is available for silk and woolen materials and for all the range of cotton and linen stuffs. In the new shirt waist flannels woven with silk stripes it is admirable combined with taffeta; made from albatross it is eminently satisfactory and when unlined and made from batiste, madras, Swiss muslin, dimity and the like, it is an ideal Summer bodice. The foundation lining (which in this instance is omitted) closes at the center front. On it are arranged the back, the full fronts and the shield—this last being attached at the right side and hooked into place at the left, while the waist closes at the center, but separately from the lining. The fronts are extended, rolled back and faced to form the revers. The sleeves are in bishop style with narrow cuffs of lace. At the neck is a stock collar that closes invisibly at the center back. When the lining is omitted the shield is joined to the stock collar only, and attached to the fronts, under revers, permanently on the right and buttoned under the left. To cut this waist for a woman of medium size, 3½ yards of material 21 inches wide, 2¾ yards 27 inches wide, 2 yards 32 inches wide or 1¾ yard 44 inches wide will be required, with ½ yard of all-over lace, ½ yard of silk for revers, one yard of lace edging and ⅝ yard of insertion to trim as illustrated. The pattern No. 3784 is cut in sizes for a 32, 34, 36, 38, 40 and 42-inch bust measure; price 10 cents from this office.

3784 Shirt Waist, 32 to 42 in. bust.

Dr. Norton's Prescription.

"It wa'n't the first time that Dr. Norton and I had been on a case together, but I don't know 's we ever had one end in matrimony, the way this one did.

"No, I didn't do any nursing, this time. In fact, the Ellsworth sisters did n't know I had anything to do with it, except just to send the doctor there.

"I was in their house one day, and they was telling me how ailing and miserable they felt all the time. All at once I says, as though I'd only just thought of it, 'Why don't you try Dr. Norton? I'm most sure he'd cure you, and I know he wouldn't be exorbitant in his charges.' And then I went on to tell of the folks he'd cured. They thought it over some and guessed maybe they'd try him.

"'Don't you want me to send him over?' I says. 'He goes by quite often, and I'll tell him next time I see him if you want I should.'

"They said yes, I might send him, if I'd be so good. That was what I wanted, for I knew if I left it to them they'd keep neglecting it and would never have him.

"Well, it was a day or two later that I see Dr. Norton going by. I knocked on the window and he drove up into the yard and hitched his horse to the elm tree.

"Now we'd always been acquainted and we understood each other, so when he come in that day he looked at me and then he says, 'Well, Aunt Asenath, what have you got on your mind now?' and he settled down in his favorite chair real contented like.

"'The Ellsworth sisters want you to call there,' I says.

"'I suppose that means that you want them to want me to,' he says, laughing.

"I don't know's it makes any particular difference what you s'pose,' I says. 'It ought to be enough that you are wanted at the Ellsworths.'

"'Any of them sick?' he says.

"'No more than common,' I says, 'but you know they ain't none of 'em well, ever. I don't s'pose you'll take any advice from an old friend, but I'll tell you just what is the matter with 'em. They 're afraid as death of fresh air, and they don't have enough to do, and three women, so they don't bother to cook much and so they live on baker's stuff mostly.'

"The doctor sat for awhile without speaking, then he got up and put on his overcoat.

"'It is not good for woman to be alone. Good-bye, Aunt Asenath.' That

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was every word he said, but I knew him so well that I felt satisfied and easy in my mind, and I was certain that the Ellsworth sisters were going to be cured.

"Dr. Norton told me so much about that visit, and the sisters told so much, too, that I know what happened most as well as if I'd been there.

"He went in and began to talk about their symptoms, and he asked lots and lots of questions. Pauline had sick headaches, most every day; Martha had trouble with her stomach, and Ruth had liver trouble and bad colds most of the time. He found they lived mostly on toast and tea and coffee, and they never stepped out of the house if they could help it.

"After he'd got all the information he wanted, he sat looking at the floor ever so long, and then he says, 'I will cure you if you will do just as I say for three months. Will you do it?'

"They all said they would, but that wa'n't enough for Dr. Norton. He tore a leaf out of his note-book and wrote on it, 'I solemnly promise to do exactly as Dr. Norton directs for three months.' Then he had all three of them sign their names to it. They was dretful conscientious women, and he knew they'd keep their promise, if it killed 'em.

"'Now,' he says, 'I'm not going to give you any medicine this time, but there's something I'm going to get you to do for me. You know that clump of pines I've got down back of your house? Well, I'm going to have them cut off. I want you to board the two men that are going to do the work.'

"'Oh, we couldn't—we're not able—' they begun, but he stopped 'em by reminding them of their promise. 'I'll bring the men over to-morrow or next day,' he says, 'so you can have their rooms ready for them. You won't need to be afraid of them,' he says. 'They've worked for me before, and I know they're honest, steady fellows. The only thing you'll want to look out for is to give them plenty to eat, for cutting wood gives anybody a ferocious appetite.' Then he got up and started out of the room.

"'Oh, by the way,' he says, as he put on his gloves. 'You must have the windows of your sleeping rooms opened a crack every night. The air here is perfectly vile,' and he went to one of the windows and reached up and punched his fist through one of the little panes of glass.

"After he'd gone I s'pose they had a terrible time. I guess they cried and took on for quite a while. But there was their promise, and there was them two men a-coming in a day or so, and they just had to stop feeling bad and go to work.

"The very next day the men came and went to work. The doctor had given them directions, and told 'em to get the three Ellsworths out of doors as much as they could. The wood lot was about half a mile back of the house, and the men pretended they couldn't spare time to come up to dinner, so the sisters must bring their dinner to them. Well, the sisters they was awful timid, and one of 'em didn't dare to go alone, and there wa'n't one of 'em that could be hired to stay in the house alone, so all three of 'em had to go with the dinners. Naturally the walk give 'em a good appetite, so when they got home they'd just eat a good hearty dinner themselves.

"The men they was real interested in Dr. Norton's cure, and they managed it somehow so that before a week had gone by the sisters would stay down in the woods and eat their dinner with 'em. They'd have a good fire burning, and fix some place for 'em to sit, and there all five of 'em would picnic. And it got so they'd stay half the afternoon maybe, and watch the men at work. Of course this was only on good days. When it was terrible cold or stormy, the men would come up to dinner.

"Well, it ain't no wonder the Ellsworth sisters begun to feel more like something. Being out doors so much, and the smell of the pine, and having some work to do, and the excitement of having some real live men in the family it was all bound to make a change in 'em, and at the end of two months they was just as well as any of us.

"I tell you Dr. Norton was tickled enough. He come in one day and sat and laughed till I got all out of patience with him.

"'Do you remember how they seemed the first of the Winter?' he says. 'Pale and pasty looking, shut up in an airtight house that smelled like the silent tomb, only louder, and if a bit of fresh air managed to get smuggled in they get out of the way of it as if 'twas the pestilence? Well, I went there to-day and found the house locked up and I couldn't raise anybody. I thought they'd gone visiting, so as my patients were missing, I thought I'd go down and see how my men were getting along with the wood cutting. Well, if you'll believe me, when I got down to the lot there were two of my patients at work on a fallen pine tree with a cross-cut saw; the third one was standing by with the measuring stick in her hand, and the two men were at work on the same tree cutting off the limbs. I stayed and watched for awhile, and then I came away. I couldn't bear to break in on the pastoral scene.'

"'Those are uncommon young men,' I says.

"'That they are,' he agreed. 'They've done wonders. I didn't expect they would understand what I wanted of 'em so well.'

"'They seem real likely young men, too,' I says, 'and I'm glad of it, for there may more come out of this than either of us thought of at first.'

"I had to laugh when I see how blank the doctor looked, and then how scared. "You don't mean it, Aunt Asenath,' he says. "You're just teasing me.'

"'Perhaps I be,' I says, 'but I've had a better chance than you have to see how things are going. You never can tell,' I says, real severe, 'what will be the consequences when you attempt to mix in with human affairs. You better not make any further mischief, though, trying to undo what you've already done.'

"I see I'd kinder upset him, and he went away looking real blue, but the next day he come in and he seemed to be feeling better. 'I've been thinking over what you said yesterday,' he says, 'and it seems to me if there is any blame you'll have to share it with me. But the more I think it over the less it worries me. Why shouldn't they get married, I'd like to know? And which ones are they?'

"'You're as curious as you ever accused me of being,' I says, 'but you'll have to wait like the rest of us. I'm sure I don't know which ones is interested in which ones, but unless I'm greatly mistaken something's going to happen sometime.'

"And I was right, though it wa'n't till a year afterwards that the wedding come off. It was the youngest Ellsworth girl. Some of the neighbors thought 'twas a terrible thing, but it didn't seem so to me. He was an honest, hard-working man, and they was fond of each other.

"Yes, they all live together, and Dr. Norton don't have to prescribe for 'em no more. It was a permanent cure."

SUSAN BROWN ROBBINS.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

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The red in the blood is the oxygen-carrier. Better to breath with half of one lung than not have enough red in the blood.

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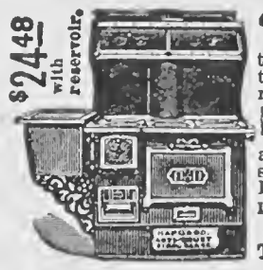

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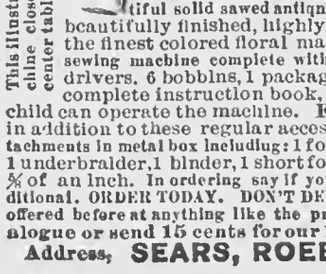

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991 MIAMI BUILDING, CINCINNATI, OHIO.
[*We recommend the above firm as thoroughly reliable.—Editor.*]

This illustration shows the machine closed to be used as a center table, stand or desk.
SEND NO MONEY Cut this advertisement out and send to us and we will send you this, OUR HIGH GRADE DROP HEAD CABINET EDGEMERE SEWING MACHINE by freight C. O. D., subject to examination. You can examine it at your nearest freight depot, and if found perfectly satisfactory, exactly as represented, equal to the highest grade sewing machines advertised by other houses at $20.00 to $30.00, and as good a machine as you could buy from your dealer at home at $30.00 to $40.00, the greatest bargain you ever saw or heard of, pay your railroad agent our SPECIAL OFFER PRICE $11.95 and freight charges. Give the machine three months' trial in your own home, and we will return your $11.95 any day you are not satisfied.
OUR $11.95 EDGEMERE SEWING MACHINE is covered by a binding 20-year guarantee, is made by one of the best sewing machine makers in America, has every new and up-to-date improvement, very high arm, positive four-motion feed, is very light running, does any work that can be done on any sewing machine made. It comes in a beautiful solid sawed antique oak, drop head cabinet, as illustrated. Cabinet is beautifully finished, highly polished and decorated with a complete set of the finest colored floral marquetry designs. AT $11.95 we furnish this sewing machine complete with the following accessories: 1 quilter, 2 screwdrivers, 6 bobbins, 1 package of needles, 1 oil can filled with oil and a complete instruction book, which makes everything so plain that a child can operate the machine. For 75 cents extra (or $12.70) we furnish in addition to these regular accessories a complete set of highest grade foot attachments in metal box including: 1 foot hemmer, 1 ruffler, 1 shirring plate, 1 tucker, 1 underbraider, 1 binder, 1 short foot and set of hemmers, different widths up to ⅝ of an inch. In ordering say if you want these extra foot attachments at 75 cents additional. ORDER TODAY. DON'T DELAY. Such a beautiful sewing machine was never offered before at anything like the price. Write for Free Sewing Machine Catalogue or send 15 cents for our 1100-page Catalogue of Everything.
Address, **SEARS, ROEBUCK & CO., CHICAGO, ILL.**

This illustration gives you an idea of the appearance of the High Grade, High Arm Edgemere Sewing Machine, which we furnish at $11.95 in the handsome 5-drawer drop head oak cabinet illustrated.

MARKETS.

The Week's Quotations.

WHOLESALE PRICES.

NEW YORK, APRIL 20, 1901.

GRAIN.—Frost damage to wheat in the Southwest is reported. The corn market is firm, owing to the cold backward Spring.

Wheat, No. 2, hard, N. Y.	78⅞	@	—
No. 1, Northern Duluth, spot.	86⅞	@	—
No. 1, hard Duluth, spot	89⅝	@	—
Corn, No. 2, mixed	48¾	@	—
Oats, No. 2, white, in elevator	32½	@	—
Rye, No. 2, W'n, c. i. f., Buf	—	@	54½
State & Jersey, track	57	@	58
Barley, feeding, c. i. f., Buffalo	42½	@	45
Malting, new crop	62	@	68

BEANS.—Trade light and Red kidneys very dull.

Marrow, choice, per bu	2 45	@	2 50
Marrow, fair to good	2 20	@	2 30
Pea, bags, choice	2 05	@	—
Red kidney, choice	2 05	@	2 07½
White kidney, choice	2 25	@	2 30

FEED.—Spring bran and middlings have dropped 50 cents to $1. Market is weak, with considerable pressure to sell.

Spring bran, 100 lb. sacks	17 60	@	20 00
Winter bran, bulk	18 50	@	22 00
Spring middlings, 200 lb. sacks	17 00	@	19 50
Red Dog	19 00	@	—
No grade flour	—	@	22 50
Linseed meal, ton	—	@	26 00
Cottonseed meal, ton	25 60	@	—

HAY AND STRAW.

Hay, No. 1	85	@	90
No. 2	80	@	82½
No. 3	75	@	80
Clover	70	@	72½
Clover, mixed	72½	@	77½
Straw, rye, long	75	@	85

SEEDS.

Clover, per lb	10¼	@	10¾
Timothy, per lb	4¼	@	5
Red Top, per lb	10½	@	—
Flaxseed, whole, bu	6 50	@	7 00
Millet, per lb	1¾	@	2
Rape, German, per lb	3¼	@	3½
Sunflower, per lb	2⅜	@	2½

BUTTER.—Price down one cent from last week, and trade inclined to be dull.

NEW.

Creamery, extra, firsts	—	@	21
Firsts	20	@	20½
Seconds	18½	@	19½
Lower grades	16	@	17½
State dairy, tubs, fancy	19½	@	20
Tubs, firsts	18	@	19
Tubs, seconds	17	@	17½
Tubs, thirds	15	@	16
W'n imitation creamery, fancy	17½	@	18
Lower grades	13½	@	14½
W'n factory, fair to good	12½	@	12¾
Lower grades	11	@	12
Rolls, choice	—	@	13½
Common to prime	11	@	13
Renovated butter, fancy	17	@	18

OLD.

Creamery, Summer made, prime	15	@	16
Summer made, com. to good	12	@	14
State dairy, tubs or firkins, prime	14	@	14½
Tubs or firkins, com. to good	11	@	13½
West'n factory, Summer made	10½	@	12½

MILK.

New York Exchange price within 26-cent freight zone 2½ cents per quart.

EGGS.—There are more undergrades arriving than can be disposed of promptly. Prime goods are firm.

QUOTATIONS AT MARK.

Nearby, State and Pa., fresh-gathered, fancy white, doz.	—	@	15½
Fresh-gathered, fancy brown, per doz	—	@	15
Fresh-gath'd, avge. prime	14	@	14½
W'n, storage packings, fancy	—	@	14½
Regular packings, selected	—	@	14¼
Regular packings, firsts	—	@	14
Reg. packings, under grade	13	@	13½
Kentucky, fancy marks	13¾	@	14
S'n, fresh-gath'd, avge. best	13¼	@	13½
Poor to fair	12¾	@	13
W'n, fresh-gathered, dirties	12	@	12¾
Checks	11½	@	12
Duck eggs, Baltimore, doz	—	@	20
Western	17	@	18
Virginia & Tennessee	16	@	17
Far Southern	15	@	16
Goose eggs, per doz	—	@	30

VEGETABLES.

Potatoes, Bermuda, prime, bbl.	6 50	@	8 00
Bermuda, No. 2, per bbl	4 00	@	5 50
Havana, per bbl	4 00	@	6 00
State & W'n, in bulk, 180 lbs.	1 25	@	1 62
State, per sack	1 40	@	1 50
Jersey, per bbl	50	@	1 37
Sweets, Vineland, per bbl	2 00	@	2 50
Sweets, other Jersey, bbl	1 50	@	2 00
Asparagus, Ch'n, Colossal, per dozen bunches	5 00	@	—
Ch'n, extra, per doz. behs	3 50	@	4 50
Ch'n, prime, per doz. behs	2 50	@	3 00
Ch'n, culls, per doz. behs	1 50	@	2 00
North Carolina, doz. behs	1 50	@	3 00
Beets, Fla., per crate	75	@	1 00
Fla. & Ch'n, per 100 behs	3 00	@	6 00
Bermuda, per crate	75	@	1 00
New Orleans, per 100 behs	2 00	@	3 50
Carrots, Bermuda, per crate	50	@	1 00
Fla. & Ch'n, per 100 behs	2 00	@	3 00
New Orleans, per 100 behs	2 00	@	3 50
Cabbages, State, per ton	10 00	@	15 00
Ch'n, large, per bbl. crate	2 50	@	—
Ch'n, small, per crate	1 75	@	2 25
Fla., per bbl. crate	2 25	@	2 50
Celery, State & Cal., large, dz.	70	@	90
Medium, per doz	40	@	60
Small, per doz	15	@	30
Fla., per case	1 00	@	2 50
Chicory, New Orleans, per bbl.	4 00	@	6 00
Cauliflowers, Fla., per bskt	2 00	@	3 00
Escarol, New Orleans, bbl	3 00	@	5 00
Eggplants, Fla., per doz	2 00	@	3 50
Green peas, Fla., per bskt	1 00	@	3 50
Kale, Norfolk, per bbl	75	@	90
Baltimore, per bbl	75	@	85
Lettuce, Fla., per ½-bbl. bskt.	1 00	@	3 00
North Carolina, per bbl	3 00	@	4 50
Ch'n & N. C., per ½-bbl. bkt.	1 25	@	2 50
Ch'n & N. C., per bu. bskt	75	@	1 25
Norfolk, per basket	1 50	@	2 25
Onions, Conn. & L. I., w., bbl.	2 50	@	5 00
Conn. & L. I., red, per bbl	2 00	@	4 00
Conn. & L. I., yellow, bbl	2 00	@	3 25
Orange Co., N. Y., red, bag.	2 00	@	3 25
State & W'n, yel., d.-h. bbl.	—	@	3 50
Bermuda, per crate	2 00	@	—
Havana, per crate	2 00	@	—
Egyptian, per bag	2 40	@	2 50
Okra, Havana, per carrier	1 00	@	2 00
Peppers, Fla., per carrier	1 50	@	2 25
Parsnips, old, per bbl	75	@	1 00
Parsley, Bermuda, per box	50	@	1 00
New Orleans, per 100 behs	1 00	@	3 00
Romaine, New Orleans, bbl	3 00	@	6 00
Bermuda, per crate	50	@	1 00
Fla. & Ch'n, per basket	1 00	@	2 00
Radishes, Norfolk, per bskt.	75	@	1 25
Squash, Hubbard, old, bbl	1 50	@	2 00
Marrow, old, per bbl	1 00	@	1 25
Fla., new, per crate	1 50	@	2 50
String beans, Fla., wax, crate.	2 00	@	4 00
Fla., green, per crate	1 75	@	2 75
Spinach, Norfolk, per bbl	75	@	1 00
Baltimore, per bbl	75	@	1 00
Turnips, Canada, Russia, bbl.	75	@	85
Tomatoes, Fla., per carrier	1 00	@	2 25

HOTHOUSE PRODUCTS.

Lettuce, Eastern, per case	3 50	@	5 00
Cucumbers, prime to choice, doz.	1 25	@	1 37
No. 2, per doz	60	@	75
Tomatoes, fair to prime, lb	10	@	20
Radishes, prime, per 100 behs	2 00	@	3 00
Mushrooms, good to prime	25	@	40
Rhubarb, per 100 bunches	4 00	@	5 50

FRESH FRUITS.—The best apples have advanced slightly. Florida strawberries doing fairly well and show improved quality.

Apples, Spitzenberg, per bbl	3 00	@	5 00
Spy, State, per bbl	3 00	@	4 50
Ben Davis, per bbl	3 00	@	4 50
Baldwin, fancy, per d.-h. bbl.	3 50	@	3 75
Baldwin, fair to good	3 00	@	3 25
Greening, common to fair	3 00	@	4 00
Russet, com. to choice, bbl	2 00	@	3 50
Cranberries, Cape Cod, good to choice, per bbl	7 50	@	9 00
Cape Cod, com. to fair, bbl	6 00	@	7 00
Jersey, fair to prime, crate	75	@	1 75
Strawberries, Fla., prime to fancy, per quart	28	@	30
Fla., poor to fair lots	20	@	25
Ch'n, good to choice, per qt	30	@	35

DRIED FRUITS.

Apples, evaporated, per lb	6	@	6½
Evaporated, choice, per lb	5	@	5½
Evaporated, prime, per lb	4½	@	4¾
Evaporated, poor to good, lb.	3	@	4¼
Sun-dried, S'n, sliced, lb	2¾	@	3¾
Sun-dried, State & W'n, qrs., per lb	2¾	@	3¾
Sun-dried, S'n, coarse cut	2½	@	2¾
Chops, per 100 lbs	1 00	@	1 62½
Cores and skins, per 100 lbs	40	@	90
Raspberries, evap'red, 1900, lb.	19	@	19½
Blackberries, 1900, per lb	5¾	@	6¼
Cherries, 1900, per lb	13	@	14½

LIVE STOCK.

Native steers	4 60	@	5 60
Oxen	5 10	@	—
Bulls	3 00	@	4 65
Cows	1 90	@	4 00
Veal calves	3 00	@	5 75
Little calves	—	@	3 00
Sheep, common to prime	4 00	@	5 00
Lambs	5 25	@	5 90

LIVE POULTRY.—Turkeys, ducks and geese are selling slowly, but few prime chickens are being received.

Fowls, per lb	—	@	10½
Roosters, per lb	—	@	6½
Turkeys, per lb	8	@	9
Ducks, avge. West'n, per pair	70	@	80
Average Southern, per pair	50	@	65
Geese, avge. West'n, per pair	1 00	@	1 12
Average Southern, per pair	70	@	75
Pigeons, per pair	35	@	40

DRESSED POULTRY.—Market slow and easy and top figures seldom reached.

FRESH PACKED—ICED.

Turkeys, W'n, hens, small	10½	@	—
Western, toms	—	@	8
Broilers, Phila., under 2 lbs. to pair, per lb	45	@	50
Phila., 2½@3 lbs. to pair, lb	35	@	40
Phila., 3½@4 lbs. to pair, lb	26	@	30
Chickens, Phila., Winter, 5@6 lbs. to pair, per lb	20	@	25
Fowls, W'n, dry-picked, prime	—	@	10
Western, scalded, prime	—	@	10
Western, fair to good	8	@	9½
Southwestern, prime	9½	@	10
Old roosters, per lb	—	@	6½
Ducklings, L. I. and other nearby, per lb	20	@	22

FROZEN.

Turkeys, young hens, No. 1	11	@	—
Mixed, young hens and toms, No. 1	10½	@	11
Young toms, No. 1	10	@	10½
No. 2	7	@	9
Broilers, dry-picked, fancy	16	@	17
Scalded, fancy	13	@	15
Chickens, fancy, soft-meated	—	@	12
Average, No. 1	—	@	10
No. 2	7	@	9
Fowls, dry-picked, No. 1	9½	@	—
Ducks, fancy	12	@	12½
Geese, fancy	9½	@	10

COUNTRY-DRESSED MEATS.

Calves, veal, prime, per lb	—	@	7
Fair to good, per lb	6	@	6½
Common to medium, per lb	3½	@	5½
"Spring" lambs, fancy, each	6 00	@	6 50
Poor to prime	3 00	@	4 00

BUSINESS BITS.

THE concensus of opinion in last week's issue seemed to indicate that it is advisable for fruit growers to own their own spraying outfit. Wm. Stahl, Quincy, Ill., offers a full line of spraying machinery. He will send you catalogue describing all insects injurious to fruit for the asking.

You can have a low-down wagon simply by getting a set of steel wheels to fit your farm wagon. It is surprising how cheap these wheels can be supplied. Empire Mfg. Co., Quincy, Ill., will send a catalogue free, telling how to measure for the size of wheel, giving prices and all.

THE Eclipse corn planter and fertilizer distributor is one of those machines that will save its cost every season for any farmer who plants as much as a half dozen acres of corn. It drops in hills or drills at the will of the operator, and will do the work of five men at hand planting. Write for free catalogue to the Belcher & Taylor Agricultural Tool Co., Box 75, Chicopee Falls, Mass.

THE International Food Co., Minneapolis, Minn., offers a $3,000 stock book free, the only conditions being that you answer four questions found in their advertisements. The book is valuable to all stock raisers, and the foods sold by this company are highly recommended by users as a conditioner. It is cheap, too—three feeds for one cent.

IT is impossible to have pure sweet milk, unless you remove the animal heat and stable and other odors. This is most readily accomplished by use of the Perfection milk cooler and aerator, which makes the milk smell sweet, taste sweet and keep sweet longer than if handled in the ordinary way. Send to the manufacturer, L. R. Lewis, Cortland, N. Y., for catalogue and prices.

THE Kraus pivot axle cultivator possesses some excellent features which are peculiar to the Kraus alone. Each gang is provided with an independent lever for raising and lowering, and for controlling the depth of the shovels. The pivot axles enable the operator to control the direction of the cultivator completely. It changes direction instantly, and will "hug" a row perfectly either on level or hillside lands. It is equipped with either pin or spring shovels or spring teeth. Altogether it is one of the most durable and substantially-built cultivators on the market, and is of light draft, easy to handle and does most perfect work. Write for catalogue to Akron Cultivator Co., Akron, Ohio.

THERE is nothing that does more to set off and bring out the great beauty of home surroundings than a little bright paint applied to buildings, fences, walls, etc. A man is judged to a great extent by his surroundings and appearance, whether he is a farmer, a manufacturer or a financier. His ability is gauged a great deal by the appearance of his farm, the condition of his buildings, etc. He cannot afford to allow his buildings to look untidy and leave them unpainted. A paint made by the Casein Company of America, Bellows Falls, Vt., is called "Indurine." Indurine is a weatherproof, fireproof, cold-water paint. This means that it comes in the form of a dry powder, and that it is easily and quickly prepared for use by the simple addition of cold water. It is made in white and practically all colors. It is equally desirable for inside and outside use. Write the manufacturers for full information.

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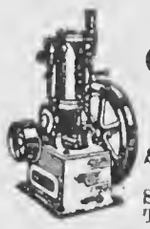

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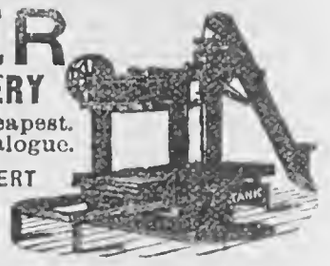

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Market Briefs.

PICKED UP HERE AND THERE.

"SPRING" LAMBS have been arriving more freely since the close of the Lenten season, and in some instances, better prices have been obtained, $6 or a trifle over being the top for the best now. The cool weather has been favorable for this country-dressed meat trade from the commission houses. A few days of warm, sultry weather would make havoc with this business, for dressed lambs sour and spoil quickly unless stored in a cold house. For shipment late in Spring it is advisable to cut the lambs open much more than in cold weather, as the danger of spoiling is thus lessened.

A BIG TOW FOR THE OCEAN.—A logging company in Oregon is about to undertake the preparation of a raft to contain 10,000,000 feet of logs, to be towed across the Pacific to the port of Shanghai, China. These logs will be worth over $200,000 in the Chinese market. The cost of towing will be only about $20,000, so that the venture will prove highly profitable if the journey is made in safety It is expected that the trip can be made with a 5,000-ton steamer in two months. There are great risks connected with this job, not the least of which is the possible danger to shipping, if the raft should be lost in a storm and drift into the pathway of other vessels.

WESTERN DRIED FRUIT MATTERS.—The troubles of the California cured-fruit associations are attracting unusual attention, and the causes of their difficulties should be studied by other associations, if they wish to avoid running against the same snags. The officers seem to have blundered in not keeping in close touch with the great markets and their own members. They allowed an excessive surplus of goods to accumulate on their hands, seeming to forget that prunes and raisins are grown in other parts of the world than California. The cut in price they have made relieves this condition somewhat, but it will unsettle the market for a long time. There is a very bitter feeling against the Prune Association. The courts have decided that under the circumstances growers are not legally bound by their contracts to the Association. The growers claim that the real conditions have been hidden from them. If this is a fact, the officials could not have made a worse mistake. The only way that an association composed largely of farmers can hold together and succeed is to invite discussion and keep the members informed as to what is being done. This may lead to cultivation and pruning in the shape of stormy meetings and the ousting of incompetent officials or those trying to hold their jobs by political methods, but it will weed out mistakes while they are small. To handle such an organization is no easy job. If one set of directors cannot do it, they ought to be willing to give others a chance; or, if not, they should be removed. The excuses made by some of these officials seem like nonsense. They lay it all to the publicity that has been given the matter. That is just what has been needed. Keeping their members in the dark as to what is going on may put off the crash for a time, but it is sure to come.

TOO GREEDY.—On general principles it is a good plan for the producer to get as near the consumer as possible, but this may be overdone, and some who raise produce for sale in city markets might well heed the old proverb about letting "well enough alone." A middleman who has made the business a study for years is better able to get high prices from retailers and avoid bad debts, than an outsider. Several mushroom growers had disposed of their output for some time through a reliable commission man in this city. He had got good prices for them, and made prompt returns. It seemed to be so easy that the growers got a case of "big head" and concluded that they might as well sell their own mushrooms and make the commission themselves. They put cards in each basket with an invitation to the buyer to correspond with them and buy direct. They succeeded in placing a large part of their output in this way, but soon complaints of inferior quality began to come from buyers who knew that they had an advantage over non-resident shippers, and bad debts piled up to the extent of several hundred dollars. They came to the man who formerly handled their goods and offered them again to him, but he declined, saying that he had taken considerable trouble to work up a trade for them, only to have it taken away, and he did not care to be bothered with any more such childish nonsense. A really careful and straight commission merchant is one of the best friends a farmer can have, and it is a good plan to stick to him and not grudge the commission he makes.

W. W. H.

EVAPORATED RASPBERRY TRADE.

The demand for evaporated raspberries is much lighter than several years ago, and we have no doubt that evaporating to any extent for market is somewhat a thing of the past. The reason is simple. They are now canned in large quantities, and when the market is at its lowest ebb. Much of the natural flavor is retained, and the goods being more serviceable, better quality, cheaper and less trouble than the evaporated goods, have run it out of the market THOS. H. EVANS & CO.

Baltimore.

It is likely there is not quite as much demand for dried raspberries as there was years ago, since there is a much greater production of California dried fruits. Evaporated raspberries are selling at from 18 to 20 cents, and we have no doubt many more would be used if price was 12½ to 15 cents. Those who raise and evaporate their own berries claim that there is a fair profit after the price goes above 10 to 11 cents. A number of years ago the price got down to 10 cents, on account of a very heavy production. Those who were raising the berries were discouraged, and many gave it up. WM. L. ALLEN & CO.

New York.

There are no statistics whatever as to the receipts, and we can only speak in a general way. Ten years ago the bulk of the crop was made in New York State, and came here for sale, and the price ranged from 25 cents down to 15 cents. Now there are a great many made in Michigan, and they and much of the New York State crop go to Chicago. The crops of 1897, 1898 and 1899 were so large that there was a surplus of not less than 50 carloads, and the price dropped down as low as 8½ cents. This discouraged the producers, and the crop of 1900 was small, so that now we are getting 19 to 20 cents. We have so many new fruits from California, at very low prices, that we wonder that raspberries sell as well as they do, and shall expect them to drop back to 10 cents if there is a good crop this year. You cannot advise farmers to plant largely again.

New York. A. C. WORTH.

GRAIN PROSPECTS.

Grainfields look well here, and grass would have stood the Winter all right, but it was very poor last Fall. The weather was not favorable last year for clover, so we have no clover in our new fields. We have a light sandy soil here; a little top-dressing after seeding will do very well for grain and grass. C. E. G.

Gibraltar, Pa.

Fall-sown grains and newly-seeded grass fields have stood the Winter well, having been protected to a certain extent by a covering of snow during our coldest weather. The prospects for the coming season are good at this date. The plan generally adopted with us is to sow to grass seed at the time of sowing wheat. Some prefer to wait until Spring; some prefer to mix clover and grass together. We make no special effort in that direction. We live in a fertile valley and have little trouble in obtaining a good stand of grass on all kinds of land. B. G. F.

Seville, O.

The prospects in this section for a good crop of wheat the coming season are excellent, as none to speak of has winter-killed. Grass has also stood the Winter well, but owing to the severe drought of last Summer a good catch was not generally secured; consequently, a full crop is not likely. As a rule our best stands of grass are obtained by seeding wheatfields early in the Spring, although in some cases good catches are secured by seeding with barley or oats, or with wheat in the Fall. Alfalfa is beginning to be grown here in a small way, and succeeds well where given a fair show. J. H. B.

Mandana, N. Y.

Pomelo vs. "Grape Fruit."

Among the delicious fruits of the orange or Citrus family is the pomelo. It is much larger than the orange, of slightly flattened shape and pale lemon yellow. The flavor is sour but very agreeable, being much milder than the lemon and with a touch of bitterness. The skin is very bitter and so are the partitions that separate the sections of edible pulp. But by cutting the fruit crosswise into halves and using a spoon to dip out the pulp there will be only a slightly bitter taste. There is no more wholesome and refreshing fruit, and it is especially desirable in Summer. The name pomelo is the correct one, and is always used for this fruit in the East Indies, whence it was brought to this country. "Grape fruit" is so inappropriate and inapplicable that it should never be used. It was given it in Florida about 20 years ago, and why no one seems to be able to tell with any sort of reason. Let the name pomelo be used by all intelligent people, whether in fruit or otherwise.

E. E. VAN DEMAN.

Ives Peach.

Having many inquiries as to the origin of Ives peach, I will give your readers a short account of this celebrated variety. About 30 years ago a single tree came up in the garden of my late father, I. M. Ives, a noted horticulturist of that day, from which I set out 200 trees. I have supplied fruit to Boston market for many years, until now I am unable to supply the demand. The variety is a dark red, freestone expressly for preserving, in which it excels all other varieties that I know. The fruit brings from $6 to $8 per bushel. The trees are very hardy, enormously productive and bear every year.

Salem, Mass. JOHN S. IVES.

The prices mentioned are far above the average, and could not possibly be maintained for a long period, because the supply, being easily increased, would soon bring them down. It may be that this is a valuable peach for general trial.

H. E. V. D.

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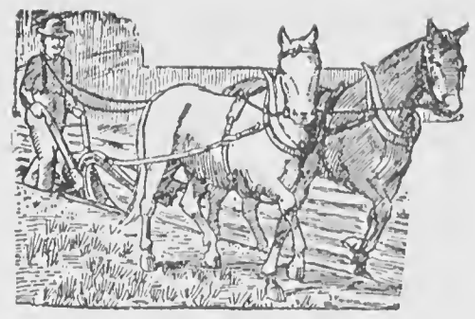
"I had been a sufferer for many years from nervousness with all its symptoms and complications," writes Mrs. O. N. Fisher, 1861 Lexington Ave., New York, N. Y. "I was constantly going to see a physician or purchasing medicine. In the spring of 1897 my husband induced me to try Dr. Pierce's Favorite Prescription. After taking one bottle and following your advice I was so encouraged that I took five more bottles, and then stopped for several weeks as I felt so much better, but still I was not *completely cured*. I commenced taking it again and felt that I was improving faster than at first. I am not now cross and irritable, and I have a good color in my face; have also gained about ten pounds in weight and *one thousand pounds of comfort*, for I am a new woman once more and your advice and your 'Favorite Prescription' is the cause of it, coupled with the 'Pleasant Pellets' which are not to be dispensed with. I took eight bottles of the 'Prescription' the last time, making fourteen in all, and will not take any more unless you so advise, for I do not see as I need it."

makes weak women STRONG, sick women WELL.



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2 oz., 25c.; 8 oz., 50c.; 5-lb. pkge., $4.

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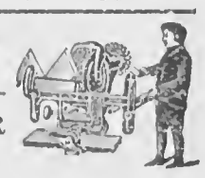

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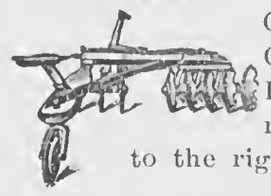

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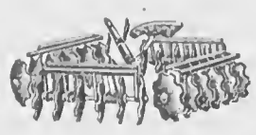

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$5.97 for 16-tooth 2 section harrow. Best oak frame, guard and whiffletree. Painted and varnished. Better than others sell for $14. Weight 150 lbs. 18, 20, 24-tooth equally low.

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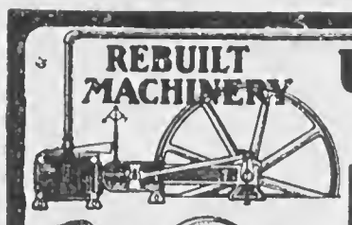

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Live Stock and Dairy

THE BREEDER'S WAYSIDE.

Breed of Cows for a Dairy.

What cows can I buy for a dairy to get best results? I have Jerseys and live near a town of 6,000 population; have 12 acres of land; great demand for milk. Would you advise Holsteins or Short-horns?

Waynesboro, Pa. G. H. H.

No more satisfactory breed of cows exists for supplying consumers with milk, than the Jersey. The milk is rated as strictly high class, when drawn from healthy cows, and Jersey milk is sold to the most particular trade in America. That from the consumer's standpoint. Now from the producer's standpoint, as to whether it will pay to keep one breed or another, depends mainly on the individual merit of the cows kept. The writer keeps Jerseys. Then by all means I should say, stick to your breed, get better cows if you can, and make a success of them. If you cannot succeed with Jerseys, then something is wrong with your method or management, for there are plenty of men maintaining Jersey herds and selling milk in towns who are succeeding in the business. If you can't make Jerseys go, then how do you know you can succeed with the other breeds? Your cows at four years old should be able to produce at least 5,000 pounds of milk a year, if you have good ones. Weigh the milk yield of each cow each milking, using a spring balance, and keep a record of the same. Then weed out the unprofitable milkers. When you buy, be sure that you get cows that are first-class milkers and from superior ancestry. Then the breed matter will settle itself.

The above is not intended as a special plea in behalf of the Jersey, but rather to stick to a breed already adopted. But to go further, Short-horn milk is popular for town consumption, and the better class of Holstein milk also is, although there are too many cows of this breed that produce low-grade milk, to make it the best sort for a particular class of customers, unless cows giving milk containing at least 3½ per cent fat are selected. A commendable effort is being made by Holstein breeders to produce strains yielding high-grade milk, and these cows will do for city trade. As a rule, however, the Holstein serves a better purpose as a producer of milk for creameries and butter making. The Short-horn usually will not produce milk as economically as either Jersey or Holstein, while the latter ranks as the greatest milk-producing breed in the world. Generally speaking, no matter what the breed, the cow which produces the greatest amount of milk in a day yields relatively speaking the milk poorest in butter fat. The Jersey that yields 10 pounds of milk ordinarily makes a milk richer in fat than the one yielding 35 pounds. People as a rule prefer milk rich in fat, for drinking or to skim for cream; consequently Jersey milk will supply this requirement better than Short-horn or Holstein. So this is another reason for adhering to the Jersey for this special phase of dairying.

If it is desired to keep some Jerseys and also some Holsteins, and mix the richer with the poorer milk, and so increase the quantity, and still reduce the quality, the scheme will work. Still, I assume that what is wanted is profit. The question arises, which will produce 100 pounds of milk cheaper, 1,000 pounds of Jersey or 1,000 pounds of some other breed? That point all depends on the individuality of the cow or cows. It is not necessarily a breed question entirely. The dairy breeds, to be sure, will produce this more economically than the beef breeds. The competition is closer among the purely dairy types. Yet on the basis of my knowledge of the subject, I do not hesitate to recommend the Jersey as a breed capable of yielding a very high-grade milk at as low a cost of production per pound as any dairy breed we have.

Concerning this, the question has been asked me: "Where the milk from various cows is mixed together, can we really guarantee it to be uniform, or will some customers get less fat than others?" This will depend upon conditions. If the milk from 50 cows, of several breeds, was thoroughly mixed together before distribution, it would no doubt be uniform in quality if bottled or dipped out from the can with long-handled dipper. However, if one had only half a dozen or so cows, representing two or three breeds, with extremes in quality, this milk might easily vary in quality if two of these cows should go dry for a time, or fall off greatly in milk yield. The greater the number of mixed cows kept, the less the variation. The writer believes that the live-stock interests of America will be more benefited by purity of breeding than by impurity. Therefore he advocates one breed for a purpose and fixed standards. C. S. PLUMB.

Short-horn and Aberdeen-Angus Cross

A man in West Virginia says he has obtained an excellent general-purpose cow by crossing Short-horn of good milking strain with an Aberdeen Angus, and my opinion is solicited on such a cross. This is what may be regarded as a harmonious cross, two beef breeds, of large type, being mated. Such a cross would naturally produce a better beef than dairy animal. The Angus is not regarded as the equal of the dairy Short-horn in milk production, but in this instance, fair milking blood may have been mated, and for the first generation satisfactory results have been secured. With the second generation uncertainty and trouble come in. I can see no advantage in crossing these two breeds, unless we view it from the standpoint of improvement through one individual, that is, not a good representative of the breed, by mating it with a better one of another breed. Fine typical Short-horns or Angus cattle would better be kept purebred or high grade. I certainly fail to see how Angus blood can improve a Short-horn of dairy type, that is, of high individual merit. In fact, Angus blood would ordinarily tend to the production of a type of animal away from rather than toward the general-purpose idea. C. S. PLUMB.

DISHORNING JERSEYS.—Would you advise dishorning Jersey calves intended for stock? How would you do it? J. E. D.

Yes, for practical purposes in the dairy we think dishorning is desirable. The loss of the horns might injure the sale of purebred animals, but they have no value on dairy cows. The whole process was explained April 13, page 277.

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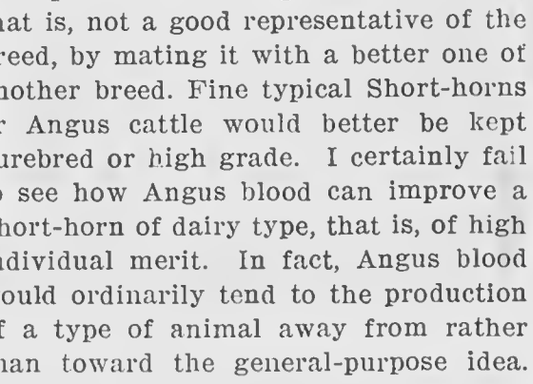

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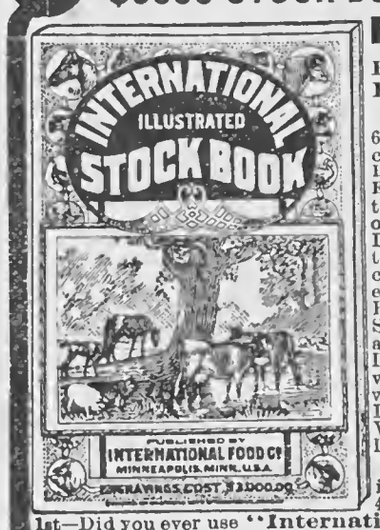

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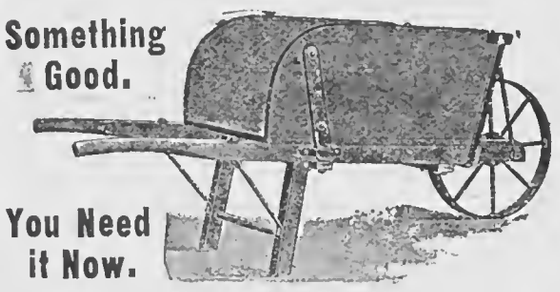

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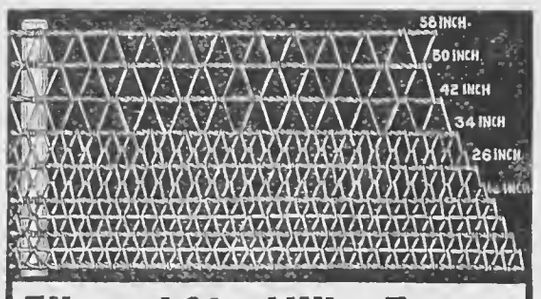

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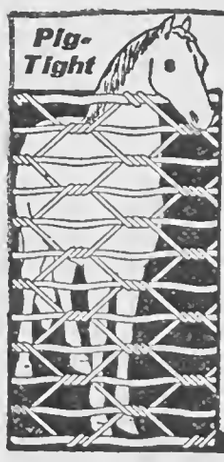

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Two Red Poll Bull Calves, Spring O. I. C. Boar Pigs, and a few Barred Rock Cockerels for sale. E. J. ADAMS, Adams Basin, N. Y.

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HIGH-CLASS
Registered Jersey Cattle.
ROBT. F. SHANNON, Pittsburg, Pa.

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ready for service, and a fine lot of Bull Calves. Best of breeding, and from deep producing families.
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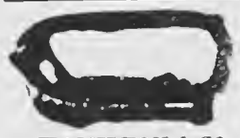

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Runts are Unprofitable; Dead Hogs a Total Loss.

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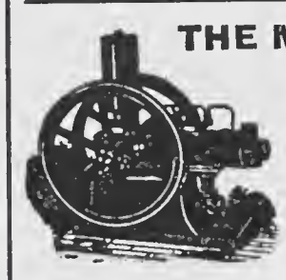

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Can Reduce Expenses
of cultivation by the judicious use of
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upon his land. This when properly applied, with other elements of plant food, never fails to largely increase the yield of hay, grain, or garden crops, without additional cultivation or labor. Our literature and ***list of dealers*** in *Nitrate of Soda* will be sent free on application to **John A. Myers,** 12-0 John St., New York City.

A TALK ABOUT PIGS.

The Size of Litters.

How many of the average litter are considered good enough to register? What proportion of the pigs do breeders usually reject? Do not the pigs from small litters usually make the best individuals? That seems to be the case in our experience, and we would like to know what others think of it. Some breeders say they would not breed a sow that had small litters, but we have found such pigs superior as they grew up.

Sometimes one and sometimes two pigs from litter are not good enough to register. Average about 10 pigs per litter. Undoubtedly small litters make the best individuals as a rule.

J. D. VAN VALKENBURGH.

Greene, N. Y.

About two-thirds of the pigs are usually good enough to register. Pigs from the smaller litter usually prove the best individuals. Litters of 12 or 14 are too many; eight or 10 are better. I prefer to save a sow pig for breeder from a litter of seven or more; eight or nine is a very good-sized litter.

Vermont. C. C. PAINE.

It depends greatly on the dam and sire, number in litter and many other conditions. Sometimes, if the litter is not too large, 100 per cent is fit for breeding purposes, but very rarely; usually from 10 to 80 per cent. Breeders do not raise near as many as they ought to. Both for breeders and for the economical production of pork I would rather have five *good* pigs than 12 poor ones. C. K. RECORD.

Peterboro, N. Y.

The number of pigs that are good enough to retain for breeders varies very much, as some sows breed better than others. I have certain sows that will produce 85 per cent show pigs, and others, in some breeders' herds, would only farrow 45 per cent good enough to retain for breeders. I think that the litters do not necessarily have to be small to raise the choicest pigs; however, it is seldom that a litter of more than six pigs contains pigs of exceptional size and development for their age. I like my sows to farrow litters that will average eight pigs, however, and they usually do. D. R. PERRY.

Columbus, Ind.

The golden rule is our motto. About one-half of the average litter is generally not good enough to register, though some breeders do not cull so heavily. We reject all that are not strictly first-class, and good enough to register and send the culls to the butcher. The pigs from small litters sometimes make the best individuals, but the feeder is to blame for that. If the male is vigorous and the sow properly fed from the time she is bred until she farrows the pigs will not be inferior when farrowed. If the pigs are inferior when farrowed the feeder is directly or indirectly to blame. If we thought small litters developed into the best hogs we would henceforth argue in favor of small litters. The best pig in the litter at one month old does not always make the best hog; sometimes a pig that is slow to develop the good points retains them best when fully grown. G. A. FOOTE & SON.

Irvington, Ky.

Holding a Switching Tail.

Fig. 125 represents a device that I have found to be particularly useful in the cow stable at milking time to prevent a bothersome cow from annoying a milker. The whole device, as figured, comes very near to showing just what it is without description. If desired, it can be made entirely out of rope, but as the reader will observe, a small piece of chain is used to connect the two ends of the rope. I rather like the addition of the chain, because it gives a little weight that aids much in holding the rope in place. There is also an advantage in fastening one end of the chain securely to the rope, while the other passes through the loop in the rope end, and doubles back. This makes it very easy to lengthen or shorten the circle without much trouble. As will be seen, the rope is thrown over the hook points, and hangs down just above the udder, holding the tail in between the legs. Once in a while a cow will get the tail out of the device, but it is comparatively infrequent. I have used this rope quite often on a cow at my back, to prevent her swinging the tail into my face while milking the next cow to her. A nervous cow will frequently do this even in the Winter just to keep the milker located, something as a "feeler." This can be used on a kicking cow very readily, and especially those that will be liable to kick if they find their tail is fastened. The probabilities are the cow will get the tail loose before she becomes so agitated as to kick. Every milker ought to have one or two of these devices in the stable, and once with them he will not be found without it. It is preferable that the rope be made of inch stuff, and rather a light-weight chain Size is a matter that depends entirely on the size of the cows.

Shiawassee Co., Mich. C. P. REYNOLDS.

MILK FARMERS AHEAD.

The Scranton Dairy Company Settles.

The dairy company, after making contracts with the farmers for one year, claimed that the express company would not give them rates less than New York price, which is 26 cents per can, but this proved to be untrue, for the railroad company offered the farmers rates, as soon as they commenced to make butter, to both Scranton and La Plume, where the dairy company's condensery is located. On January 1, 19 of the 82 farmers who furnished milk to the dairy company held a meeting, and decided to commence making butter in the new factory, which was built in the Fall, costing the farmers $4,000. This building and machinery was rented to the Scranton Dairy Co. when they made contracts for the milk at $300 per year, but they gave up the lease when they quit taking the milk. On December 31 we hired an experienced butter maker and put him at work, paying him $50 per month till April 1. It was rather up-hill work for a spell, but we kept getting more milk, till now we have 75 cans per day. January and February our milk netted us two cents per quart. The dairy company did not pay for December milk on January 1, as they had agreed to, but about February 1 offered 70 cents on the dollar, and the report was that the company had sold out and gone out of business, which was true in part, as they had sold their retail business in Scranton and tried hard to sell the condensery at La Plume but failed to do so. About 60 farmers took what the company offered, or the 70 cents on the dollar, but the rest held out, and commenced suit against the company, and the first week in April the company paid them in full and interest from January 10 to date, also costs to amount of $91. Now, those who took the company's offer are feeling sick. The size of the thing is that the company could not sell its condensed milk so as to get out whole, so tried to make its loss good by squeezing the farmer. The 30 per cent that the farmers lost amounted to about $800.

Hop Bottom, Pa. E. P. B.

Horse Owners Should Use
GOMBAULT'S
Caustic Balsam
The Great French Veterinary Remedy.
A SAFE, SPEEDY AND POSITIVE CURE.

Prepared exclusively by J. E. Gombault ex-Veterinary Surgeon to the French Government Stud

SUPERSEDES ALL CAUTERY OF FIRING

Impossible to produce any scar or blemish. The safest best Blister ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses or Cattle.

As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, Etc., it is invaluable.

WE GUARANTEE that one tablespoonful of CAUSTIC BALSAM will produce more actual results than a whole bottle of any liniment or spavin cure mixture ever made.

Every bottle of Caustic Balsam sold is Warranted to give satisfaction. Price $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address
THE LAWRENCE-WILLIAMS CO., Cleveland, Ohio

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Like June Grass

Quaker Dairy Feed makes flow and quality of milk equal to June pastures.

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guarantees superiority, to those who know, and others should write for catalogue No. 153
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SEPARATOR FREE
on 10 Days' Trial. Lightest, easiest running HAND Separator.
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Perfect Butter
—the kind which brings the highest price in any market can only be made from perfect milk. All bad odors and flavors of animal, feed or stable must be removed,
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will do it quickly, cheaply and perfectly. Made in various sizes from 1 to 200 cows Send for prices and catalogue of Farm and dairy supplies. L. R. Lewis, Mfr., Box 12 Cortland, N.Y.

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Newton's Improved COW TIE
Holds them firmly, draws them forward when lying down, pushes back when standing, gives freedom of head, keeps them clean
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The Improved United States Separator

as it appears on the market to-day is the result of years of study and experiment. While we do not claim it is perfect, although many users say it is as near perfection as possible, yet we do claim that it is unequalled by any other make on the market. This claim is based upon its work at Experiment Stations and in Dairies and Creameries the country over, where it has demonstrated many times that it

Does more exhaustive skimming, therefore Saves Cream:
Has greater capacity according to price, therefore Saves Time:
Requires less power to run and less time to clean, therefore Saves Labor:
Has greater simplicity and durability, therefore Saves Expense.

In fact it has so many times proved in competition with other makes its overwhelming superiority as to make good its right to be known as

The Standard Cream Separator of the World

If you will follow the advice of its users you will investigate its merits before buying some other make said to be "just as good." Remember there are none such.

We also sell a complete line of Dairy and Creamery Apparatus.
Write for descriptive catalogues of what you are in need of.

REPRESENTATIVES WANTED TO HANDLE OUR GOODS IN TERRITORY NOT ALREADY COVERED.

VERMONT FARM MACHINE CO., Bellows Falls, Vt.

214-A

Humorous.

There was a young lady of Gloucester
Whose name was Penelope Foucester;
It is proper to say,
Had she spelt it this way
We should not have known how to accouster. —Puck.

"I CAN tell you," said he, "how much water runs over Niagara Falls to a quart." "How much?" asked she. "Two pints."—Chicago Journal.

MRS. FUSSY: "John, you're the most unreasonable man I ever met in my life." Mr. Fussy: "I don't doubt it. I'm the only one that ever married you."—Pick-Me-Up.

"HERE'S a story of a dog that hatched out a nest of eggs which had been deserted by the hen." "Does it say what sort of a dog it was?" "No, but it must have been a setter."—Judge.

A WELL-KNOWN medical journal offers this advice: "If the child does not thrive on fresh milk, boil it." Why not begin by merely spanking it? It may learn to like it after awhile.—Atlanta Journal.

"A WOMAN," said Mr. Plattitood, "can't keep a secret." "Huh!" said little Johnny, "teacher kep' me workin' an hour on a ole example, when she might have told me the answer any time."—Indianapolis Press.

PARSON ARTHUR DOX: "I wonder why we received so many pennies in our Easter collection?" Deacon Hickory Crick: "Wall, I s'pose it's 'cause they don't make no smaller coins in the mint."—Brooklyn Eagle.

TWYNN: "Up in Minneapolis the opponents of women's activities never quote what St. Paul said about women's subjection." Triplett: "Why not?" Twynn: "They don't think much of St. Paul at Minneapolis."—Leslie's Weekly.

"I KNEW he could never keep his head above water," said Jimson. "He started in business three years ago, and he's been going down ever since." "What did you say he was?" asked Johnson. "A diver," replied Jimson.—Marine Journal.

RETURNED COLONIST: "There is a most remarkable cave in the Blue Mountains, not far from Sydney, in New South Wales." Innocent Stay-at-home: "What is there remarkable about it?" Returned Colonist: "If you call out 'Halloa, Smith!' the echo says, 'What Smith do you mean?' no fewer than 14 distinct times."—Tit-Bits.

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New and Extra Inducements
to sell our celebrated Teas, Coffees, Spices, Extracts and Baking Powder. 20 and 25 per cent to agents. Freight paid. For special terms address THE GREAT AMERICAN TEA COMPANY, 31 & 33 Vesey St., New York. P. O. Box 289.

Estab. '32 SCALES of every description Satisfaction guaranteed. Write for prices. JESSE MARDEN, 109 S. Charles St., BALTIMORE, MD.

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Direct from maker to user. 75-lb stone, diameter 20 inches, $2.80. 100-lb. stone, diameter 24 inches $3.30. Either size stone mounted, $1.25 extra. The prices include cost of delivery at nearest railroad station. Write for circular.
P. L. COLE, Lock Box 381, Marietta, Ohio.

ORNAMENTAL FENCE

25 designs, all steel. Handsome, durable.—Cheaper than a wood fence. Special inducements to church and cemeteries. Catalogue free.
KOKOMO FENCE MACHINE CO., 454 North St., Kokomo, Indiana.

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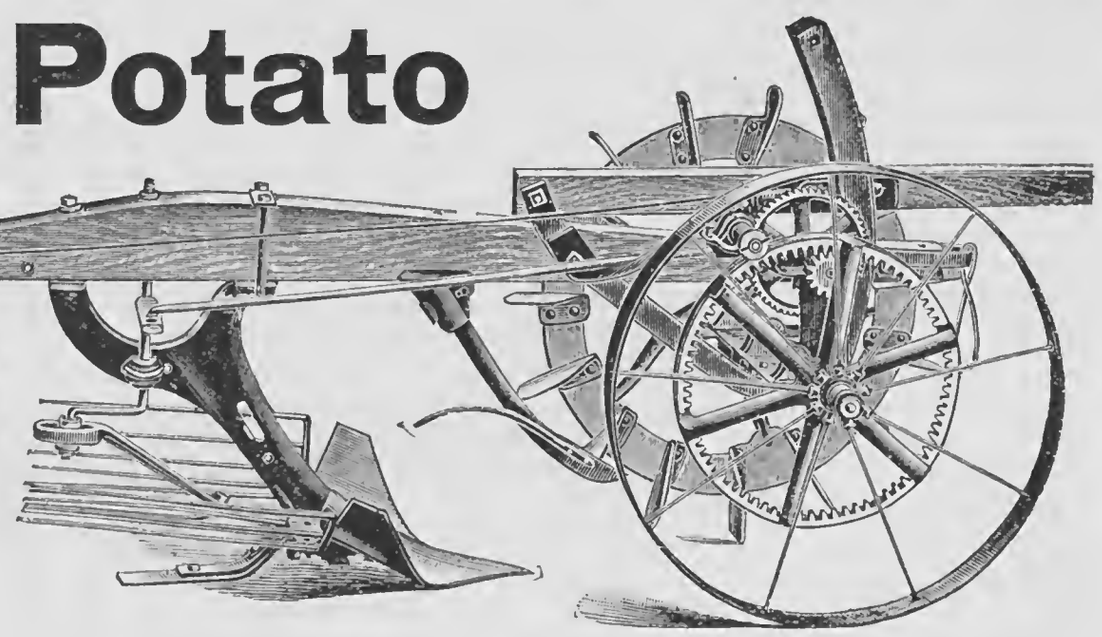
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Guaranteed to do as good work in the same field as any four-horse elevator digger on the market. Price one-half. Draft one-half. Cost per year for repairs, one-fifth. Guaranteed to dig as clean as a man can with a fork. Will make digging potatoes as easy, simple and inexpensive as cutting grass. Would such a digger please you? Will you buy such a digger? WE TAKE ALL THE RISK—unsatisfactory work in your field means no sale. Every farmer who grows five acres or more of potatoes is interested. We wish to hear from all such. D. Y. HALLOCK & SONS, Box D 805, York, Pa.
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Built in all sizes and furnished with either 2, 3 or 4 horse eveners.
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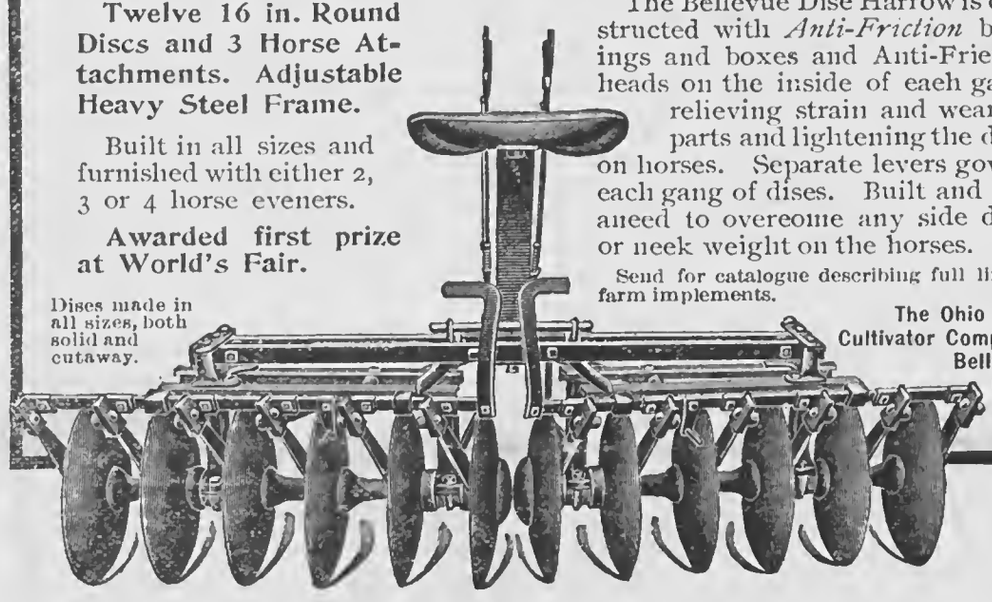
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Send for catalogue describing full line of farm implements.
Dises made in all sizes, both solid and cutaway.
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A Good PLANTER
should plant all kinds of field seeds,
Field, Ensilage and Sweet Corn, Peas, Beans, Sugar Beets, Stock Beets, etc.
It should plant in hills, drills or check at the will of the operator. It should at the same time drop or drill all kinds of commercial fertilizers, wet, dry or lumpy, pulverized hen manure and other home made fertilizers, evenly in any quantity per acre.
EASILY ADJUSTED. EASY TO HANDLE. WEIGHS 150 LBS.

The Eclipse
Corn Planter and Fertilizer Distributer
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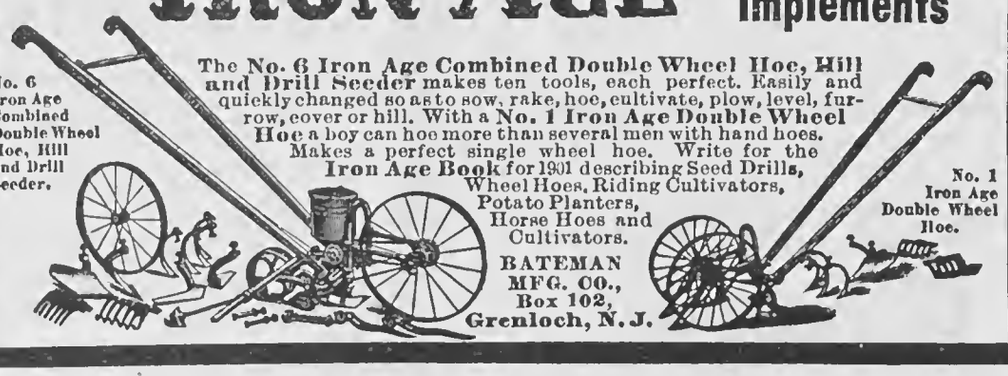
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transplant all kinds of plants, such as cabbage tobacco, sweet potatoes, tomatoes, sugar beets, watering and fertilizing at the same time; also has potato planting attachment. Write for prices and territory. Made by
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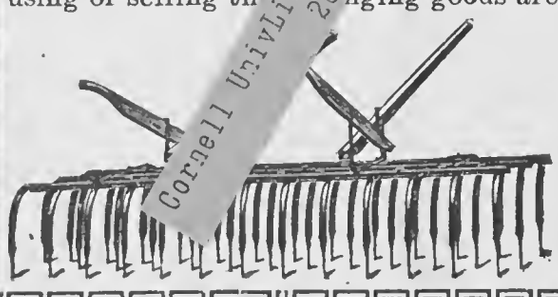
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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2675. NEW YORK, MAY 4, 1901. $1 PER YEAR.

LIME AND SULPHUR FOR PEAR BLIGHT.

MR. PEASE GIVES FURTHER INFORMATION.

Great Interest in the Subject.

The recent article by Mr. Pease on Pear blight has very deeply interested me. His experience, to say the least, is a remarkable one. To lose nearly 20 per cent of his trees, after such persistent efforts to check it as he used, seems almost incredible. I would like to ask Mr. Pease whether he disinfected the pruning tools when cutting out blight, also whether he cut much below the part affected? He says, apart from Bartlett and Louise Bonne, that the other varieties were affected about to an equal extent, except the Seckel, which was less so. Now, in my experience, the Angoulême has been virtually blight-proof—far more so than the Seckel. So it would seem that the attack of this trouble was a very virulent one with him, or else the disease was transmitted from the pruning tools. Will Mr. Pease state what proportions he uses of sulphur and lime, and the quantity of same to 50 gallons of water? I purpose giving this remedy a thorough trial and hope that I may have as favorable results as he has had.

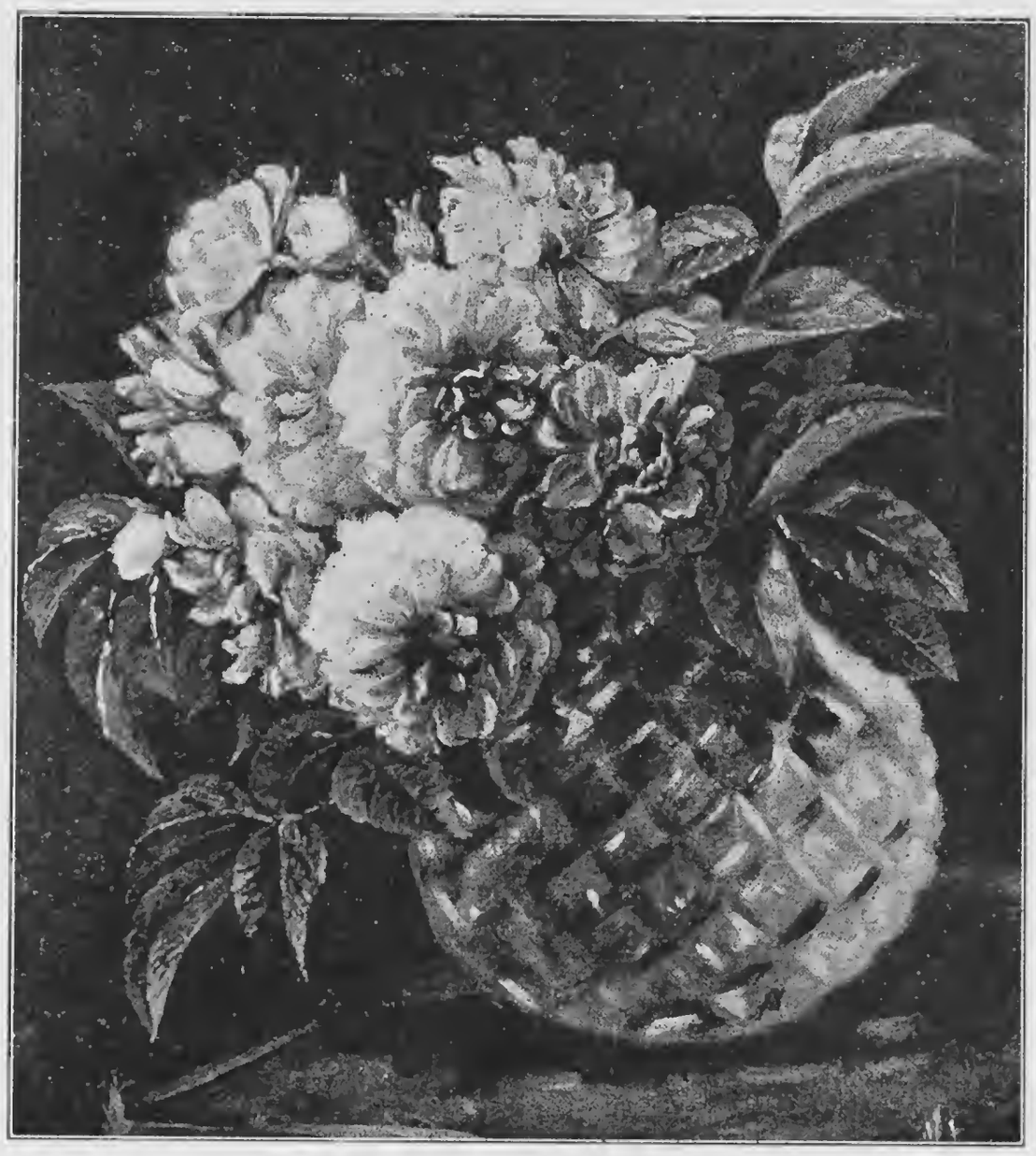
Orange Co., N. Y. J. R. CORNELL.

Mr. Cornell seems to think it almost incredible, that we should have met with such a loss of trees, with thorough treatment for the disease. To make this better understood I wish to call attention to the condition of the trees. They were planted in the Spring of 1893, and were attacked by blight in 1897 at the age of four years from planting. They had been cultivated thoroughly, and cut back closely every year up to this time, causing a rapid growth of wood, and making an ideal condition for the spread of the disease. In regard to spreading the disease by the tools used in pruning, I think this point has been practically settled. It has been shown by careful experiments that it is very difficult to spread the disease in this way, even by the most careless work. We did not deem it necessary to take any such precaution, but we were careful to cut a safe distance below the blight. For further proof I will say that we rarely find blight on the part of a limb left where blight has been cut. As to the susceptibility of the different varieties to the disease, I will say that in my previous article the statement was made in a general way, as I have not taken the pains to figure out the exact per cent of loss of each variety, but judging by observation I think the Angoulême would have shown the smallest per cent of loss (except the Seckel), but was far from being free from blight. We certainly did not carry the disease to the Angoulême trees by the pruning tools, because it was there before the tools were used. As to the remedy, I will state how we prepared it, and wait for further experience to improve upon our method.

For the wash, use a thick whitewash of lime with flower of sulphur thoroughly stirred in, adding one quart of strong brine and one-half pint of linseed oil to three gallons of wash. Make it very strong with sulphur. For the spray use milk of lime (strained) with from five to seven pounds of flower of sulphur to 50 gallons of mixture. It must be well stirred while using. As to the proper proportions, we are yet in the dark. This must be settled (if at all) by future work. I realize that we have opened up a great question and a broad field for investigation. The more I study the matter the more it seems to me that the cutting-off treatment is like locking up the barn after the horse is stolen. It is very evident that the disease is in the trees for some time before we have any outward evidence of it. I have found trees that were apparently all right in the Fall, black from the disease the following Spring. It seems to me the better way to use a preventive, if possible.

In my correspondence with scientific men one says that "the difficulty in controlling Pear blight by any application of sulphur is to get the sulphur where the germ is. The germ is inside the cell. There is no way of getting the sulphur to that place." Another says: "I am interested in what you have to say about the treatment of Pear blight, but I frankly confess that I doubt the effectiveness of the treatment with lime and sulphur. I would like to see good experimental evidence supporting it. I doubt it for this reason. It has been proven conclusively that this disease is caused by bacteria, exceedingly minute organisms which make their attacks upon the young growing tissue, as for example, the tender parts of the flower or tips of the young twigs. The germs get in at these tender places, and when once within the tissues work downward into the larger branches and limbs. Now it appears plain that any spray or wash, to be effective in keeping out these germs, must be applied at the point where they enter, and a wash applied to the trunks and limbs would not, of course, reach the most essential point. It seems probable that any spray, to be effective against this disease, must be applied while the flowers are open, because it is very evident that bees carry the disease from tree to tree as they visit the flowers." It is my opinion that we may get the sulphur on the trees by a wash or spray, or both, strong enough to destroy the bacteria before they can gain an entrance. In the interest of the pear growers, I feel that we have a right to ask these representatives from the experiment stations in this State, to give a *reasonable* reason for their doubts of the efficiency of this plan. The question has been asked whether we could not use poison with the spray also, to kill the Codling moth. I can see no reason why it could not be done if we were spraying at the proper time. And again, I do not know any reason why we might not use the sulphur with the Bordeaux Mixture when it seemed advisable to do so. I can say that I have seen marked effects of the sulphur spray on leaf blight of the pear, so that we shall have some benefit from our work, even if it should prove an ineffectual remedy for fire blight. I have great esteem for the work of the scientist, and I trust that in the near future some of them will come to our assistance with helpful suggestions along the lines indicated.

D. R. PEASE.



HYBRID RUGOSA ROSE NEW CENTURY. FIG. 128. SEE PAGE 326.

SPRAYING FOR MELON BLIGHT.

Several readers have asked what experiment station bulletins will give them information about melon diseases. After reading the article on page 265 other readers ask what is meant by the "one to 12 Bordeaux formula." F. A. Sirrine answers these questions as follows:

The New York Experiment Station has published no bulletin or pamphlet on melon blights. Short articles describing the characteristics of the leaf blights of melons have been published in the annual reports of New Jersey (New Brunswick), Connecticut (New Haven) and Massachusetts (Amherst) stations. In addition these diseases have been described in several bulletins of the Ohio (Columbus) and in one bulletin of the Colorado (Fort Collins) stations. The principal trouble described as affecting melons in New Jersey has been an anthracnose. In Connecticut and Massachusetts it has been the leaf blight called Alternaria. In Ohio the Downy mildew and Alternaria have caused the principal damage, while the Colorado writer describes the blight as "Cantaloupe blight." Probably it will be best to send for bulletins 73 and 105 of the Ohio Station for the description of the disease and for results of treatment. The other articles mentioned describe the disease, but give very little with regard to treatment for it.

It would seem that the best method for melon growers, and especially those who grow muskmelons, to follow would be to test the value of spraying on their own fields. The work done by Holmes Brothers showed that although they sprayed for Downy mildew, the leaf blight known as Alternaria was checked. I am sure that it will pay growers of muskmelons to spray their vines with weak solutions of Bordeaux Mixture to protect them from the striped beetle, and as the so-called Alternaria "leaf-blight" is liable to start early in the season the gain from spraying is doubled. By weak solutions of Bordeaux Mixture we mean the use of only two or three pounds of copper sulphate, or blue vitriol, to a 50-gallon barrel of water. It is customary with writers on spraying to speak of the 1-to-8, 1-to-11 and 1-to-12 formulas of Bordeaux Mixture. This is a short way of expressing the use of one pound of the copper sulphate to eight, 11 or 12 gallons of water. Spray pumps are usually mounted in barrels holding from 50 to 52 gallons, and generally only about 48 gallons of liquid are put in a barrel, hence a 1-to-8 formula would mean that six pounds of copper sulphate were used in a barrel holding 48 gallons of water, and the 1-to-12 means that four instead of six pounds of copper sulphate are used in the same-sized barrel. The 1-to-12 formula of Bordeaux Mixture is strong enough to use on muskmelon vines at any time,

and it is safer to use only half this strength while the vines are small. A large excess of lime should not be used in preparing these solutions, as the application of too much caustic lime, either dry or as combined in Bordeaux Mixture is liable to stunt young muskmelon vines. (See page 20 of Bulletin 158, New York Experiment Station.) It is advisable for all growers to commence spraying their melons as soon as they are out of the ground with a weak solution of Bordeaux Mixture, two pounds of copper sulphate to 48 gallons of water (1-to-24 formula) and repeat this application every week until the beetles disappear. As soon as the plants commence to form vines, spray with a stronger solution, 1-to-12, of Bordeaux Mixture, every 10 days or two weeks until the last settings of fruit are nearly mature. The early sprayings will discourage the beetle and leaf blights, while the late sprayings will help to keep off the Downy mildew and anthracnose. It is best to use the 1-to-12 formula for spraying strawberries.

THE "SEED END" OF POTATOES.

In Mr. Brown's interesting article entitled "Potato Growing in Central Illinois," on page 285, he says: "The seed or blossom end of each potato should be cut off and thrown away," and there he leaves the matter. Not a word as to the why and wherefore which we Yankees consider of the first importance. Every intelligent cultivator desires to give a substantial reason, backed up by facts, for whatever he does, and is seldom willing to "go it blind." Apropos to this matter there will be found in the Massachusetts Agricultural Report for 1886 an account of an interesting series of experiments, covering six consecutive years, by Edmund Hersey, of Hingham, Mass., read before the State Board of Agriculture. According to statistics the Nation has made a marvelous growth in 15 years. Can it be possible that the stem end of the potato has outstripped the seed end in the same ratio? Mr. Hersey's experiments were accompanied by 49 photographic views of the plants June 28 and July 21, and the season's product. These views show that the seed-end plants were more than double the size of the stem-enders on the same dates. Every year of the six the seed-enders started in advance and kept ahead of the stem-enders.

Now for the results. "The seed end produced (in one year) of large potatoes, four pounds eight ounces, and one pound 10 ounces of small; total, six pounds two ounces. Stem end produced of large potatoes four pounds four ounces, and of small one pound two ounces; total, five pounds six ounces. For six years the 10 hills of each produced—seed end, 166½ pounds of large potatoes and 47¼ pounds of small; total, 213¾ pounds. Stem end produced 141⅜ pounds of large potatoes and 47⅛ pounds of small; total, 188½ pounds—the seed end producing 25 pounds more large potatoes than the stem end, and about the same quantity of small potatoes. Rate per acre, seed end, 408 1-3 bushels; stem end, 358 1-3 bushels." Mr. Hersey summarizes the results of his experiments as follows: "Years of close observation and careful experiments lead me to the following conclusions: Whole potatoes will produce a crop from a week to 10 days earlier than cut potatoes. Small whole potatoes will produce for many years in succession just as good, if not better results, than large potatoes cut the size of the small whole ones. The seed end of a potato is better to plant than the stem end, because the plants start with more vigor, and produce larger and more potatoes. A large piece of a potato is better to plant in ordinary soil, and will produce a much better crop than very small pieces or single eyes." And yet I am told that some of our Connecticut farmers insist upon cutting off the seed end of the potato and throwing it away when preparing the tubers for planting! H. H. BOARDMAN.

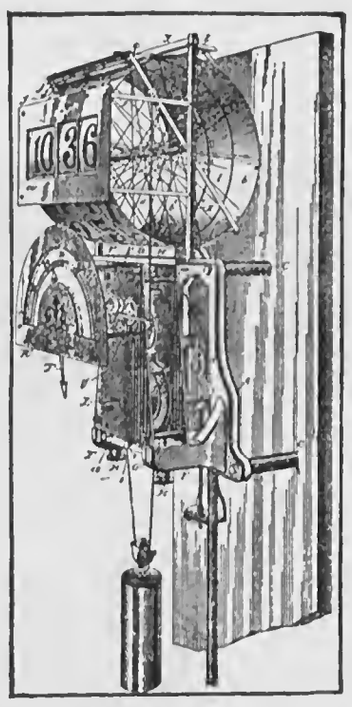
Connecticut.

SOME LAW AS TO TREES.

A tree is wholly the property of him upon whose land it stands, notwithstanding the roots extend into, or the branches overhang, the land of the adjoining owner, say the New York and other State courts. In Vermont is was held that the location and property of the tree should be determined by the position of the trunk or body above the soil, rather than by the roots within or branches above it. Permitting the branches of trees to extend beyond the soil of the owner is said to be an unequivocal act of negligence, warranting the party injured in abating the nuisance by clipping the branches back to his line of easement. It seems that he may also abate the roots projecting into his soil, at least if he has suffered actual damage. But here the law makes a curious distinction. After clipping the branches he cannot carry them, and the fruit they contain, away and convert them to his own use. There is no authority in anyone to treat as a nuisance that which is not so, and anyone assuming to abate as a nuisance that which is not so, acts at his peril. An adjoining owner may sue for damages, but unless the tree or trees are poisonous or noxious in nature, there must be proof of some real sensible damage to authorize him to maintain such action. In the case of C. vs. L., 24 Hom. (N. Y.) 405, the complaint alleged that in consequence of the overhanging limbs the plaintiff's crop was diminished by reason of shade. The court held that the plaintiff's remedy was by clipping the branches, especially if the owner of the tree refused to do so when requested.

It seems that a land owner is liable for damages growing out of his having planted on his own ground a yew tree (poisonous to horses) so near to his neighbor's lot that his horses while feeding on the branches overhanging were poisoned and subsequently died from the poison contained therein, solely on the ground that the tree was poisonous. But where a land owner clipped a yew tree, knowing it to be poisonous, and took so little care of the clippings, as to allow them to be placed on land not occupied by him, whereby the horses of plaintiff were poisoned, the defendant was held not liable.

An adjoining owner has no title to the fruit growing upon the branches of the trees which overhang his land, and will be liable in trespass for gathering it, say the Connecticut and New York courts. And further, says the court: "And he will be liable for an assault and battery for using violence to prevent the owner of the trees from gathering it, provided the latter cannot do so without committing a trespass." Even though fruit falls from the overhanging branches upon his land, the owner of the trees may go upon the land and take it away without being liable for trespass. But here the law exhibits another curious distinction, in that if, when pruning the trees, the loppings fall upon the adjoining land, the owner cannot enter and take them away, if by using due caution their falling there might have been prevented. So, if one's tree be blown down and falls on the land



A CLOCK WITHOUT A DIAL. Fig. 129.

of his neighbor, he may go and take it away, and the same rule prevails where fruit falls on the land of another; but if the owner of a tree cut the lopping branches so that they fall on another's land, he cannot be excused for entering to take them and the fruit thereon away, on the ground of necessity, because he might have prevented it. R. D. F.

EVERYBODY'S GARDEN.

PLANT PROTECTORS.—An indispensable adjunct to growing first early vegetables is a supply of plant protectors. Heavy tarred building paper, everything considered, is the most desirable material. It is sold here at 75 cents per roll, and the protectors can be made, labor included, for from 1½ to three cents apiece. Cut the material lengthwise or crosswise of the breadth, as will cause least waste, any length or diameter desired. Bind the strips round with one inch lap; with a sharp knife make an incision through both ends and fasten with brass paper fasteners. Covers of the same material are made by cutting into squares a little larger than the diameter of the protector. They are very useful in windy weather to prevent the plants from whipping, and plants thus protected when cold and stormy may with safety be set 10 days or two weeks earlier than otherwise. When desired for use, the covers may be held in place by slightly weighting with earth. When through using, the fasteners may be removed, and the strips packed away under weights. They will many times repay their cost each year, and low ones (say four or five inches high) left permanently around the Hubbard squash hills are almost a guarantee against the Black squash-bugs.

NOVELTIES.—Much pleasure and profit may be gained by testing some of the novelties sent out by reliable seedsmen. Give the boys and girls a little space in which to grow them. Substantial prizes are offered for fine specimens, good reports, names, etc., and there is no better way in which to interest all members of the family in garden work than striving to carry off some of the prizes.

SPROUTING SWEET CORN.—April 10, 1899, found considerable frost in the ground in this locality. On April 20 sweet corn (Early Sheffield) was planted, which was well up and cultivated on April 28. The corn was sprouted before planting by placing a layer of sand in shallow pans. Over this cheesecloth was spread, and the corn placed on the cloth; another layer of cloth was placed on top of the corn, and the whole covered with a light layer of sand. It was kept in a warm place, and well watered, and was nicely sprouted in five days, and planted on above date. July 8 we had corn for table use, and began marketing on July 15. The chief advantage of sprouting is that it can be planted much earlier without danger of rotting before germination takes place. This variety is very desirable, extra early, very hardy, withstanding some frost, and nearly free from smut. The ears are large and very fine in flavor.

EARLY TOMATOES.—With the hotbed and plant protectors, the problem of early tomatoes is solved. Sow early in the hotbed and transplant when the second leaves appear into rows two or three inches apart; they will find room to grow without crowding for some time to come. When grown sufficiently to begin to crowd transplant into pots. With broken bits of pot placed in the pots for drainage, fill them one-third full of rich soil; as the plant is placed in the pot place a small handful of Jadoo fibre under and around the roots. Add soil enough to hold the plant in place and firm down well around the roots, and fill up with loose soil. Do not pack or firm the soil about the stems. Place the pots in a tub partially filled with water which has been exposed to the sun, and when thoroughly soaked from the bottom upward place in the cold frame. With frequent watering and uncovering on warm days they will make the stem and root growth so essential to early fruiting. Jadoo fibre is an ideal preparation for potting, and when picked up and fined by working through a coarse sieve has no equal within my knowledge. When ready for the open ground, dig holes large and deep enough to hold the entire contents of the pots. Soak the pots thoroughly and jar out; if carefully done the roots now grown through the entire mass will hold it intact. Place in the hole and fill up with loose soil. Set out in this way, the work may be done under the hottest sun, and the plants will never wilt or change color. They will receive no check, and with the plant protectors for cold days or cold storms they may be safely transplanted two weeks earlier than they otherwise could. Compared with reports from the Lansing (Mich.) Experiment Station, we ripened same varieties fully three weeks earlier, from seed sown from three to six days later than theirs.

Michigan. J. E. MORSE.

CUT AND DRIED.

A New Form of Clock.

The American Inventor describes a new clock—a picture of which is shown at Fig. 129. Instead of having a hand passing around a dial this clock prints the time, minute by minute, in plain view. Those who have seen the registers on electric cars will understand how these figures appear. The picture gives an idea of the "works" of this clock. It seems to us that there is every reason why this system of indicating time is better than the old dial plan.

The Baldwin Apple and Spraying.

In New England, when the hill farmers wish to give you their best, they will bring you a dark red, solid, rich Baldwin apple. Some things grow better as they go away from home, but this is not true of Baldwin. It was born in Massachusetts, and it still reaches its highest perfection on the hills of its native State. During the early Winter many of the cellars under the New England homesteads are great pits of perfume. They are well stuffed with apples, and as you open the door a flood of fragrance rushes out. Western New York is a great apple country—settled originally by Yankees. The Baldwin apple is largely grown there, too, yet it has not been regarded as a first-class eating apple until recently.

"Why," said a large grower in Orleans County, "up to this year none of our best farmers thought of storing Baldwins for their own eating. They were good enough to sell, but not good enough for home use."

"What do they use?"

"Spitzenberg, Northern Spy and Greening are the favorites."

"Did you say some of them have eaten Baldwins this Winter?"

"Yes, continued spraying has greatly improved Baldwin—there is no question about it. It has improved in size, quality and appearance!"

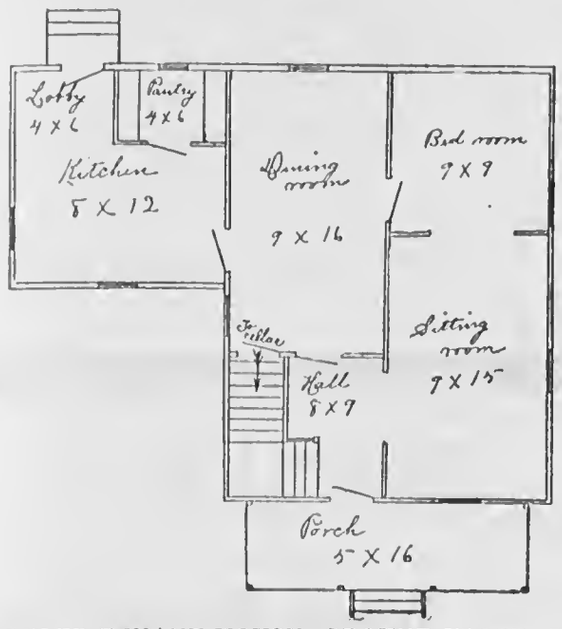
"What else has it done?"

"That ought to be enough, but the trees are becoming more vigorous. You will see whole orchards which now hold their leaves until after heavy frost, where five years ago the trees were bare as poles before frost came. This is due to spraying, which has kept the leaves green and thrifty all through the season. Several years of this have given the old trees new life and vigor. We are satisfied, too, that spraying and cultivation have prevented the off year in our Baldwins. They now bear every year."

THE FARM HAND PROBLEM DISCUSSED.

Another Michigan Farmer Talks.

In your issue of April 13 appears an article from "Michigan Farmer" in regard to the hired-help question. It occurs to me that the $15 per month which he mentions as paying is an uncommonly low price to pay for the labor of competent men. The price is too low, even if the man were boarded, but in this case it seems he boards himself. I should expect ar-



REMODELED TENANT HOUSE—GROUND FLOOR. Fig. 130.

ticles to be missed, and men to take advantage in my absence, and things to go wrong in general, if I hired men who would work for such wages as that; for either the man is incompetent, or he places a fearfully low value upon himself if he will sell his labor for such wages, and in either case I should not want him. If farmers expect to retain the same class of help as gravitate into other lines of business from the farm, then they certainly must pay somewhere near the wages that other lines of business pay. Cheap prices buy cheap goods whether it be in merchandise or in labor, and farmers must wake up to this fact, or their best men will leave them either to obtain homes of their own or sell their labor where it will bring the better price. RAY SESSIONS.

Antrim Co., Mich.

The Hired Man's Side.

In your issue of April 13, you comment on the ideal farm hand. He will never make his appearance during the reign of the present razorback employer. Here in this vicinity a man is expected to work 13 or 14 hours a day in Summer and as much more as his employer can get out of him. A young man here who thoroughly understands the dairy business, the care of stock when sick or well, good milker, understands care and use of horses, handy with tools, who can do almost anything in the jack-carpenter or wheelwright line, who spends rainy days mending harness and doing other repair work, thoroughly reliable everywhere, sober and industrious, asked his employer for a slight raise of salary, no more than other farmers of his class were paying. He was informed that his employer could secure other help at the wages he is now paying. Now, if intelligence is of no use to farmers, why do they ask it, and if they ask it, why should they not be willing to pay for it? The fact is that good working fools are what is wanted, who will work all night or Sunday without comment. A man of intelligence cannot afford to waste his time on a farm at starvation wages when there is such a demand for his services in other lines. J. M. B.

Maybrook, N. Y.

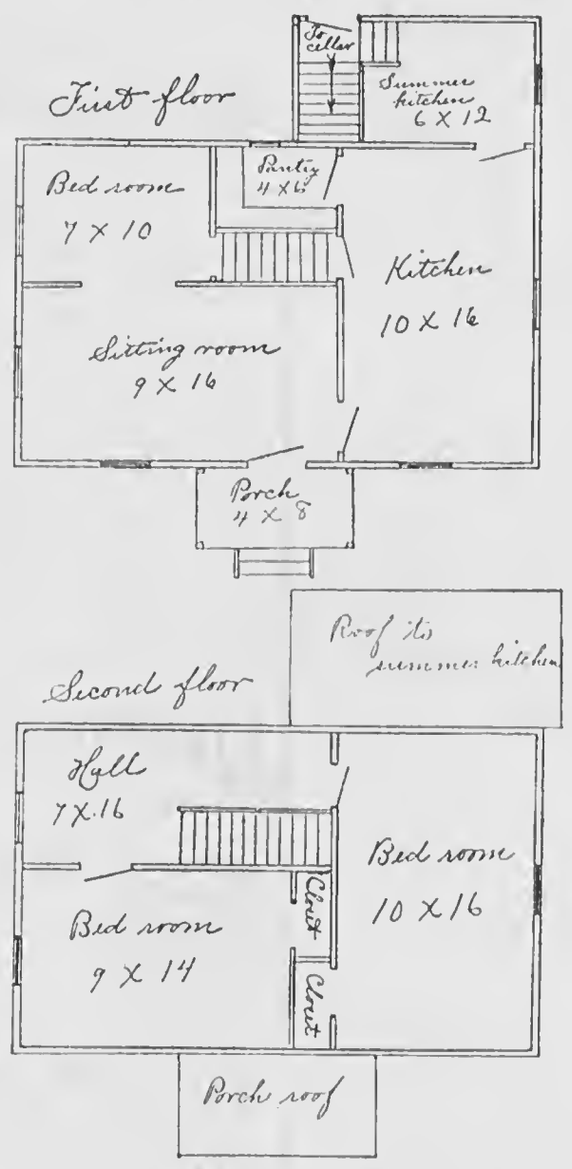
How to Get Help.

I think Michigan Farmer starts right by giving his year man a house and privileges, but he will be a long time getting a really good man for $15 a month who must board himself out of it, no matter how much or how little he works. This is not enough under any circumstances. A man who is the son of a farmer, but has roughed it in working out, said when I read the article that he would expect any man to steal and soldier about as this man seems to if the pay was so small. "I know of a young man," said this man, "who gets $22 and board and washing for nine months a year, and he has a horse to drive whenever he wants it." Certainly $15 a month would not board a man if he had to hire it of some one else, and it would not leave much to support a family on if it was provided by the man's own family. A farmer who, several years ago, found himself without a man, wrote to the Commissioner of Immigration at Castle Garden, New York, and asked for a good man with family, promising him a permanent home if he proved satisfactory. In return the Commissioner sent him a Swede, paid his fare to destination, saw that he had family baggage enough to insure his following it, checked it to destination and sent the check to the farmer. The result appears to have been eminently satisfactory to all concerned. The man "worked in" all right and stuck to his old-world frugal life, so that he steadily accumulated money, and soon he will own his own farm and have it pretty well paid for. It is a neat thing to do, for the country as well as the individual. If the common renter of land, who is now the chief source of impoverished farms, could be handled in that way, there would soon be a vast improvement in the condition of the farming community the country over. JOHN CHAMBERLIN.

Erie Co., N. Y.

Tenant Houses on the Farm.

Very little is said in our rural papers concerning help on the farm. With us, however, it is a matter of no little importance; but the help problem has been solved to our satisfaction; and so pleased are we with our present system of hiring, that we desire to give others the benefit of our experience. We consider it best for all concerned to hire married men, furnishing them house, garden, firewood and milk; or, if preferred, keep a cow for them. I never hire without a written agreement, a copy of which, signed by both parties, is kept by each as a memorandum. Supposing I am to pay $225 per year, I draw up a writing to that effect, adding that it is to be paid monthly, as follows: January and February, $12 each; March and April, $18 each; May, $20; June, $26; July, $30; August and September, $20 each; October, $18; November, $17, and December, $14. Then add whatever I am to furnish, also a clause stating that the hired man is to be present every day at milking time, or furnish a substitute. This plan of varying the monthly payments



TENANT HOUSE—FIRST AND SECOND FLOORS. Fig. 131.

with the seasons is, I think, the safest way for a farmer to hire, as there is not a month in the year when some other might not be hired to do the same work, at the same wages. As a rule, eight hours in the field is as long as we work; and as each man has from eight to 10 cows to milk I consider that long enough. If I am absent at milking time (which seldom occurs) the one who milks my share of the cows gets a quarter for his trouble. There are many farmers who hire one or two men the year around, and always hire single men, at so much per month and board. If you suggest to one of these men that it would be better to hire a married man and let him board himself, he is almost sure to say he "does not doubt it, but cannot afford it." Perhaps he has no house for a hired man and feels that he cannot afford to build, so he goes on in the same old rut, letting his wife cook, bake, wash and iron for his helpers, seldom sitting down to a meal with his family alone, when by a little extra exertion on his part, a neat little cottage might be built and a man hired who perhaps would give much better satisfaction, with more prospect of a long term of service; and when a man has become thoroughly acquainted with a farm and the lines upon which it is managed, his services are worth much more than while he is learning; and on the other hand, the prospect of a permanent position with increase of wages is an incentive to a man to do his best. The two small tenement houses, plans of which are shown in Figs. 130, 131 and 132, cost so little and at the same time are so neat and attractive, comfortable and convenient, that no one need say he cannot afford to build. Fig. 131 is built of hemlock with the exception of the shingles, which are red cedar. Floors of the best hemlock flooring, walls of planed stock lumber, double boarded with building paper between; battened on the outside and finished inside with 4½-cent muslin, which by some, is considered preferable to plaster for walls that are to be papered. The lower rooms are eight feet high, the upper ones seven feet. The cellar, 13x16, is seven feet high. The following shows the cost of building, making no account of my own work, or stones for cellar wall, drawn from our own fields:

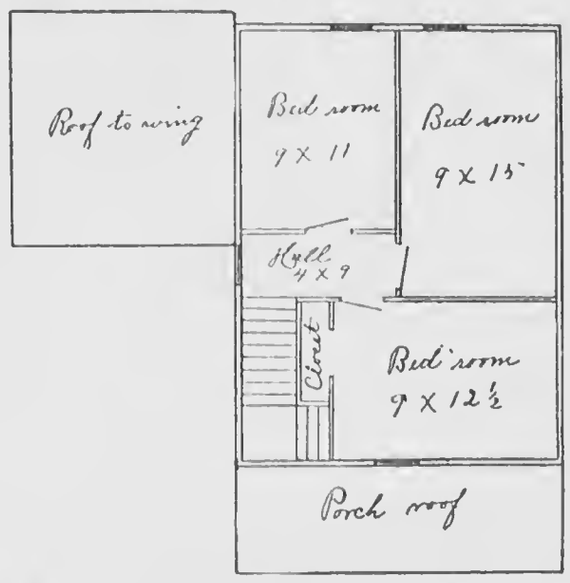
Lumber and shingles	$120.38
Doors and windows	21.95
Brick for chimney	2.80
Lime and sand	3.00
Hardware, building paper and paint for inside	9.18
Muslin	11.25
Carpenters' work	22.80
Masons' work	9.00
Common day labor	14.05
Paint for outside	5.00
Total	$219.41

I am unable to give the exact cost of Fig. 130, as it is an old house remodeled, but feel safe in saying that the difference in the cost of the two houses would not exceed $50. J. S.

Allegany Co., N. Y.

An ex-Farm Hand Talks.

I was interested in the article in THE R. N.-Y. in regard to an ideal farm hand. There are plenty of such men, Americans, too, who might be had if farmers are willing to pay for their services, I will not say as much as they can get as common day laborers, but I will say reasonable pay for the services demanded. I agree with the "year man" that he has not got a "good thing." I have worked on a farm in every State between Maine and Nebraska, taking in Michigan—so I know something about farm hands and farmers, and I have left farming several times to go to work on the railroad. I did not leave the farm for the railroad because I liked that better, nor altogether because of the money. An illustration will show. I was looking for work in Illinois one Spring. I heard of a man who wanted a hand, and called to see him. He wanted a man to work for $18; I wanted $20. We compromised on $19 and the hired man to pay for his washing. That man had nearly 100 head of stock, and kept no hired man in the Winter. When I began work there were more carcasses of cattle lying out in the cornfields, starved and frozen to death, than would have paid the wages of a man at $20 per month for a year. It is unnecessary to say I did not stay with that man long. I left him and went to work at railroading at $50 per month, and sometimes made $25 per week. Board and room cost me about $18 per month, and $2 for washing left me $30 per month without any extras. I should have preferred to work for a good man on a farm for $25 per month, and I am only one of many more of the same mind whom I have known. Then there is another class of farmers with whom I have had some experience. I hired to a man once who laid out work enough to occupy the time of three men and six big horses two years, and wanted me and one darkey with three small mules to do it in one Summer! That is the trouble with the average farmer. They have work enough fully to occupy the time of three good men and teams; then they hire a man for $12 to $18 per month and perhaps only one team, or possibly three horses, on the farm, and they try to do the work by crowding everything from the time that they can see in the morning until it is dark at night. If farmers would use more reason and common sense they would be able to make farming "pay," and we should not hear so much of the cry: "Farming don't pay." I say that a man who does not



REMODELED TENANT HOUSE—SECOND FLOOR. Fig. 132.

make $1,000 profit on 100 acres of tillable land, is not working that 100 acres to the best advantage.

Plymouth Co., Mass. FARM HAND.

R. N.-Y.—We would like to ask "Farm Hand" if he can make any such profit himself!

The Time to Quit.

"At 45 begin to prepare for the time when some younger hand must take the reins. Don't hang on too long," says THE R. N.-Y. on page 257. That depends on how he has lived. If he has taken a lot of whisky and not taken as good care of himself as he has of his horse, it may be so, but if he comes of good stock and has lived right the best 15 years of his life are to come.

A MICHIGAN READER.

R. N.-Y.—We are willing to put that to a vote! Let's hear from the thousands of R. N.-Y. readers who have lived *"right"!* Our idea was that it is well to get out of the harness gracefully before it grows fast to the shoulders!

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

The Plum Leaf Spot or "Shot-Hole Fungus"

J. H. H., Battle Creek, Mich.—I have an orchard of about 800 plum trees, Lombards and Abundance. Two years ago they were affected with what is known as the shot-hole fungus, the leaves falling in August from the Lombard trees, for a distance of from six inches to two feet from the trunks. The first plums that ripened were those near the ends of the limbs, and were very small. There was little growth of wood. Last season almost all of the leaves fell from the trees, so that it became necessary to shake the plums, which were thickly set, from the trees during the first part of August, when the plums were not more than half grown. The trees grew less than the previous year, and partially leaved and blossomed durng September. The growth of wood had a speckled russet appearance. Is this disease fatal? If not, how can we avoid the recurrence of last year's experience? The trees are nine to 10 years, from one to two-year nursery stock, being on good heavy two to three-foot sandy-clay soil, with gravelly subsoil. The trees have borne four or five crops of fancy plums. The leaves did not fall from the Abundance trees, but the fungus seemed to eat holes through the leaves. The trees have been sprayed with the Bordeaux Mixture each year, save one, since they began to bear.

ANS.—The "shot-hole disease" is a popular name which is often given to the spotting of the leaves of plum, cherry and apricot by the attacks of a fungus, the Cylindrosporium padi. For certain technical reasons it seems best to call this trouble the leaf-spot disease of plum, cherry and apricot. It may cause even more serious loss than that described in the above letter. One fruit grower in western New York reports that one season it was so abundant that many of the plum trees lost a large part of their leaves in August before the fruit ripened. The ripening of the fruit by such trees when they were barren of leaves, together with the loss of the foliage, caused them to enter the Winter in such weakened and ill-prepared condition that many of them were winter-killed. While the disease does not often cause so great destruction as this, yet it doubtless does greater damage than most fruit growers imagine. When the conditions are favorable to its development and spread, nearly all the leaves may be attacked and eventually a large percentage of them drop on this account. Often the diseased spots break away from the healthy leaf-tissue, and drop out, leaving holes with clean-cut edges; often circular in outline. In this way the appearance is produced which has given rise to the name "shot-hole disease." A shot-hole appearance, however, cannot be regarded as positive proof of the work of the leaf-spot fungus above mentioned. Duggar has shown, for example, that treatment with improperly-prepared spray mixtures and also that other causes may produce a shot-hole appearance similar to that caused by the attacks of the leaf-spot fungus. Sometimes certain insects eat holes in the plum leaves, which an inexperienced observer might take as evidence of the work of the fungus.

The first appearance of a leaf-spot which would ordinarily be noticed is found in discolored spots one-sixteenth of an inch in diameter or even less. At this stage, especially on plum and cherry leaves, the spots may have a reddish-tinged border. They may soon increase in size to one-eighth of an inch, or more, in diameter and the color may change to dark brown with pale center. The diseased and discolored tissue may remain in the leaf, but usually it drops out and leaves the "shot-holes" referred to above. The holes formed in the leaf are not always circular, but when several spots coalesce into one, or when conditions are extremely favorable to the rapid spread of the disease, large irregular-shaped patches may drop from the leaf and give it a ragged, worm-eaten appearance. The infested leaves frequently turn yellow and drop prematurely, so that it is not uncommon to see twigs of the current season's growth nearly or quite leafless in August or later. The tree may lose nearly all of its leaves before September. A considerable loss may be seen as early as July, but usually the loss of foliage is not serious before August or September. *Treatment with Bordeaux Mixture is recommended.* Carefully conducted experiments have proved that this leaf-spot disease may be controlled by timely use of properly-prepared Bordeaux Mixture. It has also been shown that a weak mixture, in which but one pound of copper sulphate is used to 11 gallons of the Mixture, is efficient in controlling the disease if properly prepared and applied, and if the treatments are made at the right time. In some seasons two treatments are most economical, but generally at least three treatments should be made. The first should be given about 10 days after the blossoms fall, but not later than June 1. The second treatment should be made from two to three weeks later. The time may be varied according to the apparent necessities of the case. The third treatment should be made about three weeks after the second. Be sure that the Bordeaux Mixture is properly made. Follow minutely the directions as given by the United States Department of Agriculture, or by some of the agricultural experiment stations.

A word of caution may be added. It may not be generally understood by fruit growers that the leaves of the stone fruits are much more liable to injury from applications of arsenical compounds than are those of either the apple, pear or quince. Even Bordeaux Mixture alone may injure peach foliage, although it apparently does no harm to plum foliage. But plum foliage may be seriously injured by Paris-green and by other arsenical compounds. It is best, therefore, not to use arsenical poisons in spraying plums unless such treatment is demanded by imperative necessity. [Prof.] S. A. BEACH.

Geneva, N. Y.

How to Raise Water.

D. H. W., Kerrmoor, Pa.—In getting a water supply for house and barn, which would be the cheaper in the end, to pump water a distance of 50 rods, with an elevation or rise of 100 feet, or drill a well on the hill above the buildings, the depth of which would be 100 to 150 feet? In the former instance the source would be a spring. In both plans a windmill would be used to do the pumping.

ANS.—We do not understand all the conditions, but judging from our own experience we should prefer the drilled well and windmill on the hill. We think this would insure a more constant supply of water. We have more wind on our hills than in the valley. By putting a tank on the hill you will have pressure enough to give you a good water supply in house and barn.

A Four Years' Rotation.

J. E. D. (No Address).—Will you give a four-years' rotation of crops? Land now in pasture and worn-out meadow.

ANS.—In deciding upon any rotation it is necessary to understand what crops can be sold to advantage and how much money is available for fertilizers. The Rhode Island Experiment Station (Kingston) in Bulletin 74, advocates the following rotation—potatoes, rye, clover. The rye is sown after potato digging, and the clover seed added in the Spring. Wheat might be used in place of the rye and corn planted in the clover sod making four years instead of three. This rotation gave a fair profit in Rhode Island. We cannot, of course, name the best rotation for you without knowing more about what you wish to sell and how much labor and money you wish to spend.

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3,000 **Elms.** American and European.
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500.000 **Evergreens,** of all sizes, including Hemlock, Norway, Colorado Blue, Oriental and Weeping Spruces, Arbor Vitæs, Retinosporas, Pines in variety, Root-pruned and sheared specimens.

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THE WM. MOON CO.,
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Magnolias and Japanese Maples
Grafted in this country.
Japanese Holly
(ILEX CRENATA).
The finest Hedge plant known, evergreen, new, of exceptional beauty. Send for further description.
Parsons & Sons Co. Ltd.,
FLUSHING, N. Y.

100 California Privet for Hedging for $2.50; 500 for $10, 18 to 24 in. high; prepaid. T. C. Kevitt, Athenia, N. J.

NATIVE EVERGREENS.—Balsam Fir, Arbor Vitæ, White Pine, American Spruce and Hemlock, 6 to 12 inches, at $4 per 1,000; 5,000 for $15. Packing free. Also, transplanted Evergreens at lowest prices. Mrs. James A. Root, Skaneateles, N. J.

Cumberland Raspberry Plants for Sale or Exchange. P. SUTTON, Exeter, Luzerne Co., Pa.

Plants by Mail.—Sample Strawberry, none better, 150 plants for $1. Asparagus, 150 plants for $1 Lucretia Dewberry and Miller Red Raspberry, 10 plants for $1. F. S. NEWCOMB, Vineland, N. J.

Everyone should set a bed of **PENNELL STRAWBERRIES** this year. Send for Circular and Supplement, What the Growers Say, to JOHN W. PENNELL, South Norwalk, Conn., Rural Del. 37.

Prices on Peach Trees reduced. Trees kept dormant and in good condition until June 1. List of var. on application. R. S. Johnston, B. 4, Stockley, Del.

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Select your trees for their fruit as well as for hardy vigorous qualities. The **YORK IMPERIAL** satisfies the most fastidious. High color, bright red, large winter apple; good quality, good keeper, robust, heavy bearer. Thirty-five others, peaches, pears, etc. Catalogue free.
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CAULIFLOWER SEED
High grade Danish seed by mail, direct from the grower in Denmark, to your address, postpaid.
Danish Snowball, ¼ oz. 50c 1 oz. $1.50 1 lb. $18.00
Dwarf Erfurt..... ¼ oz. 65c 1 oz. $1.85 1 lb. $22.00
KARL KOLLE, 840 E. Fullerton Av. Chicago, Ill.

DANISH CABBAGE SEED On account of lateness of season will supply best tested seed at $1 50 per pound. J. S. BULL, Cortland, N. Y.

Vegetable Plants.
Large transplanted plants of Cabbage, Tomato, Celery, Egg Plant, Pepper and Cauliflower. Write for Catalogue.
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ROOFING
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THE STANDARD PAINT CO.,
100 William Street,
NEW YORK.

Plants and Trees 15,000 Eldorado and Rathbun Blackberry; 2,000 Pomona and Red Cross & Wilder Currant. Also, 100,000 Fruit & Ornamental Trees at lowest rates. Write for prices. Lawrence Nursery Co., Lawrence, Mass.

Surplus Nursery Stock!
We offer 8,000 each Elberta, Stump, Chair's Choice and Crawford's Late; 3,000 each Beer's Smock, Salway and Ford's Late; 1,000 and up of nearly all of the other leading varieties in the very best grades for orchard use. We offer standard Pear, Plum, Cherry, Concord Grapes and Houghton and Downing Gooseberry in good supply, and we have 50,000 medium apples, including 10,000 York Imperial. Prices right, and trees clean and well grown. Send list of wants when writing for catalogue.
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For Sale—1,000 bu. Clover Seed @ $6 to $7 per bu.; 500 bu. Crimson Clover Seed @ $5 per bu.; 2,000 bu. Cow Peas @ $1.25 to $1.75 per bu. J. E. HOLLAND, Milford, Del.

Packard's Ensilage Seed Corn
write to-day for circular and sample. My seed corn ALWAYS GROWS. If you own a silo, you need my Early Mastodon corn. Makes one-third heavier crop than Leaming. Other varieties.
PACKARD, Seed Grower, Dover, Del.

Cow Peas. The Famous Forage Crop and Soil Improvers.
WE ARE HEADQUARTERS for these and all Southern specialties, including **Soja Beans, Velvet Beans, Pearl or Cat-tail Millet, Teosinte Bermuda Grass, Ensilage Corn, Spanish Peanuts, Chufas, Sorghums, etc.**
Write for prices, and our interesting Catalogue giving full information about these crops.
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Seed Potatoes—Rural New-Yorker and Sir Walter Raleigh, 50c. per bu., sacks or bbls. included.
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CARMAN No. 3 $3.00
Sir Walter Raleigh and Early Bovee $4.00 per bbl. all bbls. 4 bu. Dewey, the great cropper. Wholesale list *free.* GEO. A. BONNELL, Waterloo, N. Y.

FARMERS—30 choice standard varieties Raleighs, Giant, E. Harvest, E. Cobblers, Commercial. Tuber free (remit only postage), White Star Oats tested with 10 varieties: sample and descriptive list free, and 5c., packet seed free. Save $1 per bbl. 4 varieties of fowls. SMITH POTATO FARM, Box C, Manchester, N. Y.

Imes' Blight-Proof Seed Potatoes
1901 Catalogue, Free, gives particulars
CARMAN No. 3.
To prove superiority of our *Seed Potatoes*, we offer 2,000 bu. at $2.50 per 4 bu. bbl., f. o. b.
The W. E. Imes Seed Co., Smith, Mich

B 4 U BUY see my circulars and prices. **Carman** and **Sir Walter Raleigh Potatoes.** Eggs from high-scoring, prize-winning, **White Wyandottes** and fine flock of **White P. Rocks. Vegetable Plants** and money-making **Seed Specialties.** Seed and Plants of the most profitable **Cauliflower** grown. Investigate if you want the best on the market.
CHRISTIAN WECKESSER, Marshallville, O.

100 20 30 VARIETIES JAPAN PLUMS in Trial Orchard. Listed for Sale. Thrown Away.
We paid from $1 to $5 apiece for trees when introduced, and many times that for experience. We give away the experience, and sell the trees at a nominal price. We have some varieties we know are good, and plenty we know nothing about, if you prefer to pay for your own experience. FREE CATALOGUE—Fruit Trees, Berry Plants, Gladioli, Dahlias, Roses, Shrubs, Seed Potatoes, Baskets, etc.
THE BUTLER & JEWELL CO., CROMWELL, CONN.

The Cornell Reading Course.

Edited by John Craig, Professor of University Extension, and Editor Farmers' Reading Course, Cornell University, Ithaca, N. Y.

DRY SEASON EXPERIENCES.

Plow Early and Cultivate Late.

Last Spring I planted 500 peach trees, very late, on land plowed very early and tilled until trees were set. One of my neighbors set 350 trees two weeks before I did, and on land plowed immediately before the trees were planted. I lost eight trees out of the 500, and he lost over 50 out of his 350. We experienced very dry weather this year, and my crops were cut below what they would have been under favorable circumstances. I used the "weeder" on my wheat and oats, sugar beets, beans, potatoes and corn, and find it valuable in securing a surface mulch. My Syracuse lever spring-tooth drag does my digging and mellowing, and a Daisy wheeled cultivator, which is also a spring-tooth implement, does my cultivation. In potato culture I made great use of a home-made coverer and hiller when potatoes are young, to be followed in a few days by weeder. Although I have no underdrains as yet, I drain the surface very thoroughly, always leaving open drains, made every night, when I am plowing, and re-opened after tillage, and also study to plow, to benefit the surface of the field by filling hollows and making water courses from them. I noticed a piece of beans planted June 13 last on land plowed early in Spring. They germinated (appeared at surface) in seven days. Another piece planted same day on land just plowed and fitted to receive the crop did not show above the ground for over 24 days, and many never came. A rain broke the drought, or they would have been there yet. You cannot say too much in favor of early plowing or surface mulching by tillage. My land is mostly sand, and I commence plowing before frost is all out (on sod) and continue in as great haste as possible until land for my Spring crops is all turned over. I consider it a great weed-killing device or process, to limit meadows to one year, and two mowings at that. C. H. P.

Sodus, N. Y.

Here is strong argument in favor of early Spring plowing which lowers the water table; but which must be followed by persistent surface cultivation to hold the moisture. Of course this practice would not apply to heavy clays, which must be cautiously handled to prevent caking.

The Budding Farmer.

I decided some time ago to be a farmer. I like the Reading Course very much. I think the last lesson is a dandy. I am going to put the seeds in the flannel and try it. My brother and I have a flock of geese together. We sold two for $1 aplece, and would like to sell the rest for that much. I have $6.35 and my brother has $5.86 (he is eight years old.) We are going to invest it in black raspberry roots. When they get to bearing I think I shall be large enough to take care of them. I am most 11 years old now. I like to split wood and milk and hunt the eggs, but I don't like to fill the wood box or clean the stables. I like to hoe in the garden, so you see I will enjoy taking care of our berry roots. We have five horses and 21 cows and 60 chickens. We have a silo and like it very much. I hope you will write again some time.

Watkins, N. Y. R. G.

I am very glad to get your newsy letter. You are going to be a farmer. That's right! Many men are not fitted for farming; they are better suited for keeping store, arguing, or teaching other men how to be good. The best farmers are those who like their work. Of course there is not any farmer who likes all parts of his work equally well. I can remember when I was of your opinion regarding the filling of the wood box. It wasn't a nice job and the sticks were heavy, but then I used to stop and think how comfortable it was in the evening when the stove was piping hot, while the wind went whistling by outside. You are furnishing comfort for all. That is the thought we ought to have in mind when we are filling the wood box. I hope you will be successful in growing your blackcap raspberries. Be careful to secure one-year-old plants, unless you can get the tips at a nearby nursery and set them out yourself quickly; otherwise there is a chance of losing many of them in the operation. You know that the blackcap multiplies in a curious way; the tips of the cane bend down and take root in the soil. These are called tip plants. If you plant these they should not be planted very deep; not more than two inches of soil should be put on top. If they are set lower than this they are likely to smother.

MACHINES FOR PLUM CURCULIO.

Several Subscribers.—What machines are used in fighting the Plum curculio, and how are they used?

The little picture (Fig. 133 shows the Johnson curculio machine, which, we understand, is a success. It is like a big inverted umbrella on wheels. There is an opening at the side, so that it can be

THE JOHNSON CURCULIO MACHINE. Fig. 133.

pushed up under the tree. One man wheels the machine under the tree, then jars the tree—and bags the curculio. The following notes are from persons who have used the machine successfully:

We commence to use the machine soon after the blossoms have fallen, and continue using it once a day on each tree until the plum pit gets too hard for the curculio to penetrate, unless the weather becomes very warm, which makes the insect more active, and then we use it twice a day to each tree. I would not try to grow plums in a commercial way without this machine. My experience tells me that this insect cannot be destroyed by spraying. B. F. KEAN.

Geneva, N. Y.

The machine being mounted on light, easy-running wheels makes the work of jarring and catching the curculios mere play compared with the old slow way of jarring on sheets. It could be improved by using oilcloth for covering in place of muslin, as the curculio would more readily roll into the receptacle below, but as it is we find it in every way practical, and a great labor-saving device to plum growers. We have grown the plum 28 years, and were overrun with curculio from the start, but by persistent jarring every day that weather would permit while they are the most numerous we have usually raised good crops, but we must be watchful. Some seasons it is comparatively easy to raise a crop, and the next we may have to fight from the time they are out of the blossom until the fruit is nearly ripe. One brood follows another so rapidly that there is no let up, but we always gauge our jarring by the number of insects caught. J. K. SOUTHARD.

Ottawa Co., O.

We used to catch the insects with an old-fashioned machine, which had to be carried about by hand. The Johnson catcher being on wheels is a great improvement in this respect, as one man can do more work with it than two with the old style, and much easier too. I think they should be made to fold up more easily than they do, as the large-sized machines are difficult to wheel through gateways, and if in going from one orchard to another there is occasion to travel on the road it is liable to frighten horses. The best time to jar the plum trees is in the morning or on cool cloudy days, as the insects are much more easily caught, being more stupid. We sweep them and the plums, etc., which drop, into the box which is made for the purpose; if the day is bright this would need to be done quite often for fear the curculios would fly away. If they are not very plentiful we often mash them on the canvas, which saves sweeping. The number of times the trees would need jarring depends very much on how thick the insects are. If quite plentiful I think every other day would do for two or three weeks, or until they begin to get scarce. Sometimes if the trees are loaded with fruit and there are not many curculios, a few jarrings will be sufficient. We often have to thin the plums afterwards, but then if we did not jar at all there might be too many of the plums stung. If necessary the machine can be used for peaches, too, or any fruit that is stung, if the trees are not too large. We pour hot water on the insects and plums to destroy them; often take a tight sack along to the field to empty box into.

Tompkins Co., N. Y. EDWARD WOOD.

How and When to Feed Ducklings.

On page 234, March 30, F. E. W. gives some good directions for raising and feeding young ducks. I wish he would also tell us how often to feed them. We tried a few last year, and out of about 20 hatched only raised two. Ought we to feed two, three, five or more times in a day?

Liberty, N. Y. M. K.

Ducklings, when first hatched, would best be fed every two hours, or five times a day, just what they will eat up clean in a reasonable length of time. If any is left take it away till next time. After they are about a week old, extend the intervals so as to feed four times a day. If incubator birds, they will thrive best and be str nger if left in the machine two days after the hatch is cleaned up, and not fed till placed in the brooder. When grit is not convenient sand answers nicely. Have a dish of it always accessible to the babies and stir about two tablespoonfuls into the feed. A good combination drinking vessel for small ducklings is a roast-beef and a tomato can. Punch a hole in the latter 1½ inch from the open end; fill the can with water and place the dish over it, then reverse it. The water fills and feeds out to the ducklings as required; it avoids their getting wet and chilled, or clogged-up nostrils. For the first week or two the water should be tepid, otherwise either chicks or ducklings are liable to have cramps. F. E. W.

Chazy, N. Y.

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NOTES FROM THE RURAL GROUNDS

DAMP AND CHILLY WEATHER.—It has never been the purpose of the writer of these notes to say more about local weather conditions than is needed to explain trial results. The cold dry winds of February have already been mentioned on page 212, and the fear of injury to evergreens and exposed new plantings has been fully justified. Many beautiful groups and specimens of the more sensitive Thujas and Retinosporas on neighboring grounds are so injured as to be worthless, and the mortality among Rhododendrons is greater than for the last 15 years, though the temperature did not at any time reach zero by at least four degrees. The several species of Euonymus have lost most of their leaves, even where well protected, and exposed plants of the Cherry laurel, Prunus laurocerasus, and the dainty little Garland flower, Daphne Cneorum, are apparently killed to the ground. Since the beginning of March, however, there has been a constant succession of storms preceded and followed by days of cloudy weather with chilling winds and fogs from the sea. This slow and halting approach of Spring is distinctly beneficial to exposed grass and grain lands, which are recuperating in an unexpected degree from the Winter's damage. Even the blackened stems of half-hardy roses and tender blackberries are regaining color in many instances, and pushing buds at points seemingly dead a few weeks ago. Fruit buds of all kinds appear to be in good condition, but are naturally coming on at a slow rate under the cool conditions. The prospects for a local crop of the various fruits is very good, the only danger greatly feared being a recurrence of the cold rains in the blooming period.

A GRAND NEW HARDY ROSE.—Since the introduction of the vigorous and hardy Rosa rugosa from Japan and North China persistent attempts have been made to create, by hybridizing with other species and highly-improved garden roses, new varieties combining its special qualities and peculiarly handsome foliage with greater perfection and freedom of bloom, and increased range of coloring. Considering the innumerable crosses that have been made by patient experimenters on both continents the net results are really very meager. Mme. Georges Bruant is the offspring of a Tea rose pollenized by the white-flowered Rugosa, and was the first useful hybrid sent out. It is a very thrifty grower and produces when well established immense clusters of large semi-double white flowers with a pleasing odor. It is constantly growing in favor in the Northern and Prairie States on account of its hardiness and reliability. The late Mr. Carman, of THE R. N.-Y., next produced the popular Agnes Emily Carman, by crossing the common pink Rugosa with Harrison's Yellow. The unexpected result was a large double brilliant crimson bloom of much the shade of Gen. Jacqueminot. The plant is particularly rugged and hardy, and the foliage really exceeds the typical Rugosa in beauty. It blooms very freely, and continues almost all Summer. Mme. Charles Frederick Worth has the famous Paul Neyron for the pollen parent, and is in many respects the finest of the colored Rugosa hybrids on the Rural Grounds. It is strong and stately in growth, and the blooms are more double, and have a better finish than its competitors, but the season is scarcely as long. Souvenir de Pierre Leperdrieux, sometimes sold as Souvenir de Yeddo, has proved the most continuous bloomer of any yet tried, producing clusters of double bright red flowers until late Fall, which are abundantly followed by fair-sized fruits. All other Rugosa hybrids are sterile with us. Blanc Double de Coubert is another double white-flowered variety, looking more like the species than a hybrid. The blooms are quite double, pure white and possess a delightful fragrance. It was introduced from France in 1894, its parentage being Rugosa and Kamschatka roses.

The writer has been growing Rugosa hybrids since 1893, and has bloomed many hundreds of interesting crosses, only two or three developing characteristics of horticultural value. This is about the experience of all hybridizers who have used the Rugosas extensively. So variable and inferior are the usual results that it has been supposed Rosa rugosa is not an actual botanical species, but a natural hybrid between certain Asiatic wild roses. Its varieties reproduce themselves very readily from seed, but diverge widely when pollen from other sources is used. The finest Rugosa hybrid yet developed on the Rural Grounds is shown on first page, Fig. 128, under the name of New Century. It is now being disseminated by the Conard & Jones Co., West Grove, Pa., the growers of the Ruby Queen rose which is now in the hands of many R. N.-Y. readers. New Century was raised from seeds of the hybrid Polyantha rose, Clothilde Soupert, the male parent being the single white Rugosa. It was only secured by persistent effort to effect a cross that should theoretically produce good results. More than 500 pollenizations were made before the first sound seeds were produced, and many subsequent trials have since been required to secure others. New Century sends up a forest of strong thorny canes, three or four feet high, when established, each topped with a cluster of five to 11 large, perfectly double blossoms with a bright carmine rose center, shading to white or rose pink at the edges. The fragrance is particularly agreeable, being almost identical to that of the woodland wild rose, R. lucida. The strong, erect bushes are clothed with handsome Rugosa-like foliage, but of a lighter green tint. The picture was made from a careful painting of a cluster, large enough to fill a peck measure. The artist, however, for pictorial effect, has concealed the single stem from which all the blooms spring in the representation of a vase. This specimen was grown in the highlands of Tennessee on good soil and was the most artistic natural cluster of roses the writer has ever seen. The hardiness of New Century seems to be entirely established, as it has been grown in several widely-separated localities four years without the slightest Winter protection, and has never been injured, even by a temperature of 26 degrees below zero. If well fertilized it is almost continually in bloom, but must be cut back well in the Spring and again in July to promote the formation of new shoots. There is little doubt that Rugosa hybrids are destined to wide popularity when their merits become more fully known, especially where the so-called hardy garden roses are commonly winterkilled. The Canadian Experimental Farm at Ottawa classes the various Rugosa hybrids as "half-hardy" in that severe climate, in distinction to such entirely hardy varieties as the Rugosas proper, Persian Yellow, etc. By half-hardy is meant that tender late growths are often killed, but matured wood is seldom injured. A perfectly hardy plant should preserve its terminal buds like a currant or gooseberry through any stress of temperature. Practically, we have found moderate winter-killing of more benefit than injury, as it necessitates closer pruning than might be given if all the growth remained intact. We would counsel those who plant roses of the New Century type to put them in rich, moist soil when possible, and away from buildings so that the erect and robust habit may be preserved. While blooms may be produced the next season after planting, the bushes will not show their full development until three or four years have passed, but are apparently good for a life-time if not allowed to starve.

WINTER DELICACIES.—Of all the Winter delicacies we have been able to grow the quality of the rhubarb forced in a warm corner of the cellar, without the aid of glass, pleases the palate best. The tomatoes, peppers, beans, lettuce, radishes, mushrooms and cress are very acceptable indeed, but they are nearly identical in flavor with the Summer product. Forced rhubarb is immeasurably superior in quality and appearance to the usual outdoor growth, apart from its quality as a desirable novelty at the season. It retains a delightful pink color when cooked, and the flavor is a delicate and refreshing fruit acid without a trace of astringency. The plants in the cold cellar are just beginning to grow, and will scarcely develop more than 10 days earlier than the garden clump. In the heated cellar (soil temperature at 55 degrees) five plants have given a constant supply for a small table since early February, and are still sending up new stalks. W. V. F.

Mr. J. A. Gardner, of Colchester, Conn., writes: "I know that my potato vines on which Bowker's 'Boxal' was used keep green long after others were dead." —*Adv.*

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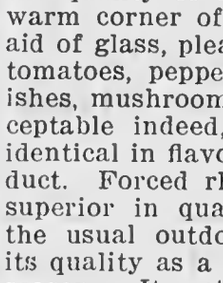

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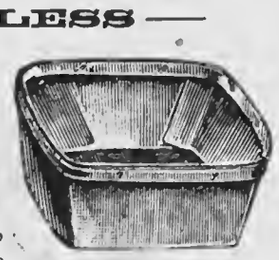

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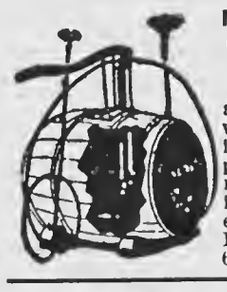

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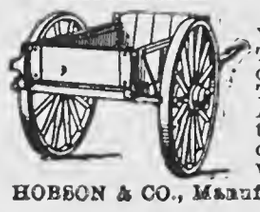

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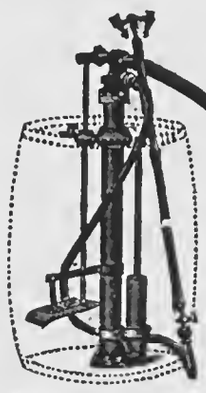

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Hope Farm Notes

FARM NOTES.—Hope Farm has a clean face at least. Rain! Rain! Rain! That has been the programme all through April. When the rain did not fall a cold, raw wind came out of the northwest, licked the moisture out of the soil and rubbed it down our backs. Between rains Charlie plowed and sowed the oats, while Hugh and Brent planted peach trees. We must be at least 10 days behind the average season. . . . . The Crimson clover has been strangely backward this year. In former years at this time I have known it to be six inches high by May 1, but this year it has hardly started. On two fields I gave it up as lost, as I could not see it from the lane. When I came to walk over the field I found it covered with little clover plants. Give them 50 hours of warm sunshine and how they will jump! . . . . I sometimes read advice from people who tell us to roll down the grass and grain early in the Spring. That would be a foolish thing to do this year, for every time a horse put his foot into the soft ground he would up-root far more grass than the roller would pack down. There is no use adding to the flood of rain by crying over it. Every tear weighs a ton by the time it hits the damp ground. . . . . Some of our farmers planted potatoes at about the usual time—April 15—regardless of the condition of the soil. They like to get the seed out of the way. I think it is safer spread out in the sun above ground rather than down in the cold wet soil. I don't think we gain anything by planting in soil that is not ready. In a season like this we get the most benefit from dusting the seed with sulphur before planting. I am sure that it keeps the seed from rotting, and I am satisfied that it helps keep off the scab. It is also my belief that the sulphur gives a stronger plant—less likely to be affected by blight—though the scientific men say that there is nothing in this. . . . . The coal stove in the house was taken out on April 20. Usually it pays to keep the fires going longer than this, but we are quite comfortable from the big wood stove. . . . . The hens walk about like soaked feather pillows, yet they laid 474 eggs in the first 20 days of April. These eggs are strong, too. Out of 220 put into the incubator, 198 were fertile. I expect to set about 1,500 plants of early cabbage grown and transplanted in Florida and sent to New Jersey by express. I wish to see how these southern plants, grown entirely out of doors, compare with the northern hotbed candidates.

WHAT IS THE TRUTH?—I have had the following note from a good friend who evidently thought from something said in THE R. N.-Y. that first-class farm hands were easily to be found:

"I want to say further that having been brought up from a child with THE R. N.-Y. we have always taken its word as law and gospel, and you must not print anything that you cannot stand by or that is misleading in any way, for we country people are prone to believe everything we read."

Every person who puts thoughts into print should understand that he assumes a great responsibility. Our friend says that country people are prone to believe everything they read. I should want to edit that statement somewhat. I find people very anxious to believe the truths that run right along with their own beliefs or desires. I have known these same people to reject and cry out at other truths which rubbed them the wrong way. We all know the story of the blind men who went to see an elephant. One got hold of his tail and was ready to swear that he was like a rope. Another struck his leg and knew he was like a tree, and so on. It is much the same way with most of us in describing an object or a method. We see it from one point of view, and it is almost impossible not to put a little of our own estimate or belief into it. That is the way a good many so-called "big stories" get into print. The writer, without knowing it, lets his imagination run, and the result is that he tells, without meaning to do so, not just what he saw, but what undoubtedly *would be* if the plans were all worked out as they should be. Our friend is right. There never should be a line written for THE R. N.-Y. by one who knows that truth can come and lash him away from his statements.

KICKERS.—I have that last statement right in mind when I say that in my opinion Julia can kick harder and quicker than any cow in this country. Julia is a black cow, and Genevieve is her brown daughter. I bought them late in February of a man who wanted to sell out. He said he gave Julia her name because she was born in July. Genevieve was his idea of a January birthmark. Following out this line of thought I don't see but that Julia's calf, born in April, should be named Ape! Genevieve is a gentle little thing, but the conduct of her mother is "something scandalous." Kick! Charlie is a truthful man, and he insists that she can kick with all four feet tied! She is a good cow, and able to give a large mess of milk, but one would about as soon milk a tiger. I am afraid her heels will punch holes through too many good resolutions. The most successful milkers thus far have been her son and grandson—the two calves. We will let her make veal of these two youngsters, and then get other calves to follow, if possible. We will sell Julia or make beef of her next Fall. I have been forced to do some "kicking" myself in my day—the Madame also will say that many of her rights are kicked-over wrongs—but Julia certainly goes up head as a star. "That's another of your bargains!" murmurs the Madame. When I bought her she was like a lamb. How could I know she was only waiting for a chance to kick my head off?

THE HAPPY MAN.—I cannot say what put it into my mind, but I spent several hours of a wet Sunday thinking over this question, "Who is the happy man?" The soak and drip of the rain were enough to drive a fellow crazy with sad memories, or else make him forget his stiff knees and dance for joy that he had a dry home that he could call his own. Nature's tears meant laughter for the grass and grain. *"Who is the happy man?"* I tried to analyze the feelings of all the Hope Farm folks, and of friends whose lives have been opened to me. I couldn't find one over 15 years old who can be said to be fully happy! Many of them ought to be, and some think they are, but there is a knothole of character somewhere, though often painted over. This one is haunted by the memory of some old-time mistake. Another feels a dead place in his make-up where some noble or helpful impulse was undeveloped. That one is under the lash of poverty or ill-health. This one feels that in spite of all his efforts to earn true happiness evil tendencies master him at times and undo his best. Still another has seen the work of long, patient and self-denying years trampled under foot by carelessness or ingratitude. *Who is the happy man?* I run over all the friends I can think of, and see that they are all carrying or shirking their share of the world's great load of trouble. The carriers are happier than the shirkers—there's no doubt about that, but there is no happy *man*—though, thank the Lord, there are millions of happy children. The man who comes nearest to happiness is he who hangs longest to his childhood, and when that becomes too dim to hold lives it over again with his children. As I sit struggling with these useless thoughts the little Bud climbs on my knee. She studies the mournful drip of the rain and asks slowly: "Father, are you glad it's raining?" There comes to my mind the absurdity of being anything else but glad—the futility of growling about the things we are powerless to help, and I put myself on record as glad to make the best of wet or dry, and by so doing, for the moment at least, I find—the happy man!

H. W. C.

OHIO FARM NOTES.—Since I have commenced feeding the roof off the shed I have come to the conclusion that there is less waste than there would have been from the same amount of fodder shocked in the best possible way and allowed to stand till this time. I have sown 10 acres of clover sod to barley and Alfalfa; 1½ bushel of former and 16 pounds of the latter per acre. It is a costly experiment, yet if it wins it will pay me a heavy return in furnishing hay for lamb feeding. The only drawback now is sufficient storage room under roof for my clover hay and Alfalfa, if I am so fortunate as to succeed with the latter. However, before I tear down my barns and build greater, I must make a cheaper improvement in the shape of a wind pump, and from now till Fall I shall give a good deal of time to the study of wind-pump literature. About 500 lambs will have gone through my yards by the time the feeding is wound up from the first to the middle of May.

JOHN M. JAMISON.

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---

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The Rural New-Yorker

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THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, MAY 4, 1901

THERE seems to be strong ground for the belief that the poison of the honey bee's sting may be used to prevent or cure rheumatism in humans. This was suggested several years ago but was not regarded seriously. Careful investigation seems to show that there are possibilities in the treatment. We once saw a rheumatic farmer mow into a bumblebee's nest. If ability to run fast is any indication the cure was instantaneous.

*

THE annual call for information about skunk farming has begun. Day after day we receive letters from persons who have heard of successful skunk farms, and who want a share of the great profits to be found in the skunk's society. We have traced down dozens of these farms, and never found one that paid. We say, therefore, to one and all, that those who embark in skunk farming are sure to be skunked—that is, they will never make a point except to be pointed at by their neighbors as brothers to the skunk.

*

WE recently met a man who is buying his farm at the rate of two per cent per year. According to the terms of sale, he is to pay $2,500 for the farm in 50 annual payments of $50 each. He has the privilege of paying the whole at any time he is able to do so. The former owner was a large land owner who believes that in this way he can obtain fair prices for his land and also give deserving men a chance to become freeholders. If more of the land-rich would meet the land-poor in this way—what a world we would have!

*

THOSE who read the articles by D. R. Pease on using lime and sulphur for Pear blight must remember that he does not pretend to have found a "sure cure." His experiments were satisfactory—that is, the blight was checked. Did the sulphur help? It would seem so, but the only way to make sure is for many growers to try the same thing and observe results. We hope that hundreds of our readers will try the lime and sulphur and report results. The scientific men do not see much hope for this sulphur remedy. Still, we advise a trial of it.

*

ACCORDING to a bulletin recently issued by the National Live Stock Association, the stockmen are determined to conduct an active campaign against the Grout bill on its next appearance in Congress, and this will be the most important business brought before the Association when it meets at Chicago the first week in December. With such powerful interests conducting a determined campaign against the bill, it would be very unwise for dairy farmers to cease their efforts in its favor. Persistent agitation is needed in the interests of the cow, to offset that made by strong organizations who would neglect her for her brother the steer.

*

WHY is the man who works under cover any better than he who works under the open sky? Why should the townsman consider himself superior to the farmer? In some way certain people have come to think that he who stands in a dusty shop, or sits behind a desk or counter, is of a higher type than the farmer who works with his feet in the soil. Strange, isn't it, that the man who crawls off and narrows himself down to the brick and stone of the town should think that he is better or nobler than when he trod the rough hills! Think of the man who has brushed the last speck of soil from his clothes and his character, presuming to step above the man on the farm who works in direct partnership with God! The thing seems preposterous, and yet some farmers help make this sentiment by acting as though they were ashamed of their calling. The business of farming is dignified only by farmers themselves.

*

THE farmer's wife may lay down the law as to what her household shall eat and how they shall eat it. She generally suits her people. The farmer must not think that he can lay down the same law for those who buy his food. That is another thing. There is so much food sent to market that the buyer has the option, and the farmer, or some one else, must meet his demands. It is true that some customers do not really know the best food when they see it. They use prejudice instead of judgment in buying. It will cost money to remove that prejudice, but it would prove a good investment!

*

A READER in a southern State asks the following question:

I have charge of a large dairy and have had a large experience in a practical way, and a natural love for stock. I am 28 years of age. Would you advise me to leave a position that pays me $360 a year and board to take a course in a dairy school?

That is a good job to leave for any uncertainty. A man who can earn such wages for one man can do it for another. If he can make that amount of money without scientific knowledge he can doubtless make more than that with an education. While it is a risky thing to give general advice about change of occupation, we would, were we in this young man's position, attempt to master the science of dairy husbandry.

*

REPORTS indicate a movement of people from the East to the West this year. It appears that hundreds of people in the Mississippi Valley are moving to the Pacific coast—thinking to better their conditions. Some of them, too, are restless by nature, and demand a change of home every few years. We call public attention to the following letter, which shows what some of these immigrants may expect to find at their journey's end:

This land has been homesteaded years ago, improvements were made, buildings and fences put up, fruit trees set out, etc., and during his five years of residence the owner found that the land is worthless except for the timber. He sells the logs to a sawmill, and will now sell the land for a song. Hundreds of such farms have been abandoned. I find that certain parties have a plan to get possession of this land for almost nothing, go to the East and Middle West, and exchange it for land, cattle, stocks of goods, or anything, as what they get in exchange is almost clear profit. When the immigrant arrives at his ranch, his means are perhaps exhausted, and he has to begin life over again.

There are without doubt good opportunities in the Far West for many people. We would put no obstacle in the way of any man who wants to go there. We went there to live years ago—and came back again. We would warn our friends, however, not to exchange farm and stock for a "ranch" about which they know nothing. Far better stay where you are and try to make a new start.

*

WHAT a blessing it would be for the Southern States if southern farmers would draw "the color line" on yellow oleo. No section of the country so sadly needs the society and salary of the dairy cow as the Gulf States. Yet the great bulk of the supporters of oleo came from that part of the country. Can the southern oleo men "make it unanimous"? Not by a good deal. Here is a letter from one of our readers—a Georgia cow man:

Keep up the fight against oleo. Georgia dairymen are with you, if our representatives are not, but we are going to talk with them next election time.

That is one of the most hopeful signs from the awakening South that we have seen. We are glad to see that Georgia cow men are not cowards. Think what would happen to the State of Georgia if her dairy interests were fully developed! Here is a table that will bear study:

State.	Population.	No. of cows.	Value of cows.
Georgia	2,216,331	285,431	$6,836,072
Vermont	343,641	268,886	8,577,463
Indiana	2,516,462	605,855	20,447,606
Michigan	2,420,982	463,698	15,162,925
Wisconsin	2,069,042	1,003,321	33,711,586
Iowa	2,231,853	1,263,283	44,088,577
Minnesota	1,751,394	672,540	21,285,891
Kansas	1,470,495	707,675	22,999,438

Georgia and Iowa are about equal in population, yet Iowa supports nearly 1,000,000 more cows, worth $37,000,000 more than the milch cows of Georgia. The cows on the rough hills of Vermont are worth $1,700,000 more than their sisters on the sunny slopes of Georgia. Give Georgia one good milch cow for each two inhabitants, and let them be well fed and cared for, and the State will receive greater benefit than would be the case if the cash value of every Georgia slave set free at the close of the Civil War was returned to the former owner! In view of these things is it not astonishing that southern Congressmen will join hands with the oleo men whose apparent aim is to kill off the cow?

*

ON page 286 we were told how a Pennsylvania farmer improved a hard, shallow clay loam soil by sowing Cowhorn turnip seed in the standing corn. We have been flooded with letters from readers who ask all sorts of questions about this. The turnip is not an ideal crop for green manuring. Still, it adds a large amount of vegetable matter to the soil. This vegetable matter opens up the hard-packed soil, increases the bacterial action—gives it "life"—in fact, is just what such soils need. The deep-growing root also breaks up the subsoil, deepens the tillable earth and brings fertility to the surface. We have no doubt that a crop of these turnips will increase the power of the poor soil to produce other crops in far greater proportion than we could expect from the actual fertility which they contain. They may actually fit the land, so that it will grow clover or cow peas. Where a man can afford to buy fertilizers we do not consider it good economy to use a manurial crop alone. Turnips, like buckwheat, can utilize crude forms of plant food, making them over into available material for corn, wheat or potatoes. We would, if possible, use fertilizer of some sort when growing a crop to be turned under.

*

BREVITIES.

How dear to our heart is the bright silver dollar,
When some kind subscriber presents it to view;
The liberty head without necktie or collar,
We long for the bush where the pretty thing grew.
The wide-spreading eagle, the arrows below it,
The stars and the words with the glory they tell,
The coin of our fathers, we're glad that we've got it,
For some time or other, 'twill come in right well;
The spread-eagle dollar, the star-spangled dollar,
The old silver dollar we all love so well.
—Credit Lost.

* * *

The word of some men who are faultless in grammar
Wouldn't sell for five cents if put under the hammer,
While others who knock all the grammars to smash
Are known to be worth their face value in cash.
Still, that is no argument why anyone
Should kick out "I did" and put tongue to "I done."

* * *

Let us once more our tale rehearse;
This time we frame it in a verse.
Do not mix lime, I beg you, men,
Into organic nitrogen.
For nitrogen's a shaky scamp,
And ever ready to decamp.
"Affinities" but lightly hold,
A chap so fickle and so bold,
And lime will come with burning hand
To cut the all too fragile band
That holds organic nitrogen
In harness for the good of men.
Wait till you get him in the soil;
Then let him out and make him toil.
But if you value cash or care
Don't set him free in open air.

* * *

LOOSE statements get men into tight places.

IT'S the boiled-down article that "burns on."

THE growth some people need is to grow small.

THE sensational reporter is the write man in the wrong place.

ASK the hog if the grass sward is not mightier than the pen!

LISTEN to the *mocking* bird—in other words, the lying cackle of the robber hen.

THE people who but live to stuff and eat will surely call their later years a cheat.

TRUTH will put rubber into a man's conviction. The more people "jump on him" the harder they bounce back.

THE Canadians exported 10,187,906 dozens of eggs last year, while our own countrymen sent abroad but 5,910,162 dozens.

DURING the past year American exports of butter decreased $120,442, while exports of oleo oil increased $1,320,197.

THIS very rain that drives us out of the field is a God-send to the dairy farmers whose meadows have been brown so long.

IF this wet weather continue there will be less need than usual for soiling crops this Summer. Still, we shall plan for a dry August.

WE use the formalin solution by pouring it over the oats and then raking them into a damp pile. It is also used the same as for potatoes—by dipping the oats down into it.

LORD ROBERTS says the American wagons are the best sent to Africa, but that the American mules do not equal those from India. The mules probably sympathize with the Boers!

SCARLET fever rages in a New Hampshire town, and to prevent its spread all money passing through the local bank is sterilized. Some people put their money through what is known as "a hot time," without destroying its germ power for evil.

RUSSIA seems likely to become a formidable rival to butter-producing countries, the exports for the first 10 months of 1900 being 37,729,200 pounds. The principal increase of export is the butter product of Siberia, for which butter trains equipped with refrigerating apparatus have been employed to transport the goods to the ports for shipment.

"We state what we sell, And sell more than we state."

More than Ten Thousand Government Tests have been made of Bowker's Fertilizers in the past thirty years of samples taken in the open market, and they show that these goods have always contained more plant food than was guaranteed by the makers.

They have been used by more than One Hundred Thousand practical farmers every year on every variety of crop and soil with splendid success.

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Send for Circular **M** relating to fertilizers; also Circular **24** relating to spraying and the insurance of crops. It will be worth your while.

BOWKER FERTILIZER COMPANY
(INDEPENDENT)

BOSTON NEW YORK CINCINNATI

Woman and Home

From Day to Day.

This is somebody's birthday,
Just as sure as fate;
Some little boy is six years old,
Some little girl is eight.
Some little boy is three to-day,
Some little girl thirteen,
Some little twins are exactly two—
Two apiece, I mean.

Some one is eating his birthday cake
And laughing over the plums;
Some one is counting her birthday dolls
On all her fingers and thumbs.
Some one is bouncing his birthday ball
Or winding her birthday watch,
Some one is not too wise or tall
For birthday butter-scotch.

Think of the beautiful birthday books,
Think of the birthday cheer,
Think of the birthday happiness
Every day in the year!
Every day in the year, my dear,
Every day we're alive,
Some happy child is one or two
Or three or four or five.

—Youth's Companion.

*

THE deep drawers often provided in a closet to hold household linen, are difficult to move when filled, and in place of this a convenient closet has deep shelves, fitted with covers which let down. The covers seen on some book shelves, which roll up and down like spring blinds, would be suited for this.

*

POPPING corn seems a very easy process, but there is a right and a wrong way of doing it. To get the best results, pour over it enough cold water thoroughly to wet it, allowing this, of course, to drain away; then shake it on the top of the stove long enough to be thoroughly heated before it is moved to a warmer place. The steam of the wetting softens the shell, and when the corn begins to pop all bursts open at once, leaving no hard core.

*

SOME small boys are so perpetually in mischief that what is left of their conscience may accuse them unnecessarily, like that of the small William described below:

"Now, boys," said the patient Sunday school teacher, "surely some one of you can tell me who carried off the gates of Gaza. Speak up, William."

"I never touched 'em!" said the indignant William, with a suspicion of tears in his youthful voice. "I don't see why folks always think when things get carried off that I've had something to do with it!"

*

EXCEEDING flounciness is one of the characteristics of the thin Summer dresses seen in the large stores, some of them having from three to five flounces. They are preferably flare or ripple flounces, but in many cases additional fullness is given to them by shirring or pleats. Where pleats are used, they are often put in clusters at each seam of the skirt. Rather an odd style was an inverted box pleat at the center front and center back of a graduated flare flounce, and no other pleats, the material being a heavy linen.

*

INNUMERABLE small buttons are seen among the dress trimmings, and some of them have little danglers or tags hanging from them, giving them a very dressed-up appearance. They are used extensively on silk waists in gilt, and in black or white silk. Sometimes both black and white buttons are used on the same waist; for example, a gown of figured foulard, black and red upon a white gown, had a vest trimmed with white silk buttons, while upon the edges of the foulard were rows of black buttons. Combinations of black and white, or black, white and red, are very fashionable, though the early Spring saw the usual outbreak of pale gray, which we see every year. Many women seem to feel that their earliest Spring costume must preferably be delicate gray or dove color, no matter whether it is becoming or not, and such gowns looked strangely unseasonable during the boisterous wind and rain that brought March weather into the first half of April.

*

IN discussing the desirability of moving from the city to take up life on a farm THE R. N.-Y. has often referred to the fact that restlessness on the farm chiefly results from feminine dissatisfaction with farm life. In other words, farm life is largely what the women make it. This fact makes the agricultural college the best place for giving

3684-Work Gown.
32 to 40 in. bust.

higher education to ambitious farm girls, as well as boys, and we may look for great results from the system. Any education that makes a girl grow away from the farm, when there is every probability that she must always make her home upon one, is a grave mistake. The domestic-science course at an agricultural college must elevate the student's appreciation of everyday things, while bringing her in closer sympathy with the life on the farm.

*

FOR a consistently republican country we are just a little given to unnecessary titles. The Hope Farm man tells us that in a certain small southern town he visited, after modestly disclaiming any right to be addressed as colonel, professor or doctor, the entire population united in calling him judge, and he was obliged to live up to the dignity of this distinction during his visit. He says that his claim to this distinction rested upon the fact that he acted as umpire in a baseball game, to the entire satisfaction of both teams. The following item from Leslie's Weekly illustrates this title-giving custom:

"Second Cousin Philenda's youngest daughter, Mary Ella, is married," Farmer Hornbeak annnounced upon his return from the village. "Niece Theodosia stopped me as I was drivin' along an' told me to let you know that she'd just got a letter from Okonk, where Philenda's folks live, sayin' that Mary Ella was married week before last to Professor—er—er—Somebody—I don't exactly recall what the name was."

"A professor?" returned Mrs. Hornbeak, in pleased tone. "I guess, then, that she's made a good match of it an' got a man of education an' social standin', if so be that he's a professor. I'm real glad 'tis so, too."

"Wa-al, I don't know," said the old man, shrewdly. "That depends a good deal, 'cordin' to my way of thinkin', on what variety of the species he belongs to, so to say. Theodosia didn't tell me, an' I forgot to ask, whether he is a dancin' master, a corn doctor, a piano tuner, a prize fighter, a hoss physician, a layer-on-of-hands, a balloonatic, a seventh son of a seventh son, a sword swallower, a phrenologist, a bicycle rider, a magician or an elastic-skin man."

The Rural Patterns.

A comfortable working gown need not necessarily be an unbecoming one, and the design illustrated will recommend itself to those who wish to look neat and trim while at their household tasks. Preferably it is made of washable stuff, such as percale, in order that it may be laundered and made fresh at need; but flannelette is entirely suitable when greater warmth is required, as is any inexpensive lightweight woolen material. With the gown should be worn the simplest of neckties and belts. The waist is in spencer style, and differs from a shirt waist in extending to the waist line only. The back fits smoothly across the shoulders and is drawn down at the waist. The fronts are gathered at the neck and again at the waist line, and the entire lower edge of the waist is attached to the upper edge of the belt. The sleeves are in bishop style and are finished with pointed cuff bands that lap over at the seam and hook invisibly into place. At the neck is a shapely standing collar. The waist is closed at the front with buttons and buttonholes. The skirt is cut in five gores and falls only to the floor. It fits smoothly across the front and about the hips, and is arranged in gathers at the back. The placket is made at the left front seam, where it closes invisibly, and the upper edge of the skirt is attached to the lower edge of the belt, the left half of the front gore being attached to the extra portion and hooked over into place. To cut this gown for a woman of medium size 7½ yards of material 27 inches wide, seven yards 32 inches wide, or six yards 44 inches wide, will be required. The pattern No. 3684 is cut in sizes for a 32, 34, 36, 38, 40 and 42-inch bust measure. Price 10 cents from this office.

Eton jackets are unquestionably the favorites this Spring. The jaunty little model shown includes all the latest fea-

3794 Eton Jacket,
32 to 42 in. bust.

tures, and can either be made with the vest and kaiser collar or without either, in the mess-coat style, as preferred. The original is of broadcloth in a shade of castor, with the vest white, closed with cut steel buttons, the collar white overlaid with appliqué in black, and makes part of a costume; but the same design is suited to all suiting materials, wool and linen, and to the general wrap. For the latter use, it is preferably black cloth, cheviot, taffeta or peau de soie, with the vest of embroidery or some such tone as castor, pastel, tan or gray. Made without the vest and collar it is simply stitched and worn plain, or with the addition of a collar of batiste or Russian lace, and becomes a most satisfactory light wrap for wear over all gowns. The back is seamless and absolutely smooth. The fronts are fitted with single darts and joined to the back by means of under-arm gores that are well shaped and aid in producing the perfect fit. The narrow vest is joined to the fronts at the darts, and the collar is attached to the neck and back and sides, flaring as it reaches the front. The sleeves are two-seamed and flare becomingly over the hands. To cut this jacket for a woman of medium size 2¾ yards of material 21 inches wide, two yards 32 inches wide, 1½ yard 44 inches wide, or 1⅜ yard 50 inches wide will be required, with ¾ yard in any width for vest and collar facings. The pattern, No. 3794 is cut in sizes for a 32, 34, 36, 38, 40 and 42-inch bust measure. Price 10 cents from this office.

Preparing Codfish.

When a codfish or a fraction of one is brought into the house it is a saving of time and patience to pick it up at once; that is, remove the bones and skin, and store it in empty fruit cans or a jar, then it is ready to use at a moment's notice and there is no drying up hard, as is always the case when it is simply hung up. Dry bread may be broken up tolerably fine and the same amount of shredded codfish added to it, the whole covered with water; butter and pepper may be added, and as it comes to a boil an egg stirred in briskly makes an agreeable addition.

Another simple form of picked codfish is thus prepared: To a teacupful of codfish picked up and freshened add two teacupfuls of sweet milk, and set on the stove in a porcelain or other suitable dish. Take two tablespoonfuls of butter and rub into it about as much flour, and when the milk comes to a boil thicken with it, and stir well. One boil completes it. AUNT RACHEL.

THE world loves a true and noble woman more than the greatest beauty that ever lived or the most brilliant intellect. Within the memory of every one there are noble, womanly lives, which have been dearer and better to us than the most brilliant women of history.—A. S. Atkinson.

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Rural Recipes.

Russian Jelly.—Soak half a box of gelatine in a gill of cold water for 10 minutes, and pour it into a pint of boiling water with a cupful of sugar and one of orange and lemon juice mixed up in the proportion of one-fourth orange and three-fourths lemon. Strain and set in a cold place to thicken enough to be whipped with an egg-beater to a stiff froth. Wet a mold with cold water, put in a little of the jelly, then a layer of candied fruit, sliced fresh fruit or preserves, more jelly and more fruit until the mold is full. Serve with whipped cream.

Rhubarb with Figs.—Wash a half-pound of bag or pulled figs and cook in boiling water to cover until the water is nearly absorbed. Skin and cut a pound of rhubarb in one-inch pieces. Put a layer in a baking dish, sprinkle with sugar, add a layer of figs, repeat until all is used; put in a quarter of a cupful of hot water and bake in a slow oven until the rhubarb is soft. Dates or raisins may be used with the rhubarb in the same manner. Serve with plain or whipped cream.

Coffee Cream Cake.—Mix three teaspoonfuls of baking powder with three cupfuls of flour. Cream one-half cupful of butter with one cupful of sugar, beat the yolks of four eggs, add a second cupful of sugar, and when light and creamy combine with the butter mixture. Add one cupful of strong coffee and then the flour mixture, and last the whites of the eggs beaten stiff. Bake in two shallow pans. When done, split carefully and put in a filling of coffee cream. Sweeten one cupful of thick cream and flavor it to taste with black coffee. Chill and whip it stiff with a wire spoon; then spread half-inch layer on one of the cakes. Put little slivers of apple jelly over the cream; cover with the other half of the cake and sprinkle powdered sugar over the top. Cut in long, narrow slices. Lemon filling may be substituted for the other layer if preferred.

Kornlet Roughrider.—Two cupfuls of finely chopped cooked meat, any kind; season with a scant teaspoonful of salt, one saltspoonful of pepper, one-fourth teaspoonful celery salt, one tablespoonful of grated onion, add one beaten egg, one tablespoonful of melted butter, two tablespoonfuls cracker crumbs. Mix this thoroughly together. Take 1½ cupful of kornlet, two cupfuls of bread crumbs, saltspoonful of salt, dash of pepper and one-fourth cupful of milk; mix thoroughly. Butter well a small granite dish, line the bottom and sides quite thick with the kornlet; pack in the meat, cover the top closely with kornlet, spread a teaspoonful of soft butter over this and steam 45 minutes; then put in the oven to brown about 15 minutes. Loosen it around the sides of the dish, turn it out upon a hot platter and pour tomato sauce over it. Serve at once.

Boston Tea Cakes.—Beat two eggs in a teacup, fill the cup with sweet milk, turn into a bowl with one cupful of sugar, 10 even teaspoonfuls of melted butter, 1¾ cupful of flour and two teaspoonfuls of baking powder. This is the most reliable, easily made and accommodating of cakes. Dellcious baked in layers and spread with jam or cream. May be baked in a loaf or small patty pans. Serve warm with tea.

Gooseberry Catchup.—It is well to make a note of this recipe now, before gooseberries are in season. Five pounds of fruit, three pounds of sugar, 1½ quart of vinegar, one tablespoonful of cloves, three tablespoonfuls of cinnamon, two tablespoonfuls of allspice. Wash the berries, put them in a porcelain stewpan, mash them well, add the other ingredients and boil until thick. Seal while hot.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

Living in a Cage.

Grandma Rosemary went last Summer to her native village to visit her niece, who a year before had married a farmer in the neighborhood.

They went one day to take tea with a friend of Mrs. Rosemary's girlhood. As they came near the door grandma said: "That old house has not altered in the last 20 years! There are the same closed green blinds at the parlor windows, and the same tin pails sunning on the kitchen bench, and the same Dahlias and sunflowers in the yard. There is Serena in the door, a little leaner and grayer, but otherwise just the same."

She found no alteration inside the house, either. Serena lived alone. She gave them the same kind of biscuit and veal cakes and honey which grandma remembered when she was young. They sat in the bare, clean parlor, with the blinds closed. The sofa, the table, the chairs stood in the same places as when Serena was a child. She talked of but two or three things—crops and the weather and the neighbors, topics so old that they had a musty flavor.

When the visitors were on their way home, grandma drew a long breath. "Twenty years ago," she said, emphatically, "Serena Nutt was talking of the yield of corn in that field, and of the sharpness in business of the Nutts, and of the best way to make succotash, precisely as she did to-day! Her mind goes round and round in the same little circle, like a squirrel in his wheel. She doesn't know that there is a world outside of this village!"

She paused a moment, and then said: "It is no credit to me that I am not like her. My husband was an editor, and my sons were in business and went about the world a good deal, so windows opened into my life on every side. When we sat down to breakfast the men talked of the great events of the day, as reflected in the newspapers, or of an expedition to the North Pole, or of some new book or some discovery in science. I am like David. I thank God that He has 'set my feet in a large room.'"

"He has not set me in a large room," said her niece, gravely, 'but in a very small one. My husband works hard on the farm and I in the house. There is danger that I shall be shut in with as few ideas as Serena has. It is the great danger in farm and village life. But what can one do?"

"Open windows and doors in your little room," said Mrs. Rosemary, promptly. "Take one or two of the best magazines, and read them. Keep up with the action of the great outside world in every way possible to you. Write to your old acquaintances. Don't spend your money in new-fashioned gowns or parlor furniture, but in books, magazines, and above all in little journeys with your husband. It is only by measuring yourself with strangers that you can get your true measure."—Youth's Companion.

Household Remedies.

We read that Mrs. Carrie Nation looks like a woman who could "teach Sunday school, bake bread and make mustard plasters," and we can imagine the little self-approving smile to which the busy reporter treated himself after thus deftly touching off the three saving graces. Did the shadow of some dear soul who had ministered unto him in his time of need, flit across his mental horizon as he paused for the hundredth part of a second for words that would exactly describe the impression made upon him by this startling woman? Had he just recovered from the grip and had he found out, by experience, that the warm proposition of the home physician was after all the most consoling thing in the world? A mustard plaster consoling? Yes, I mean just that. I will, however, admit that there are irritating mustard plasters, just as there are consoling women and irritating women. Little dabs of plasters, made by tearing off a piece of muslin, say 4x8 inches, smearing it with a tablespoonful of sloppy mustard, then folding over, making a four-inch square—this is an irritating non-quieting kind. But tear off a generous piece of old thin muslin about 6x12 inches, on one-half of it put two even tablespoonfuls of dry mustard and one tablespoonful of white flour, mix lightly and spread evenly over the cloth, then sprinkle with hot vinegar or water until the surface is quite damp, fold over the other half of the muslin, turn up the edges slightly and apply wherever needed—I assure you it will warm you up admirably! In cases of nervous sick headache a plaster of this kind on the stomach will prove very soothing, and induce sleep. After an hour the plaster may be removed from the stomach and placed on the back between the shoulder blades and kept there until the strength has gone out of it. Thin-skinned patients insist upon having soft muslin cloths well smeared with lard—it is more cooling than vaseline—placed over the mustard's pathway, others do not care to be bothered with anything of the kind—and they also survive!

A mustard plaster on the chest will loosen up a cough wonderfully. Also a mustard foot-bath, hot as can be endured taken before going to bed, accompanied by a good hot drink of lemonade, will give relief. A hot-water bag, wrapped in flannel or a well-heated flat iron treated in the same way, should always be placed in a grip sufferer's bed as a foot-warmer. "Keep the head cool and the feet warm" is the good nurse's saving charm. In cases that show symptoms of pneumonia, having sharp pains in the region of the lungs, hot onion poultices put on one after the other until the patient is relieved are more efficacious than mustard plasters. The onions should be sliced and fried in lard until soft, then put into a little woolen bag—a leg of an old merino stocking sewn up at one end is handy. Place this over the seat of pain just as hot as the patient can bear it, and have another bag ready to change with as soon as the first grows lukewarm. Keep this treatment up until the patient is relieved. This simple remedy is often prescribed by physicians, and we have tried it so often on home folks that we know, beyond the shadow of a doubt, that it is good. When the pain has ceased apply greased cloths and cover with a good thick layer of cotton batting. This should be worn several days as a protection against further cold, the greased cloth being changed daily. In country places it takes so much time to get a doctor that it would seem to be the duty of a good house-mother to know what to do in cases of emergency. Yet so many women yield to a feeling of helplessness and fright and will not venture to do a thing for a sick person until the doctor arrives, and expressly orders this or that done. In the meantime the moments seem like long hours to the sufferer. DOCIA DYKENS.

THE greatest difficulties are found where least expected; the greatest successes come from where they are least sought.—Ivan Panin.

THE world wants men who are saved from secret faults. The world can put on an outside goodness and go very far in uprightness and morality, and it expects that a Christian shall go beyond it and be free from secret faults. A little crack will spoil the ring of the coin. —Mark Guy Pearse.

WE have nothing further to do when the scroll of events is unrolled than to accept them as being for the best. If we could take all things as ordained and for the best, we should indeed be conquerors of the world. Nothing has ever happened to man so bad as he had anticipated it to be. If we would be quiet under our troubles they would not be so painful to bear.—Gen. Gordon.

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MARKETS.

The Week's Quotations

WHOLESALE PRICES.

NEW YORK, APRIL 27, 1901.

GRAIN.—Trade in wheat is active for foreign demand. Ohio crop conditions reported favorable. Oats are firm and local trade good.

Wheat, No. 2, hard, N. Y.	80⅞	@	—
No. 1, Northern Duluth, spot.	82⅞	@	—
No. 1, hard Duluth, spot	89⅞	@	—
Corn, No. 2, mixed	52⅝	@	—
Oats, No. 2, white, in elevator	33½	@	—
Rye, No. 2, W'n, c. i. f., Buf	—	@	54
State & Jersey, track	—	@	56
Barley, feeding, c. i. f., Buffalo	42½	@	45
Malting, new crop	62	@	68

BEANS.—Market is quiet and Red kidneys particularly dull.

Marrow, choice, per bu	2 45	@	2 50
Marrow, fair to good	2 20	@	2 30
Pea, bags, choice	2 05	@	—
Red kidney, choice	2 05	@	2 07½
White kidney, choice	2 20	@	2 25

FEED.

Spring bran, 100 lb. sacks	17 25	@	19 50
Winter bran, bulk	18 50	@	22 00
Spring middlings, 200 lb sacks	17 00	@	19 50
Red Dog	19 00	@	—
No grade flour		—@	22 50
Linseed meal, ton		—@	26 00
Cottonseed meal, ton	25 60	@	—

HAY AND STRAW.

Hay, No. 1	90	@	92½
No. 2	85	@	87½
No. 3	75	@	80
Clover	65	@	70
Clover, mixed	80	@	82½
Straw, rye, long	75	@	85

SEEDS.

Clover, per lb	10¼	@	10¾
Timothy, per lb	4¼	@	5
Red Top, per lb	10½	@	—
Flaxseed, whole, bu	6 50	@	7 00
Millet, per lb	1¾	@	2
Rape, German, per lb	3¼	@	3½
Sunflower, per lb	2⅜	@	2½

MILK.

New York Exchange price within 26-cent freight zone 2½ cents per quart.

BUTTER.—Price down one cent, and the recent reductions have caused quite an increase of demand. Prime table grades are scarce at present, but no increase in price is anticipated.

NEW BUTTER.

Creamery, extras, per lb	—	@	20
Firsts	19	@	19½
Seconds	17½	@	18½
Thirds	15	@	17
State dairy, tubs, finest	19	@	—
Tubs, fresh, firsts	17½	@	18½
Tubs, fresh, thirds to seconds	15	@	17
W'n imitation creamery, finest	17	@	17½
Firsts	15	@	16
Lower grades	13½	@	14½
W'n factory, fresh, large tubs, choice	13	@	13½
Fair to choice	12¼	@	12¾
Lower grades	11	@	12
Rolls, fresh, choice	13¼	@	—
Common to prime	11	@	13
Renovated butter, fancy	17	@	17½

OLD BUTTER.

Creamery, Summer made, choice	15	@	16
Summer made, com. to prime	12	@	14
State dairy, tubs or firkins	11	@	14
W'n, factory, Summer made	10	@	12½

medium grades. Receipts are large and

EGGS.—Market weak, particularly on the quite a surplus is accumulating. Goose and duck eggs in very light demand.

QUOTATIONS AT MARK.

Nearby, State and Pa., fresh-gathered fancy white, doz	—	@	15½
Nearby, State and Pa., fresh-gathered fancy brown, doz	—	@	15
Nearby, State and Pa., fresh-gathered average prime	14	@	14½
W'n, storage packings, fancy	—	@	14½
Regular packings, selected	—	@	14¼
Regular packings, firsts	—	@	14
Reg. packings, under grade	13	@	13½
Kentucky, fancy marks	13½	@	14
S'n, fresh-gath'rd, avge. best	—	@	13
Poor to fair	12½	@	12¾
W'n, fresh-gathered dirties	11½	@	12¼
Checks	11	@	11½
Duck eggs, Baltimore, doz	—	@	20
Western	16	@	17
Virginia and Tennessee	15	@	16
Far Southern	14	@	15
Goose eggs, per doz	25	@	30

VEGETABLES.

Potatoes, Bermuda, prime, bbl.	6 50	@	8 50
Bermuda, No. 2, per bbl	4 00	@	5 50
Havana, per bbl	4 00	@	6 00
State & W'n, in bulk, 180 lbs.	1 12	@	1 50
State, per sack	1 25	@	1 40
Jersey, per bbl	50	@	1 25
Sweets, Vineland, per bbl	2 25	@	2 75
Sweets, other Jersey, bbl	2 00	@	2 25
Asparagus, Ch'n, Colossal, per dozen bunches	5 00	@	6 00
Ch'n, extra, doz. bchs	4 00	@	4 50
Ch'n, prime, per doz. bchs	2 50	@	3 50
Ch'n, shorts, doz. bchs	2 25	@	2 75
Ch'n, culls, per doz. bchs	1 75	@	2 00
Norfolk, per doz. bchs	2 00	@	4 00
North Carolina, per doz. bchs.	1 50	@	3 50
Beets, Fla., per crate	75	@	1 00
Fla. & Ch'n, per 100 bchs	3 00	@	7 00
Bermuda, per crate	75	@	1 00
New Orleans, per 100 bchs	2 00	@	3 00
Carrots, Bermuda, per crate	50	@	1 00
Fla. & Ch'n, per 100 bchs	2 00	@	3 00
New Orleans, per 100 bchs	2 00	@	3 50
Cabbages, Ch'n, large, bbl. crte.	2 50	@	—
Ch'n, small, per crate	2 00	@	2 25
Fla., per bbl. crate	2 25	@	2 75
Celery, State & Cal., large, doz.	70	@	90
Medium, per doz	40	@	60
Small, per doz	15	@	30
Fla., per case	1 12	@	2 00
Chicory, New Orleans, per bbl.	3 00	@	6 00
Cauliflowers, Fla., per bskt	2 00	@	3 00
Escarol, New Orleans, per bbl.	3 00	@	5 00
Eggplants, Fla., per box	2 00	@	3 50
Green peas, Fla., per bskt	1 00	@	2 50
Ch'n & Savannah, per bskt	2 00	@	3 00
Kale, Norfolk, per bbl	50	@	75
Baltimore, per bbl	50	@	60
Lettuce, Fla., per ½-bbl. bskt.	1 00	@	2 50
North Carolina, per bbl	1 00	@	5 00
Ch'n & N. C., per ½-bbl. bskt.	1 00	@	2 25
Norfolk, per bskt	75	@	1 25
Onions, Conn. & L. I., wh., bbl.	2 50	@	5 00
Conn. & L. I., red, per bbl	2 00	@	4 00
Conn. & L. I., yellow, bbl	2 00	@	4 00
Orange Co., N. Y., red, bag	2 00	@	3 25
Bermuda, per crate	2 00	@	—
Egyptian, per bag	2 50	@	2 60
Okra, Havana, per carrier	1 00	@	1 50
Peppers, Fla., per carrier	1 25	@	2 00
Parsnips, old, per bbl	75	@	1 00
Parsley, Bermuda, per box	50	@	1 00
New Orleans, per 100 bchs	1 00	@	3 00
Romaine, New Orleans, bbl	3 00	@	6 00
Bermuda, per crate	50	@	75
Fla. & Ch'n, per basket	1 00	@	2 00
Radishes, Norfolk, per bskt	50	@	60
Squash, Hubbard, old, per bbl	1 50	@	2 00
Marrow, old, per bbl	1 00	@	1 25
Fla., new, per crate	1 50	@	2 50
String beans, Fla., wax, crate	3 00	@	4 00
Fla., green, per crate	3 00	@	4 00
Fla., green, per bskt	3 50	@	4 50
Spinach, Norfolk, per bbl	1 00	@	1 50
Baltimore, per bbl	1 00	@	1 25
Turnips, Canada, Russia, bbl	90	@	1 00

HOTHOUSE PRODUCTS.

Lettuce, Eastern, per case	2 00	@	3 00
Cucumbers, good to choice, doz.	1 00	@	1 25
No. 2, per doz	60	@	75
Tomatoes, fair to prime, per lb.	10	@	20
Radishes, prime, per 100 bchs	1 00	@	1 25
Mushrooms, good to prime	25	@	40
Rhubarb, per 100 bunches	4 00	@	5 50

DRIED FRUIT.

Apples, evaporated, fancy, lb.	6	@	6½
Evaporated, choice, per lb	5	@	5½
Evaporated, prime, per lb	4½	@	4¾
Evaporated, poor to good, lb.	3	@	4¼
Sun-dried, S'n, sliced, per lb.	2¾	@	3¾
Sun-dried, State & W'n, qrs., per lb	2¾	@	3¾
Sun-dried, S'n, coarse cut	2½	@	2¾
Chops, per 100 lbs	75	@1	50
Cores and skins, per 100 lbs	40	@	85
Raspberries, evap., 1900, per lb.	—	@	19
Blackberries, 1900, per lb	5¾	@	6
Cherries, 1900, per lb	13	@	14

FRESH FRUIT.—Arrivals of apples are light and prices generally firm. Florida strawberries are plenty, and sell slowly on account of the unfavorable weather. A small quantity of Charleston fruit has been received, but these berries will not cut much figure in the market until later.

Apples, Spitzenberg, per bbl	3 00	@	5 00
Spy, State, per bbl	3 00	@	4 50
Ben Davis, per bbl	3 00	@	4 50
Baldwin, fancy, per d.-h. bbl.	3 50	@	3 75
Baldwin, fair to good	3 00	@	3 25
Greening, common to fair	3 00	@	4 00
Russet, com. to choice, bbl.	2 00	@	3 25
Cranberries, Cape Cod, good to choice, per bbl	7 50	@	9 00
Cape Cod, com. to fair, bbl.	6 00	@	7 00
Jersey, fair to prime, crate	75	@	1 75
Strawberries, Fla., prime to fancy, per quart	20	@	25
Fla., poor to fair lots	12	@	18

DRESSED POULTRY.—The bad weather has upset trade. Stock quickly gets slippery when exposed for sale, and dealers have been willing to cut prices to make quick sales.

FRESH PACKED—ICED.

Turkeys, hens, small	—	@	10½
Toms	—	@	8
Broilers, Ph., under 2 lb. to pr.	45	@	50
Phila., 2½@3 lb. to pair, lb	35	@	40
Phila., 3½@4 lb. to pair, lb	26	@	30
Chickens, Phila., Winter, 5@6 lb. to pair, lb	20	@	25
Fowls, State & Pa., good to pr.	10	@	10½
W'n, dry-picked, small	—	@	10
West'n, scalded, small	9½	@	10
Southwestern, small	9½	@	10
Heavy	—	@	9
Fair to good	8	@	8½
Old roosters, per lb	—	@	6½
Ducklings, L. I., and other nearby, per lb	—	@	20
Squabs, choice, large, wh., doz.	2 50	@2	75
Mixed, per doz	2 00	@2	25
Dark, per doz	—	@1	50

FROZEN.

Turkeys, young hens, No. 1	11	@	—
Mixed, young hens and toms, No. 1	10½	@	11
Young toms, No. 1	10	@	10½
No. 2	7	@	9
Broilers, dry-picked, fancy	16	@	18
Scalded, fancy	13	@	15
Chickens, fancy, soft-meated	—	@	12
Average, No. 1	9	@	10
Fowls, dry-picked, No. 1	9½	@	—
Capons, fancy, large	15	@	16
Medium sizes	13	@	14
Ducks, fancy	12	@	12½
Geese, fancy	9½	@	10

COUNTRY-DRESSED MEATS.

Calves, veal, prime, per lb	8	@	—
Fair to good, per lb	6½	@	7½
Common to medium, per lb	5	@	6
"Spring" lambs, fancy, each	6 00	@6	50
Poor to prime	3 00	@4	00
Pork, light, per lb	8	@	8½
Medium, per lb	7	@	7½
Heavy, per lb	5½	@	6½
Rough, per lb	4	@	5

LIVE POULTRY.—Trade quiet and buyers conservative. Some urging is necessary to dispose of fowls at the prices quoted. Turkeys and ducks dull, but geese firm.

Fowls, per lb	—	@	11
Roosters, per lb	—	@	7
Turkeys, per lb	8	@	9
Ducks, Western, per pair	70	@	80
Southwestern, per pair	50	@	65
Geese, average W'n, per pair	90	@1	00
S'n & S'w'n, per pair	70	@	75
Pigeons, per pair	25	@	35

THE Philadelphia North American relates the following cure for hiccoughs: "The doctors tried ether and various other remedies without success. As a last resort they placed a piece of ice on the patient's abdomen when he did not expect it. The man was so frightened that he stopped hiccoughing at once."

BUSINESS BITS.

GEO. STRONG, of Smithtown Branch, N. Y., says he is using a two-horse-power Mietz & Weiss kerosene engine for pumping water to a height of 90 feet, and can cut cabbage at the same time and have power to spare. Address A. Mietz, 128 Mott St., New York City, for catalogue and prices.

W. J. CAPRON, V. S., writes to Lawrence-Williams Co., Cleveland, O., as follows: "I read your advertisement about Gombault's Caustic Balsam and have tried it for the last year in a great many cases and found it perfect. Its use in my practice has become so much increased that I would like to know what you will charge me for it by the dozen."

WE desire to say to people who contemplate buying low-down steel wheels that the grooved-tire wheels, made by Havana Metal Wheel Co., Havana, Ill., are giving the very best satisfaction. They make the flat tires as well as the grooved, and know that the flat tires do not last as long or give as good satisfaction as the grooved-tire wheels. Get their prices when buying.

WE frequently have advertisements of the Animal World, which offer pets of all kinds free, and which have been cut from other papers, sent us with the request whether they are reliable. The publisher of this paper has been recently arrested and held in $2,500 bond to answer charges of fraud. We have never heard of anyone getting pets or anything else for money sent them. The previous good standing of the paper accounts for the advertisements appearing in some papers which do not knowingly accept such advertisements.

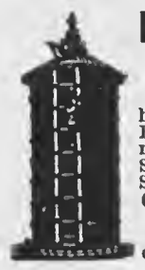
THE Elkhart Carriage and Harness Co., Elkhart, Ind., make claim to being the largest manufacturers of vehicles and harness in the world, selling to the consumer exclusively. Having decided long ago that the public would much prefer to deal direct with the manufacturer, the man who made the goods, if the people but could be convinced that they were getting the best goods at the lowest procurable price, the Elkhart people inaugurated their present system. The results of 28 years of experience in carriage building are given in their free illustrated catalogue.

"SOLUBLE AND SURE."—Perhaps you never stopped to think what a bag of fertilizer represents. The deserts of South America provide nitrate of soda, the great city factory sulphate of ammonia, the animals that do our work or provide our meat give bone, blood and tankage; the mines of the South and of Germany give phosphoric acid and potash, while the ocean is scoured to furnish fish scrap. We hold a handful of the fertilizer, and realize how two continents and a dozen localities are represented. We are not speaking of a cheap and clumsy mixture of acid rock and kainit with a faint smell of tankage, but of high-grade complete goods such as are sold by the Bowker Fertilizer Co., of Boston, Mass. These fertilizers are said to be soluble and sure! Who say so? Farmers who have bought them for the past 30 years, and crops that have talked in that universal language—money. This is but the first chapter in the story. It is continued in the catalogue issued by the Bowker Company, and all should read it.

ILLINOIS GRASS NOTES.—I am entirely out of grass ground. For some reason for the last three years it has been impossible to get a catch from Spring-sown grass seed. I sowed twice with oats and failed; then at suggestion of a friend I tried barley, as it is said the oat stubble is likely to burn out the young grass during our usual hot dry weather in August and September, but I failed with that. One of my neighbors had the same trouble with Spring-sown seed; sowed in the Fall and has a fair stand. Possibly Fall-sown seed has a chance to get a firmer grip, so can withstand a probable drought. Cow peas have proved a bonanza to those who have failed with grass. Have any of the dairymen found that cow peas fed to cows made the butter strong? A. M. C.

Bunker Hill, Ill.

The Cold commonly described as "deep-seated," with pain and soreness in the breast, difficulty of breathing, and all that, yields quickly to Dr. D. Jayne's Expectorant.—*Adv.*



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LABOR 1-2 SAVED.

Also best Horse-power, Thresher, Clover-huller, Dog-power, Rye Thresher and Binder, Fanning-mill, Feed-mill, Saw-machine (circular and drag), Land-roller, Steam-engine, Ensilage and fodder-cutter, Shredder, Root-cutter and Corn-sheller.

GEO. D. HARDER, Manufacturer, Cobleskill, N. Y.

☞ Please tell **what** you wish to purchase.

Wants, For Sale or Exchange

FOR SALE.

Country Home, "Rural Grounds,"

of the late **ELBERT S. CARMAN**, for many years owner and editor of **The Rural New-Yorker.**

Situated in the Hackensack valley, 18 miles from New York, one mile west of the station, River Edge, on the New Jersey and New York Railroad. House in excellent order with broad piazzas. Good stable and carriage room. The grounds, consisting of a little over two acres, are beautifully graded and planted with rare coniferous and deciduous trees and shrubs. A never-failing lake of pure spring water adds to the beauty of the grounds.

MRS. ELBERT S. CARMAN, of No. 5 West 82nd Street, New York, will answer questions and show views of the place

Farm Managers, Gardeners, Butter-makers, etc., always on hand. No charges to employers. Write us. Rural Science Agency, Durham, N. H.

FARM MANAGERS. We have several first-class men at present whom we can recommend as Farm Managers—men of experience and ability, well versed in agricultural matters and the breeding and rearing of stock. Correspondence invited. PETER HENDERSON & CO., 37 Cortlandt St., New York.

100 FOR SALE WESTERN RESERVE FARMS in the Mahoning Vy. Send for list. **Dennison & Miller, Warren, O.**

A GOOD FARM, of 100 acres, to let or take on shares, with stock or without. A fine place to go into the milk business. Never-failing water. Handy to school, and very pleasant location. Box 150, Leonard Bridge, Conn.

FARM FOR SALE—150 acres good land. Buildings alone cost $6,000. Running spring water, near school and creamery. Two miles to village, churches, stores, mills, hotel. Keeps big stock. Healthy locality. Everything desirable. Come and let me show it to you. A bargain, $3,500. J. A. MILLER, East Dummerston, Vt.

Cash For Your Farm

Residence or Business Property may be obtained through me. No matter where located. Send description and selling price, and learn my successful plan. W. M. OSTRANDER, 1215 Filbert St., Phila., Pa.

Great Bargains in Farms.

Those seeking a mild equable climate, where plowing can be done 12 months in the year, and outdoor life all the year 'round is the rule, would do well to look into these exceptional offers made by reason of ill-health of the owner.

756-acre farm, near Richmond, Va., one of the finest in the State, under full cultivation. Improvements first-class and ample.

The Old Bassett Homestead, 660 acres, near Richmond, Va.

A finely located farm of 200 acres, on the Severn River, 4 miles from Annapolis, Md. Ample Buildings. Vegetables, Fruit, Tobacco, Fish, Oysters, etc., etc.

A large manufacturing business. 40 years established. Fully equipped. In Fredericksburg, Va.

Address the Owner, **CHARLES TYLER,** 1415 Madison Avenue, Baltimore, Md.

JERSEY BULLS—Have on hand a few selected Registered Jersey Bull Calves, from two to four months old, from great milk and butter-producing dams, and of the most approved breeding. Improve the quality of your milk and butter output by taking advantage of this offering. We breed for quality and quantity. Will make price low; delivered to your station. Don't miss this opportunity. Correspondence promptly answered. WHITE OAK RIDGE STOCK FARM, East Orange, N. J.

Oldest Commission House in New York Est. 1838. **Butter, Cheese, Eggs, Pork, Poultry, Dressed Calves, Game, etc. E. B. Woodward, 302 Greenwich St., N.Y**

GEO. P. HAMMOND. EST. 1875. FRANK W. GODWIN.

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Commission Merchants and Dealers in all kinds of **COUNTRY PRODUCE,** Apples, Peaches, Berries. Butter, Eggs, Cheese, Poultry. Mushrooms and Hothouse Products a Specialty. Consignments solicited. **34 & 36 Little 12th St., New York.**

ROUND SILO

THE PHILADELPHIA.

The only perfect continuous open-front Silo made. See Open-Top Patent Roof. Ask for catalogue. **E. F. SCHLICHTER,** 321 Vine Street, Philadelphia, Pa.

Also made in the West by **DUPLEX MFG. CO.,** South Superior, Wis.

Guide to the Pan-American.

Exquisite blending of soft harmonious colors has given to the Pan-American Exposition the name of the Rainbow City. Just as beautiful in its blending tints is the handsome little guide book issued by the Lackawanna Railroad, giving information that every Pan-American visitor is anxious to have. Write for one, inclosing 4 cents in postage stamps to T. W. Lee, General Passenger Agent, New York.—*Adv.*

Market Briefs.

PICKED UP HERE AND THERE.

SCARECROW FOR MOTHS.—The ordinary moth balls sold at drug stores are such vile-smelling things that people dislike to use them in packing away garments that they consider of much value. It is well known that the odor of Red cedar is distasteful to moths, and putting blocks of this wood in packages of clothing that are to be stored is a quite effective protection. A convenient form of this was seen in the form of Red cedar shavings, cut up in about the same shape as excelsior, pressed in blocks a little larger than the ordinary building brick, retailing at 10 cents. These blocks may be torn in pieces and sprinkled into the packages to be stored. The odor is not disagreeable and soon disappears when the garments are taken out to air. The best protection for furs is cold storage, and the warehouses in this city do a large business in this line every season.

POTATO CONDITIONS.—The general tone of the market is weaker than for some time, and the prices given are rather high for average lots. This does not apply to selected seed potatoes, which, if anything, are higher. People often complain of the difference between the prices of seed and table stock, though there may be no noticeable difference in the tubers. No doubt there is some inconsistency in this, and the needs of planters may be taken undue advantage of. Yet it must be remembered that few farmers keep their potatoes pure, the great bulk that is received in the markets for consumption being mixed stock. Those who take pains to keep the tubers of different varieties separate, and know that they have not been frosted so as to injure the sprouts, have a right to expect a little extra for their trouble. Where a farmer is raising and storing a number of varieties, often much alike in shape and color, it is no easy task to keep them separate through the various handlings that are necessary before they are disposed of in Spring. Sweet potatoes are firm and a trifle higher than last week.

CHERRIES AND GRAPES.—This is quite a combination of early and late fruit, yet to a limited extent they are both on sale in this market. The cherries are from California. A few boxes have been received by express, and there will be regular shipments every week from this time on. The first lots sold at wholesale for from 25 to 40 cents per pound. They were rather small and inferior. The large hotels are always after these odd and extra-early fruits chiefly to give their tables an air of luxury, which is supposed to please the class of people to whom they cater. The native grapes now offered are Catawbas and the last of the cold-storage stock. Nearly all of the larger fruit stores have the baskets holding about three pounds, and retailing at 25 to 35 cents. As might be expected, the grapes are badly decayed or withered, and in a whole basket but few are found that retain their natural flavor. Like the cherries, they are bought because of their scarcity. There are plenty of Malaga grapes remaining in the markets. Their tough skin, hard pulp and habit of sticking tightly to the stem, make them long-lived, but so far as quality goes, they are poor substitutes for our native grapes. W. W. H.

SCRAPS.

WHERE can I get the Vineland bush sweet potato? W. T. K.

Write to F. S. Newcomb, Vineland, N. J.

IN response to L. F. P., Gleasondale, Mass., there is much evidence to show the Worden-Seckel pear is worth a careful trial, despite its hyphenated name.

A READER who does not give his name wishes the address of B. H. Hite, who last year wrote an article for THE R. N.-Y. on methods of preserving eggs. Prof. Hite's address is Morgantown, W. Va. He is the chemist at the West Virginia Experiment Station.

IOWA CLOVER SEEDING.—Timothy seed has been sown as early as January and given an excellent stand and a heavy crop. The usual time of sowing clover, however, is during the month of March, when the seed is put on while the ground is covered with a light snow that will remain only a few days, the thawing of the snow providing sufficient moisture to carry the seed into the soil and put it in good condition for germination when the growing season opens. I can see but little, if any, advantage in sowing earlier than March. Prior to that time the ground is not usually in good condition. Sometimes there will be deep snow drifted over some portions of the field, and other portions may be bare and exposed to the winds. It is better to allow the sunshine of early Spring to remove these drifts and sow the seed on top of the light snow later in the season. These are of frequent occurrence in this locality during the month of March.

Iowa Ex. Station. C. F. CURTISS.

BERCKMANS BROS. write that they have planted 31,000 peach trees at Mayfield, Hancock Co., Ga. In a year they will have 50,000 plum and peach trees in their orchard.

CURING HAMS.—Your answer to the inquiry of B. G., page 193, as to how to keep smoked hams through the Summer to preserve them from the attacks of insects, is hardly satisfactory. I have found the following a sure preventive if done before the warm weather begins: Carefully wrap paper around the hams—old newspapers will answer. Then take a fair quality of domestic and wrap over the paper, sewing in place. Make a thick whitewash—water and lime—and immerse the cloth-covered ham in the wash. When thoroughly dry, tie a string to the neck of the ham and hang in smokehouse or other place. This I have never known to fail when done before insects gain an entrance to the meat. R. W. C.

Bowling Green, Ky.

CALIFORNIA STRAWBERRIES.—You advise thorough cultivating of strawberries. That is good as far as it goes, but not here. I have one-quarter of an acre, planted three years, and only worked the first year. Of course, the weeds were kept out last year. We had 500 cases, 15 buckets to the case, or 15 pounds. If there is any better crop than that they are not in this part of the country. We picked some March 1 this year, and can pick some any time of the year. We commence to pick in April, and pick until Christmas. They are what is called the Dollar berry. There is no better berry in this part of the country. It will ship to New York if wanted. W. R. G.

Placer Co., Cal.

SHEET FOR LEAVES.—There is one article that I find handy about the place. Take some grain bags, do not rip them up the back, but turn them inside out, start the thread at the bottom end, pull the thread out and you have a small sheet; give the "Bud" five or 10 cents to sew four of these sheets together, using the thread that came out of the bags and a darning needle. The result is a good-sized sheet. If you wish to get some leaves, rake together a big pile of them, spread the sheet close to the pile, and rake the leaves into the sheet, standing on it and treading down the leaves. When it is full tie the opposite corners together, and you put them where you want them. I find these sheets handy to carry bedding into the hen coops. I don't fancy leaves for bedding unless one has a box stall or something to keep them from spreading all over the floor; there is nothing any wetter than a wet leaf. V. E. H.

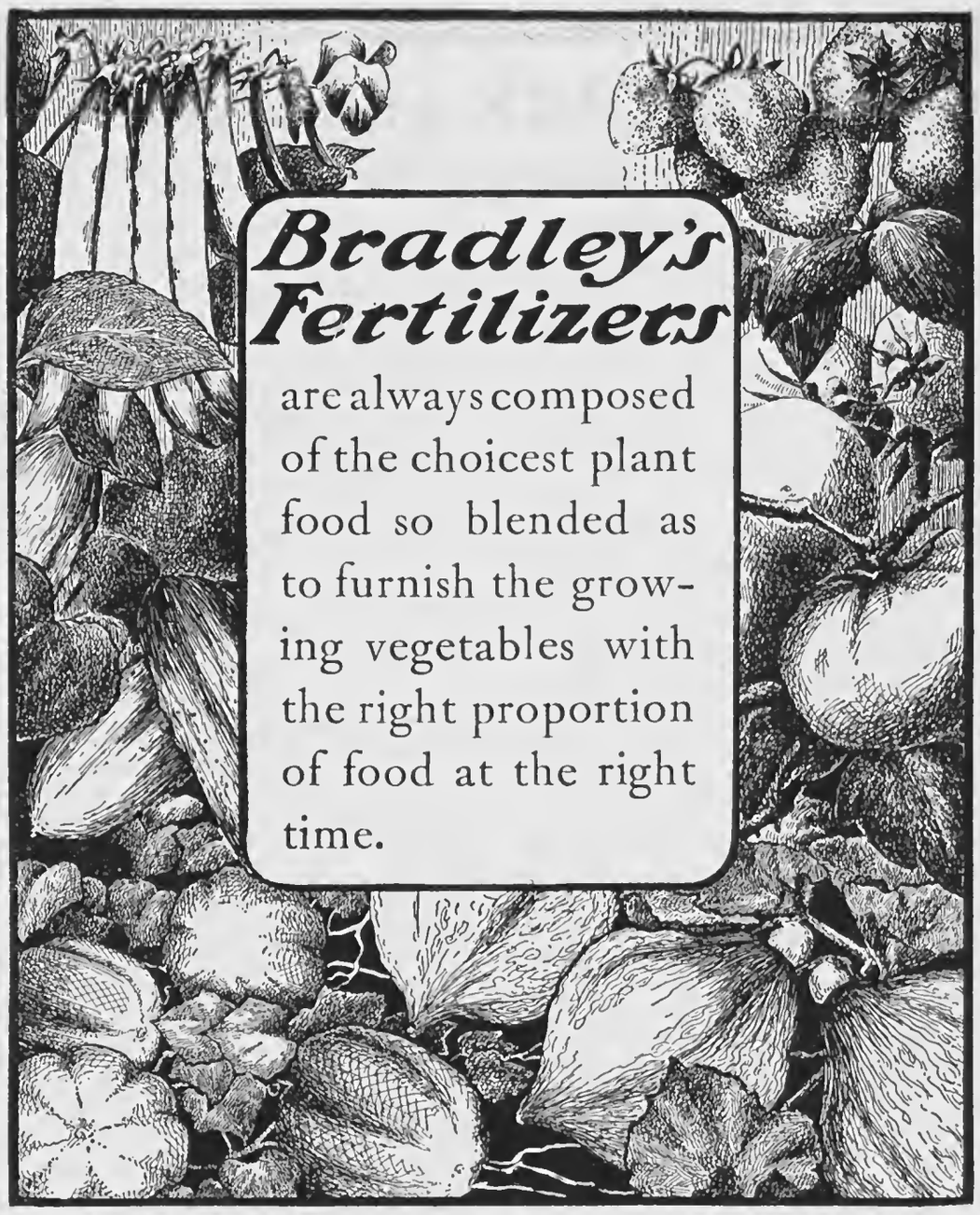
WHEN you write advertisers mention THE R. N.-Y. and you will get a quick reply and "a square deal." See our guarantee 8th page.

Once or twice a year the good housewife has a thorough house cleaning. The house has been swept and dusted every day in the year, but the housewife knows that in spite of vigilance dust accumulates in cracks and corners, and is only to be removed by special effort.

It's the same way with the body. You look after it every day. You take all the ordinary precautions of cleanliness and health. Yet the body needs its special cleaning to rid it of the accumulations of waste and poisonous matter which invite disease. Doctor Pierce's Golden Medical Discovery, taken regularly once or twice a year, would save many a sickness. It purifies the blood, strengthens the stomach, and cleanses the body of poisonous accumulations.

"Last spring I had a severe attack of pneumonia, which left me with a bad cough, and also left my lungs in a very bad condition," writes John M. Russell, Esq., of Brent, Cherokee Nat., Ind. Ter. "I had no appetite and was so weak I could scarcely walk. My breast was all sore with running sores. I got two bottles Dr. Pierce's Golden Medical Discovery, which I believe saved my life. I cannot express my gratitude to you. I am able now to do very good work."

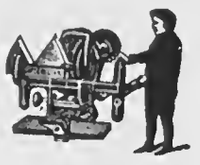
Dr. Pierce's Medical Adviser, in paper covers, sent *free* on receipt of 21 one-cent stamps to pay cost of mailing *only*. Address Dr. R. V. Pierce, Buffalo, N. Y.



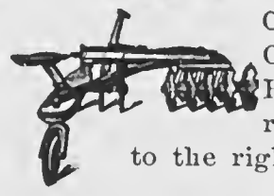
The Most Successful
Tobacco Growers
accomplish results by forcing the early growth of their plants. This is successfully done by proper use of
Nitrate of Soda,
applied before the plants are six inches high. The immediate effect of an application of *Nitrate of Soda* is to develop a dark green color of the leaves and start the plants to growing rapidly. Just enough *nitrate* increases the yield and improves the quality. Write to **John A. Myers,** 12-O, John St., New York City, for full information. No charge.

THE TRUTH MADE MANIFEST
"Unless you see and wonder you will not believe."—F. MCDORCH, D. V. S.
Veterinary Pixine
has greater penetrating, healing and restorative power than any preparation in the materia medica. Give horse no rest, apply it, rub it in thoroughly on sores, galls, scratches, speed cracks, grease heel, mud fever or skin disease, no matter how chronic or acute the case, it speedily and permanently heals without scab or scar.
Money back if it fail.
2 oz., 25c.; 8 oz., 50c.; 5-lb. pkge., $4.
At all druggists and dealers or sent prepaid.
TROY CHEMICAL CO., TROY, N. Y.

$2.50 Cash
will buy the BEST Dutton Knife Grinder EVER MADE.



J. H. Hale's Favorite Orchard Tools.



Clark's California Sr. Orchard Plow and Harrow. Plows a furrow 3 feet wide 6 feet to the right of the pole.

Clark's Double-Action Cutaway Harrow will easily move 15,000 tons of earth 1 foot in a day

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Gasoline Engine
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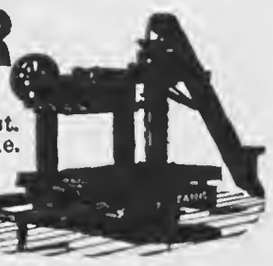

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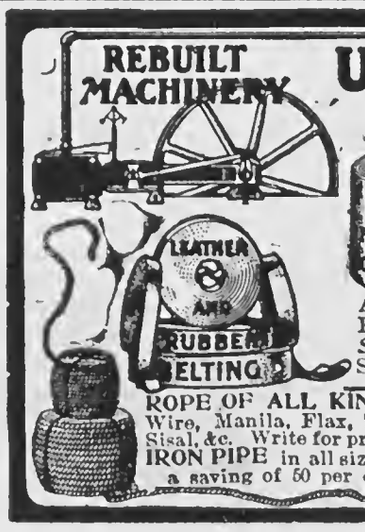

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Two Sheets saturated felt, and between sheets water-proof cement, making a solid, flexible sheet, the layers of composition thoroughly combined. It can be put on without removing the old roof. Can be applied without previous experience, requiring no special tools. Each roll contains 108 square feet. Comes complete with cement for two coats, caps and nails to lay. Price per roll.....$1.05

A million feet of Brand New and Second Hand RUBBER, LEATHER and COTTON STITCHED BELTING, bought at various Sales. We guarantee to save you from 25 to 50 per cent. We have a job in ENDLESS THRASHER BELTS.

ROPE OF ALL KINDS, Wire, Manila, Flax, Tow, Sisal, &c. Write for prices.
IRON PIPE in all sizes at a saving of 50 per cent.

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BOILERS from $23 up
ENGINES from $35 up
STEAM PUMPS from $15 up

Live Stock and Dairy

THE BREEDER'S WAYSIDE.

Soiling Crops for Mules and Horses.

I work a number of cattle and mules, and wish to raise their feed. Almost anything grows here. What is best for soiling crops to get a balanced ration? What is the ratio of nutrients for work mules, also work cattle. Is silage good to feed to horses and mules and work cattle?

Birmingham, Ala. J. W. H.

Horses and mules cannot be fed green crops in so free a manner as cattle. They have smaller stomachs, and are liable to colic unless fed judiciously and in relatively small amounts. Consequently I do not regard the soiling of work horses or mules as desirable, excepting in a small way. Of course succulent food in a very limited way is desirable, and is appreciated by the horse. In the South Soy beans and cow peas fed with fodder corn will provide a splendid soiling ration where the balance is a good one. Both of these crops do well in the South, though the cow pea will produce the largest yield per acre by considerable. Then the Soy beans or cow peas will make a very nitrogenous hay of high class if well cured. The Alabama Experiment Station at Auburn should be able to offer valuable advice on growing these soiling crops, it being in the State from which the inquiry comes.

Horses at medium work require a nutritive ration of 1:6.2, while those in heavy work require 1:6. Mules have the same application so far as feeding standards go. Oxen at light work require 1:6.5, while those at heavy work require 1:5.3. A 1,000-pound horse at medium work requires two pounds, or if heavy 2½ pounds of digestible protein daily to 11½ or 14 pounds of digestible carbohydrates and fat. A 1,000-pound ox at medium work requires two pounds of digestible protein, or if at heavy work 2.8 pounds to 12 or 13.8 pounds digestible carbohydrates and fat. This for daily consumption. Silage is not especially adapted to horses. Horses will eat it, but it has been tried by some very extensive horse breeders and discarded as unsatisfactory. I know of no persons at this time feeding silage to horses. Its fermented character does not make it best suited to the horse's stomach. Sugar beets, however, are very good if fed in a small way. For cattle silage is especially suited, and a 1,000-pound steer will eat 30 pounds or so a day with a relish. Work animals, however, require concentrated foods for the best results, and this is not a quality of silage. So for either horses, mules or oxen I should recommend relying on standard hays and grains and feeding soiling crops or silage as an appetizer only in small amounts. C. S. PLUMB.

Pure Cornmeal vs. Corn-and-Cob Meal for Steers.

"Michigan Reader" wishes to know whether the policy of grinding corn for fattening steers is a good one. He says they pay one per cent for getting the cob taken out and the corn ground. Many experiments have been conducted where pure cornmeal and corn-and-cob meal have been fed cattle, and it has been clearly shown that 100 pounds of one gave about equal returns with the other. This is explained on the basis that where pure cornmeal is fed it packs rather solid in the stomach, while if the cob is in the meal, it makes a more porous mass, through which the digestive fluids pass more readily than in the pure meal. This applies in particular to cattle, whether for beef or milk. The Kansas Experiment Station has experimented on this subject more than any other station, so far as steers are concerned. They have fed pure cornmeal, corn-and-cob meal, and whole corn, dry and soaked. In 1884 five steers fed pure cornmeal 140 days ate 795 pounds of meal each for 100 pounds of increase, gaining 2.08 pounds per day, while five steers fed corn-and-cob meal ate 732 pounds for 100 pounds increase in live weight, making an average daily gain of 2.25 pounds. In 1885 the experiment was repeated, and continued for 150 days. In this trial 1,166 pounds of pure meal were required to make 100 pounds gain in live weight, or 1.36 pound gain daily was made on this feed. Of corn-and-cob meal, 1,260 pounds were required to make 100 pounds gain, or 1.44 pound daily gain per head. So both of these years the corn-and-cob meal gave the most satisfactory results.

It may not always pay to grind corn. If one has pigs pastured with steers, then such corn as may pass through them will be eaten by the pigs and a gain made thereby. But where the only purpose of the grain is for the steers then it should be ground or crushed. If not, there will be considerable loss from undigested grain passing off in the manure. At the Texas Station Curtis fed corn, cob and husk ground together, and coarse cornmeal to steers. It required 498 pounds of corn, cob and husk meal to make 100 pounds of gain, and the steers fed this made an average daily gain of 2.29 pounds. Those fed coarse cornmeal required 400 pounds of grain to make 100 pounds of gain, but they made a less daily gain, making 2.21 pounds. For years the writer has fed corn in various forms to live stock, and unless for some special experimental feeding, always gives the cattle, whether milch cows or steers, corn-and-cob meal. This we grind ourselves in a burrstone mill, but many farmers can, of course, grind their corn in sweep mills, which, however, are more or less unsatisfactory, or in regular farm mills as they choose. Yet I should certainly feed corn-and-cob meal rather than pure cornmeal. C. S. PLUMB.

Anybody

can keep his horses free from all forms of **Lameness**, curbs, splints, contracted cord, thrush, grease heel, etc., by treating promptly with

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Used internally it cures Colic, Distemper, Founder, Pneumonia, etc. **Used and endorsed by Adams Express Co.**

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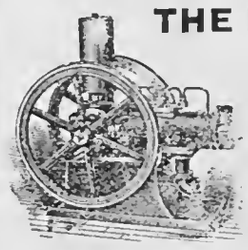

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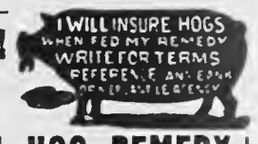

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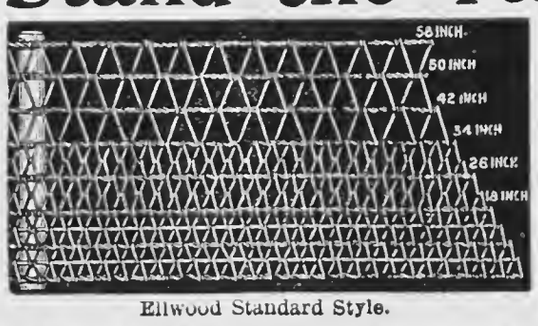

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Ailing Animals.

ANSWERS BY DR. F. L. KILBORNE.

Ringworm on Young Cattle

All my calves, for two years or more, have what is called here barn itch. When about three weeks old the hair comes off the eyelids first, then around ears, on head and nose, then gets scabby or warty. Once in a while one will have scabby spots all over. What shall I do for them? I fatten calves right along. The cows are not affected. E. D. W.

Huntington, Conn.

Paint the patches with the compound tincture of iodine. Care should be taken not to allow the tincture to get into the eyes. Repeat once a week, until they cease to spread, which will indicate that the parasite has been killed.

Shoulder Lameness in a Mare.

A six-year-old mare had shoulder strained last Summer by one side of hame breaking on hard pull, all the pull coming on the other side. She limps at times, and the injured shoulder is a little less fleshy than the other, indicating a light case of sweeny, I suppose. What treatment is advisable? F. B. T.

Visalia, Ky.

Apply a mild blister over the whole point of the shoulder, and also over the shrunken muscle along the shoulder blade. Repeat after three or four weeks if there is any improvement from the first. If there is no improvement take the horse to a competent veterinarian for examination.

Horse Passing Worms.

I have a six-year-old mare perfectly sound and healthy, but every few days she passes a worm from eight to 10 inches long, one-quarter inch in diameter. Will the parasites hurt her? H. G. D.

Loyalville, Pa.

The round worm you describe is the common Ascaris of the horse, and except when present in larger numbers, is comparatively harmless. Feed only a bran mash at night, and in the morning *before* feeding drench with two or three ounces oil of turpentine, well shaken up in one pint raw linseed oil. In an hour (and before feeding), give one ounce each best aloes and ginger, either in ball or by drench in a pint of cold water. Then follow with a bran-mash diet until the horse is freely purged. Salt placed where the horse can lick it at will, will materially diminish the number of intestinal worms.

Enlargement on Horse's Ankle.

I have a young horse (seven years old) which got his foot between two logs, one year ago in March, and dislocated his ankle. I put him in the barn, bandaged the injury, and, on examination, the veterinary said there was no fracture of any kind, replaced the bandage and said it would be all right in a few days. He ordered a liniment. The horse was not very lame, but I did not allow him to do any work for six weeks. There was a small enlargement on the inside of the ankle, which I have tried to remove with mild applications. Lately, from some cause, the enlargement has grown, and a small one commenced on the outside of his ankle. But for the blemish he would be worth $200. He is not lame. I used compound tincture of iodine and camphor. Once I applied a light blister of biniodide of mercury, just enough to raise the hair. It seemed to make it grow. What remedy do you advise? F. H.

Gallupville, N. Y.

If the enlargement is soft and puffy, blister quite severely with the biniodide of mercury ointment; but if it is hard and bony, I would advise having it fired in points. The firing should be done only by a competent practitioner.

Some Pig Questions.

Why do you prefer Berkshires, and is it healthful for the pigs to work in manure? How do you prevent them from scattering it all over the yard or field if you pasture them? C. R. W.

New Jersey.

We wanted a black pig. For several reasons the blacks seemed most desirable. As between Berkshires and Poland Chinas the former seemed better suited to our farm and crops. The Poland seems to be a corn-and-clover pig. On the rich corn lands of the Middle West the Poland is seen at its best. On our rough, hilly farm, where there is little clover, but a great variety of crops, the active Berkshire seems better adapted to the conditions. Our pigs have done well on the manure pile. They are in a large yard, and are not obliged to stay in the manure all the time. They work it over thoroughly, fine it and make it far better for spreading. They scatter the manure somewhat, but do no real damage to it. When the horses are fed whole corn the pigs require little extra feed in addition to it.

Dutch Belted Cattle Notes

The bull Belvidere was a superb animal, a remarkably sure breeder, and his calves averaged very large. One of them weighed 113 pounds when dropped. Last Fall, when three years old, he showed signs of crossness and, fearing he might attack my children, I sold him for beef. He dressed 800 pounds of beef besides hide and tallow. The tallow was inconsiderable, as he was not fat. I did not feed him as he should have been fed for fear that he would become vicious and unmanageable. He has a half uncle —Harry Byron—that weighs 2,060 pounds. A number of years ago I had a cow drop high-grade Dutch Belted twin bull calves. They are oxen now, and weigh 4,000 pounds. In January, 1900, I sold an old registered cow that weighed, empty, after having been driven six miles, 1,410 pounds. The butcher said that had she been weighed when younger and when at pasture she would have weighed 1,700 pounds. She gave me 196 quarts of milk in seven days, on silm pasture, two months after calving. She was an easy keeper and about an ideal dual-purpose cow.

New Jersey. G. G. GIBBS.

HARDY DUCKS.—As a breeder of ducks I wish to protest against the statements made in THE R. N.-Y. of March 30 about Pekin ducks. That Pekin ducks are not hardy is a notorious fact, and while they succeed well under the model conditions of the large duck ranches they often fail altogether for the farmer. There are several breeds which are hardier than the Pekin, the Muscovy, the Cayuga, the Grey Call and best of all that great little "egg machine," the Indian Runner. You can keep three on the food one Pekin eats. They are better foragers, make little noise, and lay more eggs than a Leghorn hen. They reach a weight of four pounds in the same time, and the meat is not so coarse and strong. R. D. B.

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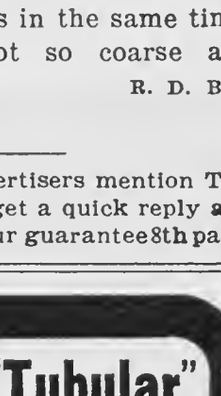

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He is stuck upon the glue. —Life.

TIMID LADY: "Are people ever lost in this river?" Boatman: "No, ma'am, we always find them in a day or two."—Fun.

JUDGE: "When did your domestic troubles begin?' The Plaintiff: "On the day I was married, your Honor."—Chicago News.

"YOU ought to rise with the lark." "Well, if I had to perch all night on a cold twig, I suppose I'd be glad to."—Chicago Record-Herald.

"MR. GROUCH went to a masquerade the other evening disguised as a bear." "Did anyone recognize him?" "Only his wife."—Philadelphia Record.

"I SEE that a home for honest indigent lawyers is to be established in Wisconsin." "Well, that's the kind of lawyers that become indigent."—Puck.

"Is every hair in your head numbered, grandpa?" "Yes, my child." "Well, grandpa," said the little fellow, as he contemplated the great bald spot, "you haveh't got much of a head for figures."—Yonkers Statesman.

MISTRESS: "Nora, you have made a terrible mistake. You have mistaken the quinine for baking powder and filled our flannel cakes with medicine." Nora: "Faith, mum, they must be medicated flannels."—Chicago News.

FIRST FARMER MAN: "They say a feller took a prize at the Chicago Fat Stock Show because he never cussed his cows." Second Farmer Man: "Don't you believe it. If them cows could talk he'd never have got it."—Washington Post.

"I MISTRUST the motives of that western milkman who put on rubbers." "Why so?" "He simply seems to have been making an effort to keep the water out of his own system. Why didn't he put rubbers on his cows?"—Cleveland Plain Dealer.

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"THIS dollar that I hold in my hand," he said, "reminds me of a deep, dark, scandalous secret." "Oh, George!" his wife exclaimed dropping her hands in her lap, and bending forward eagerly, "tell me about it." "Yes," he went on, "it reminds me of a secret of that kind, because it's so hard to keep."—Chicago Times-Herald.

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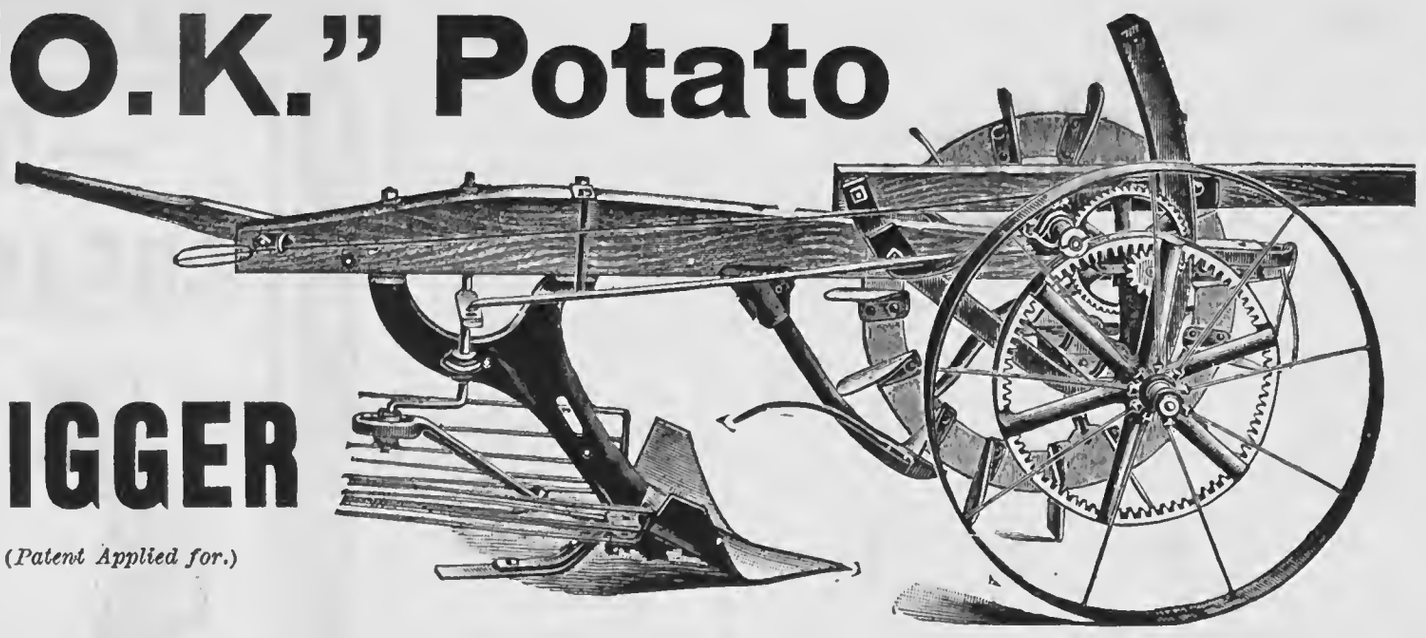

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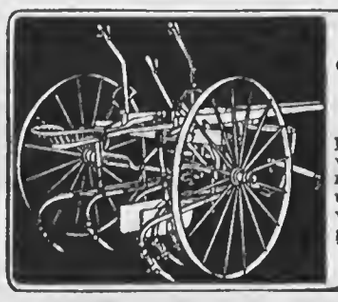

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VOL. LX. No. 2676. NEW YORK, MAY 11, 1901. $1 PER YEAR.

A FRUIT GROWER IN PORTO RICO.

WHAT THE COUNTRY LOOKS LIKE.

Chances in the Fruit Business.

TROPICAL FRUIT COMPETITION.—Fruit growers and consumers are interested not only in the fruits grown in the temperate zone, but also in those from the tropics, for with modern transportation the fruits and products of all climes, except those of a perishable nature, are brought to our markets and sold at our doors. Perhaps it will not be right to say that they are sold in competition with our northern fruits, for I do not know as a fact that the vast quantities of oranges, bananas and pineapples, consumed by the people of the United States actually compete in the markets with our apples, pears, peaches and grapes. I am inclined to believe that tropical fruits do not diminish the sale or limit the use of northern fruits; they simply round out the season, and give greater variety, so that the people consume a larger quantity. At any rate a kind Providence has provided a variety of luscious fruits, some that can be grown only in the tropics, and some only in the temperate zone, but all evidently intended for man's enjoyment and use, and all have become a necessity in modern times.

FROSTED FLORIDA.—Since 1890 I have had the pleasure of spending seven Winters in Florida and other southern States, I have gained some knowledge of the orange industry there, and, living on an orange grove on the banks of the Indian River during the disastrous freeze of 1894 and 1895, I have seen the results of the freezes since then. I remember looking at the ruined groves, considering Florida's uncertain climate, and saying to myself what a desirable thing it would be if Porto Rico or some other of the West Indian islands could become part of the United States, and make a fruit garden for us that would be truly tropical, where there would never be any danger of freezes. I never expected to see the day when this would be the case, but I have; our flag now floats over Porto Rico. Last Winter I visited the Island, spending nearly two months there, looking up its fruit growing possibilities, especially the orange industry, as well as I was able. I found the Island healthful, with fertile soil, a sufficient rainfall, except on the south side, and a tropical climate, a quartette of valuable characteristics.

WILD FRUIT.—As a commercial industry fruit growing was never developed under Spanish rule. Enough fruit was produced for home use, but little or none for export. Oranges and lemons grow wild, seldom receiving care or cultivation. All are seedlings; so far as I can learn there is not a grove or a single bearing tree even, of grafted or budded improved orange or lemon on the Island. The wild oranges may be divided into two classes, the Mirangha or sour rough orange and the China or sweet. The latter are juicy and sweet, and do very well for insular use, but are not very attractive. They have too many seeds, too much rag, and too poor keeping qualities to make them valuable for export. At present the business of up-to-date fruit growing is somewhat of the nature of an experiment. No one has yet demonstrated by actual trial just what a well-cared-for orange grove of improved varieties will do. There is no such grove on the Island, but it seems reasonable to conclude that if the wild fruit flourishes without care the improved will certainly thrive when properly cultivated. Nothing is being done by the native Porto Ricans to develop commercial fruit growing; they are watching to see what the Americans will do. If a few groves are started that prove to be successful and profitable they will naturally follow and imitate. At present very few know anything of the art of grafting or budding, or know that there is any outside market for choice fruit.

SCENE ON A FLORIDA PINEAPPLE FARM. FIG. 136.

STARTING ORCHARDS.—There are not many American fruit growers on the Island yet, but a few have been there two years. Their first attempts at orange growing were made by obtaining wild seedlings from the hills, planting them in rows, cultivating them and budding later. This plan has not been very satisfactory. Later quite a large number of trees of improved varieties were imported from Florida; many of these are growing nicely, but they seem to require some time to become acclimated. Some trees had apparently become somewhat stunted by being frozen back several times; some were ruined by heating while en route. After looking at the matter on all sides those best qualified to judge have decided that the best way to obtain Citrus trees for planting in Porto Rico is to sow the seed of the sour orange to grow stocks on which to bud improved varieties like the Washington Navel, Hart's Tardif, Sanford's Mediterranean, etc., and lemon seed for stocks to be budded with lemon, grape fruit, Tangerines, etc. Seedlings of the sour orange and lemon grown from seed planted a year ago on suitable soil, properly cultivated, are now fine, vigorous little trees large enough to bud. Of course this takes time, but it is the plan I adopted on my own farm purchased last year. It is located near Bayamon, nine miles from San Juan, the capital. The largest colony of American fruit growers on the Island has purchased in that locality. When I visited the Island again in January of the present year I decided to prepare 4½ acres properly by plowing, cross-plowing and harrowing. This was planted early in March, using 220 quarts sour orange and 17 quarts rough lemon seed. The drills are 3½ feet apart, seed one-half inch apart in drill. There has been plenty of rain, so that the seed can germinate readily. A quart of seed ought to produce more than 1,000 trees for grove planting. Other Americans have also planted considerable seed, so the prospect is that there will soon be a supply of home-grown trees.

SOIL AND WEATHER.—The per cent of land suitable for growing oranges and pineapples profitably is comparatively small, but at present such land is mostly unproductive, and can be bought near good roads within a reasonable distance of the seaports at a cost of from $5 to $20 per acre. The weather is remarkably uniform through the whole year. This can be accounted for by the fact that the great body of water surrounding the Island modifies the heat and cold, so that July is only a few degrees warmer than January. The United States Weather Bureau report for 1899 states that the highest temperature for that year at San Juan was 91 degrees in June, the lowest 65 degrees in November. People from the States will be likely to find the steady warm weather depressing if they reside there for a long time, but from my own experience I can say that a visit of a few months during the cold of our northern Winter is delightful. The rainfall at San Juan in 1899 was 81 inches, being the greatest in August, September, October and November, and least in February.

There are very few factories there to employ labor; nearly all the work is agricultural. There is a great surplus of farm laborers. The people are kind-hearted and willing to work. Employers are annoyed by many more applicants for work than they can use. The regular wages for able-bodied farm laborers are 35 and 40 cents per day, without board, boys 20 cents, oxen 50 cents per pair. Travelers who have visited the different West Indian Islands tell us the natural resources of Porto Rico are equal or superior to any of the other islands. It is the general opinion of those who know the Island best that fruit growing, especially oranges and pineapples, will soon become a leading industry. I think this the most promising business investment the Island offers. A word of caution may be needed here. It takes money to start a grove and care for it till it comes into bearing. The

purchase of the land is only the beginning: for the first few years it will be all outgo and no income. Still, there is this to consider: A thrifty young orange grove or promising pineapple plantation has a market value while still young, for there are many men of wealth who do not wish to wait, who will be glad to buy at a good figure groves just coming into fruitage. There is a sort of fascination about the beautiful orange tree with its golden fruit that captures the heart of the northern man. Again, what is true of the fruit grower in the North is just as true in the tropics, and everywhere else on earth. A successful fruit grower must be an enthusiast; must love his work, must love to see the trees grow; must have a large stock of perseverance, always remembering that valuable things cost. GEO. F. PLATT.

Connecticut.

PINEAPPLE CULTURE IN S. W. FLORIDA.

During the past few years pineapple growing has rapidly come to the front about St. Petersburg, Fla., which is situated on a narrow peninsula separating Tampa Bay from the Gulf of Mexico. It is across Tampa Bay, about 18 miles from Tampa. Owing to the closeness of the Gulf Stream on the west, Tampa Bay on the east, and the narrowness of the peninsula, which is only six or seven miles wide, vegetation rarely suffers from frost, thus greatly aiding the growers of semi-tropical fruits, of which the pineapple is one. The soil selected is usually oak and pine land, which must be thoroughly cleared and prepared as for the best garden work. This is sometimes quite a job, as the pine here has a way of sending a tap root down 10 to 12 or more feet, with just a fringe of small horizontal roots. The scrub palmetto, whose roots very much resemble those of the northern water lily, being from six to eight inches in diameter, also adds its share to the work. After being thoroughly cleaned up from two to four tons of tobacco stems, costing about $12 per ton, are plowed under. The sheds, which are one of the peculiarities of pineapple culture, are made by setting posts 15x7½, and 6½ feet above ground; on these posts 2x8 stringers are laid and upon these stringers 1x4 slats three inches apart are nailed. The whole pinery is then inclosed by a seven-foot tight board fence. The object of this shed is to protect the plants from cold winds and possible frosts. The pineapple also thrives better in the shade. This shedding is the most expensive part of the enterprise, costing from $500 to $700 per acre.

The plantation is then set out in beds of seven rows each, plants 18x30, with a five-foot alley-way. These alley-ways are left for the purpose of providing room to build small wood fires in case of very cold snaps. Not much dependance is placed upon the heat thus created, but upon the smoke, which retards radiation. This method of planting calls for about 8,500 plants per acre. The plants are of three kinds, viz., suckers from the side of the parent plant, rattoons, which are suckers with roots on, and crown plants which are from the tops of the fruit. These are planted very much as we plant cabbage plants in the North, except that they are much larger, being a foot or more long. We generally set from June to September, which is the rainy season here.

After culture is very simple, and consists in keeping the soil stirred with a scuffle hoe and fertilizing the plants about once in two months with some good nitrogenous fertilizer at the rate of about four ounces to the plant. Very little labor is required after planting, the plants soon shading the land, which with the semi-darkness of the shed is not conducive to weed growth. The crop is generally ready to harvest in from 12 to 18 months from setting. About 90 per cent of the plants commonly produce one fruit and three plants. After fruiting all except one sucker is removed from each plant, and used for planting new pineries. The sucker remaining is to produce the next crop and is cared for as before described. These suckers now sell for about 10 cents apiece. The cost of a pinery, including first cost of land up to fruiting, varies from $1,400 to $2,000 per acre; the proceeds are said commonly to reach as high as $3,000 for fruit alone, while the sale of plants sometimes adds about one-half more to the receipts. The varieties mostly used are the Smooth Cayenne and Porto Rico. My observation of the pineapple industry here is that it is of a very intensive character. The most profuse fertilization, intelligent care and faithful attention are necessary to success. These given the grower is abundantly remunerated. F. G. TICE.

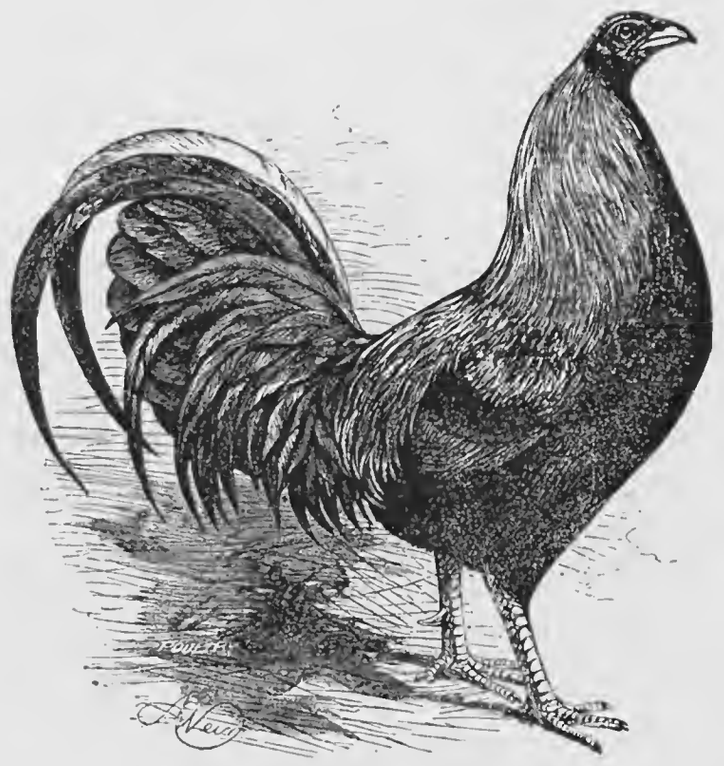
KILLING BEDBUGS.—Regarding the article on page 308 on bedbugs, I wish to call attention to the airing of the room after fumigation. It is absolutely essential to safety to provide means of opening windows *from the outside*, else sufficient gas is almost sure to be inhaled to insure work for the undertaker. Another point for safety; the cyanide should be dropped by means of a string from the outside. A third, but not so important, is to have the jar protected, not so much to prevent spattering as to prevent *leakage* through the vessel which often cracks from the heat suddenly evolved. Refer readers to bulletin from Entomological Division, Washington. I've followed their instructions with profit.

M. G. KAINS.

A USEFUL FOWL FOR THE FARM.

The genuine Game fowl is a comparatively rare bird in poultry exhibitions, and is quite distinct from the two types popular at present among fanciers. The modern or "exhibition" Game embodies the extreme attenuated idea as applied to fowls, and the close selection along these lines has done much to undermine the vigor and thrift of the variety. The Cornish Indian Game is another departure from the original type, this time in the direction of extreme blockiness of build and development of flesh. This kind also has departed from the normal state of hardiness, being among the poorest yielders of eggs. There would seem to be no economic advantage in having produced these two variations from the normal type. The true Game, or "pit" stock, as poultrymen designate it, needs no eulogist where once it is known and tested as a fowl for eggs and poultry. It is subject to much variety of size and shape, but the accepted type, where pains have been taken to control it, is a fowl of medium size, legs of moderate length, plumage quite full and tail especially of great length and beauty. The tendency of breeding exclusively for pit uses is to develop vigor to the highest limit, and there has been a movement among English fanciers in the direction of the normal type, such stock being now known as the Old English Game. Fig. 137 shows this type, being a reproduction of a pen-and-ink drawing by Weir, England's best-known artist in this field. It represents a bird whose bodily lines suggest a Leghorn, with the exception of head points.

There is much about the make-up of the genuine Game fowl which especially adapts it to the conditions found upon the average farm. Vigor is the true basis of prolific laying. In the Game is vigor conserved to the utmost. To allow stock of any breed to



A TYPICAL GAME COCK. FIG. 137.

fight constantly, whether in the instance of males or females, is to allow vigor to run to waste. There is no denying that it is the Game's first nature to fight, and the problem is to take up this breed of full pristine vigor, and so handle it as to direct its forces in the line of reproduction. It is not to be supposed that the cow which holds the butter record could accomplish this if kept constantly upon the warpath. The butter problem was worked out in the Channel Islands by a system of keeping the cows at the quietest pitch while under the pressure of high feeding. In the case of Game fowls there is abundant testimony that certain individuals and families are remarkably prolific layers, and there is every reason to believe that if fanciers would devote a tithe of the interest in supplying the pit Game with the proper environment to enable it best to develop prolificacy which they now squander in chasing some fad bubble or other around the lots, it would be much to the advantage of the art of husbandry. Let them take some of those improved nest boxes, so many of which have been patented in the past few years, allowing the egg record of each layer to be kept, and by the process of selection of the most prolific, prove to what extent the fighting nature may be restrained, harnessed up and turned into eggs.

There is another trait of the Game which, when the conditions are right, establishes its advantage over all other breeds. This is perhaps closely allied with its superior courage, which directs it to roam over wide areas in quest of forage. The Game will cover long distances, frequently a quarter of a mile, in search of grasshoppers and other insects. In my own experience I have found the high cost of food for poultry the chief objection to the pursuit. When tempted to push out into the rough lands, the hawks and crows have quickly responded, "Here is nature." I have often wished that my stock were of the right breed that I could say in turn, "Here is nature." So thoroughly ingrained is the Game's combative nature that the out-crosses upon other breeds will often display a surprising amount of it. I have known a Game Plymouth Rock hen leave the ground and fight a hawk upon the wing, in defense of her brood. The Game is your true Stringfellow breed, adapted largely to find its living while enriching our outlying orchards. The Game has not been popularly handled as a business fowl. Among the reasons for its neglect may be mentioned the high prices of stock. The breeders for the pit are generally limited to small flocks, producing no great amount of surplus, and the high prices obtainable for each lively male for use in the pit preclude selling at farmers' prices. So, while a Game cross upon common stocks would be advantageous, it is seldom available. The breed which most closely resembles the true Game, and one especially desirable from its make-up and useful qualities, is the Duckwing Leghorn, a variety not so many years over from England, where it originated. It is no secret that both the Game and Dorking, besides Leghorn blood, were used in its breeding. Specimens have been exhibited in our leading shows within the past half dozen years, which more nearly approached the accepted ideal for Leghorn shape than is found in our popular Brown or White varieties. They have never yet caught the belief that they are coming into popularity, which constitutes the chief ground for any breeds getting into favor with the masses. If true worth were the criterion there might be some startling occurrences in the poultry yard. F. W. PROCTOR.

A MADE-OVER DAIRY BARN.

A reader recently requested a plan for a cow barn to accommodate a stock of about 20 cows. For a person who has a location adapted, I think my plan could be but little improved. My old barn, about 80x36, stands about north and south on land gently sloping to the east, with cellar under it about eight feet deep. My stable was on the east side running nearly the entire length. By the new plan I took three spaces of 12 feet each, starting the sills at the old floor, and going out at right angles to the old barn 48 feet. The feeding floor is 12 feet wide in center, with cow stable on each side; the cows heads in, tied with patent stanchions. Running water in a tank at west end of cow barn supplies a tank between each two cows, connected by piping to first tank. There are 12-lighted 9x13 windows on the south side, which let the sun on to the cows all day, on the south side, and with windows smaller, about four feet long, about as thick as they can be placed in a monitor roof, furnish sunshine to the cattle on the north side of barn, and swinging in furnish ventilation when necessary. In the cellar, which receives the manure through trap doors, the ground is graded from both outsides to the center space sloping about four inches, and all the bottom is cemented. The center space under the feeding floor is graded toward the east end, slope about one foot. Every drop of liquid manure settles in the center; an eight-inch pipe through the east wall runs into a cement well outside the building, three or four feet deep, from which it is dipped with a long-handled pail, into barrels on a dray, and taken to any part of the farm where needed.

Under the old stable I had a cement basin, but when the droppings from above filled the space, the liquid was displaced and lost. Now my supply is always visible, and is wholly separate from the droppings, and the surprise is that so many barrels accumulate in a few weeks from 20 cows. Its use is a revolution in farming; it is, of course, full strength, and care is sometimes required in its use. Doors on each side can be thrown wide open, and carts placed close to the piles of droppings. A sliding door separates the cow barn from the other. The silo, 12x24, is nearly opposite and extends 12 feet west of old barn; the land being a little higher. A window about 10 feet from ground, serves to fill the silo about 24 feet deep.

Worcester Co., Mass. CHAS. E. PARKER.

Eggs and Meat.

T. Greiner, in the Practical Farmer, says: "I wish to take issue with the editor of THE R. N.-Y., who doubts the pertinency of the saying, "as full as an egg is of meat," because an egg is 75 per cent water. That is just about the percentage of the water found in meat. And when you see a little chick trying to get out of the shell, how much more meat could you expect to crowd inside of an egg shell?" The following table shows how eggs compare in food value with some other foods:

	Refuse.	Water.	Protein.	Fat.
Whole egg (hen)....	11.2	65.5	11.9	9.3
Steak	12.8	54	16.5	16.1
Cheese	....	34.2	25.9	33.7
Potatoes	20.	62.6	1.8	0.1
Milk	....	87	3.3	4.

The eggs of the duck and goose have a greater food value than those of the hen. A pound of steak has about 50 per cent greater feeding value than a pound of eggs, while a pound of cheese contains three times as much nutriment. An egg full of chick is far more "meaty" than the same shell packed with yolk and white. We know, of course, that eggs furnish strong and nutritious food. At this season of the year the workmen who do the heavy labor with metal, wood and stone, on the great city buildings, eat great numbers of eggs. They can be observed eating their dinners of fried egg sandwiches instead of meat.

FEEDING MUSCLE-MAKERS INTO PLANTS.

Its Practical Application in Feeding Grass Lands.

The recent publication of an article in THE R. N-Y. on the above general topic has led to a number of inquiries regarding its practical application in increasing the amount and value of the hay crop. The great lack in the leading forage crops of New England farms is protein. Such fodders as corn, oats and our common grasses are rich in starchy materials, known to chemists as carbohydrates, but are deficient in protein. The protein is especially useful in milk production, and in building up muscle in the growing animal, while the starchy part of the food is useful mainly for the production of heat. There are three methods by which the influence of this lack of protein in our crops may be partially counteracted; first by growth and feeding of more clover, peas, Alfalfa, vetch and Soy beans, all of which are relatively rich in protein; second by the purchase and use of such grain feeds as cotton seed, linseed and gluten; and third by increasing the proportion of protein in our common grasses, corn and oat fodders by the proper use of fertilizers. The first of these methods has been practiced to a limited extent, and should be more generally adopted. The second method is more common, but adds greatly to the cost of keeping the herd. The third method is practicable, but has received little consideration until within a few years. In the use of fertilizers the three important ingredients are nitrogen, phosphoric acid and potash. The last two are commonly known as the mineral ingredients of fertilizers. Whether we use stable manure, fish, blood, tankage, nitrate of soda, or sulphate of ammonia, they are all valuable for the nitrogen and the mineral ingredients they contain. It is a commonly-observed fact that the materials supplying considerable nitrogen, like stable manures, blood or nitrate of soda, greatly promote the yields and the growth of grasses, corn and oat fodder. But this is only one advantage from their use. The nitrogen of the fertilizer also tends to increase the nitrogen of the crop beyond what would be brought about by the increase in yield. That is, the *proportion* of nitrogen in the composition of the plant is increased.

The nitrogen in plants represents nearly a fixed part of an organic compound called protein. All protein compounds contain approximately 16 per cent of nitrogen, or 6¼ parts of the whole. If, by the use of liberal quantities of nitrogen in the fertilizer, we increase the nitrogen in the crop one-half of one per cent we increase the protein 6¼ times that amount, or 3.1 per cent. The effect of nitrogen on the yield and feeding value of hay is very well illustrated in an experiment by the Storrs (Conn.) Station, which covered a period of three years. In this experiment nitrate of soda and sulphate of ammonia were used as sources of nitrogen, but on different plots. The results from these two sources of nitrogen were quite similar, and the figures have been averaged in the following table, which gives absolute and relative yields per acre:

	Lbs. per acre.	Dry substance per acre.	Protein per acre.	Relative yields.	
No fertilizer	...	1,675	121	0.7	0.6
Dissolved bone black....	320	2,368	195	1.0	1.0
Muriate of potash.....	160	.....	...	...	...
Mineral fertilizer	480	3,240	248	1.4	1.3
Nitrate of soda, 160 lbs.	25	.....	...	...	...
Mineral fertilizer	480	4,202	366	1.8	1.9
Nitrate of soda, 320 lbs.	50	.....	...	...	...
Mineral fertilizer	480	4,458	432	1.9	2.2
Nitrate of soda, 480 lbs.	75	.....	...	...	...

The dry substance as here used means the total amount of food constituents exclusive of water, while the yields of protein were obtained by multiplying the dry substance by the per cent of protein in the crop from each plot. In the column headed "relative yields" it will be noticed that the yield of protein on plots that received over 25 pounds of nitrogen per acre increased relatively faster than the dry substance. This means that the percentage of nitrogen and of protein increased when more nitrogen was used in the fertilizer. The presence of some clover on all the plots obscured, somewhat, the effects of the nitrogen on the mixed grasses. In some other experiments on pure species of grasses the effects of nitrogen in increasing the protein were even greater than on the mixed grasses with some clover. The average percentage of protein for six distinct kinds of grasses, where only mineral fertilizers were used, was 7.4 per cent; where 25 pounds of nitrogen (equal to 160 pounds of nitrate of soda) were used with the mineral fertilizers, there was 8.6 per cent of protein; and where 75 pounds of nitrogen (equal to 480 pounds of nitrate of soda) were used, there was 11.6 per cent of protein.

The practical application of this is that the liberal use of nitrate of soda, or other quick-acting source of nitrogen, on meadows, will greatly increase the yield and the feeding value of hay. How much nitrogenous fertilizers we can afford to use depends on the value of hay and the price of nitrogen. It must be remembered that mineral fertilizers are essential in addition to nitrogen, unless the land is to be plowed and manured after fertilizing one year. Nitrate of soda alone will give a large increase in crop for one, and sometimes two years, but as soon as the supply of minerals is seriously reduced the yields fall off rapidly. Dissolved South Carolina or Florida rock phosphate, at the rate of 300 pounds per acre, with 150 pounds of muriate of potash, will supply a fair proportion of the mineral ingredients. Of late years nitrate of soda has been the most economical commercial source of nitrogen for grass. I believe that from 150 to 300 pounds per acre of this will pay on meadows where the manure supply of the farm is not sufficient for all crops. The liberal use of stable manure will have much the same effect as commercial nitrogen, however, and should be utilized to the fullest extent possible. Quick-acting materials, like nitrate of soda, or sulphate of ammonia should not be applied until the grass has become well started in growth in the Spring. If large applications are to be made, it would be advisable to apply at two dates, from three to four weeks apart. C. S. PHELPS.

EVERYBODY'S GARDEN.

With a little forethought and labor many dwellers on small city or village lots might enjoy the luxury of small fruits and crisp tender vegetables of their own growing, and at the same time beautify otherwise unsightly buildings and areas. The illustration, "A Barn Garden," Fig. 138, offers suggestions for this work. In this instance Lima beans, tall-growing tomatoes, cucumbers, nasturtiums and garden peas were planted on south side, just far enough out to escape drip from the eaves, and trained to the wall. Everything grew finely, and the yield was very satisfactory; from nine hills of Lima beans we used 28 quarts, worth four cents per quart, sold one-half bushel for 75 cents, and saved a quantity of seed. Two tomato vines yielded nearly a bushel of ripe fruits and a

A MICHIGAN BARN GARDEN. FIG. 138.

quantity of green ones for pickles. From two cucumber vines we had all we cared to use for slicing. The peas furnished but one mess for eating, and were then pulled up to give more room to the fine Caprice nasturtium, from whose vines we picked numberless bouquets, and whose leaves and blossoms furnished a dainty addition to many salads and garnishes. For Lima beans no better place than the south and east sides of such buildings can be found. Make the soil rich and mellow, and when the apple trees are in bloom plant the beans (eyes down) about one inch deep and 12 inches apart. Use coarse wool twine for the vines to climb, which they will do as readily as does a morning glory. Early Siebert and King of the Garden are our favorite varieties. Grapevines and even peach trees can be trained to such a wall, by proper pruning, and securing the branches by nailing strips of leather over them.

Eight or 10 roots of rhubarb, a Spring luxury, will furnish an ordinary family an abundant supply. Linnæus is best for early use, though not as large as Victoria or Mammoth. An asparagus bed 3x6 feet will yield several dollars' worth each season if properly cared for, and will last for 20 years. Anyone who has tested the difference between home-grown salads and those purchased from the grocery or market will gladly give time and space to grow a few rows of lettuce, endive, chicory, dandelion, mustard, parsley and cress. Several of these are useful as greens, and for garnishes. Raspberries, red and black; blackberries, currants and gooseberry bushes can be set close to the tight board fences which ordinarily enclose city lots, and if pruned and cared for, yield rich harvests, as well as hide the ugliness of the fence. Caring for the fruits and vegetables will keep the boys and girls off the street, and give them an interest in the home and a love for Mother Nature as nothing else can.

TIMELY SEEDS FOR MAY.—Below is given an alphabetical list of vegetable seeds which are timely in most localities for sowing or planting in May, viz., asparagus, beans, beets, cabbage, cauliflower, celery, corn, cress, carrot, cucumber, endive, lettuce, melon, onion, peas, parsley, parsnip, potatoes, radish, spinach, salsify, turnip and tomato. Many of these varieties may be sown or planted up to the middle or last of June. Some of the more tender sorts, as Lima beans, melon, cucumber and squash, may be advanced considerably ahead of their regular season by starting in shallow pans or boxes placed in sunny windows. Squash, melon and cucumber vines being very delicate and liable to injury are most safely handled in berry boxes. Enough seed should be sown in each box to make sure of a good stand after transplanting and becoming established in the ground. The boxes should be moved occasionally to prevent any roots that might grow out of the boxes getting started in the soil outside. When ready for transplanting, soak the boxes thoroughly, and with a sharp knife remove the bottom, and plant the entire box below the surface of the ground. Thus handled the plants will receive no check, and the time gained in maturing the crop will many times repay the extra labor. The very small, slow-germinating seeds, as celery, parsley, etc., are most safely handled in shallow boxes of any desired depth. Broadcast or sow in drills, cover lightly with fine soil, and cover the boxes with burlap or other coarse cloth until well established. Rich soil and plenty of moisture are indispensable, and boxes should be somewhat sheltered from too hot sun.

Lima beans can hardly be omitted either from the home or market garden; being particularly liable to injury from late frosts or even cold, wet weather, they should, for first early, be started as above. The bush varieties are growing very popular, both as to quality and yield, and will in a great measure supersede the pole varieties, especially where space is an object. Burpee's Willow Leaf, Wood's Prolific, Burpee's Quarter Century and Dreer's Wonder are all desirable varieties of bush Limas, and are named in order of their season. The pole or climbing varieties, the chief dependence of the market gardeners, are trained in various ways, on poles or trellises; the latest and best way is to set posts of 2x4 lumber 12 feet apart and eight feet high; 1x3-inch boards are nailed from post to post at top, and 1x2-inch strips at the bottom. Coarse wool or binder twine is cut in three-yard lengths and tied at both top and bottom boards, 12 or 16 inches apart. Not more than two vines should be allowed for each string, and the vines will need no assistance in climbing to the top; the leaders should then be cut or pinched out to throw the strength of the vine into the maturing of the pods. Rows four feet apart are sufficient for horse cultivation, and good crops are often grown three feet apart or less. Well-enriched ground with shallow but thorough tillage, is necessary to ensure good results.

Michigan. J. E. MORSE.

WHITEWASHING WITH SPRAY PUMPS.

I have recently seen a new factory building on the east side of New York City whitewashed from top to bottom, ceiling and walls, by a spray pump. The wash was made in the usual way, about as thick as cream, and strained through a fine sieve into an open barrel. The pump was single-acting, so constructed that it drew in a small amount of air with the wash at every stroke, and discharged it into a tank holding about 20 gallons. To this tank a long hose was connected and discharged through a one-half-inch pipe about 10 feet long. Two kinds of nozzles were used. One was an ordinary stop-cock, one-quarter-inch size, with one side sawed off near the plug and a slot cut down to it, so that when partly open the wash was thrown against one side of the slot, and discharged in a fan-shaped spray. The other was a brass plug screwed into the end of the one-half-inch pipe; two small holes were drilled through this plug at an angle, and over the top was screwed a cap with one hole in the center the size of one drilled in the plug under. Both of the nozzles threw the same shape of spray and one was as good as the other as far as I could see. A pressure of 60 to 80 pounds was used on the tank. A large colored man was the motive power, and the machine used a barrel of wash in from 30 to 40 minutes. The work was well done, and a large amount of surface quickly covered, but I think that the machine is too wasteful for painting, except the cheapest kind, as a lot of the spray does not hit where intended, and is lost. As I am much interested in spraying I noted the working of this machine, and have since tried both of these nozzles on fruit trees; they are of no use except for high pressure, say above 40 pounds, as it takes considerable force to make the stream spray and not dribble.

Rutherford, N. J. G. W. L.

THE rye stand throughout Columbia County, N. Y., is very fine, with every prospect of a large crop. New seeding is looking well. We are just having a copious rain, and all we want now is more warm weather. No wheat of any account is raised in this county.

Spencertown, N. Y. G. W. H.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Roofing Information Wanted.

J. T. R., Ivory, Md.—If any of your readers have used Ruberoid or Red Rope roofing for six years or more I would like to hear through THE R. N.-Y. what they say of it.

ANS.—We would like to hear from readers about this.

Paper Baskets for Fruit.

L. O. V. A., Bethel, Ky.—What do you think of paper berry baskets? Do you think they will answer the same purpose as the wooden ones? I think they will make a very neat package. They are cheaper than the wooden ones, if they will answer the same purpose.

ANS.—Dealers here do not think highly of paper fruit baskets. It is doubtful whether they will stand long shipments. When the fruit is moist the paper "goes down" rapidly. We would like to hear from shippers.

Fertilizers that Sour Soil.

W. O. B., Connecticut.—Does the use of acid phosphate increase the sourness of the soil or tend to sour it?

ANS.—Yes. It has been found that acid phosphate, muriate of potash and sulphate of ammonia increase the acid in the soil when used in large quantities. On soils naturally inclined to be sour it would be necessary to use lime every few years when these fertilizers were used. It seems to be true, however, that Potato-scab germs will not develop well in acid soils, and acid fertilizers may be better where scabby seed is used.

Fertilizer for Strawberries.

C. D. B., Wilmot, O.—Would it be all right to drill fertilizer with a grain drill on a strawberry bed before setting out plants? What kind of fertilizer do you advise?

ANS.—Yes, many farmers use the grain drill for dropping fertilizer. We would rather put the fertilizer in narrow strips (18 inches wide) where the plants are to be set. We think this is better than broadcast sowing. You can do this by tying the tubes on the drill together so as to drop the fertilizer in strips. The fruit and vine fertilizers made by the manufacturers are good. For a home mixture we like 400 pounds nitrate of soda, 400 pounds muriate of potash, 400 pounds fine ground bone and 800 pounds dissolved rock.

How Much Cement Needed?

J. C. L., Louisville, Ga.—I wish to build cow stalls and desire to make a cement gutter. Gutter will be 18 inches wide, six inches deep on one side and 10 inches on other, 60 feet long. Will require sides to gutter, so suppose it will be 36 inches outside to outside. How many barrels of cement would be needed? What fall would you give it? How much per foot, or how much fall in the 60 feet?

ANS.—In all the cities in this vicinity one orders cement, uses what he needs, and the seller takes back what is left. For this reason I have never estimated the amount of cement needed per cubic or square foot. Have so far estimated only the total cost—cement, gravel, sand, labor. Your job ought to cost from five to six cents per square foot—three inches of grout and full one-half-inch top coat. One of my men alone under my directions would do the work in one day, and it would take about two barrels of cement and four cubic yards of gravel. You could screen out of the gravel the sand needed for top coat. Two barrels best Portland cement $5, four yards gravel $2, and expert man for work $2.50. A cement contractor here would charge you for that job fully 14 cents per square foot, because it would be out of his line, and would make him trouble and care in forming the gutter. I would not try to curve that gutter, because it could not be properly plastered without a curved trowel. I would give it a fall of one-quarter inch to the foot if convenient. One-eighth or even less would carry off the fluid if not obstructed. I have a 10-inch drain 834 feet long with eight-inch fall, and the water runs quite rapidly. All the sidewalks in this city of 18,000 population *must* be made of cement, and there are perhaps a half dozen contractors for this work, and they make money at eight cents per square foot of walk. Beginners are apt to waste a good deal and spoil more, and therefore I caution such to go slow and take the utmost pains till they "get the hang of it." S. E. BARNEY.

Indiana.

What to Do With Bones.

Reader, Warwick, N. Y.—I have several tons of calf bones which have been in a pile until many are partly decayed. What method can I use to pulverize and put them in condition to use as a fertilizer?

ANS.—This question is asked every Spring. You cannot make fine bone meal on the farm without a steamer and powerful grinder. You can soften the bones by packing them in layers with wood-ashes. Put an eight-inch layer of broken bones at the bottom of a box or barrel. Then put a layer of unleached wood ashes, then more bones, and so on to the top. Keep the whole mass well wetted with liquid manure or urine. In 90 days the bones will be quite soft and can be smashed with a maul or heavy shovel. This will not equal the fine-ground bone which the manufacturers sell, but is about the best you can do on the farm.

Manurial Value of Corncobs.

G. S., Unadilla, Mich.—I wish to know the manurial value of corncobs. Can they be subjected to any treatment that will hasten decomposition and make them available for plant food? What soils will they benefit most? What fruits or vegetables will be aided by their use? Would there be value enough in their use to warrant the purchase of them? What could one afford to pay for them? The same questions apply to refuse cornstalks after they have been fed to stock. Would lime and plaster hasten the decomposition of either, and preserve the fertilizing properties?

ANS.—A ton of average corncobs will contain 10 pounds of nitrogen, 12 of potash and two of phosphoric acid. These fertilizing substances are worth only a few cents less than those in a ton of horse manure, yet it is clear that the corncobs plowed in as they are would not produce a good crop. It would not pay to try to rot them with lime. It is more economical to burn them. True, by burning you lose the nitrogen, but the fuel value will more than make up for it. A ton of the corncobs will produce about 17 pounds of ash, which is very rich in potash. There has been some argument about the difference in ash elements between corn kernels and corncobs. A ton of corn kernels when thoroughly burned would leave 30 pounds of ash—nearly twice as much as from the cobs. There would be eight pounds of potash and 13 pounds of phosphoric acid in the ton of kernels. We would use the refuse cornstalks for bedding and absorbents, and plow them under for manure. It is much better to shred or cut the stalks.

Plaster in the Stable.

F. B., Middletown, Del.—Ever since I can remember my father used to use land plaster on his barnyard manure when composting it, and I have followed his example. For some time past we have been following your advice by using it in our cow and horse stables, but we don't know just how much plaster we should use to hold all the ammonia and yet not waste the plaster. What is your advice?

ANS.—We consider it good practice to use the plaster in the stable. Formerly large quantities of plaster were used directly on the soil or in the manure pile. That practice has been largely given up. Prof. E. B. Voorhees, of the New Jersey Experiment Station, gives his practice as follows: "About one pound of plaster is used for three cows daily, though we are not particular in reference to this point, as we obtain the Rancocas waste plaster, which costs but $2 per ton, plus the freight. We sprinkle it in the gutters, on the platforms, and everywhere there is any moisture, and find that it absorbs very readily the odors, and probably fixes most of the ammonia, which would under other circumstances be lost." This "Rancocas" plaster is a waste product from the manufacture of phosphorus.

Prof. I. P. Roberts, of Cornell, gives his practice as follows: "We have used gypsum or land plaster in our stables for many years. About two tons suffice for the Winter for 20 cows. The stables are first cleaned and swept, for if a good deal of moisture is left in the gutters it will require rather more gypsum than we use. It is always sprinkled wherever the stable floors are damp from coming in contact with either solid or liquid droppings. There is no doubt in my mind but that this is not only scientific in principle, but thoroughly useful and beneficial in practice. In order to be available gypsum requires large quantities of moisture, and the liquids do not furnish more than is necessary to make available even the small quantity which I have recommended. I may say, however, that our stable floors are smooth, being paved, except where the cattle stand, with hard-burned bricks well laid. They were some that were not hard enough for paving in the city, and were procured at a reasonable price. Of all the flooring I have tried these bricks appear to be the best. They are clean and tidy, are easily swept and do not appear to dampen the stable like cement floors. I have no means of knowing, but I imagine the expense of such a floor is a little more than an asphalt or grout floor. However, this has worked so satisfactorily that I cannot but recommend this method of cow floor where one wants neatness, durability and comparative freedom from dampness. If wooden gutters more plaster than we use would probably be necessary.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

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Japanese Holly
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Write for prices, and our interesting Catalogue giving full information about these crops.
T. W WOOD & SONS, - Richmond, Va.

Sweet Potato and Tomato Plants. Price-list free. CALEB BOGGS & SON, Cheswold, Del.

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Farmers 30 choice standard varieties. Carman No. 3, $1.85 bbl. *See last week's ad* S. J. SMITH POTATO FARM, Box B, Manchester, N. Y

CARMAN No. 3 $3.00
Sir Walter Raleigh and Early Bovee $4.00 per bbl. all bbls. 4 bu. Dewey, the great cropper. Wholesale list *free*. GEO. A. BONNELL, Waterloo, N. Y.

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CARMAN No. 3. To prove superiority of our *Seed Potatoes*, we offer *2,000* bu. at *$2.50* per 4-bu. bbl.. f. o. b. The W. E. Imes Seed Co., Smith, Mich

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For Sale—1,000 bu. Clover Seed @ $6 to $7 per bu.; 500 bu. Crimson Clover Seed @ $5 per bu.; 2,000 bu. Cow Peas @ $1.25 to $1.75 per bu. J. E. HOLLAND, Milford, Del.

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write to-day for circular and sample. My seed corn ALWAYS GROWS. If you own a silo, you need my Early Mastodon corn. Makes one-third heavier crop than Leaming. Other varieties.
PACKARD, Seed Grower, Dover, Del.

Cumberland Raspberry Plants for Sale or Exchange. P. SUTTON, Exeter, Luzerne Co., Pa.

100,000 POTTED STRAWBERRY PLANTS. Ready July. 49 Varieties. List free. T. C. KEVITT, Athenia, N. J.

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No. 1. ¾ to 1 inch..... at $15 per 100
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Wickson Plum, ⅝ to ¾ inch..... at 8 per 100
Ben Davis Apple, ¾ to 1 inch..... at $13 per 100
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ASPINWALL MFG. CO.,
JACKSON, MICH.

The Cornell Reading Course.

Edited by John Craig, Professor of University Extension, and Editor Farmers' Reading Course, Cornell University, Ithaca, N. Y.

Reading Course Editor Among His Pupils.

The editor has just returned from a jaunt through Otsego, Herkimer, Oneida, Jefferson and St. Lawrence counties. It was a Reading-course excursion and very delightful. One meeting with a club or Grange took place each day, and sometimes two. This is a busy season, yet the average attendance was good. The editor saw a number of old friends, and made hosts of new ones. The social side of these meetings is quite as important as the intellectual. The Grange can be and is being made a great institution for good. Farmers need cementing agents which will tend to bind and hold them together—influences which will enable them to act in concert. The Grange dinner—here is a part of the all-day programme appreciated by all. The writer's knowledge of the products of cookery has expanded astonishingly during the week. His conception of the varieties of homemade pie, cake and pickled articles was much broadened, and his respect for certain kinds greatly increased. It was cheering to note everywhere a sincere and persistent desire to chase down underlying principles—to get at the why of things. This betokens the right spirit and promises well for the future. The season has been backward, but the land is drying rapidly, and seeding is being pushed with energy.

Time to Sow Hairy Vetch in the Orchard.

We would like to try some of the Hairy vetch. We could not very well plant it in August or early September, as at that time we are going over our ground picking fruit, but thought that possibly it could be planted in June or July, and would get large enough so that walking over it in fruit time would not kill it. We handle our Crimson clover in that way now and find it works very well. Is six cents per pound a fair price? M.

Lockport, N. Y.

I think it entirely practicable to sow Hairy vetch as early as July 1. If you keep your ground in a good state of tilth up to that time, the seed ought to germinate promptly, and you ought to get a good heavy mat of foliage on the ground before fruit harvesting arrives. The vetch will stand tramping better than Crimson clover, and makes an ideal carpet for fruit-picking. If I had to choose between September 1 and July 1 for sowing, I would certainly select the latter date. If you can secure the true Hairy vetch (Vicia villosa) for six cents a pound I think the offer is reasonable for this year. The seed seems to be scarce, and I have not been able to secure a better quotation. I have had better success in drilling the seed than in broadcasting, although if broadcast on freshly-harrowed ground and then rolled I have generally been able to secure a good catch.

Root-Gall of the Raspberry.

We have great difficulty in getting berry plants which are free from root-gall. Can you tell us whether there is any way of treating the plants before setting out, which will destroy the gall, so that we shall not be troubled with it on the stock grown from them? B. S.

Stanley, N. Y.

The life history of the root gall of the raspberry has not been satisfactorily worked out. Everyday experience has demonstrated the contagious character of the disease. I do not know any certain way of treating the plants so that the gall would be destroyed, and the roots of the plants left uninjured. I do know that there is, at the present time, a very serious difficulty in securing healthy plants. It is now coming to be generally understood that the gall of the raspberry and that of the peach are, if not identical, very closely related, and probably transmissible; therefore considerable time should be expended in examining the roots of raspberry plants which are to be set in young peach orchards. If I purchased a lot of berry plants which I suspected of root gall, I would certainly take the precaution of dipping them in formalin before setting out. I would use the formula employed in treating potatoes for scab—namely, one-half pint of formaldehyde diluted with 15 gallons of water. While there are no experiments on record which go to prove that this would lessen the amount and growth of the gall, yet I believe it to be worth trying. The principle effort to be made should be in the line of securing healthy plants.

Grape Knots.

A number of my Niagara vines are affected by swellings or knots like the samples I enclose. What is the cause, and is there any remedy? R. M. J.

Portland, N. Y.

The canes received bear irregular swellings, rough and warty, quite like black knot of the plum and cherry. These knots are not uncommon, and yet they are not so widespread as to have caused in any one place, a great deal of damage. The cause of these excrescences is not known at the present time. While they resemble in quite a remarkable manner the general appearance of the black-knot fungus, botanists claim that they are in no way related. French scientists have studied the matter carefully without reaching decisive conclusions. In this respect the trouble resembles Peach yellows, because its contagious character seems to be satisfactorily proved, but the fungus or germ has not been discovered. Some growers do not hesitate to say that the knots are due to unfavorable climatic conditions, but they also agree that when once they have started, they continue to grow and spread. Recent experiments published in an English journal claim that the trouble may be overcome by good tillage, close pruning and heavy fertilizing. This is a general principle in treating diseased plants. While it is true that Concords are much less susceptible to this malady than others, there is no guarantee that they will not finally become infested. I would cut out the diseased vines at once and seek to stimulate the vigor of those in immediate proximity, by good tillage, light dressings of nitrate of soda and wood ashes. If the vineyard has not had any barnyard manure for some time give it a dressing of the homemade article.

A Silo in Northern New York.

How can I build a silo in northern New York? Can I use green lumber? How shall I plant the corn, what distance apart and at what stage cut it? R. L. H.

Ellenburgh, N. Y.

A copy of the bulletin issued by the Cornell Experiment Station on the construction of the stave silo has been sent to your address. Green lumber can be used for staves, but we would prefer lumber which was at least partially seasoned. If you have made up your mind to build a silo next season it would be well for you to get out the lumber at once and have the planks cut two inches thick and one foot wide. The wide plank will season without warping out of shape, as will plank only six inches wide. Just before building the silo the plank should be taken to the mill and split in two, making the staves six inches wide by two inches thick. Corn should be planted for the silo but little thicker than it is ordinarily planted where a crop of grain is to be harvested. Best results seem to be secured when the rows are about 40 inches apart and the hills in the row from 20 to 22 inches apart, and not more than two stalks of corn left to the hill. The corn should be cut when the kernels are in what is known as the early glazing stage. The mistake is often made of cutting the corn when it is too green, and the mistake is also made of leaving corn until it is too ripe. Both should be avoided.

L. A. CLINTON.

Round Silos of Rough Staves.

Do you know of anyone who has built a round silo without having the staves matched or jointed, and who has used it for several years? Advice has been given to build with unmatched staves, and with matched. I would like to know which has proved the more satisfactory way of building. J. S. W.

Morris, Conn.

I have known of several round silos built where the staves were neither matched nor jointed, and where they were not even beveled. If the silo is to have a diameter of more than 12 feet it may very safely be constructed without beveling the staves or without tongueing and grooving them. If the diameter of the silo is to be less than 12 feet the staves should be either slightly beveled or else they should be of material not more than four inches in width. I have recently talked with several farmers, one of whom has had a stave silo in use for more than seven years. The staves of his silo are not beveled and he would not have them beveled, believing that they are better suited for the purpose as they are. L. A. CLINTON.

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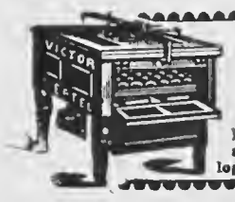

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It is the only perfect machine for turning or tedding hay. No breakage of forks and Arms.

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It is the latest, and it drops at twelve different distances.

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Send for our new 80-page catalogue of our Agricultural labor saving specialties.

AMES PLOW COMPANY, BOSTON AND NEW YORK.

Ruralisms

NOTES FROM THE RURAL GROUNDS.

FISH-OIL SOAP.—Much is now being written about this odoriferous compound. While it has been known and used by professional gardeners for generations, it is only within the past few years tnat it has assumed first importance as a practical insecticide for the ordinary trucker and fruit grower. Under the name of whale-oil soap, various preparations of greater or less efficacy have long been offered by dealers at a comparatively high price. Possibly actual whale oil was used in making the early soaps, but those now offered are composed of ordinary fish oil, pressed from the mossbunkers and menhaden, so plentifully taken along our coasts, combined with an alkali. When soda is used the result is a tough, leathery soap often difficult to dissolve and keep in solution. It handles well, however, and is the kind mostly kept in stock by dealers in horticultural supplies. When potash is employed as a base a jelly-like "soft soap" is formed, retaining about 25 per cent of water in combination. The potash fish-oil soap is quickly and completely soluble in hot water, and does not separate on standing, though solutions weaker than one or two pounds to the gallon may decompose in warm weather if kept too long. We have tried both kinds, and find the potash soap far more effective and pleasanter to use. It appears to be more searching in its effects on vegetable and animal life than the soda preparation, and the proportions recommended for nse on greenhouse and tender plants—two ounces or more to the gallon of water—are quite too strong for best results. We find one-half ounce to the gallon sufficient for green fly or aphis, one ounce for Mealy bugs and soft-bodied insects, and two ounces for most glasshouse scales, dissolving the given qnantities in all cases in a gallon of water. Used in these strengths very little damage to tender young plants is caused. When scales or stubborn pests affect palms and other hard-leaved plants solutions as strong as eight ounces to the gallon may safely be used. For use outside the soap strengths should be at least doubled for the same class of pests. We strike a tough customer, however, in the Pernicious or San José scale. He is sealed so tightly in his scaly shelter when dormant that a two-pound-to-the-gallon solution is needed to overcome him. A solution of this strength is quite thick when cold, and must be used warm or it will not go through a spray nozzle. It may be safely applied to all dormant deciduous trees or shrubs, and is fairly effective, but experience shows that it seldom kills all the scales, even when very thoroughly applied, but greatly retards their spread. Crude petroleum must take precedence of all soap solutions as regards efficiency in killing resistant scales and other insects, but it often injuriously affects young trees, and sometimes kills them outright. Its use is necessarily limited to dormant trees in Winter and early Spring: as Summer applications pure or in the form of emulsions have often injured the foliage considerably. Fish-oil soap, up to four ounces to the gallon, may be sprayed all over the trees whenever the larvæ of the scale is observed during the growing season, but all stronger solutions should first be tried on a single limb of the trees needing treatment. Any injury to the foliage will be apparent in a few days, and the solution weakened accordingly by the addition of more water. The claim is made that potash fish-oil soap, as now made, is a good fertilizer for many plants on account of the contained potash, which, we have been informed, amounts to a very substantial percentage of the product, and the presence of some nitrogen due to organic impurities in the cheap grades of oil used for the purpose. This is quite conceivable, and our own experiments show that weak solutions applied to the soil about tender plants rather stimulate than retard their growth. The most important use for fish-oil soap, apart from its employment in fighting Pernicious scale, is as an effective application for the very destructive new Pea louse. Hundreds of barrels of this soap were used last year in New Jersey alone, generally with profitable results. The best potash fish-oil soap we have yet tried is made by James Good, Philadelphia, Pa. The price for the pure soap ranges from four to five cents a pound, according to quantity purchased. A combination is also made with tobacco extract, which is especially useful for aphides, but the cost is somewhat greater. The compound Sprayall soap, made by Leggett & Bro., New York, is also very efficient and safe to use. It appears to have antiseptic as well as insecticidal properties and its aromatic odor renders it less disagreeable to handle than some others. A foreign soap preparation called Black Insecticide soap is strongly recommended by the highest European authorities and is now offered in our markets. We have not yet tried it.

THE BARBERTON DAISY.—A new plant of great interest and prospective decorative value has been recently brought from the Transvaal. It is a somewhat tender perennial, requiring good Winter protection, and produces great numbers of very large daisy-like flowers, on long stems. The color is almost pure bright red, a very rare shade in the family of Compositæ, to which it belongs. The botanical name is Gerbera Jamesoni, but Barberton daisy has been proposed for popular use, as it is found near that South African town. Some plants growing in the Riverton, N. J., nursery of Henry A. Dreer were very handsome last Fall, and it has since been successfully bloomed under glass in Winter. It is a handsome and striking flower, and the cultivation appears not difficult.

THE AGGRESSIVE STAR OF BETHLEHEM.—The hardy little Star of Bethlehem, Ornithogalum umbellatum, has become firmly naturalized in moist and shady places near the Rural Grounds, and even creeps into the fields and ousts the early grasses. One woodland glade is so entirely carpeted with its vigorous foliage at this season that it appears a perfect sea of green, in pleasant contrast to the fields, which are still quite brown at this writing. So thickly have the bulbs developed in the course of years that thousands are forced to the surface every Spring for lack of room. The pretty white star-shaped flowers follow in May after the foliage, now so vigorous and erect, has begun to decay. Where the clumps have grown so thick as to starve the bulbs there is not much bloom, but younger colonies flower with great freedom. The hardy Star of Bethlehem is a native of Europe, and was early introduced in American gardens It can frequently be found about old places, but is seldom planted now, as it is too aggressive for the flower border when conditions suit it. It is occasionally offered in bulb catalogues, and care should be taken to distinguish it from the large Winter-blooming species, O Arabicum, which is a pleasing plant for window decoration, and is often forced by florists for cut flowers. W. V. F.

THE BOIKEN APPLE.—Having recently heard several inquiries about the Boiken apple, I am moved to tell through your columns what little I know of it. Three years ago, upon the advice of S. D. Willard, of Geneva, N. Y., I grafted a large number of trees, 20 years old, to the Sutton Beauty and Boiken. Last Fall they bore some fruit for the first time. On one tree of Boiken there were more than two bushels of fruit; every apple perfect, although the tree was not sprayed. They are large, beautiful as wax. Color light yellow, with a crimson cheek. They are a little tart for dessert purposes, but for cooking, I believe that they are unexcelled. Although they are of good quality, yet I am confident that their handsome appearance will always find for them a ready sale. J. C. J.

Genesee Co., N. Y.

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and oil in your painting when you can get a more satisfactory paint at about one-third the cost. Its name is

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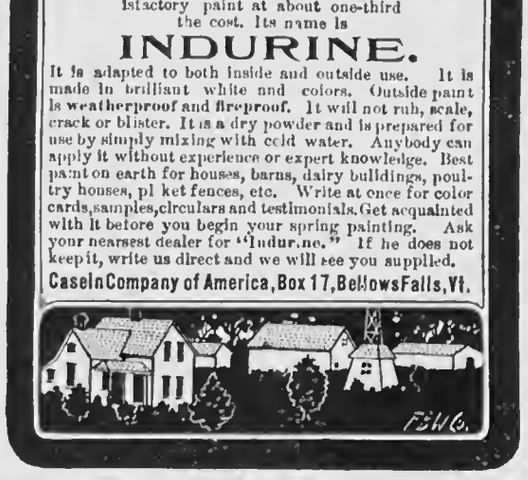

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is most useful when he is dead. Kill him with "BOXAL," and prevent blight by the same same operation. $1 buys 10 pounds.

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Cyanide

Guaranteed 98 to 99 per cent., for generating

Hydrocyanic Acid Gas

the most effective fumigating material, to destroy scale insects on fruit trees and plants. The only positive eradicator of the dreaded **San Jose Scale.** Endorsed by all Agricultural Experiment Stations. "A perfect practical remedy," says Prof. W. G. Johnson, State Etymologist of Maryland.

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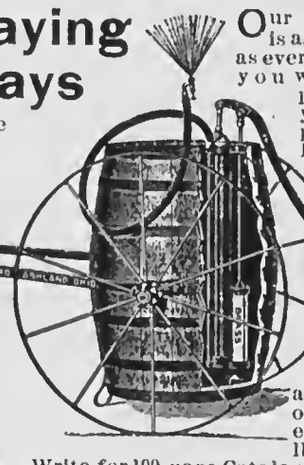
If you have the right pump



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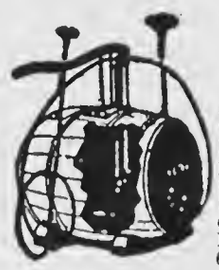

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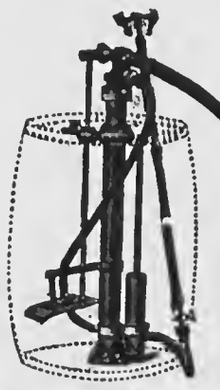

—don't experiment—costs money. We have done the experimenting—used the common spray pumps in our own orchards, noted their defects—then invented the ECLIPSE. You get the benefit of our experience free. Send at once for catalogue.

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It is admitted by all classes of fruit growers and farmers that my 5 gallon compressed air sprayer is the most durable made. This reduction is made for a limited time only. Take advantage of the liberal offer—it may be your last opportunity to get the sprayer at the reduced price. $3 75 for galvanized steel, $5.00 for copper. **Will throw a good stream 25 to 30 feet.** Good pressure 20 to 30 minutes. **The tallest fruit tree can be sprayed.** Order to-day. Salary to reliable men. Address

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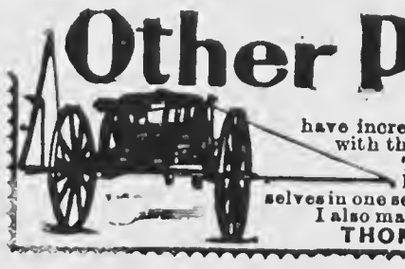

have increased 25 to 50 per cent. when they began to spray *the right way*—with the right sprayer, the PEPPLER AND CLIMAX SIX-ROW SPRAYERS. They will do as much for you. Read how they spray 30 acres a day, how they save ½ the poison, increase crops one-half, pay for themselves in one season. Catalogue contains spray calendar, formulas, etc. Sent free. I also manufacture the Improved Riggs Plow and Riggs Furrowers.

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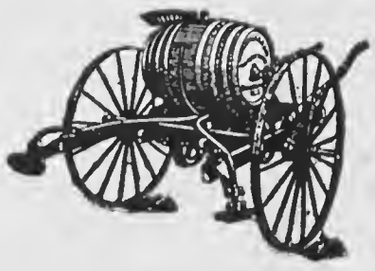

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IT has no small nozzles to stop up.
will not spray on horse or driver.
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will do more work better and with less trouble than any other sprayer. Price, $55. Send for circular.

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Hope Farm Notes

THE SUN SHINES.—After making a gloomy record of only two sunshiny days in the month, on April 26 the sun actually climbed over the hill and drove the clouds out of sight. Those who claim that "like cures like" had an argument right then, for the blue sky quickly helped the "blues" that had been gnawing at us for weeks. It was wonderful how the grass and growing things jumped at the sun. The first fruit trees at Hope Farm to show green were the crab apples, which leaved out April 23. Some early varieties of pears came next. Before the sun came one could see from our hill clumps of red where the maples had started, and light green where the willows woke up early. After 24 full hours of sun every living thing on Hope Farm began to dance. Even old Major realized that Spring had come, and let go of his Winter's coat of hair, so that he plastered those who rode behind him. The grass, rye and clover took on the dark, rich green which means serious business. I undertook to tell how the sun encouraged the work and production of chlorophyll. Some of the Hope Farmers got it that I said *glory feel.* That was not so bad, considering how every living plant daneed in the sunshine. Take it all through, April will go on record as a strange month. Some young men, and older ones, too, know how a sweetheart or a wife may drive them almen, and older ones, too, know how a tears by turns, and just when he is ready to run away turn with a sudden smile and make it all up.

FARM NOTES.—The sun brought work as well as whitewash for the blues. We were at least two weeks behind with all plowing. Our soil is naturally moist and heavy, and days of hot sun are required to dry it. The rain had given a chance to shred all the corn fodder, cut the Summer's wood and get ready for the start. The horses, too, were ready after their good rest. . . . . My friend De Voe, the weather prophet, assured me that I could not plant potatoes until May. He came close to it, but we did manage, by hard hustling, to get a few in on April 30. We are planting in hills this year—mostly early varieties. . . . . As an experiment we are planting Junior Pride potatoes grown on our farm by the side of Maine-grown seed of the same variety, and also second-crop Florida seed. We also have our regular-crop June Eating seed, and the second crop from Florida seed. This sort of testing is an old story, but I want to try it for myself. . . . . Prof. H. H. Hume, of the Florida Experiment Station, sent us a number of cabbage plants for trial. I have often wondered whether the southern plant, grown out doors from the seed, would be better than our northern hotbed plants. This Florida cabbage was started January 10 in the open air, and the plants were transplanted once at least. They are fine stocky plants—some of them having stems as large as the thumb. They stood the long journey well, though some of the outer leaves were yellow. We have them all out and we shall have a good chance to compare them with the "leggy" plants grown in the hotbed. At present I will back Florida against hotbed. . . . . If I were to put in a new set of water fixtures I would never again run a pipe direct from the pump to the house. The pipe that supplies our house leaves the main pipe a few feet from the pump. When the windmill is running there is a thump and jar, for then the pressure is brought against the range and our kitchen water works. I would rather have two pipes—one feeding from the tank to the house. This would cost more, and we would have to use tank water entirely; still, I think it would be more satisfactory.

ALL SORTS.—Various "cures" for a kicking cow are coming in, but I will guarantee that Julia will kick the cure out of them as fast as presented. She is in a class of her own—without rivals. The two calves bunt and punch her from every point of the compass. No matter how hard they punch and pull she stands meekly by and seems to enjoy it. The moment a milker's hand touches her ever so gently she is up in arms—or rather legs—and the whole thing is changed. If some active and wealthy man wants to try some new cure for kicking he will find Julia a ripe specimen. I have known wives to say that their husbands were too tame—did not "kick" enough. I will positively guarantee that Julia's society will remedy this defect, and I will sell her at beef figures. . . . . Our potatoes follow last year's corn. We were noticing how clean the cornfield is this year, and how much easier it will work than last year's sod. That is where we get the benefit of that last thorough hoeing we gave the corn. I doubt if we got our money back in the corn crop, but it destroyed the weeds, kept the ground clean and this year's potato crop will be better for it. On a farm we cannot live or work for to-day. Sometimes our best work must wait for years before we can read the results on Nature's face!

H. W. C.

HOPE FARM REVISITED.

A year's work, worry and expense does not always make as much visible improvement on an abandoned farm as might be imagined, but a recent brief stroll over the loafer fields of Hope Farm revealed a wonderful sticking up in the general appearance of the land. Cow peas and a good chemical fertilizer did the work on the back fields, and manure, fertilizer and good tillage on the nearby ones. Much hard work has of course been done in grubbing brush and getting bowlders out of the way. The unwelcome discovery was made that some of the big "hardheads" are cemented in rocky union to very ribs of the earth. In other words, there is an occasional outcrop of bed rock on the slopes. The soil is, however, of an excellent natural quality and quickly responds to good treatment. Cultivation of the steep slopes and thin spots will be given up as soon as a good covering of grass can be secured. H. W. C. is rather pessimistic as to the outcome of the Clark grass-seeding experiment; more so perhaps than the present appearance of the field indicates. This plot was prepared with the most scrupulous care, and an excellent germination of the seed followed, making a good close stand, but the Winter rains have since gashed and furrowed the sloping portions in a depressing manner. The prospect remains, however, of a sod so thick and tough that further pranks of the kind will be prevented. This promises to be a very useful experiment even if it only demonstrates the limitations of the Clark method. A good soil, excessive care in forming the seed bed and heavy seeding are essential factors, but in addition thorough protection against floods and untimely droughts is also needed to insure reasonable success. This is characteristic of all attempts at intensive cultivation. The planter may do his full duty in any case, but in the long run he will find that only narrow areas of fortunately situated soil will fully reward him for his trouble and expense. Despite the keen investigation of many agricultural problems now going on in our well-equipped experiment stations, very few facts of practical value to the ordinary cultivator are discovered, which seems to prove that agriculture is really one of the most difficult of all sciences. When humanity emerges from the present fog of military and commercial barbarism it will take its proper place as the most attractive as well as useful of all pursuits.

A Stringfellow peach orchard was being planted with a careful attention to detail that should delight Mr. Stringfellow's heart. It did look as though the chances for these little stubs of top and root-pruned trees to live were slim, but a few weeks' time will tell the story. The weather has been distinctly favorable for this experiment, as it has since rained heavily enough to settle the soil well about the little trees. The Hope Farm man should certainly be commended for the thorough manner he is carrying out the many experiments deemed of possible value in the rehabilitation of this long-neglected farm. It means no small expense and labor thoroughly to carry out experimental work of any kind. It is safe to say that any feature that passes the Hope Farm scrutiny will be of real value to the everyday farmer. If succeeding years bring as radical improvement in the appearance and capabilities of Hope Farm as the past one it will soon be a model well worth studying.

W. V. F.

SCRAPS.

THE homemade telephone has largely gone out of use. The cheap attachments sold by dealers are so much better and less liable to get out of order that it does not pay to bother with homemade devices.

THE fertilizing value of corncobs may best be obtained by burning them. The little nitrogen they contain will be lost in this way, but there is not enough of it to pay for the expense of reducing them with chemicals.

GENERALLY speaking it will pay to drill in and cultivate cow peas rather than sow them broadcast. The growth of vines will be enough greater to pay for the extra trouble. It is not wise to expect much from this plant in the way of fodder and hay so far north as Canada. The better way is to plow them under and depend for profit upon their fertilizing value.

CORN SMUT AND STOCK.—A Wisconsin reader who fed cornstalks through the Winter had a sick horse, and the veterinarian said that Corn smut might have caused the trouble. Prof. W. A. Henry wrote him as follows: "Experiments in feeding Corn smut to cattle have shown that it is not generally at least an active poison, even if fed in very large quantities. There have been no experiments with horses. The quantity which your horse could possibly have got is so small that I feel quite sure that sickness must have come from some other cause than smut in the fodder. Corn forage is a splendid horse feed, being quite free from dust and exceedingly palatable, as well as more economical as compared with hay. I strongly urge that you continue the use of corn forage, therefore, looking to some other cause for the sickness of your horse."

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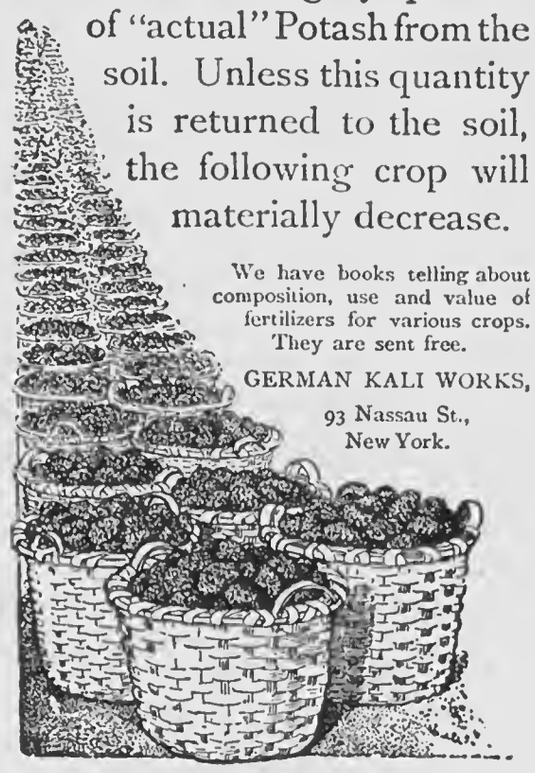

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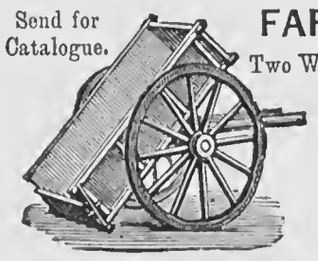

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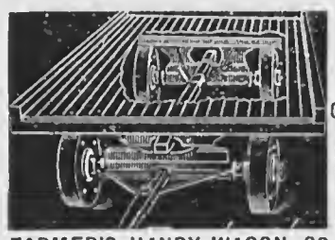

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The Rural New-Yorker

THE BUSINESS FARMER'S PAPER.

A National Weekly Journal for Country and Suburban Homes.

Established 1850.

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THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, MAY 11, 1901.

WE find that many people are interested in Porto Rico. We do not think that there is likely to be any large emigration to the Island, still there is a class of people who would without doubt do well there. For this and other reasons we have arranged for some reliable articles describing the actual chances to be found in Porto Rico. Jack Frost seems to have put his heel on northern Florida, but he will long and beg in vain for a chance at Uncle Sam's new island.

*

THERE are always those who say that apple growing will be greatly overdone The facts and figures of February generally silence such men, for in most years there is a lack of fine apples in late Winter. They may be right in saying that people are *planting* too many apples. Planting used to be 75 per cent of the business; now it is but 25 per cent. Spraying, cultivation and storage are now nearly as important as planting. The Jericho road that runs between the apple orchard and the fine market is a rough highway. The barrel of apples will strike 10 thieves where it formerly met one. Happily science has given us many new Samaritans also.

*

THREE years ago a laundryman in Rochester, N. Y., left his horse and wagon standing on the street. A steam automobile came along. The horse took fright, ran, and injured the wagon and himself. The owner recovered damages, but the county court reversed the judgment, holding that automobiles have a right on the road or street, and that horses must get used to them. The appellate court has now upset this decision and decided against the automobile. It appears to hold that the automobile is a small steam engine subject to the laws of the road which govern such machinery. This seems to us fair. The horse has enjoyed the rights of the road for centuries, and he should come ahead of the horseless carriage.

*

THE new buildings at Ellis Island, New York, for the reception of immigrants, are the most complete in arrangement and equipment of any that have been made for this purpose. Features of special note are bathrooms and laundry. In the laundry nearly 20,000 garments per day can be disinfected and thoroughly washed, and the bathrooms will accommodate 1,000 bathers per day. All immigrants who for any reason are obliged to remain on the Island over night will be made to take a bath. It is thought that such an initiation may have a salutary effect on these prospective citizens, and prove something of an incentive toward keeping clean afterward. What they will think when, later, they get into some of the political "deals" of this country, where no laundry is provided, is quite another thing.

*

THERE are many credulous people who believe themselves heirs of unclaimed estates, either here or in Europe, and they are willing to put time and money at the disposal of rogues who fatten upon such claims. Recently a woman was arrested at Richmond, Ind., by Federal authorities, on the charge of using the mails to defraud; she was secretary of an association formed to recover a great estate in Maryland, which is believed to be a myth. The alleged heirs, scattered over many States, have been furnishing money to prosecute their shadowy claims. One would hardly believe such frauds possible when the suppositious estate is located within the United States, but they prosper amazingly as do all of the get-rich-quick schemes. Foreign consuls often send warnings from abroad regarding imaginary fortunes lying unclaimed in the Bank of England, or unknown estates in some far-off corner of Europe. Rainbow chasing is never very profitable, and it will be well to put the energy thus expended into digging out prosperity at home.

*

THE transportation committee of the Eastern New York Horticultural Society met with representative farmers and others May 3 at Newburg, N. Y., and laid their grievances before the express and steamboat men. There has been much dissatisfaction among shippers at the careless way in which fruit is handled and the shiftless manner of returning empty crates. The committee made a strong showing, and there were men enough present to show that they mean business.

*

No, my scientific friend, the fact that you publish a good bulletin dealing with some fact or method does not settle the matter for good. Many people will not take the trouble to read it. Many will never know it was published. Some will read and forget it—others will not understand it. The only thing to do is to keep at the public. You cannot lift a sack of fertilizer or a bag of grain by getting above them and reaching down. You get down to their level or a little below them and lift up. In like manner, if you wish to get the farmer to know what the fertilizer or the grain is composed of, you must get down to his level and lift him into it. You may say that it is not your business to do this work of education. You discover facts rather than make them popular. We are not prepared to deny that statement, but if you issue bulletins at all, why not aim closer at the people who most need your facts?

*

AN interesting statement has been made regarding the national debts of the world's great nations. In 1793 it was estimated that the total debt of the nations was $2,500,000,000. It is now estimated at $31,000,000,000. The increase in debt, population and coin during the past century may be stated about as follows:

Increase in population	150 per cent
Increase in gold and silver	300 " "
Increase in debt	1,000 " "

It will thus be seen that this vast world's debt has largely exceeded the increase in coin, and must be based largely on credit. What has caused this frightful increase of debt? Possibly one-third resulted from building railroads and improving rivers and harbors. The rest may be charged to wars—many of them unholy and little short of barbarous! This is the burden that agriculture has carried—for, in the end, the great expense of war and destruction must come out of the soil.

*

WE begin this week a series of articles on dairy farm topics by H. E. Cook, of New York. Mr. Cook is a successful dairyman. He can milk a cow with his own hands, make the milk into butter or cheese, and sell the product to advantage. He can then take the pen and tell just how it was done, so that all may follow him. We regard Mr. Cook as one of the best dairy writers in the country. Our readers are sure to be helped by his articles. In a private note Mr. Cook writes:

> In 1899 we had a dry season, and potatoes were a good crop. Last year another dry season, and the conditions of the two crops were reversed, so after all it is a question of doing one's best and never losing faith in the Great Ruler. Did you ever think that the farmer of all men lives on faith, and I'm not sure but he may live as well as other people!

Of course he may if he will live up to his faith. No matter how the rain now falls, dry days are ahead of us, and we shall hear much of soiling crops this year. We try to promise by performance, and will let Mr. Cook's articles speak for themselves.

*

THE recent failure of a banking house in Seneca Co., N. Y., has proved a severe calamity to that part of the State. Among the reasons given for this failure is the following:

> The failure was a direct result of the decline in farm values. Many of the mortgages held by the bank were taken when farms hereabouts were in demand at $75 an acre. The same farms can be purchased to-day for $40 an acre. As an inevitable result the bank was more than $50,000 short in its April collections and failure followed.

We have no doubt that this statement of cause is correct. When these mortgages were given, the higher values were justified by the earning capacity of the farms. Through no fault of owner or tenant farm values have been forced down by reduced prices and increased competition. This shows what we have always maintained—that there can be no permanent prosperity in this country unless the farmers are generally prosperous. A shrinkage of farm values through reduced prices or inability to sell farm products is sure sooner or later to affect injuriously all forms of business and property. Money invested in land ought to be the safest possible investment, for the soil is the great mother of all industrial life. The farm that has shrunk 40 per cent in earning value cannot pay off the debt contracted at the higher figure without pinching the pocketbook of the men who lent the money, or the life of the farmer who struggles to pay it. Since the Civil War the National policy of this country has been to build up the town and city at the expense of the farm. Such prosperity will surely prove to be hollow unless the farm be given a fairer chance and the special favors granted to other classes be taken from them.

*

STRANGE and brutal things are done in the name of "sport," and about the most inexcusable and disgusting that we know of is the practice of pigeon shooting as carried on by some gun clubs. These pigeons, practically tame birds, are let loose, and frequently considerable scaring is necessary on the part of the attendants to make them fly, so that the brave Nimrod who is to murder them can get a shot. It often happens also that instead of being killed outright they are only maimed, and have to suffer for some time before being put out of their misery. It would be a nearly parallel case if a farmer should get his hired man to chase his flock of White Leghorns or Plymouth Rocks until some of the frightened birds flew over the fence or on top of the henhouse, while he blazed away at them, and then went about the neighborhood bragging about the glorious sport they had had. Of course, it is great markmanship for a man to hit with a rifle 95 out of 100 birds set loose for his benefit, as one did recently, but it is an act of cowardice second only to Herod's slaughter of the innocents. His skill could be shown nearly as well by shooting at glass balls or some similar moving target. Why sacrifice for mere fun the lives of helpless, harmless creatures? A man with such a fever for hunting should go into the jungle after lions, tigers or poisonous snakes, where he takes an even chance with his victim.

*

BREVITIES.

"THE WOMEN'S HORSE."

[In view of the recent discussion in THE R. N.-Y. regarding a horse for the women folks to drive, we have been asked to repeat the following]:

Ain't got no speed; he's fat enough to kill—
  Jest sorter jogs along a steady course,
An' yet there ain't no hundred dollar bill
  That ever'll buy old Gray—the women's horse.
I don't expect he really earns his feed,
  Jest cultivates a little an' that's all;
Yet he's exactly what the women need,
  To hitch up now an' then an' make a call.
You know how women drive—jerk on the bits;
  Push on the lines, an' cluck an' holler "whoa"!
Enough to drive a nervous horse to fits,
  But some old pelter like old Gray will go
Like clockwork—why, he'll turn right out an' pass
  Another wagon—patient as a saint,
Ef they broke down—he'd go to eatin' grass,
  An' when they whip him, he makes no complaint.
I feel as safe as can be when old Gray
  Takes out them women folks—he's old, I know,
An' now an' then I hear the women say
  They wished they had a horse that ain't so slow,
An' yet I'll bet they'll miss him when, some day,
  He strikes the last hard milestone of his course.
No! No! There ain't no money buys old Gray.
  I couldn't sell him—he's the women's horse.

WHO can wear light heels with a heavy heart?

BETTER "give your self away" than sell yourself!

THE widow may contribute her might through a broom.

PLANNING for the child is like building castles in the heir.

WHO can tell us about the paper fruit baskets? Are they useful?

THE cynics say that every man has his price. What is your price to-day?

TAKING a post-graduate course—the horse that breaks his bridle and runs.

"LET us put away childish things." Some men need help to get rid of them!

WHY is a sitting hen like a strike leader? One sits on the eggs and the other eggs on the cit.

THE hatchet is the only thing that will cure some hatches that never should have been hatched.

NO—the farmer's wife is not a hired girl taking a post-graduate course and tied up so that she can't run away.

THE hired man who takes a real interest in his work! You can't keep him down. If his present boss will not raise him some one else will.

IT is surprising how many people use an extra b in spelling plum. The time to use the b is when you are trying to get the rows straight.

THE latest so-called "consumption cure" is based on the observation that persons with gout or rheumatic troubles seldom have tuberculosis. The uric acid in the blood is thought to antagonize the tuberculosis germ. Those who have suffered from gout or gravel will hardly want to try this cure!

A PLANTER in Arkansas is said to be contemplating the establishment of a kangaroo ranch. Besides the value of its hide, the kangaroo supplies the tendons used by surgeons to sew up wounds. Probably the Arkansas man realizes that the profits from such a venture must increase by leaps and bounds.

Events of the Week

DOMESTIC.—Measles in a cavalry regiment stationed at Fort Leavenworth, Kas., practically disabled the entire command. . . . . A track is to be built along the Miami and Erie canal in Ohio, and the boats will be towed by electric motors. Experiments with the system have demonstrated its feasibility. . . . . A bill has been introduced in the Illinois Legislature making it a misdemeanor to give future options in markets, to spread false reports concerning stock values or to corner a market. . . . . Rosebud mine, at Angora, Mo., caved in April 26, and buried five men at a depth of 110 feet. . . . . During the last week in April heavy rain and snow caused disastrous floods in the Eastern, Middle and Central States. Conditions were very serious throughout the Ohio Valley, and in the vicinity of Pittsburg, Pa., where the loss was estimated at $2,000,000. At Cincinnati the river was 10 feet above danger line April 26, after which it fell slowly. . . . . The Southern Peanut Company, chartered at Norfolk, Va., April 27, with a capital stock of $100,000, has to some extent cornered the market for No. 1 Spanish peanuts, of which they have bought a large quantity of late. They will operate 40,000 nickel-in-the-slot machines, now building, which will dispense the nuts roasted, boiled in cocoanut oil and salted. A solid train of 50 cars of nuts left Norfolk April 27 for Chicago. . . . . April 30, a gusher of oil was struck in the Aspen tunnel of the Union Pacific, near Evanstown, Wyo. Much excitement prevails. Pennsylvania, California and Nebraska capitalists have secured large tracts of land, and will bore for oil. Local parties have also ordered machinery and will sink oil wells. . . . . A fire in a coke plant at Latrobe, Pa., April 27, killed six persons, and caused a property loss of $150,000. . . . . Cherry County, in the extreme northwestern part of Nebraska, was being devastated by immense prairie fires April 26, the recent drought and high wind lending to their fury. The region is sparsely settled, but several ranches have been swept away by the flames. Stockmen and villagers have turned out in large numbers to engage in back-firing, but the scope of the flames is so great that human agency avails little. Large herds of cattle have stampeded and are hopelessly scattered. Several villages are doomed unless rain comes speedily. The prairie grass is heavy and dry in all parts of the county. The flames traveled northward under three separate heads.

ADMINISTRATION.—Minister Loomis, returned from Venezuela, says he does not expect severing of diplomatic relations between United States and that country, and that war talk is foolish. . . . . Free trade between Porto Rico and the United States will be established after July 1, the local assembly having passed a tax law to meet necessities of the government. . . . . The Congressional appropriation of $3,000,000 for the extension of the rural delivery postal service becomes available in three months, and Chief Machen of the Post Office Department is now getting ready to spend it. The rural delivery routes cost an average of $500 a year each, and, allowing $500,000 for clerical hire and other expenses, it will be possible to establish about 5,000 new routes.

PHILIPPINES.—The court martial of Capt. James C. Reed, charged with frauds in the commissary department, began April 29. Numerous witnesses testified to payments made the accused officer, some being in the form of lump sums, others commissions on sales. Lieut. Townley of the navy is also implicated, and his conduct will be investigated by a naval board.

GENERAL FOREIGN NEWS.—Great loss of life and destruction of property was caused April 26 by a terrific explosion in a chemical factory at Griesheim, in the Province of Hesse, Germany. . . . . Bubonic plague continues to spread at Cape Town, South Africa, a number of fatal cases occurring among Europeans. The disease still causes alarm in Australia.

FARM AND GARDEN.—The Minnesota Legislature has passed a number of bills affecting farmers. A new law prohibits the sale of oleo or any imitation butter colored yellow, and makes such sale a misdemeanor. Formerly the stuff was allowed to be sold if properly labeled. The Torrens system of land-title registration is to be tried in the counties of Ramsey, Hennepin and St. Louis (the counties embracing St. Paul, Minneapolis and Duluth). If it proves a success in these counties it is to be hoped that at the next session it may be made applicable to the whole State. The gross-earnings tax bill, which was passed after a hard fight, provides that with the sanction of the people at the next general election, the railroads of the State shall be compelled, after January 1, 1903, to pay a gross earnings tax of four per cent in lieu of all other taxes.

The Harrison bill introduced in the Pennsylvania Legislature to prevent the use of any coloring matter in pure butter, which was intended to aid the oleo interests, has been killed. The Lack bill requiring all packages of renovated butter to be distinctly labeled, passed finally in the House.

The business to come before the next convention of the National Live Stock Association to be held in Chicago during the first week in December, will be of unusual importance, according to a bulletin issued April 17 by Secretary C. F. Martin. He says the live stock men and others interested will be compelled to continue their fight against the Grout bill, as the dairy interests have declared their intention to reintroduce the bill in the Congress. In addition to this the Association is interested in securing Federal inspection for all inter-state shipments of live stock in place of repeated State inspection.

The meeting of the American Guernsey Cattle Club in New York, May 15, will be a very interesting one, the result of the second home butter contest being announced.

A violent duststorm occurred in North Dakota April 27, and much of the wheat seeding must be done over again, as the grain was blown out of the ground. The temperature reached 84 degrees.

Ex-Gov. Morrill, of Kansas, has set out an apple orchard of 64,000 trees, on 880 acres of land, in the southern part of Leavenworth County. This is the largest apple orchard in the United States, if not in the world. The trees are set on the Welihouse plan.

April 30, the Snyder Anti-oleo bill was passed by the Pennsylvania House of Representatives. The debate of two hours' duration before its passage was one of the liveliest of the present Legislature. The bogus butter advocates threw off all disguise and acknowledged the sale of colored oleo on an enormous scale, in defiance of the present law. Dairy and Food Commissioner Jesse K. Cope and some of his agents, who have claimed that the law is being enforced, were embarrassed listeners to this frank confession. The Agricultural Department had been forced into passive submission to the will of farmers on the Snyder bill, which at first was bitterly opposed by Secretary Hamilton and his subordinates.

Plans have been agreed upon for a new Department of Agriculture building at Washington, to cost not exceeding $2,000,000. It will be U-shaped, of white marble, four stories high, with a 400-foot front and two wings, each 200 feet long.

May 3, representatives of the Eastern New York Horticultural Society, the Apple Shippers' Association and the Granges of New York State met at Newburg, N. Y., to discuss express rates and transportation matters as applied to fruits. Their efforts are calculated to obtain better recognition for fruit growers from transportation interests.

NEW YORK MILK PRODUCERS TALK.

About Cows and Their Feed.

The cows in this vicinity came through the Winter in good shape. The farmers buy their cows mostly, and they are worth from $30 to $60, according to time of dropping calf. But very few farmers raise their calves; the breed most liked is Holstein. There are no cows for sale except those brought in by dealers. J. L. R.

Westtown, N. Y.

Owing to the shortage of fodder in 1900 and the consequent scarcity, cows have been poorly wintered, and many dairies are now in bad condition for the Summer. I know of but few cows that have changed hands this Spring. Those fresh in milk sold for $35. Cows are mostly native, with a sprinkling of Jersey, Guernsey, Holstein and Durham. Most farmers raise their own heifers. Some are looking for sires that will increase size of cattle, as there seems to be most money in having prime veal calves. G. E. MCM.

Brecsport, N. Y.

The condition of cows varies according as the owners are feeders of grain or not. Probably more than half the cows are in prime condition, while the rest range from poor to fair. Very few farmers are buying cows; nearly every dairyman raises his own heifers. There are more Holsteins raised than all other breeds combined. Fresh cows are being shipped from this locality during all seasons of the year, and are being replaced by heifers raised on the farm. Fresh cows sell all the way from $40 to $65, according to quality and age, black-and-white taking preference over any other color. H. P. C.

Unadilla Forks, N. Y.

Cows in this vicinity in good condition, the silo supplementing the shortage of hay. Quite a few farmers are buying cows, as there is a good demand for milk. There are two milk stations at this place, H. S. Tutthill, of New York City, having opened his station April 1. He buys by test, paying full Exchange price for all milk testing 4.7 per cent butter fat, milk testing above or below paid for according, at the rate of two cents per .1 per cent. Cow buyers have been around paying from $30 to $40 per cow. The better strains of Holstein-Freisian cows producing large quantities of medium-quality milk are most satisfactory, even when milk is sold by Babcock test, as a good large flow of four-per-cent milk will net better returns than the smaller quantities testing higher.

Cobleskill, N. Y. W. J. W.

Many cows were sold during early Fall and Winter, owing to a very short hay and corn crop. The dry weather shortened the corn production so that many silos were only half or two-thirds filled. Prairie, or what is known as western hay, sold readily here for $15 per ton. As far as I have seen or heard cows are usually in fair condition. Most of the farmers raise their own heifers from their choicest cows. The Jersey cow and her grades have taken the lead as butter cows, but the past few years have made quite a change in favor of the Holstein. We have some very good herds of both breeds, notably the latter. There are not many cows offered for sale at present in view of the fact that the farmer thinks he can reach grass without much additional expense. Some cows are changing hands, however, at prices ranging from $25 to $35. The farmers here have come to the conclusion that the butter and cheese factory, side by side with the milk shipping station, develops a healthier market for whole milk, and that if substantial benefits are secured for the producer it must come along these lines, assisted by pure-milk laws and the passage by Congress of the Grout bill, or some equally as good legislation. M. D. W.

Spencer, N. Y.

Owing to the severe drought last season the hay crop was the shortest that has been in years, many farmers not having half hay enough to carry their stock through the Winter, and consequently, cows have been fed very sparingly of rough fodder. The past six months have been a harvest for the feed dealers. Sugar-beet pulp has been fed to some extent with satisfactory results, having been shipped from Binghamton and Lyons sugar factories. Notwithstanding the short hay ration cows have come through the Winter in good condition, and also in good health. All surplus stock was disposed of last Fall, and but few cows are being bought by farmers this Spring at from $30 to $35 per head. The majority of farmers raise their own heifers, as they make better cows than those they buy. Holstein-Friesians are preferred; a good many farmers are using purebred bulls and grading up their herds, while others already have herds of purebred and high-grade cows. New York buyers, when through this section, will pay more for black-and-white cows than for any others. But few cows are for sale here this Spring. The Empire State Dairy Company is paying 74 cents per can for milk at their shipping station here. E. C. J.

Greene, N. Y.

This is not very much of a dairy section; nearly all small dairies, with the exception of a few who ship milk direct to Jersey City. These dairymen generally buy cows to replenish their dairy, but most of the dairies are kept in stock by raising their own heifers, which consist mostly of Jerseys and Holsteins. Cows fresh with calf brings from $40 to $50, but not very plentiful to find. Cows have wintered fairly well, taking into consideration the scant supply of fodder sown last season. Barns will be about empty by the time cattle go on pasture. Milk is too low in price, when we take in account the cost of production. Those that ship get about $1 per can; those who patronize the shipping station get 80 cents per can, one-half cent less than Exchange price.

Stanton, N. J. W. A.

The cows in this section came out in fair condition this Spring. Some dairies are very thin. Those that make Winter milk are in good condition. There have been many auctions in this section during the Winter and Spring. Many farmers are out of hay, and at the present price of hay and grain they say they cannot afford to buy for their stock; hay is selling from $15 to $18 per ton in the barn, and hard to get at that. At the auctions the average price is about $40 per cow; if Holsteins it is nothing uncommon to sell for $50 to $60. Everything that is black and white is called a Holstein, whether it has a drop of Holstein blood or not. That makes from $10 to $20 difference in the price. The Standard Dairy Company is paying 74 cents per can for milk at Mayburys; at Solon the Dairy Dispatch is taking the milk since April 1; price supposed to be the same as at Mayburys. B.

McGraw, N. Y.

Last Fall everyone seemed fully to understand that he must reduce his stock, and this was done by selling off the older cows and young animals. With two very dry seasons the farmers made preparations early by putting in, up to June 5 or 6, a large acreage of fodder corn. Those not having silos cured and fed dry by cutting up a quantity at a time upon the floor in heaps, which heated and softened so that the stock ate it well and kept in fine condition with a grain ration, the same as with silage. Stock is looking as well as in former years. A number of farmers have had to buy some hay, but there were others who had a surplus and have supplied all demands at from $13 to $14 at the barn. One farmer now has about 50 tons to press. About the usual number of cows have changed hands, largely at auction, selling all the way from $35 to $50 per head. For a few years past considerable attention has been given to raising stock, mostly Holsteins, though there are several Jersey stock farms. W. F. J.

Earlville, N. Y.

Vegetables in the South.

The cabbage crop in this section is moving freely; 40 cars left here last night for the East and West. I find the farmers are distributing their stuff more to the West than in past years. They have been very much disappointed in the cabbage crop this Spring. Sixty per cent of the crop was planted in the extra early type of Wakefield, and set out early. For the past two seasons this type of cabbage has made heads of fair size, yielding about 150 crates per acre, came in early and brought big money. This year at least 60 per cent of the crop in this vicinity was planted in this early variety of Wakefield cabbage, and the season has not suited them. It has been an unusually cold Spring, and this type of cabbage has headed up very small, 100 to 250 heads to the crate, enough heads in one crate to make five under ordinary circumstances. Those having Henderson's Large Type Wakefield, Henderson's Early Spring, and Henderson's Succession cabbage are making fine crops. On account of the shortage in the yield of Extra Early Wakefield crop there will be no more cabbage shipped from this and Charleston's vicinity than there was the last year. This will make the crop of Spring cabbage very short. In the cold snap of the early part of the week the thermometer went down as low as 36 degrees, but a stiff wind blew all night and prevented much damage from frost. The potato crop of this section was nearly ready to bloom. It was not injured, beans were not hurt to any extent, but the cucumber and cantaloupe crop was scorched up badly by the cold wind and light frost. I think we are exceedingly fortunate in saving our potato crop, which is very fine. With favorable seasons from now on the new potatoes will be moving from this point and the vicinity of Charleston from May 10 on.

Youngs Island, S. C. W. C. G.

Fruit on the Delaware Peninsula.

Reports from all county vice-presidents of the Peninsula Horticultural Society show that there is at this time a fine prospect for an abundant crop of all kinds of tree fruits. Without an exception the reports state "prospect for full crop of peaches." Pears are not quite so full of buds as last year; some orchards were badly injured by blight last Summer. Strawberries did not make as many plants as usual, on account of dry weather. Raspberries were badly winterkilled, so that the crop will be very light. Some varieties of blackberries, notably the Wilson, are also injured. The season is backward, but the prospect was never better for a fine general crop of tree fruits of all kinds.

Orchard Prospects in Ohio.

The worst storm of the year commenced on April 18, with rain for 30 hours, then snow for 60 hours. The creeks were the highest known, and the rivers did immense damage. The temperature was 30 degrees above zero the coldest morning, but it did not hurt any of the fruits that I can find, although peaches and some plums were in full bloom. We have prospects of large crops of peaches, plums, apples and fair crops of small fruits. We had commenced spraying before the storm, and had to wait eight days for favorable weather and fair ground to drive over to resume the work. Apples will be in full bloom in a very short time now. Spraying is a sure preventive of fungous diseases if rightly managed. Several orchards in this vicinity will be sprayed for the first time this year. People are seeing and learning, but it is very slow. A Cincinnati commission man has bought a fine hill farm of 236 acres near here, and will raise fruits largely. The large dealers fear they will not be able to secure enough first-class stock for the demand in the near future, and some of them are going to try to raise their own supply. Where are all the skeptics who were afraid the fruit business would be overdone? Modern fruit culture demands large plantations and a manager with a large head. Are there enough of the right kind of men on the farm, or must some of the city men come back to show the farmer how to improve his opportunities? U. T. COX.

Lawrence Co., O.

Woman and Home

From Day to Day.

A CITY FARMER.

Oh, I'm a reg'lar farmer, for I got a hoe an' spade,
An' a bag of roasted peanuts, which I'm goin' to plant, you bet,
'Cause when they gets to sproutin' and has all their bushes made
They'll be loaded down with peanuts just the best was ever et!

I got a new wheelbarrow with a wheel all painted red,
An' a pair of new jean britches made up just like any man's;
An' Ma' says I'm a farmer sure enough—'at's what she said—
An' purt' soon I'll be raisin' Cain an' ripe tomato cans.

W'y, I planted lots of orange seeds just yester' afternoon,
An' a whole han'ful of raisins what had worms inside their skin;
I'm goin' to dig 'em up unless they come up mighty soon,
For I'm gettin' seared for fear they ain't stayed where I put 'em in.

Oh, I like to be a farmer an' to work out in the sun;
I'm goin' to buy a farm some day an' plant what I love best—
Of dates and figs and licorish I'll raise a million ton,
An' with oranges an' sugar plums I guess I'll plant the rest.

'Course now I'm in the city, where there ain't a bit of land
'Cept what's in our back yard, and that is where I have to play;
But we're goin' to the country, an', oh, won't it be grand?
You bet I'll be a farmer, then, an' plant most ever' day!

—Chicago Record.

*

A NOVEL idea in fancy sandwiches is to use plump little biscuits, a day old, from which the centers are removed nearly to the bottom with a sharp round apple corer, leaving a little well. This well is filled with chicken salad cut fine, and the little round crust top fitted into the biscuit like a lid. The result is a very dainty and delicious sandwich.

*

BRASS polishers in Chicago and Milwaukee have suffered from the competition of women, who have crowded into the trade, which is generally regarded as rather an unhealthful one. Instead of crowding the women out by making their surroundings unpleasant the intelligent polishers suggest finding them something better to do by encouraging matrimony, and urging the feminine operators to transfer their polishing powers to domestic life. This seems the most sensible solution of such a labor problem. To destroy competition by annexing the competitor, thus forming with her a domestic and labor trust, seems to be following the lines of great modern commercial combinations.

*

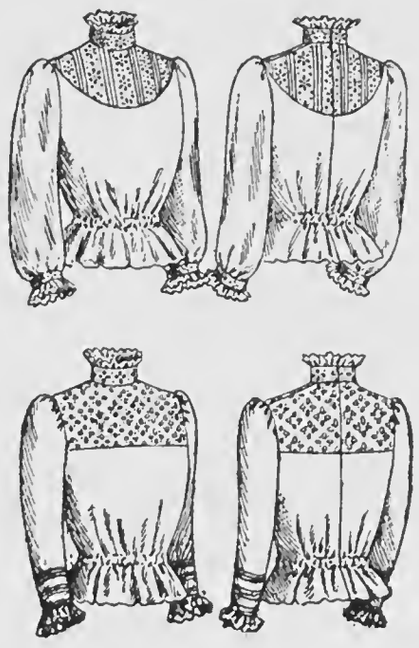
MANY of our friends who live distant from large cities have heard of the "little mothers" of New York—small girls who must daily care for their smaller brothers and sisters, and who are thus cut off by their responsibilities from the pleasures of other children. It is a common sight within the shadow of the tall building that shelters THE R. N.-Y., to see little girls of seven or eight laboriously carrying lusty babies whose weight seems enough to break the thin arms that encircle them; yet watching over their charges with the premature wisdom of experienced matrons. The little mothers cannot go on fresh-air excursions, like the other children, being as much tied down as though they had already assumed the cares of a household. Eleven years ago a kindly woman who became acquainted with some of these small girls with big burdens began to provide excursions and other pleasures for them, and from her benevolence began a movement now formed into the "Little Mothers' Aid Association," in which many influential persons are interested. The Association has bought a house in a crowded part of the city, as headquarters for the children, where instruction and amusement are provided, and where they are sure of aid and comfort in all emergencies. It is not to be called in any sense a charity, for these toiling children surely have a right to the aid and sympathy of those more fortunate, nor are its benefits limited to the narrow confines of a city. In thus strengthening the bodies and training the minds of these toil-laden little mothers, we are developing a better citizenship, whose effects are far-reaching for a better future.

*

IT is believed that the notoriety attending the recent recovery of the long-stolen portrait of the Duchess of Devonshire, by Gainsborough, will bring into vogue again the graceful curving Gainsborough hat, with its wide brim and sweeping plumes. It is very becoming to youthful faces, as, indeed, most fashions are, but it will mean the use of many feathers, instead of flowers. The Nell Gwynn hat, which is a curving cartwheel surmounted by a forest of feathers, has already made its appearance, though it is entirely too heavy for Spring wear, and indications point generally to large and picturesque shapes. They are not always easy to keep in comfortable position. Many women seem unaware that a hat is pinned more firmly when one pin is put in from each side, instead of both passing through the same way. With the pins passing from opposite sides the hat is well braced into a firm position.

*

THE shops are now so full of dainty washing fabrics that it is a little hard to remember that daintiness is not the only thing to be considered in buying the children's Summer frocks. Little folks are hard on their clothes, and it is very unwise to buy materials that must fade or grow sleazy with repeated washings. For constant wear nothing gives more satisfaction than shirting percales; they show very pretty colorings, iron nicely, and wash well to the very last rag. While most ginghams wash well, many of them fade in the sun, and they are not quite so easily ironed as the percales. A little girl's Summer



3741 Girls Guimpe,
6 to 16 years.

wardrobe should always include some dark washing frocks of heavier material, suitable for rainy days or railway journeys. Galatea is admirable for this use, and a sailor suit is the best style for making it. The domestic galatea costs from 12½ to 15 cents a yard ordinarily; imported makes are 25 cents a yard up. Both are very serviceable.

ART is long, life short, judgment difficult, opportunity fleeting. To act is easy; to think is hard; to act according to our thinking is troublesome.—Goethe.

The Rural Patterns.

Guimpes are a necessity with girls' Summer dresses. The model illustrated is available for all suitable materials, lace, tucking, all-overs of all sorts and to any fine fabric which one may prefer. As illustrated, it is of lace and needlework, and shows bishop and dress sleeves, round and square yoke, for all of which the pattern provides. The front and backs are smooth across the shoulders, and drawn down in slight gathers at the waist line. The yoke is applied as indicated, but if a transparent effect is desired, the under material can be cut away on the line of perforations and the edge finished neatly on the under side. The bishop sleeve is cut in one piece and is finished by a frill and band of needlework or lace. The dress sleeve is two-seamed and finished by a frill of the material, lace or embroidery, as preferred. The neck is finished with a standing collar and frill, and the closing is effected invisibly, or with buttons and buttonholes, at the center back. To cut this guimpe for a girl of 12 years of age 1⅝ yard of material 36 inches wide will be required, with ½ yard of all-over lace, embroidery or tucking 18 inches wide for yoke and collar. The pattern No. 3741 is cut in sizes for girls of 6, 8, 10, 12, 14 and 16 years of age; price 10 cents.

3751 Girl's Blouse Dress,
4 to 12 Years.

The simple little frock that can be worn with or without a guimpe makes one of the best possible models both for light wool and washable materials. The pretty model shown is made from mercerized madras in shades of dull blue, and is trimmed with needlework insertion and edging, but all cotton stuffs are suitable, as are cashmere, veiling, albatross and the like. The skirt is straight, finished with a hem at the lower edge, and arranged in gathers at the waist, where it is joined to the belt. The waist is simplicity itself. Both backs and fronts are gathered at the upper and lower edges, the fitted lining being used or not as preferred. Around the Pompadour-shaped neck is a flat, square collar, that is eminently becoming and which, at the same time, can be laundered with ease. The lower edge of the waist is attached to the upper edge of the belt, and the entire gown closes at the center back. The short sleeves are gathered in puffs and finished with straight bands. To cut this frock for a girl of eight years of age 4⅝ yards of material 27 inches wide, 4¼ yards 32 inches wide, or 2⅞ yards 44 inches wide, will be required. The pattern No. 3751 is cut in sizes for girls of 4, 6, 8, 10 and 12 years of age; price 10 cents.

RED LETTER DAYS.—There are days when some especially important event takes place, or when an unusual pleasure is enjoyed. I like to make more than the ordinary record of these red-letter days in my diary, so what more appropriate than that I should use carmine ink for the purpose? Sometimes only one paragraph is written in red, when there is one noteworthy incident in an otherwise uneventful day. In looking over my diary in after years, these red pages and paragraphs will stand out conspicuously, making it easier to find the more important happenings.

S. B. R.

TOO MUCH LEARNING.—It is amusing to hear people, when they are asked their opinion about what studies a boy should pursue, ask first: "What are you going to make of him? What is he going to do for a living?" They seem to think that there would be danger of his knowing too much, unless he was to choose a profession. The time a boy had to give to school might make a difference about what is the most advisable course for him to take, but is not knowledge always desirable to have, whatever a man's occupation? Is a blacksmith a poorer workman because he loves and is familiar with Scott or Shakespeare? AUNT RACHEL.

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Alicia Gale's Final Choice.

"There was a long time that I did not know as I ought to ask you, Alicia." Mark Washburn looked fondly at his sweetheart. "Then I thought that if it was possible that you loved me, we could do the waiting together, and if you didn't—well, I could begin to get used to it. To think that you really do, Alicia! You don't know how hard I'll work. I've planned it all out. You see," he hesitated—"well, there's no use in our beating about the bush. There needn't be any keeping things from each other now. You know what Mother is like just as well as I do. I wouldn't ask you to live in the same house—it wouldn't be right. The other boys have tried it and it hasn't worked, and no wonder when her own daughter can't stand it. My plan is to build another house right near, with a covered passage between, and maybe a telephone. Then I could look after her almost as much as I do now and you wouldn't have to be bothered. The shop being right across the road makes it handy, too. Of course it will take some time, though I have saved up something towards it already, but I am afraid we will have to wait a year or two at least. I'm helping Hugh and he will be through college by that time. Do you think you can wait as long as that?"

"Yes," said Alicia slowly. "Unless—oh, don't look at me that way, Mark! You don't know how horrid I am, but I will tell you. I've thought about it a good deal since I began to think you liked me. You see, living off in a country place like this I never have had a chance to get acquainted with many nice men. To be sure there are the neighbors, and the boys I went to school with. Now I am sure that I like you the best of any of them. You are honest and steady and intelligent; you do your work well, and you are strong and manly. I haven't the least doubt that you are the very best man I know. But I suppose there are lots of other nice men that I don't know, now, and one of them might come along that I liked better than I do you, and then what should I do? Of course I don't mean after we are married, I'm not quite so bad as that, but while we are just engaged."

"If you found a man you liked better," Mark spoke with an effort, "I think I care enough for your happiness to be able to give you up—but I don't know. I hope I won't have to be tried that way."

A year went by, and it was July again.

Mark stood in the doorway of his blacksmith shop. He was looking over across the little lake to Mrs. Mayhew's large house on the rising ground beyond. His face was sad and anxious, and the cause of his trouble was over at that house. It was three weeks since Mrs. Madison Drake and her son Theodore had come there to board. Mrs. Drake had been a school friend of Alicia's mother, and almost at once, upon her arrival, she had sought out the girl and made much of her. Nearly every day the three were together, and lately Mark had, several times, seen the young man rowing Alicia across the lake, that being a nearer way home than to go around by the road. Over and over again the last few weeks Mark had recalled every word of what Alicia had said the day they became engaged, and as he saw how happy she seemed in Drake's company, all hope left him. What chance had he, a country blacksmith with a cantankerous mother, against this handsome, well-bred city man? He saw that the time would come when he must give Alicia up. It took all of his strong self-control to keep him from betraying his feelings to her, but thus far he had acted just as he always had done. He had even shown a friendly interest in the Drakes, and listened attentively to all Alicia had to say about them.

Mark's reverie was interrupted by the arrival of Mrs. Mayhew with one of her horses. While it was being shod she went in and visited Mrs. Washburn. As he worked, Mark's thoughts were still of Alicia. When the shoes were set he led the horse out and harnessed it into the buggy again. He was just going around the other side of the horse to finish the harnessing, when Alicia and Drake went by. For a moment he looked in her face, and then they passed on, and a little later Mrs. Mayhew came out and drove away. When Alicia parted from Drake at her own gate, she stood looking after him. When he turned into the path leading to the lake, Alicia, with a light, quick step went down the road in the direction from which she had just come. When she reached the blacksmith shop she went in, but the place was deserted. "I'll wait for him," she said. She picked up Mark's hammer and rung it on the anvil, listening to the sound. There was a smile on her thoughtful face. She was dressed in white, with blue ribbons at neck and waist, and her figure stood out strikingly against the dark background. Mark coming in paused and looked at her in surprise. She glanced up, and with a little laugh laid aside the hammer.

"I wish you would come over to-night, Mark," she said without looking at him. "There is something I want to say to you."

"I will come," he answered, and stood aside so that her white gown would not brush against him.

There was an awkward constraint between them as they sat in the sitting room that evening. Alicia did not raise her eyes from the floor and there was a pause before she began hesitatingly.

"I don't know how to say what I want to, it is hard to make you understand, but I wish you to know all about it. It is about Theodore Drake." She waited for him to speak, but he said nothing.

"The Drakes have been very kind to me, and I have seen a good deal of them. I got to know Theodore very well, and the more I saw of him the better I liked him. He is really an unusually fine man, kind, thoughtful and cultivated. She hesitated, then went on again, speaking more quickly. "You remember what I told you a long time ago about what I should do if I found a man I liked better than you. Well, the more I saw of Theodore Drake the more I despised myself. I wished at first that they had never come here. Then I thought of you and it did not seem as though I could stand it. I really tried at first not to like him, but he was so nice I could not help it, and after a time I just stopped trying. He liked me, too, though he did not act silly or anything of the kind, and his mother was lovely to me.

"Well, this afternoon I decided I must see you and have a talk with you. Theodore rowed me across the lake, and then he walked up here with me. Just as we got to your shop you stepped out from behind that horse and I looked you right in the face." At the last words Alicia raised her eyes and looked at Mark. With a little cry she started up.

"Oh, Mark! What have I done?" She looked at him in a kind of terror.

He turned away from her. "Go on," he said in a strained voice. "Don't mind me."

She went to him quickly, and laid her arm about his neck. "You don't understand, Mark," she said tremulously. "I was only thinking about my own confession and I thought you would understand from the first. Don't you see? I looked right at you as I went by, and for the first time I saw you two men together. Then I knew in a flash that you are the only man in the world for me."

He turned quickly and looked in her tear-filled eyes, then he understood.

"When are the Drakes going away?" he asked a little later.

"In two days."

"I shall be glad when they are gone."

"But Mark, it would not make any difference if they stayed forever."

"Nevertheless, I am glad they are going. You don't know—but I have been horribly jealous. What are you going to do about him?"

"Nothing," said Alicia demurely. "I told him this afternoon that I am engaged to you."

"You did?"

"Yes. And as he has been such a good friend I told him when we are to be married."

"Alicia!" he cried reproachfully.

"I know, Mark, that it was very improper to tell him before I told you, but I made him promise that he would not speak of it. I will tell you now if you would like to know."

Mark sighed. "I am afraid it will be a year yet. Hugh has needed more money than I expected, and Mother being sick last Winter. I suppose I might borrow—"

"No," said Alicia with spirit. "I'll do a good deal for you, Mark Washburn, but I won't live in a mortgaged house with you."

"That's my feeling, too, Alicia, and so I don't see as there is anything to do but wait."

"Yes, till the fourteenth of next September, my birthday, you know."

"But Alicia, we can't do it—on account of Mother."

Alicia went and stood looking down at him. "Mark," she said earnestly, "I have been thinking lately about a man who is well-to-do and who could give his wife advantages, and whose mother is very fond of me. But Mark, I would rather marry you and help you to give Hugh his education, and help take care of your mother, even if she does not like me. What is more, I cannot wait any longer than I said, and if you are not ready then, I never will forgive you."

SUSAN BROWN ROBBINS.

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MARKETS.

The Week's Quotations.

WHOLESALE PRICES.

NEW YORK, MAY 4, 1901.

GRAIN.—Wheat is 1½ to two cents up from last report. Corn is also active and higher. Trade in oats is heavy.

Wheat, No. 2, hard, N. Y.	82⅝	@	—
No. 1, Northern Duluth, spot.	84⅝	@	—
No. 1, hard Duluth, spot	91⅝	@	—
Corn, No. 2, mixed	53¾	@	—
Oats, No. 2, white, in elevator.	34½	@	—
Rye, No. 2, W'n, c. i. f., Buf	—	@	55
Barley, feeding, c. i. f., Buffalo.	42½	@	45
Malting, new crop	62	@	68

BEANS.

Marrow, choice, per bu	2 45	@	2 50
Marrow, fair to good	2 20	@	2 30
Pea, bags, choice	2 05	@	—
Red kidney, choice	2 05	@	—
White kidney, choice	2 20	@	2 25

FEED.

Spring bran, coarse	18 00	@	19 50
Winter bran	18 00	@	20 00
Red Dog	19 00	@	—
No grade flour		—@	20 00
Linseed meal, ton		—@	26 50
Cottonseed meal, ton	21 60	@	—

HAY AND STRAW.

Hay, No. 1	90	@	92½
No. 2	85	@	87½
No. 3	75	@	80
Clover	67½	@	72½
Clover, mixed	80	@	82½
Straw, rye, long	85	@	90

SEEDS.

Clover, per lb	10¼	@	10¾
Timothy, per lb	4¼	@	5
Red Top, per lb	10½	@	—
Flaxseed, whole, bu	6 50	@	7 00
Millet, per lb	2	@	2⅛
Rape, German, per lb	3¼	@	3½
Sunflower, per lb	2⅜	@	2½

MILK.

New York Exchange price within 26-cent freight zone 2½ cents per quart.

BUTTER is down one cent. There has been a gradual increase in receipts, and both local and out of town trade is fair. Some very good State dairy is arriving.

Creamery, extra, per lb	19	@	—
Firsts	18	@	18¾
Seconds	17	@	17½
Lower grades	15	@	16
State dairy, tubs, fancy	18	@	18½
Tubs, firsts	17	@	17½
Tubs, seconds	16	@	16½
Tubs, thirds	—	@	15
W'n imitation creamery, fancy.	16½	@	17
Firsts	14½	@	15½
Lower grades	13	@	14
W'n factory, large tubs, best..	13	@	—
Fair to good	12¼	@	12¾
Lower grades	11	@	12
Rolls, common to prime	11	@	13
Renovated butter, fancy	16½	@	17
Old creamery, best	14½	@	15
Common to good	12	@	14
Old Western factory	10	@	13

EGGS.—Receipts are lighter, but there is still a surplus of lower grades.

QUOTATIONS AT MARK.

Nearby, State & Pa., fresh-gathered fancy white, per doz	—	@	14½
Nearby, State & Pa., fresh-gathered fancy brown, per doz	—	@	14¼
Nearby, State & Pa., fresh-gathered average prime	13½	@	14
W'n, storage packings, fancy..	13½	@	14
Regular packings, N'n sect'ns.	—	@	13
Reg. packings, S'rly sect'ns..	12½	@	12¾
Reg. packings, under grade..	11½	@	12
Kentucky, best marks	—	@	12½
Southern, fresh-gathered, average best	—	@	12
Poor to fair	11	@	11½
W'n, fresh-gathered, dirties	10	@	11
Checks	9	@	10
Duck eggs, Baltimore, per doz..	—	@	20
Western	14	@	15
Southern	12	@	14

VEGETABLES.

Potatoes, Bermuda, prime, bbl.	7 50	@	9 00
Bermuda, No. 2, per bbl	5 00	@	6 50
Havana, per bbl	5 00	@	7 00
Florida, per bbl	5 00	@	8 00
State & W'n, in bulk, 180 lbs..	1 25	@	1 62
State, per pack	1 30	@	1 50
Sweets, Vineland, per bbl	2 50	@	3 00
Sweets, other Jersey, bbl	2 00	@	2 50
Asparagus, Ch'n, Colossal, doz. bunches	5 00	@	6 00
Ch'n, extra, per doz. bchs	4 00	@	4 50
Ch'n, prime, dozen bchs	3 00	@	3 50
Ch'n, shorts, per doz. bchs	2 50	@	3 25
Norfolk, prime, doz. bchs	2 50	@	4 00
N. C., prime, per doz. bchs	2 50	@	3 50
S'n, culls, dozen bchs	1 75	@	2 25
Beets, Fla., per crate	75	@	1 00
Fla. & Ch'n, per 100 bchs	3 00	@	7 00
Bermuda, per crate	75	@	1 00
Carrots, Bermuda, per crate	50	@	75
Fla. & Ch'n, per 100 bchs	2 00	@	3 00
Cabbages, Ch'n, large, bbl. etc.	3 00	@	—
Ch'n, small, per crate	2 50	@	3 00
Fla., per bbl. crate	2 50	@	3 00
Celery, State, per doz. roots	25	@	1 00
Florida, per case	1 00	@	2 00
Cauliflowers, Fla., per basket	2 00	@	3 00
Eggplants, Fla., per box	2 00	@	3 50
Green peas, Fla., per bskt	1 00	@	1 75
Ch'n & Savannah, per bskt	1 25	@	2 25
Kale, Norfolk, per bbl	50	@	65
Baltimore, per bbl	60	@	65
Lettuce, N. C., per bbl	1 00	@	4 00
N. C., per ½-bbl. basket	50	@	1 50
Norfolk, per basket	50	@	1 00
Onions, Conn. & L. I., wh., bbl.	3 00	@	6 00
Conn. & L. I., red, per bbl	3 00	@	4 50
Conn. & L. I., yellow, per bbl.	3 00	@	4 50
Bermuda, per crate	1 90	@	2 00
Egyptian, per bag	2 75	@	—
Okra, Havana, per carrier	1 00	@	1 50
Peppers, Fla., per carrier	1 25	@	2 00
Romaine, Bermuda, per crate	50	@	75
Fla. & Ch'n, per bskt	1 00	@	1 50
Radishes, Norfolk, per bskt	75	@	1 00
Squash, Hubbard, old, bbl	1 50	@	2 00
Marrow, old, per bbl	1 00	@	1 25
Fla., new, per crate	1 00	@	2 00
String beans, Fla., wax, crate.	2 00	@	3 50
Fla., green, per crate	2 00	@	3 25
Fla., green, per basket	2 00	@	3 50
Spinach, Norfolk, per bbl	50	@	1 00
Baltimore, per bbl	75	@	1 00
Turnips, Canada, Russia, bbl	80	@	90
Tomatoes, Fla., fancy, carrier.	2 75	@	3 00
Fla., poor to prime	1 25	@	2 50

LIVE POULTRY.—There is only a moderate supply of Spring chickens and these are inferior. Heavy fowls and ducks and geese are very weak.

Spring chickens, per pair	50	@	80
Fowls, per lb	—	@	11½
Roosters, per lb	—	@	7½
Turkeys, per lb	8	@	9
Ducks, avge. W'n, per pair	70	@	80
Average Southern, per pair	50	@	55
Geese, avge. W'n, per pair	90	@	1 00
Average Southern, per pair	70	@	75
Pigeons, per pair	25	@	35

DRESSED POULTRY.—The demand for broilers is good. The market is cleaning up in fair shape all around and is generally firm.

FRESH PACKED—ICED.

Turkeys, W'n, hens, small	10½	@	—
Western, toms	—	@	8
Broilers, Phila., under 2 lbs. to paire, per lb	35	@	37
Phila., 2½@3 lbs. to pair, lb	30	@	35
Phila., 3½@4 lbs. to pair, lb	25	@	28
Chickens, Phila., Winter, 5@6 lbs. to pair per lb	22	@	25
Fowls, W'n, dry-picked, prime.	—	@	10½
Western, scalded, prime	10	@	10½
Western, fair to good	8½	@	9½
Southwestern, prime	10	@	10½
Old roosters, per lb	6½	@	7
Ducklings, L. I. and other nearby, per lb	—	@	18
Squabs, choice, large, dark	2 50	@	—
Mixed, per doz	2 00	@	2 25
Dark, per doz	—	@	1 50
Culls, per doz	50	@	1 00

FROZEN.

Turkeys, young hens, No. 1	11	@	—
Mixed young hens and toms, No. 1	10½	@	11
Young toms, No. 1	10	@	10½
No. 2	7	@	9
Broilers, dry-picked, fancy	17	@	19
Scalded, fancy	13	@	15
Chickens, fancy, soft-meated..	—	@	12
Average, No. 1	—	@	10
No. 2	7	@	9
Fowls, dry-picked, No. 1	9½	@	—
Capons, fancy, large	15	@	16
Medium sizes	13	@	14
Ducks, fancy	12	@	12½
Geese, fancy	9½	@	10

COUNTRY-DRESSED MEATS.—In both lambs and calves of anything but extra quality these are dull and weak.

Calves, veal, prime, per lb	—	@	7½
Fair to good, per lb	6½	@	7
Common to medium, per lb	5	@	6
"Spring" lambs, fancy, each	—	@	5 00
Poor to prime	2 00	@	4 00

HOTHOUSE PRODUCTS.

Lettuce, Eastern, per case	2 00	@	2 50
Cucumbers, good to choice, doz.	1 00	@	1 12
No. 2, per doz	60	@	75
Tomatoes, fair to prime, lb	10	@	20
Radishes, prime, per 100 bchs.	1 00	@	1 50
Mushrooms, good to prime	25	@	40

DRIED FRUIT.

Apples, evaporated, fancy, lb	6	@	6½
Evaporated, choice, per lb	5	@	5½
Evaporated, prime, per lb	4½	@	4⅝
Evaporated, poor to good, lb.	3	@	4¼
Sun-dried, S'n, sliced, per lb.	2½	@	3½
Sun-dried, State and Western, qrs., per lb	2½	@	3½
Raspberries, evaporated, 1900, lb.	19	@	—
Blackberries, 1900, per lb	5½	@	6
Cherries, 1900, per lb	12	@	14

FRESH FRUITS.—Apples are selling well. Southern strawberry sales are quite satisfactory. A few from North Carolina are arriving.

Apples, Spitzenberg, per bbl	3 00	@	4 50
Spy, State, per bbl	3 00	@	4 00
Ben Davis, per bbl	3 00	@	4 00
Baldwin, fancy, per d.-h. bbl.	3 50	@	3 75
Baldwin, fair to good	3 00	@	3 25
Russet, com. to choice, bbl	2 00	@	3 50
Cranberries, Cape Cod good to choice, per bbl	7 50	@	9 00
Cape Cod, com. to fair, bbl	6 00	@	7 00
Jersey, poor to prime, p. crate.	75	@	1 75
Strawberries, Fla., prime to fancy, per qt	25	@	32
Fla., poor to fair lots	15	@	22
Ch'n, good to choice, per qt	30	@	35
N. C., good to prime	25	@	35

BUSINESS BITS.

PREPARE now for those berries which will be ready for market in a few weeks. If you have not yet purchased baskets, write South Side Mfg. Co., Petersburg, Va., or Webster Basket Co., Webster, N. Y. Both firms are reliable, and will send you just what they agree.

FRUIT growers have realized at last that they must spray thoroughly every year in order to insure a crop. They can't afford to take chances on the occasional off years, when a crop can be grown without spraying. Spray every year is a good motto. Ross Bros., Worcester, Mass., offer a practical outfit at a reasonable price.

GRANT FERRIS CO., Troy, N. Y., make a specialty of straight-straw thrashing machines. They guarantee the machines to thrash wheat and rye perfectly clean without breaking the straw, and then bind the straw in bundles. This machine can be changed to an oat thrasher in a few minutes, and takes less floor space than other outfits. Write for Catalogue B.; address as above.

IN the past several years certain manufacturers and others, with that knowledge and unbounded faith born of experience, have been sending out all sorts of things to the farmer to be first tried by him and paid for only after he is convinced of their merit and satisfied with the bargain. So far as we know, however, the Kalamazoo Carriage & Harness Co., of Kalamazoo, Mich., is the first firm in the United States offering to send out carriages, buggies, wagons, harness, etc., on this plan. This appeals to us as being about as fair and open a method of doing business as it is possible to adopt. We have used a wagon, made by this firm, and have found it satisfactory and first class in every particular. Address as above for free catalogue.

HARD-COAL ashes is the thing to dust the roosting places to keep mites off the hens, and is just as good to keep lice off cattle.

Elkhorn, Wis. S. D. H.

WONDERFUL HENS.—On page 274 a correspondent wants a wonderful bird. Allow me to suggest that the Rhode Island Red is both useful and good to look at, good layer, and will fill the bill for an all-round fowl. The Reds make great pets, and if the old couple should choose them I feel confident they will not regret it.

Standish, Mich. D. W. R.

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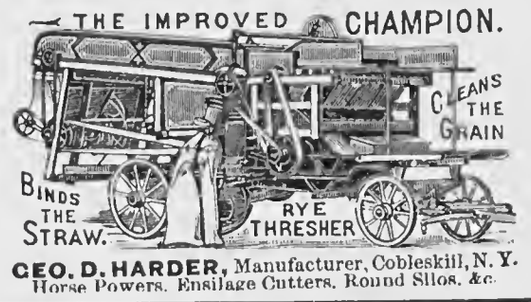
Situated in the Hackensack valley, 18 miles from New York, one mile west of the station, River Edge, on the New Jersey and New York Railroad. House in excellent order with broad piazzas. Good stable and carriage room. The grounds, consisting of a little over two acres, are beautifully graded and planted with rare coniferous and deciduous trees and shrubs. A never-failing lake of pure spring water adds to the beauty of the grounds.

MRS. ELBERT S. CARMAN, of No. 5 West 82nd Street, New York, will answer questions and show views of the place



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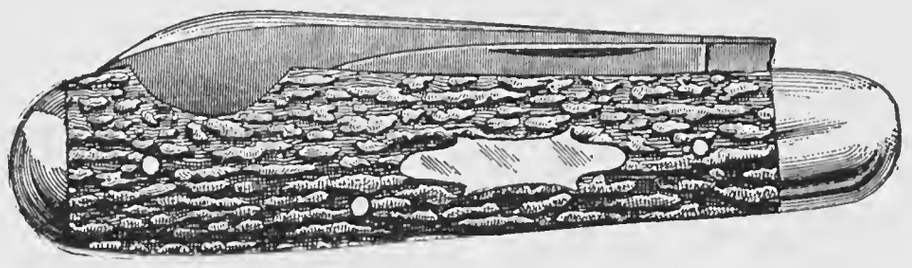

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THE RURAL NEW-YORKER, New York.

Market Briefs.

PICKED UP HERE AND THERE.

APPLE VS. ORANGE.—From the opinions expressed by many people we judge that not more than two out of 50 really prefer an orange to a prime apple, and it is doubtful whether anyone will claim that the large, smooth, perfectly-ripened Northern Spy is equaled by any representative of the orange tribe that reaches this market. It is true that there are some oranges of extra quality which are not good shippers and are unknown to consumers in the New York market. Like certain varieties of choice Florida pineapples, they are eaten where grown, as they will not stand transportation.

COMPARATIVE PRICES.—The following is a common scale of prices of apples to small buyers: Two for one cent, one cent each, three for five cents, two for five cents, three for 10 cents, and five cents each. The two-for-a-cent grade are very small or unsound. The bulk of the oranges retailed on the streets go at two or three for five cents. Occasionally small ones are sold for one cent, but not many. The large ones go for the same price as the largest apples, five cents each. There are great quantities of inferior and mixed apples with comparatively few prime ones, while just the opposite is true of the oranges, the small and mixed lots being few.

REFORM AND ORGANIZATION.—With the present methods of growing and marketing apples it is safe to say that a bushel, or 100 bushels, of the grades retailing at five cents or two for five cannot be placed on the New York market so cheaply as the same quantity of oranges retailing at these figures, on which the cost of 3,000 miles of transportation has been paid. There are plenty of so-called apples which manage to come to maturity after a hard season's fight with soil starvation, insect pests and fungus diseases, and our markets are flooded with these scrubs, which are practically the "razorbacks" of the apple tribe. The western hog man raises corn-fed Poland Chinas because they give him more profit than "razorbacks," and the same principle should hold with five-cent apples as compared with scrubs. There are two things in particular which in part account for the place the California orange holds in eastern markets: Thorough organization among growers, and intelligent and systematic marketing. The orange men have had many difficulties, and their troubles are not all over yet by any means, but the magnitude of the trade they have worked up shows what may be done by keeping at it. Of course, the conditions in orange-growing districts are entirely different from those in the apple sections, where diversified farming is carried on to such an extent that the fruit business is secondary, and coöperation in the same lines as where hundreds of adjoining acres are producing the same kind of fruit, is impossible. Yet something of this sort must be done before apple growers can make much impression on the market with large quantities of uniformly fine fruit. But is there not an overproduction of apples? Are not the markets so crowded now that apples frequently sell for scarcely enough to pay for picking and shipping? Not of the type mentioned. Suppose a man should come here with a sample of Northern Spy, or some equally good variety, large, smooth and high-colored, and say that he had 500 bushels of just such fruit, which he would wrap, put up in suitable bushel boxes and label something after the style of California oranges; he would make a sensation, and have no trouble in interesting fruit dealers who cater to the better class of trade. Now and then some one makes a spasmodic effort, but he either does not sell to the right parties, or expects too much on the start. One grower trying to do this alone has a hard row to hoe, but suppose the majority of the large apple men in New York State, for instance, who are willing to take the trouble to raise good fruit and spend time and thought in marketing it, got together and hung together for 10 years, working with an aim to produce the best article and see that it reaches the consumers who want it, there would be no doubt about the future of their business. People here want good apples, but cannot get them. There would be plenty of opposition from retailers who are not at all anxious to handle apples in bushel packages that could be sold unbroken, on the strength of a label, to the consumer. They would much rather retail in one or two-quart lots at double the profit. Many commission merchants also would not encourage this, but there are some of the better class who would be glad to work with the grower to bring about a reform in the apple business. It is a matter of producing what is wanted and getting it to the people who want it. Unless the latter is done, there is but little use in doing the former. Here is where a mistake is being made right along. Some day apple men are going to wake up to the possibilities before them in the shape of hundreds of thousands of people in the great cities of the East who are hungry for good apples. W. W. H.

PENNSYLVANIA FRUIT PROSPECTS.

Small fruit came over Winter in a fine condition. Spraying is now in order. But very little is done throughout here, about 10 per cent only. We have no large growers of apples and pears. We have some who grow strawberries, peaches, dewberries and raspberries, but these are beginners only. J. M. G.

Liekdale.

The prospects for small fruits in this section are very promising. The trees stood the Winter well and are just beginning to bud. Peaches, pears and plums promise a good crop. Spraying is done more and more every year. Grain fields are in a very good condition, and promise a good yield. W. S. U.

Myerstown.

Small fruit came through in good condition; present outlook for trees is good. I only know of one besides myself who sprays at all. I spray just as soon as buds start and then just after blossoms fall, and find by so doing that I have fruit on trees 15 years old that have never borne good fruit until they were sprayed with Bordeaux Mixture. I am of the opinion that it is the only way to get good fruit.

North Orwell. J. P. S.

All fruit trees in our section have come through the Winter in good condition, and are starting out this Spring very nicely. One unusual feature is that the peach trees are set full of blossom buds and bid fair to bloom very fully. Peaches are very unreliable with us, and we get them only once in three or four years. Cherry and pear trees are set well with blossom buds and will bloom fully. The plum trees are a little later, and have not made much advancement yet. The apple trees are in good healthy condition. Berries and currants did not winterkill at all, but strawberries got such a poor start last Fall, owing to the very dry weather and the work of the White grub, that they are not in good condition to produce much this year. So far as I know none of our fruit men in this section sprays regularly. Some spray their small fruits, but the apples are neglected. I wish that the attention of farmers could be called to the fact that cherry and plum trees affected with black knot should be destroyed; I see many trees left after they are killed, which should be cut and burned.

Sugar Grove. R. J. W.

Weight of Grade Lambs.

We have mentioned the grade Tunis lambs which Clark Allis, of Orleans Co., N. Y., has been selling. We are now able to give the weights of some of these lambs as compared with those of other breeds.

"I send you the weights of seven Tunis grades and one Shropshire grade. The Shropshire grade was shrunk; he had been away from his mother two or three days, but had what grain he would eat, which was not much, and the Tunis were taken off full feed the morning they were killed. April 10, one Shropshire grade, wether, live weight, 58 pounds; dressed, 31½; April 10, one Tunis grade, ewe, live weight, 51 pounds; dressed, 29; April 10, one Tunis wether, live, 52 pounds; dressed, 29½; April 10, one Tunis wether, live, 52 pounds; dressed, 30½; April 12, one Tunis grade wether, live weight, 52 pounds; dressed, 29, one Tunis grade wether, live, 55 pounds; dressed, 33½; one grade ewe, live, 52 pounds; dressed, 30; one wether, live, 52 pounds; dressed, 31. This is about the way they run all through. Have dressed some at 47 to 48 pounds, live, and had them weigh 28 dressed. All of the lambs were full dressed; hide and head off, liver and lungs out. I killed a purebred Merino last week that weighed 53 pounds live and 28 dressed; his hide weighed eight pounds, also a Shropshire grade ewe 48 live, and it only dressed 25 pounds; it was good and fat."

A. H.

A JERSEY GRANGE.—We organized a Grange at this place one year ago, and now have 100 members. We run a co-operative business, and do a large trade. We meet once a week, and have very busy times. Grangers go home loaded with goods. We sell at an advance of five per cent on cost. W. M. D.

Three Bridges, N. J.

PAPER BERRY BASKETS.—For several years I have been making it my business to watch the progress that paper berry-basket manufacturers have been making, and I have yet to find one shipper of berry baskets who is willing to change from the firm, white and clean wooden berry baskets to paper baskets, that are not firm and are easily soiled. The prices of wooden berry baskets are from $2.25 to $2.50 per 1,000 for the very best, while the prices of paper baskets are about the same. They are in the knock-down shape, and it is required to fold them into a basket, the labor being worth fully $1 per 1,000. A paper basket is easily soiled, is not firm, and will not carry berries to market in good condition, while a wood basket is strong and firm, white and clean, and by long experience it is known to fruit shippers that the wooden basket will stand the carrying of berries to the most distant markets.

A. REASH.

FRUIT IN NEW YORK.—Small fruits have wintered well; conditions favorable for good crops. Seventy-five per cent of fruit growers spray 90 per cent acreage. I prefer to apply Bordeaux in early April, as leaf buds open, and just before blossoms open. No steam or gasoline sprayers are used, and only one "geared" machine.

Wayne Co., N. Y. E. W. C.

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Is the sweetest season in human life, as it is in Nature generally. It is the time of promise. As the young girl draws near to that mysterious line "Where womanhood and girlhood meet," her whole destiny is in a measure being determined. How often the sweet young girl, under the influence of the change, withers and droops like some blighted bud. Nature generally needs some little help at this critical period, and this help in its best form is contained in Doctor Pierce's Favorite Prescription. It establishes regularity, and gives the vigor of perfect health to the womanly organs. It contains no alcohol, neither opium, cocaine, nor other narcotic.

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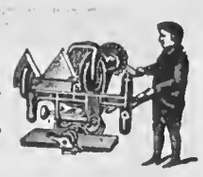

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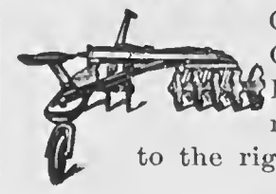

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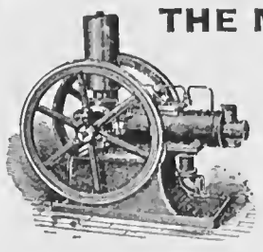

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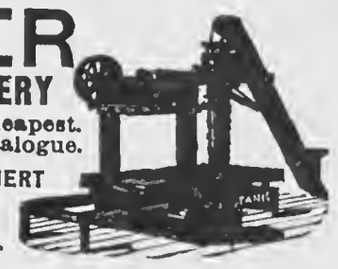

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SOILING CROPS NEEDED.

Dry Weather Ahead.

I'm not a prophet or a son of a prophet, but for about eight years in institute work I have prophesied dry weather for the dairy farmer during four to eight weeks of the Summer, and records show that I have absolutely failed but once in the time mentioned. In varying degrees dry weather comes upon us nearly every year, so much so that short pastures suffer and dry out, providing only a scanty subsistence. I feel confident of my position on this question; it is one of the things I am *sure about*. That in all sections where I have had an opportunity to study, and in northern New York, where I see things every year without color, one of the weakest points in dairy feeding is lack of green, succulent food for July and August. We talk much and write more about balanced rations, and we need it all, but it is something of a conundrum to me how much good a cow will get out of the chemistry of cattle foods when obliged to range over large fields, walking several miles a day in search of food. By the way, New York State has thousands of acres of non-tillable land, which would provide more profit to the owner were it stocked with mutton sheep, and cows kept on fewer acres with less exercise. It may not be wise to adopt a pure soiling system. It is my judgment that no one can better answer this question than each farmer for himself. Price of land, cost of labor, ability of the farmer to *manage* things, are factors, but as to the value of a semi-soiling system I take no middle ground. No matter what may be the price of land or cost of labor, not a farmer keeping cows can afford to do without some kind of supplemental food. You say this is no new thing; why not give us something new; let this old chestnut rest. But do you know that a call for hands up in institutes in sections where cows bring 75 per cent to 100 per cent of the income of the farm, will never exceed 25 per cent, and often not more than five per cent of those present who practice this system? It is coming to be a conundrum to me; farmers who practice it rarely give it up. I have in mind two farms that I have known for many years. One of them produces about twice as much from the dairy as the other. The ability of the cows to produce in both cases is not materially different. In a way both dairies are well fed. The cows freshen in both cases in the Winter and Spring. The difference, however, comes at a vital time, and after shrinkage takes place it has been my experience that it is very expensive to get the flow to increase even a small per cent. The farmer above-mentioned, who gets the smaller yield, does not provide any green forage crop until "sowed corn" is ready, which in our latitude is about September 1. At this time prices for milk products begin to advance, and I have repeatedly queried which farmer was most to be pitied, a man with all his milk in June at the very low price, or one without any when prices are high.

I have seen the milk flow at our factories nearly cut in twain by the heavy shrinkage of the hot, scorching weather of 31 days of July. This nearly always happens when prices are high. We have repeatedly tried to make good a loss of forage crop feed by a more liberal use of concentrates, but in every instance failure was recorded from the financial side of the question. The cow, unlike the horse, must have coarse, bulky food, at least two-thirds of her ration. What is the use of keeping three cows to do the work of two? Formerly our practice had been to commence this supplemental feeding from August 15 to September 1. Now our practice is to feed not later than July 4, and we find most satisfactory results therefrom. From this extra six weeks of feeding we are enabled to produce uniformly 100 pounds of milk a day; more from each 30 cows from July 1 to January 1 than when beginning the late feeding. This 100 pounds of milk has been worth for the period mentioned about $1. We have therefore $1 a day increased income from each 30 cows for six months due to six or seven weeks extra supplemental feeding. We find the $1 a day will nearly pay the whole expense of grain food for the same length of time. Then why not arrange at once to supply this want?

I do not believe yet that we have anything for the more northerly dairy sections as safe and satisfactory as oats and peas. Select some dry ground that is ready to work and sow 1¼ bushel peas plowed under four or five inches. Please do not try to harrow them in. A drill will do fairly good work if we could be assured of reasonably wet weather. I have repeatedly observed that those plowed in would maintain a growth after those covered shallow had quit. Do not hesitate, fearing you may not need the stuff—they make the best of grain and as good milk-producing hay as the average grass with its usual small per cent of clover. Our first sowing has now been in a week. The weather has been cool and wet, and the peas have not grown too much for safe sowing of the oats. I like to have them come up at the same time, if possible. It is a most difficult problem to manage. Sometimes we cannot wait more than four or five days before sowing the oats, from 1½ to two bushels to the acre. If the peas are under four to five inches, one may safely wait until they are sprouted. Of course we must not wait so long that the drilling or harrowing of the oats will disturb the growing peas. I would roll the land after sowing, if on the loamy soils, in order to hasten germination and then if dry weather is probable put the weeder on behind the roller, and compact for the seed and dust mulch for the retention of moisture with the same effort.

The great demand for Canada peas has put the price if one has to buy quite high; for two years I bought for our neighbors, and a few for our own use, 75 bushels of perfect stock at $1.07 delivered, but then, considering their many values—a protein crop for forage, a nitrogen gatherer to some extent, and a pulverizer of no mean value—we can well afford to pay the price. My father used to say: "It would pay to sow peas to fine the soil." They had the same effect then as now, only our scientific friends have in more recent years found out the why of it. In fact, the great development of agricultural science during the two decades just past has been rather the finding out the why of things than the discovery altogether of new things.

One of the men has just come in, saying: "The ground is ready, and you better come and sow the oats on the pea ground." As he is one of those men who means what he says I am going to stop writing and do something that I am *sure* will do some good to the cows when the dry weather comes on. Don't fail, dairymen, to sow this all-important crop if you have not already done so.

H. E. COOK.

SMALL COW.—I saw in THE R. N.-Y. an inquiry for a small cow. I have one four years old and she is not as large as a medium yearling. She was very small when dropped, on the first day of April, and we called her our April fool. C. MCG.

Amsterdam, N. Y.

WHY BUTTER MAY NOT PLEASE.

That butter fails to please the consumer may not always be the fault of the maker or due to the over-fastidiousness of the buyer. Two instances have recently served as an illustration. The express wagon at a rural village in a dairy region drove up to the railway station from the village office and stood waiting for the arrival of the train. On it were two or three tubs of butter, presumably consigned to private consumers. In close contact with them, doubtless consigned to some dealer in hides, was a bundle of skunk skins. If the two commodities continued their journey together, as they probably did for a time at least, the warmer and more confined air of the express car would aid in diffusing the aroma more effectively, and perhaps in adding to the satisfaction of the consumer. A man purchasing butter in considerable quantities from a distant dairyman complained that the butter was not clean; that it was even filthy, and that a layer around the outside of several tubs had to be cut off and thrown away, because covered with dirt and small sticks. The dairyman was nonplused. He knew that each tub was carefully washed and soaked before being filled, that no other person had had the handling of it. He acknowledged that in the extreme drought of the past season it was at one time necessary to draw water, which being low might have left a slight sediment, but the quantity of dirt found ruled out this explanation. The purchaser finally offered the most tangible explanation, which was that the tubs, which had been sent by freight in cold weather, had been so roughly handled that the covers were loosened and the butter rolled out upon the floor of the car or freighthouse. Neither incident is particularly encouraging to the dairyman who must depend upon a distant consumer. F. W. C.

SHOEING GEESE.—The following is taken from Notes and Queries: Three million geese are brought regularly to the October market in Warsaw, Poland. Often coming from remote provinces, many of these geese have to travel over long distances upon roads which would wear out their feet if they were not "shod." For this purpose they are driven through tar poured over the ground, and then through sand. After the operation has been repeated several times the feet of the geese become covered with a hard crust.

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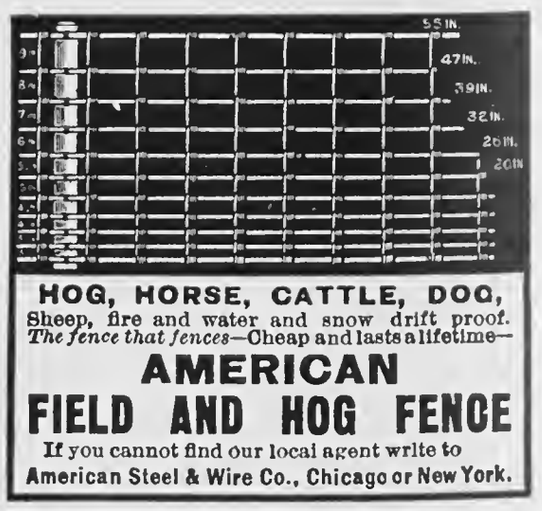

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Ailing Animals.

ANSWERS BY DR. F. L. KILBORNE.

Suppuration in Cow's Udder.

What should I do for a cow with gathering in udder; pus runs from three of her teats? The other one is gathered and I can't get it open. She will be fresh in a few weeks. W. W. B.

Reno, Mo.

Your description indicates extensive suppuration in the udder, probably due to lack of proper attention in drying off. If such is the case she will be worth little or nothing as a milker, and you will do well to beef her after calving. The suppurating cavities should be irrigated at least once daily with a two-ounce solution of carbolic acid, or other antiseptic, to check the suppuration and favor healing.

Heifer Calf With Large Udder.

I have a heifer calf dropped January 17 which has an udder as large as a two-year-old when three months with calf. It seems to be increasing. What is the reason? A. W. B.

Groton, Mass.

There may be some disease of the udder, the nature of which can be determined only by a personal examination. If there is no disease, it is simply a case of unusual development of the udder; but why this should occur in this case I cannot answer any more satisfactorily than I could why one cow has larger easy milking teats, while another's are small and hard-milking.

Cough and Thick Wind in a Horse.

I have a young horse that had distemper a year ago, and was very sick. Since then she has coughed, and breathes badly when drawing hard or trotting. It is not what is called wh'stling, but thick breathing. Can you tell me what to do for her?

Ludlow, Vt. H. L. P.

I would advise taking the horse to a competent veterinarian for examination, to ascertain the nature of the trouble. If unable to do so, try a course of arsenic. Give one tablespoonful Fowler's solution of arsenic, in the feed once daily for three or four days, after which increase the dose to two tablespoonfuls and continue for a month or six weeks. Blister the throat from ear to ear with ammonia liniment, and repeat after three or four weeks.

Disinfectants and Their Use.

A pet cat had a bad sore, which broke, the pus from it falling about the house and woodshed. What disinfectant can be used to destroy danger of infection? What disinfectants can be used to destroy the bacilli of glanders and tuberculosis in animals? How long does danger of infection last, if horses or cattle distribute bacilli by coughing or sneezing on the passer-by?

So. Royalston, Mass. A. W. L.

For disinfecting your clothes when soiled with pus or nasal discharges, boiling water is one of the best. Allowing the clothes to remain in the boiling water for five to 10 minutes will effectually kill all ordinary disease germs. If the clothes cannot be boiled, sponge off thoroughly with a five-per cent solution of carbolic acid, after which hang in the sun to dry. For your hands and face a 1-to-1,000 solution of corrosive sublimate in water may be used. The corrosive sublimate can be obtained of your druggist in compressed tablets that will readily enable you to make a solution of the desired strength. A corrosive sublimate soap can also be obtained, that is made especially for this purpose. For hitching posts, stalls or other stable or out-of-door woodwork a solution of a half-pint of strong commercial sulphuric acid in each two gallons of water, and applied with a brush or broom, is one of the cheapest and most effective. Care must be taken not to get the acid or solution on the person and clothes. In the house scrub the floor or other woodwork with boiling water, to which chloride of lime can be added to advantage. In all these cases the disinfected articles are safe as soon as dry. Other modern disinfectants, such as sanitas, creolin, zenoleum, chloro-naptholeum, etc., can be obtained of your druggist with directions for their use in each case; but they possess no special advantages except in special cases, or in the hands of the practitioner.

PIG POINTS.—I have seen in my own herd and others whole litters that I would not sell for breeding purposes, but this is very seldom, and I have had litters of 10 of which everyone was fit for shipping. Pigs of small litters mature earlier, but I prefer a boar pig for herd leader out of a large litter. The best and most prolific sow I ever had in my herd was out of a litter of two pigs. H. A. YOST.

Camden, O.

A PLEA FOR RED POLLED CATTLE.

In THE R. N.-Y. of March 9, page 176, I find a plea for Holstein cattle by W. M. Benninger, and an article by G. G. Gibbs, on page 175, favoring the Dutch Belted cattle. Another, Edwin Hoyt, favors the native polled cattle, and last, but not least, the Hope Farm man favors the woman, Bud, Scions, etc., and perhaps the Jersey breed of cattle. Many cattlemen and some of our agricultural papers claim that a farmer should select cattle either for beef or the dairy, if he wish to succeed, or derive the greatest profit from the money invested. They may be right, but I would ask them, are there not horses, sheep, chickens, etc., classed as general-purpose kinds, that give the best of satisfaction and a good profit? Then why not a general-purpose breed of cattle? I believe the Red Polled cattle are such, and that the average farmer will succeed with them where he would fail with some or any of the special-purpose breeds. The Red Polled cattle are medium to large in size, compact, very hardy, good milkers, and their milk is of good quality; they are very gentle, uniform in color, and when crossed with other breeds about 75 per cent will show red color, and about 90 per cent will be hornless. With me the grade cows have been very good milkers and of good size.

About 14 or 15 years ago (when I began looking up their peculiarities) there were but about 800 of them in the United States, bulls, cows, heifers and calves, registered or eligible to registry, and I regret very much that I did not buy a pair of them at that time. I bought a registered bull in March, 1891, and was so pleased with his get that in May, 1895, I bought another bull and a registered cow, Ruby Twin. The cow was due to drop calf in about a month, and she was about 5½ years old at that time. She has given birth to seven calves since then (one at a time), four heifers and three bulls; has not been dry more than three to eight weeks any year. She has given 10,239 pounds of milk in a year, and when the six years are up (June 1, 1901) no doubt will have given over 60,000 pounds. The average test of her milk is about 5.2 per cent butter fat. Some may call her a freak or wonder, but we have a heifer that dropped her first calf when she was about 29 months old, that gave over 5,500 pounds of milk the first year; average test about 4.6 per cent fat. There is a herd of Red Polled cows (mostly young) owned near here, 15 or more in number, that average over 5,000 pounds of milk per year; milk that tests over four per cent butter fat. There are many good Red Polled cows now in Ohio, Illinois, Iowa, Wisconsin and other States, and many in England that would make about as good a showing at the pail as any of the special dairy breeds, and a much better showing for beef. For their beef qualities I will refer you to an article in the Breeder's Gazette of April 10, page 672, written by S. McKelvie, Clay Co., Neb., where he says that he just sold a Red Polled bull 12 months and 14 days old that weighed 1,275 pounds. S. S. C.

Waupaca Co., Wis.

A Guernsey's "Lost Pedigree."

On page 257 of THE R. N.-Y., April 6, you refer to a grand representative of the Guernsey breed, and give her illustration under the heading of a "Lost-Pedigree Guernsey," and state it would be interesting to know how the pedigree of so nice an animal was lost. I am glad to tell you, because it is an object lesson to all those who handle improved stock. The animal was raised by a man who had as a foundation some purebred registered Guernseys. While he liked his cattle he was interested in the financial side of his herd and thought that it was a needless expense to pay the small fee required for recording the animals. Consequently he made no record of the births and parentage, and the result was that after a few years he was unable to place his animals, and the consequence is a loss of many times more than the registry fee in the value of the cattle. In this one instance there would undoubtedly be paid enough to cover the entry fees of his entire herd for a number of years if the ancestry of this animal could be traced. It should be a warning to all persons who handle cattle, especially those who are handling purebred animals. The importance of registration should not be overlooked. While the mere fact of registration cannot add any stated quarts of milk or pounds of butter to the yield of the animal, it is a guarantee of the ancestry, and an index by which the desirability of the parentage can be determined. In this day of enlightened dairy farming no herd of grades or purebreds could be managed without a proper set of records, for that is the only means of determining the profitable and unprofitable animals of a herd, as well as being a breeding record. WM. H. CALDWELL.

Peterboro, N. H.

SOME CONNECTICUT HENS.—The following figures will show what our hens have done during the year 1900. We commenced with a flock of about 150. At the beginning of October 71 of this number were sold to the butcher; we keep no hens of more than two years old. The flock is a mixture of four or five different breeds, something like Hope Farm hens. Their eggs are sold every week to a grocer in Derby at two cents above market price. Every egg is warranted to be fresh, and for more than two years not a bad egg has been sold: January, 145 dozen; February, 134 dozen; March, 185 dozen; April, 220 dozen; May, 280 dozen; June, 163 dozen; July, 105 dozen; August, 99 dozen; September, 45 dozen; October, 47 dozen; November, 25 dozen; December, 76 dozen. Total, 1,334 dozen. These are exclusive of eggs used in family or in sitting, but merely an account of what was sold in market. The statement is made not to boast, but to find out whether I am keeping along with the procession.

Connecticut. L. D. C.

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As a sound horse is always salable, Lumps, Blemishes, Bunches and Lameness cut the price in two. Almost any kind of horse may be made sound by the use of

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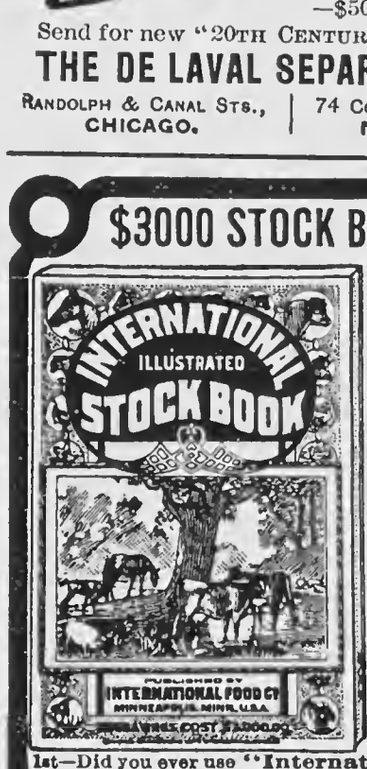

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Keep singing as you go,
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HUSBAND: "I wonder what we shall wear in heaven." Wife: "Well, if you get there, John, I imagine most of us will wear surprised looks."—Smart Set.

THE COD: "I see that J. P. Morgan is going to organize a fish trust." The Salmon: "Great Neptune! I hope he doesn't forget to water the stock."—Puck.

EDITOR: "Here's a line in your poem about the 'flowerets shooting into the air.' Flowers do not shoot. They grow." Poet: "But, sir, they have pistils."—Melbourne Leader.

"PA," said little Willie Hornblower, "what is meant by a 'comatose state?'" "Well, my son," replied the prominent Chicagoan, "that adjective applies to any State outside of Illinois."—Philadelphia Press.

"WHAT do you think of the dessert, dear?" said the young wife. "I made it out of Mrs. Shouter's cook-book." "Oh, that accounts for it. I suppose it's the leather binding that makes it so tough."—Philadelphia Press.

"YOU haven't explained how you came to have Mr. Smith's chickens in your possession," said the judge. "I'm trying to think, yer Honor," replied the accused; "give me time." "Very well," replied the judge blandly, "six months."—Cincinnati Enquirer.

MAMMA: "Tommy! Tommy! you're doing the very thing I told you not to. Now, don't you let me speak to you again." Tommy: "Gee whizz! Ma; if Pa can't keep you from talkin' when you once get started, how d'you expect me to?"—Catholic Standard and Times.

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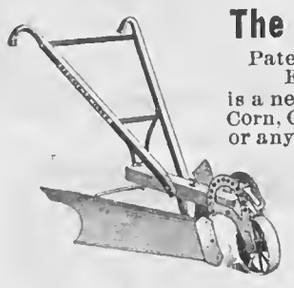
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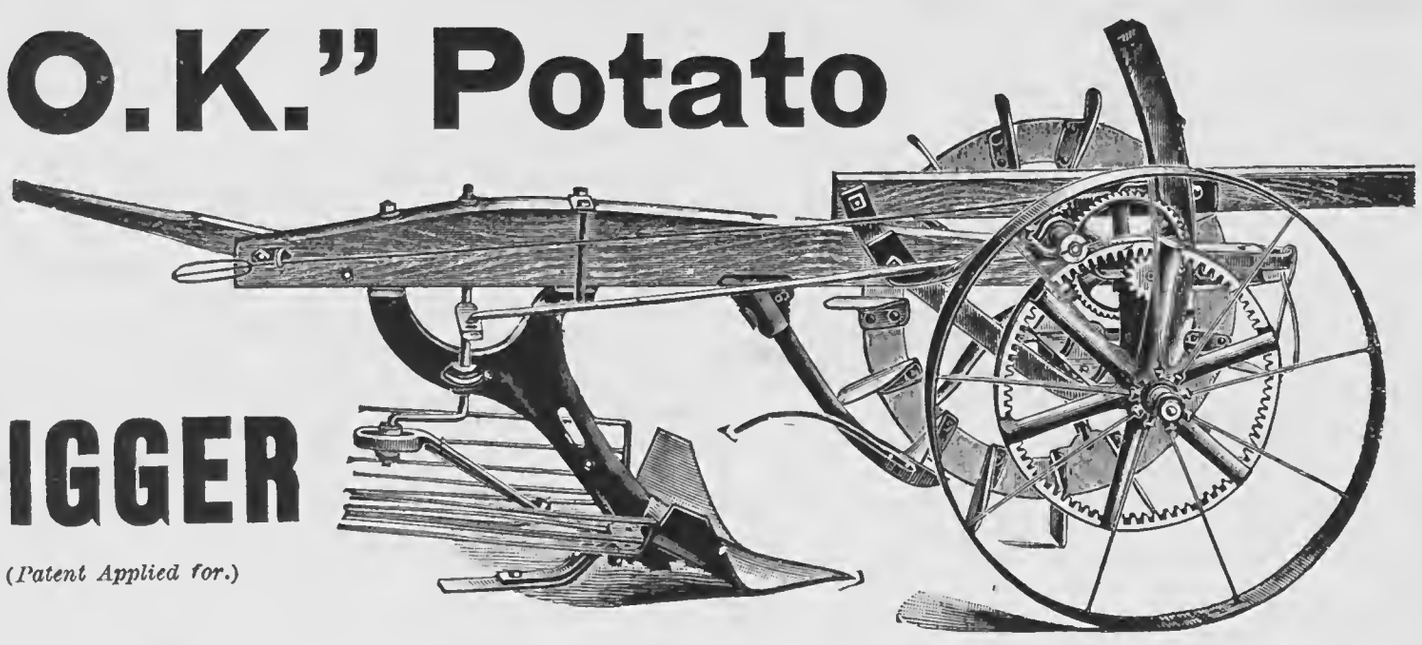
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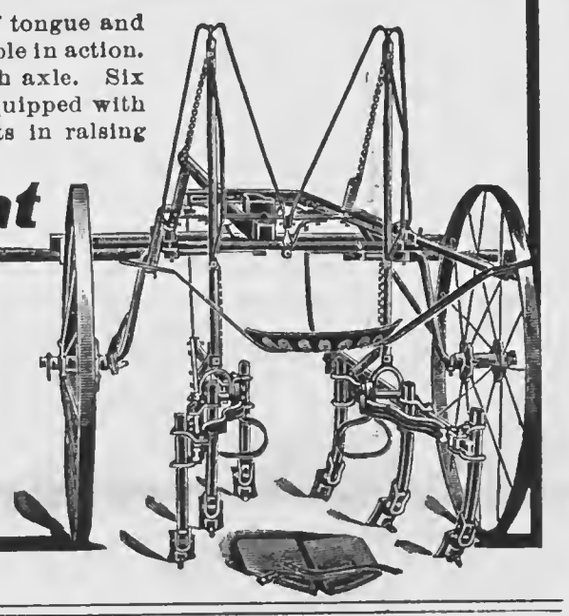

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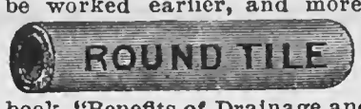

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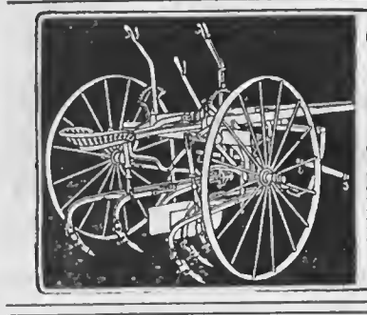
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MAY 18 1901

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2677. NEW YORK, MAY 18, 1901. $1 PER YEAR.

AN OLD ILLINOIS ORCHARD.

WHAT SPRAYING AND CULTIVATION DID.

Some Reason for Failure.

TREES ON TIMBER LAND.—The oldest apple trees in this orchard were planted about 35 years ago. Timber land was selected as, in those early days, it was supposed to be best for all kinds of fruit trees; but later experience has demonstrated the fact that just as good orchards can be grown on prairie lands, and the trees will not be so liable to the root rot. At the same time these old apple trees were set, there were also planted pear, peach and cherry orchards. The pear orchard consisted of 500 trees of the different varieties recommended for commercial use, and according to the teachings and practices of those days was immediately seeded down as a preventive of the blight. But that dread disease seemed to have a firm hold of the trees from the start, and in less than five years there was not a pear tree left that was worth saving; they were cleared out, and apple trees planted instead. The peach orchard consisted of 1,500 trees and the cherry orchard of 500. They were both thoroughly cultivated for several years, and then they were seeded down to Timothy. For a few years after seeding they continued to be profitable; some seasons turning off from one to two tons to the acre of hay, and also a fair crop of fruit. But the trees gradually ceased to bear, and died out, until in 1885 the few remaining peach trees were grubbed out and replaced by apple trees, and two years later the cherry orchard suffered the same fate. In replacing the cherry orchard a few old snags were left, where they did not interfere with the replanting of the apple trees, thinking that they might bear a few cherries for home use the following Spring; but much to the owner's surprise they have continued to live and bear good crops until the growth of the apple trees has forced their removal. A few are still living, and although they are nothing but mere outside shells or sprouts from the old stumps they have never missed bearing a good crop of fruit from that season to the present, and force the conviction that, had they been cultivated and sprayed from the start, the old cherry orchard would have been living and thriving to-day.

CROPPING THE ORCHARD.—The old original apple orchard, when first set out, was planted in small fruits, and this kind of cultivation was continued until the trees got too large, when it was seeded to Timothy. The trees continued to bear good crops for a few years after the orchard was seeded, but the fruit gradually got smaller and more worthless, until the owner concluded that they had passed their usefulness, and determined to grub them out. But it was discovered that the removal of an old, solid, well-rooted apple stump was an entirely different undertaking from the removal of those old peach and cherry stumps. It proved a slow and costly job, and not only that, but the young tree planted in its place would not start off and grow as it ought to. After spending considerable time and money in various projects it was learned that by taking a common 1½ or two-inch auger and welding a piece of iron on to the handle so as to make the whole thing about four feet long, then by boring under the stump and inserting a half-pound stick of dynamite, with about 18 inches to two feet of fuse, the whole thing could be lifted, or loosened, so that a very little extra work would remove the stump. Not only that, but it made a hole that it took a half load of fresh earth to fill up, and the young tree replanted in that place would commence and grow from the start. This proved that there need be no fear of replanting an old orchard with young trees, if dynamite were used to remove the old stumps; provided that the young trees were fed and cultivated as they ought to be. The dynamite should be 60 per cent instead of 40 per cent—that commonly used.

REVIVING OLD TREES.—In removing the unprofitable trees in one part of the old orchard it left three rows of old Winesaps in the center of a block of young trees, so that it was almost impossible to cultivate the young trees without including the old ones. It almost seemed a waste of time to leave these old trees, for they had borne no apples for six or eight years, and what little foliage they put out every Spring was small, and covered with a sooty-looking substance. Most of the trees had one or more limbs dead clear back to the main trunk, and a few were more than half gone in that way, but Spring was on us, work crowding, and their removal was deferred until we had more time. But the next Spring they came out with such a healthy set of foliage that their time limit was extended; the following season good foliage and a crop of apples, but too small for market; then two years that the crop had to be thinned in order to keep the trees from overbearing.

AZALEA AMŒNA; FLOWERS ROSE-PURPLE. FIG. 140.

SEE RURALISMS, PAGE 358.

RESULTS OF CULTIVATION.—Before this time the remainder of the old orchard had passed its prime, had long since ceased to bear any apples fit for market, and the trees would shed their leaves long before the proper time, going through half the season with bare limbs under a scorching sun, but the green hillsides of Kentucky could not show a finer set of Blue grass than grew under those same old trees. But profiting from the lesson learned from the Winesaps, it was determined to give these old trees a dose of the same treatment. The ground had not been plowed for 10 or 12 years, and the roots were only just under the surface, making it almost impossible to plow, and it was some time before a suitable implement could be found to tear up the sod without injuring too many roots. It is generally supposed that the roots of a tree extend outward about as far as the top, but the hired man in this orchard proved that was a wrong theory. Some of the long, slender roots were traced 20 to 25 feet from the main body, and the end was not reached even at that distance. These trees, like the Winesaps, did not show any of the effects of cultivation the first season, except retaining the foliage later, but the second season they came out with a healthy set of foliage that staid on all the season, and a good crop of apples.

SPRAYING EXPERIENCE.—This orchard has been sprayed for a number of years, but with such varying success at first that the owner was almost discouraged, and thought he would have to give it up. Commencing with Paris-green and water simply as an insecticide, he had gradually drifted into the use of the more complicated Bordeaux and Paris-green mixture used both at the same time as an insecticide and fungicide, for it seemed a waste of time to go through all the motions for only half the work. If you are spraying for the Apple worm why not add the Bordeaux Mixture and spray for the scab at the same time? The spraying of this orchard has had for the owner all the fascination of the game to the young gambler. The successes, to the close observer, have been just enough to show that if we only knew how and when and where to use the spray we would be masters of the situation; the outsiders have seen nothing but the failures. For several years the Early Harvest apples in this orchard had been so scabby that they did not pay the expenses of shipping; but the first season that they were sprayed with Bordeaux Mixture they were as smooth as though they had been polished. For shipment they were sorted into two grades, size being the only difference, leaving five barrels of very small but perfect apples. More for curiosity than any thought of gain the five barrels were shipped along with the others, but branded No. 3. The commission man remarked when he made his returns, that "By keeping back the small apples until he closed out the others, they sold for almost as much as the larger sizes—they were so perfect." Previous to the year 1896 the spraying of this orchard had not been very systematic as to time and number of sprayings; some years it had been sprayed just as the blossoms fell, sometimes not until the apples had formed, and then other times not until the fruit had reached considerable size, but the season of 1896 it was determined to give it a thorough spraying just as the "books" called for. A tank holding 300 gallons was made at considerable expense, and the orchard was given its first spraying before the blossoms opened, another just as they fell, another a week or 10 days later, and another one still later, with the result that during the season it showed up with a crop of the wormiest lot of apples in that section of country. The trees were full of apples and still there were not enough to furnish each worm with a home of its own. It was claimed in those days that the moth lays its eggs in the maturing blossom of the apple just as the petals fall, and as soon as the caterpillar hatches it burrows into the apple. But this orchard that season must have developed a different breed of worms, for they not only burrowed through the blossom end, but the sides as well, literally turning those apples into city flats. At gathering time those apples contained no worms, but they could not be classed as No. 1, although perfect in form, size and color, for they were bored through and through; they showed no signs of rot, just simply the holes. In examining the fruit along through the growing season, by cutting open, it was observed that

the holes were full of water and the worms dead. A neighboring grower who observed the same thing remarked that they were all drowned. Was it the downpour of rain we had just about that time, or an extra flow of juice? Almost every orchard had a crop of good fruit that year, and as this was about the only orchard in this section of country that had been sprayed and cultivated it was a great set-back to the new doctrine. It was not a failure, as the orchard turned off 1,800 bushels, but the owner was not proud of the quality.

SOME EXPLANATIONS.—The presence of so many worms that season in this orchard was due to two causes. One cause was the poor quality of the Paris-green; the other was something entirely overlooked. At the first setting of these orchards there were also planted two rows of Transcendant crab apples along the north side of the peach and cherry orchard, and when those orchards were removed the crab trees were still left. When they first commenced bearing they were very profitable, as the fruit sold well, but the price had gradually gone down until they did not pay for picking. The trees had grown very tall, so that it was almost impossible to spray them, and as they very seldom failed, and were very prolific bearers, the ground would be covered with fallen fruit. That special season they had borne an extraordinary crop, and on examination it was discovered that every little apple contained a worm, so that no matter how hard they were fought against in the remainder of the orchard this small section was keeping up the supply. These trees were chopped down and burned, and all the little crab apples were gathered up and thrown on the fire, and since then we have not been bothered with any more worms. It is astonishing how much trouble some little things will give us, and how easily they are overlooked.

ANOTHER LESSON.—The Spring of 1897 everything commenced blooming April 25, but was not in full bloom until April 29; then we had four cold, cloudy, rainy days ending with a white frost. Last blooms were gone by May 9; last four days bright, clear sun and no wind. Commenced spraying May 10, and as the previous year had been so disastrous, the spray was made stronger by adding more Bordeaux Mixture and three-eighths of a pound of Paris-green to 50 gallons of water instead of one-fourth of a pound as formerly, and each tree was sprayed until it would drip. Owing to the extra time it took to do such thorough work and also being bothered by frequent rains, we did not get through first spraying until after May 25. Shortly after that time the orchard showed up with the snarliest lop-sided lot of apples it had ever borne. It would have been hard to find a more disgusted fruit grower than the owner, almost ready to turn the whole thing out to the commons; but the Cutaway, the Acme and the smoothing harrow were kept going in that part of the orchard that had been cultivated the year before, working it up so that all through the drought of that year it had from two to three inches of dust on top, with plenty of moisture underneath. Right in the hottest and driest part of the season it was noticed that the apples on the cultivated part were improving, and they kept on swelling and getting smoother and smoother until gathering time, which resulted in an extra good crop of apples free from worms. In that part of the orchard that had not been cultivated the apples showed no improvement and were hardly worth gathering even in that exceptional year of good prices. The trees and soil were identically the same, nothing but a portable fence separating them, only one part was cultivated and the other was not. The renovation of this orchard was found to be a more serious undertaking than was at first supposed. It was five years after this work began before it gave its first crop. But since then it has never missed, and has borne six consecutive crops consisting of 1,500, 1,800, 2,700, 2,000, 3,500 and 4,000 bushels respectively. The crop of 2,000 bushels was borne in 1898, when there was not another orchard in the State that produced any fruit. H. A. A.

Neoga, Ill.

THE CARPENTER APPLE.

At the meeting of the Eastern New York Horticultural Society last year specimens of the Carpenter apple were exhibited. Nicholas Hallock, of Long Island, secured us samples of the fruit, from which the illustration, Fig. 142, was made. The originator, or shall we say "discoverer," lived at Milton, N. Y. This is what Mr. Hallock says about the original tree:

"He wants it called the Carpenter apple, for his grandson. It came up in a field of raspberries that were planted with Oldenburg and Fameuse or Snow apple. Four years ago the tree was grafted with other kinds of fruit, and pruning was neglected on the new wood. Last year the wood that was left—the original tree—bore these apples. This was the first time that it fruited, and it had 1½ bushel of apples, independent of the grafts, showing it to be a good bearer, a good grower, and a good keeper, which we know from the specimens we had at the show." We found the fruit of high quality, a good keeper and, we should judge, a decided acquisition.

CORN-GROWING IN THE CENTRAL WEST.

THE SEED BED.—To grow a good crop of corn each separate step must be intelligently taken, seed bed, seed, planting and tillage. Is not the first of these steps the most commonly neglected? A good seed bed is not made in one season. It may be finished in one season. Nature's seed bed is always in the process of making, and is ever improving. In proportion as our soil departs from the condition of a natural seed bed are we compelled to improve the character of our tools and increase our work to grow a paying crop. It is proverbial that one hardly needs to scratch a virgin soil to grow a big crop. In digging into undisturbed soil I have been surprised at its firmness. The top is covered always with a mulch; just below, the soil is half mold and is very mellow, but it quickly becomes quite firm, almost hard. Our

A ONE-SIDED ORANGE. Fig. 141.

cultivated seed beds are often hard to the very top. This is the result of exposure to the fierce sun and the beating rain, and to robbing it of humus. We pay the penalty for this abuse by buying costly machinery and multiplying labor. Would it not be cheaper to return more nearly to the conditions of the natural seed bed? Firm, not hard; mellow on top and covered with a protecting mulch.

GETTING BACK.—There is no great secret about Nature's seed bed. It is simply full of sticks and protected. In this section we save strawy manure, often in a box stall where sheep and cattle are fed in flocks. This manure is never exposed to weather, and most of the time it is thick enough to absorb the urine. It is often scattered with a fork or manure spreader on clover stubble after taking off hay or seed. Its substance is washed into the soil, and the coarser parts are thoroughly rotted, so that when preparing for corn the next season it mixes well with the soil. By shredding fodder and bedding with straw, and feed-

THE CARPENTER APPLE. Fig. 142.

ing out clover and corn on the farm, we find that the humus increases in our soil, and that it will often grow a larger crop than when new. The late growth of clover covers the ground all Fall and Winter, and takes up any nitrates that might leach out of the soil and be lost. It also prevents sudden drying in the Spring, and gives one time to break more land in good condition than if the surface were exposed. The soil has been so thoroughly shaded and mellowed that by Spring it pulverizes easily and needs little working.

FALL BREAKING.—In this latitude we do not favor Fall plowing except in tough sods. Our Winters are so open that the soil puddles too much. It is often harder to prepare the seed bed in Spring than it would be to break it and prepare it. In the Spring our date for breaking is governed more by soil conditions than by the almanac. About one season in 10 is dry early, and if breaking is deferred till the last of April the ground gets so dry that it breaks cloddy. In such seasons it is far better to break in March and harrow occasionally to conserve moisture.

PLOWING TOO WET.—It is true, however, that farmers go wrong far more often by breaking land too wet. I have often asked farmers in an institute how they judge when land is too wet. Some say that if one will squeeze it in the hand, and on opening the hand it will fall apart, it is dry enough. This is, however, entirely too severe a test. A better test is to roll it into a marble. If it will adhere when rolled you would better stop the plow. Plowing too wet will harden the seed bed, and handicap one's effort the entire Summer. It will also greatly reduce the crop. I once thought to be smart, and broke a narrow back furrow in the garden "a little too wet." Two weeks later I plowed the rest of it. The first strip worked hard and puddled into one great clod, and was hard to work, as well as made a light yield, while the later plowing worked mellow all Summer. Apply this to a field, and you have a worse result, since the garden contained more humus. Many a farmer grows a light yield of corn, and does not know that he killed his crop plowing wet in the Spring. Tramping when wet does the same thing. It makes an intelligent farmer nervous to see a drove of stock ranging across a field, when he knows that every step is bound to make a clod for the coming season.

DEEP OR SHALLOW.—Some successful corn growers plow shallow. There are some loose soils where it is better to leave the ground stirred as little as possible, but as a rule, it is far better to plow from six to eight inches deep. This is especially true on hillsides. Otherwise a heavy rain will saturate a thin seed bed and slough it down to the valley. Deep plowing exposes more dirt to the action of the air; it covers weed seed and trash deeper, and makes a deeper mulch to prevent evaporation. We have gradually abandoned the riding plows and the small walkers, and find that a large plow requiring three horses turns the soil better and crumbles it more thoroughly. We need three horses for the harrow anyhow, and they will plow half more land than two. We usually back-furrow in the Spring, and throw out in the Summer breaking. If the weather is drying we harrow up to the plow every morning to conserve moisture. If it continues dry we harrow once a week till planting time. If the season is wet the roller will puddle soil almost as hard as if not broken. It should be used with judgment in the Spring. Even if dry for a time it will puddle badly if rolled down close and soaked by a heavy rain. If Nature does not firm the seed bed, however, one must aid her with a roller. Nature's seed bed is quite firm, and if we would enjoy best results we must not have ours too loose, especially in its lower part. Nature plows her seed bed with frost and literally picks it to pieces. Since it is protected with a mulch it thaws out from below first, thus affording perfect drainage and avoiding puddling. It is protected from dashing rain and baking sun by the mulch, and from puddling by its humus. It does settle down quite firm, and contains no large air chambers and no clods. The newer part of plant roots is always covered with little hair roots, and the plant thrives best when these are all the way in touch with the soil. Openings left by careless working of the seed bed, and by tufts of grass or lumps of manure are obstructions to this contact with root growth.

AN IDEAL SEED BED is one that is too well filled with humus to puddle, and has abundant fertility. It should be so worked that if one dig up a spadeful of dirt and cast it around it will disappear, not showing clods. This bed should not settle under a horse's foot much over the shoe, and should possess a lively mellow appearance. If soil is clayey and puddles badly, it is best not to work it too fine, and to be careful to practice a rotation that will not rob it of humus. Of course good drainage is essential to growing any cultivated crop. Some one says that a good man is one that is always growing better. This is true of Nature's seed bed, and of every artificial one. Every good seed bed is one that is growing better. It is one of Nature's bounties that is given in response to good sense in management, which simply means obedience to natural law. E. H. COLLINS.

Central Indiana.

THE STORY OF A "MOTH TRAP."

We have received a number of letters from readers who wish to know about the Haseltine moth trap, which has been widely advertised. This "trap" is a pan in which stands a small kerosene lamp. Four tin reflectors are arranged so as to throw the light out. The pan is filled with water. The lamp is said to attract insects, which fly against the reflectors and fall into the pan of water. The picture shows all sorts of bugs flying about the lamp. It doesn't seem to make any difference to the inventor that many of these insects do not work at night, and are not attracted by light. He seems bound to tell a big story about his trap and so he gives unnatural habits to insects, and has them all caught! Is the trap a humbug? Perhaps the best answer to that question is found in the following statement by Prof. J. M. Stedman, of the Missouri Experiment Station:

About a year ago I tested this trap and endorsed it for the Corn or Boll-worm moth *only*. The inventor then issued circulars advertising this trap and inserted my letter all right; but he finally became bolder and bolder, and commenced to cut out parts of my letter, especially the part restricting it to the Corn or Boll-worm moth, until finally, in later circulars, he made it appear as though I endorsed the trap for all the insects he mentioned. He finally issued circulars stating that the trap will catch the Codling moth, "the insect that stings the fruit," borers, Plum curculio, Potato beetles, Tomato worm moth, etc., and just below this absurd list states that it is "Endorsed by Prof. Stedman, of the Missouri Agricultural College," omitting my letter entirely, and making it appear that I endorse the trap for the entire list of absurdities, which is false, unjust, misleading and deceptive. These circulars are being widely distributed, and his agents are selling immense numbers of these traps, no doubt largely because of the false and deceptive way in which he uses my name. Whenever a person knows better than to believe his statements in regard to the catching the Codling moth, etc., by lights or trap lanterns, or whenever they mistrust something is wrong, they write to me, and I always inform them properly, but, nevertheless, most people do not take the trouble to write to me, and as a result thousands of your people are no doubt being deceived by this humbug.

We all know that certain insects are attracted by lights. No doubt this so-called "trap" will catch many of these light-loving pests, but some of the claims made for it are preposterous.

FARMING IN THE MOUNTAINS.

THE R. N.-Y. has a big family—scattered all over this great country. Those who live in the flat valleys know little of life on the high hills. One of our readers in Colorado sends us the picture shown at Fig. 143 and says:

I mail a photograph of our mountain ranch with a few of our bossies; our altitude is nearly 8,000 feet, so you may imagine we breathe pure air. We miss the fruit we can't raise, and it makes our mouth water to read of the good things the Hope Farm people eat. C. L. R.

Golden, Col.

It would take a good many bushels of pure air to make up for the lack of good apples and small fruit. Still, there are many mountain farm homes as happy as any to be found in the valley.

AN ACRE OF TOMATOES.

As the ground was full of Quack grass we plowed it early in the Spring, and then it was cultivated thoroughly in order to get rid of the Quack grass before time to set out the plants arrived. The ground was marked out four feet each way, and then the furrows were run out one way for the plants. When the plants were being set out I noticed there were plenty of cutworms, and when I went out to see how the plants were the next morning after planting, I was not surprised to find many of them cut off. I felt pretty blue over it, but as we had more plants we reset what were destroyed. In digging out the old roots we found from four to six nice fat cutworms; it is safe to say that they did not get a chance to do any more damage. After resetting all that were out we took unleached hard-wood ashes and put a good handful around each plant, so that the cutworms would have to crawl through the ashes in order to get at it. I do not know whether it was the ashes or not, but after we put them on we lost but few plants. The worms were there, for on digging around the plant we could get as many as six or seven. Did the ashes prevent the cutworms working or not ? Do any of your readers know anything about it?

We started cultivating plants second day after setting, and though the weather was very dry, they kept growing finely. The cultivator was run through them each way once a week until they got so big that there was not room for the horse to walk without stepping on them. We could not find a bit of the Quack grass at last cultivation. The first ripe tomatoes were picked about July 25, and on August 11 we began delivering to the canning factory, and we took the last to the factory October 17, having in the meantime delivered 384½ bushels for which they paid 20 cents per bushel, amounting to $76.90. They also paid us $2.13 as premium extra on tomatoes delivered before September 1. Then I sold 20 bushels to the Italians at 25 cents per bushel, $5, making in all a total of $84.03. Beside this amount we sold a great many pounds to the Italians at one cent per pound, of which a separate account was not kept. The varieties grown were Royal Red and Michigan Red Apple. The total cash outlay was $5. J. B.

Fenton, N. Y.

LATE SEEDING OF CLOVER.

A member of our board of trustees, whose farm was in North Andover, in this State, made it his uniform practice to prepare land for seeding as late in the Fall as it could be worked, and then to put on the seed (mixed grass and clover) just before he considered the ground likely to freeze for the Winter. He stated that he got better results through seeding in this way than in any other that he had ever tried. In his practice it was not expected that the seed would start to grow at all until the following Spring. I have on one occasion tried this plan, but on the estate belonging to the College it appears to me impracticable, chiefly because most of our fields slope sufficiently so that if the land be smoothed as for grass and left uncovered through the Winter there will almost invariably be serious washing, either during the Winter, when we are liable to have thaws, or early in the Spring while the frost is coming out. I conclude that there are few localities in our State where this plan would be practicable.

Practically all seeding in this section is done in the standing corn the latter part of July or very early in August, i. e., at the time of the last cultivation, and grass and clover seeds are sown together at that time. Clover sown then becomes sufficiently well rooted so that it goes through our very trying Winters and Springs successfully, even on soils which are very heavy and retentive of moisture. This plan gives us far better results than any other we have ever tried. The field, it is true, is not quite as smooth as it could be made by replowing, but by level culture of corn in drills it is sufficiently smooth for all practical purposes. It is the practice to roll in the Spring to break down the corn stubble, and to help level such inequalities in surface as exist. Wherever corn is grown for the silo it is preferable to seed in this rather than in a crop which is to be stooked and husked, for in case the crop is stooked grass and clover are likely to be somewhat killed where the stooks stand, and these spots must be reseeded. By seeding in the manner which I have indicated we get full crops and heavy yields the first year, for both clover and grass become thoroughly well established before cold weather. If the grass is sown later and the clover during the Winter or in early Spring, the crops of the first year are never as heavy as under the plan which we follow. [Prof.] W. P. BROOKS.

Massachusetts Agl. College.

A ONE-SIDED ORANGE.

The orange shown in Fig. 142 has an abnormal development of one of the carpels or divisions of the primitive ovary. The line of division is very plainly marked between the enlarged and normal portions. The reason why one division grew so much more vigorously is, of course, obscure. We may assume that irritation of the primary cells of this particular carpel by a different pollen could have been an exciting cause, though it is often denied that foreign pollen affects any part of the fruit except the seed germ. Each pollen granule contains two active cells; one unites with and fertilizes a seed ovule, but the action of the other has not yet been accounted for, though it is surmised that its vital force may be expended at times in affecting other portions of the fruit. There are other sources of irritation which also give a possible explanation. The various orange species have been profoundly altered by long cultivation from the original bitter, waxy berries, and many extraordinary

ON A COLORADO MOUNTAIN RANCH. FIG. 143.

forms occur from time to time. The oddest is probably the Fingered citron, a sort of lemon, in which the individual carpels are separated and prolonged into a monstrous representation of the human hand. It is a Japanese curiosity scarcely known in this country, and of little practical value. The very valuable Navel orange, now almost monopolizing the markets, is really an abnormal seedless form, with adventitious cells near the tip imitating a smaller orange partly inclosed in the main fruit. The original tree grew near Pernambuco, Brazil. It was brought to the United States nearly 20 years ago, and is now perhaps more propagated than any other variety.

EVERYBODY'S GARDEN.

COMBINATION TOOLS.—The best of tools and plenty of them are, of course, much to be desired; but this involves an outlay which all cannot afford. Much expense may be saved by the purchase of combined tools, of which there are now many kinds advertised in these columns. A careful study of such tools will suggest many ways of adapting them to save time and labor. Thoroughly to understand the tool means to be able to take advantage of every condition and every possible combination, and turn them to the best account. The operator who is able to do this will accomplish more and better work than can two men who know nothing of the implement they are attempting to use; for illustration, a double-wheel hoe with rake, cultivator and plow attachments is used by me for many kinds of work. The plows set together are used for opening trenches for planting potatoes and all kinds of seed dropped closely or in drills; with the mold boards reversed and set apart the seed is nicely covered as rapidly as a man cares to walk. The hoes may be used set closely together, or apart for working between or astride the rows, and the weeds go down fast or slow, according as your pace is. A very useful attachment and one quickly made is a weeder. Take a board one inch by three feet long, drive a row of wire spikes, size 40, four inches apart, and one inch in from each edge, driving second row so as to break joints with the first. Attach this to underside of wheel hoe with two small bolts, and you have a hand weeder that will work wonders in the garden. The stroke is too wide to push the implement easily; but it may be pulled after the operator, by the handles, weighting, if necessary to work deeper. A shorter one, say 18 inches long, is very useful for work between the rows when plants are too high safely to go over them; this width may be pushed the same as the ordinary attachments, and either one serves a two-fold purpose, destroying all weeds, and leaving a fine dust mulch to conserve moisture.

SUCCESSIONS OF PEAS.—At this writing the first early and medium sorts will be well under way; but successions for late Summer and early Autumn may be sown at intervals of two weeks up to July 1. For these later crops sow the extra early varieties which mature in 50 to 60 days from germination. Choose moist and cool ground for late planting, and use plenty of well-rotted manure. The finest crop of peas the writer has ever grown was sown on sandy soil with a heavy dressing of hen manure deeply spaded in. The peas were sown in double rows, with stakes between set six feet apart. When the first tendrils began to appear twine was run along the row with a turn around each stake. As the vines grew more strings were put on a few inches apart. This holds them well in place, is more economical than brush, and is entirely practical for quite large areas.

TRANSPLANTING.—Much loss of time and plants will be saved if the work of transplanting is properly done; and the first essential to this work is in thoroughly fitting the ground. For a day or two previous to setting out the plants should be copiously watered and should never be pulled, but taken up in blocks, with as much wet soil adhering as possible. The setting should always be done on freshly worked ground, and with these precautions may be safely done even in quite dry weather without the trouble of watering out. The tops of beets, mangels, cabbage, cauliflower, celery and tomatoes should be cut back, as they draw heavily upon the vitality, which ought to go to the roots. The dibber, trowel and spade all have their advocates; but whatever the method it pays to do the work without slighting.

BEAN BLIGHT AND RUST.—These are common enemies of the Bean family, and as prevention is far cheaper than the cure it is safest to keep well ahead of these diseases. Danger from blight may be nearly or quite obviated by a liberal use of Bordeaux Mixture if taken in time. The Mixture may be safely used full strength, omitting the arsenites. Saltpeter and water in the proportion of one ounce to the gallon is a preventive of rust, and if plentifully applied to the foliage and about the roots will give a luxuriant growth. These remedies are, of course, most easily applied with the sprayer, but lacking this apply with watering pot, or whisk broom; anyway, only do not omit it. High authorities estimate that $3,000,000 damage is annually done to crops in the United States by insects, fungi and blight. Most of this immense loss can be avoided by the judicious and persistent use of the appliances now at hand, such as sprayers, fumigators, insecticides and fungicides now thoroughly tested and known to be effectual. Outfits to suit all pocketbooks and conditions are available, and their use should become general.

LIMING THE SEED BED.—For the late cabbage and cauliflower plants it is well to apply a liberal amount of air-slaked lime, thoroughly working it into the ground before sowing the seed; as it destroys worms and is a safeguard against club-root. Be sure of strong vitality in the seed, and do not make the bed where any suspicion of club-root exists. Some successful growers, instead of sowing the seed in beds, plant it where the crop is to grow; four or five seeds to the hill, covering lightly and thinning out after the plants are well established. This method saves the labor and risk of transplanting, as also the delay frequently consequent upon lack of rain, just when one is ready for the work. Personal experiments with this method have not been satisfactory, as the plants were destroyed by the Cabbage flea about as fast as they appeared above ground. In many localities where the flea has become a pest its ravages have been entirely overcome by sowing the seed in large, shallow boxes set on posts six or seven feet high. "Prove all things; hold fast that which is good," is always safe advice, and sure to lead right in the end. J. E. MORSE.

Michigan.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Cement Cistern for Manure.

W. B. W., New York.—I am going to build a small stable for two or three horses and one cow, and wish to fix a manure shed alongside with a cement floor, so as to save all the manure under cover, with a vat underneath to collect all the urine, to be pumped over the pile. No cellar under the stable. Who can tell me best how to do it? I got the idea from page 34 of your January 19 issue.

ANS.—Who can give experience with a plan of this sort? We have seen something of the sort—a cement vat or cellar under the pile of manure so that the liquids drained into it. A bucket pump was used to lift the liquids so that they leached through the manure several times, and were at last carried in a tank on wheels and sprinkled over grass or grain. The plan has probably been tried by some of our readers, and we shall be glad to hear from them about it.

Wide-Tired Wheel Hoe Wanted.

A., Dover, N. H.—Do you know of any maker of wheel plows or wheel hoes with wide tires? I work in a mill, but cultivate about three-quarters of an acre, mostly fruit, for family use and pleasure, but there is not so much pleasure as hard work when the wheel sinks up to the hub in my sandy soil, and it has to be pushed through the soil instead of over it. I would also like a wheelbarrow with a wide tire, the tire to be convex to enable it to tip sideways easily. A six-inch tire would suit my wants; would not cut up my lawn, and I think it would wheel much easier over the soil in garden. I bought an Empire spray pump last Spring, fitted it up with 50 gallons of homemade Bordeaux Mixture, and had the old trouble with narrow tires. Three of us hauled it over the garden, and it was enough for a horse, but I have no horse, so only fill it one-third full.

ANS.—Here is a chance for some of our manufacturers. Some people advocate wide tires on the hard road, but think narrow tires good enough for the soft garden and farm.

Value of Sweet Clover.

S. G. M. T., Zaliski, O.—Is Sweet clover of any benefit to the farmer? Bee papers and bee keepers are trying to get it to growing all over the country, claiming that it makes good pasture for all kinds of stock and good hay, as well as being a great honey plant. I don't see anything in the farm papers about it. I have never had any experience with it, but would like to know something about it. I am not a bee keeper.

ANS.—This is a sort of tramp and pioneer plant combined. Every country boy knows it as a settler on sand banks, along railway cuts and on bare roadsides. In the Middle West it is everywhere. Curious that it has never impressed the eastern farmer with a feeling that it is valuable as a forage plant or a soil regenerator. In the sandy lands of the South, it is used as a green manure. In the same country, where they use the "beggar weed" for the purpose of putting nitrogen and humus into the soil, Sweet clover, or Bokhara clover as it is sometimes called, is also employed. It is a biennial. If sown in the Spring some plants seed the same season, but generally they do not give a crop of seed until the second year. It is a moderately deep-rooting plant, but does not penetrate the soil as deeply as Alfalfa. As a forage plant it must be handled rather carefully, because the stems soon get hard, fibrous and unpalatable. Cattle do not take to it readily, but may acquire a taste for it. Prof. Roberts says the acquiring process is a slow one. As a cover crop it is not ideal, because it is a branchy grower and makes a thin cover. Perhaps if mixed with something else which would thicken up at the base, it would be desirable. I do not believe that we have use for it generally, except on the thinnest and poorest of soils, but on worn-out limestone soils I am of the opinion that Sweet clover is one of those plants that have been overlooked. I wish we might have some experience from those who have tried it. JOHN CRAIG.

Injured Sugar Maple Trees.

E. B. D., Brushton, N. Y.—What can I do for a maple sugar bush of about 300 trees, from which bark was all blazed off when tapped this Spring? It was done by a man who had seen the rough bark smoothed off large rough-barked trees. Mine are all small smooth ones. The spots vary from the size of a silver dollar to three inches square. Would painting do any good?

ANS.—Rossing off the bark when tapping is a most useless as well as injurious practice. It is much more harmful on thin, fine-meshed bark than on trees having coarse, scraggly bark. If rossed down to the "quick," as it very likely was in this case, a long crack, or seam will soon appear in the bark both above and below the tap-hole, and the bark will also loosen from about the hole to the extent that the rossing was done. This will certainly injure the tree, but will not kill it unless followed year after year. Simply painting over the injured place is hardly sufficient. The hole should be stopped to prevent the bark from loosening about it. Seal up the hole with a small wad of grafting wax and then apply thick paint over all. A cheap wax can be made by melting up about five pounds of rosin and one pound of tallow. This will make a hard wax that should be melted in a small cup or basin and applied with a little wooden paddle. A. R. PHILLIPS.

Land Too Sour for Clover

C. N. R., Canton, Pa.—To raise clover successfully I have to use lime. To raise other crops, like potatoes and cereals, I need potash and phosphoric acid. I use muriate of potash and dissolved rock. From my experience and what I read I am convinced that these last-named substances drive the lime out of the soil, and in other ways cause the land to become sour, or in a condition where more lime must be used in order to grow clover again. I have very little stable manure, and so hardly know what to do. It seems foolish to buy fertilizers that will put ground in such a condition that one must go to more and greater expense in applying lime before clover can be raised, and all this for the small benefit derived from the fertilizers above their cost. Yet I feel I must have the fertilizers, and so it leaves a very perplexing question. Are there other substances I could use that would not tend to sour the soil, and if so, would not their cost prohibit their use in general farming?

ANS.—On some heavy soils, especially where there is a close hardpan near the surface, it is likely that muriate of potash does "sour" the soil. Experiments have shown that on such soils lime gives excellent results. Acid or dissolved phosphate rock, as is well-known, will increase the acidity in most soils—especially those naturally inclined to be sour. Sulphate of potash or wood ashes will not cause this trouble—neither will fine ground bone. We think that the danger to the clover is exaggerated. Surely lime is cheaper than fertilizers, and in the case mentioned we should think it would pay to use 1,600 to 2,000 pounds per acre every few years. This application would prevent too much souring. You ought to read the bulletins issued by the Rhode Island Exp. Station, Kingston, R. I.

White Minorca Fowls.

What are the merits and demerits of the White Minorca fowl? READER.

The White Minorcas, as a breed, have only been known among us about 15 years. Their origin is "veiled in oblivion," but their name would suggest the Island of Minorca, in the Mediterranean, and it is claimed that they are the only Mediterranean fowl whose weight approaches the Wyandottes, averaging about a half-pound less. For a description of the appearance of the bird, will quote from the Poultry Monthly:

The White Minorca has a large body, and stands well up on its legs; it has a broad chest, and a long flat back. The standard requires the tail to be carried upright, but breeders generally prefer having it carried well back. The body of the male is long, square in front, tapering toward the rear. The thighs are stout; shanks medium in length, stout in bone, and are pinkish white in color; the comb is single, large, perfectly straight, evenly serrated, and extending well back over the head. Wattles are thin and pendulous, and correspond with the size of the comb; ear-lobes pure white. The general appearance of the females in body is the same as the male, rather long, broad and deep. Her comb is single, large and drooping to one side. The color of the White Minorca must be white throughout, feathers other than white disqualify. The comb, face and wattles are a bright red, showing no white in the face. The eyes are hazel or red.

When dressed for market these birds, with their gray legs and pinky white skin, make a poor display as compared with the yellow legs and rich golden-tinted flesh of the White Wyandotte. But, on the other hand, the White Minorca eggs are as large, beautiful, porcelain-like white, while the White Wyandottes, though a good size, are brown in color. Regarding prolific egg yield the Minorca fanciers claim precedence for their fowls, as do also the Wyandotte breeders for theirs. Regarding hardiness and early maturity, for the same reason, it seems to be a "drawn game," though I am inclined to think that the White Wyandottes have a slight advantage here, as well as in the weight and market points. While the size and appearance of the White Minorca eggs are superior, they average in weight 15 per cent more than the Black Minorcas. The birds are exceptionally intelligent, biddable and gentle. The standard weight for these fowls is eight pounds for a cock; 6½ pounds for a cockerel and a hen, 5½ pounds for a pullet. F. E. W.

Chazy, N. Y.

KENTUCKY FRUIT.—Fruit trees of all kinds are very full of bloom. In order to secure a nice marketable fruit a great amount of thinning out will have to be done. I use a device which is very simple, yet one person can do so much in one day as five can by hand. Take a stick any length (an old broom handle is good), drive a small wire nail through one end, then with a pair of pinchers bend a small hook. Commence thinning when fruit is the size of a large pea. Slip the hook over the fruit; a small jerk does the work. With a little experience the fruit can be pulled off very rapidly with no injury to the trees.

Owensboro, Ky. J. H. H.

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Melons

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which should be used with the proper proportions of potash salts and acid phosphate. When properly applied it cannot fail to develop the largest and finest yields for the early market.

Full particulars free upon application to **John A. Myers,** 12-O John St., New York City. *Nitrate of Soda for sale by dealers*; we send you a list of them.

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Everyone should set a bed of PENNELL STRAWBERRIES this year. Send for Circular and Supplement, What the Growers Say, to JOHN W. PENNELL, South Norwalk, Conn., Rural Del. 37.

Sweet Potato Plants.—Jersey Yellow, $1.50 per 1,000. 100 by mail, 60c. 11 kinds. Send for circular. F. S. NEWCOMB, Vineland, N. J.

Prices on Peach Trees reduced. Trees kept dormant and in good condition until June 1. List of var. on application. R. S. Johnston, B. 4, Stockley, Del.

CARMAN No. 3 $1.90 barrel. Quick shipments. 30 standard var. Banner Field Beans, Dent Field Corn. 26 B. P. R. Eggs, $1.50; for exhibition, $2.50. S. J. Smith's Potato Farm, Manchester, N. Y.

FINE STOCK of ABUNDANCE and BURBANK PLUM, large enough to bear the first year after planting. All in good shape to plant. Low price. Order at once. LAWRENCE NURSERY CO., Lawrence, Mass.

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1,500 each Salway, Elberta, Ford's Late, B. Smock, Chair's Choice and Stump. 200 to 800 Susquehanna, Oldmixon, Champion, Geary, Early Crawford, Bilyen's, Crawford Late. 150 Champion Quince. 500 Bartlett. 250 Clapps, 100 Seckel, Sheldon, Vermont Beauty, Summer, Clairgeau, Manning's Elizabeth, Idaho, Flemish, Wilder, Anjou. Trees in dormant condition. Prices very low to close out. WOODVIEW NURSERIES, B. 100, Urlah, Pa.

NATIVE EVERGREENS.—Balsam Fir, Arbor Vitæ, White Pine, American Spruce and Hemlock, 6 to 12 inches, at $4 per 1,000; 5,000 for $15. Packing free. Also, transplanted Evergreens at lowest prices. Mrs. James A. Root, Skaneateles, N.Y.

CAULIFLOWER SEED High grade Danish seed by mail, direct from the grower in Denmark, to your address, postpaid. Danish Snowball, ¼ oz. 50c 1 oz. $1.50 1 lb. $18.00 Dwarf Erfurt..... ¼ oz. 65c 1 oz. $1.85 1 lb. $22.00 KARL KOLLE, 840 E. Fullerton Av. Chicago, Ill.

For Sale—1,000 bu. Clover Seed @ $6 to $7 per bu.; 500 bu. Crimson Clover Seed @ $5 per bu.; 2,000 bu. Cow Peas @ $1.25 to $1.75 per bu. J. E. HOLLAND, Milford, Del.

Packard's Ensilage Seed Corn write to-day for circular and sample. My seed corn ALWAYS GROWS. If you own a silo, you need my Early Mastodon corn. Makes one-third heavier crop than Leaming. Other varieties. PACKARD, Seed Grower, Dover, Del.

The Cornell Reading Course.

Edited by John Craig, Professor of University Extension, and Editor Farmers' Reading Course, Cornell University, Ithaca, N. Y.

Grape Queries.

1. What about Campbell's Early grape? 2. How do nurserymen propagate grapes? 3. What tree would you advise growing for grape posts? J. H. L.

Benton Harbor, Mich.

1. Campbell's Early is, I believe, a valuable grape. It is a fair grower, the fruit is of good quality, and, so far as we know, the blossom is fertile. I believe it will, to some extent, replace Moore's Early. McPike is a seedling of Worden. It is larger in fruit than its parent, about as vigorous a grower, and, so far as I have been able to observe, a satisfactory bearer. It is earlier than Worden. 2. Commercial grape growers make their cuttings in the Fall. They usually cut all wood to three eyes. The cuttings are bunched, butts all at one end, into bundles containing 100 cuttings each. These bundles are pitted in the ground, butts up, in the Fall. The pits are protected from frost with manure and soil. In Spring the covering is taken off, with the exception of two inches of soil, which is raked smooth like a seed bed. The sun warms the surface soil and induces callusing. When this takes place, the cuttings are set out. 3. I am of the opinion that you could grow Catalpa very satisfactorily at Benton Harbor, and perhaps more quickly than any other timber for the purpose you desire it. You can buy seedlings from western nurserymen quite cheaply. The trees should be planted closely, 4x4 or 5x5 feet apart, so that they will run up straight. By using this tree you ought to be able to get grape posts in six or seven years on cultivated ground.

Apple Orchard; Choosing Varieties.

I am thinking of setting out about five acres of apple trees this Spring, but have not decided upon the varieties. What varieties do you advise to set out? Do you consider it a good plan to set all to one variety; or, is it better to mix them in with others on account of more perfect fertilization of the flower? C. A. S.

Batavia, N. Y.

The variety question is a difficult one. A man must settle it largely for himself. There are two general types of varieties, and perhaps two types of fruit growers. There is the fruit which is standard. This variety must be hardy, productive, carry well, fairly attractive in appearance, but the quality need not be high. This is the general market or commercial type of fruit. In apples we see examples of it in Baldwin, Greening and Ben Davis. These fruits are staples, go to the general market, and there is always a more or less regular demand. The other type of fruit is that in which quality and handsome appearance are the predominant characters. As a rule these fruits are more difficult to grow. If they were not, every one would grow them. In apples we might say that McIntosh, Newtown Pippin and Sutton Beauty were examples of this second class. Now, if a man wants to grow fruit for a high-grade market this is the type of fruit he should plant, but he ought not to plant those varieties, so particular in their requirements, and so susceptible to the attacks of enemies, unless he is prepared to give them all the care they need. My own inclination would be to set out an orchard of Baldwin and Spy and top-graft these wholly or partly with such other varieties as I cared to include. My collection would take in McIntosh, Ontario, Rome Beauty, Sutton Beauty, King and probably Newtown Pippin, the last for experiment. I would not plant in blocks. Most varieties of apples are at least partially self-fertile, but all varieties are benefited by interpollination, which may be secured by planting two rows of another and so on through the orchard. Some attention should be given to the blooming period of each. For instance, Spy is notably late, while Astrachan and Duchess are among the earliest to blossom. A late and an early variety should not be planted in contiguous rows. Cornell Experiment Station has issued a bulletin on the pollination of fruit trees, which may be had on application.

Seeding with Clover Expensive.

I am living on a hill farm, 106 acres, and have felt the dry Summers very much. Can we afford to pay the present prices for clover seed and only receive benefit from it for one or two years? A. B. M.

Coventryville, N. Y.

It does look like wasting money—just on the face of it—to purchase expensive clover seed, get a poor catch and then have it last only two years. Unfortunately we can't change the habit of the plant. It is a biennial, and goes out naturally at the end of the second year. Usually a certain amount of self-seeding takes place, and sometimes a few plants live over till the third year, so that it does not disappear entirely if we give it a chance to flower and form seed. Clover costs from 12 to 16 cents a pound at the present time. This means that it costs us approximately $1.50 per acre for seed. When a man has 15 or 20 acres to seed down it amounts to quite a sum; still, I don't think that there is any cheaper form of manure than that secured by investing $1.50 in clover seed. The catch must be a very poor one indeed that will return you less than this amount in humus and nitrogen. The fact of the matter is we northern farmers can't get along without it. We need it in balancing up our cattle ration; we should have it in our pasture, and as a soil restorative it is all powerful. Clover first by all means, chemicals if we must.

Two Connecticut Farm Hands.

HARD LINES.—I notice a recent article entitled "Wanted, an Ideal Farm Hand," in THE R. N.-Y. I would say, "Wanted (in Connecticut), an ideal farmer." A New York man went to work for a Connecticut farmer. He was to have his house rent, wood and $25 a month. After he had been there a short time the farmer refused him the wood, refused to pay him his wages, and told him he thought he ought to pay his employer for the privilege of working for him! There were 17 head of stock to be watered twice a day; the water had to be brought from the brook, quite a distance from the barn in a barrel, and carried by the pailful to the creatures; cornstalks, cut with a hand cutter, three times a day into a trough, watered down; apple pomace fed three times a day from silo; some grain was fed. All barn work had to be done, besides milking eight cows. He was up at half-past four in the morning, and worked until half-past eight or nine in the evening. Just time enough to eat his meals; had no time to cut even his firewood; plenty of odd jobs outside of the barn. He was so disgusted that if he had not married a Connecticut girl he would have made a run for York State.

E. H. K.

R. N.-Y.—From the time of Jacob, and even before, farmers have been glad to toil for "the farm girl."

AN EXPERT TALKS.—I have read the article on page 267, "Wanted, an Ideal Farm Hand," with much interest, as I do all that is printed in THE R. N.-Y. I am a farm hand myself. I think our friend, Michigan Farmer, wants too much for the wages. Of course, I am not acquainted with the scale of wages in Michigan. There is great difference in farm hands, also in employers. To some farm hands a small raise in wages will be appreciated, and the amount more work they will do will justify the raise. I have worked on a farm for others more or less for 10 years, except one year I rented for myself, but owing to my wife's health and climatic conditions, had to give it up. I have always had a few dollars per month more than others. I can always find good places to work. At present I am getting $35 per month, house rent, garden, milk, etc. I have been here over a year. I always go on with the work as if it were my own. One fault with help is they never try to please those they are working for. I have had some such help. Perhaps you will say: "Why don't you work for yourself?" I intend to as soon as circumstances will permit. Many a young man working for others gets discouraged, and don't care, for he may have to eat at a table alone, sleep on soap boxes and straw (as I have done), get up at 3.30, 4 and 4.30 A. M., and work until 7 or 7.30 P. M., and later, and on Sundays will have some pigpen to clean and repair, or calfpen to clean out, and such odd jobs. Is there any wonder that farm hands don't care and soldier? I once worked for a man who, when I hired out, said: "I want a man to work, not to soldier." That was one of the best places I ever worked. Farmers must have system and a time for work and a time for rest. M. H.

Some Ohio Notes.

Why did you not advise—page 311—that Connecticut man to sow beardless barley for hay? It is in every way superior to oats, millet, or any other annual grass or grain. The Clark method? Well, I don't know; we disked and disked, dragged and dragged, harrowed and harrowed last July, August and September, on a two-acre stubble plot, then we sowed the seed. In early April we disked the bare land over again, and drilled in 1¾ bushel of beardless barley per acre. "Ideal conditions all around" just fits the case; these conditions were absent last Fall and Winter. I think it was George Scott who told me of an editor of a farm paper who spent a day or two with him about two years ago. George said that this editor spoke about some hog-pens he had seen in Ohio, and the editor said these pens each contained as much tertility as a great many 10-acre fields in New Jersey. We are certainly wasteful of manures on our rich lands.

Second paragraph, page 312: As the Assistant Secretary of Agriculture is a warm personal friend I think I will write him to send me a new pipe; I lost mine to-day. Of all humbugs the sending out of seed labeled "selected variety" is the worst. I want to do my own selecting. Yes, sir, a hen will make lots of eggs out of cow peas. The best laying flock I saw in the past Fall and Winter had access to half an acre of cow peas which were left on the ground. C. D. LYON.

FOR OLD AGE

To the old, as to babies, the even balance of health is more important than anything else in the world. The possible health, in age, is not high and strong; it is only even.

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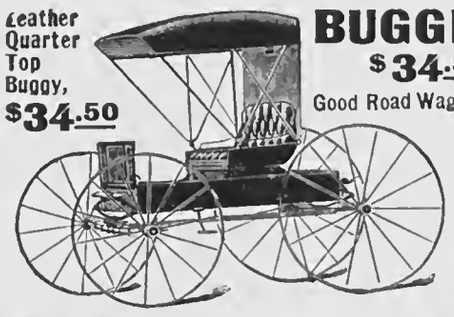

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Down a Little for June.

The demand for Silver and Partridge Wyandotte Eggs at Beaver Hill Farm has been heavy. We have returned dozens of orders that we could not fill at our regular prices, $3 per sitting for Silver and $5 per sitting for Partridge Eggs.
In response to numerous requests for lower rates later in the season, we have decided to name

The Following Low Prices for June:

Silver Wyandotte Eggs, $2 per sitting; 3 sittings, $5.
Partridge Wyandotte Eggs, $3 per sitting; 3 sittings, $8
Orders for eggs at these special prices will be filled in the order received.
A majority of our famous prize winners the past season were hatched in June. Handsome booklet, free
A few Breeders of both varieties for sale in June.
A good time now to get one of our fine Collie Pups.
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EGGS for hatching, 6 cents each. First-class stock. *Rhode Island Reds*, Brahmas, Hamburgs and Rocks. W. Sherman, 25 Boulevard, Middletown, R. I.

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BUFF and BARRED Plymouth Rocks.
BUFF Cochins, Rose-Comb Brown Leghorns.
EXTRA-FINE Cockerels and Pullets for Sale.
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WE GUARANTEE our customers against any change in our price and if we go lower, you will be refunded the difference in price. We treat all our customers alike and the early buyer is afforded as much protection as the late one.
SAMPLES FREE. We guarantee our twine, every pound of it, and we will refund your money instantly and without a question if it fails to come up to our representation either in quality or count, but if you prefer to see samples before ordering, then write to us and we will send samples by return mail so that you can see and test it.
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Ruralisms

NOTES FROM THE RURAL GROUNDS.

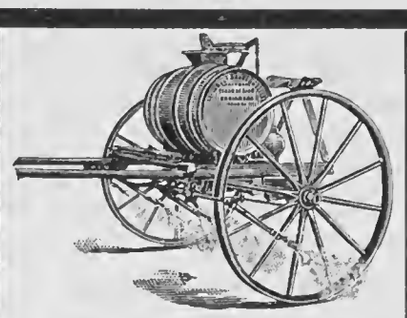
A Beautiful Azalea.—Very few flowering shrubs so combine richness of color with delicacy of outline when in bloom as Azalea amœna. Like some other members of the genus its habit is rather flat and rigid. The small, dark green foliage does not entirely conceal the stiff outline during growth, but in May the whole plant is smothered in a cloud of rosy purple bloom. When seen close at hand the magenta tint is not always pleasing, but at a little distance, when lighted by the sun, the effect is incomparably brilliant and pleasing. The innumerable flowers, often with double corollas, lose their individuality and give a lace-like effect that is quite unique in this class of plants. Azalea amœna is not entirely hardy north of New York, but can be grown successfully with moderate Winter protection to the Canada line. It should be planted in a sheltered position whenever possible, but there are fine specimens in this vicinity growing on rather exposed hillsides. The illustration on first page, Fig. 140, well represents a flowering branch, but can only give a faint idea of its extreme freedom of bloom. The picture was furnished by Bobbink & Atkins, Rutherford, N. J., who can supply this desirable Azalea as well as many other species. Azalea amœna is a native of North China and Japan, and is therefore at home in temperate climates, especially in hilly and well-forested districts. There are several native species of Azalea well worth transferring to our gardens. The beautiful flame-colored A. calendulacea from the Blue Ridge Mountains is scarcely excelled by any foreign hybrid. A. arborescens and A. Vaseyi, the former ranging along the summits of the Alleghenies and the latter nearly restricted to North Carolina, have large and handsome white or rose-colored blooms. Even the common eastern Azaleas, the "Spring honeysuckles" of every forest glade, A. viscosa and A. nudiflora, make desirable additions to a shaded garden. The large-flowered and beautifully colored Ghent Azaleas so abundantly forced for Easter blooms by florists are hybrids between various East Indian, Chinese and American species. Very few are hardy, even with the best protection, but they may be grown outside in moist soil during Summer, and wintered in a cellar or brought into bloom in the window garden. Some varieties may be forced repeatedly if given good care in the intervals, but the bloom is not likely to be as good as at first. Azalea amœna is regarded by some high botanical authorities as a variety of A. Indica and not as a distinct species. Most of the Azaleas were formerly classed with the genus Rhododendron, which is now confined to the large growing Rose bays.

Soil As a Commodity.—In most thickly populated districts good soil and leaf mold are in limited demand for potting plants, making up small flower beds and occasionally grading a lawn. When quoted by dealers in horticultural supplies the price is about $2 a barrel. Most florists furnish potting soil to their customers at very moderate prices, considering the trouble of getting up a well-balanced compost. In suburban resorts, where wealthy persons build costly Summer homes and improve extensive pleasure grounds, the demand for large quantities of rich top soil becomes quite imperative. The six-mile ridge of rolling upland between the present Rural Grounds and the ocean affords many desirable building sites on account of the great variety of water views obtainable, and has been in constant progress of improvement for the last 20 years. The soil near the sea is naturally so thin and poor that it will not sustain lawn grasses, while it rapidly improves inland. As the first improvements began near the beach much top soil was required to make a fertile surface, and farmers two or three miles back found they could get an average of 50 cents a yard for their soil with the profits for hauling usually added. Whole fields were stripped, the amount received in some cases reaching nearly $1,000 per acre. It looked as though these farms were ruined, and for practical agricultural purposes this probably was true, but with the advance of improvement inland the denuded fields came into market for building purposes, and were frequently sold at a still higher figure. It is not often that a piece of land can be bought at a high price, the surface skinned off and sold for more than the land cost, and the land itself later on sold at an advance over the purchase price, yet such has been the case in this locality. The marketing of sod for covering terraces and slopes as well as small inclosures, is a recognized industry in all suburban places, and has been considerably developed in this vicinity in connection with the trade in soil. Good firm natural sod is worth from one to 1½ cent a square foot, as it grows, and costs about three cents when laid in place. As a rule only a fraction of any given plot will produce good sod, but on some of the moist, rich fields many thousands of feet have been cut without seriously injuring the land. In hollows, where the soil is deep, successive crops have been taken without much deterioration. There is little good surface soil near Lakewood, situated just on the edge of the pine-barren district, and top soil is brought in by rail in large quantities for the very extensive improvements always going on. The business is locally in the hands of contractors, and the farmers have little to do with it except to sell their land when a sufficient price is offered. The stripping of a good meadow of its accumulated riches is no part of legitimate agriculture, and can only be profitable under such unusual conditions, but after all it is only restoring to the impoverished uplands the fertility they have been despoiled of by the storms of centuries.

Trifoliate Orange is Hardy Here.—Each day of the advancing season impresses one more strongly with the serious damage evergreen plants have suffered. The line of demarcation between the living and dying portions is constantly becoming more evident. Not for the past 20 years has so great loss been caused by climatic conditions. Deciduous plants came through the season very well, not being called on to transpire much moisture during the cold winds of February, when the roots were locked in frost. The plantings of the hardy or Trifoliate orange were little affected. As the trees grow older they gain in sturdiness, scarcely a twig being lost. They are really ornamental in Winter, the dark green of the bark rendering them quite conspicuous against a snowy background. If it were not for the slow growth there is little doubt the Trifoliate orange would become the most formidable and lasting of hedge plants in this latitude. The growth is thick and compact, and the long unyielding thorns defend it from any aggression by man or beast. Local trees have now reached eight or nine feet high, and have bloomed and fruited for several years past. They can easily be kept to a convenient height, and the tendency of all the winterkilling that has ever taken place here is simply to prune the plant by checked late and poorly-ripened shoots. A well-known nurseryman had such faith in the hedge possibilities of the hardy orange several years ago that he grew many thousands of seedlings, but he never could work up sufficient confidence in its hardiness to effect any but trivial sales, and in due course of time this interesting plantation was destroyed. It is not too much to say that scarcely anything grown in the nursery of equal age was less affected by frost than these unprotected little orange trees. It is, of course, understood that the fruit of the hardy orange is not edible, and of value only for the seeds when they are wanted. The plant is not catalogued now to the same extent as five or six years ago, but may still be obtained from some dealers at 15 to 25 cents apiece. The seeds are offered at 20 cents an ounce. They grow quite readily. Few plants have been encumbered with so many botanical synonyms, it having been described under four generic names, but the present designation of Citrus trifoliata is likely to stick.

W. V. F.

Mr. F. D. Rogers, of Monson, Mass., writes:—"I used Bowker's 'Boxal' on an acre of potatoes, and am certain that it checked the blight which was prevalent in this section."—*Adv.*



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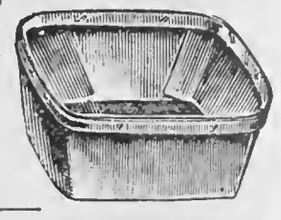

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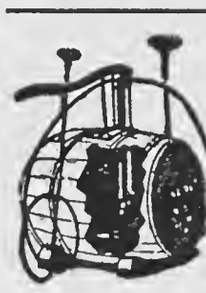

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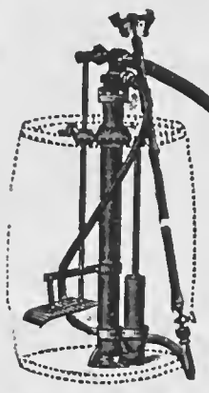

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Hope Farm Notes

STILL COLD.—I have heard of Winter lingering in the lap of May, but this year May had such a cold that she could hardly get up and dress. It is true that the plums burst into bloom about May 1, with the cherries a few days later, but the trees looked like men who put on straw hats about three weeks too early. The apples are far behind their usual season. . . . . The rains have kept up, with cold, windy days between them. Our hard, cold soil has had no chance to dry or warm. We are planting potatoes slowly, but I don't know that it is wise to put the seed into this cold soil. Corn planting will be very late this year. . . . . There is no use grieving over the weather. Both the just and the unjust are getting their full share of it. Far better consider the crops that are being helped by it. Our little peach trees are thriving. This wet soil just suits them. They are shaking out their leaves in great shape. The seedling cherry trees that were planted along the stone walls enjoy this weather. So do the rye, grass and Crimson clover. The cabbage plants are thirsty friends, and so are the newly-set strawberries. There are two sides to this weather question, and the live farmers will try to have something in the ground that will rejoice at anything the weather clerk sorts out.

FARM NOTES.—I love to see the little plants of Red clover pricking up among the oats. These green babies will work for the farmer when they grow up, and leave the soil better than they found it. Our seeding is coming up finely. The damp soil has helped the clover. . . . . The oats are starting well. Of course we treated the seed with formalin. I am sure that this helps the plant from the very start. When the smut germs are in the seed they may begin their work at once as the sprout starts, and the little plant never has a fair showing. I have seen oats which paled and limped along from the start, never making a decent crop. This was largely due, I think, to smutty seed. The plants never had a fair show any more than a calf born with the germs of tuberculosis in its body can hope to grow into a first-class cow. I am told that formalin is also used to prevent Onion smut. . . . . The most valuable thing thus far about our experiment with the Clark grass seeding method is the fact that we can see our mistakes. They are certainly written in green ink. Where we did the work just right the field looks like a thick lawn. What was "right?" Why, the stones were all picked up, the ground nicely graded and the seed evenly distributed. There are brown streaks and patches in our fields, some of which stand as monuments to our own errors. In some places the stones were not picked up clean. The soil was all carefully fitted, but part of it was not graded. On every little lump and ridge I notice the brown soil showing like the bald spots on a man's head. We put the seed on carefully by hand, but with the wind blowing it was scattered more or less. I now see why Mr. Clark wants to work the field several times with his light harrow after seeding. This mixes it up and makes it even. Where we did our full duty the grass is thick and strong—good evidence that the Clark method is O. K.

THOROUGH JOBS.—But is it possible for the every-day farmer to go through all these motions and take such pains with his grass? He may have only one team, and there will be a dozen jobs pressing at once. We would not ask that question if we could have faith, and know that we can make one acre do the work of two if we would only take care of it. Most of us are in the habit of spreading our labor over a certain area. Work and weather catch us at the wrong time, so that we never can say that the crop was perfectly cared for. How many have actually tried the plan of cutting down the area and working fewer acres better? We shall try that this year with our potatoes. We lost a share of the crop last year because we could not get over it thoroughly. This year we shall have but little more than half the acreage, but that will mean nearly twice as much attention to bug, blight and weed. My conviction is that it will pay me better to seed down two acres each year on the Clark method than it would to scratch over five acres and half seed it—as is usually done. As a fellow grows heavy and feels the rheumatism in his joints he may be excused for thinking twice before he tackles useless jobs. If I could be 20 again, and carry my experience back with me, I would never make a mere smatterer—running and fooling after a lot of different things, but I would master one of the common things of life or come as near to it as I could. Who in the world cares to listen to some 'prentice or amateur trying to play "Listen to the Mocking Bird" or "Old Black Joe" on violin or piano? Nobody but his father or mother; but let some master of the instrument start these simple old tunes and we will gladly listen all night. Why? Because these players pour the soul right out through their fingers. In those few minutes they give us a taste of the mastery which they have won through years of fight and self-denial! It is about so with Mr. Clark and others who have fought for mastery over some crop or farm method. They show us the way to get out of 'prentice work and master the forces of nature.

FAKE PROMISES.—I find fault with some of these writers and speakers because they paint up one side of the thing in glowing colors and bury the other end in the ground. Their excuse is that if they did not tell a "big story" the farmer never would start. In some cases he would be better off if he didn't. As an illustration of what I mean I will say that we are starting in the milk business. We sell to neighbors who take at present six quarts per day, and want eight or 10 quarts later. We can get six and eight cents per quart. Now I might say this about our milk trade: "We have no trouble in selling all the milk we produce at six and eight cents per quart. This milk is so good that a gallon of it represents a pound of butter. When farmers say that they can get only two cents a quart, we judge from our experience that it must be because they have poor milk or else they do not put brains into farming!"

Now, I read many articles that are just about as sensible and helpful as that would be. It is true that we sell our surplus readily but it is only a small side issue with us. How foolish to apply it in the case of a farmer who makes milk for a living. We can sell a gallon of milk for 25 cents and buy a pound of butter with the money, but as I have put it above it appears that our milk contains 19 per cent fat! I submit that some of these folks who put up a wise bluff and keep all the shade out of the glowing pictures they draw have sometimes less of fact than I have in the above statement. "Brains into farming!" Why, our milk could not compete in the New York market with that produced on the back farms! We would most likely starve to death if we tried to make a living on those milk farms! Some of these fellows dress up our honest friends the hen, horse, hog or cow—not to mention apple and potato—so that they are truly wolves in sheep's clothing luring farmers on to throw away their hard-earned dollars.

STOCK NOTES.—The Hope Farm men, women and children think highly of their live stock, but we really can't tell any very big stories about them. Julia is still kicking out veal and milk. Ape and Pril—the two calves born in April—are milking her and separating a large per cent of veal. Now that our little milk trade has started we feel more like taking the kick out of Julia, for she will make a peck of bran per day change into the grain needed by all the horses! . . . . The little Berkshires are thriving. Here you have their weight records: March 19, 14 pounds; April 1, 31 pounds; April 8, 45 pounds; April 15, 60½ pounds; April 22, 78 pounds; April 29, 97 pounds. One little sow weighed 26 pounds on April 29. They are very satisfactory. Little Billy Berkshire has a bob tail, but his hams and shoulders make up for any tail defect. I am told that this loss of the tail in little pigs is quite a common thing. Speaking of weights a farmer in my own county sends me the following:

"Litter farrowed March 19, number of pigs when farrowed, five live and one dead; cross between Berkshire boar and grade Chester White sow of small size (about 200 pounds), pigs of even size. Weight on April 27, 39 days old, 120 pounds (best one 26 pounds); average 24 pounds. I will give you the weight of this litter next Saturday again; it was farrowed the same day as yours, and it is a fine bunch of pigs of even size." C. J.

Our hens laid 674 eggs in April. Taking out sitters and loafers the flock averaged 45. In addition to shelling out these eggs the hens had dug and burrowed in the season's garden. Their yard has been plowed twice and will be plowed again. Then the hens are turned out of it into another yard and their old runs planted in onions, Lima beans and sweet corn. I have said many hard things about the dog. Some of them I will stand by as long as I live, and will invent words to make them stronger. I must admit, however, that there are dogs that are gentlemen. Shep, our Scotch collie, is a nobleman in fur. He, like old Major, Jersey and Peter will end his days on Hope Farm. The intelligence and loving character of this dog have astonished me. Many a day while wandering over the hills alone Shep has followed, snuggling up against me like a child whenever I stop for a moment's rest. If every farm family could have a dog like Shep the world would be better off. That is strong language for a man who has insulted the dog as often as I have!

H. W. C.

What is Black Knot? Its Cure.

We often receive questions from readers who ask about the disease known as black knot. The following simple statement by Prof. C. O. Townsend, of the Maryland Experiment Station, seems to answer such questions fully:

Black knot is a fungous disease affecting both wild and cultivated varieties of plums and cherries. It is an American disease that has been known for more than 100 years, and so far as can be determined had its origin in the eastern part of the United States. For a long time the knots were supposed to be due to stings of insects, but careful examination has shown that they are due to a distinct and well-known fungus (Plowrightia morbosa). In appearance the knots are at first light brown in color, but gradually deepen with age until they become perfectly black. The first indication that a knot is forming is a slight swelling under the bark, the swelling increases until the bark splits and the brown surface of the knot appears. These abnormal growths may form on any part of the tree, i. e., either upon the branches or upon the trunk. The fungus that produces the black knot forms two sets of spores; one set known as Summer spores is produced early in the Spring, usually in May, the other set, called Winter spores, is formed in the late Fall or early Winter, usually in December. The Summer spores are capable of germinating just as soon as conditions are favorable; hence, if they chance to lodge in a suitable place upon the tree they will form new knots. The Winter spores do not germinate immediately, but retain their vitality until the warm, moist days of Spring come, when they germinate and produce new knots similar to those produced by Summer spores. The fact that this fungus forms two sets of spores accounts for its rapid spread and for its very destructive nature. The spores seem to be able to cling to almost any part of the tree, especially where the bark is rough, hence we find the knots forming most frequently in the crotches of the branches. The fungi produced from these spores are able to penetrate the bark at all points, even on the trunks. After the fungus has penetrated the bark and produced a knot it grows between the bark and the wood for several inches beyond the visible knot, so that the removal of the knot does not remove all of the fungus.

With these facts in mind the remedy for the trouble readily suggests itself. In the first place the knots themselves should be cut off and burned. If they are growing upon twigs or branches, the affected parts should be cut off several inches below the knots, in order to remove all of the knot-producing fungus. If the knots are growing upon the trunk or upon large limbs they should be cut off, and the bark for several inches in all directions should be removed and burned with the knots, and the surface should be washed with a fungicide (iron sulphate, one pound in 20 gallons of water). If the trees are very seriously infested they should be cut down and burned completely and promptly. Having removed and burned all the knots the next step consists in spraying the trees thoroughly with some fungicide in order to destroy any spores that may be lodging upon the branches. Probably the most satisfactory fungicide is Bordeaux Mixture, which should be applied just as soon as the trees can be freed from knots. The spraying should not be confined to the diseased trees, but all plum and cherry trees in the same vicinity should be sprayed in order to destroy any spores that may be lodging upon them. This treatment should be repeated several times through April, May and June. In spraying after the foliage appears it must be remembered that full strength Bordeaux Mixture is liable to injure the leaves of Japan plums, hence a mixture containing a small amount of bluestone (two pounds in 40 gallons of water) and a large excess of lime should be used at that time. The earlier the knots can be cut out in the Winter the better, and they should by no means be left until the foliage appears, as they are then obscured, and sometimes hard to find, especially when they are small.

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409 Pearl Street, New York.

SATURDAY, MAY 18, 1901.

To January 1, 1902, for 50 Cents.

During the last two years we have received several thousand letters thanking us for the new rose, Ruby Queen, most of them saying at the same time that the writers are always glad to do a good turn for THE R. N.-Y. We are going to give these good friends a chance now to interest their neighbors in the paper. We have some roses yet left. Get two of your neighbors to give you 50 cents each, send us the dollar and their names and addresses. We will send them the paper the remainder of this year, and each a rose by return mail. For your part we will send you postpaid Mr. Stringfellow's New Horticulture, which is advertised in another column, for 50 cents. We hope to hear from several thousands of our friends on this proposition. Do not put it off. See what you can do at once.

*

OUR advices indicate that the strawberry crop in the South is both short and late. If it were short and not late the prospects for the northern crop would be better. Prices would be likely to remain high right through the season. The crop is late, however, and a few days or weeks of hot sunshine may quicken the growth in northern sections so as to bring on a glut after all.

*

THE oleo men admit that if the Grout bill had ever come before the Senate it would have passed. A majority of the Senators favored it. The oleo men defeated the bill by what they call "parliamentary advantage." It reached the Senate late in the session at a time when a good many important measures were crowding. By playing off one interest against another the oleo people were able to hold the bill up. The remedy is to bring it before the next Congress at once, and push it harder than ever. Let us try to get the stumps out of the road beforehand. One tough-rooted stump is J. W. Wadsworth, chairman of the agricultural committee. Pull him out by all means.

*

IN a wholesale liquor store in this city is an odd-looking clock. The works are in a beer barrel, which is placed on a high shelf. One end of the cask is painted to make the dial around which the hands turn. In whatever form he appears, time has lessons for all, even though they refuse to hear or heed. Intoxicating drinks not only rob a man of his money and brains, but of his time also. Surprising figures might be shown if some one could keep a correct account of the time spent by the patrons of a busy saloon in one week in drinking and getting over it. The old clock in the beer keg says: "You may bottle me up, but still I point out to you the swiftly-flying minutes, which multiply to hours and days and years and lifetimes." Time is a slippery customer. Chains will not hold him, and he will duplicate no wasted moment.

*

THE recent pigeon-shooting tournament at Interstate Park, N. Y., during which 20,000 birds were butchered to gratify cruel ambitions, has been followed by such a clamor of public execration that a bill to outlaw the inhuman sport has been forced through the New York Legislature, and only awaits at this writing the Governor's signature to become law. Great opposition was manifested to this salutary bill, which places pigeon shooting on a legal par with prize fighting and some other brutal pastimes. It is said that the most formidable opposition came from powder manufacturing companies, which find their business interests imperiled, but it is to be hoped that their influence will not finally prevail. While such exhibitions are always degrading to participants and spectators, if the pigeons or other live birds were all killed outright it would not be so revolting, but many of the helpless victims flutter out of reach after receiving ghastly wounds, and slowly perish in agony. The necessary skill can be shown in shooting at the various ingenious mechanical substitutes for living birds now on the markets. Such an exhibition of public conscience and sympathy as preceded the passage of the bill is most gratifying in view of the flood of "strenuous" talk let loose on the community during the late political campaign by persons who think it the acme of manliness to kill or maim some helpless creature under the guise of sport. While this law, if approved by the Governor, will stop the cruel pastime in New York it is still free to go on in neighboring States like New Jersey. It is to be hoped that no R. N.-Y. reader will countenance live-bird shooting in any locality, nor be instrumental in supplying birds for such purposes.

*

So great has been the demand for rural free mail delivery that nearly all of the $3,500,000 appropriation has been provided for. Unless Congress votes more money at its next session many new applications for routes cannot be considered. There are now about 3,000 routes in operation, and 500 more have been ordered by July 1. There has been nothing in recent years quite like the growth of this demand for better mail service. Most of us remember how gingerly the Government handled it at first. The authorities seemed to be afraid that farmers would not appreciate the business and social advantages of this service. So they went about it in a sort of half-hearted way. They ought to have known better than to lose faith in the good sense and intelligence of the American farmer. Such a demand for an increase of the service came rolling in that no one now thinks of giving it up. The only question is—how rapidly can it be extended? The American farmer will obtain his share of benefits when he wakes up to the fact that public rights result from demands, not from begging!

*

THE Kiowa and Comanche Indian reservations are soon to be opened up for settlement. Such "openings" in the past have meant a mad rush and gamble in which the actual home-seekers usually had the worst of it. This land is supposed to belong to all the people—why should a few be permitted to grab and gobble it? There are 1,400 quarter sections of this land, and it belongs to eastern people as well as to those who live west. One of our readers in New England suggests the following plan:

> It seems as though we, who live so far from the fine lands of the West, and most of us in New England, for instance, farm rather poor land, ought to have as good a chance, if only by lot, as those fellows in the West who make land speculation a business. There is little good land left. Is there any reason why all could not have share alike? Why could not lots be drawn for all of it, and men in Oregon, or Florida, or Vermont, all stand on the same footing? I know it is objected that such a distribution would be contrary to the law against lottery, but such a law was aimed at concerns which have for their object the fleecing of the many for their own benefit, and incidentally the demoralizing of a few by the expectation of big or little prizes. Where nothing is paid by the citizen, and no demoralizing influences are present, how can the law be infringed any more than drawing a jury by lot? It would be absolutely fair for all, and under the supervision of the Government, these lands would be allotted to citizens, who might apply, from all over the country.

*

WE know a man who a few days ago sold his seat in the New York Stock Exchange for $65,000. About 20 years ago he bought this seat for $1,000! What can there be about such a thing that can command this value? This "Exchange" is limited in membership. Only those who are members may go upon the floor during business hours and buy or sell stocks. As the vast proportion of sales or transfers are made at the Exchange, and go through a system of recording and transfer, it is easy to see what a tremendous advantage such membership is. Just now a member can probably make at least $1,000 per month by simply becoming a partner in a firm of brokers, thus giving them a chance to handle stocks on commission. We speak of these figures to show the immense advantage conferred by this great business organization. The whole system is more or less of a gamble, though it is fair to say that were there no such "Exchange" the frauds and bogus concerns would have a better chance to fleece the public. So far as the farmers are concerned all this stock gambling is opposed to their interests—for they pay every dollar of the cost in the end. No one can object to actual sales or transfers of stocks or of grain or produce. There would be little gambling about such transactions. The actual stocks or products are not sold at all in many of the transactions, which are really bets on the *price* of the stocks. As the prices are forced up or down the investors win or lose. The man who gambles in a game of cards has at least a chance to play his own hand. The stock gamblers know nothing about the workings of the game. We believe that National legislation is needed to prevent dealings in "options" or gambling in prices. The Washburn bill, which was aimed at this abuse, was killed in the United States Senate several years ago. It should be revived!

*

THE Hope Farm man has been pleasantly criticised because he is hunting for something that will provide a profitable Winter job for a large family. One trouble on many farms is the fact that the labor which produces actual money is crowded into a few months. The rest of the year is occupied with chores or odd jobs which produce little cash. We all understand the evils of such a system of incomes. Near towns and cities one result is that cold weather freezes the hired man out of his job, and sends him to town—too often to join the ranks of the idle or half employed. The effect on the farmer's own family is often bad. They are overworked during the busy season and do not always use the Winter to the best advantage. It is usually hardest for the women, as they have few of the things they need when the farm income is small. We feel sure that personally most large country families would be better off for some attractive Winter job that would pay fair wages. The farmer would be able to keep a good man through the entire year. His own family would be happier and more hopeful, for attractive and profitable labor is the great sweetener of human life. Discontent is bred by heavy, underpaid drudgery or unprofitable idleness. In a public way, too, a good solution of the farm Winter-job question would benefit the country. It would help spread industry and population, taking them away from the crowded towns where they are as great an evil as an overcharge of blood in certain organs of the human body. There are good arguments in favor of the farm Winter job and but little to be said against it.

*

BREVITIES.

Just take your learned scientist,
  Put in his hand a hoe,
And lead him out into the field
  And point him to his row.
What living, think you, he would dig
  Out of the richest dirt?
His stomach would show lack of food,
  His back would lack a shirt.
You take the farmer from his plow
  And put within his hand
The test tube and the microscope
  Where, think you, *he* would land?
What living, think you, he could earn
  In such an awkward place?
What truths would his untrained eyes find,
  In Nature's heart and face?
Why should we blame the scientist
  Because he finds the hoe
An awkward tool and only knows
  The *why* of how things grow?
And why despise the man of soil?
  To this all must agree
Without his work your science would
  Remain a theory.

WHAT is the outlook for hay and fruit?

THOSE who bridle sin provide a mount for the evil one.

THE tomato is fast growing away from vegetable into fruit.

NOW, gentlemen, what will keep rabbits away from young trees?

A MOLE becomes nearest to being a mountain when on a human nose.

HE who will not master common things, must take his place among the underlings.

TO put the "kick" inside your hatching eggs—induce your hens to scratch and use their legs.

WHEN time lays bare the motive how ashamed some of us will be—who have been judging the deed alone.

SOME people spend life trying to reach what they would like to be with little thought of what they should be.

YES, some of those who are trying to boom the Angora goat will surely go among the goats at the last sorting.

ONE of P. D. Armour's rules of business was: "Don't talk too much." Let farmers' institute workers know how dangerous their position from becoming talking machines.

A REMARKABLE old horse has just been turned out to grass in Newark, N. J. He has been used for producing antitoxin for diphtheria. He cost $15 originally and has produced $9,000 worth of the antitoxin.

DR. J. J. BLACK says that the boy's green-apple stomach ache is as likely to result from "the pathogenic germs that go down with the apple" as from the fruit itself. It's lucky our ancestors did not have a knowledge of germs added to their other troubles.

A READER gives the following as a "sure cure" for scours in calves: Boil corncobs in water for an hour—give the liquor warm. Medical men find little in corncobs that would have any such effect. Probably simple boiled or sterilized water alone would help.

WE have a dozen questions about to how handle seed corn so that the crows will not pull it. Our way is to tar the corn. We use the ordinary thick tar. Add a little water so that the corn will become fully smeared. Then dry by sifting ashes over it. The crows in our part of the country will let such corn severely alone.

Events of the Week

DOMESTIC.—President and Mrs. McKinley, members of the Cabinet and their wives and a few guests departed from Washington April 29 on the journey across the country, during which they will visit 25 States, travel more than 10,000 miles and be absent more than a month. . . . . The Pan-American Exposition was opened to the public May 1. Formal opening and dedicatory ceremonies will be held May 20. . . . . Van B. Triplet, inventor of the gold brick, who is said to have swindled people out of a million dollars by different kinds of confidence games, died May 2 at West Baden, Ind., in poverty. Money was raised by his friends to give him decent burial. Triplet, who was also known as John V. Tripp and "Old Tripp," was well known by the police in Chicago. He was born in Virginia 60 years ago and came of good family. He began a life of crime when he was young, and for more than 40 years had been pitted against the police. . . . . A destructive conflagration occurred at Jacksonville, Fla., May 3. The fire broke out about noon. A large section of the business and residence portion of the city was destroyed, and the losses are estimated at from $8,000,000 to $10,000,000. Six lives were reported lost, and 10,000 persons were homeless. . . . . Thousands of persons are pouring into Southwestern Oklahoma and camping in and about the Kiowa, Comanche and Apache and Wichita Indian Reservations for the opening, scheduled for some time in August. . . . . May 3, 13 barges and a tug were sunk in a collision at Evansville, Ind., entailing a loss of $45,000. . . . . A dynamite explosion May 3 at Oates Camp, on the Asheville and Nashville Railroad, in Tennessee, resulted in the death of two men and severe injury to several. . . . Seven persons were burned to death, three fatally injured, and several slightly burned in a fire at South Chicago, Ill., May 5. The fire engines were blocked by a freight train, whose crew refused to move from a crossing, and the firemen could not reach the burning building until too late. . . . . Fire in a wool warehouse in Philadelphia May 6 caused a loss of $375,000. . . . . An epidemic of smallpox has broken out at Gloucester City, N. J.; 15 cases were reported May 6. . . . . Four children, left alone in a farmhouse at Muskegon, Mich., May 3, set the house on fire and were burned to death. . . . . May 4 a fire in the Chicago stockyards destroyed a large butterine plant, the loss being $150,000. . . . . Two practical jokers at Davenport, Iowa, May 7, while pretending to hang a companion, were killed by a falling pulley and scantling. Their intended victim was slightly injured.

GENERAL FOREIGN NEWS.—Distressing accounts are arriving at St. Petersburg, Russia, of the situation of the villagers throughout Bessarabia, especially in the Soroki district, caused by the famine arising from the failure of the last harvest. The peasants are living on husks of maize boiled in water. Half of them are suffering with typhus fever. They are clad in rags and have no furniture or other household necessities. Horses and sheep have decreased from 50 to 60 per cent, owing to lack of forage. In some villages horses are sold at a ruble each. Elsewhere 70 per cent of the farmers have lost all their horses. . . . . Secretary Jackson, of the United States Embassy at Berlin, informed the State Department that the German authorities at Hamburg would not permit the shipment in bond through Germany of sausage intended for the Austrian market. The matter was brought to the attention of the proper officials, and it was found that the action of the German authorities was due to a misunderstanding. The customs authorities have been instructed that no objection exists to the shipment of canned meats and sausage through Germany in bond. . . . . C. J. Van Houten, who died recently in Algiers, rightfully deserved the title of prince of cocoa manufacturers. The house of Van Houten began business in Weesp, Holland, in 1817, having been launched on its great career by the father of the late proprietor. The factory, which covers an area of eighty-five acres, employs 3,500 people.

FARM AND GARDEN.—In the annual report of C. F. Saylor, special agent in charge of the beet sugar investigation of the Department of Agriculture, an active tendency toward the institution of new beet sugar enterprises is shown. Next Autumn, he says, Michigan will have three new factories and Ohio, Indiana, New York, Colorado, Utah, South and North Dakota and Illinois will install new factory enterprises, making 13 throughout the United States now in contemplation. A conservative estimate, he says, is that there will be 42 beet sugar factories in operation by the end of this year. He adds: "Even in the incipiency of the industry these factories have shown good profits. They have maintained themselves without any apparent contest with the sugar trust. The sections of the country that seem most adaptable to the industry are where conditions call for new resources, as in Michigan, where there has been a phenomenal increase in the last three years, largely due to the waning of the lumbering industry of that region."

The Summer meeting of the Missouri State Horticultural Society will be held at New Haven, Mo., June 4-6, 1901. Spraying for insects and fungous diseases will be an important feature of the discussion.

The Michigan State Fair will be held at Pontiac, Oakland Co., September 23-27; secretary, I. H. Butterfield, Agricultural College, Mich.

The Secretary of Agriculture has ordered a thorough investigation of all matters pertaining to the distribution of Government free seeds by the contractor during the present year, and has delegated Professor B. T. Galloway to do the work of investigating. Professor Galloway is "required to make full and complete report, so that it may be in evidence when final settlement is made with the contractor." An announcement is also made by Secretary Wilson, to the effect that after July 1, 1901, "all matters pertaining to the Congressional distribution of seed, including the control of the employees of the Seed Division," shall be in charge of Dr. Galloway.

Tobacco men in Wisconsin say that there will be an increase of acreage this year. Considerable interest now centers in the production of plants, which is always taken as an indication of what the farmers will do during the season. The plants are reported as being backward, owing to the dry weather, but there are indications that millions will be needed to supply the increased demand. Considerable effort has been put forth to produce an early variety of seed, and a large quantity is now sown in the plant beds. Deliveries of the crop of 1900 are very large, and the hundreds of warehouses are well stocked with tobacco waiting to be sorted and packed. Many buyers are in the field, and shipments are reaching in some places 1,000 cases a week. Many of the warehouses are holding crops back as far as 1896, and some of the farmers are still holding back crops.

GENERAL CROP PROSPECTS.

Peanut buyers in Virginia are rapidly absorbing all of the better grades, on some of which an advance has been made. The lower grades are plenty and hard to sell.

The wheat acreage in eastern Washington is greatly increased this year. It is said that in Whitman County 50,000 acres of land will produce its first crop of wheat this season. One farmer last year plowed up 1,000 acres of sage-brush land, which was thought to be about worthless, but the weather was favorable, and his experiment resulted in a yield of nearly 30 bushels per acre. This Spring many other owners of this sage land are following his example.

Parts of Georgia and Alabama have suffered severely from hail. In some sections it is thought that three-fourths of the young cotton has been destroyed. Damage was also done to corn and vegetables on the truck farms. The storm began a little before midnight, and on some of the hills the halistones remained on the ground until nine o'clock the next morning.

Last year's Kansas wheat crop lacked about 10,000,000 bushels of the figures estimated at the time of harvesting. This year indications are, if anything, more favorable than last, and a 100,000,000-bushel yield is expected. A Kansas mathematician has been doing some figuring,

THE BOOM IN WALL STREET.

THE AMERICAN FARMER: "After all, the prosperity of these money-makers is based upon my hard work!"—CHICAGO RECORD-HERALD.

and finds that the wheat crop of that State in the last three years has brought in enough money to topdress the whole State with dollar bills two deep. A newspaper reports that Kansas has sent out a call for 15,000 young men to work in harvest at $2 per day. No one should "bank" very much on this report, and certainly should not go until he verifies it and learns further particulars. The chances are that a big supply of incompetent so-called farm hands will float in. Kansas folks are hustlers, particularly at harvest time, and no one need go unless he is willing to "pitch in" and earn his $2.

Reports from Southern California place the yield of prunes at about one-eighth, and apricots and peaches one-fourth that of last year. It is said that the prunes are of uncommonly large size and good quality.

The Southern Strawberry Crop.

The cold, wet weather made the crop late, but more favorable now, and probably a very good crop will mature. S. P. S.

Bensalem, N. C.

The prospect for the strawberry crop is all that could be expected. The plants are looking fine now (May 7) in about full bloom, all except Gandy. The acreage is about the same as last year. Some growers have more, some less. Some who did not give their patches the best of care last year do not have a good set of plants, but most planters have plenty. The weather has been favorable. Raspberries, I think, will be short. S. J. D.

Greensboro, Md.

The strawberry crop is poor; in the dry season of 1900 the plants made no growth, and it is conceded by most growers that half crop, compared with last year, is as much as can be expected. The crop will be two weeks later in ripening than last year, owing to weather being so cold up to the beginning of this month. The season is fine now for all crops—plenty of rain, and for a few days past the weather has been quite warm, temperature up to 85 degrees at noon. Wheat and grass are very fine; apples, peaches, pears, cherries, plums, etc., all show for a big crop. A. W.

Crozet, Va.

The berry crop will be very short in this section. Under the most favorable conditions from now, not over 75 per cent of a crop can be harvested. We are having exceedingly dry weather, with high temperature, and very brisk winds, and unless we have rain in a few days, a greater shortage will occur. This is the largest shipping point for berries in North Carolina, and conditions are said to be more favorable here than elsewhere in the berry district. We are about twelve days late.

Mt. Olive, N. C. J. O. L.

The California Prune Growers' Association.

The affairs of the California Prune Association have improved. The cut in price and extra efforts made resulted in sales sufficient to pay the debts of the Association, give a dividend of one cent a pound to growers, and leave a small surplus toward the next dividend. The cut has now been revoked, and it is said that an order for 8,000,000 pounds at the low rate was refused. This favorable turn of matters has caused a better feeling on the part of the growers, and it is likely that the Association will be continued. It is said that an effort will be made to get all the small prunes out of the market by making them up into preserves or jams, the object being to prevent speculators from buying them up at low figures to put on sale next Fall. This cut in price, although criticised, has been a good thing. If a tree or vine makes too much wood in a season, it must be pruned severely, and there is no reason why a heavy surplus of prunes should not be pruned also. Holding a large quantity of perishable food is a poor plan, particularly when a new crop is but a short distance away.

Southern Fruit Crop Notes.

The frost the latter part of last month seems to have done considerable damage to early fruits and vegetables in the trucking districts of the Carolinas, Virginia and the Peninsula. Many South Carolina cucumbers will have to be planted over. Strawberries also got a set-back. Indications for the North Carolina cantaloupe yield are said to be promising. The returns from the strawberry crop in Delaware for the past two or three years have been so unsatisfactory that some growers have plowed up their fields. It is thought that the Georgia peach crop has come through the cold snap without serious injury. Still, some authorities claim that the stems have been weakened by the cold and high winds, and that on this account a much larger proportion of the fruit than usual will fall. The curculio is active, and growers are spraying with Bordeaux as a preventive of the brown rot, which did damage last year. Some claim that the addition of two ounces of Paris-green to 50 gallons of Bordeaux will help in disposing of the curculio. It is generally conceded, however, that sprays have but little effect on this hard-shelled customer, the only effective treatment being jarring the trees.

Government Weekly Report.

In the South Atlantic and Gulf States rain is needed, particularly in the parts of the cotton belt that have been replanted. Moisture and temperature conditions for the Northern and Central States are favorable, and plentiful rains have fallen in parts of the Rocky Mountain plateau. On the Pacific coast cool weather prevails. Corn planting in the valleys of the Central South is rapidly going on. In parts of the extreme South, where the corn is already up, the stand is uneven, owing to unfavorable weather. The Winter wheat outlook is generally favorable except in Michigan, where the stand is so uneven that some has been plowed under, and in parts of Texas and Oklahoma, where insect damage is reported. Winter wheat on the Pacific coast looks unusually fine. Early-sown Spring wheat promises well except in Minnesota. Drought and insects are injuring oats in Arkansas, Oklahoma, Texas, and parts of Illinois. Fruit trees in the North, except late apples, are generally in bloom. In Ohio and West Virginia apple trees have blossomed unusually full. In the tobacco districts the outlook is favorable. Small fruits in the Central States in healthy condition. In the Atlantic States strawberries are backward.

FIGHTING PEA LOUSE.—Last year the Pea louse made its first appearance in this locality, destroying about 50 per cent of the crop. Early peas, however, were not at all affected. Gregory's Surprise and Nott's Excelsior furnished last picking July 4. Then the lice came in swarms. Abundance and Juno, 50 to 60 per cent destroyed; Stratagem, total loss; Champion of England, 50 per cent. This experience would seem to indicate that we would better confine our planting to the early sorts, yet if I remember rightly one of your Connecticut correspondents wrote that his early peas suffered the most. The outlook is decidedly dubious. However, we purpose to plant about as usual, and if the louse puts in an appearance brush him off and bury him, as that seems to be the only effectual remedy yet discovered.

Jewett City, Conn. H. H. B.

THE MILK SITUATION.—The cows in this section are in fair condition, although some of the farmers have had to buy hay. Most of them now feed heavily of grain, so as to have hay to carry them through. Pasture is short, though we have had plenty of rain, but the drought of the last two years hurt the fields, so feed will be short all Summer, and the milk flow will be below the average. The farmers reduced their herds last Fall, so there is little sale of cows this Spring. Cows bring from $25 to $35, only a few being sold at the highest figure. Most of the farmers try to raise enough calves to keep their dairies good. Most of the cows through this section are crossed with Jersey and Durham; a few purebred Jersey. This seems to be about the general-purpose cow. There is hardly a dairy that will not test four per cent butter fat, and some will test over five per cent. There are no cows for sale that I know. The farmers are getting sick of the milk station, and are making butter and taking to factories. They are talking of putting up a coöperative creamery next Fall. If the farmers would sell their scrub cows and keep fewer cows and better ones, and buy less feed, they would have more money at the end of the year. We have a good many cows that are only boarders and do not pay their keeping. Sort them out and sell them; they are dear at any price.

Great Bend, Pa. W. G. H.

Woman and Home

From Day to Day.

CLEANING TIME.

Beneath the burnished chandelier
The weary housewife stands,
With scrubbing brushes, dampened cloths
And such things in her hands,
And in a rasping tone she gives
The hired girl commands.

A rag is wound around her head
To keep her hair in place;
She has the bed clothes wildly piled
Upon the dressing-case—
Her nose is skinned and there are broad
Brown streaks across her face.

From room to room she makes her way,
And madly rips and tears;
Her husband helps throughout the day
To run the world's affairs,
And sadly wanders home at night
To sleep upon the stairs.

—Chicago Record-Herald.

*

HATS trimmed with straw braid and straw buttons are characteristic features of Spring millinery. Sometimes the straw braid is used to combine with silk muslin. Long, rather flat bows of straw braid are apparently fastened down with straw buttons the size of a quarter. It is a style, however, that easily becomes clumsy.

*

OLD-fashioned crochet buttons are having a fashionable revival; in addition to forming rows of trimming and bunches of pendants, they are used on heavy lace, like the familiar rings. Those who have a supply of these buttons laid away, relics of out-of-date garments, may now bring them forth. Sometimes they are used as pendants to tip chenille ends. Rosettes of chenille with a few dangling ends are used as trimming, the chenille used being about half an inch in diameter, and costing 12 to 18 cents a yard. To tell the truth, we have always violently disliked chenille as a dress trimming; it suggests lamp mats and tidies, but there is no question of its style at present.

*

THE Atchison Globe tells of a man in that town who solemnly swore that one day was sufficient to give a thorough Spring cleaning to an eight-room house; he considered that women waste entirely too much time in pottering around. As the result of a wager with his wife, he completed the cleaning in the time specified, but history is cruelly silent as to how it was done. It is an undoubted fact, however, that the heavy labor of house-cleaning is properly men's work, and we know one country town where a capable colored man makes engagements for housecleaning months in advance. He descends on the premises with aids who work under his directions, and the thoroughness and celerity with which the work is done is a revelation.

*

ONE of the ocean steamship companies in New York decided some time ago to place the most modern rubber air mattresses in the best staterooms in two of its biggest ships. One of the great advantages of these mattresses is that they may be used as small rafts or life preservers should the emergency arise. The manner in which these mattresses collapsed was a puzzle to the stewards, who had to inflate dozens of them after each trip. It was finally discovered that they were stabbed to death by the women passengers, who used them for pincushions. The average hatpin will effectually destroy the ambition of any air cushion and apparently everything in the pin line had been stuck into these mattresses. The steamships now have a notice attached to the doors of the staterooms, requesting passengers to refrain from the practice. This is a case where one might die from a pin prick, since, in sudden disaster, the uninjured air mattress may buoy up a victim until rescued.

*

THERE is an epidemic of small buckles just now, which break out like an eruption all over women's garments. Stock collars are trimmed with them;

3799 Girl's Long Waisted Dress, 4 to 12 years.

waists are closed with them, and they often are spaced along beading or ribbon garniture. A pretty idea in silk waists is to have the garment close down one side, after the Russian model, the apparent fastening being little tabs of the material drawn through tiny buckles, and often a little metal dangler hangs from the buckle. The metal spike tags are very common now, but some ingenious women have finished the ends of ties or trimmings by using, in place of these tags, handsome old-fashioned ear rings. The long, drooping style of 30 years ago is just suited to such use. The end of the ribbon or material is neatly gathered and then tipped with the ornament.

*

SOME of the daily papers, in discussing the recent departure of an abnormally rich young husband and wife for a two-months' stay in Europe, proudly announce that their child is left under the charge of five competent nurses. The poor little rich baby, their firstborn, is two months old, and many young mothers, to whom a trip to Europe is a rainbow dream, would think it dearly bought at the expense of this separation. It makes one realize the idea thus suggested by two women quoted in the Youth's Companion:

"Yes, my dear," said one, "I knew him when he worked for Uncle Joe for $3 a week. Of course that is the fixed price for all millionaires who have made their money, and it does make one tired, but this is literally true. And now he has a house in New York, another at Newport, a farm on Long Island, an estate in Lenox and cottages at Tuxedo and Aiken, besides a yacht and a private car that is the apotheosis of leather and gilding."

"Where is his home?" asked the other.

"Home? He hasn't any. When they get as rich as that they've no more home instinct than milk cans."

The Rural Patterns.

Long-waisted effects are in the height of style for the little girls as well as for their mammas. The pretty little dress shown is suited to warm weather wear, but can be used with a guimpe and become high of neck and long of sleeve if desired. The material of the original is French nainsook, with a bertha of allover tucking and trimming of needlework bands, but all the cotton and linen fabrics are suitable as well as childish designs in China silks and such simple woolen materials as cashmere, albatross and the like. The waist is made over a fitted lining, which keeps it neatly adjusted. The backs are laid in tucks, but the front is simply gathered, and the neck is finished with a shaped bertha that is exceptionally becoming. The

3781 Five-gored Petticoat. 22 to 32 in. waist.

skirt is gathered at the top, finished at the lower edge with a hem, and joined to the body portion. With the frock is worn a sash of the material trimmed on the ends and simply tied in a knot. To cut this dress for a girl of eight years of age five yards of material 21 inches wide, three yards 32 inches wide, or 2½ yards 44 inches wide will be required, with ⅝ yard of all-over tucking for bertha, two yards of insertion and four yards of edging to trim as illustrated. The pattern, No. 3799, is cut in sizes for girls of 4, 6, 8, 10 and 12 years of age; price 10 cents from this office.

The foundation skirt or long petticoat that can be worn as a slip beneath unlined skirts is a necessity that every woman knows and feels. While it is always possible to make it exactly like the outer skirt the comfort and advantage of a model specially designed for the purpose, that can become interchangeable when desired, will be recognized at a glance. The admirable example illustrated is designed with direct reference to the needs of the season and is suited to both silk and lawn, which latter material is admirable as a foundation for organdies, batistes, Swiss muslins and all similar fabrics, but as shown is of taffeta with narrow frill and ruches of the same. The skirt is cut in five gores and is fitted smoothly and snugly about the hips, while the fullness at the back is laid in an inverted pleat. The flounce is circular and is seamed to the lower edge, while it, in turn, is trimmed with a bias frill 2½ inches wide, edged and finished with a tiny ruche, and is headed by a similar ruche that is slightly wider than those upon the frill. The upper edge of the skirt is simply faced or narrowly bound and so ensures a perfect fit about the waist. A placket is formed in the center back seam and the closing made invisibly with hooks and eyes, but gathers may be substituted and the top completed with a straight belt if so preferred. To cut this skirt for a woman of medium size 8¼ yards of material 21 inches wide or six yards 32 inches wide will be required. The pattern No. 3781 is cut in sizes for a 22, 24, 26, 28, 30 and 32-inch waist measure; price 10 cents.

LET the soul be turned as strenuously towards good as it usually is towards evil and you will find that the simple love of goodness will give incredible resources to the spirit in its search after truth. Love, with little intellect, will perform miracles.—Fenelon.

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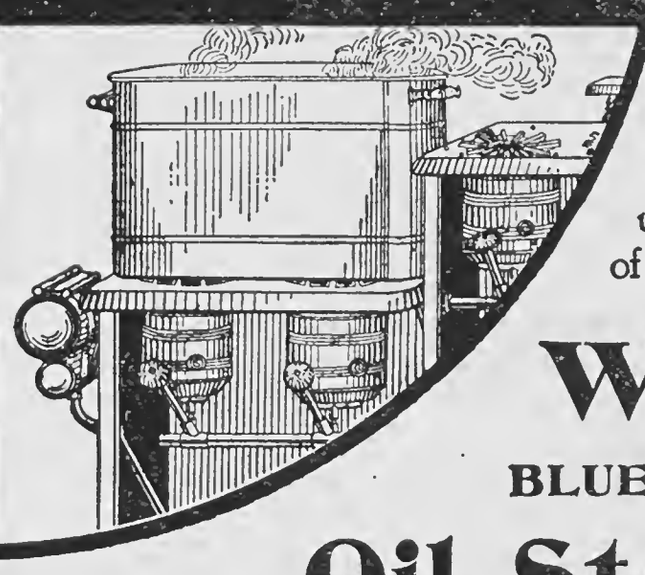

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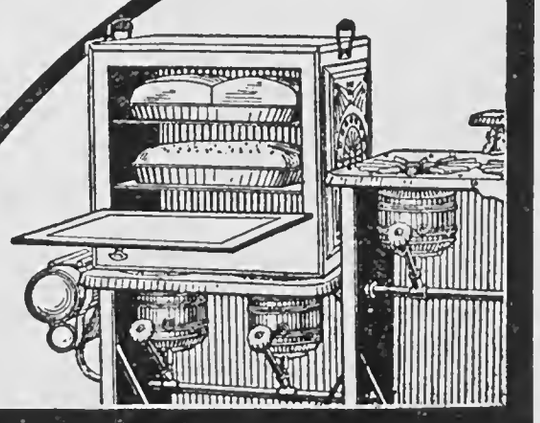

A Balsam Pillow.

PART I.

Now that fir needles and hemlock needles have become recognized articles of commerce, and every other shop now boasts its row of fragrant cushions, with their inevitable motto, "Give Me of Thy Balm, O Fir Tree," I am reminded of the first pillow of the sort that I ever saw, and of what it meant to the girl who made it. I should like to tell you the little story, simple as it is. It belongs to the time, eight or nine years since, before pine pillows became popular. Perhaps Chateaubriand Dorset may be said, for once in her life, to have set a fashion. Yes, that was really her name. Her mother met with it in a newspaper, and, without the least idea as to whether it appertained to man or woman, adopted it for her baby. The many syllables fascinated her, I suppose, and there was, besides, that odd joy in a piece of extravagance that costs nothing, which appeals to the thrifty New-England nature, and is one of its wholesome outlets and indulgences.

So the Methodist elder baptized the child "Chateaubriand Aramintha," making very queer work of the unfamiliar accents, and then, so far as practical purposes are concerned, the name ceased to be. How can a busy household, with milk to set, and milk to skim, and pans to scald, and butter to make, and pigs to feed, find time for a name like that? "Baby," the little girl was called till she was well settled on her feet and in the use of her little tongue. Then she became "Brie," and Brie Dorset she remained to the end. Few people recollected that she possessed any other name, unless the marriage, birth and death pages of the family Bible happened to be under discussion.

The Dorsets' was one of those picturesque, lonely, outlying farms, past which people drive in the Summer, saying, "How retired! how peaceful!" but past which almost no one drives in Winter. It stood, with its environment of red barns and apple orchards, at the foot of a low granite cliff whose top was crowned with a fir wood, and two enormous elm trees met over its roof and made a checkerwork of light and shade on its closely blinded front. No sign of life appeared to the city people who drew their horses in to admire the situation, except, perhaps, a hen scratching in the vegetable beds, or a lazy cat basking on the doorstep, and they would drive on, unconscious that behind the slats of the green blinds above a pair of eyes watched them go and a hungry young heart contrasted their lot with its own.

Hungry! There never was anything like the starvation which goes on sometimes in those shut-up farm houses. Boys and girls feel it alike, but the boys are less to the pitied, for they can usually devise means to get away.

How could Brie get away? She was the only child. Her parents had not married young. When she was 19 they seemed almost elderly people, so badly does life on a bleak New England farm deal with human beings. Her mother, a frail little woman, grew year by year less fit for hard labor. The farm was not productive. Poverty, pinch, the inevitable recurrence of the same things to be done day after day, month after month, the same needs followed by the same fatigues—all these Brie had to bear, and all the while the child had that love and longing for the beautiful which is part of the artist's equipment and the deprivation of which is keen suffering. Sweet sights, sounds, smells—all these she craved and could get only in such measure as her daily work enabled her to get them from that world of nature which is the satisfaction of eager hearts to whom all other pleasures are denied.

The fir wood on the upper hill was the temple where she worshiped. There she went with her Bible on Sunday afternoons, with her patching and stocking-mending on other days. There she dreamed her dreams and prayed her prayers, and while there she was content. But all too soon would come the sound of the horn blown from below, or a call from the house, "Brie, Brie, the men are coming to supper; make haste!" and she would be forced to hurry back to the workaday world.

Harder times followed. When she was just 20, her father fell from his loaded hay wagon and fractured his thigh. There was no cure for the hurt, and after six months of hopeless tendance he died. Brie and her mother were left together on the lonely farm, with the added burden of a large bill for doctoring and medicines, which pressed like a heavy weight on their honorable hearts.

The hired man, Reuben Hall, was well disposed and honest, but before Mr. Dorset's death he had begun to talk of going to the West, and Brie foreboded that he might not be willing to stay with them. Mrs. Dorset, broken down by nursing and sorrow, had become an invalid, unable to assist save in the lightest ways. The burden was sore for one pair of young shoulders to bear. Brie kept up a brave face by day, but at night, horrors of helplessness seemed as brass, against which her feeble prayers beat in vain, the future was barred, as it were, with an impassible gate. What could they do? Sell the farm? That would take time, for no one in particular wanted to buy it. If Reuben would stand by them, they might be able to fight it out for another year, and, what with butter and eggs and the corn crop, make enough for his wages and a bare living. But would Reuben stay?

Our virtues sometimes treat us as investments do, and return a dividend when we least expect it. It was at this hard crisis that certain good deeds of Brie's in the past stood her friend. She had always been good to Reuben and her sweet ways and consideration for his comfort had gradually won a passage into his rather stolid affections. Now, seeing the emergency she was in, and the courage with which she met it, he could not quite find the heart to "leave the little gal to make out by herself." Fully purporting to go, he stayed, putting off the idea of departure from month to month, and though, true to his idea of proper caution, he kept his good intentions to himself, so that relief of having him there was constantly tempered by the dread lest he might go at any time, still it was relief.—Susan Coolidge in Colorado Weekly Times.

Rhubarb Recipes.

Rhubarb is one of the most wholesome products of the home garden at this season, and some of the following recipes may be new to those tired of the stalks when stewed or made into pies:

Baked Rhubarb.—This requires less sugar than stewing. Peel the stalks, selecting red rhubarb. Cut into inch lengths and place in a stone crock. Add one part of sugar to two parts of the fruit, unless you like it very sweet, then add nearly half and half; arrange the fruit and sugar in layers; use no water. Stand the crock in a pan of hot water, cover and set in the oven and bake until the pieces are clear. This may be used for a meringue by filling a shell of good light pastry, covering the top of the fruit with a meringue and coloring a delicate brown in the oven.

Rhubarb Compote.—Cut red rhubarb into pieces three inches long. Cover with cold water and set over a moderate fire where it will very slowly come to the boiling point, but do not allow it to boil. Drain the water off carefully, or take the rhubarb up on a fork, keeping the pieces whole. Measure the water and to each pint add a pound of granulated sugar. Boil until it becomes a syrup, then pour over the rhubarb. This is nice served with plain boiled rice for a simple dessert.

Rhubarb Sherbet.—Wash the stalks and cut into pieces one inch long. To a dozen stalks add three pints of cold water. Cook in a double boiler until tender. Flavor with grated lemon or orange peel, and sweeten to taste. Let stand in a cool place for several hours, then strain and chill. Add shaved ice.

Rhubarb Cream Pie.—One cupful of rhubarb chopped fine or grated, one cupful of sugar, a pinch of salt, a grating of nutmeg or lemon peel. Moisten a tablespoonful of cornstarch with a tablespoonful of cold water; then fill the cup up with boiling water, stirring until clear. Beat the yolks of three eggs until light, and add them with the cornstarch to the other materials. Line a pieplate with good light paste, fill with the mixture and bake in a moderately hot oven until custard is set. When done and cooled, cover with a meringue made with the whites of the eggs and half a cupful of confectioner's sugar. Brown delicately in the oven.

Rhubarb Fritters.—Select the smaller stalks of tender, fresh rhubarb. Cut into pieces two inches long; cover with cold water and steam until tender; drain and spread on a platter. Make a syrup of sugar and water, flavor with a little lemon. Pour this over the rhubarb and let stand until perfectly cold. Drain off the syrup, dust the rhubarb thickly with granulated sugar. Make a fritter batter in usual way, dip the pieces of rhubarb in the batter and fry in deep hot fat.

Rhubarb Soufflé.—Pare and cut the rhubarb into small pieces, add enough water to keep from burning, and a pound of sugar to each quart of rhubarb. Stew until tender, then press through a sieve. Measure your rhubarb, and to each pint take three eggs; separate and beat the yolks very, very light, and add to the rhubarb. Mix well, then whip the whites to a stiff froth and fold into the mixture. Throw into a well-buttered dish and bake in a quick oven about half an hour. When it cracks open on top it is done.

Rhubarb Cobbler.—Fill a deep, buttered, earthenware pie dish with rhubarb cut into pieces an inch long. Make a batter of eggs, flour, milk and salt, allowing a large tablespoonful of flour to each egg and milk enough to make a batter thick as for fritter batter. Pour this over the rhubarb and bake until the pudding is light and nicely browned.

Rhubarb Tapioca.—Prepare the rhubarb as for stewing; place in a deep baking dish and add sugar enough to sweeten well, a little shredded orange peel, salt and dot with bits of butter. Add one quart of water to half a cupful of fine tapioca. Add a pinch of salt and cook in a double boiler for 15 minutes. Then pour over the rhubarb, cover the dish and bake half an hour. Serve with sweetened whipped cream.

With the Procession.

KNOW that strength is yours in proportion to your progress, enough for each day, be it mental, physical or spiritual. Realize that there is a reward for every labor, rest after every task, and rise for every faculty developed. Your reward may not be what you expect; probably it will be much better. The power which comes from trying is more than worth the effort.—Adelaide Keen.

A THING is worth precisely what it can do for you, not what you choose to pay for it.—Ruskin.

HE who can be true to his best and secret nature, who can by faith and patience conquer the struggling world within, is most likely to send forth a blessed power to vanquish the world without.—Martineau.

YOU are never quite conscious of how many disagreeable lodgers there are in that many-chambered mansion you call your "self" until anger or envy or hate knocks at the door—and presto! out come trooping such a lot of unhappy creatures—rancor and uncharitableness, and suspicion, and all unkindness, a perfect army of enemies to peace and happiness.—Helen Watterson Moody.

AFTER all we must come back to the old truism: that men and women are like water; they always find their true level. And where you live happiest, that is your level. There's polluted water, and there's clear water. But one law is inexorable: the closer you get to Nature, the truest and simplest thing there is because it is closest to God, the clearer always will you find the water.—Ladies' Home Journal.

THE circumstances that surround us at any given time are transitory, but they are the occasions of modes of life, thought and feeling, which are not perishing, the mortal mothers of immortal children. The immortality of a thought, a word, a deed! We can trace them back sometimes to the limits of memory. We are what they have made us. . . We forget the details, we feel the result. Suppose a plant endowed with consciousness, it is conscious of itself; it may not remember every ray that has warmed, every frost that has wounded it, yet each and all have contributed to make it just what it is, no more, no less, and of that whole it is conscious.—Eliza T. Clapp.

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MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

MARKETS.

The Week's Quotations

WHOLESALE PRICES.

NEW YORK, MAY 11, 1901.

GRAIN.—Wheat speculation light, owing to unusual interest centered in Stock Exchange. Corn is firm. Reports from Argentina indicate an excellent crop, with large surplus for export.

Wheat, No. 2, hard, N. Y.	83¼	@	—
No. 1, Northern Duluth	83¼	@	—
No. 1, hard Duluth, spot	89¾	@	—
Corn, No. 2, mixed	53½	@	—
Oats, No. 2, white	34½	@	—
Rye, No. 2, W'n, c. l. f., Buf	—	@	56
Barley, feeding, c. i. f., Buffalo	42½	@	45
Malting, new crop	62	@	68

BEANS.

Marrow, choice, per bu	2 50	@	2 55
Marrow, fair to good	2 40	@	2 45
Pea, bags, choice	2 05	@	—
Red kidney, choice	2 05	@	—
White kidney, choice	2 20	@	2 25

FEED.

Spring bran, coarse	18 00	@	19 50
Winter bran	18 00	@	22 00
Red Dog	19 00	@	—
No grade flour	19 00	@	20 00
Linseed meal, ton	—	@	27 00
Cottonseed meal, ton	24 10	@	—

HAY AND STRAW.

Hay, No. 1	90	@	92½
No. 2	85	@	87½
No. 3	75	@	80
Clover	65	@	70
Clover, mixed	75	@	80
Straw, rye, long	85	@	90

SEEDS.

Clover, per lb	10¼	@	10¾
Timothy, per lb	4¼	@	5
Red Top, per lb	10½	@	—
Flaxseed, whole, bu	6 50	@	7 00
Millet, per lb	2	@	2⅛
Rape, German, per lb	3¼	@	3½
Sunflower, per lb	2⅜	@	2½

MILK.

New York Exchange price within 26-cent freight zone 2¼ cents per quart.

BUTTER.—Prime fresh creamery is very scarce, and a few sales have been made above 19 cents. Imitation creamery and factory quiet, and all lower grades dull.

Creamery, extra, per lb	19	@	—
Firsts	18	@	18¾
Seconds	17	@	17½
Lower grades	15	@	16
State dairy, tubs, fancy	18	@	18½
Tubs, firsts	17	@	17½
Tubs, seconds	16	@	16½
Tubs, thirds	—	@	15
W'n imitation creamery, fancy	16½	@	17
Firsts	14½	@	15½
Lower grades	13	@	14
W'n factory, large tubs, best	13	@	—
Fair to good	12¼	@	12¾
Or dairy, lower grades	11	@	12
Rolls, common to prime	11	@	13
Renovated butter, fancy	16½	@	17
Common to choice	12	@	16
Old creamery	12	@	14½
Old Western factory	10	@	13

EGGS.—There is an excessive supply of average and lower grades.

QUOTATIONS AT MARK.

Nearby, State and Pa., fresh-gathered fancy selected, doz.	15	@	15½
Average prime	14	@	14½
W'n, storage packings, fancy	14	@	—
Regular packings, N'n sec'ns	13	@	13¾
Graded, Southerly sections	—	@	13½
Reg. packings, S'y sec'ns	12½	@	13
Reg. packings, under grade	—	@	12
Kentucky, best marks	12½	@	13
S'n, fresh-gathered, avge. best	—	@	12
Poor quality	11	@	11½
W'n, fresh-gathered, dirties	10¾	@	11½
Checks	—	@	10
Duck eggs, Baltimore, doz	16	@	—
Western	13	@	14
Southern	12	@	13

COUNTRY-DRESSED MEATS.

Calves, veal, prime per lb	7	@	—
Fair to good, per lb	6	@	6½
Common to medium, per lb	5	@	5½
"Spring" lambs, fancy, each	—	@	6 00
Poor to prime	1 50	@	5 00

LIVE POULTRY.—Arrivals are rather heavy and market weak with a decline of one cent on fowls and roosters.

Spring chickens, per pair	50	@	75
Fowls, per lb	—	@	10½
Roosters, per lb	—	@	6½
Turkeys, per lb	—	@	8
Ducks, avge. West'n, per pair	70	@	80
Average Southern, per pair	50	@	55
Geese, avge. West'n, per pair	90	@	1 00
Average Southern, per pair	70	@	75
Pigeons, per pair	25	@	35

DRESSED POULTRY.—Receipts are not excessive, but the rainy weather has been bad for trade. Some lots came in without ice and had to be disposed of quickly.

FRESH PACKED—ICED.

Turkeys, W'n, hens, small	10½	@	—
Western, toms	—	@	8
Broilers, Phila., under lbs. to pair, per lb	33	@	35
Phila., over 3 lbs. to pair, lb	30	@	32
Penn., fair to good, per lb	23	@	25
W'n, fair to good, per lb	20	@	25
Chickens, Phila., Winter, 5@6 lbs. to pair, per lb	22	@	25
Fowls, W'n, dry-picked, prime	—	@	10½
Western, scalded, prime	—	@	10½
Western, poor to good	7	@	10
Southwestern, prime	—	@	10½
Old roosters, per lb	6½	@	7
Ducklings, L. I., and other nearby, per lb	—	@	20
Squabs, choice, large, dark	2 50	@	—
Mixed, per doz	2 00	@	2 25
Dark, per doz	—	@	1 50
Culls, per doz	50	@	1 00

FROZEN.

Turkeys, young hens, No. 1	11	@	—
Mixed young hens and toms, No. 1	10½	@	11
Young toms, No. 1	10	@	10½
No. 2	7	@	9
Broilers, dry-picked, fancy	18	@	20
Scalded, fancy	13	@	15
Chickens, fancy, soft-meated	—	@	12
Average, No. 1	—	@	10
No. 2	7	@	9
Fowls, dry-picked, No. 1	9½	@	—
Capons, fancy, large	15	@	16
Medium sizes	13	@	14
Ducks, fancy	12	@	12½
Geese, fancy	9½	@	10

DRIED FRUITS.

Apples, evaporated, fancy, lb	6	@	6½
Evaporated, choice, per lb	5	@	5½
Evaporated, prime, per lb	4½	@	4¾
Evaporated, poor to good, lb	3	@	4¼
Sun-dried, S'n, sliced, lb	2½	@	3½
Sun-dried, State & W'n, qrs., per lb	2½	@	3½
Sun-dried, So'w'n, coarse cut	2½	@	2¾
Sun-dried, S'n, coarse cut	2¼	@	2½
Chops, per 100 lbs	50	@	1 50
Cores and skins, per 100 lbs	30	@	1 00
Raspberries, evaporated, 1900, lb	19	@	—
Blackberries, 1900, per lb	5½	@	6
Cherries, 1900, per lb	12	@	14

FRESH FRUITS.—Apples are getting scarce. Strawberries are coming in freely from North Carolina, and prices have dropped decidedly.

Apples, Ben Davis, per bbl	3 00	@	4 25
Baldwin, choice, per d.-h. bbl.	—	@	4 00
Baldwin, fair to good	3 25	@	3 75
Russet, com. to choice, bbl	2 50	@	4 00
Strawberries, Fla., prime, qt..rdlu fwypnin			
Strawberries, Ch'n, good to choice, per quart	16	@	20
N. C., good to prime	12	@	18
Norfolk, prime, per quart	18	@	20

HOTHOUSE PRODUCTS.

Lettuce, Eastern, per case	2 50	@	3 00
Cucumbers, good to choice, doz.	90	@	1 00
Radishes, prime, per 100 bchs	1 00	@	1 50
Mushrooms, good to prime	25	@	40
Cauliflowers, per doz	1 00	@	2 00

VEGETABLES.

Potatoes, Bermuda, prime, bbl.	6 00	@	6 50
Bermuda, No. 2, per bbl	4 00	@	5 00
Florida, per bbl	4 50	@	5 50
Florida, No. 2, per bbl	3 00	@	4 00
State & W'n, in bulk, 180 lbs.	1 37	@	1 62
State, per sack	1 40	@	1 60
Sweets, Vineland, per bbl	3 00	@	3 50
Sweets, other Jersey, per bbl.	2 50	@	3 25
Asparagus, Colossal, doz. bchs.	3 50	@	4 00
Extra large green, per doz	2 50	@	3 00
Prime, white and green	1 50	@	2 50
Fair to good, doz. bchs	1 00	@	1 25
Culls, per doz. bchs	50	@	75
Beets, Fla., per crate	50	@	75
Fla. & Ch'n, per 100 bchs	4 00	@	6 00
New Orleans, per 100 bchs	2 00	@	5 00
Carrots, Fla. & Ch'n, 100 bchs.	2 00	@	3 00
New Orleans, per 100 bchs	2 00	@	4 00
Cabbages, Ch'n, large, bbl. etc.	2 50	@	2 75
Ch'n, small, per crate	2 25	@	2 50
Florida, per bbl. crate	1 50	@	2 50
North Carolina, bbl. crate	1 50	@	2 25
Norfolk, per bbl. crate	1 50	@	2 00
Celery, Florida, per case	1 25	@	2 00
Cauliflowers, Fla., per bskt	2 00	@	3 00
Eggplants, Fla., per box	2 00	@	3 00
Green peas, Fla., per bskt	50	@	1 00
Savannah, per basket	75	@	1 00
Charleston, per basket	75	@	1 25
N. C., per ½-bbl. crate	2 00	@	2 25
N. C., per bushel basket	1 00	@	1 50
Kale, L. I., per bbl	85	@	1 00
Lettuce, N. C., per bbl	1 00	@	3 00
N. C., per ½-bbl. basket	50	@	1 25
Norfolk, per basket	50	@	1 00
Onions, Canadian, red, per bbl.	3 50	@	4 00
Bermuda, per crate	1 30	@	1 40
Egyptian, per bag, f. o. b	2 30	@	2 40
New Orleans, per bbl	3 00	@	3 25
New Orleans, per bag	1 35	@	1 50
Peppers, Fla., per carrier	1 25	@	1 50
Romaine, Bermuda, per crate	50	@	75
Fla. & Ch'n, per basket	1 00	@	1 50
Radishes, Norfolk, per bskt	1 00	@	1 12
Squash, Fla., new, per crate	1 25	@	1 75
String beans, Fla., wax, crate	1 50	@	2 00
Fla., wax, per basket	1 50	@	2 25
Fla., green, per basket	1 50	@	2 25
Fla., green per crate	1 25	@	2 00
Spinach, L. I., per bbl	1 00	@	1 25
Turnips, Canada, Russia, bbl.	75	@	80
Tomatoes, Fla., fancy, carrier	—	@	2 50
Fla., poor to good	1 25	@	2 25

BUSINESS BITS.

THE Osgood Scale Co., Binghamton, N. Y., would like to have three or four good live men in every county to look after their interests.

A NEW implement for hilling corn, potatoes, cotton and tobacco, is offered by Van Allen Whitbeck, Aquetuck, N. Y. For hoed crops this should be a great labor saver. Write for circular and full information.

"HOGOLOGY" is a pamphlet on the care and diseases of hogs and their remedies. It is issued by Jos. Haas, V. S., Indianapolis, Ind., who has had 25 years' experience in treating diseases of hogs. The pamphlet and special advice for your particular case can be had for the asking.

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To prove their confidence in their machines and to allow prospective customers full opportunity thoroughly to test them by actual use, the National Dairy Machine Co., of Newark, N. J., will send any dairyman one of their National hand separators for 10 days' free trial. Intending purchasers of separators will do well to send to the company for catalogue and particulars of the free trial offer.

THE line of compressed air sprayers offered by the Ripley Hardware Co., Grafton, Ill., commands the attention of fruit growers. The compressed-air feature has a great advantage over the old-style force-pump sprayers, and this company guarantees to fulfil every claim it makes for the implement, or will refund the purchase money. Circulars, prices and full information may be had for the asking. Address as above.

The Early Potato Crop.

THIS is the round and sweet potato section. Round potatoes are looking green over the fields. Some sweets are set out; weather cold and dry. S. J. C.

Cheapside, Va.

Our soil is a dark loam with a gravel subsoil, so we have natural drainage. I am pleased to report no rot or replanting, except a few low places where the water formed ponds. Acreage about as last year; early potatoes coming up. C. O.

East Williston, L. I.

I have an acre of swamp Hebrons planted April 11, in soil that is a sandy loam. The seed pieces were cut to one eye as a rule, and some of them are very small. One part of this acre is so low that I could not drain the water off it. In that particular spot the seed pieces are entirely gone, but elsewhere I failed to find any that were rotted. May 7 I counted three sprouts above ground. They were planted about three inches below the surface, and the ground was harrowed level. April 13 and 14 we planted five acres of Green Mountain and Carman, and April 17-18 we planted six acres of Sir Walter Raleigh and Carman on very heavy but well-drained loam, and a careful examination a few days ago failed to reveal any rot. The acreage planted in this vicinity is about the same as last year, but potatoes are planted very much later than last year, and late plantings as a rule have a hard time to make a showing, as the bugs find them even before they get out of the ground.

Syosset, L. I. J. S. B.

FRUIT CROPS.—The outlook now is good for a fine fruit crop this season. The apple and plum trees are loaded with blossoms. If there is no frost the prospect is good. The grass crop is looking fine for this time of year. The Spring was favorable for clover roots. The clover crop has been light here for the last two years.

Antwerp, N. Y. L. S. R.

THE present outlook is bright for small fruit; pears and cherries are blooming full; apple trees seem to be laying off this year, especially Baldwins and Greenings. Many other kinds are budding full. Only about one farmer in 10 sprays his orchard, yet all realize we must do it if we expect good fruit. I. S. J.

Otsego Co., N. Y.

So far the season is backward, with cold winds. Apples not forward enough yet (May 6) to tell. Plums, Lombard, will bloom full; cherries, what few there are, and pears I think the same. We had plenty of rain so far, and grass is looking well for this time of year, but winds are cold. Some have finished seeding; others not commenced back on hills where ground is naturally moist. A. H.

Sherburne, N. Y.

During the sixty-two years that Dr. D. Jayne's Expectorant has been used in the treatment of Pulmonary disorders, the percentage of cures has largely increased. Undeniably, IT HEALS THE LUNGS.—*Adv.*

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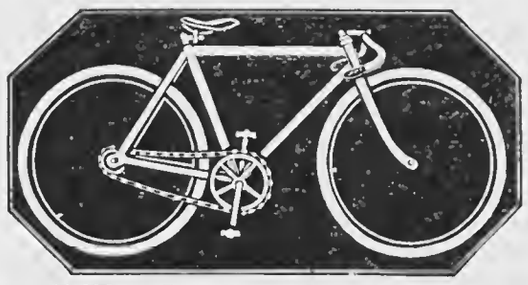

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THE RURAL NEW-YORKER, NEW YORK.

Market Briefs.

PICKED UP HERE AND THERE.

LAKE TRAFFIC.—The American and Canadian canals connecting Lakes Superior and Huron, are the highways over which large quantities of merchandise pass during the season. For the month of April 104 vessels passed through these canals, either east or west, carrying a total freight of 2,545 tons. The largest single item was grain—23,500 bushels.

APRIL FIRE LOSSES for the United States and Canada amounted to $11,352,800, less than half the loss for the same month last year. The Jacksonville, Fla., disaster, which will be figured in the May report, will about bring up the total for the first five months to that of last year. The largest single item for April was $650,000 for a St. Louis grain elevator. Most of the fires ranged from $10,000 to $75,000.

THREE NEW TRUSTS.—Straw hats, oilcloth and music are now applying for enlistment in the army of combinations. If the exactions of the first two become too oppressive, we may have to go back to the bare-headed and sanded-floor modes of living of our ancestors; but we understand that the music trust is not to take in the hand organ, horse-fiddle and squeejunk, so there is no immediate danger of a musical famine for those who decline to patronize this proposed monopoly.

HEAVY LEMON SALES.—A Mediterranean steamer loaded with oranges and lemons has arrived at Montreal, Canada, and the cargo is being disposed of at auction. On May 7 about 100,000 boxes of oranges and lemons were sold, prices for the latter ranging from $1.35 to $2.75 per box. New York lemon dealers were on hand and bought heavily. The oranges did not sell well. California lemons, while of good quality, do not take the place of those from Sicily. Analyses have shown that the latter contain a larger pereentage of citric acid, which is thought to be due to peculiar conditions of soil and climate.

WASTED LABOR.—Some apple packers have queer ideas. In one commission house was seen a barrel of inferior Greenings, every apple wrapped in tissue paper. The man who sent them evidently thought that the paper and extra work done would sell the poor fruit for a big price. The apples should have been sold in the early Winter. Many of them were partly rotten, and the dealer said he had not been able to get an offer for them. It is a pretty safe rule to sell Greenings in the Fall, as they do not keep well, and will not stand handling. Those who wish to hold apples for a late market would better depend on Newtown, Baldwin or Ben Davis.

PLENTY OF ONIONS.—On the White Star Line steamer Georgic, from Liverpool, is an uncommonly large shipment of onions—nearly 17,000 sacks, valued at about $40,000. Old domestic onions are scarce, and this causes an increased trade in Egyptian stock. Quite a percentage of the onions received here are consumed by the foreign population, particularly the Italians, who use them in combination with red peppers in a variety of ways. They also work well in stews or hash in the type of eating houses where a man who has a steak for supper is quite likely to renew his acquaintance with the tough and uneatable portion in the hash he has for breakfast.

THE MAN WHO LEANS.—He is found in crowded street cars, and is apparently so lacking in common sense and decency that he sees no impropriety in leaning against his neighbor, whether man or woman. He is usually well-dressed, and a big, able-bodied man, muscular enough to hold himself up. The one remedy is to let him lean for some time, then suddenly move to one side and note his wild efforts to keep from falling. This trick was neatly done in a Broadway cable car. The car was not crowded, there being room enough so that those who were standing need not have brushed against each other at all. One of these hogs was reading a paper, and instead of hanging on a strap, leaned against another man, who stood it for a time. As the car neared one of those sharp curves, around which they go so swiftly as almost to throw people out of their seats, he got a firm hold of the strap, and as the car flew around the corner, he lurched to one side, so that the leaner fell flat on his back, to the amusement of the other passengers.

HEAVY TRADING.—The business done on the New York Stock Exchange for the past month has been enormous. More than 630,000 transactions were recorded in a single hour, and the brokers' commissions for buying and selling in one day amounted to nearly $400,000. Demoralizing as some aspects of this business are, it does not merit the wholesale condemnation heaped upon it by those who denounce all Wall Street operators as cutthroats and thieves. It is true that unusual opportunities are given for taking advantage of the ignorance or misfortunes of others, and the loser is often ground into the dust in a way that seems heartless, yet these are not the methods of all Wall Street men. The effect of such a boom in stocks is bad on many young people, clerks and stenographers, both men and women. They see how the investment of $100 on a margin may in one day bring them more money than they could earn at their work in months, and take the risk. In many cases the worst thing that can happen to them is to win, because after one taste of easy money-making, they will never be satisfied with the slower method of getting what their labor is actually worth. No young person knows the value of a dollar or how to spend it wisely unless he has earned it by work. The conversations overheard at this time between young men in street cars and restaurants indicate that the one thing uppermost in their minds is stock speculation. W. W. H.

A Good New Apple

I am the ardent champion of fine-flavored fruits. Nurserymen often fail to grow deserving varieties because they do not make straight young trees, so they do not "deliver well." The Mann apple is a well-known instance of a very poor apple sent all over the land for the reason, as I happen to know, that the young trees grew straight and "delivered well." Good quality is the only criterion of merit. Last Autumn, while gathering a collection of 100 varieties of Winter apples for an exhibit of northwestern Michigan fruits at the Pan-American Exposition, I found a Kalkaska County apple I named Wolverine, which is the greatest hustler and barrel-filler of any apple I know. It was first spoken of in public and exhibited at Michigan State Fair in 1900. It bloomed at four years from seed, and has been heavily loaded every year for sixteen years without fail, and with its cloud of big leaves and large white blossoms, it gets there in spite of cold weather, having passed through 40 degrees below zero unharmed. This and another new variety will probably be exhibited at Buffalo. I visited Olivet in search of scions of favorite apples of my school days; Early Joe, the finest early; Primate, Dyer, Sops of Wine, Gravenstein, Ohio Nonpariel, and McDonald, the last a seedling. Four years ago, when I was engaged in buying apples at Lee, a seedling tree bore a heavy load of smooth, light green apples, with a deep red cheek. These I called Van's Blush, and they sold readily. As I approached the tree recently, behold a pile of brush made of its once symmetrical top, and firewood sawed and split out of the smooth body. The storm had uprooted it, and thus the history of another new apple seemed ended.

Charlevoix, Mich. F. M. B.

Hudson River Fruit Transportation.

On May 3 the transportation committee of the Eastern New York Horticultural Society and representatives of other organizations met at Newburg, N. Y. Among those present were J. A. Hepworth, Chas. Forster of New York, J. S. Hosford, J. S. Carpenter, E. R. Martin, E. B. Covert, J. R. Clark and H. W. Collingwood. They first called upon W. H. Weston, president of the steamboat line which carries a large proportion of the fruit of that section to New York. No time was lost in making known their chief wants, which are: More careful handling of fruit; better service in returning empty crates.

Shippers who were present described the way in which deck hands sometimes play ball with crates or boxes of fruit. They seemed to convince Mr. Weston that they knew what they were talking about, and that reforms are needed. Chas. Forster corroborated the statements made by shippers—in fact, there was no chance for an argument, and Mr. Weston agreed that more careful service must be given.

The empty crate question is an old one. At present the crates are brought back and dumped—none too carefully—on the dock. Each fruit grower is supposed to help himself from the pile. The result of this careless system is that some men get more than their share, while others are short just at the time the crates are most needed. Sometimes a man will order 100 crates from his commission man, only to find that some neighbor has come in ahead of him and taken half or more for his own use. It is easy to see how much confusion and trouble this lack of system means. The fruit shippers want their crates sorted and piled so that each man may get his own and give a receipt for them if necessary. In other words, they want these crates carried and handled like other merchandise. They cost money and are a necessary part of the business. If it be said that they are carried for nothing, the answer is that more than enough is paid for carrying the full crate to cover the round trip. These things were made so clear and plain at the meeting that there can be no chance for an argument. Mr. Weston certainly talked fairly, and seemed disposed to do his best to improve the service. The men who were present represented a good deal of freight, and all of them understand the situation and the remedy, if needed.

The committee also met P. K. Bushnell, representative of the National Express Company, and told him in a business-like way what was wanted. He promised that crates would be returned promptly and in good shape, and properly delivered. He also guaranteed quick and careful service in handling fruit. We think this was a good day's work for the fruit growers of the Hudson River Valley. Much of the credit is due to J. A. Hepworth of Marlborough, the chairman of the committee. This work simply shows what would happen if any large proportion of fruit men in the valley would fall in behind the committee and push hard.

CUTTING SMALL POTATOES.—Planting seed ends of small potatoes certainly does not pay. For 15 or 20 years, when using small seed of long varieties, I clip the seed end and throw it away, and divide the remainder into two pieces. This method, by several trials, has given more merchantable and less small potatoes than would be the result if all were planted. Small seed, hen's-egg size, for instance, has too many eyes unless cut too small. A good-sized piece with two good eyes with us is just right. Whole seed is sure to give a multitude of small and few large tubers. We plant with an Aspinwall planter. B. B.

Sardinia, N. Y.

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"I was taken with severe headache," writes Thomas A. Swarts, Box 103, Sub-Station C, Columbus, Ohio, then cramps in the stomach, and my food would not digest, then kidney and liver trouble, and my back got weak so I could scarcely get around. I just gave money to the doctors whenever I thought they would do me any good, but the more I doctored the worse I got until six years passed. I had become so poorly I could only walk in the house by the aid of chair, and I got so thin I had *given up to die*, thinking that I could not be cured. Then I saw one of my neighbor boys and he said, "Take my advice and take Dr. Pierce's Golden Medical Discovery and make a new man out of yourself." The first bottle helped me so I thought I would get another, and after I had taken eight bottles in about six weeks I was weighed and found I had gained twenty-seven (27) pounds. I have done more hard work in the past eleven months than I did in two years before, and I am as stout and healthy to-day, I think, as I ever was."

Dr. Pierce's Pleasant Pellets cure biliousness.

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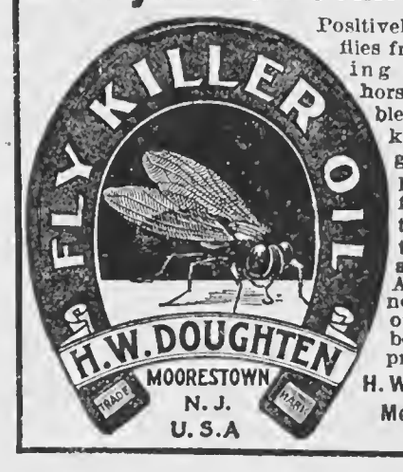

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Most people like a nice ring. We show three styles. These are made by drawing a shell of gold over a rod of composition metal. They are better and will wear longer than solid gold rings of a low carat. The retail price would be from 75 cents to $1. We will send one of these rings postpaid as a reward for sending one new subscription at $1. Cut a slip of paper the size of finger and send for size.

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THE RURAL NEW-YORKER, New York.

Live Stock and Dairy

THE BREEDER'S WAYSIDE.

The Number of Pigs to the Litter.

How large a litter of pigs should a sow farrow? That depends. A young sow should not have as large a litter as a mature one. A sow in poor condition during pregnancy should have a smaller litter than one in strong breeding flesh. Each mother should be in such bodily condition as would best enable her to stand the drain of suckling her offspring. Immaturity or unsuitable condition calls for relatively small litters. If a sow has the capacity to produce ample milk to suckle eight pigs until 10 weeks of age, and keep them growing strong and healthy, then it is a loss to the breeder if she kills a part of her litter, or farrows any number less than eight. The most profitable use of any sow calls for the production of the greatest number of pigs possible, which may be reared without detriment either to them or the dam. A good brood sow will, of course, usually lose in flesh while suckling a full-sized litter, but this is not to her disadvantage, as it is a perfectly natural operation. As soon as the pigs are weaned, she will rapidly take on flesh if fed sufficient food. Before weaning, her appetite is greatly increased, so that she consumes enough more food to supply her pigs from this increased consumption.

Personally, I desire a sow in her first litter to farrow at least seven. She should produce these at about 12 or 13 months of age. In her prime I consider a litter of 12 as large a number as she should ordinarily suckle to weaning time, though some sows are capable of handling more. From these larger litters any inferior, undersized runts should be destroyed, and only vigorous, growthy pigs kept for suckling. In fact, runts from any litter should be destroyed. Sows that farrow only four or five to the litter are not doing satisfactory breeding service. This condition usually occurs with short-bodied, chunky sows. The better type of brood sow should be fairly long-bodied, on short legs, and with deep sides. Her back should also be strong and straight, sagging being very undesirable. Her mammary development should be superior. While suckling, the glands of the udder ought to be shapely, with teats of good size, so that the pigs shall be able to suckle easily. A person does not usually need to keep brood sows with little short teats, or with milk glands of a defective character, where pigs have to work hard to obtain nourishment. People do not often enough take note of this important feature of the brood sow.

Now the question arises, should a person producing pigs for breeding purposes prefer a smaller litter than the one breeding for feeders? I see no reason why there should be any difference here. In either case, the pigs should be kept growing as fast as possible while suckling. The real difference in handling comes in after four months of age. Then the pig designed for the pork barrel may begin to have a greater fattening food than the one to be used for breeding, and at six months of age the diet of the two groups of pigs should be materially different. The lard pig of to-day, the chubby, dumpling sort, is deteriorating. Litters are becoming far too small, and profits are thereby lessened. Our breeders should look for a growthier, more productive pig in offspring. This oftentimes means the difference between profit and loss. There are certain individuals that farrow much larger litters than others, and by selecting from these one may develop a strain that will do far better in farrowing than selecting indifferently. In purchasing purebred pigs, buyers will be wise to ascertain the size of litters from which stock is offered them. Records of this sort are kept by all breeders of importance, and are filled with registration papers of pigs recorded. C. S. PLUMB.

Trumansburg, N. Y.

THE CARE OF INCUBATOR CHICKS.

I have fair success in hatching incubator chickens, but when one puts 50 or 75 nice lively chicks in a good brooder and gives them good care, and as it seems to me treats them "according to Hoyle" and they die by the two, three and four, one is naturally disheartened, and not willing to give up, I begin to look around for sources of information and advice. They stand around, sleepy-looking, and the next one knows they are dead. The eggs are laid by Golden Wyandottes, and Barred Plymouth Rocks, and the hens appear healthy, though confined in yards. I have fed these chicks oat flakes and some johnny cake made with chick-size grit in it, and they have grit and charcoal by them most of the time. Sometimes they droop and die when only a few days old, and again at a month old. They always seem hungry. M. W.

Patterson, N. Y.

Your information is rather meager of details concerning the care and food of these birds and their symptoms. If they hatched in good form the breeding flock is all right. Fifty per cent in chicks from incubator eggs is considered fair. They should, when due, come out prompt and lively; not drizzle along a few at a time, struggling out feebly. It is presumed that these were out with a rush. They should be very carefully changed to the brooder and not chilled; the heat kept as near 90 degrees as possible for the first week. Also, they need air, plenty. My brooder covers are both open a little and we enlarge the space as the birds grow older and the weather moderates. As the chicks absorb the yolk of the egg the last thing before they break from the shell, they are provided with food for 48 hours. The best plan is to leave them in the incubator two days after the hatch (if it is over on the twenty-first clean out the trays, but leave the chicks in the machine till the morning of the twenty-third). Have the front of the brooder covered with sand, and crush up your eggshells fine and scatter over. Have the chill off the drinking water, and if you put in a pint about five to 10 drops tincture of iron, it will prevent, so it is claimed, the "pasting-up behind." Let the chicks drink and pick at the sand till the afternoon, and then give them their first feed. Bread crumbs moistened and squeezed dry in milk are good, and cracker crumbs—but get them into hard food grains—so they can scratch and exercise soon as possible. Of course they need a variety of food, and many methods are advocated, but the main point is not to overfeed at first, or force them by too high temperature and too strong diet. They will perhaps stand it for the first three weeks, then they begin to die off like poisoned flies.

If they are anywhere near your breeding flock, or if you put with them chicks hatched under a hen, your babies will surely have lice. The "standing round, sleep-looking" sounds as though this is the trouble. There is a large gray louse on the head that bores into the brain and kills the chick. Mix up equal parts of melted lard and kerosene oil and rub a little in on the head and under each wing and around the vent; not enough to daub the bird up. Also, the insect powders are good and useful. After the first week begin to lower the heat in the brooder so that at the close of the second week it is 80 degrees, and at the end of the fourth it is 70 degrees. Four times a day is enough to feed; make them scratch for the early morning; then a mash, just what is eaten up clean, and the other two feeds grain in the litter, a generous supply at night. Oat flakes are good, but some way what suits one flock does not always do as well with another. I find it so with my ducks. If they don't seem to thrive and do well on one kind I substitute another. Bone meal and grits always at hand for them and green bone or beef scraps may be fed when 10 days' old, five per cent of the bulk of their food, gradually increasing to one-tenth when three months old. A close study of the ways of the hen with her little ones helps greatly in successful artificial rearing of chicks. F. E. W.

Chazy, N. Y.

THE "ROOTS" ON A HOG.

What can I do to stop my hogs from rooting up their pasture? I have rings in their noses, but still, when the ground is soft, they tear it all up.

I find that hogs are sometimes troublesome to control against rooting in wet weather. I have found that when they are rung well back in snout, so that the twisted end will not turn out of its naturally projected place, when trying to root it is much better than when not set back so far. In this way the projecting part is generally held in place and is the cause of keeping their noses somewhat sore continually while trying, thus causing disgust on the part of the hog soon. The instrument I see advertised as cutting out the center of the end of the hog's snout, I should think effectual. ARTHUR J. M'CAIN.

Delaware, N. J.

It is natural for a hog to root in soft, damp ground, and when it is in that condition I don't think ringing or clipping the end of snout any use. I keep our Berkshires off the pasture when the ground is soft. *Never ring or clip snout.* When the ground is reasonably hard and pasture good I turn out the Berkshires—first drawing a load of two of coal ashes with a barrel of salt mixed with them to the pasture lot. This mixture the hogs root over, finding what their systems require to tone up the stomach; then feed some grain, and we never have any trouble in having pasture rooted up only in soft, damp spots, which they will root over to wal'ow in.

Trumansburg, N. Y. R. H. STONE.

"Ed" Blair, of Cadmus, Kan., known locally as "the melodious poet of the Osage," has written the following lines on the hen:

Cackle, cackle, Plymouth Rocks,
Ye can have the wagon box,
'N' the smokehouse, 'n' the barn,
Take 'm—we don't care a darn.

Cackle here and cackle there,
Lay your eggs just anywhere,
Every time ye lay an egg,
Down the mortgage goes a peg.

Cackle, cackle, all the day,
Who kin find a better way
Fer to glt ahead again
Than to cultivate the hen?

BROOD SOW NOTES.—If sow is a good eater, and by good feeding gets thin with a medium sized litter (seven to eight pigs) and pigs are growing well, the sow is a good milker. If sow keeps in good condition with medium litter and pigs are not gaining well, she is a poor milker. About every sow gets thin, suckling a large litter, but a good milker gets very thin. A brood sow that is a poor eater is no good, and I would not keep her long. C. J.

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contracted cord, thrush, grease heel and all forms of lameness yield readily to

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Used and endorsed by Adams Express Co.

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ready for service, and a fine lot of Bull Calves. Best of breeding, and from deep producing families.
C. K. RECORD, Peterboro, N. Y.

150 DeHlhurst Holsteins
for sale, including young Cows, Heifers and a great lot of BULL CALVES—several now ready for service—sons of "DeKol's Butter Boy", and the famous "Royal Paul" out of advanced Registry cows. Catalogue.
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Reg. P. Chinas, Berkshires and *O. Whites*, Choice Pigs, 8 weeks old, mated not akin. Bred Sows and Service Boars. *Poultry.* Write for *hard times prices* and free circular.
HAMILTON & CO., Rosenvick, Chester Co., Pa.

2000 FERRETS. First-class stock. Some Trained. New price-list free.
N. A. KNAPP, Rochester, Lorain Co., O

Collie Pups—Spayed Females. Circulars. SILAS DECKER, South Montrose, Pa.

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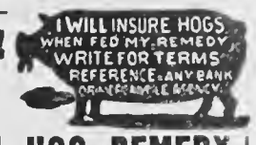

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has come to the front. There is not to be found in the materia medica a preparation of such penetrating, absorbing, soothing, antiseptic healing power. Seemingly incurable or aggravated chronic cases of scratches, grease heel, mud fever, old sores, inflammatory swellings and skin disease can be positively and permanently cured.

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2 oz., 25c.; 8 oz., 50c.; 5-lb. pkge., $4.

At all Druggists and Dealers, or sent prepaid

TROY CHEMICAL CO., Troy, N. Y.

DAIRY AND FARM NOTES.

WINTER WHEAT.—I am surprised at the outlook for our Winter wheat crop. Last year the Winter was not as favorable as I judged it, and we harvested 30 bushels to the acre. Lewis County is not a Winter wheat-growing section. Last Fall we seeded 45 acres and looked for a good stand. The ground was covered before freezing, and snow remained on till warm Spring weather took it away, and but little freezing and thawing subsequently. The stand is, to my surprise, not good. It apparently smothered worst where the snow was deepest. One small piece of two acres was sown about a week before snow and Winter came. It is the only perfect stand.

BUYING CLOVER SEED.—I am tempted strongly to reduce the amount of clover to the acre this Spring. It seems like a big bill to pay, and cheese prices two cents lower than last year. I am trying to convince myself, and have a clear conscience, that seeding in former years has been too heavy. The truth has finally conquered, and a few figures showed that I could not possibly save more than 30 to 40 cents an acre, and that would buy just three pounds of nitrogen either in cotton-seed meal, dried blood or nitrate of soda. Two years ago we failed in northern New York to get a catch of clover. Thousands of dollars have since been spent by the farmers in payment for gluten feed and other protein foods to take its place.

PURCHASED PROTEIN.—The growing of protein on our farms is the burning question to-day for the eastern farmer. This continual purchase of such an immense quantity of gluten, linseed, brewers' grains and other protein food is getting burdensome. The seller of milk in the East is often accused of drawing a can of milk to the station and a bag of feed from the mill to the barn. No statistics are at hand to show the amount of cattle food shipped into a locality for a period of years. But in the old milk shipping sections of Orange Co., N. Y., feed has been purchased liberally for years, and the soil should have steadily increased in its crop-producing power. I was interested last Winter in making inquiries at Pine Bush, Unionville, Washingtonville and Bloomingburg, when attending institutes, whether or not the farms were yearly increasing in fertility. The great majority of answers were in the negative. A ton of milk contains $2 worth of plant food, all removed from the farm. As near as I can compute, 500 pounds of protein food will be purchased for its production; in the Winter much more, but in the Summer much less. The plant-food value of this 500 pounds will average $2.50 at a careful estimate, and often, when cotton seed is fed, perhaps double this amount. The farm is therefore receiving more in plant food than it carries away, *if* all is saved. The *if* is the trouble. No section of the East is free from this extravagant waste in stable manure. Far-famed Orange County, just mentioned, is guilty as well as northern and western New York. We have been buyers of feed on our farms, perhaps too extravagant. We have the satisfaction, however, of seeing a gradual but constantly increasing production. Two causes are responsible for the increase; a careful husbanding of the manures, using absorbents, and getting the manure to the field as soon as possible. Increasing fertility not only provides for larger crops of corn and hay—the great backbone of dairy feeding—but enacts an enabling clause for the culture of the protein crops. What shall they be? For New York latitudes oats, peas and Red clover, with Alfalfa where it will thrive. No more satisfactory ration can be compounded than 30 pounds of silage, not too rich in corn, six to eight pounds of oats and peas ground, and as much clover hay as the cow will clean up and still think she would like a little more, all grown on our own farms. Available fertility must be at hand to do it.

NEW PASTURES.—Cows are being turned to pasture in some localities as I write, where a most scanty subsistence will be furnished for two or three weeks, and too often all indoor feed will be withheld; a serious mistake. I know of farmers who repeat it year after year without learning the lesson. Of course they are short of feed. Then for the cows' sake, if for no economic reason, either grow more silage corn or sell cows. Keep up the hay, silage and grain feed for the cows. I prefer hay and grain rather than silage at this time; we need to keep the bowels in proper condition, and hay aids much in neutralizing the looseness of the bowels. We have fed many different grains and mixtures. I am inclined to prefer wheat bran or oats. The succulent grasses are not muscle-producing. The cows have been standing quiet during the Winter, and when they are allowed their liberty or required to walk long distances in search of food, they need a muscle-producing food. Nothing supplies the want as well as oats. Wheat bran is usually cheaper; that is, the protein content costs less. It is, however, a narrow food, and does not therefore balance the grass food. The oats contain more carbohydrates and the nerve-producing element as well.

GARGET TREATMENT.—It is also a dangerous time for garget. Garget comes, I am satisfied, from a cold more often than we are ready to admit. The udder, which has come in contact only with a well-bedded warm floor, is altogether too sensitive to come in contact witn cold, damp ground. Said one of our foremen a few days ago: "A man needs to be a V. S., understand all about foods, and their effect, have patience and the ability and disposition to work hard every day in order to take care of a dairy." That's about it. The observation was brought about by a case of garget. Dr. Smead, the well-known institute worker, and V. S., of our State, first gave me the presently accepted remedy for parturient apoplexy, and it occurred to me that it might also be used without danger for garget. We have used it with some success: One-half ounce iodide potassium dissolved in one pint boiled soft water, using it as an injection for each teat, or one-quarter of it for one teat; one-half for two teats. I give this for what it is worth. Garget has been a most difficult disease to treat, because the animal becomes fevered and affected through the whole system before the owner is aware of it. Be careful that your cows do not take cold during the month of May. If the cows are not fleshy add a quart of cornmeal daily to keep up steam.

SHELTERED COWS.—Cows should be kept indoors nights until the ground is warm, and then it's my candid opinion that they are very much better off on the ground than in the barn. There is certainly a limit to artificial conditions; constant stabling, heavy feeding—in other words forcing the cows to work under milk pressure all the time—is not wise. The old custom of outdoor exercise for eight hours a day has been followed by an indoor extreme. We have one stable full of cows, 50 or more, that have been working too hard the past Winter, and they will have to take a rest. One grade Holstein, a 10,000-pound cow, has given milk continuously for several years. She has now taken matters into her own hands, and dried up completely six months before she is due to freshen again. From past experience of this kind I expect this cow has done her good work. She is getting very fat on hay and silage. We shall keep her and report later. The advocates of wholly artificial conditions, close housing, etc., are honest in their conviction, but their judgment has been based upon premises entirely different from the surroundings of most farmers who rear their own stock and keep a cow as long as she is profitable.

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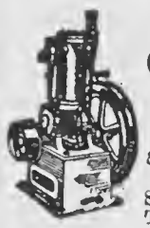

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TOMMY: "Father, didn't you say we had a new baby?" Father: "Yes, my son, why?" Tommy (in a tone of conviction): "Well, you've been regularly taken in. It's as old as anything—quite bald, and not a tooth in its head."—Pick-Me-Up.

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TEACHER: "Now, Tommy, suppose you had two apples, and you gave another boy his choice of them, you would tell him to take the bigger one, wouldn't you?" Tommy: "No, mum." Teacher: "Why?" Tommy: "Cos 'twouldn't be necessary."—Tit-Bits.

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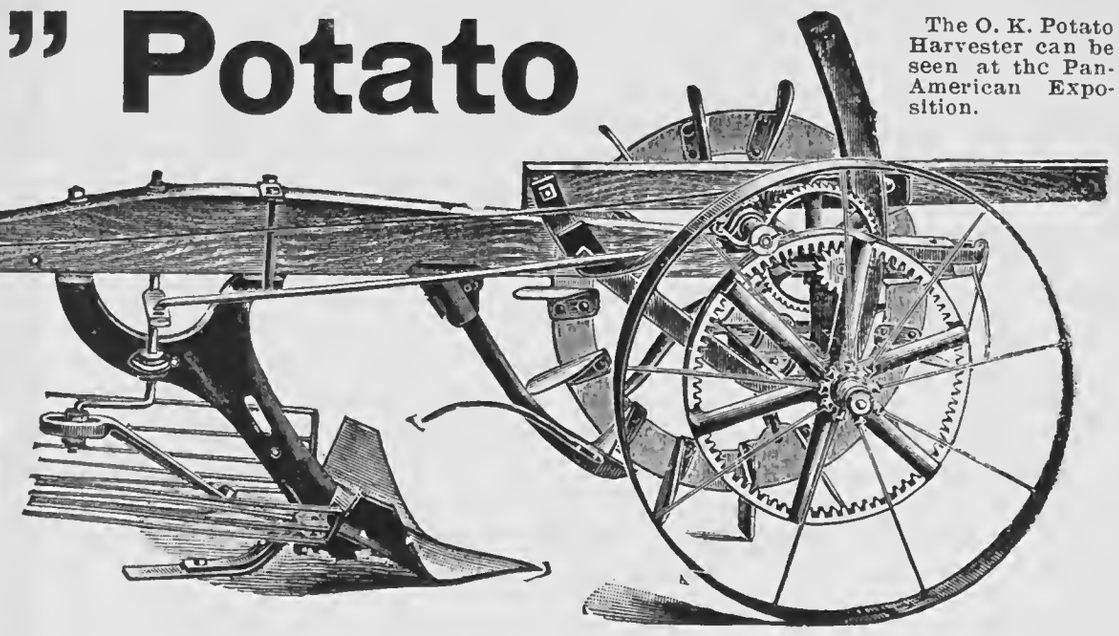

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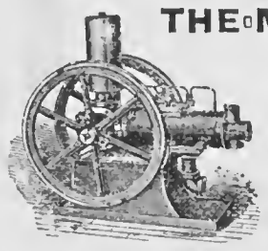

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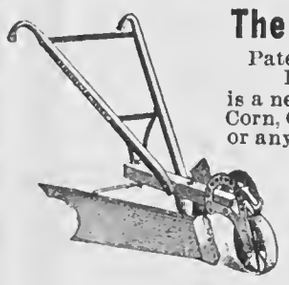

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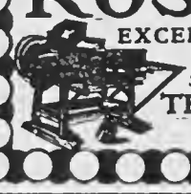

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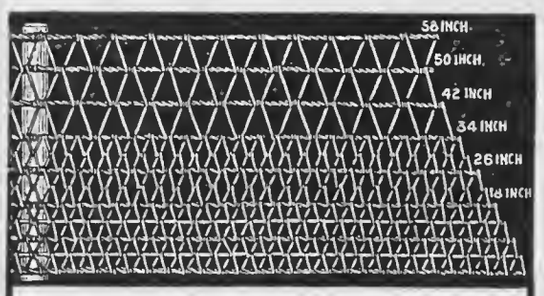

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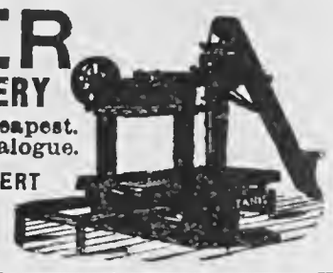

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BENEFITS OF THE CENTRALIZED SCHOOL.

CHILDREN CARRIED TO THE TOWN CENTER.

How It Works in Ohio.

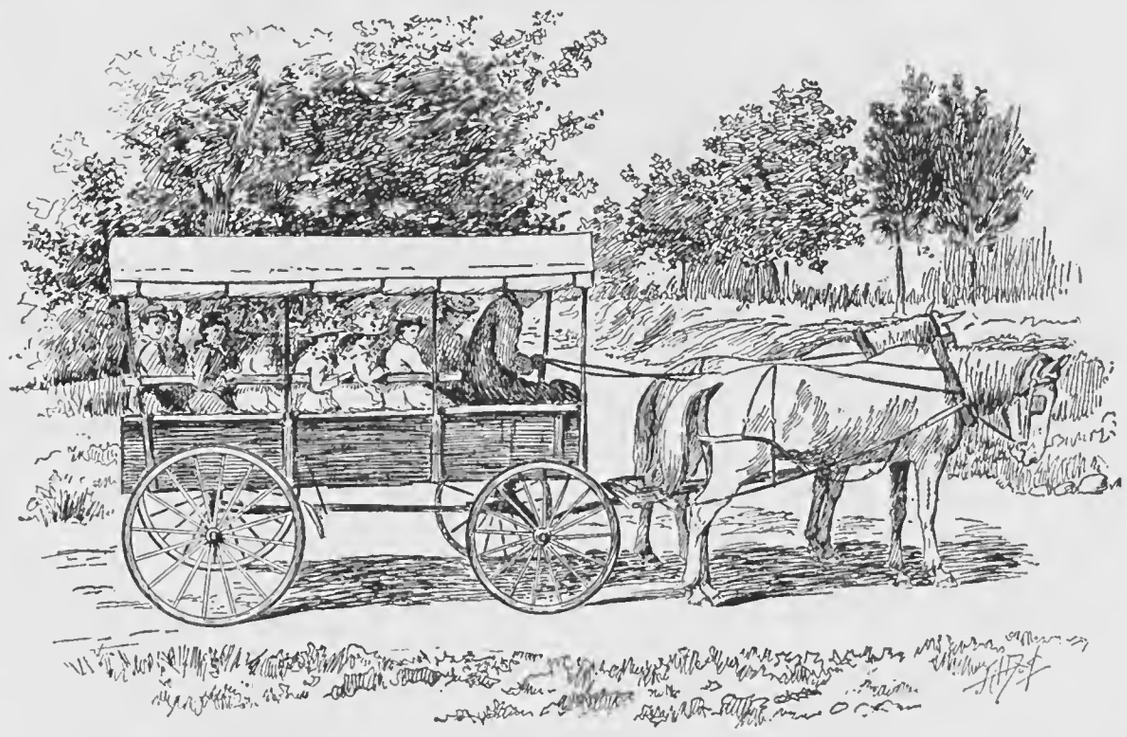
It was an early Spring morning. A cold, misty rain was falling, interspersed with snow squalls; the wind was strong from the northwest; under foot, the mud and water were having a "spat" for supremacy, and all nature seemed to be having a spell of "outs." Yet in the midst of it came the school wagonette drawn by a span of stout horses; while inside, protected from storm, wind, and mud, were 19 children bound schoolward, and all singing "Coming Thro' the Rye"; two youngsters were added to the load, the boot was again buckled up, and the song went on as the happy, dry little company finished their trip of a mile to the centralized school. When they had passed out of sight, I recalled reading last night an address delivered by a man who spoke of "hauling down the flag from the little red schoolhouse," of "children carted to school like calves, and pigs," of "children in a wagonette, and in the big schools, losing their individuality," of "increased expense," of "thousands of teachers being thrown out of work?" of "poor children being unable to attend schools because of poor clothing as compared with that of the village children," and lastly, "centralized children never came back to the land." All this in opposition to the plan of centralized schools. What are the facts in practice? Our township has had centralized schools on trial, and as a permanency now for over five years, and none of the things alleged above has been detected, and we believe never will be in a well-conducted system of rural schools. The idea of "taking down the flag," etc., is all sentiment. The flag waves just as protectingly over our centralized schoolhouse, the flags and emblems in the school rooms are as educational, and the patriotic songs sung by the children have the same inspiring ring, only deepened in volume, that they did in the little red schoolhouse. As to the children losing their individuality more by being taken to school in a warm, comfortable wagon, with order and decorum maintained—if needs be—than by children in groups tramping through mud, snow, cold and storm, as well as sunshine, to a school often 1½ to two miles away, it is hard to see. So far as good clothes are in evidence, the centralized school recognizes merit and proficiency for promotion, rather than clothes, and it is a fact that in this school referred to, it is the children of the poorer class of parents who stand, as a rule, in the highest lines of promotion for attainment and intelligence. I know that calico dresses and patched pants, if coupled with cleanliness and good behavior, work no detriment to any scholar. The idea that children are "carted to school like calves" is only to invoke the retort whether it is not as applicable to the children that parents send on foot through all kinds of weather to the rural school, where often the comforts and "conveniences" are as primitive as about an Indian tepee.

As to the centralized children not coming back to the farm, it is on trial, but they are as likely to remain in the country, as they would be to return to it after an education acquired in city or some educational center away from the influences of country life. Where the education of mind and hand goes together, as it does in the country in centralized education, and the education grows apace with the participation in farm work, and rural life, and its independence of shop rules, and freedom from dependence upon the turns of the labor market, we think the land will claim its full share of the centralized education. To my mind one of the greatest benefits of the centralized school, is in abolishing the clanship incident to the division of the rural schools; each neighborhood thus becomes a clan, with but little interest in community at large, and the matters of acquaintance of children in different parts of a town are slight. Often the pupils of the school at the center of the town—for there is, nine times out of ten, an embryo village in each town center in Ohio—are regarded by the rest of the children of the town at large, as of quite another race, and appointing themselves aristocratic prerogatives, which the brief association for an hour in the Sunday school does not wholly eliminate. Now all children of the town are of our community, and merit wins, not the parental possession of dollars, or being a factor in some "sphere of influence." One scholar is as good as another, and talent and deportment are the only avenues to merit, and in our school, the scholar from the back district is as often recognized as those to the "manor born."

It is not here contended that the centralized school is as yet perfect. It is in a state of evolution, but each step seems the better move towards solving the question of a better education for the rural boy and girl. In average attendance, the new plan far exceeds the old. In some towns the attendance is 25 per cent better on the average. It is fully that in our township. Then it promises to add at least two years more schooling to the school life of the pupil. To be taught along ever unfolding and new lines in study inspires, where the ever going back to retraverse old study byways, causes listless and lifeless ways, even to desertion of school life. The cost is less in most instances. The transportation of a school district to a central point is less than the cost of its separate maintenance. In some towns the centralized plan saves hundreds of dollars. In some the cost is about the same. In a few, where causes have been beyond the board's control, the cost is more, but in all cases, the instruction vastly compensates for the slightly increased cost. Granted that the cost is the same as by old methods, the ease and comfort in attending school, the increased attendance, the system of study and promotion, the increase in total months of school life, the actual participation in what actually amounts to manual training, rural education and life together, is not the centralized school a plan and a possibility worth striving to attain for the country, making rural life more worth the living? Shall this car of educational progress be helped forward, or its movement hindered?

JOHN GOULD.

Portage Co., O.



CHILDREN CARRIED TO AN OHIO CENTRALIZED SCHOOL. FIG. 147.

CORN-GROWING IN THE CENTRAL WEST.

Thick Planting for Shredded Fodder.

PART II.

SEED AND PLANTING.—It is not enough for seed corn to grow. It will often grow when its vitality is quite weak. Investigation shows that the crop is lessened more than commonly thought by lack of vitality in seed that grows fairly well. Experiments in peas where large and small sizes are planted show remarkable advantage in size alone. The greater abundance of starch stored in the seed gives the tiny plant a rapid, vigorous growth that is an advantage over weeds and weather that it never loses. In selecting seed corn how seldom one pays attention to size of grain, or to large vitality! With weak vitality corn will often start, especially if the weather is favorable, and if cold, damp weather comes, insects will destroy it and the soft grain sour. Nature covers the ear with shucks, and beds the germ in a cob with a layer of silk between the grains as high as the germ. Man ruthlessly strips off all protection and cords the ears on a brace in the barn, subject to every change of temperature and moisture.

VITALITY OF SEED.—A seedsman once said to me that he did not keep a fire in his corn crib in cold weather, but in muggy weather; that the moisture that is deposited on a rock will be absorbed by seeds, and that a sudden cold snap following such dampness is sure to injure the vitality of seed. On this account he keeps a fire in his crib in warm, damp weather to keep his corn dry, instead of in cold weather to keep corn warm. I have written far and near to learn definitely of the effect of cold on the vitality of seed corn, but from stations I have failed to learn of any experiments to test this effect of cold. This is passing strange to me, since the corn plant has been studied from every other standpoint. One station replied that it was so well-known that moisture and cold injured seed, that it was not thought worth while to test it. Another said that corn kept in cribs with no shuck on would not absorb moisture enough to weaken its vitality. They had not experimented any at all, and I do not know how they obtained information. It is decidedly contrary to experience. One experimenter said that he thought its vitality was damaged more by fungus attacks than by subjection to cold and dampness.

CARE OF SEED CORN.—This whole subject of care of seed corn has been woefully neglected. It is claimed that farmers lose 10 per cent of the oat crop each year from smut, and that often this is hidden in the plant, so as to not attract attention. Who is prepared to say that farmers do not lose 10 per cent or more in an average of 10 years by reduced vitality of seed corn by exposure? My own estimate is that the only safe way to keep seed corn is to get it air-dry before cold weather, and then never let it be exposed to a freezing temperature. I once bought some seed kept in a dry cellar. It was against the ceiling, and yet it was very tight on the cob. The bottom of the cellar was dusty, but there is danger of fungus growth and damage to vitality. This grew very well, however. I have dwelt much on vitality, because so recklessly neglected. It is of far more value than the question of selecting from ears near the butt or top of stalks or even the general shape of the ear or grain. A typical ear should be not less than eight inches long for central Indiana. The diameter should be one-quarter the length. I like the grains to be so built as not to leave a groove between their rows, and also like them to be wide and flat, instead of roundish

or rat-tooth like. One reason is that a flat grain has a larger germ; another is that it drills better. This is one reason why I shell off the tips and butts. The grains are inferior in shape and size. They drill badly, and I have more faith in a good grain and germ rightly drilled than in the late supply of pollen afforded by the tip grains. Corn drills much better if fanned, on account of removing scales and dirt that will sometimes run the grain over and make a skip. If seed is carefully selected, and the drill brush is in good repair the machine ought to drop even enough so as to not require thinning.

PLANTING.—In the Central West we are shredding so much fodder that we do not care for an earless stalk now and then. In fact, we plant twice as thick for the silo as we used to, and for shredding we plant thicker, and never care to thin. Sometimes we plant twice as thick for shredding. Some that feed out fodder with corn on, without shredding, plant thick so that there will be more ears with the same amount of corn, and smaller ears, so that the cattle can eat fodder and corn without crushing. Where our corn is planted 16 inches apart, one grain in a place, and rows 44 inches apart, the ears are so large and hard that we have to use a splitter or crusher to get a steer to eat enough to fatten. The drillers and hillers are about equal in numbers in central Indiana. This depends largely on the kind of land. If land is wet it is best not to put seed in a furrow. Some claim that if it is foul it is more easily kept clean in hills. The writer prefers drilling even in foul land. The stalks are single, and letting the fenders drag one can lap the earth around a stalk better than around two or three. We have a double drill that we like very much. It does its own furrowing, and drills two rows at a time. Many make a mistake planting corn deep in order to keep the roots down away from the plow. Corn is a grass, like wheat and Blue grass, and after coming to the top abandons the first root and makes a new root system near the top. It may surprise some to know that the roots of corn are no deeper under ground after it is a foot high, if planted four inches deep, than if planted one inch deep. The way to get the roots down is to plant in a furrow. The stalk comes up and sets near the top, and after once setting it will not change again if soil is thrown to it. The bottom of the furrow being two or three inches below the top the roots run off that low or lower.

I have tried both ways of planting, and am sure that the cultivator tears roots off much worse when planted without a furrow. Then, too, it is necessary in lapping dirt around the stalk to have a furrow. That is one reason I object to hilling. But with our late tools one may plant in a furrow and hill. As to depth of planting; Nature plants seeds two to four times as deep as the seed is thick, and corn will do well planted that way if it could be covered with a mulch, to prevent drying out, as Nature does. Practically, I like to plant corn as shallow as possible and not have it dry out in the hill before growing. The plant depends entirely on the starch in the seed to make its growth to the air, and if it is too deep it may exhaust that starch and come up spindling, or curl up in the ground.

E. H. COLLINS.

Central Indiana.

THE HEN AS A MACHINE.

What She Needs in Her Food.

PART I.

In order thoroughly to understand this subject, let us begin at the bottom, or at least as near the bottom as present knowledge will permit us. First, let us quote from THE R. N.-Y. of August 28, 1897:

The realm of matter is composed of about 70 primary or chemical elements. By a primary element, we mean an element which cannot be subdivided by any known process of chemistry. Of these 70 elements, about 14 go to make up the vegetable and animal kingdoms. A subtle principle, which we call life, is present in every fruitful seed, fertile egg and embryo animal, which, if given the proper conditions, will gather to itself enough of these 14 elements of matter, and combine them in such a way as to form a complete specimen of its kind, and, taking the male and the female together, to perpetuate its species. In the case of the fertile egg, the first condition to be supplied is heat. Supply the proper degree of heat, and the life principle within the egg begins to gather to itself the elements of matter which Nature has placed within the shell of the egg. At the end of about 20 days, we have a chick with sufficient strength to burst its prison walls and come forth to the battle of life. Its next requirement is oxygen. As soon as respiration begins, it must have oxygen to unite with the carbon in its system, and keep up the fire of life begun in weakness. It can get part of the heat necessary to sustain life in this way, but it must flee often to the shelter of its mother's wing for additional warmth. As it increases in size and strength, it depends less and less upon the heat from its mother's body, till, at about six weeks of age, it can "go it alone" if it has proper shelter from storm and cold.

Its next requirement is food and drink. These must contain the same 14 elements of matter which it found within its shell. Nine of these are needed in very small quantities, and are supposed to be present in sufficient quantity in all ordinary food, viz: Sulphur, chlorine, iron, silicon, potassium, sodium, magnesium, manganese and phosphorus. The remaining five are oxygen, hydrogen, calcium, nitrogen and carbon. Of these, the chick can get a supply of oxygen and hydrogen from fresh pure air and water, so we need not worry about supplying them in the food. We now have the food question narrowed down to the three elements, carbon, nitrogen and calcium. The chick seems to have the power of securing a supply of the latter from crushed oyster shells and bones, so, if we keep a supply of these constantly in reach, we need not worry about supplying it in the food. We now have the food supply narrowed down to the two elements, nitrogen and carbon. If we supply these two elements in the food in digestible form, and in the right proportions, the vital functions can go on to best advantage, and the development of the chick will be normal and healthy.

If we furnish an insufficient supply of any of the elements needed, development will be checked. If we give an excess of carbon in the food, the chick has the power of storing up some of it for a future time of need, in the form of surplus fat; but this is not a normal condition, and the extra fat is in the way. I know no natural provision for storing up surplus nitrogen, but believe it quickly clogs up the system, poisons the blood, and is responsible for many of the ills of life, whether of chick or child. As soon as the pullet is sufficiently developed, part of the matter in the food is used to produce an egg in the effort of life to perpetuate its species. If she have comfortable shelter, and a well-balanced ration of food, with pure air and water, and crushed bones and oyster shells ad libitum she will lay all the eggs of which her individuality is capable. If her ration is not well balanced, or if any of the other requirements are wanting, she cannot do her best.

To illustrate: The Deacon has plenty of maple trees, and a good evaporating pan. His man, Mike, knows how to use it, and can make 50 pounds of sugar a day with it. If the Deacon set Mike to making sugar in the morning, what are his chief requirements? Sap to keep the pan filled, and wood to keep the fire burning. If the Deacon furnishes him with only half enough wood, or half enough sap, to make 50 pounds of sugar, Mike can go out and gather more wood or more sap as the case may be, just

BLACK TARTARIAN CHERRY TREE IN CALIFORNIA. FIG. 148

so the hen at liberty goes out and secures what we fail to furnish her in her food. Now, let the Deacon lock Mike in the sugar house with the evaporating pan, and we have a good illustration of a hen shut up in a pen, or in Winter when the earth is covered with ice and snow. Unless the Deacon passes in the sap, wood, and other requirements, in the right quantity and proper proportions, Mike cannot pass out his 50 pounds of sugar at night. Remember that the sugar house is small, and has storage room for only enough wood and sap to last a few hours at a time. If the Deacon keeps on bringing wood when Mike needs sap, his sugar is likely to scorch. He may pile up a little of the extra wood, but it will only be in his way, like the surplus fat on the hen's body. If the Deacon keeps on bringing sap when Mike needs wood, the pan will soon run over and quench his fire completely. If, however, the Deacon keeps on bringing the wood and the sap in just the right proportions, and in abundance, Mike can make his 50 pounds of sugar a day just as easily as if the door were not locked. If corn contains an excess of carbon for a hen's regular needs, then it is poor policy to give a hen a full meal of corn at any time, as some of her functions must wait for nitrogen, while the corn is being disposed of. If wheat bran or lean meat contains an excess of nitrogen for her regular needs, then it is poor policy to give a hen a full meal of wheat bran or of lean meat, as the case may be, at any time, for similar reasons.

The above was written more than three years ago. After three years of additional study and experience, I can find but little occasion to criticise it. I will, however, draw my pencil through the sentence where I said "Nine of these elements are needed in very small amounts, and are supposed to be present in all ordinary food in sufficient quantity," etc. While this is the popular belief, even among the best-informed scientific men, and may be true in feeding a cow or a horse, which consumes food for three or four years in order to build up the framework or skeleton of its body, my hens tell me that it is not true in their case, where this framework must be built up from the food consumed in five or six months. Some of these elements, besides the calcium, are undoubtedly secured from the crushed bones, particularly the sulphur and phosphorus. There are others, however, about which I am not so sure. Besides the 14 elements which the chemist can name, there may be others, as yet unknown even to the modern chemist.

O. W. MAPES.

SUGAR FROM SORGHUM AGAIN.

About 20 years ago considerable interest was aroused in the production of sugar from sorghum. Several factories were established, and quite a little money was spent by the Government in experimenting. It was finally decided that the beet and sugar cane were more profitable plants for the production of sugar, and, if we are not mistaken, the last factory in Kansas was abandoned several years ago. The great success of Germany and France in cultivating the sugar beet has changed the whole history of sugar making. A century ago the sugar islands in the South Atlantic were more valuable to their owners than gold mines, as they held a practical monopoly of the sugar production. When Napoleon began to encourage the cultivation of the sugar beet, without knowing it, he struck what has proved the death blow of these sugar islands. It has been argued of late years that the beet is to provide a large proportion of the sugar of the future, both in this country and Europe. Strange to say, we are again hearing from sorghum. Bulletin No. 51, from the Delaware Experiment Station, at Newark, contains some statements by Prof. A. T. Neale, which seem remarkable in the light of past experience. He states that the tropical cane of Hawaii surpasses all rivals, with a record of 10,400 pounds of supar per acre, as the average of 30,000 acres. As sugar cane requires 18 months to mature, the planting and milling of this would require the use of the land for two years. Hence, the actual annual yield of sugar per acre was 5,200 pounds. In Louisiana the best plantations have reached 4,500 pounds, but the average for the State is 3,000 pounds of sugar per acre. The beet in Germany is said to average 3,510 pounds per acre. In 1897 the average from the beet in this country was 2,700 pounds, although in California under the best conditions, 4,800 pounds of sugar have been made from an acre of beets. With these figures in mind, experiments have been made for the past few years in Delaware to see what could be done with what is known as "pedigreed" sorghum, that is, sorghum selected year after year from seed taken from the best plants. In 1898 the average crop was 2,717 pounds per acre, while the best acre reached 3,371. In 1899 the poorest yield was 3,500 pounds, and the most productive 4,700. In 1900 only one crop was made by the Station. For the month of October the average was 4,420 pounds per acre, one test during this period indicating 6,600 pounds. These figures, while, of course, on a small scale, indicate that "pedigreed" sorghum in Delaware can be made to yield as much sugar per acre as the average in Hawaii, and more than from the German beet farms. Prof. Neale, in speaking of the labor question, says that the Hawaiian planter has serious labor troubles to solve. He is experimenting with laborers from various countries; land is very expensive, and much capital is required for irrigation. In Delaware land is cheap and the labor question is simple, as the laborers are already on hand. At four cents per pound for raw sugar, one ton of sorghum, carrying 250 pounds of sugar, would be worth $10. A crop of 20 tons per acre is not unusual. During the past few years, experience with the silo has taught farmers how to grow corn and similar crops in large quantities. They can produce it for $3 per ton, and, if the figures are correct regarding the amount of sugar, there ought to be a good profit in the business. Prof. Neale goes into many details regarding the business of growing cane and making sugar. It must be said that he makes a good case at least from the scientific aspect of the matter. If it is possible to turn a large share of the Delaware peninsula into a sugar field the results will certainly be most gratifying to the farmers of that section of the country.

A FARMER'S STOCK.—I have a farm of 110 acres, well elevated. I am branching out largely in fruit. I have 10 acres of young apple orchard set 12 years, and fruiting finely; 10 acres or 250 trees set last Fall; 1,200 peach trees in their prime, and 700 Japan plums. I have seven cows, 10 sheep, four horses and 20 hogs, old and young; am quite largely interested in poultry. I have 225 pure Brown Leghorn hens; am going to add to my flock the Black Minorca this season. T. C.

La Grangeville, N. Y.

POTATO NOTES.—A correspondent from Oregon, in a recent issue of THE R. N.-Y., stated that he got most of his potato seed-balls in the shade. This concurs with my experience. I find that to get potato seed-balls, even in ball-bearing varieties, they must be planted in the shade. Two years ago I planted Carman No. 1 east of a piece of woodland, where the shade was on them most of the afternoon, and nearly all of the balls were in this shade. I have now some promising seedlings from this seed. I find that white potatoes are more easily affected with Potato rot, especially the stem end, than the pink and cream-colored varieties. Why is this? On this account I have to discard such varieties as the Carman No. 3, Rural New Yorker type, and plant Uncle Sam and the Rose class. If I could find a remedy for this stem-end rot I would still plant them, as they are good yielders, good shape and color and very smooth.

New Bellsville, Ind. C. W. F.

KILLING CANKER WORMS IN CALIFORNIA.

Experience With Paris-Green

We had thought that we knew all about canker worms, but our recent experience has proved that we did not. Last Fall we were sure that the regulation 16-mesh moth traps, properly put on, would prevent the female moths from ascending the trees. Now we know that the traps are a delusion and a snare, not to the moths but to us. We had 200 acres of fruit trees properly fitted with moth traps, and carefully examined in November to see that they were in place, and no holes where a moth could squeeze through, but in spite of our care we found eggs in the trees, saw the moths lay them, and have just finished the battle with more worms than we had last year. We now know better than to pin our faith to moth traps. To kill the worms before they ruined the trees we used shovels and poles and molasses and tar principally, but have experimented with spraying with Paris-green, and proven that the regulation dose of one pound of green to 200 gallons of water will not make *our* worms sick perceptibly. After trying a number of mixtures or ways of mixing the Paris-green we have found that three pounds of green to 200 gallons will stop them from eating, and they soon die. This is rank heresy from the standpoint of the experiment stations, and should burn the leaves disastrously. We have used some lime with the green part of the time but can see no difference when it is left out. The Paris-green that we use is supposed to be pure, but we have used three brands and see no difference in results. We are using Paris-green in the same proportion on apple trees for Codling moth.

April 29 we had finished our fight with the canker worms, and now believe that spraying is the most effectual as well as the cheapest way to dispose of them. The three different brands of Paris-green we used, each one said to be pure, varied in price from 22½ cents to 35 cents per pound. We are sure of one thing, and that is, that the usual recipe of one pound to 200 gallons of water is a useless mixture for canker worms. After experimenting we finally settled on three pounds to 200 gallons as sufficiently strong to kill the worms, and so sprayed all the prune trees at that strength, and also gave the apple and pear trees their first dose without changing the mixture. The addition of lime seemed to make no difference, for when put on without any lime no leaves were burnt. If canker worms come again next year we shall try to spray the entire orchard as quickly as possible after they begin to hatch, and then a second time immediately, as it will take a week or 10 days to spray 200 acres of trees. We have proven to our satisfaction that the ordinary 16-mesh wire moth trap will not keep down enough moths to make any marked difference in the crop of worms. A neighbor, however, seemed to be successful by putting printer's ink on the traps. The ink, by filling the meshes of the trap and some of it running through, remained moist on the under side, and thus caught all moths that touched it. I will say that in spraying almost any good force pump with a fair-sized air chamber may be rigged up for use, although the regular spray pumps are somewhat better in that the extra-large air chamber permits the man who pumps to attend to driving and keeping the mixture well stirred without reducing the force of the spray.

At Fig. 148 is shown the trunk of a Black Tartarian cherry tree; it shows how many of our fruit trees are allowed to grow. We find with most fruit trees that it is better to allow the branches to begin near the ground. From one to two feet of trunk is ample for most trees. Branches coming out so near the ground spread more gradually and make a strong support for a large top without being in the way of the horses while cultivating the orchard. The first orchard that I had to work in contained a lot of apple trees with heads from four to six feet from the ground, which resulted in a tendency of the branches to grow out horizontally, and getting lower each year at the ends, they soon had to be cut off. This cherry tree is our largest tree. It spreads over 30 feet and is probably 35 feet high. It bears large crops of fine cherries.

California. H. G. KEESLING.

AN ORCHARD SCHEME.—Regarding the distance apart for apple trees, I have a pet plan that I would like to see tested, which is based upon the sun's daily course. Wide apart rows north and south, say 50 feet apart, would allow the sun both early and late access. Then the trees could be closer than usual in the rows, perhaps 20 feet for large trees. At the time of day when the row shades itself, so to speak, the noonday sun is so high as to shine down into the trees. Certain advantages in this plan will suggest themselves. Has it ever been acted upon?

F. W. PROCTOR.

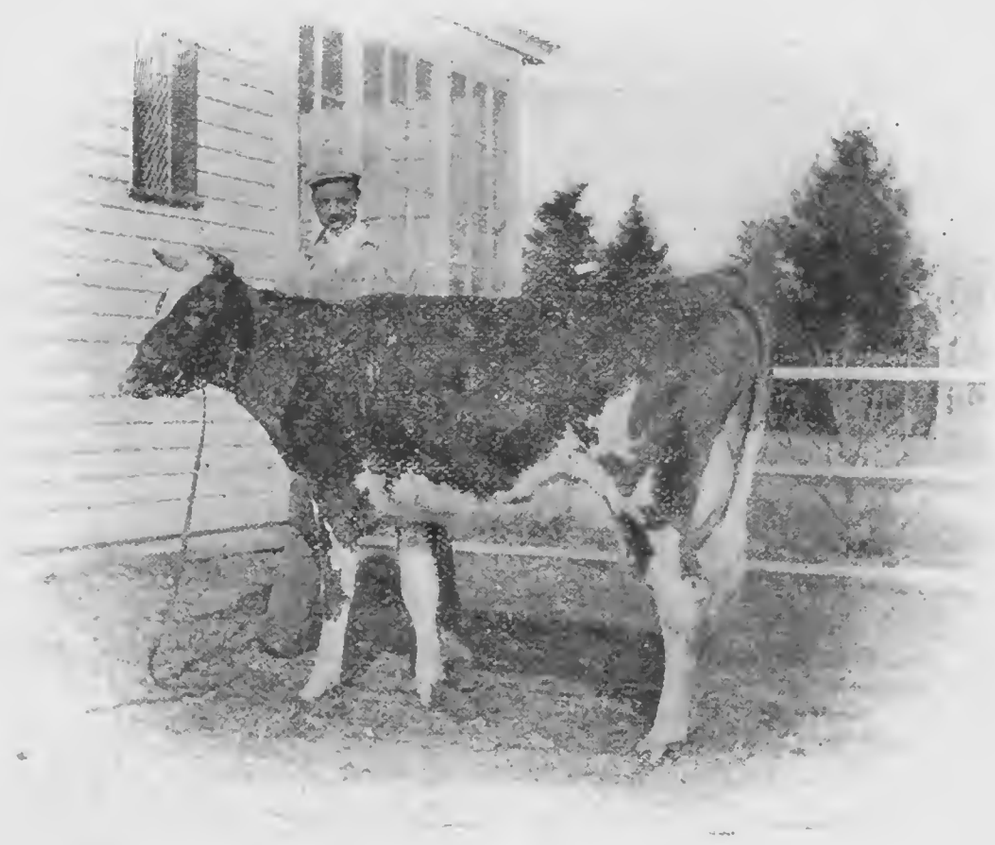
R. N.-Y.—Have readers ever tried it?

PARASITES OF TENT CATERPILLARS.

I had noticed the Forest tent-caterpillar for several years, but it did no particular damage till 1899. The Winter of 1899-1900 the trees were literally full of egg clusters which hatched, but just here, about the time when they should have been doing the most damage, they seemed to go crazy, and there was not one cocoon where in 1899 there were probably 50. In making examination of the cocoons I found some all right, some with a small white ant-like creature, which grew and became a waspish-looking fly nearly an inch in length as it came out of the pupa of the Forest worm. Others had a large maggot, some one to three small maggots. These emerged from the Forest worm pupæ, and went into pupa stage and then into a fly from size of house fly up. Others were filled with a large number of small maggots, but I think I got none of these in my collection. I never saw any of the waspish-looking creatures except those I hatched; I looked wherever I went, and there must have been a great many, as at least one-third of my collection of cocoons hatched such. The fly, which was about in equal numbers, was everywhere, especially around potatoes, and as the bug did not trouble (the slugs disappearing without doing damage), I surmised they were working on them. It is almost impossible to find a cluster of eggs on the trees now. R. J. R.

Springwater, N. Y.

The tent-caterpillars, both the apple and the forest or maple species, have many natural enemies, and were it not so, their ravages would continue until the maple sugar bush would be a thing of the past in many localities; for it is often impracticable to check the pest by artificial means in a forest, and man must there depend upon Nature's methods of reducing the numbers of the insect. Weather conditions, especially extremes or sudden changes, kill many of the caterpillars. The birds get many of them, and a bacterial disease sometimes sweeps them off by the thousands. Several kinds of predaceous insects eat the caterpillars, but more are destroyed by parasitic insects.



GUERNSEY COW AURICULA II., No. 12209. FIG. 149. SEE PAGE 383.

Among these parasites there are several kinds of flies, usually somewhat larger than a house fly. These flies stick their eggs on to the skin of a half or two-thirds grown caterpillar, and the maggots, which hatch therefrom work their way into the interior of their host, where they get their growth on the fats and juices which the poor caterpillar elaborates from the leaves it eats. As the maggots avoid eating the

ICHNEUMON FLY DEPOSITING EGGS IN COCOON. FIG. 150.

vital organs of their host, it grows and finally spins a cocoon about itself, but rarely is there enough left of the caterpillar to make up the moth into which it was destined to transform; so that there emerges from the cocoon one or more of these Tachina flies or parasites instead of a moth. Again, thousands of the caterpillars escape the jaws of their enemies and get into apparently safe quarters inside their silken cocoon, but alas, they are far from safe there. For there are two or three kinds of Ichneumon flies whose maggots find the caterpillar or pupa in the cocoon a dainty morsel. "It is very interesting to watch one of the Pimplas or Ichneumon flies when placing her eggs in the cocoons," says Perkins. "She is so intent upon her task that one has no difficulty in observing her closely. She is quite brisk even to nervousness in her movements, flying quickly from one cocoon to another, hastily, but sharply, inspecting each. If the caterpillar inside has not finished spinning and its last moult she does not leave an egg, but flies off to the next cocoon. If the cocoon is done and the pupa is formed, she then places herself over one end, and strongly arching the abdomen thrusts her ovipositor into the pupa. See this act in Fig. 150. Then by two or three successive thrusts she works the egg deeply into the unfortunate victim, withdraws the ovipositor and flies away. Sometimes she will examine and leave several cocoons before she finds one that she considers a fit place for an egg, but often the eggs are deposited rapidly. I have seen five cocoons thus parasitized in less than as many minutes. In rare instances both moth and parasite come from the same cocoon, both apparently well developed."

We confidently expect that these little enemies, together with climatic conditions and other natural checks, will soon get the upper hand, so to speak, and relegate the "Maple worm" into the background as a serious pest for many years to come. The "up" or destructive period with tent-caterpillars usually lasts several years, but their enemies also often keep them "down" for a longer period. If all were as observant of Nature's ways as R. J. R., how much more information and intellectual enjoyment could be got out of life. M. V. SLINGERLAND.

A WINDMILL SCARECROW.

The only effectual scarecrow I ever found is a windmill. I formerly made them to jingle a bell as they turned but later found that their motion alone is just as effective. I take two pieces of pine two inches square and about two feet long. These are first balanced on a knife-edge to get their center of gravity. Make a side mortise in each, cutting half through, tack them together at right angle, and we have the four arms. Bore a hole for the axis and insert an iron box, or else tack a washer on each side to prevent wear. The floats are the sides of quart tomato cans, unsoldered in the fire, rolled out flat and tacked to the arms, which have previously been beveled by taking off corresponding corners. Another strip of two-inch stuff about three feet long is required, a piece of tin or a shingle is tacked to one end for a vane, a hole is bored longitudinally in the other end to receive a bolt, which is then driven in with the wheel upon it. After being thus mounted the center of gravity is found, a hole bored through the stick at this point, and the whole mounted upon a stout pole set in the ground, using a bolt for a spindle to allow the vane to turn in the wind. Such a contrivance has never failed with me to prevent, or to interrupt the work of crows even where they have commenced their depredations. F. W. P.

A Vermont Apple Crop.

Prof. F. A. Waugh, of the Vermont Station, wrote to the Burlington Free Press an account of a profitable apple orchard owned by Mrs. Lura E. Allen, on South Hero Island in Lake Champlain. Last year this orchard of 14 acres gave a net profit of $100 per acre. This year the returns, according to Prof. Waugh, were as follows:

No barrels sold in New York	903
Gross receipts	$2,785.75
Average price by the barrel	3.08
Commission, freights, cartage, etc	521.61
Net cash returns	2,264.14
Additional fruit sold at home	300.00
Total cash returns	2,564.14
Average by the acre, 14 acres	183.08

No wonder Prof. Waugh asks which was the "off" year in this orchard! Right in the neighborhood of this orchard last Fall some apples were worth only 75 cents a barrel, but those sold by Mrs. Allen brought, in a few cases, as high as $6 and $7. Prof. Waugh well says: "Farming which pays $183 an acre, cash in the bank, is evidently successful; and Mrs. Allen ought to be publicly thanked for the benefit of her good example."

DRILLING CLOVER SEED.—I have been interested in the discussions of how to treat the grain fields in the Spring so as to insure a catch of grass. I have always sown the seed early, when the earth was cracked by the frost, but there has not been such a time this Spring, and then the rains came and the ground seemed to be so hard that I thought it useless to sow the seed. I felt afraid of the harrow; the weeder wouldn't touch the ground, but to-day I solved the problem. I was going to the field to sow oats with my Buckeye grain drill when it occurred to me that it would be just the thing to go over the wheat with it to loosen the ground, the hoes running just between the drills of grain and sowing the grass seed at the same time. I have tried it, and a more complete job you never saw. I don't think it pulls up one stool of wheat or a bit of young Timothy, the latter being mostly among the wheat in the drills.

Plainfield, N. J. W. H. P.

Van Deman's Fruit Notes.

ALL SORTS OF QUESTIONS ANSWERED.

Catawba Grape.

J. J. M., Monsey, N. Y.—I thought of setting out a few Catawba grapevines, but I do not see them listed in any of the catalogues I have. What is the matter with them? Will not Catawba grow in this section?

ANS.—The Catawba is a most excellent grape, and does very well in most sections when sprayed with Bordeaux Mixture to keep down mildew and black rot. The liability to these diseases is the principal objection to this grape, and this is probably the bottom cause of the scarcity of the plants in the nurseries.

Spraying Peaches for Rot.

G. S. E., Ennis, Tex.—Last season all of my late peaches—those ripening in September and October—rotted on the trees before ripening. Can you give me a remedy to prevent it in the future? I have already sprayed them three times this Spring with Bordeaux Mixture. They are now as large as the end of one's little finger.

ANS.—Bordeaux Mixture is the proper preventive to use for Peach rot, and if one or two more applications are used before the fruit is ready to color it is not likely that there will be any trouble from the same cause as last year, even if the climatic conditions are the same.

Winter Apples for Kentucky.

J. W. McD., Warsaw, Ky.—I wish to plant some Winter apples. What would you suggest as desirable for this section? Would Stayman do well here? I am located on the Ohio River bottom, between Louisville, Ky., and Cincinnati, O.

ANS.—In my opinion Stayman would be one of the best apples that could be planted in Kentucky. It is a seedling of Winesap, which has long been one of the most successful varieties for that region, and Stayman is giving promise of being even better. York Imperial is another good one. Both will succeed on the bottom lands mentioned, although they do somewhat better on uplands, where the soil is good.

Rabbits Attacking Young Trees.

M. E. S., Bendersville, Pa.—I have a young apple orchard of about 5,500 trees, about half of which I treated to a solution of whale-oil soap, (two pounds to the gallon of water). Since using the soap the rabbits have been working on them. Is there any application I can use that will stop their depredations and not injure the trees?

ANS.—I have tried a great many kinds of washes to prevent rabbits from gnawing the bark from apple and other trees, and all I know of that are really effective are also injurious. In some cases the milder and harmless ones were effective, except when the snow covered about all that the rabbits liked to eat except the trees, and then they would eat regardless of the coating over the bark. Wrapping is the only safe way that is sure.

Grafting Cherries.

E. M., Danbury, Conn.—In your issue of March 16 I notice article on grafting black cherries. You say "avoid splitting the central pith." I take it to be that you must not split through the center of the stock, but one side of it. Am I correct? I can graft almost anything successfully but cherries, which with me have been a total failure. I have never had any success in budding. Will you explain how it is done, how the buds should be prepared for insertion, and when is the best time to do it?

ANS.—I have noticed that some grafters advise splitting to one side of the center of the stock instead of through the center, but I have never noticed this to be an important point, for I have had very good success in both ways with the cherry as well as with other fruits. It is possible that one cause of the failure mentioned is that the grafting has not been done early enough. The best success seems to be with very early grafting, when there is not the slightest sign of the buds starting. Budding is done by cutting a slit in the bark of a young stock, such as one that is not larger than one's finger nor smaller than a lead pencil, and then making a cross cut at the top, and into this opening in the bark slip the bud. The bud is cut from a scion of the present year's growth, by taking a piece of bark about an inch long with the bud in the middle of it. I usually leave the little particle of wood attached to the bark that comes off with it. When slipped well into place the bark is tied firmly down upon the bud with some such bandage as raffia or strips of old muslin, or even cotton strings The inner corn shucks make very good bandages when they are long enough, by tearing them into strips about a half-inch wide. The best time to bud is in August or the early part of September.

Spraying for Codling Moth.

C. L. P., Boulder, Col.—Can you tell something of experiments in the West with spraying throughout the season for the Codling moth? I would like information as to practice and results.

ANS.—Codling moth is an abundant and serious pest all over the country, and seems to be worse in the Far Western than in the Eastern States. The dryness of the climate is supposed to be very favorable to its propagation, for there are at least three broods there each year. The remedy is thorough spraying with the arsenical mixtures. Paris-green is effective, but there are preparations of white arsenic that are both cheaper and more effective. One of them is made by boiling together for 15 minutes in one gallon of water one pound of white arsenic and two pounds of sal soda. One quart of this is sufficient for 50 gallons of water. It is necessary to add two pounds of lime to each 50 gallons of the poisoned water in case Bordeaux Mixture is not used instead of water, because of the caustic effect of the arsenic without the lime being added.

Apples for New York; Pasturing in Sprayed Orchard.

R. E. B., Pleasant Valley, N. Y.—1. What varieties of apples would be best to plant for a commercial orchard? I am situated about 80 miles from New York. How would the Baldwin, R. I. Greening, Rome Beauty and Northern Spy do, with Wagener for a filler? 2. Is it dangerous for cattle to eat hay from an orchard sprayed with Bordeaux and Paris-green? Would pigs running in a sprayed orchard be injured by eating grass?

ANS.—1. The first four varieties mentioned would be very good for the Hudson River Valley, and no better selection could be made for a filler than Wagener. This list can hardly be improved upon for that section. 2. No, there is no danger from all the poison that is likely to fall upon clover or grass in a sprayed orchard and afterwards eaten by cattle. This point has been tested at least once in Michigan by purposely feeding grass that was so sprayed to a horse, and with no bad results. Chemical analysis proved that it would require the poison on over 1,000 pounds of such grass to kill a horse or cow. Pigs would not be injured by eating grass in a sprayed orchard. They are not so easy to poison as cattle and horses.

Pears for Illinois.

H. M., Morton, Ill.—What six varieties of pears would you advise setting here? I would like two varieties of early pears, two for Fall use and two for Winter. The soil here is a deep black loam, and is not as well drained as it should be. All of the pears we ever set out died with the blight except Kieffer. Will too wet ground cause blight? What do you know of the Sudduth pear? Is it blight-proof as claimed? Has it been thoroughly tested yet? One nurseryman near here claims to control the sale of it, and he sells it for $2 per tree. I see the claim is made by a nurseryman here that the Lincoln pear and the Lincoln Coreless are two varieties, and that the Lincoln Coreless is a worthless variety. Is this true?

ANS.—It is presumed that the writer intends to plant pears for commercial purposes, and if so the list would be somewhat different from one for home use. Of the very early kinds, Wilder Early and Tyson are perhaps the best, although early pears of any kind are usually not very profitable. Bartlett is the most profitable of Fall pears, or for that matter of those of any season. Its main fault is liability to blight, but it is no worse than many kinds of less value in other respects. Sheldon is another excellent variety. Of the Winter kinds of good quality, Lawrence is the best, but there is perhaps more profit in Kieffer than in any other pear, although it is exceedingly poor in quality; except when ripened under certain peculiar conditions, when it is of fair quality. The Sudduth is a new variety that has been tested but little outside of Illinois. It is reported to be very productive at an early age, and that the tree is comparatively free from blight. The quality is only fair, and the appearance is not very attractive, being green in color and without a blush. The flesh is rather soft when it ripens, and I fear it would not be a good shipper. It may be well to try a tree or two of it, but it certainly would be unwise to plant of it more than for testing, until we know more about it, and I should not want to pay a big price for the trees even for that purpose. The Lincoln pear is a comparatively new variety and is only fair in quality and scarcely worthy of more than a trial; but the Lincoln Coreless, which is an entirely different pear, is absolutely worthless.

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The Cornell Reading Course.

Edited by John Craig, Professor of University Extension, and Editor Farmers' Reading Course, Cornell University, Ithaca, N. Y.

A Quiz on Plant Physiology.

Your reading lessons have all been very interesting and instructive to me, and will bear much thought and study. The subject of film moisture was entirely new to me, and corrects many mistakes I was laboring under in regard to moisture in the soil. I readily understood how the soil water enters the roots of plants by the process known as osmosis. Is it this same process which forces the sap to the top of tall trees away above the limit of capillary attraction or atmospheric pressure? Given two equal plants, one in "poor" soil and the other in "rich" soil. Does not the plant in the poor soil have to absorb and transpire an excessive amount of water? Or, in other words, will not an abundant supply of water in the soil make up in a degree for a deficiency in plant food? B. H. C.

East Bloomfield, N. Y.

"Osmosis" is the principle which distributes the food throughout the tree, but it is not due to this cause that we have the phenomenon of sap pressure. Those who have practical acquaintance with sugaring operations know that after a sharp frost they may expect a good run of sap. In the maple, the pressure is downward, not upward, as in the case of the birch. There has been thus far no satisfactory explanation of this phenomenon of sap flow in Spring. One of the most reasonable theories is this: The action of the frost is to withdraw from the cells the water which they contain, and collect it in the air spaces or interspaces between the cells. The air is reduced in bulk by the fall in temperature, and the sap still further compresses it. On the return of higher temperature the water and the air expand. This brings about a general condition of tension, and this tension continues until the cells have reabsorbed through their walls this sap water which was withdrawn. Now while this explanation appears to be a plausible one of the pressure of sap in the maple, it does not explain the upward root pressure that is found in the birch. It was formerly held that osmosis did it all—but now investigators say "don't know."

I do not think that one plant in poor soil could equal the growth of another plant in rich soil simply by an extra supply of water. Undoubtedly the larger amount of water would enable the plant more thoroughly to utilize the elements of food which the soil contained, but it would not make up for the difference in quality or quantity which existed. A generous supply of water in a poor soil might keep a plant going for some time, but there would eventually come a period when more than water would be required. Neither a concentrated food on the one hand, nor a very dilute liquid ration on the other would be likely to produce a healthy organism. Plants take this food from the soil in the form of a soup, but it must not be too thin.

More Light Wanted.

1. I have seen a notice of the Cornell Reading Course, and wish I could know more about it. We have a large garden and wish to get the most out of it for family use. I would like to know about fertilizers. It is difficult to get good stable manure; the soil is loam. 2. We have two pear trees which are troubled with blight. Last year I dug the earth from the roots of one of them and sprinkled sulphur plentifully over them, covered; then I trimmed all the affected branches from the tree and dusted sulphur on the surface, and no other limbs were affected during the remainder of the Summer. 3. Will you give a treatment for lawn where creeping weeds have appeared? S. W. H.

Waverly, N. Y.

1. The Cornell Reading Course is a correspondence course in agriculture free to residents of New York State. Information and copies of the lessons of the first series of the Farmers' Reading Course are sent to all who deserve them. Lesson 3 gives information regarding the function and use of commercial fertilizers. If you study this carefully I think it will help you materially. 2. I do not think that such treatment as you have given your pear tree will in any way prevent the recurrence of blight. This is a disease which finds entrance, not through the roots, but through the partly-grown leaves and young shoots. It is caused by a germ which spreads in the sap of the tree. The only way to prevent is by practicing good sanitation. As soon as a diseased branch makes its appearance it should be cut off and destroyed. The pruner ought to be careful to cut well down into the healthy tissue, so that all the microbes which cause this disease are likely to be removed. Trees making a rank sappy growth are more susceptible than those growing slowly and ripening their wood thoroughly. 3. Lawns which are shaded by trees or are imperfectly drained are difficult to keep in a good grass sward. The only way to keep weeds out is first to destroy them as they make their appearance, and second to encourage the growth of grass by the application of fertilizers. It is a good plan to sprinkle the lawn two or three times during the season with a fertilizer containing some of each of the three principal elements of fertility—namely, nitrogen, phosphoric acid and potash. A light application, say 200 pounds per acre, should be made in early Spring, and other applications should follow at intervals during the Summer. Top-dressing with barnyard manure is objectionable.

Bleeding from Grapevines.

J. R. F., Belleville, Pa.—Does bleeding hurt grapevines, and why did they do so when I pruned them last Fall? I thought the cut would be healed sufficiently to shut off the sap, but it is not so in this case. Is it caused by very warm weather after a late cool Spring such as we have had?

ANS.—Bleeding, or the oozing of sap from cut vines and branches is not considered harmful, as probably no more sap is lost than would be supplied to the part cut away. Vines do not often bleed when pruned so early, as the cut surface should be well sealed by Spring. Probably the best time to prune grapevines is in late February or early March. The cut ends generally dry over, and the loss of sap should be very small. The cause of the excessive bleeding in your case seems to be quite obscure.

Temperature for Cool Grapery.

W. H. W., Malden, Mass.—What temperature should be maintained by day in a cold grapery?

ANS.—During the greater part of the growing season the cold grapery is kept at about the same temperature as outside by means of free ventilation. In pleasant weather the ventilators should remain open all night, but during cold storms they may be closed. As the season grows colder they should be closed sufficiently to maintain about 70 degrees when possible. Hot graperies, when first started, should have about 50 degrees at night and from 65 to 70 degrees during the day. In three or four weeks it may be raised to 60 degrees at night and 80 or more during the day. Ventilation should always be freely given on bright days, but the houses may be closed early in order to trap the sun heat and warm the houses for the night.

SCRAPS.

KANSAS FRUITS.—Among the best very early peaches are Triumph, Sneed and Greensboro. Of the late kinds Chairs, Fitzgerald and Heath Cling are excellent. Elberta is good for midsummer. There are two classes of plums that succeed in Kansas, the Japan and American. Of the former the following kinds are good: Abundance, Wickson, Burbank and Georgeson, and of the native kinds, Wild Goose, Milton, Hawkeye and Wyant are among the very best. There are so many good strawberries that it is difficult to name any one as the very best of all. Besides, the use for which a variety may be intended is an important point. I would suggest the planting of at least two kinds, whether their flowers are perfect or imperfect. Glen Mary, Warfield, Carrie and Gandy make a good list for family use.

H. E. V. D.

TASMANIA now raises 500,000 bushels of apples a year. The trees are set very closely, about 10 feet apart, it is said; large crops are raised, England now being the chief market outside of Australasia. Tasmania ships green fruit to Australia and New Zealand. It raises quantities of pears, plums, cherries, and within the past few years has been exporting about $150,000 worth of jam annually. This latitude gives the strawberries, raspberries, grapes and other small fruits an excellent flavor, and the Tasmanian jams go as far north as the Philippines.

OATS and Spring barley are all up nicely. Corn planting begins to-day in many fields. Nearly all breaking done. Early-sown wheat all gone; late-sown looks fine. The Hessian fly seems to be afflicted with parasitic enemies, and may cease its ravages. Pastures short and dry feed still shorter. Peaches in full bloom. Corn, 50 cents; wheat, 80 cents; oats, 33 cents; hay, $16 per ton; eggs, 12 cents; butter, 14 cents; potatoes, 60 cents; hens, eight cents; hogs, $5.25. Of sheep and cattle none is changing hands. Tobacco selling rapidly at seven to 10 cents per pounds. The river is all over bottom lands. C. D. L.

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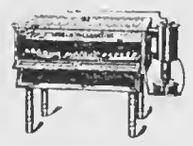

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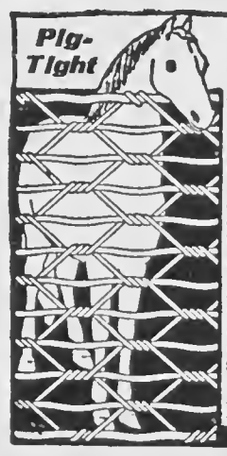

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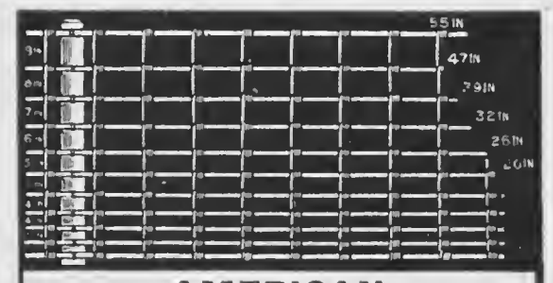

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Ruralisms

NOTES FROM THE RURAL GROUNDS

THE GIANT HARDY PRIMROSE.—This immense new primrose is now blooming on the Rural Grounds, the plant having lately been received from the American distributor, Henry A. Dreer, Philadelphia, Pa. The general appearance of the plant is very similar to Primula Polyantha except that it is much larger in all its parts, and of very robust growth. The flowers open as large as a silver dollar, and the trusses of bloom often exceed six inches in diameter. The color is a bright yellow with an orange center, and the characteristic fragrance of the European wild primrose is retained. It is thought to be a hybrid between P. vulgaris and P. Polyantha, as it first appeared among a batch of seedlings of the latter. As it now appears, it is safe to say that it is fully three times as large as any other hardy primrose. It is claimed to bloom earlier and keep at it longer than any other variety also, and to be especially desirable for forcing, as it is one of the easiest plants to bring into bloom under glass. They can be kept dormant until wanted and brought into flower in a cool greenhouse in about five weeks' time. Hardy primroses have never gained the popularity in this country they have always been favored with in Europe, but this giant variety will go far to arouse interest in a most desirable class of plants. They may be grown anywhere in moist, rich ground, but are chiefly suitable for borders and edgings on account of their trim and neat habit.

THE BARTLETT PLUM.—This very promising new plum, originated by Burbank, and sent out three years ago, is the neatest grower among plums on the Rural Grounds. A little "June-bud" tree received from Joseph H. Black, Son & Co., Hightstown, N. J., is, after a season's growth, the most symmetrical tree on the place. It grows upright, more like a pear than a plum, and the branches are arranged almost as evenly as a candelabra. The dark foliage is also very glossy, adding much to the ornamental effect. Mr. Burbank describes the plums as possessing the fragrance and flavor of the Bartlett pear in even a higher degree than that favorite variety. A sample received last Summer was of fair eating quality, but had evidently deteriorated during transportation. The color was yellow with a crimson flush, and the flesh salmon red, firm but juicy. The pit adheres slightly to the flesh.

WATER CRESS.—This appetizing relish is now abundantly supplied to most city markets. It is gathered up by large jobbers, and an unbroken supply comes to the North all Winter from southern streams. At one time the cultivation and harvesting of water cress from streams near the Summer resorts of Monmouth Co., N. J., was a considerable industry, but it fell into the hands of a combination which has since extended its operations to other fields. There was practically no indigenous water cress in the many little streams flowing to tide water in this region previous to 1896, when a quiet but observing individual, while spending his Summer vacation in the locality, conceived the idea of stocking such streams as appeared favorable to its growth. For several successive seasons he sowed seeds near the sources, and the result became apparent in such a vigorous growth of cress that the currents were often checked and the growth smothered in mud and sand. The interloping cress has generally died out from the streams where the channels are not preserved by digging or dredging, but it still persists where the conditions remain suitable. Few attempts at the naturalization of plants and animals where they have not previously existed are entirely successful, as some of the necessary conditions may be lacking, though supposed to be present. Very little cress is sent to the New York market by individual growers or shippers. Most of it now comes from West Virginia and is carefully graded and packed in ice, in large barrels. The day of large profits from a small natural or cultivated area in water cress is past.

THE LAGGARD SPRING.—During the prolonged gloom of our wet and stormy April we comforted ourselves with the thought that vegetation would advance so rapidly with the advent of warmer weather as to make up for lost time, but the hope is still unrealized. At this writing, May 10, peaches are still in bloom, pears and cherries just opening, and apples yet in small buds. Cold winds and drenching rains continue their retarding influence, and doubtless pollination has been unfavorably affected in the fruit blooms already open. A few days of warm sunshine would prove most acceptable. Even some of the cool-blooded bulbous plants appear to have had more cold moisture than they required. Tulips are large and brilliant, but hyacinths and daffodils are noticeably dull in color. The trusses of the former are large and full, as might be expected from their slow development, but brilliancy of color is lacking. Pansies are extremely large and handsome, as they find conditions just to their liking. W. V. F.

Melon Blight and Soda Bordeaux.

R. J. E., Berrien Co., Mich.—I have been much interested in the articles on Melon blight which have appeared lately in THE R. N.-Y. There are hundreds of acres of muskmelons raised in this vicinity for the Chicago and Milwaukee markets. The Osage originated here near Benton Harbor, and the business of growing melons for market has grown to be the chief occupation of a great many small farmers. Within the last few years leaf blight has made its appearance, and has gradually increased, until last year a great many crops were ruined. It usually makes its appearance about the time the melons begin to ripen and spreads rapidly until the field will look as though a fire had run through it. This causes the melons to ripen prematurely and spoils the flavor, so they are unfit to eat. I shall try the Bordeaux Mixture this season and hope it will prove effectual, though it seems to me there is one serious objection to its use. If used late after the melons are nearly grown, will not the lime form a white coating on the melons and make them unsalable? I have heard plum growers complain of such a condition where they had sprayed with Bordeaux after plums were partly grown. As I understand it lime is used simply to neutralize the acid in the sulphate of copper. If so, is there not some other alkali that will do this without the objectionable white color? How would sal soda do? How should it be used?

ANS.—We have used what is known as the soda-Bordeaux on potatoes. In this soda lye takes the place of most of the lime. The proportions are three pounds of sulphate of copper, one pound can of Lewis lye, five ounces of lime and 30 gallons of water. The copper is dissolved the same as in making the ordinary Bordeaux, and diluted so as to make 15 gallons. The can of lye is dissolved in two gallons of water and then diluted to five gallons. The lime is slaked in hot water and diluted to five gallons, after straining through a coarse cloth. The 15 gallons of copper, the five gallons of lime and the five gallons of soda are then mixed, with water enough added to make 30 gallons. In our experience this has given as good results as the lime Bordeaux. It sprays easier, does not scald as badly, but does not stick to the vines as well. Mr. F. A. Sirrine, who gave the information to Holmes Bros., says:

"We have always prepared Bordeaux Mixture for pickle and melon spraying with the yellow prussiate of potash test, and in this way have never had an excess of lime to discolor the fruit. In fact, where the vines are vigorous, only a small portion of the mixture strikes the fruit, and there is no danger of scalding the fruit with the mixture. Of course some of the mixture may show on the fruit, and when a man is growing for market purposes he should avoid anything that will excite suspicion in the appearances of his melons. Although I have not tested the soda-Bordeaux Mixture I think it would be well to advise the use of the ordinary Bordeaux Mixture until the melons become so large that the leaves do not protect them, after which he can use the soda-Bordeaux Mixture."

Starving or Feeding Pears.

W. E. G., Hammonton, N. J.—When I came here in the Spring of 1898 I saw orchard after orchard of stunted, blighted pears. I asked several of the prominent growers as to the best means of fighting the disease from the start. The answer almost to a man was, "Starve them." I thought this was a peculiar answer, and doubted it, on general principles, and from a scientific standpoint. I met a man who had 25 trees, more or less, of Kieffer pears on the east side of his house, almost worthless from blight. On the west side he had 10 trees of the same variety free from blight, from which he picked last year 150 bushel baskets of fine pears. The trees were all the same variety and set at the same time. The 10 trees were in a chicken yard about 40x60 feet, or on an area of 2,400 square feet. The difference was the chicken droppings from about 60 hens, and the usual farmer's crop of Spring chickens. I told him he had the pears because he could not help it. The result is that he is converted from a starvationist to a feeder. After our talk on this subject last Spring he sowed his other orchard to cow peas, and his starved trees are loaded with blossoms and have an entirely different appearance. He will put in cow peas again this Spring and fertilize them also. I, believing an ounce of prevention is better than a pound of cure, washed my trees with lime, sulphur and salt, and also gave them 150 pounds each of nitrate and potash. I also washed a few with lime, sulphur and whale-oil soap. I should like to hear from some of your best pear growers on the subject of feeding or starving the pear; also the best kind of feed and quantity. I myself believe in feeding everything from the start, and, of course, increasing the quantity as the tree increases in size. This is the Almighty's way of doing it.

ANS.—A very plausible reason for the immunity of the well-fed trees in the above instance would be that their energy was expended in fruit production and not in a rapid growth of succulent wood. Another variety than the Kieffer might not remain immune under such stimulating conditions. As a general rule parasitic diseases attack weak and poorly-fed plants in preference to strong ones, but the Pear-blight bacteria appear to prefer rapidly-growing trees, as the germs find a ready entrance in soft-textured wood.

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and bugs, worms, blight, etc., will have no terrors for you. Best construction, perfect agitators, no scorched foliage. We make all sizes and styles. Free Book on Spraying. Agents wanted.
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is most useful when he is dead. Kill him with "BOXAL," and prevent blight by the same same operation. $1 buys 10 pounds.
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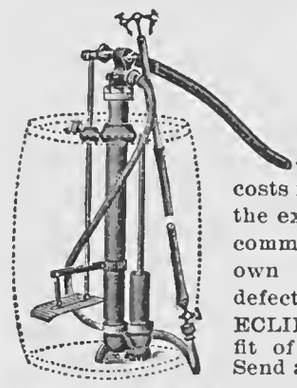
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IT has no small nozzles to stop up.
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Hope Farm Notes

CORN PROBLEMS.—A reader in New York asks some good questions:

"Would the Hope Farm man advise treating seed corn with formalin for the prevention of smut?"

No, I would not. It would probably do little if any good. With the oats these smut germs are on the seed—much the same as the scab germs are on the potato tuber. We aim to destroy them on the seed. Otherwise the smut may start shortly after the seed sprouts, and cripple the plant all through its life. The Corn smut, as I understand it, is different. These germs enter the plant mostly from the outside, floating in the air and settling upon the ear, where they develop and grow. We soak potato seed to prevent scab, and we spray the vines to prevent blight. As I understand it, Corn smut gets at the plant much as Potato blight does, only we cannot save the thick, big stalks by spraying.

"Last Spring the Hope Farm man told of his experience in treating seed corn with tar to prevent crows from pulling it up. He reported it a success. He also said he used Mapes corn manure broadcast. Last Spring, before and after plowing my corn ground, it was visited daily (I might say hourly) by some crows, until I broadcast 400 pounds per acre of Mapes corn manure, and after doing that not a crow did I see on that ground all Summer. I have often thought possibly it was the fertilizer instead of the tar that kept the crows from this cornfield."

We used thick gas tar on the corn. It was thinned a little with water—the corn was well smeared with it and then dried out by mixing with wood ashes. This left a thick, black coating over the seed. The crows pulled up a few hills and tasted the corn, but I doubt whether they swallowed a kernel. They quickly spit it out, and it was the cause of many violent caws at the caucus they held later in the woods. I have never known fertilizer to keep crows away, though I can understand how a good mouthful of it would make them tongue-tired. If it were bunched up around the hill they might taste it. Crows are very wise birds, and a little thing will often fill them with suspicion.

STUFFING THE SOIL.—The same reader also asks this question:

"I have a piece of ground in rye now, and wish to plant it to strawberries one year from this Spring. What course would I better pursue to get it in the best condition for planting at that time, the soil being a clay loam, facing the east?"

Here in New Jersey, if I were short of fodder, I would cut that rye early for hay. Then I would plow the ground and sow cow peas in drills. Early Black variety would be best. The peas would be cultivated as long as we could get through them. This would not only give a better crop of peas, but would largely kill out the white grubs. At the last cultivation of the peas I would sow a mixture of oats and Crimson clover among the cow-pea vines, covering the seed with the cultivator. I would rather have southern Winter oats if I could get them. The Early Black pea drops its leaves quite early, and in most seasons the oats and Crimson clover would start. The oats make a heavy growth through the Fall and early Winter, but die out in March. This, I think, permits a better preparation of the soil for strawberries than when rye is used. In this wet season, for example, the rye made such a start before strawberry ground could be fitted that I did not feel that we could do a good job until the rye was cut and hauled off. Remember, that I speak for the latitude of northern New Jersey.

FARM NOTES.—Still raining! Day after day the water pours down. Sundays are usually clear and bright. I suppose there are many farmers, who, if they had their own way, would have the sun illuminate work as well as worship! The stock of "indoor jobs" is about exhausted. . . . . Cherry blooming came right in a long hard rain. I do not look for much fruit, as a result of this drenching. The trees were heavily loaded with flowers. A wet season with us usually rots the cherries. . . . . The apple trees are covered with flowers. What a glorious thing it is to see great masses of pink and white color scattered over the valley, with the petals falling like a snowstorm! Our Greening orchard looks well. Last year it "went dry," but we gave it good care. Now, we shall spray it and hope for a good yield of this delicious fruit. . . . . Those Florida cabbage plants are thriving. They are without doubt ahead of the hotbed or coldframe plants. The thick, chunky workers usually have better staying power than the tall, "leggy" citizens. Speaking of Florida, Uncle Ed writes that his potatoes are drying up. Not a drop of rain for a month or more. . . . . A friend in New Hampshire has sent me a few bushes of blueberries. He has cultivated them for several years—thus developing fine, large fruit. We have set them out carefully near a stone wall. A fruit plant or a flowering shrub is a beautiful reminder of an absent friend. I want to make our roadside a plant album from friends all over the country. . . . . Little "Ape," the heifer's first calf, weighed only 57 pounds when one day old. He was so poor and thin that he hardly seemed worth raising. He milked the kicker, Julia, so well that when sold at 28 days old he weighed 99 pounds and sold at seven cents. Julia nursed her own calf most of the time also. The trouble with Ape was that he got a poor start. Still, his grandmother, Julia, has given him an inheritance of "kicking" ability that should take some of the kinks out of any rough pathway. . . . . Even the early potatoes are not all planted yet. We have, however, put them in well. I hear some complaint of rot in early potatoes, and it looks as though there will be a time in August when prices will be high.

CHICKEN FACTS.—A good friend who has had "bad luck" with chickens wants to know how the Hope Farm chicks act in the brooders. When you force us to tell the truth in that way I must admit that the brooder has been the scene of a tragedy. You will notice that I haven't bragged about our little chicks. No use blowing a horn over the dead. We started with 103 chicks in the brooder, and now have three left—under a hen. What killed the 100? Various things. They were never strong to begin with. We bought the eggs and paid $10 for the lot. There you have $3.33 for a single bird! They were never thrifty, but moped around, and when they were tired of that, lay down and died. Our own eggs are much better. Out of 172 fertile eggs 154 hatched, and only four have been lost in the same brooder which witnessed the former wholesale slaughter. You never saw a livelier lot of chickens. There is a sore place on my leg which indicates to me the chief reason for this lively crowd. It is where Don, the Wyandotte rooster, spurred me when I went to look at the egg record of his family. The sons and daughters of a nine-pound bird that is willing to tackle a 175-pound man will not fall down and die without a struggle at least. The fighting blood in that old chap does those chicks more good than the lamp under the brooder! What a great privilege it is to have fight and kick in one's pedigree, so that they may be turned to worthy ends!

MAKING FACES.—I am not going to refer to the habit some children and young women have of screwing up their face when there is a screw loose in the temper. I refer to the good folks who put up a smile and a brave front though the wolves are gnawing at their hearts. Here we have a letter from a Jerseyman. This man leads the singing in a Methodist church in a country place:

"I often see you (in my mind) sitting on the fence, or stone wall (which was it?) that Sunday dreaming and building castles in the air, and feel like taking a seat alongside of you. After coming home from Sunday school and church, eating a hearty dinner, and taking a nap for 15 minutes, there is nothing I enjoy more than taking a stroll down through the fields with my two dogs, and they seem to enjoy it, and know when Sunday afternoon comes as well as I do. But we have not indulged in that pleasure much this Spring, as we have only had one clear Sunday out of the last nine. That puts me in mind of an incident that occurred at church last Sunday. Everyone was feeling the effects of the weather, and looking a bit blue. As I got up to announce the first hymn, my wife nudged me and said: 'Sing Some of these days the skies will be brighter; Some of these days our hearts will be lighter,' etc., (a beautiful hymn). As I announced it a smile spread over the faces of the congregation like a ray of sunshine, and then when the minister began to preach, and announced that grand old hymn, 'From every stormy wind that blows; From every swelling tide of woes,' etc., the ray still brightened till everybody was in good humor." W. P.

For all the sport they make of me for sitting on a stone wall there are plenty of farmers who find rest for body and brain in looking off over the valley. We have great and noble thoughts on the hills. If we could carry some of these thoughts down into the dead level of common life how we would stir up this world! Somehow we drop most of them as we walk down hill. You see this man's wife nudged that idea into him. These wives are responsible for a good share of the worthy things that men start. I have often seen a farmer's wife halt her husband before he goes into church or before company and dust him off with her handkerchief, or straighten his necktie. It is a good thing for man that woman can also dust up his morals and good intentions from time to time. H. W. C.

See Publishers' Announcement, Page 381.

A TEXT BOOK OF PLANT DISEASES, by George Massee, of the Royal Herbarium, Kew, London: New York. The Macmillan Co., price $1.60. The sub-title of this excellent work qualifies the diseases treated to those caused by cryptogamic parasites, by which is meant the various microscopic germs preying on useful plants. The whole subject is very thoroughly treated, both from a practical and technical standpoint. The number of destructive germs thus brought together for description is quite astonishing. The book will be very useful to the intelligent cultivator, as well as for the student, for whom it is primarily intended.

SWEET CLOVER.—Reverting to the recent Sweet-clover discussion, I have a letter from an Ohio correspondent who has the following to say: "In your review bulletin you speak of all clovers being excellent restoratives to worn-out land. Would not Bokhara or Sweet clover be the best to begin with upon totally unproductive land? I planted some small stalks upon the south side of a mound of rotten shale which had been piled up 10 years ago from a railroad cut. It made a marvelous growth, though the slope was so dry and poor that no weeds nor grass could grow upon it for 10 years. The tap roots of the clover run down 2½ feet, and this year it will ripen seed. I have never seen it grow in rich or cultivated soil, and I believe it is easily crowded out by other plants, preferring to grow in spots where nothing else can grow." JOHN CRAIG.

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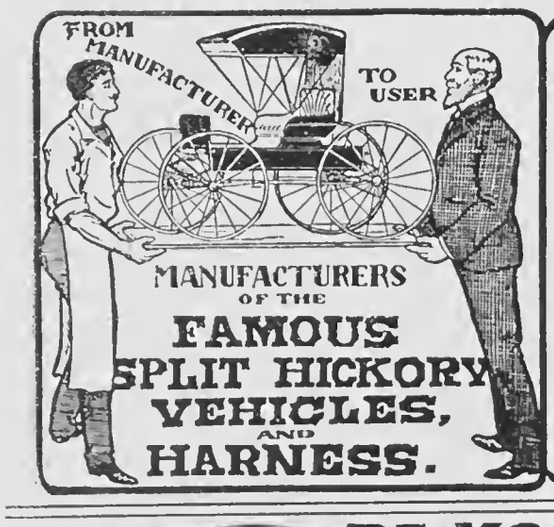

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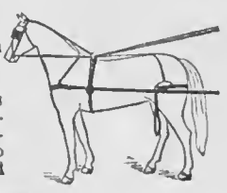

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The Rural New-Yorker

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THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, MAY 25, 1901.

As will be noticed on page 377 six more of the oleo rogues who try to sell their stuff as butter have met with their deserts. These rascals pretend to be expressmen. The only "express" business they do is to try to squeeze bogus butter through the meshes of the law. A period for reflection in jail, or a fine of $150, will do them good. Among the last batch was a man named Satanstein. Surely any man who will engage in this fraudulent business is a fit stone to carry Satan's mark.

*

WE learn from the papers that Hon. D. B. Henderson, speaker of the House of Representatives, is going to Europe for a brief visit. Mr. Henderson appointed J. W. Wadsworth, the friend of oleo, chairman of the committee on agriculture. Let us anticipate Mr. Henderson's home-coming. After being away from America for several weeks his first desire will be to know the sentiments of the people. Why not make things easy of comprehension by having thousands of letters on file at Washington telling him that the farmers want at the head of that important committee—a friend of the farm rather than a friend of the oleo factory. That sort of a home greeting would impress the Speaker, and oil the bearings of his duty!

*

PROF. Stedman's story of the way his name was used in connection with that "moth trap" last week is a good illustration of the impudence or "cheek" of some men. Prof. Stedman wrote out his experience with one insect only. The trap man put him through several stages, and finally had him endorsing the trap for the most impossible things. This man reasoned that Prof. Stedman would not bother about a small thing, but would let the statement go rather than take the trouble of making clear what he did say. If more of our public men would make a serious business of exposing these white lies and whitewashed facts, modern business would be put on a higher plane. Why is it that men who have goods to sell think they must tell big stories in order to attract attention? Cannot honest goods be sold honestly?

*

THE export trade of this country has reached enormous proportions. During the last fiscal year $1,370,763,571 worth of American goods were sent abroad, 61 per cent of them being products of the farm. Only seven per cent of these exports and 13 per cent of the imports were carried in American ships, vessels under the flags of Germany and England taking the greater share. During the past few months American capitalists have been securing control of steamships now sailing under the English flag. They have already bought the Leyland Line and have probably secured the fleet of the Atlantic Transport Company. It is said that these ships already land on the London docks over 5,000,000 tons of freight per year. If a new system of docks can be built in London the cost of handling can be considerably reduced, so that these ships will carry even more of American exports than they now do. It would seem as though England had seen her best days as a shipping or sea-carrying nation, giving way to this country. We seem destined not only to feed the world, but to carry the food to our customers as well. Vast changes and developments of industrial life are now going on, and old traditions and world-wide habits are being carried away by the ebb and flow of the tide of international trade. We must remember that the rock foundation upon which all these vast enterprises rests is the welfare and comfort of the American farmer. The money that is buying ships, building docks and changing the world's industry came originally out of the soil!

SOMETHING like 250,000 boxes of apples were sent to New York from the far western States last year. These apples gave good satisfaction, and there will be more of them this season. The Colorado apple growers in particular have their eye on this box trade. Experiments will be made next Fall with eastern apples packed in boxes. Dealers here feel sure that in time a good trade can be developed for these smaller packages. There is no room in the average New York flat for a whole barrel of apples. The fruit costs too much when bought by the measure or dozen, but a box of fair size can be kept on the fire-escape. Since the various crackers and hard biscuits were put up in small, convenient packages the trade has been greatly increased. So it will be with apples. Will eastern growers let the western men secure all the advantages of this trade?

*

Two years ago a committee consisting of two men called at the office of a transportation company to ask for better rates and service. There were other members of this committee, but they failed to come. The transportation people listened politely, but it was easy to see that they reasoned in about this way: "Here are only two men. If the farmers of this section cared much about this more of them would be here—at least they would make their interests known. We need not lose any sleep over this!" This year the same two men came back with seven others—all men of substance and business. They filled the room, and as the same transportation people sized them up they concluded that there was no play or bluff about their demands. When will farmers wake up to the fact that in dealing with those who handle their goods they are individually weak but collectively strong? Get together for business! That is the agricultural watchword to-day!

*

WE sometimes hear young men grieve because they cannot borrow money on their personal note. Could they but know it, the ability to borrow money easily would most likely prove a curse rather than a blessing to them. We believe that five young men have been hurt by easy credits where one has been permanently held back by the necessity of keeping within his means. Borrowing comes easy when one is young and hopeful. We assume an obligation as we put on a new coat. We think we can pull it off as easily, but all too often we wake up to find that it has fastened to one's life like a cancerous growth and cannot be shaken off. After many years of experience and observation we are convinced that in most cases it is a sad mistake to lend money to young men who can give nothing but a personal note without security. The boy who is capable of handling borrowed money to advantage will be able to make security for it. He will probably never make such security until he is obliged to do so.

*

SEVERAL months ago the papers reported a German chemist who gave advice about shipping American apples. He said that such apples should be sprayed about the stem end with a two-per-cent solution of peroxide of hydrogen, and then carefully wrapped in paper. A weak solution might possibly retard decay somewhat, but too much would bleach the red varieties and hurt their sale. Once let foreign consumers learn that our fruits are "treated with chemicals" and we should lose trade immediately, even though nothing but sugar and water were used. For this reason alone all such schemes should be discouraged. There are some varieties of apples peculiarly adapted to the export trade. They grow better in some localities than in others. If they are picked at the proper time without bruising, and held at a low temperature while in storage and during shipment, they will reach the other side in good condition. No other apples should be sent, and no spraying or "dipping" will help them.

*

WE do not always realize just why we do this or that. There is a slow process of evolution in our agricultural practice as well as in the development in nature. The corners are cut here and there, until finally, almost unconsciously, we have a practice or custom evolved that may be the very best for a community. The hard, stern, immutable law of the survival of the fittest deals with us unmercifully sometimes. While there is much danger of getting into ruts when one stays at home continually, yet there may be danger in seeing too much. We are not always able to see the causes that have led up to success, and are thus misled, and find later that our environments and abilities are not equal to the emergency, and failure follows. It takes good judgment to hear of large experiences of others, to read of great results, take it, digest it, and not become dyspeptic. If one talks or writes of his failures the listener or reader at once forms an opinion that he can get nothing from such a source, he turns the page over and reads of a cow that has just made 28 pounds of butter in a week, and is delighted with a possibility. His own cows, however, are not making seven pounds. How long do you suppose it will take this man to get to his momentary ideal? We are most benefited by contact with those who are doing just a little better than we are, an occasional sight of the game gives the hunter and dog courage to pursue.

*

WHILE airing their differences before the Industrial Commission the great tobacco manufacturers let out some information as to the business methods of a trust. The tobacco trust undertook to "freeze out" a rival concern. Its agents went to jobbers and retailers, and offered five per cent better terms if they would handle only trust-made goods. If they refused they were told that they could not handle any of the brands made by the trust. As a result the trade in independent goods was described as follows:

When a customer asked for an independent brand, such dealers would look around fearfully, as if they were about to commit a crime, and then sneak out the desired brand from under the counter, or from such other out-of-the way place. To these retailers the United States company was obliged to ship its goods in plain cases, without any marks which would serve to identify the contents as the product of an independent concern. When things had come to such a pass that a dealer sold a non-trust brand of tobacco with precisely the same guilty air with which he would pick a lock or commit a theft, and with just as much fear for the consequences, it was certainly time for remedial legislation.

We agree with that last statement. It wouldn't hurt our feelings if every man who sells any sort of tobacco could be made to feel like a thief. What hurts us is the fact that these same trust methods may be applied to the sale of food or other necessary articles.

*

BREVITIES.

Uncle Daniel used to pray,
In a humble, shambling way,
Half ashamed of what he said.
I can see his old, white head,
Bending o'er the table yet.
"Lord," he said, "make us forget
Them things that we want ourselves;
Help us reach up on the shelves.
Where we've tucked away the things
That a godly living beings,
Give us strength to hand a share
Of them treasures laid up there
To the poor and weak and sick
Use our hands to take your pick,
So we won't make fight or fuss,
For you give it all to us!"
Uncle Daniel at his best
Gave his nouns and verbs no rest;
Strangers tittered at his prayer,
But he had the essence there
Of the truth which wise men preach,
Pray all round, but never reach.

BUSINESS hours belong to the boss.

READ the "kicking" cures on page 382.

GREAT stunts are seldom performed by runts.

THE baby in the cradle is down to bed rock!

MY son, work first, and talk about it afterwards.

WHO can reach contentment without a small amount of cash?

HAVE plenty of faith, but don't try to manufacture it into "cheek."

CALL your fellow man brother with the heart rather than with the mouth.

PLANTS must take their food in the form of soup—as Prof. Craig says on page 373.

BE sure to read Mr. Cook's talk on milking—page 383. Always hold part of your energy in reserve.

SOME people never do their best until they are crowded into a corner where they must exert themselves.

WHY does the so-called "business" man drop most of his ideas of successful business when he goes to farming?

WE wish the patient horse could come and tell you how it feels when you neglect the wagon wheel until it loudly squeals.

SUPPOSE everybody leveled up or down to your own standard of duty-performance! Would the world be better or worse?

THERE has been so much questioning about the use of Cowhorn turnips as green manure that we hope to print the whole story soon.

CAN anyone name a case where stock of any kind has been injured by the drippings from sprayed trees? Were they poisoned by eating the grass?

MR. COOK tells us truly that some men hustle most when their muscles are moving least. We cannot see the brain work—we only see the results of mental hustling.

NO, we would not soak cut potato seed in either formalin or corrosive sublimate. That soaking should be done before the seed is cut. Dust sulphur over the cut seed.

READERS will regret to learn that our Mr. Van Deman recently threw his shoulder out of joint. He is still prepared to put a shoulder to the wheel on all hard fruit problems.

ON page 371 Mr. Keesling tells how ineffectual moth traps were made useful by a dose of printer's ink. A good many other traps lose their danger when treated with the same specific.

TENNYSON truly tells of people who climb "from their dead selves" to reach higher things. The trouble with some people is that they have so much self-esteem that they kill their best selves with kindness and then carry the corpse around with them.

Events of the Week.

DOMESTIC.—A fire at Dawson, Alaska, reported May 8, burned a large number of buildings, and caused a loss of $75,000. . . . . There is a severe outbreak of smallpox among Indians at Sitka, Alaska, and the disease is spreading. . . . . A gun is being built for the United States Government that will carry a projectile weighing 2,730 pounds a distance of 21 miles. If successful 40 of the cannon will be built for coast defense. . . . . At Berkeley, Cal., 18 cases of smallpox were reported in the State Institute for the Deaf, Dumb and Blind May 9. On the same date, 15 new cases and two deaths from the same disease were reported in Greater New York. In addition to existing sources of contagion, smallpox is now coming into New York on Italian steamers, which are bringing an unusual number of immigrants, and the sanitary officials find their quarantine facilities taxed to the utmost. . . . . May 9, two persons were killed by lightning, several thousand dollars worth of crops destroyed, and a dozen barns demolished, during a storm in Lawrence and Mercer counties, Pa. . . . . The explosion of a locomotive boiler at Mount Bedford, Pa., May 11, caused the death of four men. . . . . A Florence (Ariz.) dispatch says that the Gila River, on the Sacaton Reservation, has gone dry, and no grain will be harvested by the Indians. Great destitution will ensue. . . . . May 12, fire destroyed over $800,000 worth of property, chiefly lumber, along the Rouge River in Delray, a suburb of Detroit, Mich. . . . . A trolley car, on which were 115 persons, was wrecked in descending a steep hill at Fort Lee, N. J., May 12, and nearly all of the people were injured. It is thought the conductor will die. . . . . Jacksonville, Fla., is to remain under martial law indefinitely. This is considered necessary because hordes of tramps and disreputable characters are flocking into the devastated city, in the hope of sharing free rations without work. . . . . The steamer City of Paducah struck a snag in the Mississippi River near Grand Tower, Ill., May 13, and sank in five minutes; seven lives lost. . . . . May 15, mob violence in Albany, N. Y., resulting from an extensive street-car strike, grew beyond the control of the local authorities, and State militia was ordered to the scene of the riot.

ADMINISTRATION.—Two claims for indemnity, growing out of the blowing up of the Maine, which have been filed with the Spanish Claims Commission, may bring the whole question of responsibility for the destruction of the Maine before that tribunal. Senator Chandler, the President of the Commission, after reading the briefs in the cases, believes that the body over which he presides has jurisdiction. The question at issue is whether Spain or the United States is responsible for the damage inflicted in the destruction of the battleship. If Spain, then the United States, having assumed responsibility for claims of American citizens against Spain growing out of the disorders in Cuba, will be held liable. If the destruction of the Maine was not due to Spanish agencies, but to some internal accident or defect, then the claim could not properly come before the Spanish Claims Commission, and no claim for damages would hold. The singular feature of the business is that the law officers of the United States Government, in opposing the claim, may be compelled to take the position that Spain was not responsible for the blowing up of the Maine, and that the report of the Sampson Court of Inquiry was not a final determination of the question for the purposes of law. It will be the first time that the subject has ever been considered with all the rules of evidence before a judicial tribunal.

PHILIPPINES.—Detectives and the police have broken up a band of American brigands, who have been operating in the province of Pampanga, north of and not far from Manila. George Raymond, Ulrich Rogers and Oscar Mushmiller have been captured, and Andrew Martin, Peter Heise, George Muhn and two others are still being pursued. The band sometimes represented themselves as American deserters and at others as American soldiers. George Raymond wore the uniform of a captain. Raymond and Martin were formerly policemen in Manila.

GENERAL FOREIGN NEWS.—Heavy snow fell in parts of England May 7, endangering Spring crops. . . . . Census returns for England and Wales are practically complete, and show a total population for the two countries of 32,525,716. This is an increase of 3,523,191 over the population of 1891, a gain of 12.15 per cent during the 10 years. . . . . Violent earthquakes in the vicinity of Mount Etna, Sicily, are thought to presage an eruption.

FARM AND GARDEN.—J. W. Bailey, Oregon State Food and Dairy Commissioner, will make a strong representation to Secretary Wilson during his visit to the Pacific coast, for modification of the proposed Philippine tariff so as to admit butter into the Islands free of duty, and put a charge of 10 cents a pound on oleomargarine and all other imitations of butter. The schedules recommended by the Taft Commission put a duty of five cents a kilo of 2 1-5 pounds on butter and six cents a kilo on oleomargarine. The differential is only one cent a kilo, or a little over half a cent a pound, in favor of butter. Dairy interests all over the country have protested to the War Department against the discrimination, which is clearly for the benefit of the packing houses of the Mississippi Valley. Commissioner Bailey has the support of the butter manufacturers of Oregon in the effort he will make with Secretary Wilson in their behalf.

The twenty-seventh biennial session of the American Pomological Society will be at Buffalo, September 12 and 13, 1901, the exhibition being held in the Horticultural Building at the Pan-American Exposition; exhibits will be eligible to exposition awards.

The New York State law prohibiting the admission of nursery stock unless accompanied by a certificate from the entomologist of the State whence the goods are shipped, is embarrassing the nurserymen of several States where there is no such office as State entomologist.

Reports to the Department of Agriculture show that the average condition of Winter wheat on May 1 was 94.1. The total area under cultivation is 28,267,000 acres.

A Summer school in nature study is arranged by the School of Agriculture and Horticulture at Briarcliff Manor, N. Y., opening July 23. The course is offered especially to school teachers.

Some time in June O. G. Van Winkle will hold a strawberry carnival at Burlington, Iowa, at which he will exhibit specimens of 200 varieties of his own growing. All berry growers are invited to exhibit or participate in the meeting.

The East Tennessee Farmers' Convention was held at Knoxville, Tenn., May 21-22. It was one of the most representative agricultural gatherings ever held south of the Ohio River.

THE STRAWBERRY CROP.

Late in Maryland.

Last season's drought and heat were very severe on plant growth, and we have a very poor stand of plants on the rows. The weather has also been very unfavorable this Spring for plant growth, also for the fruit. Many blooms have been killed by frost and freezing; it looks at this writing as though we will not have over half a crop, and quality of fruit not the best. The season will be about 10 days late; prospect for other fruits good.

Marion Sta., Md. J. W. H.

Short in Virginia.

We think that there will be a short crop of strawberries this year. There has been no killing frost since bloom appeared, but the very severe drought of last Summer killed out a great many plants of the new beds, and the beds are very much broken. The quality of the fruit will depend on the weather from now on. A few of the farms are picking a crate or two this week, but there will be no general picking before next week.

Churchland, Va. J. E. W.

The Crop in Northern New Jersey.

All indications point to a half strawberry crop only in this section, the dry weather of last Summer having damaged berry patches to a great extent. Only a few careful growers will have anything like a full crop. In fields that were left uncovered during the Winter the plants are nearly extinct, especially in beds of over a year's standing. The strawberry crop, which, last season, proved exceedingly profitable, has caused a very large acreage to be planted this Spring, a great many rushing into the business who scarcely know a strawberry plant when they see one. This move will, of course, have but one effect, that of glutting the markets with small worthless berries of poor quality a year hence, after which they will again leave the field open for the careful grower, and go back, sick at heart, to their old calling. By the careful grower I mean the man who prepares his ground properly and sets pure pedigree stock and cultivates frequently during the Summer, not allowing a weed to get a start on him; then when Winter comes mulches his plants to protect them from the thawing and freezing of the cold months. The following Summer, if conditions are favorable, such a man can go to market with a load of beautiful berries, dispose of them and return home again, while the careless grower, who plants scrubs which he can procure for little money, puts them on poor ground poorly prepared, and allows the weeds to master him during the Summer, goes begging around, offering his fruit at any price, and never gets home till night and then, probably, with half his load unsold. Why would not such growers become disheartened and rush out of the business faster than they rushed in? Still, their chances are just as good as their neighbor's if they would only go about it in the right way. In this section (Sussex Co., N. J., near where the three States, New Jersey, Pennsylvania and New York meet), Bubach seems to be the stand-by, although some of the newer varieties, such as Sample, Bismarck, Excelsior, etc., have been quite largely planted this Spring by those who wish nothing but fancy fruit. The majority of those, however, who have rushed into the business, got their plants from some old beds, not even knowing whether they were perfect or imperfect varieties. I have at present over 20 kinds, new and old, on the farm, testing them with a view of determining their value on my soil. Nearly all my fruit is sold in Port Jervis, N. Y. J. M.

Tri States, N. Y.

THE POTATO CROP.

There is a shortage in acreage in our neighborhood; about one-third less than last year. The early planted potatoes are coming up poorly; some few rotting, others coming very uneven and weak, especially those planted before the week of rain. I have planted but two acres this year; have been planting four to five for several years, but have had no profit from the crop for about three years. Last year the crop was very light. We use from 800 to 1,400 pounds of high-grade potato manure to the acre. I have talked with two of our prominent farmers about potatoes; they are of the same opinion as myself in regard to the crop and conditions. H. K. G.

Columbus, N. J.

I have not learned of anyone having to replant in this vicinity; the long cold Spring delayed the farmers from planting as early as usual, and only a few have their crop above ground. In regard to the acreage it compares very favorably with last year. The Spring has been so cold and wet that seeding of all kinds has been delayed, and what seed has succeeded in coming through cannot grow very rapidly. Although the potato crop was almost a total failure in this vicinity last year, owing to the very dry weather and hot sun, the farmers are preparing to plant as many acres as usual, hoping for better results this year. C. F. H.

Bridgeton, N. J.

From personal observation and from inquiry I am satisfied that not more than one-half of the number of acres planted last year have been planted this. Probably the majority of farmers about here have put in their usual quantity—from one to four acres—but others who planted largely last year—from 10 to 30 acres—have planted very few, and some none at all this year. Last season was very unfavorable for growing potatoes in this section owing to the long drought, hot weather and the bugs; some had fairly good yields, but with others the crop was a complete failure. This year, owing to the cold and extremely wet weather which still continues, but few potatoes were planted before the middle of April, and many not until May 1. Those planted early are just coming up, and, I judge from my own, which were planted on April 12, are coming all right. Perhaps some seed planted on low ground may rot, but it is too early to determine. Other seeds have come up well, better than usual. Oats and peas, beets, carrots, onions, spinach, etc., are looking well. There is a good show for grass, grain and fruit. Peach trees are full of blooms and apple trees just putting out. I hope and trust bugs and insects will not be plentiful as they were last year. Potato bugs were something fearful; they seemed to thrive on Paris-green. I used sulphur and lime with it on potatoes and vines, and had fairly good crops. I also used sulphur on potato seed last year and this; had much less of the scab. D. C.

Huntington, N. Y.

Justice for Oleo Rogues.

The Department of Agriculture in this division has persistently kept up the fight against wagon men coming from New Jersey selling oleomargarine in this territory under the guise of expressmen. During the past week five men were arraigned for trial in the Special Sessions Court, with the result that three of them were fined $150 each or 60 days in jail; one sent to the City Prison for three months without any money penalty whatever, and sentence suspended upon another, the latter being a boy upon one of the wagons toward whom the court deemed it wise to be lenient. This brings the total up to about a dozen wagon men from New Jersey who have been detected and fined in selling oleomargarine during the past Winter. Warrants have been issued for several others, and the department feels confident that the illegal traffic in oleomargarine has received a severe setback through the heavy penalties inflicted by the courts, as the larger number of the dozen convicted had to serve a term in jail. John Colligan, Jersey City, three months in jail; George Wilson, Jersey City, $150 or 60 days in jail; James Mihim, Jersey City, $150 or 60 days in jail; George Warren, Jersey City, $150 or 60 days in jail; William Bradley, Jersey City, sentence suspended; James Hutcheon, 57 Nostrand Ave., Brooklyn, $200.

Government Crop and Weather Report.

Unusually cool weather has prevailed in the Mississippi Valley, with damaging frosts in the northerly section. On the western plateau and Pacific coast districts, the warm weather following the previous heavy rains, has made conditions highly favorable to vegetation. Corn-planting in the Central West has been delayed by the cold. In Nebraska, Kansas and southern Missouri, wheat is suffering slightly from drought. The grain is heading in Tennessee and southern Kansas. Oat seeding in the extreme North is still going on. The southern crop is being harvested, but is reported light on account of previous drought. In the Middle Atlantic States and Ohio Valley they are growing finely. Conditions in the cotton belt are unfavorable, rain being greatly needed. Southern tobacco is looking well. Transplanting in the Carolinas is about finished, and the work is being done as far north as Maryland. In New York farm operations of all kinds have been going on as rapidly as possible between showers; wheat, rye and grass in most sections are looking fine. Local hailstorms have done considerable damage in the Carolinas. In Georgia rice has been damaged by the cold weather. Fruit is dropping badly, but still there is plenty on the trees. In southern Jersey some seed potatoes are rotting. Strawberry outlook there and in Maryland is promising. In Pennsylvania the acreage of corn is large, and prospects for tree fruits favorable.

Wheat and rye are looking fairly well at present; judging from appearances now there will be an average crop. The newly-seeded grass fields are not looking very promising. We sow Timothy in the Fall and clover in the Spring on both light and heavy land. W. E.

Columbia Co., Pa.

ROADSIDE TREE LAW.—We are asked to print the Pennsylvania law regarding planting trees on roadsides. Here it is: Any person liable to road tax, who shall transplant to the side of the public highway on his own premises any fruit, shade trees or forest trees of suitable size shall be allowed by the supervisor of roads where roads run through or adjoin cultivated fields, in abatement of his road tax, $1 for every four trees set out, but no row of elms shall be placed nearer than 70 feet; no row of maples or other forest trees nearer than 50 feet, except locust, which may be set 30 feet apart, and no allowance as before mentioned shall be made unless such trees shall have been set out the year previous to the demand for such abatement of tax, and are living and well protected from animals at the time of such demand. Any trees transplanted to the side of the public highway as aforesaid in the place of trees which have died, shall be allowed for in the same manner and on the same conditions as in the preceding section. Abatement of highway tax limited to one-fourth of annual highway tax.

PROSPECTS IN PENNSYLVANIA.—We are getting a little of the rain the farmer at Hope Farm has been writing about, and we have had to quit farming for a few days past. The month of April was very dry, but May came in wet and still continues so. The rain is putting planting back; not many potatoes planted yet and no corn. I hear that some have not got all of their oats sown yet, but I think most of the oats were sown in April; there are always a few who are behind. Apple trees are not in blossom yet; I was looking at ours today and found them full of buds; think the prospect good for a big crop. Last year we got none. We are the only ones who grow wheat about here, and it is looking fine, better than last year at this time, and we thrashed 114½ bushels from 4½ acres. Rye is looking nice, better than last Spring. I think we had a little more snow during the Winter. Meadows are not looking well; new seeding is very poor. Pastures were grazed so close last Fall that they are in very poor shape. One pasture field where sheep ran last season is killed out so there is no grass on it this Spring, and the neighbor who owns it told me he would have to sell his sheep, as he had no other pasture for them. Our pastures are in fair shape. We commenced to feed our cows grain the last of July and kept it up all the Fall, so our cows did not graze so close, and I think it paid us. We are still holding the fort and making butter at our new factory.

Hop Bottom, Pa. E. P. B.

Woman and Home

From Day to Day.

THE WESTERN BOY'S LAMENT.

I wish't I lived away down East,
Where codfish salts the sea,
And where the folks have pumpkin pie
And apple-sass for tea.
Us boys who'se livin' here out West
Don't get more'n half a show;
We don't have nothin' else to do
But just to sort of grow.

Oh, if I was a bird I'd fly
A million miles away,
To where they feed their boys
On pork and beans three times a day;
To where the place they call the Hub
Gives out its shining spokes,
And where the folks—so Father says—
Is mostly women folks.
—Eugene Field's "Sharps and Flats."

*

CHAMELEON serge is one of the new materials; it is a close weave in changeable colors—blue and green, leaf green and violet, or brown and red. Taffeta straps are used to trim these serges. We also see a revival of calico this year; not sleazy cottons in ugly patterns, but crisp French and English prints, in a variety of beautiful colors. They have the smooth glazed surface of chintz, and many of them have handsome borders, as they had 15 or 20 years ago. The borders form a very pretty and effective trimming, more suitable to the material than lace or embroidery.

*

A MAN recently caused a sensation in a Brooklyn street car by his ingenious baby carrier. He had an umbrella in one hand and a satchel in the other, while, dangling in front, apparently without any human support, was a contented baby. Closer investigation showed that the child was resting on a wicker seat closely resembling the top of a vegetable basket. To this two steel hoops were securely clamped, holding the child in, while a leather strap fastened to these hoops passed around the father's neck. It was the general opinion of those who saw the device that the Brooklyn man could give points to an Indian squaw on the best way to carry a papoose.

*

SOY beans are said to be one of the best muscle-producing foods grown, containing a large proportion of protein. The Japanese eat little meat, but the Soy bean forms a large portion of their diet, and to this is ascribed their energy and endurance, which forms a strong contrast to the comparative indolence of the rice eaters. The North Carolina Experiment Station gives the following directions for preparing Soy beans: Soak the beans, until the skin rubs off, and stir until the skins rise to the surface. Boil the beans, with or without bacon, until soft; then season with salt, pepper and butter, and serve. The beans make an excellent substitute for meat, as far as nutritive value is concerned.

*

EACH season we decide that, before another housecleaning time comes around, we will have all our implements and materials for the work on hand, and in good condition. One trifle, needed all the year round, but especially at cleaning time, is a broom cover of canton flannel—several, rather, that they may be washed as necessary. They are very useful for dusting walls and ceilings. Make a bag large enough to fit over the broom, using the soft nap for the outside; run a tape in the hem, by which it is drawn closely on the broom. Another good idea is to have a soap rack that may be hung on the edge of a pail; it saves soap, and also does away with the risk of falling on a slippery streak or bit of soap. These racks are sold in the large stores, or may be adapted from something else by a handy man. A small piece of oilcloth on which to stand the bucket when needful is another trifle that adds to one's comfort.

HANDKERCHIEF stock collars are among Spring accessories, some being made apparently of white hemstitched handkerchiefs with embroidered corners, others with colored borders. The stock is covered with folds of the material; two little corners furnish turnover points, and the other corners are twisted into a four-in-hand knot in front. With colored borders, one of the newest models has about one-quarter of the handkerchief falling like a cape in the back, from the top of the stock, while two ends are brought forward to tie in a knot in front. Their style depends entirely upon the way in which they are made; it must be owned that they rather suggest an old-fashioned sore throat on the part of the wearer.

*

THE advice offered by the elder Mr. Weller concerning widows was apparently no new thing, for in the State archives of South Carolina is a time-stained document addressed to the Colonial Governor, and bearing the date of 1733. It is signed by 16 young women, and reads as follows:

We, the humble petitioners, are at present in a very melancholy condition of mind considering how all the bachelors are blindly captured by widows and we are

3807 Misses' Five-Gored Skirt,
10 to 16 years.

thereby neglected, in consequence of this our request is that your excellency will, for the future, order that no widow will presume to marry any young man until the maids are provided for, or else to pay, each of them a fine for satisfaction of invading on liberties and likewise a fine to be levied on all bachelors as shall be married to widows. The great disadvantage it is to us maids is that the widows by their forward carriage do snap up the young men and have the vanity to think their

3723 Five-Gored Skirt
22 to 32 In. Waist.

merits beyond ours, which is a great imposition to us who ought to have the preference. This is humbly recommended to your excellency's consideration and we hope you will permit no further insults.

These dissatisfied maidens apparently considered that if the widow was not burned on her husband's funeral pyre, after the Hindu custom, she should at least be well roasted.

The Rural Patterns.

Tucked and pleated flounces are sharing popular favor with the gored style, and the skirt shown is well suited for girls' wear. The skirt is cut in five gores and is laid in an inverted pleat at the back. The upper portion fits smoothly and snugly, but the shaping provides a graceful flare below the knees. As shown the flounce arranged in groups of tucks is applied over the lower edge and makes a becoming and fashionable finish, but the skirt can be left plain when desired, as it is cut full length and extends beneath the flounce. To cut this skirt for a miss of 14 years of age 6¾ yards of material 22 inches wide, 6⅜ yards 27 inches wide, 6⅛ yards 32 inches wide or 3¾ yards 44 inches wide will be required. The pattern No. 3807 is cut in sizes for misses of 10, 12, 14 and 16 years of age; price 10 cents.

The woman's skirt with circular flounces is of advantage when making over fabrics which may have to be pieced, since the flounces would hide any joins. It is a very graceful shape, and is specially commendable for duck, piqué or linen skirts to wear with shirt waists. The skirt is cut in five gores. The wide ones, at each side, are fitted with short hip darts, and the fullness at the back is laid in an inverted pleat. To cut this skirt for a woman of medium size 11 yards of material 21 inches wide, 8¾ yards 32 inches wide, 5¾ yards 44 inches wide, 5¼ yards 50 inches wide will be required. The pattern No. 3723 is cut in sizes for a 22, 24, 26, 28, 30 and 32-inch waist measure; price 10 cents.

Out-of-Doors.

She knew that she ought to go out for the fresh air every day. She read a great deal about the necessity of exercise out of doors, and she believed in it theoretically. In practice, however, there were many days when she hardly stepped out of the house. There would be a bit of work that she wished to finish, or the weather was disagreeable. She lived on a farm, so there was no marketing to take her out. One Winter two things combined to make her get more air. She had two diaries given her at Christmas, and the horse went lame. She always kept a diary, but this year, as both those given her were very nice ones, she decided to keep both of them. One was to contain observations on nature. After a week or so she found that if she noted down only the things seen from the house windows her nature diary would contain little besides weather. So she felt the necessity of going out every day to get material. She did not go far, but she always found something of interest, if nothing more than the actions of a flock of snowbirds.

The other factor—the horse—was the cause of her taking an unusual amount of walking exercise. She lived more than a mile from the post office, and she liked to hear from it often. She had not supposed that she could walk so far, but she found it a benefit and a pleasure. Her conclusions at the end of the Winter were as follows: "Every woman ought to spend at least a half hour out of doors every day of her life, and especially during the Winter. If she cannot force herself to do it, knowing that she ought to, and that it will make her feel better, she should go to work and invent something to take her out, and to give her an interest in out-of-door life."

R. S.

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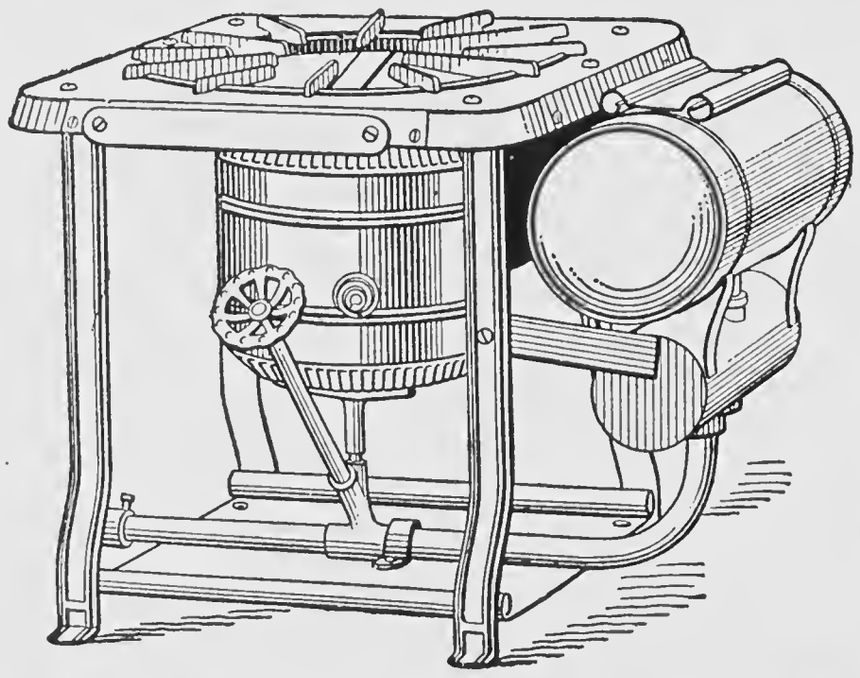

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A Balsam Pillow.

PART II.

So April passed and May and June. The crops were planted, the vegetables in. Brie strained every nerve. She petted her hens, and coaxed every possible egg out of them, she studied the tastes of the two cows, she maintained a brave show of cheer for her ailing mother, but all the time she was sick at heart. Everything seemed closing in. How long would she keep it up?

The balsam firs of the hill grove could have told tales in those days. They were Brie's sole confidants. The consolation they gave, the counsel they communicated, were mute, indeed, but none the less real to the anxious girl who sat beneath them, or laid her cheek on their rough stems. June passed and with early July came the answer to Brie's many prayers. It came as answers to prayers often do, in a shape of which she had never dreamed.

Miss Mary Morgan, teacher in grammar school No. 3, Ward Nineteen, of the good city of Boston, came, tired out from her Winter's work, to spend a few days with Farmer Allen's wife, her second cousin, stopped one day at the Dorset's door, while driving, to ask for a drink of water, took a fancy to the old house and to Brie, and next day came over to propose herself as a boarder for three months.

"I can only afford to pay $7 a week," she said, "but, on the other hand, I will try not to make much trouble, if you will take me."

"Seven dollars a week; only think!" cried Brie, gleefully, to her mother after the bargain was completed, and Miss Morgan gone. "Doesn't it seem like a fortune? It'll pay Reuben's wages and leave ever so much over! And she doesn't eat much meat, she says, and she likes baked potatoes and cream and sweet baked apples better than anything. And there's the keeping room chamber, all cleaned and ready. Doesn't it seem as if she was sent here to us, Mother?"

"Your poor father never felt like keepin' boarders," said Mrs. Dorset. "I used to kind of fancy the idea of it, but he wasn't willin'. I thought it would be company to have one in the house, if they was nice folks. It does seem as if this was the Lord's will for us, her coming in so unexpected and all."

Two days later Miss Morgan, with a hammock and a folding canvas chair and a trunk full of light reading, arrived, and took possession of her new quarters. For the first week or two she did little but rest, sleeping for hours at a time in the hammock, swung beneath the shadowing elms. Then, as the color came back to her thin face and the light to her eyes, she began to walk a little, to sit with Brie in the fir grove, or read aloud to her on the doorstep while she mended, shelled peas, or picked over berries, and all life seemed to grow easier and pleasanter for the dwellers in the solitary farmhouse. The guest gave little trouble, she paid her weekly due punctually, and the steady income, small as it was, made all the difference in the world to Brie.

As the Summer went by and she grew at home with her new friend, she found much relief in confiding to her the perplexities of her position.

"I see," Miss Morgan said, "it is the Winter that is the puzzle. I will engage to come back next Summer, as I have this, and that will help along, but the time between now and then is the difficulty."

"Yes," replied Brie, "the Winter is the puzzle, and Reuben's money. We have plenty of potatoes and corn and vegetables to take us through, and there's the pigs to kill and the chickens will lay some; if only there were any way in which I could make enough for Reuben's wages, we could manage."

"I must think it over," said Miss Morgan.

She pulled a long branch of the balsam fir nearer as she spoke, and buried her nose in it. It was the first week of September, and she and Brie were sitting in the hill grove.

"I love this smell so," she said. "It is delicious. It makes me dream."

Brie broke off a bough.

"I shall hang it over your bed," she said, "and you smell it all night."

So the fir bough hung upon the wall till it gradually yellowed, and the needles began to drop.

"Why, they are as sweet as ever—sweeter," declared Brie, smelling a handful which she had swept from the floor. Then an idea came into her head.

She gathered a great fagot of the branches and laid them to dry in the sun on the floor of a little-used piazza. When partly dried, she stripped off the needles, stuffed with them a square cotton bag, and made for that a cover of soft sage-green silk, with an odd shot pattern over it. It was a piece of what had been her great-grandmother's wedding gown. Do you realize the situation, readers? Brie had made the first of all the many balsam pillows. It was meant for a good-by gift to Miss Morgan.

"Your cushion is the joy of my life," wrote that lady to her a month after she went home. "Everyone who sees it falls in love with it. Half a dozen people have asked me how they could get one like it. And, Brie, this has given me an idea. Why should you not make them for sale? I will send you some pretty silk for the covers, and you might cross-stitch a little motto if you liked. I copy some for you. Two people have given me an order already. They will pay $4 apiece if you like to try."

3822 Girl's Costume, 6 to 12 years.

3821 Fancy Shirt Waist, 32 to 42 in. bust.

This suggestion was the small wedge of the new industry. Brie lost no time in making the two pillows, grandmother's gown fortunately holding out for their covers. Then came some pretty red silk from Miss Morgan, with yellow filloselle for the mottoes, and more orders. Brie worked busily that Winter, for her balsam pillows had to be made in spare moments when other work permitted. The grove on the hill was her unfailing treasury of supply. The thickset twigs bent them to her will, the upper branches seemed to her to rustle as with satisfaction at the aid they were giving. In the Spring the old trees renewed their foliage with vigorous purpose, as if resolved to balk her in her purpose.

The fir grove paid Reuben's wages that Winter. Miss Morgan came back the following June, and by that time balsam pillows were established as articles of commerce, and Brie had a munificent offer from a recently established decorative art society for a supply of the needles, at $3 a pound. It was hard, dirty work to prepare such a quantity, but she did not mind.

As I said, this was some years since. Brie no longer lived in the old home. Her mother died the third year after Miss Morgan came to them, the farm is sold and Brie is married. She lives now on a ranch in Colorado, but she has never forgotten the fir grove, and the memory of it is a help often in the desponding moments that come at times to all lives.

"I could not be worse off than I was then," she says to herself. "There seemed no help or hope anywhere. I felt as if God didn't care and didn't hear my prayers; and yet, all the time, there was dear Miss Morgan coming to help us, and there were the trees, great beautiful things, nodding their heads and trying to show me what could be made out of them. No, I never will be faithless again, nor let myself doubt, however dark things may look, but remember my balsam pillows and trust in God."—Susan Coolidge in Colorado Weekly Times.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

Rural Recipes.

Flannel Cakes.—One cupful of Indian meal, two cupfuls of flour, three of boiling milk, one-fourth of a yeast cake, one teaspoonful of salt, two tablespoonfuls of butter and one of sugar. Pour the boiling milk upon the meal and butter; let it cool; then add the flour, salt, sugar and the portion of yeast dissolved in four tablespoonfuls of cold water. Let it rise over night, and in the morning fry as you would griddle cakes.

Election Cake.—Rub into half a pound of sifted flour five ounces of butter, add a saltspoonful of salt, one cupful of sugar; mix. Scald two cupfuls of milk, and when lukewarm add one yeast cake dissolved, and two eggs well beaten. Make a hole in the center of the flour, pour in the milk mixture, stir in a little of the flour; cover and stand aside for three hours. Then beat in all the flour, add the juice of three oranges, a tablespoonful of cinnamon and half a nutmeg grated; turn into a greased round pan and, when very light, bake in a moderate oven for one hour.

Sweet Potato Pudding.—One quart grated raw sweet potato, one quart milk, three eggs, two cupfuls sugar, piece of butter the size of an egg, one-half teaspoonful of salt, cinnamon and allspice to taste. Mix well, put in a buttered earthen pudding dish, and bake two hours in a moderate oven.

Kentucky Corn Nuts.—To one quart of cornmeal add two teaspoonfuls of baking powder and one teaspoonful of salt; sift twice. Then add enough sweet milk to make a stiff batter that can be molded in the hands. Form into small nut-sized balls, drop into deep hot fat and fry like doughnuts. The balls must be quite small or they will not cook through.

Pistachio Nut Cake.—Cream one cupful of sugar and one-half cupful of uncolored butter together until very light; add half a cupful of milk, sift 1½ cup of flour; use the pastry flour for all white cakes; reserve one tablespoonful of this to mix with the baking powder, and sift the rest into the mixing bowl and beat with a wooden spoon for five minutes. Now stir in lightly the whites of five eggs beaten very light and add last of all one teaspoonful of baking powder sifted through the tablespoonful of flour which was reserved for that purpose; flavor with half teaspoonful of pistachio extract. Line a square cake pan with well-greased paper, pour in the batter and cook 40 minutes in a moderate oven. The greatest care must be exercised in the baking; do not take it out of the oven too soon or it will fall. When the cake is cool make a boiled icing with one cupful of sugar cooked until the stringing point, poured over the white of an egg beaten well meanwhile and flavored with pistachio extract. Chop very fine one ounce of pistachio nuts, spread them over the cake and spread the icing on top.

Beware of Them

There are two afflictions which perhaps give the most pain and trouble, viz:

Sciatica

and

Lumbago

Both disable and cripple, but

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Publisher's Desk.

To January 1, 1902, for 50 Cents.

During the last two years we have received several thousand letters thanking us for the new rose, Ruby Queen, most of them saying at the same time that the writers are always glad to do a good turn for THE R. N.-Y. We are going to give these good friends a chance now to interest their neighbors in the paper. We have some roses yet left. Get two of your neighbors to give you 50 cents each, send us the dollar and their names and addresses. We will send them the paper the remainder of this year, and each a rose by return mail. For your part we will send you postpaid Mr. Stringfellow's New Horticulture, which is advertised in another column, for 50 cents. We hope to hear from several thousands of our friends on this proposition. Do not put it off. See what you can do at once. As is well known, we never make any great promises as to what is to be printed in THE R. N.-Y. We like performance better, but we have matter now in hand and in sight which will surely prove strong and readable. From now until January 1, 1902, for 50 cents is a great bargain. Mr. Stringfellow's book is easily worth $1 to any man.

MARKETS

The Week's Quotations.

WHOLESALE PRICES.

NEW YORK, MAY 18, 1901.

GRAIN.—Wheat is down a trifle and export trade for the week light. Corn dull. Oats have met good local trade.

Wheat, No. 2, hard, N. Y.	82¾	@	—
No. 1, Northern Duluth	82¾	@	—
No. 1, Northern Chicago, spot.	81¾	@	—
Corn, No. 2, mixed	51½	@	—
Oats, No. 2, white	33½	@	—
Rye, No. 2, W'n, c. i. f., Buf.	—	@	56
Barley, feeding, c. i. f., Buf.	42½	@	45
Malting, new crop	62	@	68

BEANS.

Marrow, choice, per bu	2 50	@	2 55
Marrow, fair to good	2 20	@	2 45
Pea, bags, choice	2 05	@	—
Red kidney, choice	2 00	@	2 05
White kidney, choice	2 20	@	—

FEED.

Spring bran, coarse	18 00	@	20 00
Winter bran	18 50	@	21 00
Red Dog	19 00	@	—
No grade flour	19 00	@	20 00
Linseed meal, ton	—	@	27 50
Cottonseed meal, ton	24 10	@	—

HAY AND STRAW.

Hay, No. 1	90	@	92½
No. 2	82½	@	85
No. 3	75	@	80
Clover	60	@	65
Clover, mixed	75	@	80
Straw, rye, long	85	@	90

SEEDS.

Clover, per lb	10¼	@	10¾
Timothy, per lb	4¼	@	5
Red Top, per lb	10½	@	—
Flaxseed, whole, bu	6 50	@	7 00
Millet, per lb	2	@	2⅛
Rape, German, per lb	3¼	@	3½
Sunflower, per lb	2¼	@	2½

MILK.

New York Exchange price within 26-cent freight zone 2¼ cents per quart.

BUTTER.—There is a large supply of table grades, with something of a surplus of lower qualities.

Creamery, extra, per lb	—	@	19
Firsts	18	@	18½
Seconds	16½	@	17½
Lower grades	15	@	16
State dairy, tubs, fancy	18	@	—
Tubs, firsts	17	@	17½
Tubs, seconds	16	@	16½
W'n imitation creamery, fancy.	16½	@	17
Firsts	14½	@	15½
Lower grades	13	@	14
W'n factory, large tubs, best..	—	@	13
Fair to good	12¼	@	12¾
Lower grades	11	@	12
Rolls, common to prime	11	@	13
Renovated butter, fancy	16	@	17
Common to choice	12	@	15½
Old creamery	12	@	14½
Old Western factory	10	@	13

EGGS.—Market dull for anything but the best. Many lots are going into cold storage on account of low prices.

QUOTATIONS AT MARK.

Nearby, State and Pa., fresh-gath'd, fancy selected, doz..	—	@	15
Average prime	—	@	14
Mich., N. Ohio & N. Indiana, storage packings, fancy	13¾	@	14
Other W'n, storage packed, selected	13	@	13½
Regular packings, N'n sec'ns.	11½	@	13
Graded, Southerly sections	12	@	12½
Reg. packings, S'ly sections..	10½	@	11½
Kentucky, best marks, selec'd.	11	@	11½
W'n, fresh-gathered, dirties	9½	@	11
Checks	9	@	9½
Duck eggs, Baltimore, per doz.	—	@	16
Western	12½	@	13

LIVE STOCK.—Native steers in demand; cows lower. Sheep and lambs dull.

Native steers	4 75	@	5 00
Cows	2 15	@	4 05
Veal calves	4 00	@	6 25
Sheep	3 25	@	4 60
Lambs	4 75	@	5 30

COUNTRY-DRESSED MEATS.

Calves, veal, prime, per lb	—	@	8
Fair to good, per lb	7	@	7½
Common to medium, per lb	5	@	6½
"Spring" lambs, fancy, each	2 00	@	6 00
Poor to prime	2 00	@	5 00

LIVE POULTRY.—Spring chickens are plentiful, but of irregular size and quality.

Spring chickens, nearby & W'n, per lb	23	@	25
Fowls, per lb	—	@	11
Roosters, per lb	—	@	7
Turkeys, per lb	—	@	8
Ducks, avge. W'n, per pair	70	@	80
Average Southern, per pair	50	@	55
Geese, avge. W'n, per pair	90	@	1 00
Average Southern, per pair	70	@	75
Pigeons, per pair	25	@	40

DRESSED POULTRY.—Receipts of iced fowls large, and demand weak for anything but fancy small.

FRESH PACKED—ICED.

Turkeys, W'n, hens, small	8	@	9
Western, toms	7	@	8
Broilers, Phila., over 3 lbs. to pair, per lb	30	@	32
Phila., under 3 lbs. to pair, lb.	25	@	28
Penn., fair to good, per lb	23	@	28
W'n, dry-picked, per lb	22	@	28
W'n, scalded, per lb	20	@	25
Chickens, Phila., Winter, 5@6 lbs. to pair, per lb	22	@	25
Fowls, W'n, dry-picked, prime	—	@	10½
Western, scalded, prime	—	@	10½
Western, poor to good	7	@	10
Southwestern, prime	10	@	10½
Old roosters, per lb	6½	@	7
Ducklings, L. I., and other nearby, per lb	18	@	19
Squabs, choice, large, dark	—	@	2 50
Mixed, per doz	1 75	@	2 00
Dark, per doz	—	@	1 50
Culls, per doz	50	@	1 00

FROZEN.

Turkeys, young hens, No. 1	11	@	—
Mixed young hens and toms, No. 1	10½	@	11
Young toms, No. 1	10	@	10½
No. 2	7	@	9
Broilers, dry-picked, fancy	18	@	20
Scalded, fancy	13	@	15
Chickens, fancy, soft-meated	—	@	12
Average, No. 1	—	@	10
No. 2	7	@	9
Fowls, dry-picked, No. 1	9½	@	—
Capons, fancy, large	15	@	16
Medium sizes	13	@	14
Ducks, fancy	12	@	12½
Geese, fancy	5½	@	10

DRIED FRUITS.

Apples, evaporated, fancy, lb	6	@	6½
Evaporated, prime, per lb	4⅝	@	4¾
Evaporated, poor to good, lb.	3	@	4
Sun-dried, S'n, sliced, lb	2½	@	3½
Sun-dried, State & W'n, qrs., per lb	2½	@	3½
Sun-dried, So'wn, coarse cut.	2½	@	2¾
Sun-dried, S'n, coarse cut	2¼	@	2½
Chops, per 100 lbs	60	@	1 50
Cores and skins, per 100 lbs	40	@	1 00
Raspberries, evap'ated, 1900, lb.	19	@	20
Blackberries, 1900, per lb	5½	@	6
Cherries, 1900, per lb	12	@	14

FRESH FRUITS.—Apples are scarce. Receipts of strawberries greatly increased, but quality not at all satisfactory and prices low.

Apples, Ben Davis, per bbl	3 00	@	4 00
Baldwin, choice, per d.-h. bbl.	—	@	4 00
Baldwin, fair to good	3 25	@	3 75
Russet, com. to choice, bbl	2 50	@	4 00
Strawberries, Ch'n, good to choice, per qt	15	@	20
Charleston, fair to good	10	@	12
N. C., Middleton, choice	13	@	14
N. C., other sorts, prime	10	@	12
N. C., common to fair, per qt.	6	@	9
Norfolk, fair to choice, per qt.	10	@	15

VEGETABLES.

Potatoes, Bermuda, prime, bbl.	4 00	@	5 00
Bermuda, No. 2, per bbl	3 00	@	3 50
Florida, per bbl	4 00	@	4 75
Ch'n & Sa., prime, per bbl	3 00	@	3 75
Southern, No. 2, per bbl	2 00	@	2 50
State & W'n, in bulk, 180 lbs.	1 50	@	1 75
State, per sack	1 50	@	1 60
Sweets, Vineland, per bbl	2 00	@	2 75
Sweets, other Jersey, per bbl.	1 75	@	2 25
Asparagus, Colossal, doz. bchs.	3 00	@	4 00
Extra large, green, per doz	2 50	@	3 00
Extra prime, white	2 00	@	2 50
Prime, white and green	1 50	@	1 75
Fair to good, doz. bunches	1 00	@	1 25
Culls, per doz. bunches	50	@	75
Beets, Fla., per crate	40	@	50
Fla. & Ch'n, per 100 bchs	3 00	@	7 00
New Orleans, per 100 bchs	2 00	@	5 00
Carrots, Fla. & Ch'n, 100 bchs.	2 00	@	3 00
Cabbages, Ch'n, per bbl. crate.	1 00	@	1 50
Fla., per bbl. crate	75	@	1 00
N. Carolina, per bbl. crate	1 00	@	1 25
Norfolk, per bbl. crate	85	@	1 25
Cucumbers, Savannah, crate	3 00	@	4 00
Fla., per basket	2 50	@	3 50
Fla., per crate	2 00	@	3 00
Celery, Fla., per case	1 00	@	2 00
Eggplants, Fla., per box	1 25	@	3 00
Garlic, N. O., per lb	8	@	10
Green peas, Norfolk, per ½-bbl. basket	2 00	@	2 25
N. C., per bushel bskt	75	@	1 25
N. C., per ½-bbl. basket	1 50	@	2 00
Kale, L. I., per bbl	50	@	60
Lettuce, Norfolk, per bskt	40	@	60
Onions, Bermuda, per crate	1 05	@	1 15
Egyptian, per bag, f. o. b	1 80	@	2 00
New Orleans, per bbl	2 00	@	2 25
New Orleans, per bag	90	@	1 10
Peppers, Fla., per carrier	1 00	@	1 50
Radishes, Norfolk, per bskt	50	@	75
Nearby, per 100 bunches	60	@	75
Squash, Fla., yellow, per crate.	1 00	@	1 25
Fla., white, per crate	—	@	1 00
String beans, Fla., wax, crate.	1 25	@	2 25
Fla., wax, per basket	1 25	@	2 50
Fla., green, per basket	1 25	@	2 50
Fla., green, per crate	1 25	@	2 00
Charleston, per basket	3 00	@	3 50
Spinach, L. I., per bbl	50	@	75
Turnips, Canada, Russia, bbl.	75	@	80
Tomatoes, Fla., f'cy, carrier	2 25	@	2 50
Fla., poor to good	1 00	@	2 00
Havana, per carrier	1 25	@	1 50

RECEIPTS for first four days of this week:

Wheat, bu	560,100
Corn, bu	506,000
Oats, bu	697,700
Apples, bbls	4,186
Oranges, boxes	33,024
Potatoes, bbls	38,894

BUSINESS BITS.

MOORE BROS., Albany, N. Y., are practicing veterinarians. They offer the "Best Gall Cure on Earth" and other veterinary remedies to THE R. N.-Y.'s readers.

"HORSE TROUBLES" is the title of a booklet issued by the Newton Horse Remedy Co., Toledo, O. Heaves, distemper and indigestion are the troubles given special consideration. The booklet is free for the asking.

THE Hapgood Plow Co., Box 334, Alton, Ill., offers "the greatest bargain on earth" in the buggy line. Their advertisement gives full description of the buggy, and tells how it is possible for them to sell this buggy so cheaply.

THE Duplex ball-bearing woven wire fence machine is said to make 100 different styles of fence, and the manufacturers conservatively estimate from 40 to 60 rods of farm fence a day. Kitzelman Bros., Muncie, Ind., are the manufacturers of this machine, and they also make a large line of ornamental fence and gates. Write for printed matter which will show the different designs of fence and prices of fence machine, etc.

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CHICAGO has long been the leading metropolis of the West, and now the great inland city bids fair to become the London of America—the great warehouse of the world's commercial activities. On April 22 the steamship Northwestern, carrying a cargo of McCormick machines, cleared from the port of Chicago bound for Liverpool, England. This vessel is the first to go from the great manufacturing center of the West direct to Europe. Following the steamer Northwestern the Northman, also carrying a cargo of McCormick machines, cleared from the McCormick docks April 24 bound for Hamburg, Germany. The cargoes of the two vessels comprised more than 144 carloads of McCormick machines, mostly self-binders and mowers. In making this initial shipment by an all-water route direct to Europe the McCormick Harvesting Machine Company has made Chicago a seaport and established a line of freighters that during six months of the year will ply regularly between the Lake City and European ports.

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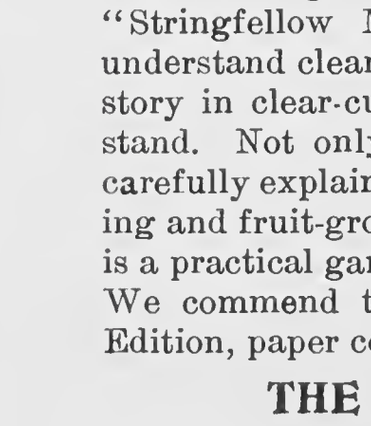

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THE RURAL NEW-YORKER, New York.

Market Briefs

PICKED UP HERE AND THERE

RETAIL FRUIT TRADE.—It is surprising to what an extent the Italians and Greeks have captured the retail fruit business of this city. Formerly butchers and grocers handled this almost exclusively in the up-town districts, but now many of these rent a window or corner of the store to an Italian, who takes to this fruit trade as naturally as a duck to a millpond. The butcher or grocer thus finds that he can satisfy his customers and get more out of it in the long run than by handling the fruit himself. How can the Italian afford to do it? Simply because it does not cost him much to live and he is willing to work for almost nothing.

DIGGING UNDER DIFFICULTIES.—New York streets are always more or less torn up by the street car companies or the gas or water works, but at present the whole city is suffering from a "breaking out" almost equal to smallpox. The cause is the work being done on the underground railway. It would be quite a task to dig a ditch of this size in the open country where there is clear sailing and plenty of room to put the earth that is removed; but as soon as one gets below the pavement here a regular tangle of gas and water pipes and bottled-up electric wires is struck, and supports have to be made for these from the surface, while the digging underneath them is done. Also, there is no room in many places to put the earth, and it must be carted away as fast as removed. Anyone with a desire to study the methods of engineers in handling a big job of this sort will find an unusually good opportunity in this city at present. Generally operations of this kind are so hidden by high fences that the public has no chance to see them, but there are so many sections of the city where this work is going on that there is no trouble in finding some out-of-the-way corner where one can stand and look as long as he likes. The new bridge across the East River is also an interesting thing at present, as the work of laying the new cables is under way. Many visitors to New York take in the theaters, museums and walk a short distance along the Bowery, and think that they have seen it all, practically ignoring the great and constantly changing produce markets and building operations.

THE SHARKS who make their living by swindling farmers who send them produce for sale are unusually active at two seasons of the year, viz.: just before the holidays and in early Summer. They know that at those times farmers have considerable stuff for sale, and so they send thousands of circulars throughout the country, making the most extravagant promises in regard to the prices they can get and the tremendous facilities they have for selling stuff. People are more suspicious of these sealawags than formerly; still some seem to think that the liars all perished in the Flood, and that no new crop has come up; that whatever a man promises he must mean to do it, or he would not promise it. Of late we have had inquiries asking us to look up this or that commission man. This is the best evidence that we know of that the scoundrels are at work with their circulars bidding for the farmers' early fruit and vegetables. In nearly every case the name is one that we are not familiar with, and going to the number given, the party is found occupying part of a store. There is a small movable sign which can be hooked on a couple of nails beside the door or on one corner of the building. Nearly all inquiries that we have are about people of this kind rather than old-established firms. Are they reliable? Who can tell? They may be, to all appearances, doing a square business to-day and "bust" the next. We know of men who have done business in a little corner of another man's store for years, and who are as "straight as a string," yet so little capital and plant are required to do business in this way that rascals have an unusual chance. The only sure way that we know of to find out whether one of these men is honest or not is to try him, but this is too much like the famous method of learning the difference between mushrooms and toadstools—by eating them—to suit most people. Why do people inquire about these toadstool business men rather than those who stay in one place year after year? Because the latter know that they must not make promises that they cannot carry out if they expect to stay in business. The other fellows don't expect to stay any length of time in one place. The only general rule that can be given is to be cautious in taking hold of any of this tempting bait of promised high prices, even though it may be unjust to some who really have a trade by which they can dispose of certain products at an unusual figure. Another thing that has been mentioned before, but which it is well to keep in mind, is that when one gets hold of a commission merchant who uses him right, it is a good plan to stick to him, even though there may be times when he sells your stuff for less than your neighbor gets. The chances are that you will come out best in the long run. W. W. H.

BRIARCLIFF AGRICULTURAL SCHOOL

A Formal Opening.

The formal opening of the new dormitory, lecture-room, and office building of the School of Practical Agriculture and Horticulture, Briarcliff Manor, N. Y., took place May 15. Last September this school was opened in temporary quarters with 10 students. There are now 30. The new building stands on high ground overlooking a large share of the 6,000 acres of dairy and fruit farms owned by Walter W. Law. Speeches were made by trustees and others interested in the school. R. Fulton Cutting said that the great business of civilization should be to give every man, woman and child a chance for the development of the best that is in them. He spoke of the way in which the unskilled laborer is handicapped, and of the hopeless struggle of mere muscle against brain and muscle intelligently used. He said that the competitive system would be entirely wrong if provisions were not made to give every one a chance to develop himself so as not to be put at a disadvantage in the struggle for position. Hon. James Wood spoke of the need of more intelligent methods in farming. He stated that agriculture in this country is carried on in the most ignorant method of any country in the world—the method of depletion. We feel proud of the resources of this country which enable us to send vast quantities of produce abroad; but we fail to realize that these are simply drafts made upon the land, and that no provision is being made for their payment. It is just taking from the soil what has been stored up by nature in the centuries of the past, and giving no return. He emphasized particularly the way in which this is being done in the West, and thought that with our growing population and constant depletion of the soil, the time would come when the balance of production and consumption will be reached; when we can no longer feed the other nations of the earth; when people will have to return to the worn-out lands in the East, build them up and cultivate carefully as is done in the thickly-settled parts of the old world. He thought that any movement that would show people more intelligent methods of handling the soil should be encouraged, and that instruction in this matter could be summed up in two points, first showing how the fertility in the soil may be conserved and increased, and next how it can be taken out to best advantage. It is the law of putting money into the bank and drawing it out when needed. He said that in all work the two great necessities were "know how and can do, and that in the lives of many men there is a chasm between these two points in to which they fall and never escape from it. Mr. Law spoke of the work that was being done on Briarcliff Farms. He said that their aim was thoroughness—to do everything as well as could be done, and mentioned the motto which is tacked up in their buildings:

"Though only a cobbler, I'll make it my pride the best of all cobblers to be;
"Though only a tinker, no tinker on earth shall mend an old kettle like me."

Dr. Felix Adler, who is well known for his interest in education in all lines, and manual training in particular, spoke of the two widely different types of men, those who live by their wits and those who live by their muscles alone. He believed that the combination of wits and work made the man who gets the most out of life for himself and does the most for others. He said that a school of agriculture, particularly for the Summer, was needed by those who attend the manual training schools in the city. Dr. Adler is the head of the Society for Ethical Culture. He said that he recently received a letter addressed to him as president of the Agricultural Society of New York. He considered it a compliment, as it seemed to him that agriculture and ethical culture are not at all opposed to each other. "We all need to be cultivated," said he, "and the best and only way to cultivate one's self is to cultivate something else. It is not done by sitting down and saying 'I must do this and that and thus cultivate myself,' but by helping to improve some other person or thing the miracle happens that we ourselves are helped, and in no other way."

Director Powell spoke of the methods and aims of the school, which are in brief to enable young men and women to study intelligently the soil and its products, how best to improve lands, and to learn the various kinds of farm work by actual experience. He was encouraged by the interest the students show in their work. Thus far nine-tenths of them have been from the city, young men and women who are anxious to get out of city life and learn how to handle farm lands. Some of them are people of means who are looking to farm lands as investments, and wish to become familiar with the best modes of farming. Mr. Van Norden, president of the board of trustees, stated that the running expenses of the school were about $12,000 per year, and that at present the fees from students pay about one-third of this amount, the remainder being met by voluntary contributions. A Summer course in nature study for a month beginning the middle of July, has been arranged, particularly for public school teachers who wish to do a little vacation work in this line. The outlook for this school is promising, and it is certainly deserving of the support and patronage of those who believe in the spread of practical agricultural education in a business-like method.

W. W. H.

The season here has been favorable to all kinds of fruit. Peaches, plums, pears and cherries set full crops. Apples bloomed very freely, but it is too early yet to tell how they will set. Strawberries are in full bloom now; weather cool and dry. Gardens all late; condition of wheat extra good.

Barborsville, Va. A. R. L.

SILAGE AND HORSES.—Is silage ever fed to horses? E. E. G.

Purdy's, N. Y.

Not usually. Cases of such feeding are reported from the South, but some deaths in horses have been traced to the silo. At the North but little silage is fed to horses or mules—the general opinion seems to be against it.

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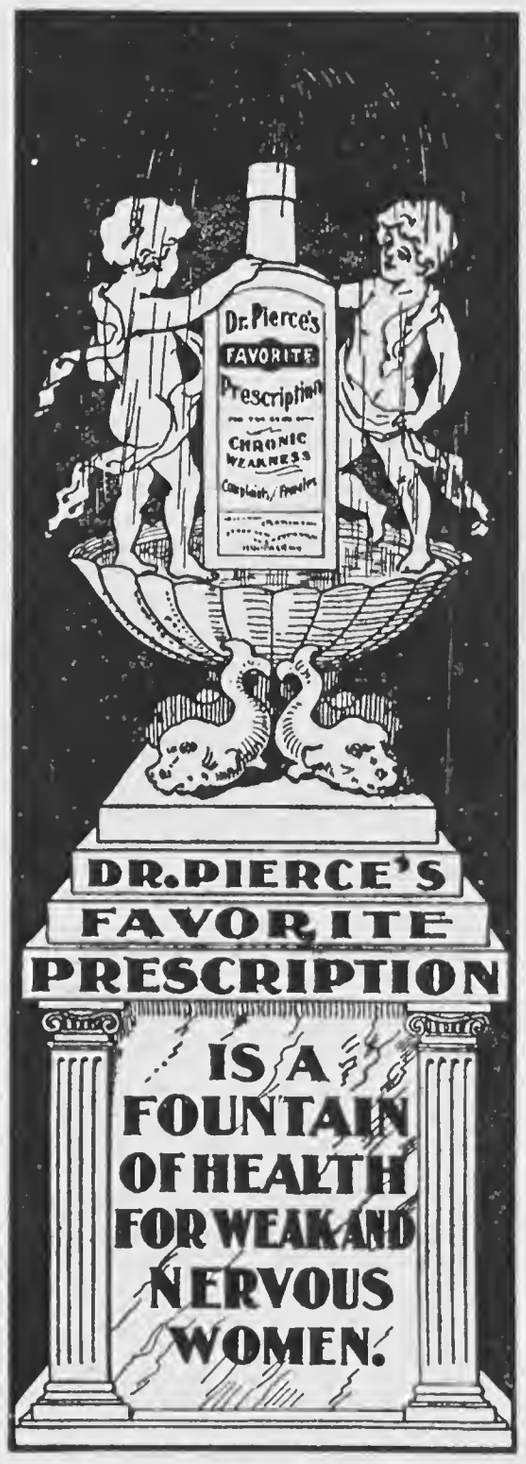

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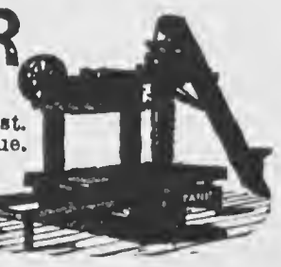

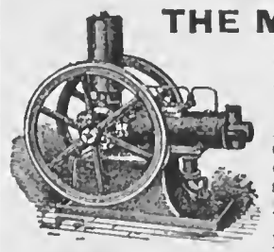

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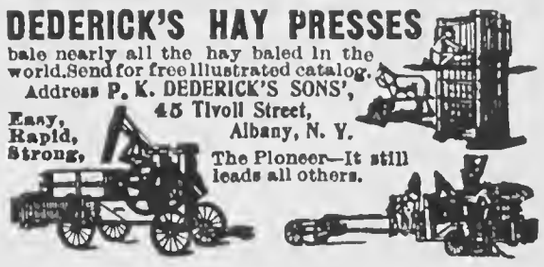

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Pasture with Rape.

1. I am thinking of sowing rape in corn at last plowing about July 4, cutting the corn off for fodder, then pasturing the rape. Will the rape make a good Fall pasture for cows? Is there anything better to plant in cornfield for Fall pasture for dairy cows? Can corn be cut late enough for fodder and not diminish the quality or quantity of corn? 2. Do you know of any solution in which to dip eggs to keep them fertile from late Summer until Winter? D. S.

Savoy, Ill.

1. Rape is a plant with a very succulent leaf, and with a rather strong flavor of the turnip or cabbage type. Consequently it is not recommended for dairy cows, neither do I know of its having been used in this capacity. Furthermore, unless fed with extreme caution, hoven or bloat would be likely to occur. So I would not recommend this plant for dairy cattle. The desire seems to be to secure a late Fall pasture. If rye were sown late in August or early in September this result might be secured, and fair grazing be available in late October and November on fertile Illinois land. Then this same land could be pastured some the following Spring. Dairy cows being milked, however, should only be pastured on rye for a few hours (two or three) *right after milking*, and not all day, otherwise the milk will have an undesirable flavor from the rye. Rye can be safely pastured if the cows are turned on as above specified. Corn in central Illinois should be suitable for soiling purposes till late in September without serious fear of frost. Then rye could follow this. Corn produces a most excellent soiling crop, and rye could be drilled into that part of a field from which the corn had been cut off, and thus the green food be well carried into the Fall.

2. The fertility of eggs cannot be maintained for any extended period of time. The egg, however, may be kept fairly fresh by placing in lime solution or painting it over with hot paraffin, but this has no special application to the matter of fertility. C. S. PLUMB.

That Kicking Cow.

I am much interested in your statements about the kicker. I won't be surprised if your pet theories are jarred a bit when old Jersey's heifers come to pail. One favorite with me is a breeching to prevent the cow from backing, a strong hame strap twice around ankle with chain out behind low down. Cow can kick at will, and cannot hurt you but does jar herself. E. L. S.

Barnstable Co., Mass.

As to that kicking Julia, never sell a cow because she is a kicker. When about 12 years old I took my first lessons in milking, and the cow that I then tried to milk would kick me clear across the stable. I never succeeded in doing much with that cow, but since that time I have milked many kickers and owned several, and I say if the cow is in all other respects a good animal I would not dispose of her because she would kick. F. H.

Plymouth Co., Mass.

The Hope Farm man tells us of a cow he has that is a confirmed kicker, and says it is his intention to have her made into beef because of that bad habit. My neighbor remarks that a kicker can be milked with comparative ease by putting her in a stanchion and laying some stout poles alongside of her, and milking through the bars. If she kicks then "she hurts nobody and nothin' but her own self," and if not too confirmed in her evil way may be cured by this method. J. Y. P.

R. N.-Y.—We have a plan like this for milking Julia. A stout frame, hinged like a door, swings up against her and fastens so that she is crowded up tight and cannot make a long kick.

I would like to suggest another cure for the Hope Farm man's kicking cow. I think I could milk her. I would get a small pail with a funnel-shaped cover with a small hole in center for the milk to pass through, and a chair high enough so that the cow could not turn toward me and tip me over; I would hitch her in stanchions near the wall, so that I could stand her alongside of the wall, put a halter on and hitch it in front so she could not go forth or back. I would sit down with my leg in front of the cow's leg, the nearer the top the better, and under far enough so that she couldn't kick by; lean against the cow and if she tries to kick with the opposite foot give her a little push. If she tries to kick with foot next to you raise your knee as high as possible and hold her leg back. I have milked heifers this way that had never been milked before, and when the teats were covered with sores. I would keep the teats covered with vaseline. I think it makes the teats tender to let the calves suck. There is nothing that will make her give up so quick as to find that you can hold her by main force. E.

Montpelier, Vt.

What Makes the Cream Bitter?

For six years I have made good butter, so that those who bought it preferred it to creamery, but for some reason I cannot do it now. Some of the time I have had one cow (a good one), sometimes two. Along in the early Winter the milk, or rather cream, began to be bitter (only one cow then), but the milk was perfectly good. I had for all those six years let milk stand 48 hours before skimming, but for some time now have let it stand but 36 hours, though I cannot see that it makes any difference. I churn twice a week, wash in three or four waters, or until clear of buttermilk; salt, work, let stand a few hours, then work again, and put in pound prints. I churn but twice a week, as that is as often as I can go to market. The cow has good Alfalfa for hay, and has always had bran once a day until within a month, I changed that to cornmeal, thinking that might make a difference, but it does not. She eats well, seems well, although she does not chew as much as the young heifers do. She has good water to drink. As I said, the cream is bitter, not bad. Sometimes I do not deteet any bitter taste, but the butter is not really good, and in a day or two is strong. If I had not made good butter all these years, and done exactly as I am doing now in every particular, I should think I did not know how. The milk is kept in the same place and treated all the way through as it always has been. The cow has been giving milk since last June; will be fresh next August. Two months ago a heifer calved and now I have her milk, but it is no better. I am particular to have everything clean; never use the milk pans for anything else, and I cannot imagine what the trouble is. H. T.

Mesa, Col.

From the statement given I should say the trouble is a bacteriological one. There are species of bacteria that cause a bitter taste in milk and cream as a result of the decomposition of the casein. These bacteria produce endospores; that is, they take on a form that is very resistant to changes detrimental to the life of the germ. Hence, they are not easily killed by heat; in fact, they are often found in boiled milk, the boiling having killed the lactic acid germs, and left the conditions favorable for the troublesome forms. Your utensils or dairy room may have become seeded in some way with the bacteria that cause bitter flavors. If this is so, they are probably present in considerable numbers even in the dust of the room. Your dairy being small, you probably do not have access to live steam to sterilize your utensils, and no matter how carefully you may clean and scour, it is almost impossible to kill all bacteria without sterilization. If, as I have supposed, live steam is not available, submerge all utensils in boiling water and keep the water boiling for half an hour, then put them in the sun and repeat in eight or 10 hours. Be sure that no pans, cans or pails are overlooked, and keep it up for two or three days. It is perhaps unnecessary to add that care should be taken to keep all dust out of the milk and cream. If this does not remedy the trouble I should recommend you to correspond with your State Experiment Station at Fort Collins.

J. A. F.

Seeding Alfalfa.

My experience and the general experience of the farmers of Onondaga County does not agree with Prof. Voorhees on the amount of seed required to seed an acre. We find 10 pounds enough, and several have succeeded with less. The larger amount makes the plants so thick that they do not get sufficient root to prevent heaving the first Winter. If 10 pounds fail 30 certainly would on the same ground. Canada experimental farms have made a thorough test on plots with different amounts of seed per acre. The growth of top and roots was weighed carefully. They found that amount gave the best results. A variation either way from that amount resulted in a diminished yield, 14 pounds not yielding more than seven pounds. He claims its main value is as a forage for soiling. Fifteen years' experience has taught us its greatest value is for hay. It is becoming quite a general practice here to sow four quarts of Timothy with the 10 pounds of Alfalfa. This helps in curing, as the Timothy dries quickly and helps to prevent molding. The quality of hay, especially for horses, is better than the best Timothy; horses and cattle will thrive on this hay with half of the grain required with Timothy hay. CHAS. MILLS.

Onondaga Co., N. Y.

ROOTING HOGS.—To prevent hogs rooting I use the large ring that goes through the nose, one end inserted in an eye at the other end, and have no trouble. With plenty of charcoal or cinders kept by the hogs they will have little tendency to root. These furnish the *roughness* that the hogs get by rooting. Some breeders divide the snout with a knife cutting straight down for an inch or through the rooting tuft; this is very effective. I would advise your readers to use plenty of charcoal or cinders from railroad or some factory; they will not only prevent rooting but will aid digestion. F. F. MOORE.

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DAIRY AND FARM NOTES.

COW DYSPEPSIA!—Did you ever hear of it? Well, feed your cows liberally when you feel like it, and reduce the feed when you feel otherwise; follow the system with these alternating periods of feasting and fasting and indigestion surely follows.

HARSH MILKING!—I am inclined to think much teat trouble comes from harsh milking. Living in the Black River Valley we are on the border of the lumber district, hence get many men who work in the woods at times. These men are frequently poor milkers—not slow milkers. They milk too fast. Nine farmers out of 10 judge one's milking ability by rapidity. I formerly did so myself, but I think otherwise now. These men would milk as one would handle logs. The milking machinery is a delicate system. These often exceedingly sensitive membranes must be manipulated 600 times a year. Is it any wonder we have bunches in teats, contagious garget, swelled udders, etc.?

SLOWER WORK.—My experience and observation is that men who are active, hustling, nervous fellows, who by the way make things *go*, have more teat and udder trouble than the easy, happy-go-lucky farmer, who takes his time in milking as he does in everything else; milks nine cows instead of 12 in an hour. Is this to be construed as an argument against activity? No, but a lesson can be drawn. Learn conservation of energy. We talk about conservation of soil moisture, but it is of far less value: often a fellow can do more hustling sitting still than in his most rapid movements. I think that milking is one of the places where this notion can be safely applied. I do not mean that the slow, indifferent milker is necessarily a good one. It is the man who milks just as the cow wants to be milked. I have sat down and milked many times when the cow would step and step—not a kicking cow; I thought then it was cussedness on her part. There might have been a vein of evil in her make-up, but I am willing to own up that I was milking that cow too fast, or, putting it another way—trying through each pressure of the hand entirely to exhaust every drop of milk that came into the teat. She did not like such close pressure. If I had used one minute more at each milking it would have been time well spent. Some men are very strong in the hands, and do not realize how hard they squeeze when milking.

WOMEN MILKERS.—Women are better milkers than men on account of their delicate touch. This last idea brings to mind the dairy work of a Wisconsin woman, Mrs. Addie F. Howie, of Elm Grove, whose reputation is established in her own State and is now spreading abroad. I listened every day for four weeks to her talks on dairy subjects, which, to say the least, were fascinating. She told in a modest, womanly way of her methods of breeding and feeding her "business partners." I was impressed particularly with a point she made in favor of women managing dairy farms; that they could more fully appreciate the wants and needs of this delicate machine, dealing as we are in her maternal functions. Upon reflection, can you not remember when Mother's suggestion has saved the loss of a valuable cow? I have heard Henry Van Dreser many times credit his mother with the remedial suggestions he was giving. Yes, after all, it was Mother who knew how to do pretty near everything, as every good honest man will testify. I do not believe it makes much difference how the teats are milked, provided only that gentleness is used in manipulation. Of course every one understands that regularity and no change of milkers is always orthodox.

ALFALFA NOTES.—Our Alfalfa has come through the Winter in fine condition, and at present writing, May 13, it is a foot high; pretty good! I have never grown a crop that has presented so many phases of character. It required a long time to learn how to grow it in our climate, and I am not sure of my position yet. Wherever it will thrive the protein question is solved. It must have a rich soil, well fed, free from a hard, stiff hardpan subsoil. The rock must not be too close, as it is in many places in the lime-rock sections. I am bound to stick to it, and win, if possible, having declared in favor of making the farms produce more protein.

CORN PLANTING.—For the past two years we have planted our silage corn thicker, 12 quarts to the acre, and we shall repeat it again this year. The change has reduced the ear growth; 50 to 75 bushels of ears to the acre seems to be about right. It is impossible to find a kernel in the manure. With 100 bushels to the acre we often found whole kernels in the droppings. We are planting our corn later than was formerly considered prudent. The results briefly told, are that land which has been worked frequently for four weeks and planted from May 20 to June 1 gives a more rapid growth, with fully as early maturity. Cultivating a stiff sod is much more cheaply done with three or four horses with a heavy harrow than with light tools or hoes. The latter is simply out of the question if profit is considered.

H. E. COOK.

THE MILK SITUATION.

The Five States Milk Producers' Association was organized in March, 1898, for the avowed purpose of securing a living price for milk. For the 10 years preceding the price as fixed by the New York Consolidated Milk Exchange had gone down, down, until the average monthly price for the year 1897 was 2.34 cents a quart delivered in Jersey City. For the year 1900 the average monthly price per quart was 2.74 cents, an advance of four-tenths of a cent per quart secured beyond a doubt by the efforts of the F.S.M.P.A., for the quantity of milk produced has increased sufficiently from year to year not only to supply the increased consumption, but to continue the "surplus" which the Exchange is constantly struggling to keep down, urging its existence as the reason for reducing the price of milk. This means an advance of $500,000 annually to the milk producers supplying New York on upward of 30,000 cans daily furnished. It is found that the local sections owning or controlling their shipping stations are receiving the best prices for milk. At Tully, N. Y., about 50 milk producers withdrew from the New York shipper and built a plant for themselves and commenced cheese making, selling milk in New York only when they could obtain a satisfactory price. In 18 months after taking the business in their own hands they received $7,000 more for their product than they would had they continued to furnish the New York dealers at Exchange prices as formerly.

The milk from about 1,000 cows is delivered in Owego, N. Y., either to be shipped or manufactured into butter. The milk has been sold up to this time at Exchange prices. A stock company has been formed this Spring, a plant erected, equipped and rented to a shipper at a price that makes it a paying investment. The shipper also contracts to pay the producers for all the milk they desire to furnish him, 17 cents per can above Exchange prices at which they formerly sold their milk; also 17 cents a can more than adjoining stations controlled by New York dealers are now receiving. When this arrangement went into effect the New York dealer they had been furnishing lost all fear of the "surplus" and offered to pay, and is paying, the advanced price. Of course the butter factory, allowing for the milk returned, must pay the same price. Allowing the usual estimate of five quarts of milk annual daily average per cow would make Owego's production 125 cans daily. Seventeen cents a can advance above Exchange prices now being received is equivalent to $21.25 a day, or $3,888.75 for the six months from April to October. Assuming the advance of the Exchange price of four-tenths of a cent a quart for the year 1900 over that of 1897 to continue for the next six months would give Owego producers $20 a day, or $3,660 for the time mentioned more than they were receiving for the same quantity of milk in 1897, making in the aggregate $7,548.75. No close observer doubts that these results have been achieved by the efforts of the F. S. M. P. A. The Association is urging the local sections to secure control of their several stations, about 40 having been secured during the past year, and when a sufficient number has complied it will be able to dictate the price for all.

Campville, N. Y. JOHN J. BELKNAP.

A GOOD GUERNSEY.—The cow shown at Fig. 149, page 371, is Auricula II., No. 12209. With her first calf she milked 40 pounds per day, and promises to give a yet better account of herself as she grows older. She is one of the good ones at Pinehurst Farm, Moorestown, N. J., where E. R. Strawbridge is building up a herd of large producers.

SMALL COWS.—My brother and I are breeding a family of Jerseys that are called low-down Jerseys. I do not know their history, and they may be descendants of the Venango Co., Pa., Creepers mentioned by E. D. H., on page 256. They are small cattle with very short legs, and stout, well-proportioned bodies; good milkers and give very rich milk. They are in demand here by town people who keep but one cow. They are not eligible to Jersey registry, but I suppose we could trace their history if it were worth while. R. H. L.

Carrollton, O.

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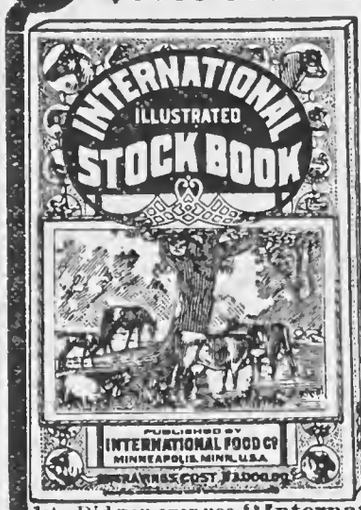

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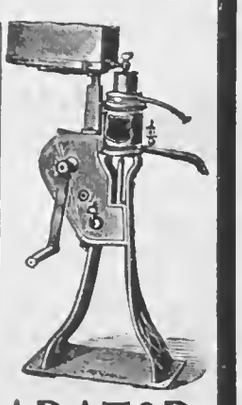

Humorous.

That man's a sage who knoweth how
To rule his wife. I don't.
To tame her will is hard, I vow;
It's worse to tame her won't.
—Phila. Record.

TEACHER: "Johnny, what do we breathe?" Johnny: "Air." Teacher: "That's right. Now, Tommy, of what is air composed?" Tommy: "Breath."—Chicago News.

MISTRESS: "I wouldn't hold the baby so near the tiger's cage, Nora." Nora (the nurse): "There's no risk, mum. Th' tiger is a 'maneater' and th' child is a gur-rul."—Chicago News.

"I WONDER why they call the hotel bellboy 'Buttons?'" said the inquisitive traveler. "Probably," replied the bachelor, "it's because he's off when you need him most."—Philadelphia Press.

JED: "Chollie has just returned from a hunting trip. He says he shot the biggest bear on record." Ned: "That might be so. If it hadn't been a big one he would never have hit it."—Smart Set.

MRS. NEWBRIDE (who has been baking): "I wonder who first invented angel cake?" Mr. Newbride (who had to sample the baking): "I don't know, but I fancy it was one of the fallen angels."—Credit Lost.

GOTHAM: "I once bought one of those automatic pianos on the installment plan." Church: "Went itself, did it?" Gotham: "No; the sheriff came and took it the second week I had it."—Yonkers Statesman.

"Now," said the public school teacher, "name the Presidents in their order." "Adams, Washington—" began the bright little girl. "Wrong. Washington was first." "Oh, no; Mr. Adams must have been first, 'cause my Sunday school teacher told me he was the first man."—Philadelphia Press.

WIGGS: "Just think of the wealth of that multi-millionaire! It would take an ordinary man two thousand five hundred years to earn that much—" Waggs: "Nonsense! Before he was two hundred years old he'd be commanding one thousand dollars a week in a dime museum!"—Catholic Standard and Times.

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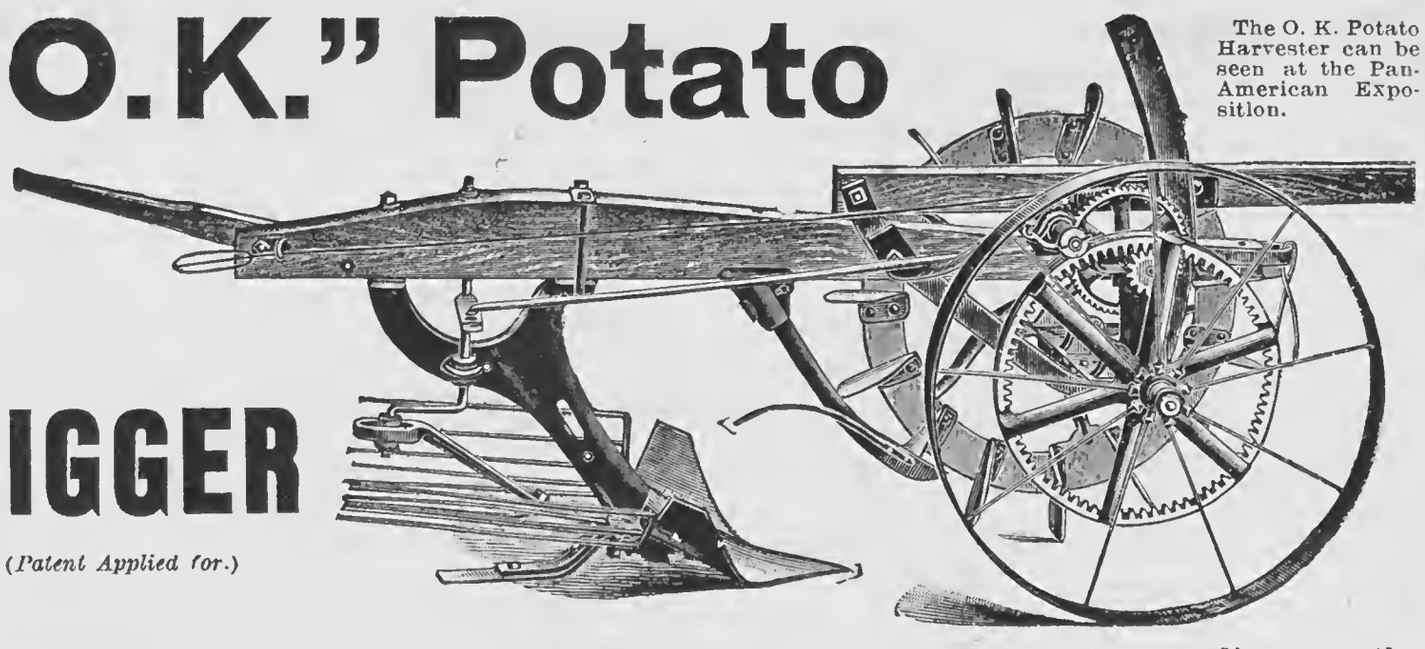

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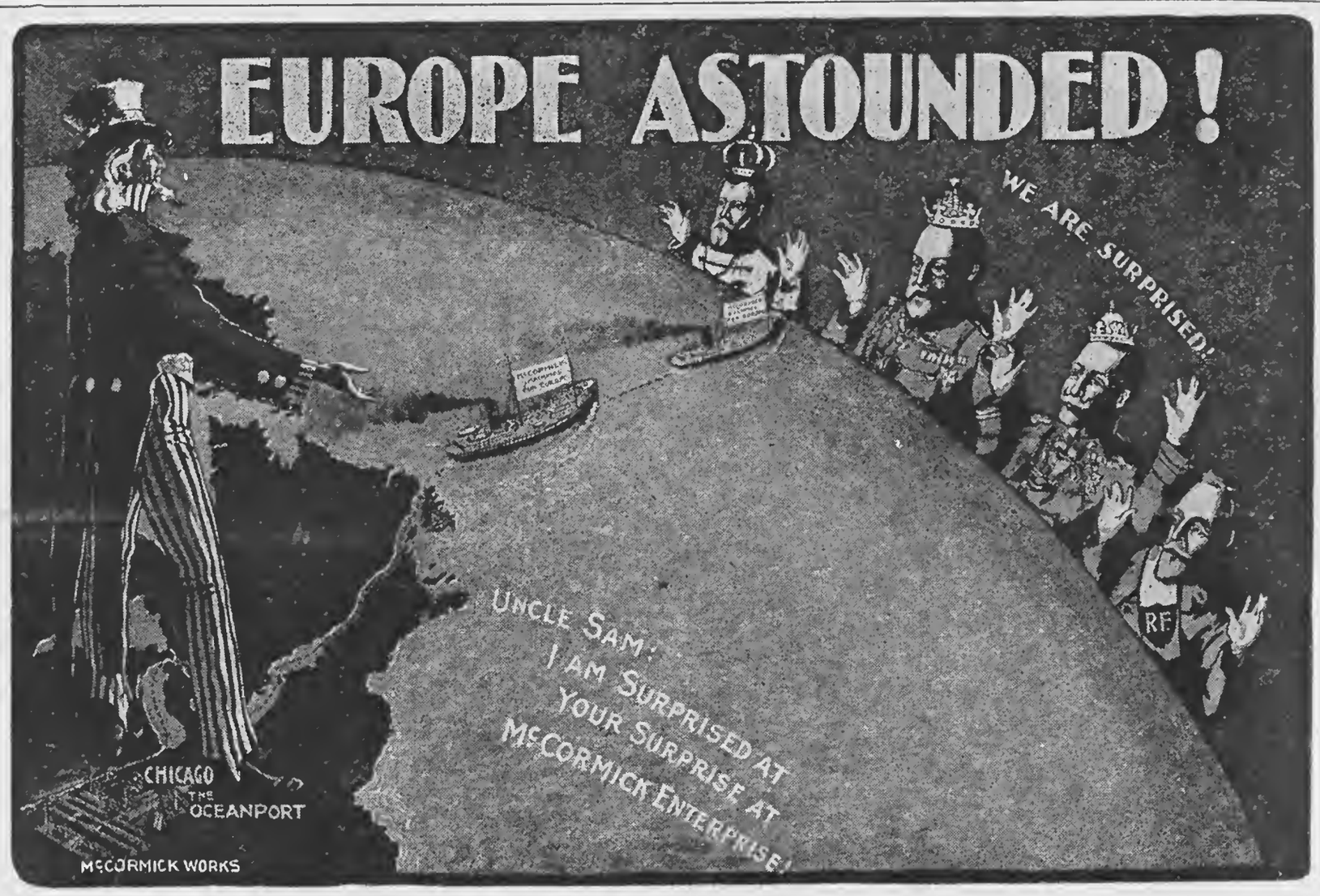

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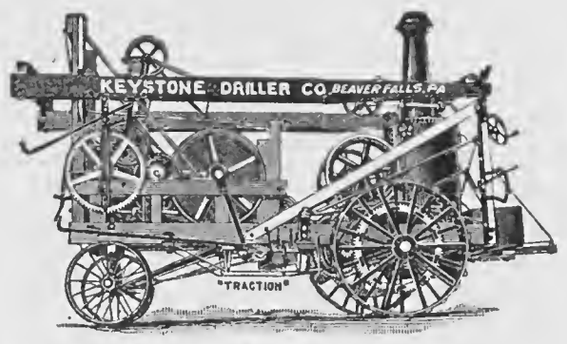

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CORNELL UNIVERSITY
JUN 1 1901

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2679. NEW YORK, JUNE 1, 1901. $1 PER YEAR.

SOME FACTS ABOUT THE USE OF BORDEAUX

WHY IT IS USED.

When and How Spraying Is Done.

The accompanying illustrations, Figs. 155 and 156, show the two general types of spraying apparatus for Bordeaux as well as other spraying mixtures. Fig. 155 is the style of pump and wagon used in most orchards where, in order to spray the foliage thoroughly, it is necessary to reach a considerable height. It is usually manipulated by three men, one driving and pumping, and the others directing the nozzles from the tower. The tank holds several hundred gallons of the spraying mixture, which is kept stirred up by an automatic device. Consequently, it is an advantage to use a circular tank rather than a square one, as in the former there are no corners for the solids to accumulate. For orchards of smaller trees, such as peach or pear, the spraying apparatus is frequently carried on a low wagon or a stone boat, and for still smaller fruits and shrubbery a device such as Fig. 156 is commonly used. In the use of this one man performs the whole operation. A still simpler device is the knapsack tank and pump, but this necessitates a too frequent renewal of the spraying mixture.

While much has been said about the use of Bordeaux Mixture as a fungicide, and while it is used almost universally among fruit growers, many are still ignorant of its practical importance or of its use in specific cases. The reason for this is probably due to the obscurity of its results as compared with those of insecticides such as Paris-green or London purple. In the use of these one can see the dead insects before him as a proof of the efficiency of the spray, while in the use of the fungicide no fungus enemy may appear, and the fruit grower is uncertain whether its disappearance is due to natural causes or the application of his remedy. Bordeaux Mixture being, like all other fungicides, a preventive, and in most cases not a cure, it is of the utmost importance that its application be made early before the fungus appears. This is made doubly emphatic when one understands the nature of the fungus attacks. A fungus is a plant parasitic upon other plants of a higher order. It is propagated by spores which are carried about in the air. On coming in contact with the host plant they germinate, sending mycelial threads into the tissue of the plant. Thus, after getting a foothold, it may be impossible to kill the fungus, but as it dies of its own accord each Fall after producing what are known as the Winter spores, the attacks the following Spring may be prevented by using some remedy that will prevent the germination of the spores. It is on this account that promptness in applying Bordeaux is of prime importance. Thoroughness is also a necessity, for if even a part of a leaf is not reached by the fungicide, the fungus may find a foothold on this portion.

Although the time of applying Bordeaux depends upon circumstances—the locality, the condition of the weather, and the kind of plant treated—a general practice may be followed of first spraying just before the fruit buds appear; next, just after the blossoms fall and again about two weeks later. If the season is unusually wet a number of other sprayings should be practiced. Under no conditions should the spray be applied while the plants or trees are blooming, as pollination may be seriously affected.

The proportion of different ingredients in the Bordeaux Mixture should vary according to the time of year applied and the kind of fruit treated. For instance, the solution used early in the season should be strong, consisting of six pounds of copper sulphate, four pounds of quicklime and 50 gallons of water, and later a weaker solution of two pounds of copper sulphate, two pounds of quicklime, and 50 gallons of water should be used. For Japan plums a larger proportion of lime and water, than in the first formula, may be used to advantage. Frequently excellent results are obtained by combining the Bordeaux Mixture in the same spray with an insecticide, such as kerosene emulsion or Paris-green. Thus double results are obtained in but one spraying. Although the Bordeaux Mixture itself is strictly a fungicide, it also prevents, in a few cases, the ravages of insects

WAGON SPRAYER FOR TALL TREES. FIG. 155.

by making the foliage unpleasant for them. This is noticeable in the case of potato vines, which on being sprayed with Bordeaux are freer from the attacks of the flea-beetle than unsprayed vines. The spray gives a similar result when applied to cucumber vines. But unless one is spraying for a fungus enemy in such cases, it would be more economical to use an insecticide. Successful spraying, whether with Bordeaux or any other mixture, is, after all, largely a matter of judgment. The fruit grower himself should best know his own plants and their needs. If he act intelligently, fully understand the value of the different sprays, and follow the general principles applicable to all cases, he cannot fail to be successful in his results.

SMALL SPRAYER FOR SHRUBS. FIG. 156.

A. F. B.

OH, what a rest and grand uplift this good old world see, if tongues would ne'er find fault until they had a remedy!

EVERYBODY'S GARDEN.

INTENSIVE CULTURE FOR CRISP QUALITY.

Some Experience With Blackberry Rust.

PLANT PROTECTORS.—A subscriber asks for more definite instructions in making the plant protectors described in a previous issue. In the directions given on page 322, read, "Bend the strips round," etc., instead of "bind the strips," and the meaning will be clear. Use the heaviest tarred building paper, which may be procured from any hardware dealer; the paper fasteners can be found at any book and stationery store. For tomato plants, cut the material into strips 10x28 inches, bend the strip to form a cylinder, giving one inch lap, and secure with the fasteners as shown in diagram. The fasteners, after being passed through the lap, are easily clinched with the fingers. This will be almost identical in size with the ordinary steel peck measure. Any size desired may be made, and smaller ones especially are very convenient. The covers of the same material should be cut in squares from 1½ to two inches larger than diameter of protector, which in this case would be 11 inches. When placing the protectors over the plants press them into the soil or bank lightly at the base; when so placed, if the covers are sufficiently weighted to hold tightly in place, they will protect against considerable freezing. On pleasant days, removing the covers will give the plants the sunshine and still protect from cold winds, which often chill and whip the plants to their serious detriment.

BEETS.—The late Fall and Winter supply, either for home use or market, are best not sown before June 15 or later, as overgrown stock is undesirable for any purpose except feeding. They will continue growth until late Fall, and the proper time will best be determined by the localities where grown. The best results both as to quality and yield will be obtained by later sowing and depending upon thoroughly enriched soil and intensive culture for crisp quality and desirable size.

PARSNIPS.—The seed is slow to germinate, and if yield is the one object sought, early sowing is essential. For desirable table qualities, however, sow early in June and thin to four inches, and cultivate thoroughly for the growth. Deep, mellow and moderately rich soil will give best results. Avoid fresh manure, as this causes the roots to grow rough and unshapely. The late Winter and Spring supply should remain in the rows where grown until wanted for use.

VIGOROUS GROWTH.—The table qualities of all vegetables depend very largely upon vigorous growth. No vegetable grown under unfavorable conditions will ever reach anything like perfection. So then, for best results conditions should be as nearly right as possible. These conditions, in so far as man is able to control, are good seed, thoroughly prepared seed bed, careful planting and diligent cultivation. With man's part properly attended to, Nature will usually answer for the rest.

CUCUMBERS.—The Japanese variety will be found excellent for small gardens, as the quality is of the best, and little space will be required. They will readily clamber over a slanting trellis, or grow nearly upright by occasionally tying the vines to the slats with coarse twine or strips of cloth. A few hills will supply the family needs nearly the entire season through, if well watered, and care be exercised in avoiding too large a growth of the fruits. By no means allow them to ripen the seeds, as this will soon destroy the vines. The greater part of the main crop will, according to location, be planted from June 1 to the first week in July. They are best planted in hills five feet apart, or they succeed nicely sown in drills on slightly raised ridges six feet apart. A plentiful supply of well-rotted manure should be worked into the hill or drill, and shallow but thorough cultivation continued as

long as the growth of vines permits. To prolong the bearing season care must be exercised in picking, not to injure the vines, and the fruits should be gathered just as rapidly as the size required for the various grades will admit. The chief insect enemy is the striped beetle, and the best preventives are strong vigorous plants, and soil conditions and culture that will promote the most rapid possible growth of the vines. The principal remedies are air-slaked lime, sifted coal ashes, land plaster, equal parts wood ashes and road dust, freely applied in the morning when the plants are wet with dew. Cayenne pepper is also an excellent remedy; but too costly perhaps for general use. Tobacco dust is a good fertilizer as well as insecticide, and may be used to advantage on all vines, except watermelon, to which it is injurious, and will destroy the vines if used in large quantities. Spraying with Bordeaux Mixture is a preventive of disease, and saltpeter and water, an ounce to the gallon, if applied to the hills, will be found a wonderful invigorator to the plants.

BUSH BEANS.—A plentiful supply of the bush beans for family use may be easily grown as second crop, without interference to other vegetables. The varieties are numerous, and by judicious selections as to time of maturing may be safely planted from May 10 up to within 50 days of frost. Planted as they may be between other crops which are maturing in advance of them, a constant supply of snap and shell beans may be had from July 1 to late Fall.

BLACKBERRY RUST.—Personal experience, if successful, may sometimes be worthy of note, even though not following the trend of scientific theory. Two years ago I discovered several plants of blackberries which were badly affected with rust. The plants were immediately dug up and burned, but later on, when the fruit was more than half grown, the disease appeared worse than ever, and began to spread rapidly. All diseased plants were dug and burned, and the remainder of the bushes were thoroughly sprayed with Bordeaux Mixture, full strength, as prepared for Potato beetles. The mixture was the usual formula of 4-6-50 with insecticide of the following formula: White arsenic, one-half pound; sal soda, one pound; boiling water, one gallon, mixed and boiled 30 minutes. This mixture was used in the proportion of 1½ pint to 50 gallons of the Bordeaux. The bushes were thoroughly drenched, and matured a fine crop of berries, as also last year, with no further traces of the rust. The same mixture was twice applied to peach trees which were badly affected with curl leaf, the first application being made on May 30, and the second, one month later. The disease entirely disappeared, and the trees have since borne two crops of peaches without any further appearance of the disease. Doubtless these may not have been thorough tests, or in any way conclusive, but at all events the experiment is worth a trial. J. E. MORSE.

Michigan.

VARIATIONS IN SPRAYING SUBSTANCES.

It is a matter of common knowledge that London purple will remain in suspension longer than will Paris-green, and that solutions which contain the former require comparatively little agitation. This valuable property of the London purple is largely due to the fact that its particles are smaller than those of Paris-green. Again, the London purple, as a finely divided substance, can be spread over a greater surface, and from this standpoint is a more effective poison. Some time ago it occurred to me that some samples or brands of Paris-green, or different samples of any spraying material to be held in suspension, might have smaller particles than others, in which case, of course, the particular lot with the smallest particles would be most valuable for spraying purposes. An examination was made of several brands of Paris-green. The results indicate that the value of this poison, at least, is affected by its state of division.

Pure Paris-green examined under the microscope is found to be composed of small green spheres which are uniform in size in any one sample. But in different samples the sizes of the spheres vary considerably. In five lots examined the average diameter was found to be .0165 millimeter (one-thousandth part of a meter); taken by lots the minimum average was, .0111 millimeter; the maximum, .0218 millimeter. When placed in water in tall glass graduates it could be seen that there was a perceptible difference in the length of time a given quantity of the different lots would remain in suspension.

Soil physicists, who work with sedimentary soils, say that "the theoretical rate of settling of small particles of spherical form in water would be, with the conditions the same, directly as the radii of the particles." That is, that particles twice the diameter of other particles, will settle twice as fast. This law, I think, will apply to Paris-green, and if so, in the cases mentioned above, means that one of the samples examined will remain in suspension nearly twice as long as will another of them. Surely this is a matter of importance to the users of Paris-green. Manufacturers, I am told, can control the fineness of division of the arsenites in manufacturing, and can make a good article in this respect as easily as a poor one. Let the demand be, then, for the small-particled product. To some extent one can judge of the state of division of Paris-green by its color; that having the smallest particles, while of a distinct green, is paler. Experiments may show that the fineness of division may be controlled, somewhat, in the preparation of Bordeaux Mixture and of the now quite commonly used homemade arsenite of lime. U. P. HEDRICK.

Michigan Ag'l. College.

HOG MANURE AND CABBAGE.

As to the use of hog manure for cabbage, our experience has been that it will not do. With us it always caused rot and club-foot, on soils that have been used for cabbage or other garden truck. The only way we ever used hog manure for cabbage with good result was on an old heavy sod. The manure was spread early in the Fall, so that it froze and thawed until Spring. Just before turning the sod over in the Spring we gave the field a liberal coat of lime. Not to our knowledge had the field ever before been planted to cabbage or other vegetables. The lime, of ccurse, kills club-foot, but with us the price of lime is too high at present for general use on farm crops. We were always bothered with club-foot in the hotbed, growing very early cabbage, even where the soil was changed every year, but since we have used lime we have had no trouble in growing two or three crops of plants in the same soil. The soil is usually handled over in the Fall by throwing it out of the beds, and

CHECK-ROW CORN PLANTER AT WORK. FIG. 157.

the lime sprinkled on as it is thrown out. It is left in this way until the beds are made in early Spring.

Chemung Co., N. Y. A. G. MILLER.

GOOD BAIT FOR SUCKERS.

Not long ago a reader in Maine wrote asking advice about investing money. He had received a letter from a man in New York which read as follows (omitting one name of the stock):

Through the sudden death of a large holder of National ——— stock, I have a chance to secure privately a large block of the stock (50,000 shares) at $2 per share. The people who now own the stock must have quick cash. They are firm believers in the great value of National ——— stock, but stern necessity compels them to sacrifice it—they must sell. I cannot at present buy all of this stock, and so will notify a few persons of this rare chance to secure some of it at this great sacrifice of price. There is no other stock for sale under $10 per share, as you will notice by enclosed printed matter. You will do well to buy all of this $2 stock that you can pay for—it is certain to go higher than $10. The price of National ——— stock is $10 per share at the company's office, and, as the people who offer the stock to me at $2 do not wish to interfere in any way with the company's offer of stock at $10, you will please consider this letter strictly confidential. There will soon be an active market established for the stock. You can order through me, and I will buy the stock for you without any charge for commission, because I want to have this cheap stock taken out of the market quickly.

Our friend was impressed by this plausible letter, and evidently felt inclined to invest some of his savings in this stock. Before doing so he was careful to investigate. This letter was really a type-written circular printed so well that most people would be deceived by it. Not even the name of our friend was written in. That stamped it as shaky from the start, for who would send *"strictly confidential"* advice to strangers on a printed page? The same thing was probably mailed to 10,000 names secured at random in the hope that a few would bite at the bait. The man who sent the circulars probably hires desk room in some office. He may have the skeleton of a company, but the shares he offers are not listed on the New York Stock Exchange and are not handled by brokers. Here in this great city are thousands of men hunting for bargains. If shares could be bought at $2 and quickly sold at $10, every one of them would be sold here in 24 hours. The fact that it is necessary to appeal to strangers is good evidence that men who are here, capable of estimating such things, do not consider this stock worth buying. In that case what folly it would be to send money to an entire stranger. It is easy to say this and yet certain country people are doing this again and again. Somehow the idea of becoming a "stockholder" in some bogus or crippled concern appeals to them, and they cannot resist the temptation. Money is taken out of the bank or from the hands of good old friends and sent to the rogues and financial wolves who only sharpen their teeth on the hard-earned and sweat-stained dollars of country people. The above letter is only a sample of many. Strange, is it not, that men will be caught by such an old bait? Sad, is it not, that the money which would bring so much pleasure and comfort to wife, children and home should be fed to sharks?

FREE TREE DISTRIBUTION

It is quite gratifying to learn that our Department of Agriculture purposes to furnish gratis trees for planting. This promises to be a great advance upon seed distribution as practiced. I am wondering whether the Government will furnish these trees without labels, as is done with the seeds this season, being simply designated as of a "select variety." It would look as though farmers were to be regarded as unskilled subordinates, unfit to be entrusted with the names of things. The seeds went promptly into the stove, and a postal card dropped to my representative protesting against such foolishness. So far as my knowledge goes these free seeds have never been helpful to the planter, have brought no useful knowledge back to headquarters following their use, and have had only a future campaign significance. Better use the money in supplying such things as the farmers really need, new acquisitions from foreign parts, and thoroughly advertise among farmers that such are to be had for the asking. The past Winter I applied to the Department of Agriculture for basswood trees or seeds, to learn that such were not forthcoming. The Government will have a large contract on its hands if it meets the demand for trees which I anticipate will come. Are these trees to be "reported upon after trial," as with the seeds? It is apparent that they must be regarded as a direct gift to the recipient. And in giving, why not give the most useful gifts, say fruit trees? A private gift to individuals from the Government is wrong in principle unless it is apparent how the community is to be directly benefited. The people's money must settle the bills, and hence it would seem proper to give trees for street and park planting, but not strictly so for private control, except under the plea of novelties tested. The basswood trees I applied for were intended for planting along streets, subject to State control, and especially calculated to furnish bee food as well as shade. I am pleased that Uncle Sam now sees his way clear to give me these trees. F. W. PROCTOR.

RURAL TELEPHONE LINES.—To get such a line started you must have some one interested enough to get subscriptions from those living along the proposed route, or near it, sufficient to build it, those being most benefited taking two or more shares. Getting started has been the greatest trouble here. Shares are $10 each, which entitles holder to attach telephone to line and free use of same. Each village has a central, with from three to 15 lines coming in from surrounding towns and country, each line giving free use of its own for the same privilege over the other lines. Centrals are supported by assessments on shares, and small sums charged outsiders for use of line. They charge them here 10 to 15 cents per message. In building the line shares are paid for in cash, work or poles. The cost here has been from $35 to $40 per mile. We can talk in almost every village within 20 or 25 miles and most of the business men have telephones. The bridging telephones have given better satisfaction here than the series. They say the metallic circuit gives the best results, but cost is double for wires. F. E. B.

Broome Co., N. Y.

CHERRY CULTURE.—The best sweet cherries I have seen south of central New York are along the fences, where the cultivator has not disturbed them. In northern Delaware there are several famous sweet cherries in the fence rows and corners, but nearly all of the orchards that I have seen in which modern cultivation methods are attempted have been failures. In central and eastern New York the sweet cherry has to be kept on medium thin land. My father has a young orchard that is booming on land that would be considered poor for farming purposes, but the trees respond there to tillage. The sour cherries will probably do best under high culture. While they grow well along the fences, they need more moisture than the sweet varieties, and pay well under the best treatment. The dark kinds are the money makers; Black Tartarian, Black Eagle, Windsor and Dikeman are the leading sorts at home. There is big money in Windsor, and if Dikeman turns out as we expect it, there ought to be more in it. Sometimes the sweet cherry needs lime and dies for want of it. Some kinds need it more than others. Tartarian, I believe, is one of them. [Prof.] G. HAROLD POWELL.

Delaware.

THE HEN AS A MACHINE.

The Requirements for Egg Production.

PART II.

An egg is a complete food and must contain everything necessary to form a complete chick. Mike would be as completely "stuck" if the Deacon failed to furnish him with a match to start his fire as he would be without any sap. Where shall we look for these little things? The hen at liberty looks to every insect, bug or worm which she can find. Aside from an egg, milk is the principal example which we find in nature of a complete food. This is undoubtedly the reason why it pays so well to furnish skim-milk or buttermilk for a hen to drink, instead of water, when it can be secured. I would also like to emphasize the the sentence where I said "If she have *comfortable shelter* and a well-balanced ration." Very much depends upon the "comfortable shelter" as well as upon the other requirements named. As regularly as the seasons come and go the great mass of hens in this climate cease egg production when Winter appears, only to resume when Spring returns, in spite of balanced rations and everything else. Why is this? I believe it is for want of comfortable shelter in a large degree. A hen's system has its limitations. There seems to be a point somewhere between "a perch among the apple blossoms of Spring time, fanned by the Summer breezes" and "clinging to the bare limb in midwinter, with the wintry blast howling about her head," where Nature draws the line between egg production and sterility. This line undoubtedly varies to some extent between different breeds, and also between different individuals of the same breed, but it is there just the same, and must be taken into account by the successful poultryman. The stereotyped advice usually given is to "keep her on the go." "Make her scratch" in order to keep her warm and comfortable. While this is sometimes effective in keeping her warm and comfortable during the hours of daylight, it is wasteful of feed and energy if carried too far, and is often counteracted by compelling her to shiver on her perch in a cold place during the hours of darkness.

A better way is to warm her quarters by day and by night by conserving the heat of the sun's rays, and the heat of the hens' own bodies. This can now be easily accomplished by a proper construction of the house and roosting quarters, and by the use of the ventilating drum. This is constructed on the principle that different metals have a differing power of conducting heat and enables us to draw off the impure air exhaled by the breath, without allowing the heat to escape. By its use a hen can warm her own roosting quarters in a cold room as successfully as a person can warm his own bed in a cold room. I have recently been experimenting a little with them. One was recently put in place in one of my henneries, which are built entirely above ground, of single-board one-inch siding, lined with paper, on an open foundation of loose stones. This morning (March 7) the thermometer stood at zero on the outside, while the hens inside were in a temperature of 42 degrees.

We are apt to pass the little things by in preparing a balanced ration. Only a little silicon, for instance, is needed in the manufacture of an egg. Surely, you say, she can pick up a grain of sand and get that. But Nature has not given to animal life the power to digest and assimilate crude and inorganic matter, whether it be nitrogen, iron or silicon. The power to take up this crude inorganic matter from the soil and combine it into organic forms is only given to vegetable life. Thus it will be seen that the vegetable kingdom acts as a sort of wet nurse for the animal kingdom. We must take this fact into account when we look about for a food supply. Again, some forms of animal life have been specially endowed with the power to convert the coarse forms of vegetable growth into flesh and blood (and milk), while others are specially endowed with power to reconvert this same matter into higher forms of animal life. The study of the subject becomes more and more interesting as we advance along the pathway of scientific and exact knowledge.

We left the pullet where we said that "if certain conditions are provided she will lay all the eggs of which her individual life is capable." As time goes on there are certain instinctive causes which step in and arrest the flow of the life current towards egg production. The first one of these is the propensity to become broody. This is another instinctive effort of life to perpetuate its species. In a state of nature this effort is put forth as soon as her nest is filled with fertile eggs. Under the conditions by which civilized man has surrounded her, this propensity has been largely overcome by feeding, breeding and selection until, in some breeds, it is almost entirely eradicated. This instinctive effort of life to perpetuate its species is only put forth under home-like surroundings. Remove her to new and strange surroundings and the current of life is at once returned to the channel of egg production. As the season for renewing her covering of feathers approaches the current of life along this channel is again arrested. A naked hen would make a poor showing, hovering a clutch of eggs or a brood of chicks. So Nature has again stepped in and provided that the current of life shall be diverted from egg production and turned to feather production. When this has been accomplished the flow of life's current goes back to the production of eggs again. Right here, however, our rigorous Winters are likely to step in, and in the majority of cases, the point between the apple blossoms of Summer and the bare limb and cold blasts of Winter, marking the limit of her system, is passed, compelling her to wait until the wintry blasts have passed, or until man provides the Summer conditions of comfort in some other way before her task of egg production is resumed.

O. W. MAPES.

PLANTING CORN BY MACHINERY.

Every year, as the time for planting corn approaches, we are met by questions as to how corn should be planted for the silo. Where the area to be planted is considerable, or where several farmers can club together and purchase a corn planter, best results will be obtained by using a machine made for the purpose. Where no regular corn planter can be secured, we would plant corn with an ordinary grain drill. These drills are usually made with the drills seven inches apart. By closing five or six of the drill holes the rows may be drilled in 35 inches or 42 inches apart as desired. The mistake should never be made of planting corn too thin. Enough seed should be used on the start to insure a stand. After the corn is well up it may be thinned by harrowing, and the corn which remains will be benefited at the same time. We would set the drill to plant at 42 inches in preference to 35, and then leave the plants a little closer in the row. The harrowing which should be given to thin out the plants will largely do away with the necessity of cultivating both ways, except upon land badly infested with weeds or grass. The accompanying illustration, Fig. 158, shows corn being planted by a machine made to plant in check rows, i. e., rowed both ways. On hilly land the regular check-row arrangement does not work well, and if we wish it rowed both ways the ground must be marked one way beforehand. The machine shown plants two rows at a time, and the grain is dropped in front of the wide wheels, which firm the soil over the seed. These wheel marks show where the corn is planted, and cultivation should always begin before the corn plants show above ground. Planting corn should not be delayed a minute after the land is in proper condition. A delay of half a day may in case of rain mean a delay of a week. A machine for planting corn has become almost a necessity in modern agriculture.

L. A. CLINTON.

A BUNCH OF OKLAHOMA BEEF. FIG. 158. SEE PAGE 398.

TRUTH OF CATALOGUE ILLUSTRATIONS.

Mr. Allen in a recent and timely article makes a noticeable defense of catalogues charged with exaggeration in illustration. Of course it is admitted that the drawings or photos are usually made from exceptional specimens grown with particular care, and no more represent the average individual product of ordinary seed and culture than a fat ox resembles the common runt cow of the Florida sand barrens. Certainly there have been fictions in this kind of pictures, but it is safe to assert that the actually accomplished results of horticultural and agricultural production have never been adequately portrayed on paper. I remember seeing a picture in colors of part of a strawberry field, in full bearing, and remarked: 'Nice picture, but quite imaginary—impossible—too much red," and since then have grown strawberries that looked like strips of red flannel a foot wide stretched across the field, and people looked at them with unfeigned amazement. Several years ago, when balsams were in vogue, the pictures of them in the catalogues were simply immense. It required lots of faith or credulity to believe them to be within half a mile of the truth. As a trial I grew some with care, planting them in bowl-like depressions in the rich soil, and feeding and watering them well. Keeping off all dead branches I grew them four feet in height, with stems four inches through, covered all round from bottom to top with large double Camellia-shaped flowers measuring 3½ inches across. I was urged to put them in tubs and send them to the American Institute for exhibition. Any attempted illustration of those balsams would have been characterized as an exaggeration. I have before me one foot of wood of Burbank plum, on which I count over 200 blossoms, and the whole tree is as white as snow. If it were possible to make a picture of the tree as it is the representation would be set down as a burlesque on the truth or a first-class whopper! J. YATES PEEK.

THE SEED END OF POTATOES.

The article on this subject in your issue of May 4, by Mr. Boardman, recalls some experiments in this line, made at our Station several years since, and reported in our annual report for 1892. The experiments continued through four years, and in every case the larger yield was secured from the seed potatoes from which the seed end was not removed. I quote the summing up of these experiments:

"It thus appears that in each of the four seasons during which the trial has been conducted, the entire seed has given the larger yield the difference, amounting on the average to something more than 4½ per cent. It is noticeable also, that in but one of the four seasons did the yield of small tubers from the entire seed equal that from the seed having the seed end removed. This fact would appear to disprove the only argument that I have heard advanced in favor of removing the seed end, viz., that the planting of a cluster of eyes at the distal end of the tuber tends to multiply shoots, and thus to increase the percentage of small tubers. The only conclusion warrantable from these trials is that, under the conditions in which they were conducted, the removal of the seed end was detrimental to yield. This result is in accordance with analogy. The potato tuber is not a root, but a thickened underground stem, of which the so-called seed end corresponds to the apex. It is a well recognized fact that the terminal bud of a shoot is the strongest one, and the removal of this bud tends to check the vigor of growth. The seed end of the potato tuber sprouts first in Spring, and when the tuber is planted whole, the first and the strongest shoot almost always proceeds from the seed end. Theoretically the continuous removal of the most vigorous buds would tend to diminish vigor and productiveness."

Your editorial on page 334 has also set me to thinking. You say: "No, my scientific friend, the fact that you publish a good bulletin dealing with some fact or method does not settle the matter for good. Many people will not take the trouble to read it. Many will never know it was published. Some will read and forget it—others will not understand it." And you might have added, some will dispute your testimony when you give it. I have stated the results of the above carefully-conducted experiments at farmers' institutes, and had them contradicted from the audience by men who did not claim to have made any experiments in the same line. After all, are the experimenters all to blame because the farmers are so slow to accept and adopt their teachings?

Wis. Experiment Station. E. S. GOFF.

R. N.-Y.—No. Truth darts like a flash when the way is made ready, but is sometimes slower than cold molasses to make a start.

FIGHTING SQUASH BUG.—Recently a subscriber told how he managed to overcome the ravages of the Squash bug and his practice is commendable, but it might be repugnant to many who are disinclined to overmuch physical exertion, as it requires diligence and perseverance in replanting, dusting with tobacco, etc. Somewhere in print I saw a hint to plant in the hill with the squash and cucumbers, turnip or radish seed, and last year did so, and had comparative freedom from bugs. It is quite possible that last year the Squash bugs were a minus quantity. Anyhow, I would like to inquire whether others have tried the plan, and if successful, would like to know the why and the wherefor. J. Y. P.

Van Deman's Fruit Notes.

ALL SORTS OF QUESTIONS ANSWERED.

Propagating Plums from Sprouts.

E. S. G., Madison, Wis.—What would be the effect of propagating the native plum from sprouts as regards the tendency of the trees grown therefrom to produce sprouts? It has been claimed that the growing of trees from sprouts increased the tendency to sprout, and I would like your opinion on this question with reference to the Americana plum.

ANS.—In my experience with the Americana and other species of plums propagated from sprouts and with the cherry and other fruits, I have never noticed any increase of the tendency to sprout; nor have I noticed a diminution of this characteristic, as a result of propagation by grafting. I do not think a method of propagation has any material effect upon the constitutional peculiarities of a species of plant, at least within the limits of an ordinary lifetime.

Barren Apricots.

J. H. R., Schoolcraft, Mich.—Can you tell me how to get some apricots from my trees? They are from six to eight inches through, are full of blossom every year, but have never ripened a single fruit. Most of them drop before they burst the calyx. A very few hang on until they are as large as a peach-pit and then drop off.

ANS.—The common Plum curculio stings the fruit of almost every apricot tree planted east of the Rocky Mountains, and causes it to drop before it is grown, provided it escapes damage by Spring frosts. In some sections, as for instance, in western New York, there is less of this trouble than elsewhere, and there are some profitable orchards there. But in nearly every case more or less jarring is done to catch the insects before the stinging is done.

Wood Veneer Tree Protectors.

H. B. S., Plymouth, Ill.—Do you advise leaving the veneer tree protectors on tree during Summer, and will they protect trees from borers? They are satisfactory for rabbits. Do you advise using them? Will insects enter at top and lay eggs that make the borer at or near the ground, and would they hatch?

ANS.—The most extensive orchardists using the wood veneer tree wrappers, so far as I have seen, leave them on all the year. They are excellent for the purpose of keeping off rabbits and they also prevent borers to some extent. The eggs of the Round-headed apple-tree borer are usually laid just where the trunk meets the earth, and if the wrapper is pushed well down to the earth there is almost no chance for this insect to lay the eggs where Nature dictates. Very rarely the eggs are laid a foot or more above the ground, especially where the shade is dense, and it is possible that a few may be laid above the wrappers. They are likely to hatch wherever they are laid, for they are slightly inserted in the bark.

Various Orchard Questions.

W. H. R., Springfield, Mo.—1. Will Kieffer pear reproduce itself from seed where no other variety blooms at the same time? 2. Will Richmond cherry succeed budded on Marianna plum roots? 3. What do you think of wood veneer to wrap apple and pears? Here in southern Missouri we are troubled in the Winter with rabbits, and in the Spring with borers; and on pear trees with sunscald in July, August and September, and it looks to me as though we ought to keep the young trees wrapped about all the year. Is there anything better than wood veneer? 4. Will Kieffer seedlings make good stocks to bud or graft Seckel and Duchess on? 5. Will the Lincoln pear succeed here on the Ozark hills, and at what age does it begin to fruit?

ANS.—1. No, the Kieffer pear will not reproduce itself true from seed, nor will any other variety do so. 2. The Richmond cherry will do very well on the Marianna plum as a stock, so some have told me, but I never tried it. 3. Wood veneer is very good for wrappers to prevent injury from rabbits and I do not see any serious objection to it, although I have heard a few persons say that the veneer made a harbor for insect pests. I have never noticed anything of the kind, but on the contrary, I have found them an advantage in keeping borers out of the trees. 4. I have never seen Kieffer pear seedlings used as stocks for other varieties, but I believe they would be good. 5. The Lincoln pear will succeed where other varieties do, and begins to bear at five to 10 years old. It is not of high quality.

Borers in Apple Trees.

L. G. L., Victor, N. Y.—Can you tell me what to do for borers in young apple trees? I set about 45 trees four years ago, and I find that some of the newer varieties, like McIntosh Red, Yellow Transparent, Sutton Beauty and few others are badly hurt by the borers; in fact, some of the trees have already died, and I am obliged to take them out. I find four or five borers in a trunk. The trees have been well cultivated and even spaded around, so that they have had clean culture from the start and have made remarkable growth. I have never had any experience with them, and I would like to know what I shall do to prevent their damage.

ANS.—The first thing to do with apple trees of any age that are affected with borers is carefully and patiently to dig every one of them out as soon as their presence is suggested. There are two common kinds of apple-tree borers. The one that is prevalent in the Eastern States is the Round-headed borer, and does its work at or very near the collar of the tree. The best cheap preventive that I know of is to bind heavy manilla paper about the base of the tree, from an inch or more below the surface of the soil to nearly a foot above it. This should be done when there are no borers in, and usually about the time the buds swell in Spring, so as to prevent the laying of eggs in the bark by the beetles, which work is done mainly during the Spring and early Summer.

Fumigation for Bedbugs.

H. B., South Haven, Mich.—On page 308 you tell how to kill bedbugs. Nothing is said about using the acid more than once. Won't there be another crop of bugs hatching from eggs left, which should be killed later by a second fumigation? If so, how long a time should elapse between the two fumigations?

ANS.—The acid can be used only once. After each fumigation pour out the contents of the jar. It contains potash and is useful as a fertilizer. A second fumigation, about 20 days after the first, will kill many of the later-hatched bugs. In some cases, several fumigations are needed to ensure a thorough job.

Cause and Treatment for Crown Gall.

F. E. H., Bucyrus, Kan.—Is the cause of the disease known as root knot or crown gall in apple and pear trees known, and its remedy or preventive? It is a matter of serious importance to nurserymen in the West.

J. O'B., Red Hill, Va.—Can you tell me anything as to the causes of crown gall or root gall on apple trees? I see specimens occasionally in the nursery, and don't know any remedy.

ANS.—This disease, which is really a fleshy outgrowth of the roots of deciduous fruit trees, has been studied at a number of experiment stations, but no definite conclusions seem to have been reached. The best statement of the disease is given in Bulletin No. 33 of the Arizona Station, at Tucson. What is known as crown gall is a swelling which appears generally at the crown of the root of young trees. As it first appears the gall is of the same color as the sound root. Later a dark color appears, caused by a deposit of dead matter. The galls are generally located upon one side of the root body, and have a softer tissue than that of the root. It is believed by most investigators that crown gall is a contagious disease, the germs of which are carried about in various ways. Some authorities dispute this, claiming that the galls follow some injury to the root; but the general opinion appears to be that the trouble is contagious like other diseases. The disease spreads in various ways. In the West, the chief spread has been from the nursery. In nursery rows the disease spreads rapidly from one small tree to another, and when these trees are sent out and planted, whole orchards are infected. The germs are so small that they are carried by the wind. They are also carried through the soil by the water in drainage, and where orchards are irrigated. Decayed galls and the bark at the surface roots may be broken off in cultivating and scattered in this way. Through carelessness the disease has been widely scattered. One case is mentioned in which trees were dug up, cut into stove wood, and sold throughout the neighborhood. In this way the galls were scattered everywhere, and infected many orchards. The losses from crown gall are considerable. The disease generally works underground, and has been overlooked by most of our growers thus far. Thousands of trees have dwindled and died, or failed to bear fruit for some reason unknown to the fruit grower. In the West especially it is thought that many of these cases of decline and death have been directly due to the work of the crown gall. Many young trees have died outright and broken off just beneath the surface of the ground as the result of the galls, which gradually weakened the stem. Prof. Toumey, formerly of Arizona, says that the majority of diseased trees live on year after year, but make less growth, and produce less and poorer fruit than healthy trees. A tree afflicted with this gall cannot do its best. It is estimated that the annual loss from this disease here is $1,000,000 or more.

So little is known about the disease that no certain remedy has been suggested. The best remedy thus far found has been to cut the galls from the crown of the tree and paint the wound with a paste made of sulphate of copper, sulphate of iron and lime. This is usually effective, although in some cases where the work is not well done, new galls appear at the edges of the wound. The galls that form deep down on the roots are not so destructive as those on the crown of the tree, and if they are removed the tree will be benefited. In Arizona orchards have been kept in good condition by inspecting the trees once a year, cutting off the galls as they appear and painting with the paste above mentioned. Trees in their first or second year suffer more than older ones. If possible, nursery stock free from galls should be obtained. If young trees already having galls upon them be planted, there is not one chance in 100, according to Prof. Toumey, that they will ever come to successful fruitage. A single diseased tree in an orchard will carry the disease all over it. If bundles of trees are received having a few of these galls upon them, the whole should be destroyed, for it will not be safe simply to pick out those that can be seen. In the West this gall disease is getting to be a serious thing, and laws are demanded requiring a rigid inspection, so that nurserymen shall not sell trees bearing galls.

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Observations by the Way.

It's no wonder that poets have their annual "breaking out" at this season of the year! As I am whisked up and down the fertile valleys of central New York my thoughts don't run so much on Spring poetry as they do on "garden sass," clover fields and green pastures. Grass is king! Verdure everywhere. Hillsides covered with vivid green standing out against the lighter and varied shades of the woodland background. Clover in great luxuriant blankets lies thick on many meadows. Alfalfa too, in central New York is frequently represented by thriving fields. We shall hear less of grass-seeding difficulties this year. The ground is soaked in a way that has not been duplicated for years. The season is somewhat backward, but with the abundant moisture, growth will be correspondingly rapid. What of the prospective fruit crop? Greening, King and Spy are making a fair show of blossoms—quite enough for a good crop of fruit if the fruit is protected. In many localities Baldwins will take a rest—a much needed rest. Still there is quite a sprinkling of white in most orchards. Some trees get into the habit of bearing on one side this year, and on the opposite side the following. The east and west sides usually alternate. I suppose the time will come when fruit growers will master the principles of fruit-bud production so that moderate annual crops will be the rule instead of extraordinary alternate crops. The champ, champ of the pump handle, the hiss of the spray, sometimes mingled with an occasional remark of the nozzle handler are familiar sounds at this time in the fruit counties of Niagara, Orleans, Monroe and Wayne. The evolution of the spray pump in this section would make an interesting story. The power sprayer is coming in. Hand power is too slow and tedious for large apple trees in areas over 20 acres in extent. Steam has been introduced; gasoline and compressed air are coming in. Another step in orchard practice has been taken.

Culture of Muskmelons.

Will you give me some information regarding field culture of muskmelons? How is blight prevented? F. P.
Ontario, N. Y.

This Station has not published anything on the outdoor culture of muskmelons. It is a subject which we have been studying, however, and on which we expect to issue a bulletin this year. The industry has grown to quite important proportions in certain parts of the State. Along the Ridge Road in Niagara and Orleans counties it is rapidly taking its place as one of the leading side lines. When I was in these counties May 3-6, melon growers were just then planting the seed. Many of these men have erected greenhouses for the special purpose of starting the plants. Small wooden, bottomless boxes made of veneer about 2½ inches square are used to start the plants. These boxes are arranged in close order on the bench and an inch of well-rotted manure is packed in the bottoms. They are then filled with a layer of sandy loam packed down by means of a tamper. Four or five seeds are sown on the surface and covered with sifted soil. The boxes are then well soaked with water. In 16 to 20 days the plants are ready for the field. A warm site is essential. Sandy loam gives earlier fruit than the clays. A southern slope is to be preferred. The plants are set about 4x4 feet apart, and cultivated like tomatoes. Some growers practice manuring in hill and others do not. If the soil is in good heart, hill manuring is not necessary. A few growers run the risk of having their crop cut by frost by planting the seed in the open ground soon after May 1. If the site is fairly elevated and the soil is warm and well drained, the results are fairly satisfactory. As a rule, the early melons bring the big prices, and the extra labor of starting the plants in the house is compensated by the larger prices secured in the fore part of the season. The blight which attacks the foliage may be prevented very completely by spraying with Bordeaux Mixture. One of the worst enemies to contend with is the Melon aphis or louse. These are held in check by the use of tobacco water. In applying the tobacco infusion, the operator must take pains to cover the lower surface of the leaves. This cannot be done by the ordinary spraying method, but requires special effort.

Spraying; Danger of Poisoning the Pasture.

Do you consider it neeessary to keep calves out of an orchard while spraying? If so, for how long? C. G.
Washingtonville, N. Y.

If you are using Paris-green, white arsenic, or other arsenites with your Bordeaux Mixture, or any of the former alone, I would keep the calves out of the orchard while spraying is going on and for a few days after. Just at this time of the year, particularly if the calves are pretty well grown, tney feed voraciously, and if one is rather careless about keeping the mixture thoroughly agitated, it may happen that a tree here and there (and the grass underneath) will get an exceptionally heavy dose of the poison. It is only in cases of this sort that injury to the animals may occur. While careful experiments have been made on this very matter, all of which go to show that under ordinary circumstances no danger is to be feared from the application of poisonous substances to trees where animals are pasturing in the same area, yet in one or two instances which have come under my own observation, I have seen sheep seriously injured, so that it will pay to be on the safe side. I would not think that there was the slightest danger of turning the calves into the orchard a week after the spraying was done, or immediately after a shower of rain.

Corn for Green Manuring; Spraying Plum Trees.

What crop is best to sow on a field to plow under? The soil ranges from sandy loam to clay. Sorrel has quite a start, and it is hard to get a cateh of clover started. How would corn do sown this Spring early, to be plowed under when it gets two or three feet high, then follow with wheat this Fall? Would sown corn be liable to sour the land if it was plowed under in hot weather? What is a good spray for plum trees, and how is it made?
So. Livonia, N. Y. H. W. M.

Corn is an excellent soil regenerator for soil which is hard and lumpy. I do not think it is best for light sandy land, but where it is difficult to get a good catch of clover or other of the small-seeded plants then corn is one of the plants that might be used. I do not think there is any special danger of souring the land by plowing under a heavy crop, but there might be some difficulty in getting it well incorporated with the soil and well packed down if the season should prove to be dry. You would find it difficult to cover corn if you allowed it to grow two or three feet high. My view of the best way to treat this field would be to give it a dressing of lime—20 or 25 bushels per acre—and then sow with field peas, plow these under when the pods begin to form, and work the soil thoroughly until time to sow wheat. The spray you should use for plum trees will depend on what you want to kill. As a rule, there are two classes of enemies in the case of the trees, as with other fruit trees, the insect and the plant parasite. The safest and most efficient spray is Bordeaux Mixture with some form of arsenical poison. Plum foliage is more susceptible to injury from sprays than apples, and one should be very careful to have plenty of lime in the Bordeaux Mixture. An excess of lime increases the difficulties of spraying, but it lessens the possibility of injury. Japan plums should be treated with half-strength Bordeaux Mixture.

Lime Paste for Bordeaux Mixture.

R. P. L., Fallsington, Pa.—How many quarts of lime paste (free from surface water) will be required to equal six pounds of unslaked lime? I have slaked a large quantity of lime, intending to keep it in the paste form, for making Bordeaux Mixture, but do not know how much of this paste to use to complete the formula. Is the ferrocyanide test reliable, and will it make a good mixture to add a little lime at a time until this test is satisfied?

ANS.—You can answer this yourself better than anyone else, by trying your lime paste. Use the usual amount of sulphate of copper and add the lime paste until the change in color from the ferrocyanide takes place.

Orange Growing in Porto Rico.

J. D. K., Mt. Airy, Philadelphia, Pa.—Will Mr. Platt (page 337) tell us something more about orange culture? How do Porto Rico oranges compare with Florida fruit? What is the average yield of trees 10 and 12 years old, and have they off years of bearing like apple trees? What is the net income per box to growers, when shipped to New York?

ANS.—There has been no orange culture in Porto Rico up to the present time such as Florida and California growers give to their groves. Of course I am unable to tell about orange culture when there has been none. The Mirangha or sour orange of Porto Rico resembles the wild sour orange of Florida. Neither is edible. The sweet oranges are all seedlings, and differ in quality and value. As a rule, they are inferior to the improved varieties of Florida. Nearly all the orange trees are growing where the seed chanced to fall I have no data for stating the yield of 12-year-old trees. The orange, like the peach, bears every year. The oranges shipped to New York the past season gave little or no profit to the grower. Careless handling and bruising of the fruit before packing caused much loss. At present the fruit of Porto Rico for export does not amount to much. I have great expectations for the future.

GEO. F. PLATT.

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EGGS from choice heavy laying S. C. White Leghorns, Silver Wyandottes and Buff P. Rocks. $1 00 per 15; $2 per 30. Safe arrival and good fertility guaranteed. T. D. GOODWIN, Columbia Station, Ohio.

EGGS—Fertility guaranteed. By the sitting or hundred. 23 varieties of prize-winning land and water fowls. Big Catalogue free. Our guarantee means something.
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Will Sell No More Wyandotte Eggs after this month. But it's time enough for Brown Leghorns yet. Some of the best Leghorns grown are hatched in June and July. Eggs that hatch: $1 per 15; $5 per 100. J. E. STEVENSON, Columbus, N.J.

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Best of both. Handsome booklet free.
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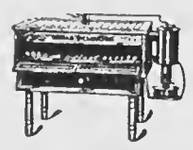
Death to Lice on Hens and Chicks 64-page Book FREE.
D. J. LAMBERT, Box 307, Apponaug, R. I.



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and all other green garden crops should be provided ample supplies of available Nitrogen. This is best done by using
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which stimulates an early, rapid and healthy growth. This treatment forces these crops into market *earlier* than is possible by the use of *any other fertilizer*. Write for free book to **John A. Myers,** 12-O John St., New York.
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Abortion in cows, which is caused by a germ—propagated by unsanitary conditions—can be prevented by the use of SO-BOS-SO KILFLY.

Sold only in gallon cans. Ask your dealer or send $2.00 for one gallon can and Eleetric Sprayer complete, seeurely packed and express paid to any point east of the Mississippi River exeept State of Maine.

The Sprayer can also be used for spraying potato vines, bushes, trees, etc. Beware of imitations.

CONVENIENT. CHEAP. PRACTICAL.

Thousands are in use in America, Canada and Mexico. Shipments have begun to Cuba, the Philippines, South America and Australia.

LENOX, Mass., April 21st, 1900.
I have used **So-Bos-So Kilfly** with good results. It is a comfort to both man and beast at the milking time. JACOB STEIBEL,
Supt. to the Hon. John E. Parsons.

PHILADELPHIA, PA., May 2, 1900.
Last July the daily quantity of milk produced by my Chester County Dairy fell off very considerably, which I attributed to the annoyance which the cattle received from the flies. About half the time the herd was standing in a stream switching instead of grazing. I ordered a sample of **So-Bos-So Kilfly** and by having it applied every second morning, greatly relieved the herd and increased the milk product from 15 to 25 per cent, and I have continued to use **So-Bos-So Kilfly** during hot weather ever since that time. Our herd of about twenty head could be sprayed in the stable in less time than it would require to milk a single cow, and I consider that I saved many times the cost of the **So-Bos-So Kilfly** used in addition to affording comfort to the herd. G. S. W. BRUBAKER.

LENOX, Mass., April 23, 1900.
We used **So-Bos-So Kilfly** last summer, on cows and horses with excellent results, it being much more satisfactory than anything else of the kind we have ever tried.
A. H. WINGETT, Supt. Allen Winden Farm.

CHAS. H. CHILDS & CO., Sole Mfrs., 12 LaFayette St., UTICA, N. Y.

Ruralisms

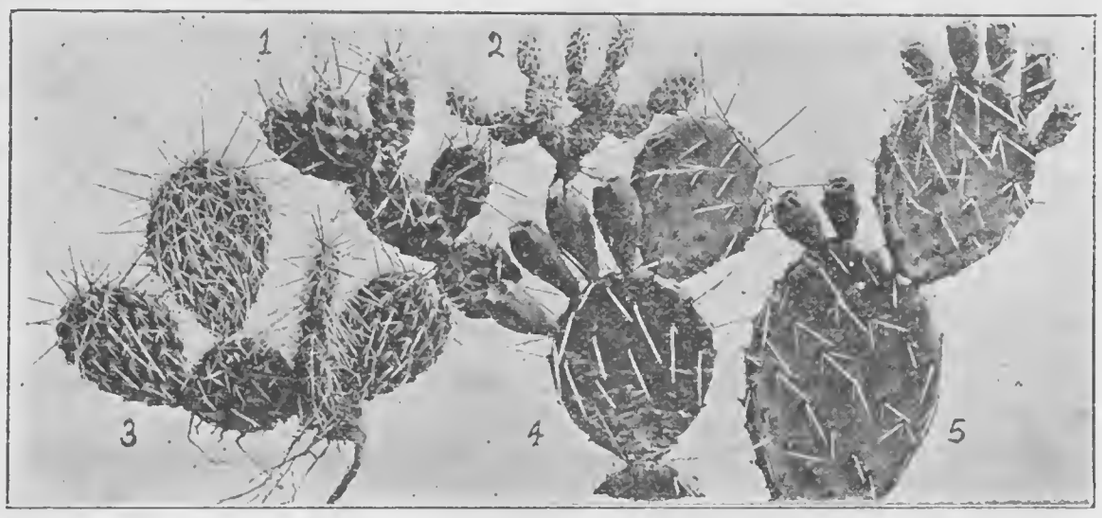
NOTES FROM THE RURAL GROUNDS.

HARDY CACTI FOR DRY SLOPES.—About the only hardy cactus grown in eastern dooryards is the common prickly pear or Indian fig, Opuntia vulgaris. It is a native of the Eastern States, and is reliably hardy when planted in congenial situations as far north as Massachusetts. It will wrinkle and discolor when exposed to severe cold, but soon regains its plumpness on the advent of warm weather. It thrives best on rocky slopes where there is good drainage, as water about the plants is injurious at any time, and generally fatal in Winter. The common prickly pear is a rather flat-growing species with pale yellow flowers about two inches in diameter. The fruit or berry is edible, but there is very little of it to eat. In the South and West O. vuigaris is replaced by two or three closely-allied species, O. Rafinesquii often producing flowers with an orange-red center. None is superior to the common species for ornamental planting. Many odd species of caeti are native to the arid slopes of the Rocky Mountains, and a dozen or more occur at considerable elevations, where the Winter temperature often descends to 20 degrees below zero. D. M. Andrews, of Boulder, Col., who publishes a most interesting catalogue of desirable native plants, sent the Rural Grounds a collection of seven species of hardy mountain cacti in April, 1900. They were planted, according to his advice, on a forbiddingly sterile slope; part of an old sandstone quarry, where the gravelly soil is too poor to grow Potentillas or "five-fingers." There were five species of Opuntia, all of which are represented in the picture, Fig. 159. They soon started into growth and produced many large, brilliant yellow blooms during the Summer, followed by showy crimson and purple fruits. They have endured the past trying Winter with but trifling harm. Two speeies of hedgehog cactus, Cactus viviparus and Echinocactus Simpsoni, accompanied the Opuntias, and were planted at the same time and place. They also endured the Winter without harm and are now, May 15, blooming brightly. C. viviparus has large brilliant purple flowers, and those of E. Simpsoni are shell pink. These cacti are apparently indifferent to dry cold, but often suffer from stem rot if water settles about them in Winter. They do best on a dry slope or rockery, where the drainage is perfect at all times, and may be made very decorative. They satisfy a liking for something grotesque and could be used to good effect oftener than they have been in the past.

The genus Opuntia is quite extensive, over 130 species having been described. They are chiefly distributed in the semi-arid regions of the American continent, and are particularly numerous from Mexico to the south temperate zone. Some of the largest cacti known are Opuntias; they grow into trees 20 feet high, with spreading, clumsy tops. In some countries the fruits of O. Tuna and O. Ficus-Indica form an important article of diet, and are extensively grown. This is especially the case in Sicily. The people of that island almost subsist on them during the Summer months, and in Mexico, the native home of these fruit-bearing species, the culture is almost as prominent. The fruits are very nutritious and quite palatable. Efforts are being made by the National Department of Agriculture to introduce the best varieties in the favorable climate of California and the Southwest. Opuntias are also much used for hedges, and to some extent in very dry regions for forage, but the numerous spines sooner or later irritate the digestive organs of the animals to which they are fed.

A GOOD SPRAY CALENDAR.—The new spray calendar issued by Leggett & Bro., New York, contains more useful information in compact form than we have found in any similar publication. Though primarily devoted to the preparations of the Messrs. Leggett, it gives full formulas and directions for using all effectual insecticides and fungicides, with dates for treating many useful plants. No better work than this has been issued by our experiment stations.

ASPARAGUS THAT'S FIT TO EAT.—Several years ago Ruralisms called attention to the miserable table quality of the higher grades of asparagus sold in the city markets. These fancy bunches are made up of thick and corpulent stalks, cut six or seven inches below the surface of the ground, leaving an edible tip seldom more than two inches long. The bleached and tough subterranean portion is not only useless in itself, but to many tastes unpleasantly affects the flavor of the edible tip. The purchaser really pays an extortionate price for the small useful portion. For certain forms of fancy cookery short tips are indispensable, and some misguided persons even think they prefer the bleached stalks to the tender and succulent green shoots cut, as they should be, at the level of the soil after they have grown seven or eight inches high. The demand for bleached asparagus is still so great that growers almost universally ridge up the soil several inches high above the plants just before the growing season, flatten the ridges to a uniform height by means of a speeial tool, and cut the asparagus by stabbing it through the side of the ridge, just after it has broken through the apex. The bunches, when made up of asparagus harvested in this manner, are very attractive to the eye, but very much of a delusion to the economical housewife. There are signs of a reaction, or at least a growing discrimination on the part of consumers, as quotations of green asparagus are now being made at very good prices. What are known as seconds in the retail markets, made up of small white and green stalks, may often prove more satisfactory to the buyer than the higher priced quality with its minute edible portion. Asparagus is one of the most acceptable of all Spring vegetables, and can still be grown very cheaply in spite of the rust and beetle. The absurd demand for a large percentage of the inedible portion in order to satisfy the eye, can only arise from ignoranee of the true charaeter of the plant, and when buyers refuse to accept what they cannot eat the consumption will enormously increase. The rule on the Rural Grounds is to allow the stalks to grow several inches high, and snap them off at the surface, rejecting all portions which will not break with a clean fracture. Just at present the retail price of asparagus ranges from 15 to 25 cents a bunch, weighing two or three pounds. The highest figure is for bunches eontaining all large bleached stalks showing only a tip of green, and the lowest for mixed bunches of white and green. There is little doubt but that the consumption of green asparagus is increasing. W. V. F.



FIVE HARDY ROCKY MOUNTAIN OPUNTIAS. FIG. 159.

1. Opuntia Arenaria. 2. Opuntia Fragilis. 3. Opuntia Polycantha. 4. Opuntia Mesacantha. 5. Opuntia Phaeacantha Major.

Spring Show of the N. Y. Hort. Society

The Spring show of the New York Horticultural Society was held in the hall of the Museum Building of the New York Botanical Garden, Bronx Park, May 8-9. As a first attempt of the new society it may be considered a gratifying success. The exhibits were chiefly confined to conservatory plants, though some lots of rare evergreens were included. There was a notable collection of cacti, Agaves, and other succulents. On a first view these spiny and tortuous forms of vegetation suggest a morbid taste in the grower, but a close inspection reveals a wealth of beauty in form and quiet color. Some of the metallic shades are very fine. May is not usually a season of bloom for orchids and choice greenhouse plants, but a number of fine specimens were brought together from various sources, and made a bright show. One of the best exhibits of meritorious plants was made by H. A. Siebrecht & Son, New Rochelle, N. Y. The lateness of the season has greatly retarded vegetation in the Park, but many interesting bulbous plants were in bloom.

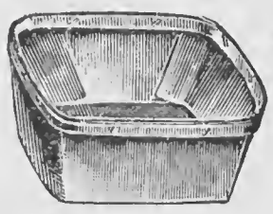
W. V. F.

ONION SMUT.—During the past few years several of our experiment station workers have been studying out a remedy for onion smut. As most onion growers know, this disease plays havoc with the crop. In many cases it has been so bad that it has nearly ruined the business. Transplanting seems to be a pretty sure remedy for it. Under this system the seed is sown in sterilized ground, so as to avoid the smut, and, when the little onions are of the proper size, they are transplanted into the field. Many growers feel that they cannot go to the expense of transplanting, although in some cases it has been done with success. At the New York Experiment Station at Geneva, experiments have been made with a mixture of lime and sulphur. It has been found that equal parts of air-slaked lime and flowers of sulphur put into the drill with the onion seed proved quite effective. The lime and sulphur sown broadcast over the ground does not seem to give the best results, but, where the mixture is put directly into the drill with the seed, excellent crops have been raised. In order to apply this mixture a new form of drill was necessary, and extra boxes, tubes and agitators for distributing the mixture were placed at the top and side of the drill. The cost was not much greater than for the ordinary seed drill, while the mixture was applied evenly and put where it would do the most good. The Ohio Station has also conducted experiments along this line, and found that lime and sulphur gave excellent results. It was also found that a solution of formaldehyde in water, sprinkled along the row on the seed in the ground, was very effective. Of course this would necessitate sowing the seed by hand, but it is possible that soaking the seed in the formaldehyde before sowing would help.

Mr. A. H. Nickerson, of Howland, Me., writes: "I used Bowker's 'Boxal' on my potatoes and was well pleased with its effect and the benefit derived. It serves two purposes—destroys the bugs and preserves the tops."—*Adv.*

Good Fruit

always finds a ready market, but to bring top prices. It must be put up in neat, attractive and substantial packages. We have everything in the basket line.



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A

Potato Bug

is getting to be a hard bug to kill. So many poisons have been tried on him, he has become pretty nearly "poison-proof," but Bowker's

"BOXAL" WILL KILL HIM

and at the same time prevent blight of vines and rot of tubers, thus serving three purposes. We have many testimonials showing the truth of this in our catalogue of Insecticides which also contains a hand-book of injurious insects and plant diseases, and how to fight them. 40 pages, fully illustrated. Ask for catalogue No. 21. Write to-day.

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Kegs, 50 lbs. ea., 5½c lb. | ½ Bbl., about 275 lbs., 4c. lb
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Compressed Air 5 gal. Sprayers. Tested to 60 lbs pressure. Has safety valve—can't burst. Throws a continuous stream 35 feet if desired. Guaranteed the best 5 gal. Comp. Air Sprayer made, or money refunded. Made both in copper and galv. iron. Write for circulars. Nothing else so good for whitewashing poultry houses, stables, etc. We also make a complete line of Sprayers for Commercial Orchards, vineyards, etc. Agents make big money selling these and our other specialties. Write for special terms and prices to dealers and agents.

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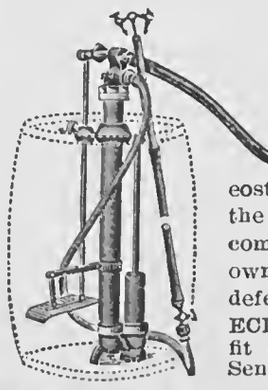

—don't experiment—costs money. We have done the experimenting—used the common spray pumps in our own orchards, noted their defects—then invented the ECLIPSE. You get the benefit of our experience free. Send at once for catalogue.

MORRILL & MORLEY, Benton Harbor, Mich.

Hope Farm Notes

TIME TO QUIT.—As it is still raining I will try to discuss something more cheerful than potato prospects this week. They tell me that discussion "brings out all there is" in any subject. If there is any more rain locked up in the weather clerk's chest I wouldn't for the world say anything that would "bring it out." We have had all we need and a surplus. Let's have something cheerful—here it is from a Massachusetts reader:

"I note with interest what you have to say regarding the age limit. I think 45 too young. I think a man should 'keep the saddle' till 60 at least. I shall be 47 soon, but do not expect to begin to grow old for 20 years yet. I put in 10 hours a day as an 'industrial slave,' and for recreation care for about an acre of fruits, vegetables and flowers. I feel no older than I did 25 years ago. I still love a long day in the woods, and am still counted as 'a good man' on the base-ball diamond. I do all my cultivating and plowing (except turf) with hand tools. I have never tried to run this piece of human mechanism with alcohol or nicotine. I do not believe hard work will hurt me as long as I eat well and sleep well. I am acquainted with a farmer of 95 who helped haying, cultivated quite a piece of potatoes and corn last Summer, and is planting potatoes this Spring. I have also known men 70 and 75 knocking off good day's work in the shop as cheerful and energetic as though 50 years younger. I am inclined to think that a man is just as old as he feels." C. A. B.

Indian Orchard, Mass.

I have been reading a delightful book by Dr. J. J. Black, of Delaware, called "Forty Years in the Medical Profession." Dr. Black says "a man is as old as his arteries," and he goes on to tell some of the ways in which the arteries are broken down. I am startled to see how much diet and plain, honest living have to do with prolonging life.

LONG LIFE.—The question arises—how long would we live could we regulate life exactly? Few would measure it by years, but rather by health and the ability to enjoy and master the forces of nature. I have lately been talking with two celebrated experts about these things. They are very hopeful for great future victories over the germs which cause and spread disease. If we are to judge from the past, they say, scientists will yet master even the worst diseases, and practically drive them from the earth. Even now some cases of consumption are being treated by cutting through the ribs and either taking out a part of the lung or filling a diseased cavity with a healing liquid or gas. When these good days come the average pill-giver or drug doser will have to saw wood for a living. While we are not there yet we are coming to it. I asked my expert friends this question: "Take a child well born, with healthy parents—and keep him under constant care so that he should not overwork or weaken any organ, or permit the germs of any disease to make serious inroads in his body—how long could you make him live?"

"Most likely for 150 years!" "But," added one of them, soberly, 'the last half of that life would not be happy. In spite of his health and good condition the man would be a 'back number.' The friends of his youth would be dead, and old men do not make new friends readily. Such long life is possible, but the majority would vote it a mistake."

PLAIN LIVING.—That seems sensible to me. I do not think I should care to live with the mere shadow and ashes of life around me. The very old are too often called upon to drink of the bitter dregs of the cup of life. It is evident, though, from what these doctors say, that this husbanding of the powers of mind and body is a matter of plain and right living. As for "eating well," I believe that for the man past 45 that means eating less than before, with more fruit and less meat. "Always leave the table a little hungry" is good advice to the grown-up man! No man can abuse his body with rum and tobacco and play baseball so well at 47 that the boys will choose him for an important match. I am a little fleshy at present, but if our friend will go behind the bat I will pitch for a few innings. That would make a "battery" of over 90 years, but we might make some of these smart young fellows "fan the air" after all. Plain and clean living, a good square effort to do your duty, fair dealings with all men, a curb bit on your temper, faith in the good and thought before action—that strikes me as a method both sensible and scientific of keeping the germs of waste and worry out of the body. As for the time to quit, as we never know when that time will come, why not try to be always ready? Right here I might add a thought that has caused some discussion between the Madame and yours truly. She read somewhere that trouble and trial sweeten and develop character. I asked her to name a character among our friends that has not been embittered and made caustic by trouble—long drawn out and well rubbed in. To my surprise she quickly named several. I thought I could quickly match them with trouble-soured individuals, but I think she beats me!

FARM NOTES.—We have a new reason for seeing some value in this cold, wet weather. Grandmother is in a hospital in New York recovering from a serious operation. Those who have had some friend under the surgeon's knife know what it means to wait for news from the sick room! Hot, basting weather would be bad enough for Grandmother, but this cool wet weather is in her favor. So when the rain slides down we can say: "It's good for the patient, though bad for our patience." Yes, the rain is good for grass, grain and Grandmother at least. . . . . We have begun to feed the green rye and clover to the stock. I would like to cut this grain for hay, but it could not be dried in any such weather. Rye hay is poor stuff if it stands too long. . . . . The Crimson clover came out nobly. During the early Spring it dawdled along, making little if any growth. Suddenly it jumped up, and is now a fine crop Cut with the rye it makes great cow feed. . . . . The grass on the field where that Clark method of seeding was tried has improved. It is very thick, but not quite so tall as that on old meadows. I have no fields for comparison where the grass was sown with grain, but there are complaints that while the Clark grass fields are thick they do not grow fast. One trouble evidently is that such fields were not fertilized as they should have been. You would hardly expect a pasture to provide for five cows as well as it provides for three. One great principle of the Clark method is that by using double the quantity of seed, and thoroughly fitting the soil, we more than double the number of growing grass plants. Of course, these plants must be well fed and watered if we expect them to make a satisfactory growth. I now expect one of my fields, at least, to give a heavy yield of hay—and pay for the extra time and seed. . . . . A part of our potato crop is six inches high. That part is, however, limited to *one plant*. You will remember a picture on page 265 of THE R. N.-Y. of a potato that had grown into a bone. We planted that in a large pot, and then plunged the pot into a box of earth. I wished to study the root growth of that plant. It is very vigorous, and seems to be taking the strength out of that bone, which was part of the thigh of some animal. That plant grows as if the bone came from a "kicker," like Julia, with power to transmit its vigor. Our main potato crop is very late—part of it not yet in the ground. On farms near us the crop seems to be coming up slowly and unevenly.

H. W. C.

The Time to Quit.

Some men must quit at 45 and from that on until the time comes that they must quit if there be a "younger hand to take the reins" or no, and it does not depend altogether, either, on the question of right living. I knew a man who died at the age of 83 who probably would not have lived much past 70 if he had been relieved of all necessity for labor at 64 or 65. F. H.

Plymouth Co., Mass.

Yes, 45 is none too early to begin to get ready to get out of the harness. Suppose, as "Michigan Farmer" says, 15 of the best years of life should then be ahead. As farming goes they'll all be needed in order to be in shape to "get out of the harness gracefully." How many at 60 years, who succeed in paying for their farms by that time, scarcely look around and take a long breath before they discover what they have struggled to pay for is almost turned to ashes in their hands when they try to sell or rent? The price has gone down, the buildings and fences have "aged" as well as he, and at best are not "up to date" in equipment, and he'll be inclined to blame the tenant for lack of care, when in fact things were just ready to go to pieces. A. WETMORE.

ALFALFA SEEDING.—I see the question is asked about seeding on Winter wheat and with Spring grain. I have seen a good catch on the wheat where a smoothing or light harrow is run over the ground. The majority of the farmers here sow on the Spring grain that has a light amount of grain sown not to exceed 1½ bushel to the acre. The Alfalfa is sown in front of the drill. Hundreds of acres are seeded in this manner, while but few seed alone. C. M.

Onondaga Co., N. Y.

WHEN you write advertisers mention THE R. N.-Y. and you will get a quick reply and "a square deal." See our guarantee 8th page.

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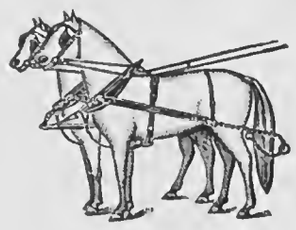
No. 5034, Concord Spring Buggy. Price $60.60.

No. 2016 Canopy Top Carriage. Price $98



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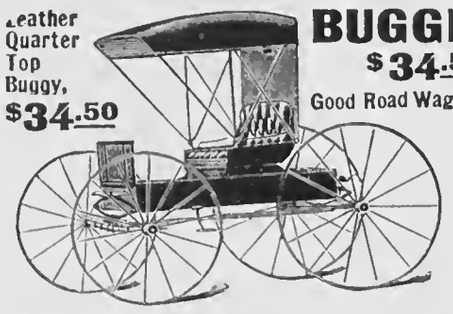

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which possesses features and improvements entirely new in wagon box construction, is but another indication of the superior methods of the Studebaker Shops and of the Studebaker Wagons. Indeed every detail as to design, material, workmanship, construction and finish of the Studebaker Wagons are peculiar to our own enormous and perfect plant, and not like those of any other. The result is a wagon that is superior in every way. Ask your neighbor who has used one for years and see if he does not fully confirm these statements. Stop at your dealer's and look the Studebaker Wagon over. If you don't find it there, write to us direct and we will tell you where you can see it in your locality.

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We are the largest manufacturers of Steel Wheels and Truck Wagons in the World. Write for Catalogue. Havana (Ill.) Metal Wheel Co.

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If it's not equal to any vehicle you ever saw costing ¼ more, don't keep it. You run no risk in buying of us. We finish and trim to suit your taste. This is our leather quarter top light buggy, with leather trimmings, full silver mountings, screw rimwheels, long distance axles, braced and leather shafts. Material first-class throughout. Price, $48.50.

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The Rural New-Yorker

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Remittances may be made in money order, express order, personal check or bank draft.
THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, JUNE 1, 1901.

THE subscription offer on page 380 is the best we have ever made. Two subscriptions to THE R. N.-Y. for the remainder of the year, two Ruby Queen roses and a copy of "The New Horticulture." Where can you possibly find a larger dollar's worth? The book, by Mr. Stringfellow, is very interesting and valuable. It is "easy to read," as one reader well puts it!

*

MR. COOK has a thoughtful article on page 398 regarding the tenant system of managing the farm. We agree with him that improvements on our own farm are better than a mortgage on another farm Again and again we see the bad results which follow when farmers move to town and leave the old farm to a careless tenant. Far better stay on the farm and try to bring the town to it by encouraging free rural mail delivery and telephones.

*

SOME men forget their hats or umbrellas. Some forget to sign their name to a letter, or to give post office or State. They are so well-known locally that they forget that people in other localities never heard of them. They sometimes write important letters and find fault because they are not answered. The fault lies with themselves because they left out name, State or post office. The simplest remedy for all this is to have name and address printed on your paper. Put the name of the farm there, too.

*

AFTER a desperate struggle the farmers of Pennsylvania have won a victory in the passage through the State Legislature of a strong anti-oleo bill. It was a hard and long battle, in which the State Grange and other organizations took part. The oleo interests were strong and well organized, and they fought desperately for their fraudulent profits. The farmers did not have much money, but they made a brave showing when they organized for business. Why do we keep on talking about organizing and "getting together?" Because that is the only way to turn the wrongs of the farmer into rights.

*

THE history of last year's apple crop is still fresh in mind. All through the season there were reports of a "heavy crop." Many farmers were deceived and sold their apples for half of what they should have brought. The only way to prevent another blunder of this sort is to have better understanding of the crop conditions, and to know what prices are offered. It is just such information as this that the New York State Fruit Growers' Association wants to collect. In order to make its reports valuable there must be many of them—sent by individual farmers. Thousands of farmers should join the Association at once. It gives them a chance to "get together" for mutual help. Write at once to F. E. Dawley, Fayetteville, N. Y., secretary, or L. T. Yeomans, Walworth, president.

*

YES, a "retired farmer" might do much for his country if he would. We do not refer to the farmer who rents his farm to some careless tenant, and moves to town in order to find fault with society in general. Such a man is not only retired but tired. The ideal retired farmer trains one or more of his boys so that they love the farm. These boys pick out farmers' daughters for wives, and all live happily together. Thus relieved, the old gentleman retires from hard, active work and stays on the farm. His council and experience are useful in public affairs Society has protected him, and given him fair opportunities, and now he pays part of the debt—not as a general critic of the universe, but as a helpful and inspiring example. It is very easy to become sour and bitter during the last years of a busy life, if we narrow the point of view down to our own individual wants and troubles. There ought to come to the declining years of every worthy farmer a fair, calm view of life in which he may realize how much he owes to others.

*

ONE of the most inconsistent things we have seen is the habit of a man in a small village, who harnesses his horse and drives to a large town four miles away, urging the animal to such an extent that he is covered with foam when he arrives The man does not do this because there is any need of hurry, for he sits around in the stores and gossips the rest of the day. A stranger seeing him go would think he was after a doctor, the fire department or a political appointment, but the neighbors only laugh at his ridiculous actions. Such a "bluff" does not amount to much anyway, and does not deceive. The saddest thing about a bluffer is the fact that he seems to believe in his own bluffs.

*

NOT long ago a celebrated minister went to a country neighborhood to preach. A large audience greeted him, and he gave an eloquent discourse on "Unselfishness." As he walked out a man stepped forward to thank him for the sermon. "It was good," he said, "I hope it will help make our people unselfish!" "Yes," said the minister, with a half sigh, "I hope so, but you must remember that the people are called upon to give for many different things!" "You are mistaken," said the man, "I did not say *generous*—I said unselfish!" There is material for a year's thinking right in that sentence. Many people cannot see the real distinction between the two words. The great work for the world's uplifting requires personal sacrifice. The "generous" people like to hire substitutes to do the real fighting for them.

*

WE have received a complete report of the hearings on oleomargarine before the Congressional committees last season. It makes a book of over 900 large pages, weighing three pounds. This big document contains what was said for or against oleo by the friends and foes of the Grout bill. We believe that any fair-minded man who will study this report will see that the arguments of the oleo people are founded on bluff and deception. One of their most "eloquent" champions undertook to defend what he called "innocent deception." What a beautiful, kindly thing it is to color lard and suet and then sell it as butter! These men always dodge the living issue, which is the fact that they use the yellow color in order to deceive. They attempt to steal the livery of the honest cow for the benefit of the hog and steer!

*

PACIFIC coast dairymen are naturally much interested in the adjustment of the Philippine tariff as regards butter and oleo. The Taft tariff proposes a differential of half a cent a pound in favor of butter; the dairymen consider this not nearly enough, and believe that oleo should be subject to a duty of at least 10 cents a pound. The oleo ships to the tropics much better than genuine butter, the beef tallow it contains keeping it firm, and it does not lose its flavor during a sea voyage. It can be made to stand any climate much better than the delicate butter fats. If it is admitted to the Philippines at almost the same rate as butter, dairymen will be able to do little business with the Islands. If butter has a fair chance against oleo, the Philippine trade will provide a great stimulus to dairy industries on the Pacific coast.

*

THE State of California seems to have "taken the lead over every State and country in the world" in fighting insects. There are State and county boards of horticultural commissioners, a State Board of Horticulture and a quarantine officer. All these various boards are not mere boarders, for they do actual work. Nursery trees are inspected before they can be brought into the State. The State law reads as follows:

Whenever a petition is presented to the board of supervisors of any county, and signed by 25 or more persons who are resident freeholders and possessors of an orchard, or both, stating that certain or all orchards or nurseries, or trees of any variety, are infested with scale insects of any kind, injurious to fruit, fruit trees and vines, Codling moth, or other insects that are destructive to trees, and praying that a commission be appointed by them, whose duty it shall be to supervise their destruction, as herein provided, the board of supervisors shall, within 20 days thereafter, select three commissioners for the county, to be known as a county board of horticultural commissioners.

Local inspectors are employed. Each inspector examines all the trees in his district. If any of the (comparatively) harmless kinds of scale are found, the owner is notified, and nothing more is done by the inspectors, as they yield to a wash of whale-oil soap, or disappear after a season of hot weather. When White scale are found the inspector starts a colony of ladybirds imported from Australia (Vedalia cardinalis). For this there is no expense to the owner of the orchard. The cost to the owner whose trees are afflicted with the kinds of scale that require gas treatment is say 50 cents per tree, which the owner gladly pays rather than see his orchard destroyed by insects. These methods work well in a State like California, where a large share of the land is devoted exclusively to fruit growing. It is necessary too that the fruit growers should be intelligent and able to "get together." Any such law in a State or community where fruit growers were distrustful and ready to cut each other out would be worse than a dead letter. The only thing that gives force to any public law is the law of private brotherhood or fair combination of personal interests.

*

DURING the last fiscal year this country exported domestic merchandise to the value of $1,307,760,571. The imports during the same time came to $849,941,184—thus leaving apparently a balance of $457,819,387. As this has been going on for some years the people have been led to believe that we have a large balance in Europe and that this is at last a creditor nation. New York bankers say that there is practically no balance to our credit abroad. One of them is reported as follows in the New York Sun:

In figuring the balance in favor of this country on the basis of the net exports of merchandise over the net imports of merchandise, there has been no taking into account of the very large amount of money that rich Americans residing abroad spend there, the money, of course, being drawn from this country. In this category are such men as William Waldorf Astor and Bradley Martin, and such women as the Countess de Castellane and the Duchess of Marlborough. There is a great number of such rich foreign Americans living in London, Paris and Italy, and to them can be added a great many more Americans of less wealth who also live abroad and who spend a very large sum in the aggregate. For example, there are living in the city of Dresden alone 30,000 Americans. Besides all this there is the amount, which has been calculated at $100,000,000 yearly, which is spent by American travelers in Europe. In addition there is the amount of the freights and insurance on our shipments abroad which we pay to Europe. The net balance is very much smaller than the amount which the statisticians have been figuring at.

We have long believed that the ngures given by the statistician needed a good deal of shading. Europe could not buy such vast amounts of American food and machinery if payments were made in cash. So we do not get rid of our grandees when they become too good for their native land and move over the water! They continue to live on American money and absorb our foreign trade balance.

*

BREVITIES.

We like a dose of theory
As well as other folks, but we
Would take a homeopathic dose
And fill the measure, packed down close
With practice clear and hard and plain,
And thus unite the hand and brain.
For every wise man understands
That brains are useless without hands,
For wisdom often idly lingers
Unless worked out through skillful fingers,
And we should mark each quality
This practice is—that theory.
Put labels on so all may know
One from the other as they go.
For we add wormwood to life's cup
Whene'er we mix these labels up.

NOT many Baldwin apples in sight.

THE hen man's credit is a yard wide.

HE only earns a rest—who does his best.

ALL men have judgment but few give it proper exercise.

WE have no authentic report of any injury to live stock from spraying.

MEASURE your prosperity by your debts rather than by your assets.

ARE there any people who really enjoy being swindled? It would seem so!

WHEN rainy days lay you upon the shelf, don't scold your wife but go and scold yourself.

THE letter on "Farming in Mexico" is worth reading even though you never expect to try it.

WHILE farmers in New York are seeding oats farmers in the Gulf States are harvesting the crop.

WE avoid tacks by using tact, though sometimes the tacks grow into spikes for lack of a pounding.

IN our experience too much wheat bran makes pale eggs and pale butter, but strong bones for young stock.

SOME men live by their wind and others by their wits—each one of them will be sized up and find a place that fits.

THE fellows who make a business of criticising everything and everybody usually do nothing else, hence their judgment is N. G.

WHAT shall it profit a farmer and his wife to toil and slave and lay up money by inches only to have their children "blow it out" by yards?

SINCE the mosquito has been shown up as a carrier of yellow fever and malaria the scientists have gone after him with all their tools. They will make holes in his ranks.

ON page 387, Prof. Goff refers to the distal end of potatoes. This means the point farthest from origin or place of attachment—a term often used in anatomy, but not in farm practice.

Events of the Week.

DOMESTIC.—Owing to Mrs. McKinley's critical illness the President decided May 15 to abandon his northwestern tour, and to return to Washington as soon as the invalid's condition would permit. May 23 Mrs. McKinley was greatly improved. . . . . A mine explosion at Farmington, W. Va., killed six men and fatally injured five others May 15. . . . . The car strike at Albany, N. Y. was attended by bloodshed May 16. A squad of soldiers on a car which was stoned fired into the crowd, and two business men standing in the doorway of their store were shot, one dying soon after. Several other persons were injured. May 20 irritation began to lessen, and there was no further violence. The trouble seems likely to be settled peaceably. . . . . Mrs. Lyman J. Gage, wife of the Secretary of the Treasury, died in Washington May 17. . . . . Fifteen cases of smallpox were discovered in a Polish convent at Detroit, Mich., May 17, and the entire institution has been quarantined. . . . . A pronounced earthquake shock passed through Ohio May 17. . . . . Three men were swept to death by a rush of water in a mine at Hazleton, Pa., May 20. The water, which came from a previously unknown pool, was set free by a blast. . . . . Edwin F. Uhl, formerly Assistant Secretary of State, and Ambassador to Germany under the Cleveland administration, died at Grand Rapids, Mich., May 17, from a complication of diseases. . . . . An extensive strike of machinists all over the country was inaugurated May 20, the object of dispute being a nine-hour day at existing wages. About 50,000 men are out, but there is no disorder, and employers are disposed to meet the demand. . . . . Several West Point cadets have been dismissed the service, and others suspended, as the result of insubordination and mutiny caused by the hazing dispute. . . . . May 19, Everet Conway, a railway switchman of Evansville, Ind., brooding over an imaginary wrong done his father in a trade, killed W. C. Garrison and wife, fatally wounded Officer Wallis, wounded two other men, attempted to kill his own father, slew a herd of cows belonging to Garrison and set fire to his barn, and then, surrounded in his own house, commited suicide. . . . . A flood from the Dee and Watauga Rivers swept through the low-lying section of Elizabethtown, Tenn., during the night of May 22, drowned three persons, carried away 62 dwellings and caused damage to the rich farming district of Carter County estimated at $1,000,000. Nearly every farmhouse for some distance along both rivers was destroyed or washed from its foundations, and it is possible the loss of life will be increased when full reports are received.

ADMINISTRATION.—The War Department has decided that in future all regular troops sent to the Philippines shall remain there three years, instead of 18 months. This action is due to the heavy expense of transporting regiments across the Pacific and in sending our relief troops. Medical men in the Philippines have maintained that the enervating climate so reduces a soldier that after two years duty he is not fit for barrack life and the navy has found that long continuous service in Asiatic waters is not conducive to health. Secretary Root believes, however, that after troops become acclimated it is better they should remain in the islands than to bring them home. . . . . Struggle in next Congress over reciprocity with Cuba is predicted at Washington. Administration will exert its influence to secure fair concessions for the Islands. Sugar growers and possibly other interests will strongly oppose any reductions of duties. . . . . Purchase of Danish West Indies is not completed, but negotiations are under way. United States is expected to acquire the possessions for $4,000,000 as a precautionary measure in defense of the Monroe doctrine.

PHILIPPINES.—In connection with the commissary frauds at Manila, the following sentences will be promulgated: Captain Frederick J. Barrows, Thirtieth Volunteer Infantry, late depot quartermaster of the department of Southern Luzon, who was charged with embezzlement and selling Government property, to be dishonorably discharged and to undergo five years' imprisonment. Lieutenant Frederick Boyer, Thirty-ninth Infantry, formerly depot commissary at Calamba, on Bay Lake, on similar charges, to be dishonorably discharged and to undergo one year's imprisonment. Both Barrows and Boyer will eventually be removed to Leavenworth Prison, Kansas.

GENERAL FOREIGN NEWS.—Andrew Carnegie has given $10,000,000 to four Scotch universities—Edinburgh, Glasgow, Aberdeen and St. Andrew's. The fund will provide for Scotch students only. . . . . It is announced officially that the British Government is unalterably opposed to raising the import duties in China to 10 per cent, as security for the payment of the indemnity, and that Great Britain would only consent to such a raise of duties in connection with commercial improvements in the Chinese fiscal system.

FARM AND GARDEN.—Statistics just published by the International Sugar Association show that Germany's beet sugar acreage this year is 1,165,170 acres, or an increase of 69,947.

One of the largest tobacco deals ever made in the West has just been carried through at Madison, Wisconsin, by the sale to a Philadelphia firm of 13,000 cases of last year's crop of Wisconsin tobacco. About $350,000 cash changed hands. The shipment will amount to about 260 carloads.

This year there has been planted 1,200 acres of cantaloupes in Pecos Valley, N. M., with an estimated yield of something less than one carload to the acre. Chicago will be the market, and the minimum price per carload is fixed at $300.

California horticulturists are preparing to test the pistachio nut in the San José Valley. The nut of the pistachio tree contains a greenish kernel of an almond-like taste, which is extensively used by the Turks and Greeks as a dessert nut and in confections, and is also exported. It yields a wholesome food oil.

The Ontario County Fruit Growers' Association was organized at Canandaigua, New York, May 4, and will coöperate with the State association organized at Syracuse in February. The following officers were elected: President, S. D. Willard, Geneva; first vice-president, Thomas B. Wilson, Halls Corners; second vice-president, W. S. Marks, Hopewell; secretary, Harry G. Chapin, East Bloomfield; treasurer, Clarence T. Ottey, Seneca; executive committee, Thomas B. Wilson, chairman, W. I. Cumine, Bristol; C. P. Whitney, Phelps; E. L. Moody, Gorham; H. G. Chapin, East Bloomfield.

Seedsmen report an increased demand in New York State for dwarf Essex rape, cow peas, Soy beans, Awnless brome grass and Alfalfa seed. It is evident that the farmers are making practical application of the newest ideas in agriculture.

The Mt. Gretna Agricultural Exposition will be held at Mt. Gretna, Pa., August 19-23.

Commissioner of Internal Revenue Yerkes has decided that where a retail dealer in oleomargarine carries on business at two or more stalls in a market building at the same time he is required to take out and post up a separate special tax stamp at each stall. But where he conducts this business at separate stalls on different days of the week, one special tax stamp, taken out for the market building, is sufficient when posted up at the stall where he is retailing oleomargarine.

Prof. S. M. Emery has resigned his position as director of the Montana Experiment Station, which he has held for the last seven years, having accepted the position of manager for the Manhattan Malting Co., Manhattan, Mont. This concern operates the largest barley farm in the country.

Prof. L. C. Corbett, lately horticulturist at the West Virginia State Experiment Station, has entered the service of the U. S. Department of Agriculture and takes charge of the new 400-acre experimental ground to be known as Arlington Farm.

The Snyder-Harris Oleo Restriction bill, which had passed the Pennsylvania House, was passed finally in the Senate May 22 by a vote of 41 against only 1, Senator Magee, and now goes to the Governor. Senator Muehlbronner explained to the Senate that he would not vote, because he was interested in the business affected by the bill. Senator Snyder says of the bill: "Of the several clauses which affect the interests of the farmers of the State the first is the color clause, which forbids oleo from being colored in imitation of yellow butter and fixing fines and penalties for violation thereof. The second feature of the bill prevents dealers from selling oleo for butter until their cases have been decided by the courts. This feature of the bill is very similar to the New York law, which has been so effectual in suppressing the sale of oleomargarine. The third feature of the bill lets one-half of the fines go to the informer, as under the law of 1885 providing for the suppression of illegal traffic in oleomargarine. The bill provides also for a license which each dealer of oleo must obtain from the Agricultural Department before being permitted to sell the substance. The penalties for violation of the act are similar to those in other States that have succeeded to a great extent in suppressing this fraud."

The California Raisin Growers' Association outlook is quite promising. New three-year contracts are being signed, and extra work done to get outside growers to join. Things are not going quite so smoothly in the Prune Association, and there has been serious opposition to the re-election of President Bond and the old board of directors. Indications now are that the old officers will be continued. These organizations are so large that they are difficult to handle, and it is no wonder that numerous mistakes have been made. It is doubtful whether any board of directors will ever be able to handle such an elephant so that no one will get his toes trodden on.

CROP PROSPECTS.

All kinds of fruit trees are in full bloom. No frost to harm anything yet. Apple tent-worms are not as plenty as last year. C. M.

Syracuse, N. Y.

Never were prospects better for a large fruit yield than at present; plums and pears in full bloom and everything betokens a bountiful supply of these delicacies.

Cincinnatus, N. Y. F. M. D.

The latest reports from the Georgia peach section indicate that there will not be quite so many peaches as last season, but that the quality will average better. The works at the largest fruit package concerns are being run day and night to supply the demand for crates.

Plums, pears and cherries are in full bloom (May 23); also strawberries and promise more than an average crop. Apples are also coming out, and are blowing pretty full with the exception of individual trees that overbore last year. The prospect at present is for a fair crop of Winter fruit if we do not get too much frost.

Fly Creek, N. Y. C. M. C.

The crop prospect is fairly good for wheat so far, and young seeding is unusually fine. If we only have enough rain to maintain it the grass crop will be good. Fruit of all kinds but apples promise well for this season. Baldwin blossoms are not very plentiful and, in fact, the trees that bore a good crop last year are not promising well this year. T. B. W.

Ontario Co., N. Y.

Wheat and grass are looking better at present than any Spring for the past three years. Spring grain is all sown, and prospect is good. Corn is not yet planted; season has been unfavorable for getting crops in early, but vegetation of all kinds is making rapid growth; berries and currants are very promising. Peas, cherries and plums are blossomed very full. Apples about one-half; very few Baldwin blossoms; other varieties quite full.

Stanley, N. Y. F. E. V. E.

All our crops and fruit are in good condition. Not so much wheat grown as formerly on account of the fly and low price. Peaches wintered well, and the outlook is good for a big crop. Strawberries are hurt a little on low ground by late frost. We hear no complaint from the farmers about hard times; they complain that farm help is very scarce. Uncle Sam, telephone companies and electric roads are using all the surplus labor of the country. No idle men now, except from choice. The same is true of female help. Good hired help for the aged farmer's wife hard to get. S. S. BAILEY.

Kent Co., Mich.

The prospects for most varieties of fruit—with the exception of apples—were never better in this section. Cherries, I think, have the handsomest bloom I ever saw. Plums and apricots are a close second. Pears—especially Kieffer—are looking remarkably well considering the very heavy crop of last year. Quinces always do well, and we expect that the present year will not injure their good reputation. As far as I have observed apples must take their place at the bottom of the list, although some varieties are blooming finely, including all early varieties, also R. I. Greening. Peaches are an unknown quantity in this vicinity. Owing to frequent rains and cool weather wheat and grass are booming. I have 30 acres of wheat that will reach an average of two feet high, while some by actual measurement measure three feet from crown to end of leaf. The season is backward for corn, beans and potatoes. W. H. D.

Lima, N. Y.

The weather has been very unusually cold and wet this Spring, and must greatly affect crops. Grass is as good as I ever saw it. If 100 represents the average appearance of grass at this season, I should mark the present outlook for grass 125. All trees are very late in leaf and flower; very nearly two weeks behind the normal. Apples are just coming into bloom, but the show is not full. I think not more than one-third of the trees have any bloom. Other fruits are blossoming full, especially plums, though two weeks late. Much land has been too wet to plow up to the present, so, of course, planting is much delayed. The lot I designed for strawberries was so wet that I did not plow at all, but worked thoroughly with harrow, and set the plants. It was a case of using imperfectly prepared land or very late setting, and I chose the former. The season has been ideal for transplanting, and I shall expect the plants to live. My potato field is only partly planted yet, though I have tried to work the land whenever it was dry enough to work. Now another heavy rain is falling which will make it mud again. Peach, plum and cherry trees are in full bloom, and I am wondering whether this cold rain will not prevent good fertilization of fruit. I think I have noticed such results in past seasons. M. M.

Medway, Mass.

GOVERNMENT CROP AND WEATHER NOTES.

There has been slight damage from frost in the Northern Atlantic States, Lake Region and Upper Ohio Valley, Western and Southern Texas, Southern Louisiana and parts of Alabama and Florida are still suffering from drought. On the Pacific Coast the weather has been cool, with an excess of rain in Washington. Corn planting is going on rapidly in the Central valleys, Minnesota and the Dakotas. Large quantities, however, yet remain to be planted in the Northern Atlantic States, where rain has hindered all farm work. Winter wheat is suffering for rain in the Missouri Valley. The grain outlook on the Pacific Coast is promising. The Southern oat crop is in bad shape owing to the lack of rain. Cotton conditions in the Carolinas and Georgia are favorable, but much of the replanted is not yet up in the Southwest. There have been severe hailstorms in North Carolina, which have made havoc on the truck farms. Bloom on late apples in Ohio, Wisconsin and New York light. Indications are that hay crop in New York will be large. The Jersey cranberry outlook is unfavorable, many of the bogs having been damaged by drought last year. Fly and chinch bug reported to be at work in Indiana and Illinois.

Great damage has been done to crops and buildings by floods in Tennessee and North Carolina. The crops of some farmers along the river valleys have been entirely destroyed. The hailstorm in North Carolina seems to have been the worst ever known in that State. Berries, cucumbers, melons, cabbage and potatoes in some of the best garden sections in the eastern part of the State have been ruined. It is possible that the injury to potatoes may not prove so serious as is thought at present, as they stand hard usage better than other vegetables. Charleston vegetables are being cut by drought. Early cabbage is not heading properly, and beans are also suffering. The Charleston beans received at New York for the last week have been inferior. A good many strawberries have been shipped from North Carolina, but the quality has not been up to the standard and they have been sold for correspondingly low prices. Hot weather along the lower coast is ripening the berries very rapidly. Conditions in the peach section of North Carolina indicate fair crop. Delaware and Virginia are shipping plenty of asparagus. Cutting in the Carolinas has ceased. Tomatoes are being shipped from central and northern Florida, but the quality is far from good, a large share of them being tough and tasteless.

CUTTING SEED POTATOES.—We have had a good deal of experience in cutting Early Ohio potatoes, confining most of our efforts to that variety. I have planted this variety of potato under a large number of different kinds of conditions, and last year made a very careful study of the value of the seed and stem end in direct comparison with each other, on a very even quality of soil, using potatoes which were of equal weight, treated for scab, and given an equal weight of piece of each kind. I found no advantage of one piece over the other. From a consideration of work which I have done for the last five or six years along this line, I would say that I have no evidence that there is any variation in favor of either the stem end or seed end, which would affect an ordinary field crop so that it could be noticed. Indeed, I have been unable to draw any conclusions when the work was carried on in the most careful manner. The weight of the piece and strain of the potato seems entirely to govern this matter of the number of stalks and the number of potatoes produced. Very often the same variety of potato, after it has run a number of years from the original, will produce wide variations or strains. I find there is a marked difference in the number of tubers which a given weight of tuber will produce in a hill in the different cases. With a given strain the number of stalks produced from an ounce of seed planted is quite uniform, also the number of tubers produced, provided the conditions are always kept as nearly as possible the same. HENRY L. BOLLEY.

N. Dakota Exp. Station.

Woman and Home

From Day to Day.

GOIN' BACK.

I've packed my traps and I'm goin' baek
where the fields are green and broad,
And the colts, with their legs all doubled
up, are rollin' on the sod;
They'll smile, I s'pose, when they see me
come, and they'll, some of 'em, likely
say
They thought I'd forsaken the farm for
good the day that I went away—
But let 'em smile—I'm goin' baek—I'm
sick of the noise and fuss,
Where a couple of dollars count for more
than the life of a common cuss;
They'll nobody notice I've went away—if
you told 'em they wouldn't care,
But somebody's face'll be full of joy when
she greets her boy back there.

I'm goin' back, for I've had my fill—I've
saw what there is to see;
The city may still be the place for you,
but it's lost its charm for me;
And won't I be lonesome there, you say,
with the people so far part?
Well, mebby they're few and far between,
but each of 'em got a heart;
There ain't no hundreds of thousands there
to push you around, I know,
Not earin' a cent where you're comin' from
or where you're tryin' to go—
For the one that's jostled day after day
with never a friend to greet,
There ain't a lonesomer place on earth than
the city's crowded street.

I'm goin' back, and you'll stay here and
rush, in the same old way,
Goin' to work and then goin' home—the
same thing day by day—
And you'll think you're havin' a high old
time and I'll pity you, lookin' baek
(From where I whistle across the fields) at
you in the same old traek!—
I'm goin' back, but the crowds won't know,
and they'll still keep rushin' on;
They'll never notice that some one's face
is missin' when I'm gone—
No, they'll never notice that some one's
gone—if they did they wouldn't care—
But every tree'll be noddin' to me when I
turn up the lane back there.
—S. E. Kiser in Chicago Times-Herald.

*

THE fortunate possessor of cut glass must remember that a sudden jar is likely to break such large pieces as salad or lemonade bowls, and it is a direct invitation to calamity to set other dishes inside them. If the glass shelf is crowded, put down small pieces first, inverting them, and then invert the large pieces over them. Take care, however, that a large piece thus resting upon its own margin presses equally all around; if it is uneven the pressure is likely to cause breaking. The glass shelf should be covered with doubled soft linen, under its cloth or doily; this little padding prevents jarring, which is always the greatest source of danger to cut glass, which has been known to break from the vibration of heavy traffic near the house. Pressed glass is not nearly so fragile, but it is always wise to avoid uneven pressure when piling it.

*

WE heard recently of a helpful husband who tried to lighten his wife's work, with results almost as painful as the case of that amateur cook who, in a moment of abstraction, tried to raise a batch of biscuits with tooth powder. He arose very early, and being fond of doing little jobs around the house, he decided that the front porch was dirty and that it would be a fine thing to clean it. Chuckling to himself to think how surprised his wife would be when she came down, he went to the kitchen, got a scrubbing brush and a package of what he thought was soap powder and a bucket of water, and started in to work with an apron tied around him. It was very early, the neighbors were not yet stirring, and he thought it was a great lark. Gaily he sprinkled the soap about, and then, moistening the brush, he got down to work. But the more he scrubbed the more pasty was the result, and after a while bubbles began to show themselves in a mess of what looked like yeast. Just then his wife appeared at the door. "Why, Jack!" she exclaimed. "What in the world are you doing?" "Scrubbing the porch," replied Jack. Mrs. Jack picked up the package which the zealous husband had supposed contained soap powder. "Good gracious!" she cried. "You're using buckwheat flour!" And he was.

*

PORTER'S linen is one of the new materials shown for shirt waists; it is supposed to resemble the blue homespun worn by French railway porters. It is woven with an uneven thread, to imitate the inequalities of the hand loom, and comes in two colors, a deep rich blue and a lighter color, called washed blue. Waists fastened at the back are the newest among Summer wear; the front is all tucked or accordion-pleated, and overlaid with lace or embroidery. Most of them are buttoned all the way down the back, but some have an opening at the back just down between the shoulders, extending no farther, the garment being slipped over the head like a sweater. Among the handsome Summer

3809 Tucked Shirt Waist,
32 to 40 in. bust.

waists crêpe de Chine takes the place of silk, some very beautiful models buttoned at the back being accordion pleated, overlaid with heavy silk embroidery; they were accompanied by embroidered sashes of the same material, having long ends and a short bow. Simple waists of

3810 Fancy Waist,
32 to 40 in. bust.

crêpe de Chine in delicate colors cost from $5 up; at $7.50 they are tucked, strapped, and quite elaborately made.

*

WE saw a girl steal a spoon in a popular business restaurant recently. Of course she did not call it stealing—she was merely collecting souvenirs. This practice, which seems to us not only dishonest, but also idiotic, is very prevalent. Hotels, restaurants, steamboats and dining cars all suffer from it. The collectors, who really merit the same epithet as the pickpocket who collects other people's purses, pride themselves on possessing "souvenirs" from as many well-known places as possible. Spoons, forks, salt shakers, pepper castors and butter plates are favorite articles of loot, and these petty thefts swell to serious annual losses. Many of the large hotels have handsome monograms or armorial designs on china, glass,or silver, making the articles very decorative, and the "collectors" make every effort to secure them. The fact that such collecting is stealing, and nothing else, does not appear to impress those guilty of it. This lack of regard for the property rights of others often springs from carelessness and indifference rather than actual dishonesty. It is very necessary to inculcate respect for the distinction between mine and thine from earliest childhood. Where parents fail to respect the little belongings of their children they are preparing those children to show a like disregard for the belongings of others.

The Rural Patterns.

The tucked waist shown is of white linen lawn and is unlined, but all cotton and linen waisting materials are appropriate made in a similar manner, while wool and silk are eminently satisfactory made over the fitted lining. As illustrated, the waist is worn with a collar of the material, stock tie and belt of liberty satin. The fronts are laid in narrow tucks from the center box pleat to the arms'-eyes, the first three being continued to the waist line while the remainder are left free at pointed yoke depth to form soft folds below. The sleeves are in bishop style tucked from the shoulders to within a few inches of the wrist where they are left free to form becoming puffs. The wrists are finished with straight pointed cuffs that lap over at the seam. At the neck is a deep straight collar finished with turnover, or protection portions. To cut this waist for a woman of medium size four yards of material 21 inches wide, 3¾ yards 27 inches wide, 3½ yards 32 inches wide or 2⅛ yards 44 inches wide will be required. The pattern No. 3809 is cut in sizes for 32, 34, 36, 38 and 40-inch bust measure; price 10 cents.

Waists closing at the back are very popular, and the example shown is of tucked and plain batiste, with point de Venise lace and is lined with the plain material cut exactly like the outside, except the sleeves, which are made over the plain foundation without lining; but the fitted lining either of silk alone or silk veiled with the material, can be used when preferred. In the case of the model all-over tucking is applied to the upper line of perforations to form the yoke, while the plain material falls to the lower edge. The lace is cut separately and applied over the plain batiste between the perforated lines, the upper edge being sewed to the lower edge of the tucked yoke; but any width of lace or insertion can be used if the upper edge is applied over the yoke edge. The sleeves are peculiarly novel, the contrast between the heavy lace and the delicate material making a most satisfactory effect. The neck is finished with a stock of lace and a chou of liberty silk is attached to the left side of the corsage. When a still more transparent effect is desired the lower edge of the lace can be sewed fast to the plain material and the latter cut away beneath it and the lace in the sleeves treated in similar manner. To cut this waist for a woman of medium size 3½ yards of material 21 inches wide or 2½ yards 32 inches wide will be required when one material only is used; two yards of all-over lace, and ¾ yard of tucking 18 inches wide and 1¼ yard of plain material 32 inches wide to make as illustrated. The pattern No. 3810 is cut in the usual sizes; price 10 cents from this office.

Household Expenses.

SOME INTERESTING FACTS AND FIGURES.

Several months ago reference was made to a Chicago experimenter who had figured down the family living to 15 cents a day. That this is not a specially meager allowance is shown by the following experience from Connecticut:

During a term of 12 weeks I had provisions amounting to $16.82. A child of eight years took one meal daily with me. We had chicken, oysters, spare ribs, etc.; two meals of meat and vegetables each day, and canned or fresh fruit, bread and cake for tea. Counting 336 meals, 252 for myself and 84 for the child, our board bill was just five cents each meal. I am a teacher, and do not keep either cows or poultry. I buy my milk, butter, eggs and chickens; buy my wood and hire it sawed. The only things I had that I did not pay for were some time during the year I had four bushels of potatoes, a barrel of apples and some squashes and cabbage sent me. My rent costs me 50 cents per week; my wood, with chopping, $6.82; oil, $5.70. I use an oil stove for getting dinner and for all uses in hot weather. The whole expense for a year was $84.27; deduct rent, $19; wood, $6.82; kerosene, $5.70, will leave $52.75 for board for 38 weeks, and the child had one meal each day; thus each meal cost five cents. This is the account for the school year of 1899 and 1900. Of course, I cannot tell what I had to eat last Winter; I always have oysters Sunday and Monday mornings.

I can tell what I have had for three days just past. Thursday, after school, I boiled corned beef, squash, cabbage and turnips; Friday noon had some of the same steamed; Friday morning had ham, potatoes and doughnuts; for tea had buns, canned peaches, mince pie and sponge roll. This morning had sausage, potatoes and cookies. Tea or coffee every meal. This noon had baked beans and baked potatoes, and to-morrow shall have stuffed baked pork. I cook dried beef, fish, etc., as my neighbors do; have oranges all the season, strawberries nearly every meal in the season. I think it more fair to reckon by the year, as I buy flour, sugar, etc., by quantities, so cannot tell any one week what my board has cost. I would have to pay $4.50 for board. I live so far from church and from Hartford that I bought me a little horse, and he and I have kept within the price of board ($4.50). I weigh 166 pounds and he kept so fat that I could hardly get my hand between him and the shafts when I harnessed. A SUBSCRIBER.

Some Massachusetts Figures.

I send you an account of our expenses for the year 1900. Although we usually have a nice garden, last year was so very dry that we were obliged to buy what we ought to have raised. What we did raise is down in its proper place. You will probably wonder at some things, but this is a true and accurate account of our year's expenses. I have receipted bills to show for all. We use very little pastry. Old-fashioned New England dishes, beans, brown bread, boiled dishes and such are staples. Our clothes are made by ourselves; my two girls trim their own hats and mine; and with New England thrift we turn and make over garments, and withal manage to look as well as people who buy new continually. I buy the cloth for my husband's clothes and cut and make them, coats, trousers, vests and underwear. We are seldom ill enough to employ a doctor. Some simple home remedy is generally all we need. We own our house and six acres of land, now mostly in grass, my husband feeling too old and lame to do much farming. I have not said anything about insurance or taxes. I have compared this account with similar ones in past years, and they all vary only a few cents. My family consists of my husband, myself and two grown-up daughters. My son is teaching, but at home part of the vacations. Company for a part of the time. The following is an itemized statement of expenditures:

	Groceries.	Meat.	Fish.	Fruit & Vegetables.	Milk.
Jan....	$6.41	$8.75	$1.04	$1.60	$1.60
Feb....	4.25	8.51	.83	1.10	1.20
March	6.75	8.40	1.00	1.50	1.70
April	3.86	5.34	.75	1.80	1.50
May	7.41	9.18	.85	1.60	1.55
June	6.59	9.16	.80	1.75	1.60
July	13.80	9.74	.90	3.05	1.60
August	9.60	13.69	.60	2.20	1.85
Sept....	4.69	8.59	1.30	3.95	1.50
Oct..	6.15	6.21	1.25	2.61	1.20
Nov.....	4.62	8.00	.93	5.25	1.60
Dec..	10.78	10.77	1.00	2.20	1.65
Total	$84.91	$106.37	$11.25	$29.61	$18.55

Four in family 12 months, five in family five months; food, $249.69; firewood, $22.50; coal, $18; medical, $7; clothing, $37; total, $334.19. This amounts to about $6.30 for each person per month. MRS. A. C.

Miss Laylock on Home Missions

Yesterday afternoon I took the blue-gray socks I had begun to knit, and went over to Sarah White's to sit awhile. She put me in the red-cushioned rocker, and I was real comfortable beside the window, where she had some geraniums that bloomed cheerful-like. We talked about the old days, and had a pleasant time till Celia came in from Topton College. Everything in that kitchen seemed to know she'd come, and peace made tracks for a quieter home. Celia is a soncy-looking girl about 17. She is well up in all the 'ologies, but thinks she knows all creation, and quite patronizes her mother and me. Indeed, I once heard her say to one of her chums that I was "only a back number." I suppose that was one way of saying I am not "up to date." Celia threw her music roll on the floor, her books and hat on chairs, and her rubbers left mud tracks on the clean oil-cloth before she took them off. Then she put her feet up on the front of the stove, while her mother brought her some baked apples to eat, as tea was not quite ready, but she didn't offer to help. I looked my disapproval through my spectacles, but she didn't take any notice; only sat there talking about the college girls, who had pledged themselves to go out to foreign missions when they were graduated, and to go wherever they were sent. Now I know Celia White pretty well; her mother is a widow with two younger children, who are well-known as hard boys to manage, in school or out, for they are very mischievous, and disobedient, but their sister does not try to do any missionary work with them, and only tolerates them when they keep out of her way.

Mrs. White can't afford to keep help, because that girl's college expenses take all her spare money, and yet there isn't a "tea" or any other social function but Celia manages to be there, in a white dress her mother has ironed for her. There is always something to take up Saturday—if not she "studies" in the luxurious college library, and on Sunday she teaches a Chinaman. Some of the girls call her a saint; others envy her fine aspirations, and they tell me she makes a most beautiful prayer at the missionary meetings. But she never hears her little brothers say their lessons, or takes a turn at the dishwashing—all that sort of work spoils the hands. Poor mother's hands!

So she spends her spare evenings in her cosy bedroom, reposing on a sofa among her books, while her mother does the chores, puts coal on the furnace, and if she sits down at all, it is to make or mend for those young people, who seem to think that is all she was made for. To-day she was busy rebinding the frayed edges of a skirt that Celia had worn, and would continue to wear, but for her mother's tired fingers.

"Why don't you let her do that work herself?" I said. "She won't have a dressmaker, or you to fix her up, when she gets out to foreign missions. It seems to me the Lord does not require you to stint yourself like this, and then when Celia is getting able to help you—and get a good situation, to have her go off to heathen countries and leave you to fight it out alone."

"Don't talk about it, please," she said in a faint voice, "I suppose I shall have strength when the time comes. I don't mind a bit about the money and the little stinting."

"No; of course you don't," I added cheerfully, "but it isn't square all the same, and I only hope you'll get your reward both in this world and the next. If that's all the comfort children are after they grow up I'm very glad mine have never been born."

Celia had left the room before I began, but came down when the tea bell rang, looking quite sweet in a newly-ironed blouse that represented hard if loving labor by her mother's busy hands. I saw that Mrs. White agreed with me, though no more was said, for she is of a yielding nature, and her boys have long since found it out. Owen had been kept in after school, and Thomas came home with a black eye, but Celia did not take any more notice of them than if they were two little frogs.

I want to see all nations worship the Saviour, and believe the time is coming when they will, but I like consistency, and have little patience with these unformed girls who imagine they have a calling towards heathen lands, when all they are really trying to do is to escape dishwashing and other irksome tasks at home, and there never was a time when overworked fathers and tired mothers and wayward brothers needed the help of these home missionaries so much as at the present. And even in Bible times just think what would have happened to Lazarus if Mary and Martha had been away on a missionary tour when he took sick? It always seemed to me that the Lord approved of a woman looking after her household, and if He had wanted any of them as an example for the benefit of all Bible readers He would have called one of them when He took Peter and James and John. But then I most forgot we live in the age of the New Woman. ELSPETH LAYLOCK.

Possibilities of a Bean Pot

The bean pot in question came into my possession about a year ago, a piece of Flemish ware whose gray-blue tints and quaint design made it an ornament to the table when a "Boston breakfast" was served in our western household, says a writer in the Christian Advocate. Surely, never were beans more toothsome and tempting than those that came hot and savory on cold Winter mornings from the pot which had been kept snug and warm in the upper part of the big coal heater over night. Some of the possibilities of my treasured bean pot have been revealed to me during the year, which I deem worthy of being made known to other housewives. Perhaps second in importance after its normal function is its use in cooking oatmeal, that delicious cereal which suffers more from undercooking than any of its fellows. After vain efforts to impress upon my maid the necessity of long, slow cooking I bethought me of an expedient which works like a charm. At supper time two cupfuls of oatmeal, four cupfuls of boiling water and a teaspoonful of salt are put into the bean pot and stirred thoroughly. It is then covered and set cooking in the heater, there to simmer until morning, and when the delicate, jelly-like mass is served with sugar and cream, it is a dish that I should not hesitate to set before the immortal old "Quaker" himself, should he drop in unexpectedly.

My bean pot also serves the purpose of a "casserole dish" most admirably and by its friendly aid a tough old hen may be made as tender as a Spring chicken, besides being incomparably finer flavored. (In point of flavor chickens, like good people, "improve with age"). Under its genial influence tough pieces of beef lose their India-rubber characteristics and become masticable. And—crowning triumph of all—consigned to the bean-pot and set in the oven, onions and cabbage may be cooked without advertising the fact in the next block. If one desires to taste apple sauce in its perfection I recommend the following recipe for consideration: Wash and quarter—do not pare—enough red apples to fill the bean pot; sprinkle over a cupful of sugar—more or less, according to the size of the pot—cover and place in the oven on ironing day. Cook three or four hours and pour into a pretty glass dish to cool. The result will be a delicious surprise in the matter of rich flavor and dainty appearance.

In the language of Mr. Browning, "One word more": Press the bean pot into service when you wish to try your hand on that time-honored delicacy, baked Indian pudding—than which there is nothing known to the cuisine harder to bake properly. And by the time you have tried the experiments indicated above I am no prophet if you have not discovered for yourself still other "possibilities of the bean pot."

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MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

MARKETS

NEW YORK, MAY 25, 1901.

GRAIN.—Both home and export trade in wheat has been quite active. Corn is down two cents.

Wheat, No. 2, hard, N. Y.	82¾	@	—
No. 1, Northern Duluth	84¾	@	—
No. 1, Northern Chicago, spot.	82½	@	—
Corn, No. 2, mixed	49¼	@	—
Oats, No. 2, white	33¾	@	—
Rye, No. 2, W'n, c. i. f., Buf.	—	@	58
Barley feeding, c. i. f., Buffalo.	42½	@	45
Malting, new crop	60	@	63

BEANS.

Marrow, choice, per bu	2 50	@	2 55
Marrow, fair to good	2 20	@	2 45
Pea, bags, choice	2 02½	@	2 05
Red kidney, choice	2 00	@	2 05
White kidney, choice	2 15	@	2 20

FEED.

Spring bran, coarse	17 00	@	18 00
Winter bran	18 50	@	21 00
Red Dog	19 50	@	20 00
No grade flour	—	@	20 00
Linseed meal, ton	—	@	27 50
Cottonseed meal, ton	24 60	@	—

HAY AND STRAW.

Hay, No. 1	90	@	—
No. 2	82½	@	85
No. 3	75	@	80
Clover	60	@	65
Clover, mixed	70	@	75
Straw, rye, long	90	@	95

SEEDS.

Clover, per lb	9½	@	10½
Timothy, per bu	1 90	@	2 50
Red Top, per lb	10½	@	—
Flaxseed, whole, bu	6 50	@	7 00
Millet, per lb	2	@	2⅛
Rape, German, per lb	3¼	@	3½
Sunflower, per lb	2¼	@	2½

MILK.

New York Exchange price within 26-cent freight zone 2 cents per quart.

BUTTER.—Receipts have increased, but not to such an extent as to cause any great surplus. Prices are practically unchanged and trade continues in a healthy condition.

Creamery, extra, per lb	19	@	—
Firsts	18	@	18½
Seconds	16½	@	17½
Lower grades	15	@	16
State dairy, tubs, fancy	18	@	—
Tubs, firsts	17	@	17½
Tubs, seconds	16	@	16½
Tubs, thirds	—	@	15
W'n imitation creamery, fcy.	16½	@	17
Firsts	14½	@	15½
Lower grades	13	@	14
W'n factory, large tubs, best.	13	@	—
Fair to good	12¼	@	12¾
Lower grades	11	@	12
Rolls, common to prime	11	@	13
Renovated butter, fancy	16	@	17
Common to choice	12	@	15½
Old creamery	12	@	14½
Old Western factory	10	@	13

EGGS.—Tone of market is firm for fancy selected and best regular packings. Other grades are dull.

QUOTATIONS, LOSS OFF.

Mich., N. Ohio & N. Indiana, regular packings	—	@	14
Other W'n, northerly sections, regular packings	—	@	13½

QUOTATIONS AT MARK.

Nearby, State & Pa., fresh-gathered, fcy, selected, doz.	—	@	14
Nearby, State & Pa., fresh-gathered, average prime	—	@	13½
Mich., N. Ohio & N. Indiana, storage packings, fancy	13½	@	—
Other W'n, storage packed, selected	13	@	—
Regular packings, N'n sect'ns.	11	@	12
Graded, southerly sections	11½	@	12
Regular packings, N'n sect'ns.	11	@	12½
Ky, best marks, selected	11	@	11½
W'n, fresh-gathered, dirties	9	@	10
Checks	7	@	9

LIVE STOCK—Steers have sold well; calves dull; sheep and lambs of the better grades higher, all others down.

Native steers	5 30	@	5 80
Bulls	3 00	@	4 40
Cows	2 25	@	4 25
Veal calves	4 00	@	5 75
Little calves	3 00	@	3 50
Sheep	3 00	@	5 00
Lambs	5 00	@	5 90

COUNTRY-DRESSED MEATS.

Calves, veal, prime, per lb	7½	@	—
Fair to good, per lb	6½	@	7
Common to medium, per lb	5	@	6
"Spring" lambs, fancy, each	5 00	@	6 00
Poor to prime	2 00	@	4 00

LIVE POULTRY.—There is some surplus of fowls. Supply of Spring chickens moderate. Ducks and geese very dull.

Spring chickens, nearby and Western, per lb	20	@	22
Southern & S'w'n, per lb	16	@	18
Fowls, per lb	—	@	10½
Roosters, per lb	—	@	6
Turkeys, per lb	7	@	8
Ducks, average W'n, per pair	70	@	80
Average Southern, per pair	50	@	55
Geese, average W'n, per pair	90	@	1 00
Average Southern, per pair	70	@	75
Pigeons, per pair	25	@	35

DRESSED POULTRY.—Trade is very slow and prices on all but better grades irregular.

FRESH PACKED—ICED.

Turkeys, W'n, hens, small	7½	@	9
Western, toms	—	@	7
Broilers, Phila., over 3 lbs. to pair, per lb	32	@	35
Phila., under 3 lbs. to pair, lb.	25	@	30
Penn., fair to good, per lb	23	@	28
W'n, dry-picked, per lb	22	@	28
W'n, scalded, per lb	20	@	25
Chickens, Phila., Winter, 5@6 lbs. to pair, per lb	22	@	25
Fowls, W'n, dry-picked, prime	—	@	10
Western, scalded, prime	—	@	10
Western, poor to good	7	@	9½
Southwestern, prime	9½	@	10
Old roosters, per lb	6	@	6½
Ducklings, L. I., and other nearby, per lb	17	@	18
Squabs, choice, large, dark	—	@	2 50
Mixed, per doz	1 75	@	2 00
Dark, per doz	—	@	1 50
Culls, per doz	50	@	1 00

FROZEN.

Turkeys, young hens, No. 1	11	@	—
Mixed young hens and toms, No. 1	10½	@	11
Young toms, No. 1	10	@	10½
No. 2	7	@	9
Broilers, dry-picked, fancy	18	@	20
Scalded, fancy	13	@	15
Chickens, fancy, soft-meated	—	@	12
Average, No. 1	—	@	10
No. 2	7	@	9
Fowls, dry-picked, No. 1	9½	@	—
Capons, fancy, large	15	@	16
Medium sizes	13	@	14
Ducks, fancy	12	@	12½
Geese, fancy	9½	@	10

DRIED FRUITS.

Apples, evaporated, fancy, lb	6	@	6½
Evaporated, choice, per lb	5½	@	5¾
Evaporated, prime, per lb	4⅞	@	5¼
Evaporated, poor to good, lb.	3	@	4⅝
Sun-dried, S'n, sliced, lb	2½	@	3½
Sun-dried, State & W'n, qrs., per lb	2½	@	3½
Sun-dried, S'w'n, coarse cut	2¼	@	2¾
Sun-dried, S'n, coarse cut	2¼	@	2½
Chops, per 100 lbs	60	@	1 50
Cores and skins, per 100 lbs	35	@	1 12
Raspberries, evap., 1900, lb	19	@	20
Blackberries, 1900, per lb	5½	@	6
Cherries, 1900, per lb	12	@	14

FRESH FRUITS.—Apples are scarce and selling well. The supply of strawberries is heavy and quality runs very poor.

Apples, Baldwin, choice, per d.-h. bbl	4 00	@	4 25
Baldwin, fair to good	3 25	@	3 75
Russet, com. to choice, bbl	2 50	@	4 00
Inferior stock	1 00	@	2 00
Cherries, N. C., per 8-lb. bskt	60	@	75
N. C., per 4-lb. basket	30	@	35
N. C., per quart	7	@	8
Strawberries, N. C., Mid'ton, ch.	8	@	9
N. C., other sorts, prime	6	@	8
N. C., common to fair, per qt.	3	@	5
Norfolk, fair to choice, per qt.	6	@	9
Maryland, good to choice, qt.	7	@	12

VEGETABLES.

Potatoes, Bermuda, p'me, bbl.	4 00	@	5 00
Bermuda, No. 2, per bbl	3 00	@	3 50
Florida, per bbl	4 00	@	5 00
Charleston & Sav. p'me, bbl.	3 50	@	5 00
Southern, No. 2, per bbl	2 00	@	2 75
State & W'n, in bulk, 180 lbs.	1 62	@	1 87
State, per sack	1 75	@	1 80
Sweets, Vineland, per bbl	1 75	@	2 50
Sweets, other Jersey, bbl	1 50	@	2 25
Asparagus, Colossal, doz. bchs.	4 00	@	—
Extra large, green, per doz	3 00	@	3 50
Extra prime, white	2 50	@	3 00
Prime, white and green	1 75	@	2 25
Poor to fair, doz. bunches	1 25	@	1 50
Beets, N. C. & Ch'n, 100 behs.	3 00	@	5 00
Norfolk, per 100 bunches	3 00	@	4 00
Carrots, Fla. & Ch'n, 100 bchs.	2 00	@	3 00
New Orleans, per 100 bchs	3 00	@	4 00
Cabbages, Ch'n, per bbl. crate.	75	@	1 00
North Carolina, per bbl. crate.	50	@	75
Norfolk, per bbl. crate	50	@	75
Cucumbers, Savannah, crate	2 75	@	3 00
Florida, per basket	1 75	@	2 25
Florida, per crate	1 50	@	2 00
Celery, Florida, per case	1 00	@	2 00
Cauliflowers, nearby, per doz	2 00	@	2 50
Norfolk, per ½-bbl. basket	—	@	2 25
Eggplants, Fla., per box	1 25	@	2 50
Garlic, New Orleans, per lb	6	@	8
Green peas, Norfolk, ½-bbl. bkt.	1 00	@	1 25
York River, per ½-bbl. bskt.	—	@	1 25
N. C., per bu. basket	50	@	75
N. C., per ½-bbl. basket	1 00	@	1 25
Kale, L. I., per bbl	50	@	60
Lettuce, L. I., per bbl	1 50	@	2 00
Baltimore, per basket	40	@	60
Onions, Bermuda, per crate	1 20	@	1 25
Egyptian, per bag, f. o. b	1 65	@	1 80
New Orleans, per bbl	1 75	@	2 25
New Orleans, per bag	90	@	1 10
Peppers, Fla., per carrier	75	@	1 25
Radishes, nearby, per 100 behs.	75	@	1 00
Squash, Fla., yellow, crate	75	@	1 00
Florida, white, per crate	50	@	75
Straing beans, Fla., wax, crate.	1 00	@	1 50
Fla., wax, per basket	1 00	@	1 50
Fla., green, per basket	1 25	@	1 75
Fla., green, per crate	1 00	@	1 50
Ch'n & Sav., per basket	1 25	@	2 00
Spinach, L. I., per bbl	—	@	1 00
Turnips, Canada, Russia, bbl.	1 00	@	1 25
N. C., new, white, 100 bchs	—	@	1 00
Tomatoes, Fla., fancy, carrier	2 25	@	—
Fla., poor to good	1 00	@	2 00
Havana, per carrier	1 25	@	1 50

Receipts at New York for week ending May 23:

Apples, bbls	4,710
Hay, tons	7,542
Oranges, boxes	20,677
Corn, bu	821,200
Wheat, bu	1,720,150
Oats, bu	1,113,100

BUSINESS BITS.

ZENNER Disinfectant Co., 100 Bates St., Detroit, Mich., has issued a little book, "Dipping Sheep for Profit." It contains the opinion and experience of the best authorities on stock matters in the country. It can be had for the asking by any R. N.-Y. reader.

"JONES, he pays the freight," is a familiar phrase to most readers of THE R. N.-Y. The author of the phrase is, of course, Jones, of Binghamton, N. Y., who is the noted scale manufacturer. He sells scales to the farmer direct, and always pays the freight himself.

DAIRYMEN evidently realize how seriously the flies interfere with milch cows. During the hot Summer months it is impossible for the cattle to do their best when tortured by these blood-thirsty pests. The best evidence of the demand for something to end this nuisance is the way the advertisers are responding. Various smears, liquids and powders are offered for the relief of cattle, and they do their work well. It was a good day for the cow when the wise men started to study out these fly cures.

THE Aspinwall Manufacturing Co., Jackson, Mich., handle a large number of useful devices. Their potato planter is automatic—one man and a team doing all the work of furrowing, dropping seed and fertilizer and covering. The four-row sprayer is another good tool, and the potato sorter does the work of human fingers. There are also churns, domestic tools, post hole diggers, small sprayers, lawn swings, weeders, and other articles in great variety. The colored advertising cards issued by this house are a great feature. It will pay you well to send for them and look them over.

IT is not at all strange that one's mind turns instinctively to the name Studebaker whenever the subject of wagons is mentioned. The Studebaker Bros. Mfg. Co., of South Bend, Ind., have been longer in the business of making wagons than any other firm in the country. In all the long years that the Studebaker wagon has been on the market, it has remained at the top of the now long list of wagons, as to quality of material, workmanship, durability, finish and long continued wear. We need to submit but one instance as proof of Studebaker superiority. We refer to their world-famous slope shoulder spoke as compared with the square shoulder spoke used by other wagon manufacturers. You can see at a glance that the slope shoulder spoke has more wood in it, that it is in no way weakened and that it, and consequently the whole wheel structure, is infinitely stronger. Well, it's just that way with Studebaker wagons all over. It has taken more than 50 years of study, practice and experience to bring about these present perfect results, but the man who buys a Studebaker wagon gets all that for nothing. You may not be able to see it in looking casually at one of these wagons, but it is there as you will realize after using one for 10 years or more. In short, the Studebaker wagon is made in their factory, in their way, with their selected materials, and with their matured experience. Ask at your dealer's or write to the factory. Address Studebaker Bros. Mfg. Co., South Bend, Ind.

WHEN you write advertisers mention THE R. N.-Y. and you will get a quick reply and "a square deal." See our guarantee 8th page.

In sudden cases of Croup, and other alarming affections of the Throat and Lungs, Doctor D. Jayne's Expectorant is invaluable. It often proves an elixir of life when death seems very near.—*Adv.*

100,000 POTTED STRAWBERRY PLANTS. Ready July. 49 Varieties. List free T. C. KEVITT, Athenia, N. J.

CELERY PLANTS ONLY $1.00 per 1,000; one million ready July first. 100 *Strawberry Plants*, in pots, for *$1.00*. SLAYMAKER & SON, Dover Del.

100 finely-bred Lord Britain and Fashoda Does, at following prices: Does scoring 90 to 92 points, $3: Does scoring 92 to 94 points, $4; Does scoring 94 points or better, $5—laid down at your door, express paid. A few very choice bucks at very low prices. All stock scored by P. E Crabtree or by one of his graduates. D. W. TALLMAN, Longmont, Colo.

JERSEY BULLS—Have on hand a few selected Registered Jersey Bull Calves, from two to four months old, from great milk and butter-producing dams, and of the most approved breeding. Improve the quality of your milk and butter output by taking advantage of this offering. We breed for quality and quantity. Will make price low; delivered to your station. Don't miss this opportunity. Correspondence promptly answered. WHITE OAK RIDGE STOCK FARM, East Orange, N. J.

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Farm Managers, Gardeners, Buttermakers, etc., always on hand. No charges to employers. Write us Rural Science Agency, Durham, N.H.

FARM MANAGERS—We have several first-class men at present whom we can recommend as Farm Managers—men of experience and ability, well versed in agricultural matters and the breeding and rearing of stock. Correspondence invited. PETER HENDERSON & CO., 37 Cortland Street, New York.

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VERMONT FARMS—200 acres—nice buildings; Summer and Winter 20 cows. 400,000 feet of heavy timber, worth at the mill three miles distant $8 per M in the log; near railroad, in large village. Price, $1,200; easy terms. GUNN & CO, Brattleboro, Vt.

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Farm of 300 acres in Bedford County, Va., on Norfolk and Western Railway; 20 miles east of Roanoke, city of 25,000, 30 miles west of Lynchburg, 22,000 population; in sight of station, telegraph and post-office. Residence, 10 rooms, nearly new; fine view. Plenty pure water; timber and fruit. Good land, adapted to grass, grain and fruit. Near schools, churches, mills and telephone. Climate fine. Sold to close estate. More land if desired. Possession any time. Good roads. Near "Peaks of Otter." Health of vicinity perfect. Water the very best. A bargain. Apply B. W. BOCOCK, Crystal, Va.

WANT TO BUY Interest in POULTRY or HARE breeding, or similar business, in suburbs of Philadelphia. P. O. Box 478, Philadelphia.

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Free tuition to residents of New York State. Extended announcement. Address Prof. JAMES LAW, F. R. C. V. S., Director.

Oldest Commission House in New York Est. 1838.
Butter, Cheese, Eggs, Pork, Poultry, Dressed Calves, Game, etc. E. B. Woodward, 302 Greenwich St., N.Y.

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GEO. P. HAMMOND & CO.,
Commission Merchants and Dealers in all kinds of COUNTRY PRODUCE, Apples, Peaches, Berries. Butter, Eggs, Cheese, Poultry. Mushrooms and Hothouse Products a Specialty. Consignments solicited. 34 & 36 Little 12th St., New York.

The best Grain-thresher, Fanning-mill, Feed-mill, Rye-thresher, Land-roller, Dog-power, Steam-engine, Clover-huller, Saw-machine (circular & drag), Sweep-power, Fodder & Ensilage Cutter, Round-silo.
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☞ Please tell what you wish to purchase.

BINDER TWINE

It affords us great pleasure to quote prices for our famous and well-known grades of binder twine as follows:

Pure White Sisal, 8c per lb. Standard, 8c per lb. Manila, 9¾c per lb.

These prices are for any quantity not less than a 50-pound bale, free on board cars Chicago, and are not subject to discount. TERMS:—Cash to accompany order.

The above twines are our unexcelled "SMYTH" BRAND, pronounced by all who have heretofore used them to be the best in the world. They are prepared with special care from first quality selected hemp, every ball being separately tested for evenness and tensile strength and insect prepared before being allowed to pass examination, hence it is absolutely perfect, is reputed the very best binder twine in the market and we believe it to be worth 2c per pound more than any other binder twine in the market.

WE GUARANTEE our customers against any change in our price and if we go lower, you will be refunded the difference in price. We treat all our customers alike and the early buyer is afforded as much protection as the late one.

SAMPLES FREE. We guarantee our twine, every pound of it, and we will refund your money instantly and without a question if it fails to come up to our representation either in quality or count, but if you prefer to see samples before ordering, then write to us and we will send samples by return mail so that you can see and test it.

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Sheffield razors known world over as best made. To introduce the Electric Balm Shaving & Complexion Soap which beautifies the skin, prevents pimples, blotches & all facial eruptions, leaving skin soft & smooth as a baby's, delicately perfumed after a shave, we give handsome imported Sheffield razor Absolutely Free with every order for 10 cakes of soap. If you want a fine imported razor free & 10 cakes of the very best shaving soap in the world, write at once, enclose stamp for sample to Premium Soap Co. Sta. D, N.Y. City. Dept 56

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BY H. M. STRINGFELLOW.

We do not hesitate to say that this is one of the most interesting books on horticulture that ever was printed. Most reading farmers have heard of the now famous "Stringfellow Method" of planting trees, but few understand clearly what it is. This book tells the whole story in clear-cut, forcible style, which all can understand. Not only is the theory of close root-pruning carefully explained, but the general principles of gardening and fruit-growing are discussed. Mr. Stringfellow is a practical gardener, and he gives his own experience. We commend the book to all without reserve. New Edition, paper covers, 50 cents.

THE RURAL NEW-YORKER, New York.

Market Briefs

PICKED UP HERE AND THERE

ONE SHARPER CAUGHT.—Philadelphia detectives have arrested a commission merchant who, under the name of John Scott & Co., has apparently been doing a wholesale fleecing business. Those in charge of the case claim that they can produce witnesses from eight different States to prove that this man has swindled them out of goods shipped to him. One of the heaviest losers reported is a New York concern, which is said to have been beaten out of $600 worth of eggs. On the letter heads he referred to the commercial agencies. There is a thoroughly responsible house known as John Scott & Co., which has a high business rating, and it would appear that the swindler had appropriated this name, and was doing business on the strength of it. In court he gave a different name, but said that he had been selling goods for a man named Scott who had desk room in his office. His story sounds very "fishy," and it is to be hoped that if proven guilty, he will be salted down to the fullest extent of the law.

EGG QUESTIONS.—A reader asks: "Do commission dealers in New York return empty egg crates or boxes? What is the average commission or margin a commission man would make or charge on a case of eggs (30 dozen)? Would you advise using the old-fashioned cardboard filled case or one of the newer and more expensive kind?" Some commission dealers make a practice of doing a grocery trade in eggs; that is, they sell in small quantities, even lots of a dozen or less. This is particularly the case with fancy eggs. We know of men who sell a good many in this small way at high prices. Buyers often find it hard to get satisfactory eggs from their grocers. They see some man in the market districts who gets a case or two of fresh eggs every day, and are willing to take the trouble of carrying them home at quite an inconvenience in crowded cars, besides paying an advanced price for the sake of getting what they wish. Where the commission merchant empties the cases himself in this way, of course, he can return them to the shipper if desired; but in many instances the eggs are sold in lots of a case or two to retailers; the crates are thus scattered all over the city, and are supposed to go with the eggs. An average commission for selling eggs is five per cent. This is really a low figure when the expenses of the dealer are taken into consideration. He must pay rent and keep enough men to handle a rush of trade, even though on dull days there is but little for them to do. As to whether we would advise cheap or expensive crates, this would depend on the class of trade reached. Some commission merchants who retail fancy eggs have told us that it would be a good plan for the shipper to use a more costly crate. This could be returned, and the eggs show up better than in the rough old boxes which some shippers use. Generally speaking, we think it advisable to use the cheap crates and let them go with the eggs. Some of these empties are saved and gathered up, and large egg men here can often supply quantities of second-hand crates at a low figure. We recently heard of 500 being sold at three cents each.

W. W. H.

GUERNSEY BREEDERS MEET.

The annual meeting of the American Guernsey Cattle Club was held at the Fifth Avenue Hotel, New York City, May 15. The secretary's report showed that the membership had increased greatly during the year, and that the business was in a prosperous condition. Extensive work has been done in rewriting and improving the system of keeping the records. The year was begun with a balance in the treasury of $1,651.90. Receipts were $8,058.35, and expenses $8,629.05, leaving a balance on hand of $1,081.20. Also, $500 has been invested as the nucleus of a fund to provide a permanent home for the club. Plans were made for a union meeting with other Guernsey breeders' associations in this country at Buffalo in September. Reports were made of the results of the home butter tests. To avoid error or deception the cows under trial were tested every month, without previous notice, by State experiment station officials. Following are the figures obtained from these tests for the year ending May 1, single cow class:

E. T. Hill's Glenwood Girl 6th, 9113, 668 pounds of butter. Geo. C. Hill & Son's Primrose's Tricksey, 7236, 592.3 pounds of butter. Geo. C. Hill & Son's Gypsy of Racine, 9639, 504.5 pounds of butter. In herds we have:

E. T. Hill's:

	Lbs. milk.	Lbs. butter.
Glenwood Girl 6th.... 9113	12,184.3	668
Lucretia's Daughter..11256	11,084.6	570.5
Lucretia of Haddon..10831	9,710.3	546.2
Glenwood Girl 8th....10830	11,310.1	540
Glenwood Girl 7th.... 9114	9,178.8	450.2

Average of the five.....554.98

Geo. C Hill & Son:

	Lbs. milk.	Lbs. butter.
Primrose's Tricksey.. 7236	9,277.0	592.3
Gypsy of Racine..... 9639	7,879.1	504.5
Lady Benjamin..... 9805	7,015.5	468.3
Lady Bishop..... 6518	7,272.4	460.0
Nounon 6569	7,059.5	445.4

Average of the five.....491.58

In the first competition we find Jas. H. Beirne's Lily Ella 7240, 912.5 pounds; Lilyita 7241, 828.95 pounds; Geo. C. Hill & Son's, Countess Bishop 7869, 27.71 pounds; Geo. C. Hill & Son's herd of five cows averaging 454.06 pounds; Levi P. Morton's herd, 450.83 pounds.

Looking at all these records a little more closely we note some interesting comparisons. There are four herds of five cows averaging for a full year from 450.83 to 554.98 pounds, or an average of the four herds of 498.5 pounds butter. There are six cows making records from 504.5 pounds to 912.5 pounds butter, or averaging 672.0 pounds. We also note that two of Messrs. Hill's cows have participated in both competitions and consequently have made two consecutive years' records. They are:

	Lbs. milk.	Lbs. butter.
Lady Bishop for 1899.....	6,868.3	444.6
" " " 1900.....	7,272.4	460.0
Nounon " 1899.....	6,338.0	410.3
" " 1900.....	7,059.5	445.4

In both instances these cows have done better during their second year. This is an excellent illustration of the staying qualities of the Guernsey.

Arrangements have been made for an Advanced Register of animals based on individual merit. Bulls will be admitted for superiority of progeny and cows on milk or butter-fat records. The most careful inspection and tests of these animals will be made by experiment station officials. Cows meeting the following requirements will be admitted to the Advanced Register on payment of the $2 fee for certificate: Milk record as a two-year-old, 6,000 pounds, increasing at the rate of 3.65 pounds per day until it reaches the limit of 10,000 pounds as a five-year-old, or aged animal. The yearly butter-fat records are to be, as a two-year-old, 250 5-10 pounds, increasing one-tenth of a pound per day until, as a five-year-old or aged animal, it is 360 pounds. The seven-day butter-fat record is to be 10 pounds for the two-year-old, increasing .00456 pounds per day until it reaches the five-year, or aged, requirement of 15 pounds.

Also the following prizes will be given for the best butter-fat records for each year ending May 1: For individual cows, $30, $25, $10. For herds of five cows each, $50, $30.

The officers elected were: President, James M. Codman, Brookline, Mass.; vice-presidents, H. A. Cassatt, Pennsylvania; Henry Sydney Fisher, Minister of Agriculture, Dominion of Canada; secretary and treasurer, William H. Caldwell, Peterboro, N. H. Members of the executive committee for four years: N. K. Fairbank, Chicago, and Howard B. Tuttle, Naugatuck, Conn.

FARMING IN MEXICO.

What do you recommend as the best thing to do in farming on a small scale in Mexico, and what locality do you think best? W. H. J.

Tenango, V. C., Mexico.

I take it that W. H. J. wants to know what kind of farming on a small scale is the best, although you ask me concerning the "best methods." In regard to best methods, I should say that the methods adopted by the leading agriculturists are the best, although they may have to be modified somewhat according to local conditions. The underlying principles of agriculture are certainly the same in all quarters of the world, and so if I intended to go into truck farming in the tropics I should proceed in exactly the same way as I would in the north. If I bought a piece of virgin forest land I could not, however, begin clearing with an ax. At the beginning of the dry season the underbrush and vines are cut down with a machete (cutlass), then all the smaller trees are cut down, and lastly the remaining large trees are felled. In order to insure good burning all large branches which stick up in the air are now cut off, and at the end of the dry season the land is burned over. If it is desired to plant corn, that can be proceeded with immediately. By burning the land over several times in succeeding years it is finally cleared of all trunks, stumps, etc., but if it is desired completely to clear the land the first year, it would be necessary to employ several teams of oxen and a stump puller, in order that the larger trunks and stumps may be got rid of.

Planting can be done all the year around, even during the dry season, if means for watering are at hand. Here, however, the regulation methods of the north may be modified. During the rainy season seeds need not be covered, or else should be covered only lightly with earth. The natives plant corn by making a hole in the ground with a pointed stick and dropping in from five to six seeds. The holes are left uncovered and the corn grows very well, securing a deep hold on the soil, because the holes are made about eight inches in depth. Nursery stock is often set out in the same way. The plant is placed in the hole and then a little earth is forced against it with the same pointed stick.

We can go Mr. Stringfellow one better down here. Mr. Stringfellow root-prunes his nursery stock to a stub, while we can take a stocky young plant, cut it off just above the roots, use it as a riding whip for a day or two, and then stick it into the ground with the full assurance that it will grow with a nice bunch of short roots all around the base of the stem. I have seen fence posts sprout and branch which were set a month after they were cut. It seems to me, then, that the "Stringfellow method" is merely a question of latitude. Prof. Bailey has shown that pruning the roots to a stub is not adapted to New York, and the same holds true for all the Northern States. The Southern States can prune the roots to a stub, and in the tropics we can cut them off entirely, although that may not be advisable. Since, then, the foundation of Mr. Stringfellow's system cannot be carried out in the North, how is the rest of the system going to be carried out? Mr. Stringfellow argues in favor of natural methods, and he himself adopts a method more artificial than any yet devised. Is confining the roots to a few feet of space and pumping fertilizers on them a natural method? What is the aspect of that "mammoth peach tree" cited by Mr. Stringfellow? I wouldn't be surprised if it is at the foot of a slope leading from the manure pile by the barn. If not, then I'd like to have Mr. Stringfellow trace out some of the larger roots and see where they run to. Here he could study natural methods. The "Stringfellow method" is all right in its place, and it is even better adapted to the tropics than it is to Texas, for besides conditions more favorable to plant growth here, there is also the labor question, the natives not knowing how to use modern farm implements, which, of course, are not necessary if only a few feet around the trees is to be cultivated.

To get back to the original question: If your subscriber has not much capital it seems to me that the best thing he could do would be to raise vegetables, pigs and chickens near some growing town, and if he wishes, he can at the same time plant some crop from which he can get returns in later years. For instance, he might locate five or six miles up the Coatzacoalcos River and take his vegetables, chickens, eggs, milk, etc., to Coatzacoalcos to sell. Milk brings 25 cents a quart, eggs two to three cents apiece; chickens, 50 to 75 cents; vegetables are proportionately high, and lard always brings a good price. (Prices in Mexican currency). As a side planting he might set out vanilla, which bears in three or four years, and is a very paying crop. Labor is worth 62½ cents a day, or else 50 cents and rations. As to other locations I cannot say much, but think that Salina Cruz, the other terminus of the Tehuantepec railway and Tampico would also be good. H. L. T.

Coatzacoalcos, V. C., Mexico.

SCRAPS.

We receive frequent questions about the value of spent tan bark as a fertilizer. The chemists place little value on it, though the ashes from burning this bark are useful. Some practical farmers have reported good success where the spent tan was used for mulching currants or other bush fruits.

The cherry and pear trees are blossoming freely, and not much difference in the variety. I think the old-fashioned black cherry is not quite as full of bloom as the sour cherries or the Yellow Spanish. The pears are loaded with buds and blossoms without much distinction. Peach trees are also well in blossom though not as full as last year. J. T.

Ira, N. Y.

The hamster, a small rat-like rodent, is causing great damage to agriculture in central Germany and the eastern part of Belgium; it is migratory, and is regarded as such a source of danger that the French agricultural department is offering a bounty for its destruction. In some parts of Europe it appears to be as great a danger as the gopher in the Western States.

A Manure Cellar.—Replying to W. B. W.'s inquiry on page 356, about cement cistern for manure drainage, my advice is not to make one. He will not find any draining from horse manure; rather, it will be too dry. I would recommend cementing floor of manure shed, making it lower in center. I once made a cement cistern in bottom of my manure cellar where I kept cows, but after a few years' trial I filled it up. It proved of but little utility and was much bother. M. Morse.

Massachusetts.

When you write advertisers mention The R. N.-Y. and you will get a quick reply and "a square deal." See our guarantee 8th page.

Dizziness

Is a very common consequence of indigestion and torpid liver. Sometimes there are spots before the eyes and hot flashes. At other times a sensation as of vertigo occurs, at once suffocating and blinding. It is a waste of time to attempt to cure this condition by ordinary means or medicines. The stomach and organs of digestion and nutrition must be restored to healthy activity, the blood must be purified, the liver cleansed and strengthened, before a cure can be hoped for. This is the work done by Dr. Pierce's Golden Medical Discovery, a medicine specially beneficial in diseases of the stomach, blood and liver. It strengthens the stomach, purifies the blood, cleanses the clogged liver, and promotes the health of every organ of the body.

"My wife was greatly troubled with indigestion, torpid liver, dizziness, and also irregular periods," writes Mr. W. A. Preston, of Shuqualak, Noxubee Co., Miss. "We tried many different remedies, but none of them gave perfect relief until we were induced by a lady to try your 'Golden Medical Discovery,' 'Favorite Prescription,' and 'Pleasant Pellets.' These medicines did more good than anything we ever tried for those complaints. We have used four bottles of your 'Golden Medical Discovery,' one of 'Favorite Prescription,' and two vials of your 'Pellets.' These medicines have done the work we desired, and I do heartily recommend them to all similar sufferers."

Dr. Pierce's Pleasant Pellets assist the action of the "Discovery."

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As a water-proof covering for Poultry-Houses, RUBEROID has no equal. Keeps the houses cool during the warm weather, and warm in Winter, and the chicks dry and comfortable. The sun cannot melt it.

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in Florida and Georgia are very profitable crops if produced early in the season. The best fertilizer to force their early growth and maturity is

Nitrate of Soda,

which should be used with the proper proportions of potash salts and acid phosphate. When properly applied it cannot fail to develop the largest and finest yields for the early market.

Full particulars free upon application to **John A. Myers,** 12-O John St., New York City. *Nitrate of Soda for sale by dealers*; we send you a list of them.

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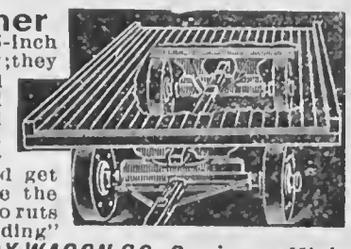
is the time when 6-inch tires are a necessity; they cut no ruts in field or lane: they roll over the soil, and they draw easier. "If I only had a 6-inch Handy, I could get that crop off before the next rain and cut no ruts thro' the new seeding"



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BERRY BASKETS.

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Special Price on Car Lots.

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Monroe Co. (Lock Box 43). WEBSTER, N. Y.

Live Stock and Dairy

DAIRY AND FARM NOTES.

Tenant System and Dairy Farms.

RENTING THE HOME FARM.—The tenant or renting question interests me much. We have tried it, and have one farm rented at the present time. Farms cannot all be worked by their owners. After a man and his wife have paid for the farm and raised a family they feel it is time to rest. This is right if some younger member of the family would assume command. But here is the rub. The parents, feeling keenly the necessity of hard work and economy in order to make payments and a living, worked early and late; went without many little comforts of life that the neighbors enjoyed, or thought they did. Their ambition was keyed up with a determination to win, and they did. After the battle was over the excitement was gone, and they justly decided not to enter another race that they might not be able to finish. How easy it is to see that the young people, not imbued with that same ambition, and having been brought up under a sacrifice, or in other words having seen what it costs to win, say to themselves: "I guess not; I don't propose to tie myself to a cow all of my life as my parents have done. I'm going to do something easier!" The parents, feeling the cost of their farm and home in hard work and sacrifice, are inclined to let the children go where they will, not requiring them to work so hard, and they are soon away, with a boast from Father and Mother that John or Mary has been very fortunate in securing a clerkship or some duty akin to it, and finally the old people are influenced to follow the children to town, and the farm is rented. In most instances under my observation from this date begins the decadence of that farm.

SUCCESS THROUGH HARD WORK.—The debatable point here is whether or not these people really did spend more vital force and energy, endured more hardships, or practiced more rigid economy than people who succeed in other fields of labor and activity? As we read the history of successful men and women, of it is all written the same story of self sacrifice, hard work, indefatigable stick-to-itiveness and disregard of the eight-hour law. Any farmer boy who thinks his lot is undeservedly hard should read "The Making of an American," by Jacob Riis, now running in the Outlook. Of course there is always a disposition to look at things from a selfish or partisan standpoint, but a judgment formed in my calmest and fairest moments has been that farmers who succeed as a whole had no more enemies to fight, battlements to scale or chasms to bridge than other people. The conclusion therefore of this young man with the moral support of his parents was drawn from a narrow conception of the world and things in it. He forgets that when he leaves his home he must begin just where his parents did, at the foundation, while the boy who takes up the farm work of a successful father really, all other things being equal, has one generation the advantage. Yet we all know how few succeed who do not in some way help to lay the foundation themselves. It's the fellow who does the thing, and not the fellow who talks about it, who knows.

THE RENTING SYSTEM.—Our theorizing about causes will not help out a solution of the renting system. At Washingtonville, Orange Co., N. Y., last Winter at the first session of the institute, Hon. C. P. Goodrich, of Wisconsin, was to give his valuable lecture on the dairy cow. The attendance was so small that Mr. Halleck, the local correspondent, very tritely remarked that it would be better for me to talk for a time, if the session must begin, than to waste Mr. Goodrich's valuable address on so small a crowd. I fully appreciated personally the force of the observation, and under some embarrassment began to kill time and without previous thought drifted into a discussion of the renting system. Comparison cannot be made between renting and living upon a farm where a great portion of the work is done by the members of the family. A man who cannot make his farm profitable himself will never succeed in renting it, asking the farm to support two families instead of one. Comparisons must be made between hiring the work all done at a fixed wage per month, and share or cash rental. We find the greatest difficulty in renting is to keep fertility and general conditions improving without doing a good deal of work ourselves. A well-tilled and productive farm rented for a couple of years is much like renting a store full of goods and not requiring the inventory at the conclusion of the term equaling that at the beginning. There will be found a little less of everything—the tenant having taken the profit, and then one must work two years to get his stock reënforced. When men work by the month or year they fail to feel the necessity of frequently cutting the corners and doing only the things that count, as a man will do who depends upon the income from the farm for his support and profit. I am speaking of a first-class tenant, and we have one of this sort, not the professional renter who stays one year and sometimes more, and then moves to new fields. He is remembered, often on the books of the local tradesmen.

THE LABOR SYSTEM.—In working, as we are doing, three farms by paid labor, we are able to give something like a personal supervision. We hire a foreman and his wife, who have immediate charge; yet a personal every-day supervision is possible. Our balance sheet does not materially differ under the two systems so far as cash returns and expenses are recorded. But a final balance is in favor of the labor system, because improvements go hand in hand with everyday work, while a day of reckoning frequently comes on the tenant farm calling for the returns that at one time seemed all profit. If the owner is to reside in town, away from the farm, unable to throw his personal force into the work, he would better adopt the renting system. Then again, results will depend upon one's ability to direct labor. I know of farmers who never get good men, and usually in their lifetime every man within 20 miles has worked for them. Other farmers always get good help. The discussion at this meeting followed along about the way I have written it. I gave them some figures made last year on a farm which had been rented until it paid no profit at all. The first year a profit of five per cent was obtained, and we grew double the stuff formerly grown. The foreman, however, is an active hustling young man, who makes things go. W. H. Halleck, a thorough-going business farmer, who owns and manages under the labor system 150 cows, practically subscribed to these points as I gave them, saying: "He could have things done as he wanted them," but this man knows how to handle labor. There is another phase to this subject. The owner, when he moves into town, is apt to become a kicker. He is out of his proper sphere. He is earning nothing, so of course feels the urgent need of economy, and knows no way more effectual than protesting against every improvement. If he goes into business at his age, and without mercantile training, failure is quite sure to follow in competition with old experienced houses that enjoy the fun of squeezing him occasionally.

In conclusion, let me urge the wisdom of living upon the farm. Invest the surplus in improvements, instead of a mortgage upon another farm. Make it a home in the full sense of the term. It will be just as attractive as a village home, both for you and your family, who will be willing to stay there and work it. Take the boys into partnership. One-half the money required to start them in business will hold them to the farm, provided always they have an inclination and adaptability. This will be one way to solve this perplexed renting question that is a bar to agricultural progress wherever it has been my opportunity to observe. H. E. COOK.

A Bunch of Beef.

The picture (Fig. 158) shows a bunch of beef cattle in an Oklahoma pasture. These animals are "ripe"; that is, ready to be shipped east to the great slaughter-houses. They are all dishorned as most beef cattle are in these days. Bunched up against a barbed wire fence they certainly form a picture of contentment. Oklahoma is becoming noted as a grazing and feeding country. The pastures are ample, and great quantities of corn, Alfalfa and Kaffir corn are produced for feeding. At present beef prices these crops sell well when packed into the carcass of a well-bred steer.

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Sore Shoulders

sore neck, sore back, &c., resulting from collar, saddle or harness gall and chafing, and all forms of canker, callous, &c., are instantly relived and cured with

Tuttle's Elixir.

Used and endorsed by Adams Express Company

Dr. S. A. Tuttle. Wolcott, Vt., July 15, 1899.

Dear Sir:—I had a horse that had two bunches on his shoulder, caused by wearing a new collar. Less than one bottle of your Elixir cured it after six months' standing. L. W. FISHER.

Cures also curb, splint, contracted cord, all forms of lameness and colic, distemper, founder, pneumonia, &c.

TUTTLE'S FAMILY ELIXIR cures rheumatism, sprains, bruises, etc. Kills pain instantly. Our 100-page book, "Veterinary Experience," FREE.

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Beware of so-called Elixirs—none genuine but Tuttle's.

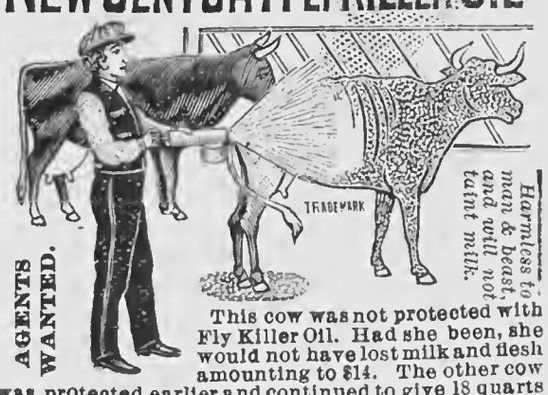
Avoid all blisters; they offer only temporary relief if any.

Best Gall Cure on Earth

Mailed anywhere for 50 cents.

MOORE BROS., Veterinary Surgeons, Albany, N. Y

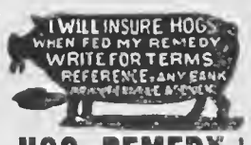
NEW CENTURY FLY KILLER OIL



This cow was not protected with Fly Killer Oil. Had she been, she would not have lost milk and flesh amounting to $14. The other cow was protected earlier and continued to give 18 quarts daily through fly time. Thousands of farmers will testify to the merits of this oil. If your dealer does not keep it, send $1 for a Sprayer and enough Fly Killer Oil to protect 150 cows. Sole Manufacturers, D. B. SMITH & CO., Utica, N. Y.

Save Your Pigs!

Runts are Unprofitable; Dead Hogs a Total Loss.



DR. JOS. HAAS' HOG REMEDY

Is Guaranteed to prevent and arrest disease, stop cough, expel worms. Increase appetite and growth.

Send $1.25 for trial package, postage paid. Cans $12.50 and $6.50; packages $2.50. State number, age, condition, food of hogs. *Special advice free.* 25 years experience. "Hogology" pamphlet and testimonials free.

JOS. HAAS, V. S., Indianapolis, Ind.

Breeders' Directory

For Sale—Two reg. Guernsey Bull Calves, about 6 and 8 months old. A. CULBERTSON, Knox, Pa.

Two Grandsons of Exile, sire of 86 tested cows. Solid Color, one and three months old. Handsome. J. A. HERR, R. D. No. 4, Lancaster, Pa.

HIGH-CLASS

Registered Jersey Cattle.

ROBT. F. SHANNON, Pittsburg, Pa.

Electress 881 Dutch Belted Cattle Association
America 196 Has bull calf sired by Belvidere D. B. C. A. Is due next month. Bred to Belvidere 318.

If you want a Dutch Belted Calf, write to G. G. GIBBS, Vail, N. J.

FOR SALE—PUREBRED HOLSTEIN-FRIESIANS. Two registered bulls ready for service; also a bargain in one bull calf dropped April 9. All of above from best families. W. W. CHENEY, Manlius, N.Y

Holstein-Friesian Bull

ready for service, and a fine lot of Bull Calves. Best of breeding, and from deep producing families.

C. K. RECORD, Peterboro, N. Y.

FOR SALE—Thoroughbred HOLSTEIN-FRIESIAN CATTLE of the best families. Also, 30 high-bred Bulls at reasonable prices. Write the MAPLES STOCK FARM, Binghamton, N. Y., WM. ROOD, Prop

REGISTERED HOLSTEIN Bulls and Heifers FOR SALE cheap. Bulls from fifteen to ten months old. Four heifers two years old this Summer. All handsome individuals. Sired by Dora De Kol's Count No. 23757. Dams finely bred. Inquire P. B. McLENNAN, Syracuse, N. Y.

150 Dellhurst Holsteins

for sale, including young Cows, Heifers and a great lot of BULL CALVES—several now ready for service—sons of "DeKol's Butter Boy", and the famous "Royal Paul" out of advanced Registry cows. Catalogue.

DELLHURST FARM, Mentor, Ohio.

Reg. P. Chinas, Berkshires and *O. Whites*, Choice Pigs, 8 weeks old, mated not akin. Bred Sows and Service Boars. *Poultry.* Write for *hard times prices* and free circular.

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2000 FERRETS. First-class stock. Some Trained. New price-list free.

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Collie Pups—Spayed Females. Circulars. SILAS DECKER, South Montrose, Pa.

Scotch Collies for Sale

From litter sister to Shep of Hope Farm. Sable and white. Price, $10. C. F. HAIGHT, Millbrook, N. Y

ZENOLEUM Kills Lice, Ticks, Mites, Fleas, Etc., on all kinds of animals and poultry. Given internally it drives out worms. Cures all cuts, wounds, sores, etc. Non-poisonous. Endorsed by leading veterinarians. "Veterinary Adviser" free. Zenner Disinfectant Co. 100 Bates St. Detroit, Mich.

LUMP JAW

Easily and thoroughly cured. New, common-sense method, not expensive. No cure, no pay. FREE. A practical, illustrated treatise on the absolute cure of Lump Jaw, free to readers of this paper.

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Veterinary Pixine

has come to the front. There is not to be found in the materia medica a preparation of such penetrating, absorbing, soothing, antiseptic healing power. Seemingly incurable or aggravated chronic cases of scratches, grease heel, mud fever, old sores, inflammatory swellings and skin disease can be positively and permanently cured.

Money back if it fails.

2 oz., 25c.; 8 oz., 50c.; 5-lb. pkge., $4.

At all Druggists and Dealers, or sent prepaid

TROY CHEMICAL CO., Troy, N.Y.

Cattle Comfort

KEEPS CATTLE COMFORTABLE IN FLY TIME

Sold by Merchants and the Seedsmen.

Send for Pamphlet to

Hammond's Slug Shot, Fishkill-on-Hudson, N. Y.

Ailing Animals.

ANSWERS BY DR. F. L. KILBORNE.

Heifer Fails to Breed.

I have a heifer coming two years old. I have never seen her in heat yet; is it best to keep her longer? A. W. H.
Windsorville, Conn.

Turn the heifer to pasture, and feed no grain whatever. If she does not come in heat in four to six weeks, she will probably never do so, and it would not be advisable to keep her longer.

Horses Out of Condition.

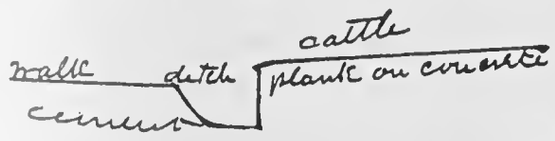
I have a mare 11 years old. She has been out of condition since last October; her coat is rough and body thin; eyes dull, and she has a poor appetite. She lies down at night as usual. I work her hard at present. I have fed various kinds of condition powders, carrots and potatoes, but all have failed. I feed her oats, bran and corn and a little upland hay. What can I do for her? J. B. G.
Echo Lake, N. J.

Try the following course of powders: Powdered gentian and nitrate of potash, of each eight ounces; sulphate of soda, 16 ounces; powdered nux vomica, four ounces; mix and divide into 32 powders. Give powder in feed twice daily. Allow a short run on pasture if you nave the opportunity.

Hernia or Breach in a Heifer.

Would a yearling helfer with a small breach of three weeks' standing, otherwise healthy and fat, be wholesome to eat for beef? Would she come under the class of diseased animals? Breach did not come through the hide and no local inflammation. R. W. W.
Jasper, N. Y.

A small breach or hernia, on an otherwise healthy animal does not render the flesh unwholesome for food. If there was strangulation of the bowels, sufficient to render the animal feverish (which would be shown by the animal being in pain) the flesh would not be wholesome, as the flesh of any feverish



CEMENT FLOOR IN COW BARN. FIG. 162.

animal is not suitable for food. A heifer in the condition you describe, if she were not feverish, would be perfectly wholesome for food, and you would, in my opinion, be justified in butchering and selling her for beef.

Skin Eruption on a Horse

I have a seven-year-old driving mare that is rather thin in flesh. She has plenty of life and is a little nervous. I think she either has some skin disease, or her blood is out of order, as she has little bunches about the size of a buckshot all over her, and she is covered with dandruff. Apparently she also has indigestion as she has frequent movements of the bowels. I feed her 10 quarts of grain a day; do not drive her more than enough for exercise.
Chester, Conn. H. J. L.

Give the mare (if not in foal) one ounce each aloes and ginger, either in ball or by drench in one pint cold water. Follow with one of the following powders in her feed twice daily. If the bowels become too loose discontinue for a day or two: Sulphate of soda, 16 ounces; nitrate of potash and powdered nux vomica, of each four ounces. Mix and divide into 16 powders. If the mare refuses to eat the powder, give in half-pint water by drenching.

Garget in Cow; Horses Out of Condition.

1. I have a cow subject to garget; her udder swells and cakes at calving time. How shall I treat her? 2. My horses keep rather thin in flesh. One is hidebound and thin, weight 1,125; sweats easily; eats well. The other, a mare, is a greedy eater and drinker, but does not gain well, weight 1,150. Grain four quarts ground oats, 1½ quart cracked corn, two quarts shorts at a feed; work every day. Please prescribe for them. F. C.
Cumberland Co., Me.

1. Whenever an attack occurs, bathe frequently with hot water or rub with hot oil several times daily until the congestion is relieved. Milk out dry each time. Internally, give one to two pounds (according to size and condition of animal) Epsom salts at the outset, and follow with a laxative diet. Also give 25 drops tincture aconite and one-half ounce nitrate potash in half pint water, and repeat every six hours. 2. Give one of following powders in the feed twice daily: Powdered gentian and ginger, of each 24 ounces; powdered nux vomica, six ounces; arsenic, 120 grains; mix and divide into 48 powders.

Horse Subject to Colic.

I have a horse that is five years old and is subject to the colic. Is there anything to feed him to prevent such attacks?
Waterloo, N. Y. H. E. S.

There are a great variety of cases and several forms of colic; and without knowing the cause I cannot advise a course of feeding to prevent the attacks. I can only suggest that you take the horse to a competent veterinarian for a personal examination, to ascertain the cause of the trouble.

Epileptic Fit in a Horse.

1. I have a horse eight years old, weighing 1,500 pounds, that was bitten by a dog a year ago. A month ago he had a spasm; muscles quivered and jerked; eyes were like balls of fire, and bloodshot; nose red and widely expanded; breathing hurried; frothed at the mouth, and kicked and snapped at everything in reach. Afterward a cold sweat came out all over him. A veterinarian gave him Spanish fly and chloral, and after 48 hours the horse seemed to be as well as ever. Was it rabies, and is it likely to return? Would it be safe to work him? 2. What is the best remedy for thrush in a horse's hind foot? W. A. W.
Allegheny Co., Pa.

1. The symptom you give indicate an attack of epilepsy. It evidently was not hydrophobia or rabies. The attack may or may not occur again, depending upon the cause. I would advise working the horse moderately, at least, until he suffers another attack. 2. Pare away all dead or diseased horn, and apply dry calomel, repeating the application daily until the discharge ceases.

A Cement Stable Floor.

Just a few words in regard to cement floors in cow stables, as inquired about by J. C. L. in THE R. N. Y. of May 11. We have had them in use for many years, made by the help employed on the farm alone, and they have given entire satisfaction. The floor is shaped just as in the rough diagram, Fig. 162. The part on which the cows stand is of plank in one and of one-inch pine boards in the other, laid on concrete, with a chestnut sill at the rear to spike to. In one stable finely-broken stone was used for base, filled in with soft Rosendale cement, and finished with about an inch of Portland. The other stable, done later, was cemented almost entirely on the hard-tramped earth, and answers just as well as where laid on broken stone. Of course the bed was shaped out first. Both are just about as solid as stone. Though not practical mechanics, we had no trouble whatever in making the curves of the gutters with a common mason's trowel. The cattle are fastened in pivoted stanchions and the floors are of a length to suit the kind of cattle kept. The gutters are from 18 to 20 inches wide and the walks four to five feet. Any men with fair intelligence can do the work. We used two parts of good cement to three parts of clean sand. WM. T. SMEDLEY.
Clinton Co., Pa.

A HEN RECORD.—Record of the number of dozen eggs sold from a flock of hens of about 150 in number from January 1 to December 31, 1900: January, 145 dozen; February, 134; March, 135; April, 220; May, 280; June, 168; July, 105; August, 99; September, 45; October, 47; November, 25; December, 76. About September 1, 71 hens, or about one-half of the flock were sold to the butcher; this accounts for the great falling off during the rest of the year. The above does not include the eggs used in the family or for setting. The hens are of all breeds, something like Hope Farm fowls, and I would like to know whether my flock will compare favorably with those of that celebrated institution. These eggs are sold every week to a grocer in a nearby city at two cents above the market price, and in more than two years not one bad egg has been found. L.
Connecticut.

—DE LAVAL—
CREAM SEPARATORS

Great as has been the previous superiority of the De Laval machines to other separators, the latest 20TH CENTURY "Alpha," developments place them still further beyond the possibility of attempted competition from anything else in the shape of a cream separator.

MAY, 1901, STYLES, CAPACITIES AND PRICES:

Old Style "Strap" Humming-Bird,	175 lbs.,	–	$50.00
Improved "Crank" Humming-Bird,	250 lbs.,	–	65.00
Improved "Dairy Special,"	325 lbs.,	–	85.00
Improved Iron-Stool Baby No. 1,	450 lbs.,	–	100.00
Improved Iron-Stool Baby No 2,	600 lbs.,	–	125.00
Improved High-Frame Baby No. 2,	600 lbs.,	–	125.00
Improved High-Frame Baby No. 3,	1,000 lbs.,	–	200.00
Improved Dairy Steam-Turbine,	1,000 lbs.,	–	225.00

Send for "20th Century" catalogue.

THE DE LAVAL SEPARATOR CO.

RANDOLPH & CANAL STS., CHICAGO.
103 & 105 MISSION ST., SAN FRANCISCO.
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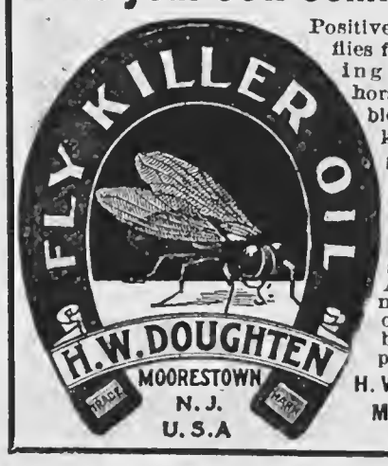
1102 ARCH STREET, PHILADELPHIA.
327 COMMISSIONERS ST., MONTREAL.

Make your Cow Comfortable



Positively prevents flies from annoying cows or horses; rids stable of flies, keeps stock good tempered and in fine condition. A boon to every stock owner. Apply to your nearest dealer or write for booklet and prices.
H. W. Doughten, Moorestown, N. J.

Shoo-Fly THE ANIMALS' FRIEND

Kills every fly it strikes. Keeps off the rest. Harmless to man or beast.

This cow was a terror to milk prior to using ½ cents worth Shoo-Fly. Had it been used earlier she would not have lost milk and flesh to the amount of $14. The other cow was protected early and continued to give 18 qts. daily through fly time. Thousands have duplicated 10 gallons seven consecutive years. If your dealer does not keep it, send us $1.00 for latest improved double tube sprayer and enough Shoo-Fly to protect 100 cows, or send 25c for liquid. Cash returned if cows are not protected.
SHOO-FLY MFG. CO., 1005 Fairmount Ave., Phila. Pa.

THE CHAIN-HANGING
Cattle Stanchion
The most practical and humane Fastener ever invented. Gives perfect freedom of the head. Illustrated Circular and Price free on application. Manufactured by O. H. ROBERTSON, Forestville, Conn.

Wilder's Stanchion
—being an improvement over Smith's. Lightest, strongest, quickest, safest swing stanchion made. Has steel latch and automatic lock. Becomes stationary when open. Animal cannot turn it in backing out. Made of best seasoned hard wood. Pins for fastening with every stanchion. Send for testimonials.
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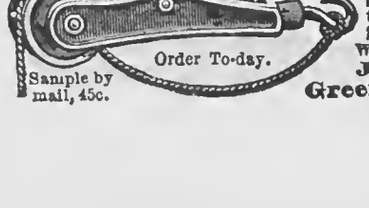
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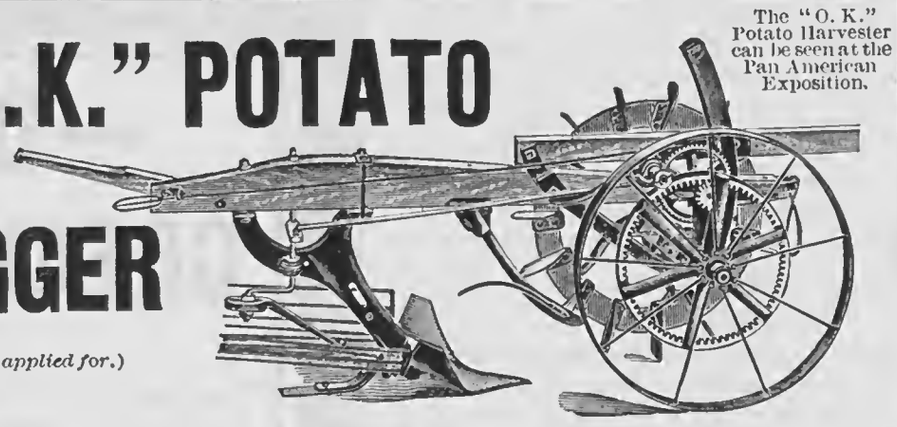
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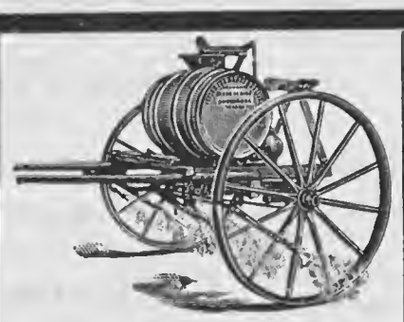
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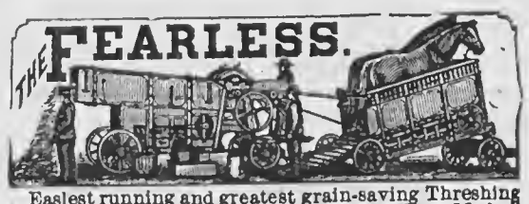
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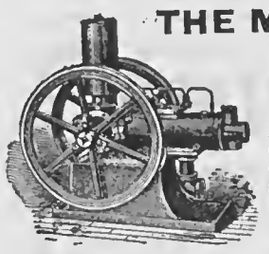
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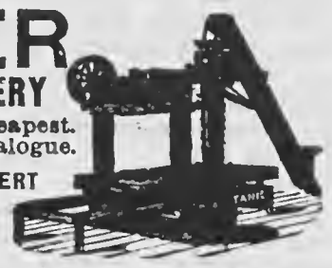
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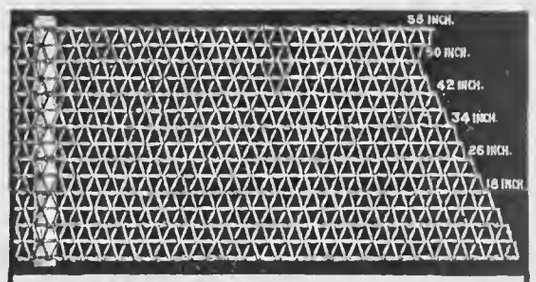

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2680. NEW YORK, JUNE 8, 1901. $1 PER YEAR.

COW HORN TURNIPS AND CRIMSON CLOVER

HOW THEY ARE USED AS GREEN MANURE.

Farm Practice of a Pennsylvania Farmer.

On page 286, Chas. Johnson gave a brief report of an address delivered at a Pennsylvania farmers' institute by R. S. Seeds. This has called out so much inquiry from our readers that Mr. Johnson has prepared the following fuller report of the lecture. The result with oats during an exceptionally dry season is worth noting:

HARD SOIL, NO MANURE.—"The value of fertility and the cheapest way to get it." Under this title, Mr. Seeds, a practical farmer living in the Juniata Valley, discussed, before the Monroe Co., Pa., Farmers' Institute, the method by which he had succeeded in restoring a "rundown" farm. The farm on which Mr. Seeds commenced operations seven years ago had been managed in the usual way for presumably 50 years. It was then rented for a number of years, until no one could be found to rent it. Then the practice of working it on shares had been tried until about 14 years ago, when it passed into the hands of the mortgagees. From this time until sold to Mr. Seeds the place had been practically abandoned. The soil is a strong clay loam, and seven years ago fell with a dead thud immediately after leaving the plow. At that time four inches was as deep a furrow as could be turned, and that only with difficulty. The experiment of hauling stable manure from the neighboring town was tried, but found too expensive, necessitating an outlay of from $20 to $25 per acre. A little computation soon showed liming to be impracticable for the same reason. Since no money could be spared for manure or fertilizers, some other means had to be devised to make this hard, compact soil productive in any degree.

DEEP-ROOTED GREEN CROPS.—The most natural solution of the problem appeared to be green manuring. Literature on the subject was collected, and plans formed for the season's work. The first crop used for this purpose was Crimson clover. This experiment proved unsatisfactory. Several reasons were given why a good stand of clover was not obtained, viz., failure to cultivate the seed in, the use of southern-grown seed, and the uncongenial condition of the seed bed. Then, too, Crimson clover was objectionable because of the long season necessary for it to reach maturity, thus delaying the use of the land in early Spring. Furthermore, it grows "on top of the ground," and consequently does not loosen up the subsoil as much as seemed desirable in this case. A plant with a long root that would mature in the Fall, was sought for but not discovered in time for use the following season. To supply the need the second season, the Purple-top Strap-leaved turnip was used. The objection to this was that it also grows "on top of the ground." The objection so often heard against the use of this class of cover crops, that *they take moisture from the soil when it is needed to mature other crops*, Mr. Seeds does not regard as warranted, since the ground, where shaded by the turnips, showed more moisture on the surface than could be found elsewhere, while the corn matured a heavy crop of both ears and stalks. It was not until the third season that the Cowhorn turnip was used. The first lot of seed was obtained from a western seedsman, but most of the leading seed merchants now catalogue this variety. This plant possesses most of the qualities desired. Photographs taken of specimens in the field, both in the ground and out of the ground, show it to be a rank grower and deep rooter. Mr. Seeds assured his audience that individual specimens measuring nearly four feet were found, while a length of two feet four inches was quite common. In order to dispel any doubts in the minds of the incredulous, Mr. Seeds added, that he always meant "tops and all." Fully one-half of the growth, as shown by the photographs, was below the surface of the ground. These crops are grown in the cornfield and left there after the corn is taken off. No attempt is made to harvest them or to use them for any other purpose than soil improvement.

RESULT IN OATS.—Among the photographs exhibited at this meeting was one of a field of oats. This field had attracted attention during the earlier part of the season, because of its peculiar dappled appearance. "To the casual observer it was evident," says Mr. Seeds, "that the dark spots were by no means accidental, because they occurred at regular intervals, and were of practically the same size." An examination showed that the spots occurred just where the corn shocks had stood. It had been noticed in the Fall that where the corn shocks had stood the growth of the turnips had been checked, and in many instances decay had set in, while the surrounding plants continued to grow for a month after the corn was cut. The stronger growth of the oats was attributed to the greater amount of available plant food in the soil consequent upon the more complete disintegration of the vegetable matter beneath the corn shocks. This field of oats was the only one in the Juniata Valley, according to Mr. Seeds's statement, that more than paid expenses in the year 1900, "the driest season" ever experienced in that section of the country. Other photographs shown did credit to the cultivator, whether in the Juniata Valley or elsewhere. Crimson clover waist-high, Red clover nearly waist-high, measured by Mr. Seeds as a standard, and as heavy as could be desired certainly need no description from me. A good stand of Alfalfa has also been obtained after repeated trials. The mistake made on this crop was in attempting to seed it the same as clover, instead of treating it as an independent crop.

BURBANK PLUMS IN A POULTRY YARD. Fig. 163. See Page 406.

TURNIPS AND CRIMSON CLOVER.—Mr. Seeds no longer uses the turnips alone, but uses them in connection with Crimson clover, sowing one pound of turnip seed and one-half peck of Crimson clover seed per acre. When used alone he doubles these amounts. Both kinds are sown at the last cultivation of the corn, and cost no extra labor except that necessary to sow the seed. Among the plants he will try this season are the Sand vetch and cow pea. The crops of Cowhorn turnips are turned under in the Fall, when possible, in order to aid decomposition and render them more available for succeeding crops. The Crimson clover is turned under any time after it has made a fair amount of growth. By this means Mr. Seeds estimates, from analyses given by the New Jersey Experiment Station, that he is plowing under about $50 worth of fertility in the shape of potash, nitrogen, etc., costing in the year 1900 only 54 cents per acre to raise. In addition to this, his soil has become lighter, works easier, holds moisture better, is cooler in Summer, warmer in Winter and can be worked earlier in the Spring.

As evidence that his improvements are genuine, Mr. Seeds made the statement that the valuation of his farm had been increased $25 per acre in three years. He now experiences little difficulty in handling the ordinary farm crops, and is satisfied with the results obtained.

CARING FOR MANURE.—At a later session of the institute Mr. Seeds explained his method of caring for his barnyard manure and disposing of it. The barnyard has been made practically a part of the barn by putting a roof over it and walling up the sides. Windows are provided to admit light. The center is hollowed out and puddled with clay. All drainage from the stables is saved, and the manure is hauled out in Winter on the grass, from which hay is to be cut the following season. Mr. Seeds dislikes the practice of hauling manure out on corn land because it does not give results until Fall. The greater portion of the fertilizing elements is washed out before the crop can make use of them. Then, too, he claims that manure not thoroughly composted, when applied to crops other than grass, has a tendency to favor drying out, and thus may prove injurious rather than beneficial.

CHARLES JOHNSON.

Cape May Co., N. J.

RENTERS AND RAIN.—We are renters, and can see many dollars of hard work wasted on undrained places, wasting of feeds and liquid gold running from barnyard, but have been unable to get the owner to see it, so it continues to go on, and this extra wet Spring shows things off, and nearly makes us discouraged. May 24 was the storm that capped them all. Old men say it was the worst one of their time. Oat seeding was cut short 12 or 15 per cent, and much of the seed in is being washed out. A very little corn is planted, and a good many have not plowed a furrow. There has been considerable hail, but have not heard of all the damage. Many bridges were washed away, and some hill roads are nearly impassable. More rain to-night; no corn or potatoes in in May. Pastures are good but hay seems to stand still. As for anything new about milk, there is nothing, only the new milch cows, and the new names going on the tally sheet. Milk at 60 cents per can, 40 quarts; the dealer skims milk and sells back to the farmer, one farmer getting a pound of butter per can of skim-milk, but a new separator is to go in in a few days. Such are the profits in the milk business (one-sided). W.

Bradford Co., Pa.

R. N.-Y.—Similar weather conditions are reported from so many sections that we think early crop reports will be subject to decided revision, especially as regards fruit and grain.

TRIMMING VARIETIES OF BLACKBERRIES.

One of our readers says that in trimming blackberries one must be careful not to prune Early Harvest severely, because, he says, the fruit buds of that variety are chiefly borne near the end of the canes. He says that other varieties may safely be trimmed severely, but that Early Harvest should not be handled in this way. This leads us to think that possibly there may be differences in the growth of small fruits which require special care in pruning. Is it safe to give general directions for trimming or pruning bush fruits generally, or do the varieties have such difference in growth that we should change our methods according to the variety?

I do not doubt but what your reader is right about pruning the Early Harvest blackberry. While I have not observed this peculiarity that he speaks of in this variety, I know that different kinds of raspberries make different growths, so that they receive different treatment in the hands of expert growers. These differences in growth and bud formation can scarcely be called a varietal characteristic, but rather a characterlstic of the race or type of fruit to which the variety belongs. These differences are usually not apparent to the ordinary grower, but in some instances these little features are taken advantage of, and the knowledge is turned to good account. The following extract from a letter from Mr. J. F. Hunt, one of the best small fruit growers in central New York, shows that different types of raspberries need different treatment in order to get the best results, and also I think that there are many things in small fruit growing that escapes the notice of the majority of men:

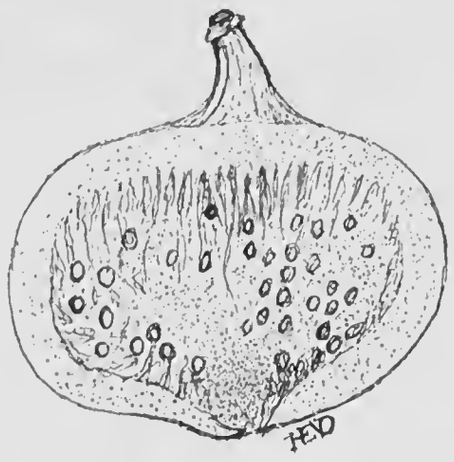
"Would say that my experience in trimming the Shaffer berry is very much the same as in trimming blackcaps, except trim shorter, as each well-developed bud has the capacity of producing twice as many berries as buds of blackcaps with the same development; that is to say, if each was forced by proper trimming to its full extent. If the new growth was pinched off when about 12 to 15 inches high, making the head low, the pruning of side branches may be longer than where the head is high and the weight of the berries tops the bushes over on the ground, and nearly all of the fruit is lost on account of being covered with dirt. I believe I have learned this, that three or four canes to the hill, cut very short, will produce more fruit in a dry season than the same canes trimmed long, or more canes left in the hill. If there is too much wood left to set fruit, and a heavy crop develops, and conditions are unfavorable, then the whole crop is forced to maturity in a few days. On the other hand, if cut short, the least-developed buds on sides of main cane start late, and so lengthen the season by a week or more. The same conditions I find hold true with the Cuthbert berry, but not with blackcaps to any extent. With blackcaps, such varieties as Ohio, Palmer and Souhegan, that have short-jointed wood, should be trimmed accordingly; they also develop many more berries to the bud than the Gregg and that class of berries." W. PADDOCK.

WATER WORKS FOR THE FARM.

I have been interested in what the Hope Farm man said about his water works, because I put in some last Fall myself. I built a cistern that will hold 170 barrels, in the top of the hill south of the house—grout and cement wall; 15x6 feet, eight feet deep. The top of wall is six inches above surface of ground, and cistern has a frostproof cover. It was a back-breaking job, digging the ditch and cistern; had to use a pickax all the way (38 rods), and near the cistern the ditch had to be eight feet deep, so I can draw right from the bottom. No siphon business for me; a siphon will work all right—for a while, and the bother begins. Fig. 165 shows how I have my water works arranged; two hydrants in garden and one each in flower garden, barn and pigpen; three valves in barn and two in house—one in kitchen and one at Cooley creamer. I have three way cocks in well, so I can either draw from cistern or pump from well. I can attach hose at pump or flower garden hydrant, and throw a stream over the house. I have a hydrant by the stable door (inside) where I can water the horses; and the pipe then extends to the top of the stable room, and from there all the way on a slant, out through the cow barn in front of the cows, to the water trough in barnyard, so I can drain the pipe out and have no trouble with zero weather. There is a feeding alley in front of horses, where cut hay drops down from above; have a mixing box there and a short hose, with the ground feed just a step from it; so everything is handy for giving the horses their mixed feed. I put cement on one end of the bottom and part way up on the sides of the alley in front of cows, and use that to mix the cut stalks and feed for the cows; of course I have a hose there.

My wife appreciates the water as we have it now, but she will have it still better when some changes are made in the kitchen and a bathroom added, for then with a water front in the stove she will have both hot and cold rain water and cold well water; can make the windmill pump up the rain water, too. The boys think the cistern is a mighty fine thing, too, because now they never hear: "Come boys, fill up that trough!" You know the old saying: "You can lead a horse to the water but you can't make him drink!" I can do better than that, because I can stick the hose down his throat and make him drink.

I have been trimming a young orchard set out four years ago. In spite of the fact that when setting them out I leaned the trees slightly to the west, many of them are now leaning to the east, and many of the limbs on the west side are bowed right over to the east. Some of the Roxbury Russets were and are of fine shape, but some of them were crooked, and despite careful pruning are so still. I think they must have crooked blood. Rome Beauty, Jonathan, Spitzenburg, Wagener and Grimes Golden will bear this year. The present prospects for all kind of crops are good. Red clover that I sowed in Spring wheat April 27 is better than that I sowed on Winter wheat April 6. J. R. W.

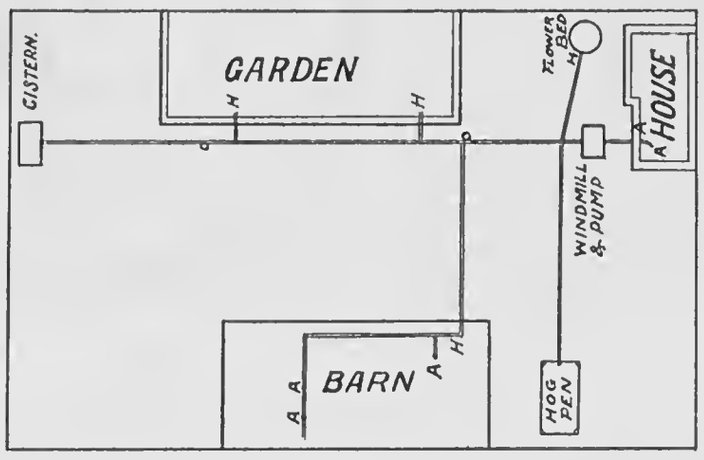


SMYRNA FIG FROM CALIFORNIA. Fig. 164.

Shortsville, N. Y.

NOTES ON STRAWBERRY GROWING.

Many authorities on strawberry culture advise plowing up old beds after the second year and starting new ones. Some suggest cleaning out and working over old beds without moving the plants, but I have found this practice usually labor lost. The roots of the strawberry begin to decay when the fruit matures. All the strength and vigor of the plant passes from the roots to the berries and runners; consequently the old root system becomes enfeebled and gradually withers and dies. My own practice, differing perhaps from that of most others, and which I have followed for several years with gratifying success, is as follows: Immediately after fruiting ceases I take up the plants with a spading fork, three or four to a forkful, disturbing the roots as little as possible, and set them one side; then thoroughly spade up the old row, clean out the weeds, fertilize, trench and then set the plants back, being careful to keep the blocks of earth intact; arrange the runners for rooting, and later on cut off only the weaker runners if in too great profusion. The first runners sent out by the old plant are larger and more vigorous than those produced later, thus making stronger plants. The importance of replanting at once after the plants have ceased fruiting will therefore readily be seen. A delay of three or four weeks, if not resulting in entire failure, would be likely to show a great reduction in the size and vigor of the new plants, and render them less capable of enduring the Winter freezing. By this system I have grown strawberries successfully year after year upon the same ground. In resetting probably not more than one-half or one-third of the old plants would be required to fill the worked-over rows, while the remainder could be used in enlarging the plot if desired. In fertilizing I have found fine ground bone and sulphate of potash, in the proportion of about four to one, very satisfactory, and estimate production at the rate of about 5,000 quarts per acre.



PLAN OF FARM WATER WORKS. 165.

My method of mulching and Winter protection also differs from that usually recommended. In August or September, with a spading fork, I take up sods about one foot square, thoroughly shaking out the earth. After lying reversed in the sun for a couple of months the grass roots become entirely dead. Along in November I trim the edges of each matted row with sods, allowing them to cover the ground close up to (not on) the plants. This prevents all damage from freezing and thawing. No other covering is required. Have sometimes used cornstalks, etc., as additional covering for some of the rows, but perceive no benefit from such use. No Summer mulching of hay, etc., to keep the berries clean is necessary, the sods forming a perfect protection. After fruiting is over, while working the rows, the sods are turned under, thus materially increasing the humus and fertility of the soil—no small gain. My experience in growing strawberries in hills has not been successful. I have discovered no increase in size, and a material decrease in production as compared with narrow matted rows. The reason is plain. The strawberry is a perennial. When confined to hills reliance is placed upon a single plant to form several crowns, which are expected to fruit the following season, all runners from the original plant being cut off as they appear. The plant being deprived of the natural power of reproduction from runners is compelled to form crowns. Reproduction from runners is natural; from crowns unnatural. A certain amount of the plant's vigor in sending out the runners has been wasted, and, of course, is not available for the crowns. Would it be risking too much to assert that a strong, well-rooted runner plant would produce more berries, equally large, than any single one of the forced crowns upon the original plant? As well expect a half-peck of potatoes planted in one hill to equal the product of a score of hills planted to single tubers.

Connecticut. H. H. BOARDMAN.

EVERYBODY'S GARDEN.

Experience With Cabbage and Club-Root.

As this disease is yearly becoming more prevalent and proportionately causing more and more damage to the cabbage crop, it may not be amiss to note some personal experiences. In February, 1898, I was called upon by a representative of a famous cabbage-growing district to suggest, if possible, some remedy for the club-root, which was forcing many of the growers to abandon the growing of the crop. In April following the locality was visited, and from a careful study of the situation, and inquiry into various places of the progress of the disease, it seemed reasonably certain that the disease, once started, was fostered and increasing to an alarming extent through a seriously acid state of the soil. There was no apparent lack of fertility, as stable manure was used in abundance, and fine crops of various kinds as strawberries, carrots, potatoes, corn, etc., were grown; but cabbage, cauliflower, wild mustard, in fact, everything subject to the disease, was alike attacked by it. Selecting a plot of ground which had been abandoned for cabbage growing (the last crop planted having been a total failure), I made tests with blue litmus paper, and found my suspicions as to acidity well founded on fact. Portions of the soil in which the test revealed a serious degree of acidity, were, after testing, treated with air-slaked lime, and placed in closely-covered tin boxes. After 48 hours they were again treated, and scarcely any traces of the acid were visible. At my suggestion, the cabbage was grown under exact usual methods, except the application of air-slaked lime at the rate of 2,000 pounds to the acre. On May 9 the ground received a heavy dressing of stable manure, and was plowed very shallow, barely sufficient to cover the manure.

Very few plants were grown in the infected district, most of them being obtained from outside localities known to be free from the disease. To make the test as thorough as possible, a strip through the center of the plot was limed after the plowing, and the seed was sown. This is by no means a safe practice or one under any circumstances to be recommended; but was done in this case to give as broad scope as possible to the test, as above stated. June 19 the ground was deeply plowed, and the lime at the above-mentioned rate was applied and thoroughly worked into the soil. The ground remained in this condition for about two weeks, or until sufficient rain fell to make the work of transplanting reasonably safe, after which the plants were set out. When the main portion of the plot had been set, the plants were all removed from the seed bed, which, after being deeply plowed, was planted, the same as the remainder of the plot. In transplanting a few diseased plants were found, which of course were discarded. Thorough cultivation was kept up, and the following report as to results was forwarded to me November 20: Whole number of plants set out, 2,200. Number found clubbed to greater or less extent, 121, which gave about .055 per cent affected. Of the number affected, some showed but very slight traces of the disease, while others were nearly or quite ruined. From the previous planting not one single cabbage was saved, and to reduce the disease from 100 to .055 in the one season's work was a very satisfactory showing.

Other troubles, as black rot, to a limited extent, Cabbage worms and drought were present; but as the test was made entirely as to the effect of lime upon club-root, no fungicides or insecticides were used. The results of the experiment may not prove altogether conclusive, as in the infected districts, the disease is more destructive some years than others, which may develop the fact that weather conditions may have somewhat to do with the matter. Again, under other soil conditions, some other agent than lime may prove effective. Under ordinary conditions, however, lime will prove a very efficient remedy, but when once developed great care should be exercised to prevent the spread of the disease. All affected roots should be boiled or burned and never fed to stock, and all tools used in the cultivation of the crop should be thoroughly cleaned before using in other ground. J. E. MORSE.

Michigan.

SMYRNA FIGS GROWING IN CALIFORNIA.

Curious Experiments With Insects.

For centuries the cured figs of western Turkey have been considered the best in the world. The Smyrna brand has long been and now is the most famous, and in reality has the most delicious flavor of any. To secure the varieties for our own country, learn the method of culture, to obtain the fruit and cure and otherwise treat it, so as to equal this foreign product, has long been a matter of earnest endeavor by the California fruit growers. The foremost experimenter in this matter was F. Roeding, and later George C. Roeding, of Fresno. The former sent W. C. West to Smyrna in 1885 to make personal investigation, and, if possible, procure cuttings of the variety from which the celebrated brand was made. This was accomplished at a cost of $3,000. The fruit was grown in the district of Aidin, 75 miles in the interior. But when trees were grown to bearing age they would not hold their fruit, but cast it when about the size of marbles. The cause was found to be lack of pollination. Something further had to be done. It should be understood that the flowers of figs are very small and within the fruits, and only reached through a small hole opposite the stem.

In studying the subject of fig pollination the Aidin or Smyrna variety was found to contain only female flowers. In the varieties that are commonly grown in California and elsewhere in the warmer parts of other States, they bear only mule flowers, or those which are totally incapable of being fertilized, while those of the Smyrna fig being perfect are easily susceptible to pollination. In a wild variety of the fig called Capri, which grows in Asia Minor, there are male, female and mule flowers, and besides, what is known as "gall" flowers, which are abnormal or partially developed female flowers, in which a very small insect breeds. The fruit, however, is small and not edible. This insect, popularly known as the Fig wasp, and scientifically as Blastophaga psenes, is the secret agent of fig pollination, and indispensable to the production of perfect fruit. There are other figs besides the Smyrna, that are large and well developed in flesh, but they lack perfect seeds and hence do not have the peculiar rich, nutty flavor of the Smyrna, which has perfect seeds, when the flowers are pollinated. Moreover, as has before been stated, this variety depends entirely upon the tiny Fig wasp for perfection of its fruit and also for that of the seeds. Fortunately, the Fig wasp finds in the gall flowers of the Capri fig a depository for its eggs, where they develop into perfect insects, and the females after impregnation while yet in the galls, emerge from them, wander about inside the fig, get covered with pollen from the male flowers, which are just then in bloom, and some of them crawl outside, carrying this covering of pollen. As they lose their wings in the act of getting out of the Capri fig they cannot fly to the edible fig trees, or they would pollenize their fruit without aid. But here comes in the hand of man, who, having learned all the foregoing facts, picks off the Capri figs when they are in just the right condition, strings them on strong threads and hangs them in the Smyrna fig trees. There the insects crawl out gradually and into the forming fruit and thus carry the pollen grains to the stigmas of the female flowers in their vain search for a new place to deposit their eggs. They die soon after. Those that remain in the wild or Capri figs deposit their eggs in the gall flowers, and thus perpetuate their own species.

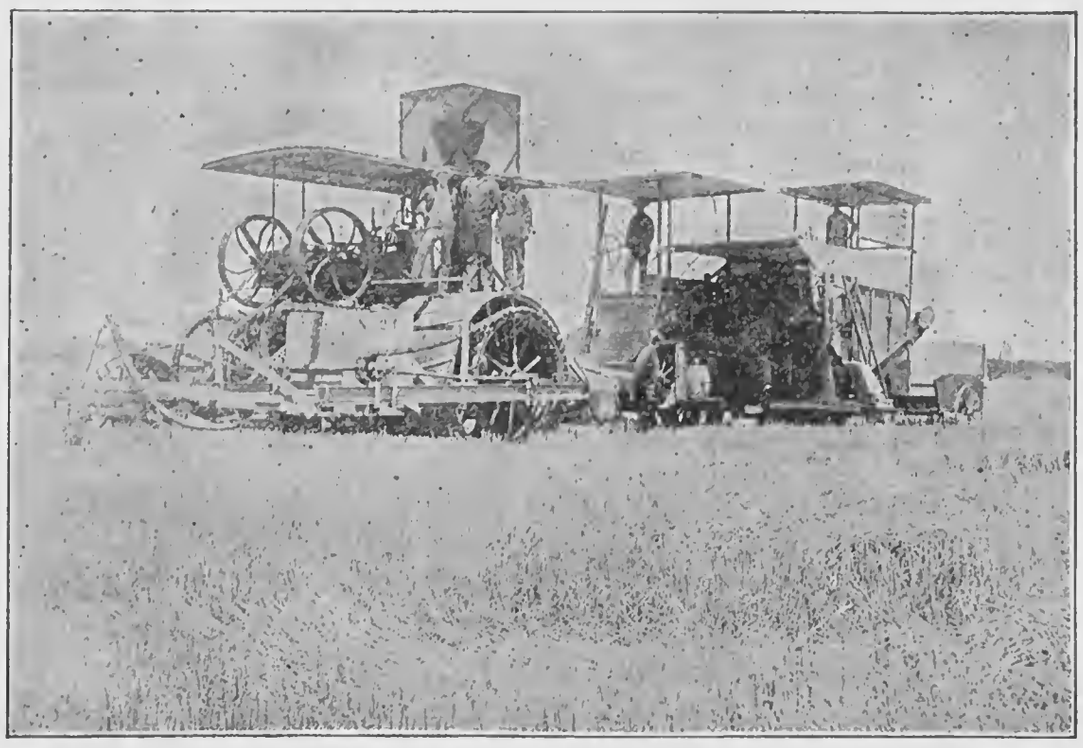
It was many years after fig growing had been begun in California before all of the above facts were known, and even then many believed them to be only idle theories. But persistent effort brought about the desired result, the production of perfect fruit on the Smyrna fig trees that had been grown from the imported cuttings. This, however, was not possible until Capri fig trees had been grown and a stock of the insects brought from Turkey. Cuttings of the Capri fig were first imported, that the insects would have a place in which to breed. Several lots were brought over, the largest of which was that imported by the United States Department of Agriculture in 1890, having been collected under my special directions by our consuls in Turkey and distributed by me throughout the entire fig-growing districts of the country. These grew readily and are now standing and their fruit in part inhabited by the Fig wasps, which have been successfully imported from the same source in Turkey, under the directions of Dr. L. O. Howard, entomologist of the Department of Agriculture.

Last Fall I had a package of cured figs from George C. Roeding, of Fresno, Cal., that are from his Smyrna orchard of 60 acres. Last year, for the first time, he was able to pollenize a sufficient quantity of the growing figs to make enough of the cured product for market. In all he has about two tons. The quality is equal to the best of that imported from Smyrna. It is sweet, aromatic and has the peculiar nutty flavor so much esteemed, and the texture of the skin is soft and pliant. We will soon no longer need to send abroad for choice figs. This large orchard will be brought into profitable bearing and others likewise. Many more will be planted, and the Turks will have to find a market elsewhere for their figs, just as they are having to do with their prunes. The size of the fresh Smyrna fig is not so large as that of many other kinds, averaging about 1¾ inch in diameter. The shape is flat, like that of a very wide decanter, with a slightly curved bottle neck about half an inch long. The color is clear, lemon yellow, with faint streaks of pale green on most specimens. Inside the color is brownish yellow. The flesh is soft yet meaty, with a central cavity of medium size. Those who like fresh figs would surely eat this variety with relish, for the flavor is very sweet and delicious. A life-size sectional drawing is seen at Fig. 164, made from a specimen grown by Mr. Roeding, of Fresno, Cal.

H. E. VAN DEMAN.

WHOLESALE WHEAT HARVESTING.

Many farmers in the Eastern States have witnessed the development of wheat harvesting. They started with the old sickle or grain cradle, and followed the mower and the crude reaper to the modern self-binding harvester. This machine is considered nearly perfect, yet the bundles must be handled again and again before the thrasher will turn out the clean grain. On the smaller eastern farms the self-binder will probably remain the standard for many years to come. In California and other western States, where thousands of acres may be cultivated as one field, larger and more powerful machines are possible. Fig. 166 shows an outfit quite common in parts of California. The picture is taken from Bulletin 24 of the United States Department of Agriculture (Division of Vegetable Physiology). The machine is a combined harvester and thrasher. It requires a strong traction engine or 28 to 40 horses to haul it at good speed. It performs the whole operation of thrashing and reaping. The straw is taken up in front in the machine, passes along and is thrown off at one side, while the cleaned grain is delivered into bags. In the dry climate of California this is possible—of course it could not be done in moist sections of the country. The bags are even left for weeks, where they fall from the machine, without harm. This is wholesale wheat farming, and if it were possible to prepare and fertilize the soil as well as the smaller eastern farms are cared for it is hard to see how eastern farmers could compete. Surely, the man who will not care for his 10 acres any better than the Californian cares for his 1,000 cannot hope to raise profitable grain.



STEAM HARVESTER-THRASHER USED IN CALIFORNIA. Fig. 166.

THAT MOTH CATCHER AGAIN.

We recently referred to the Haseltine moth catcher, and told how the manufacturer garbled a letter from Prof. Steadman. This seems to be a common trick. He did much the same thing with a letter from Prof. A. L. Quaintance, of the Georgia Experiment Station. Prof. Quaintance tried the trap on the moth of the so-called pickle worm, and finally sent the following letter to Mr. Haseltine:

> We tested your moth trap during the past Summer. We used it particularly to determine the possible value of trapping by lights of the so-called pickle-worm moth. With this insect we found that a great many were attracted to the light, and it would seem possible to endeavor to destroy these moths by some form of light trap. We had a good chance to observe the number of moths of the boll worm that were attracted to the light. One light was placed and kept burning adjacent to cornfields and cotton fields. Thousands of these moths could be observed in the afternoon and evening flying around here and there. Despite their unusual abundance, very few came to the trap, and I doubt whether this insect is attracted very much by light. The whole question of the value of any lamp, it seems to me, depends upon the species in question, as it is well known that certain moths will come to lamps when others will not. No wholesale claims, therefore, should be made for any light trap. I am glad to say that your lamp was found very effective in trapping moths of the pickle worm, and considered in connection with its cheapness, I think it would not be expecting too much of cucurbit growers to purchase it for use.

That seems plain and fair enough, but the trap man left out all reference to what the trap would *not* do, but put in the few lines about the pickle worm as though they referred to the Codling moth and other orchard insects. This may seem like a small thing, but the principle is a bad one. There can be no telling where the thing will end if men are permitted to garble letters in this way without being exposed.

THE LAW OF ANIMALS.

Horses Left Unguarded on the Highway.

The highway is for the reasonable use of all persons according to the ordinary practices and usages of life and business. One using the highway takes a certain amount of risk of accident, while those remaining upon their premises are entitled to a more absolute security. Farmers and gardeners are particularly interested in the rule of law relating to the practice of leaving horses unhitched or unguarded in the streets or highways. Many are called upon to pay damages or defend a law suit, growing out of despoliation of lawns or runaway horses. The prevailing rule appears to be that the leaving of horses unhitched and unguarded is not negligence per se, but according to the decisions it depends upon the disposition of the horse and many other circumstances, and the question of damages is to be determined by the jury from the facts of each case.

In Kansas it was recently held that a person is liable for an injury done by his runaway horse that had been left untied, though the driver is careful, and the horse an ordinarily gentle one. The court said that "the driver of a horse left unhitched ought to be near him and in a condition to control him by his voice and to reach him, if necessary, with his hand in an emergency." In California, Minnesota and other States it is held that the failure to comply with an ordinance making it unlawful to leave a horse unhitched, whereby the animals run away and do damage, is held to be negligence per se. Where a horse is high-spirited or addicted to running away, or the place is a crowded city street, or there has been negligence in the hitching or guarding, the owner will be liable. It is not material what frightens a horse, if he is not properly taken care of so as to prevent his running. The leaving of a horse unhitched or unattended need not be the immediate cause of the injury. An owner was held liable where the damage was occasioned by the act of a passerby in striking the horse. It is the duty of the owner of a horse to guard against such an accident, and his neglect involves him in liability for the consequences as well as the person who caused the frightening of the horse. A horse must be securely tied. The fact that a horse would not have run away if it had not been hit by stones thrown by boys does not relieve the owner from liability to an injured person, where the horse was tied with a flimsy and defective rope.

Where the driver of a carriage used to convey passengers for hire left the horses unhitched and unguarded while a passenger was inside, and they ran away, and the passenger was injured while trying to jump out, the driver and owner were held liable jointly or severally. A carriage at standstill upon the highway, the driver of the horses attached is liable to the statutory penalty if negligently or wilfully he is at such a distance that he cannot have the direction or government of the horses. When a gardener negligently left his horse and cart unattended and unhitched in the street, and the plaintiff, a child seven years old, got into the cart to play, and another child led the horse on, whereby the plaintiff was thrown out and hurt, the court said the owner was the real cause of the mischief, and therefore liable. Where a servant unlawfully left his master's horse unhitched, and the horse strolled away and collided with a ladder erected in the middle of the street upon which the plaintiff was working, the failure of the latter to have the ladder guarded did not relieve the owner of the horse from liability. It was the servant's negligence that contributed to the damage. It was recently said by the highest court of Georgia that "every horse whatever, no matter how gentle and amiable, must be properly attended or secured in the crowded business streets of a city, when there by the act of the owner and subject to control." R. D. F.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Compost of Fish.

W. F., Hornby Island, B. C.—How can I convert dogfish into manure to be drilled in with crops or spread broadcast and harrowed in? A neighbor advised me to get a barrel, put fish in with water, and add some muriatic acid; then dry with swamp muck or road scrapings or dust; that is, after the fish had been dissolved by the acid. What kind of acid should I use, and what amount to a 50-gallon barrel of dogfish?

ANS.—We hardly think it would pay to use acid on the fish. Where crops like corn or cabbage are planted in hills the fish can be dropped in like manure and covered. Some farmers near Long Island Sound are said to get good returns from fish used in this way. Fish can usually be rotted in a compost with lime, muck or manure. By putting the fish in layers with muck between and using lime freely a fair compost results.

A Potato Picker.

Reader (No Address).—I have invented a machine to pick up potatoes after being dug with a digger. It is simple and strong, and can be sold for from $50 to $75 with a fair profit to the maker and seller. It will take one man and boy who can handle a team to run it. It will handle the potatoes without bruising or skinning the tubers any more than when handled on an average by hand. Would there be sale enough to warrant anyone in putting money into a machine of that sort?

ANS.—We doubt it. The picker would cost too much for the average farmer. What is to prevent its picking up small stones with the potatoes? On stony farms this would be a great objection. Some of the larger growers in the West, on level ground, free from stones, could probably use such a machine, but we doubt whether it would have sale enough to pay.

Sterile Grapevine.

L. G., Independence, O.—We have a seedling grapevine which blossoms abundantly and in large clusters. The vine itself is strong and vigorous. The blossoms fall off, but the fruit does not set. It seems to blight. Can you give me any information in regard to its cause, or how to induce it to bear? The vine is nearly five years old.

ANS.—It is probable that the vine is of such character that its flowers are imperfect and will not produce fruit. In some cases the flowers are staminate, and in others they are pistillate. In the latter case they sometimes may be fertilized by the pollen of other varieties; but there are great variations in the potency of the pollen of one variety upon another, or they may not always bloom at the same time. The best way to treat this vine would probably be to graft it next Spring to some good variety.

Home-Grown Grass Seeds.

Several Readers.—Why can we not raise our own seeds of Timothy, Red-top, Orchard grass, etc., as we do seed of wheat, oats or corn? Is there any good reason for not doing it? Is there any book which tells how to do it?

ANS.—There is no reason why farmers should not raise their own grass seed as well as their own clover seed. The principal difficulty is the thrashing and cleaning of the seed. For home use this is, however, not such a serious matter, since seed is just as good when sown in the rough as when sown clean, although, of course, a great deal more must be used, and this increases the trouble of handling. There are usually very few weeds in the grass fields that are as tall as the grass, and that ripen at the same time. For instance, in Kentucky Blue-grass fields there are very few weeds when the field is well kept, and those that are present generally ripen their seeds later than the Blue-grass harvest. This seed could readily be stripped with a hand stripper, cured and dried, and run through a feed cutter to make it easier to handle. It can then be sown in the rough with quite as good results as when the fancy seed is used. Usually there is about 60 per cent of fancy seed in the rough. Orchard grass, Timothy and fescue might be run through a regular thrashing machine with the cylinders set close. The chaff could be blown out as much as convenient with a hand fanning-mill and the remainder used on the home farm. In the early days of the settlements in America clover seed was sown in the hull, there being no convenient means of hulling it. When clover seed became an article of commerce it was, of course, impossible to handle it in that way, but this method gave good satisfaction on the home place. I know of no pamphlet or book dealing with the commercial handling or preparation of grass seeds except one book in German, which is hardly accessible to American readers, and this applies more to German than to American conditions. This office has in preparation a paper on Kentucky Blue-grass seed, and we hope to follow this with other papers on the various grass seeds.

A. J. PIETERS,
In Charge of Seed Laboratory, Dep't of Agriculture.

Japan Millet for Pasture.

W. O. B., Fairfield, Conn.—Will the annual Japan millet do for pasture? We have pasture so far from home that it is impossible to grow fodder to cut green every day, yet we wish to sow something to increase the amount of feed. Is there anything better than millet?

ANS.—Millet is not a valuable crop for pasturage. It will not remain vigorous when constantly "cropped off" by cattle, as it naturally makes a thin bottom growth, with very little tendency to produce turf. If millet is wanted for cutting green and for feeding in the manger or feeding rack, it will make good fodder for use in the latter part of July and the early part of August. It requires about eight weeks from seeding to be in condition for feeding. Better crops for pasturage are rye or barley. The latter, when sown about July 20 at the rate of two bushels per acre, will produce good pasture feed from September 20 until the ground is badly frozen.

C. S. PHELPS.

The Resin-Lime Spraying Mixture.

W. T., Belle Plaine, Ia.—Tell us how to make the "resin-lime mixture." Isaw it in THE R. N.-Y. last year; I think it was in Hope Farm Notes.

ANS.—This is the formula given by the New York Experiment Station: Five pounds of pulverized resin, one pound of concentrated lye, one pint of fish oil, five gallons of water. The oil is used to soften or dissolve the resin. Boil the oil, resin and water in an iron kettle. When the resin is softened add the lye—first dissolving it in water. Stir this well and then add four gallons more of hot water. Boil all this until you have a clear, amber-colored liquid which unites with cold water. This makes a "liquid soap" which when put with the Paris-green and water will make it stick well to leaf or stem. It is hard stuff to spray—only a powerful pump will force it through the nozzle. When you add the potash and water you must let the kettle cool slightly. If this is not done the whole mass may boil over and the oil and resin will take fire.

Self-Cleaning Cattle Stables.

W. R., Wingham, Ont.—I intend to re-model my cattle stables, and would like to adopt some plan which would allow of the manure being removed at intervals of two weeks or more, instead of having to clean stables every day as at present. The self-cleaning stables, described in E. W. Stewart's book, "Feeding Animals," I think would meet the requirements of my case if they can be relied upon to do the work in common practice. As I have never had the opportunity of seeing a stable fitted with these grates I would like to read the experience of some practical farmers who have tested the self-cleaning stables.

ANS.—We have seen the iron grating over a trench behind the cows in operation, but do not think it is in common use. In some modern barns a steel rail is run behind and over the cows. On this runs a sheet-iron car or large scoop. The manure is thrown into it as it passes along and it is finally run out to the yard and dumped. In some bank barns there is a cement or plank gutter behind the cows. Every 50 feet or so there is a trap door through this gutter, under which hangs a large steel box. The manure is pushed along with a scraper and falls through the trap door into the box, which is unloaded by driving a dump cart under it and tipping it up. There are other plans for getting rid of manure, and we shall be glad to have our readers describe the devices they have found useful.

Sprays for Plum Blight and Red Spider.

A. B. W., Newlin, Pa.—1. I wish to use Bordeaux Mixture on my plum trees, also on grapevines, I see it recommended for rot in both cases. How much dry Bordeaux can I mix with a gallon of water, so it will keep off the rot, and at the same time not injure the foliage? 2. What shall I put on my rose bushes to kill the red spider, the leaf hopper and the slugs?

ANS.—1. The foliage of plums and most other stone fruits is quite sensitive to copper sulphate applications. To fight the rot successfully it is necessary thoroughly to spray before the buds open, using a mixture of four pounds copper sulphate and six pounds lime to 50 gallons water; again soon after the blooms have fallen and finally as the fruits begin to color. All applications after the leaves come out should be reduced to half strength or at the rate of two pounds copper sulphate and three of lime to 50 gallons of water. Dry Bordeaux and Fungiroid may be used at the rate of one pound to three gallons of water for first application and one to five or six gallons for the subsequent ones. 2. Cold water sprayed forcibly and repeatedly on under-side of the leaves is a sure cure for red spider, and will do much to dislodge leaf hoppers. Whale-oil soap, four to six ounces to the gallon of water, applied in the same manner, is more effectual. Dusting the bushes with dry quicklime is best for slugs, though dry road dust will often check their ravages.

THE IDAHO PEAR.—This is grown here in very limited quantities, and no new trees are planted out. The fruit grows very large, and is of little value. It ought to be picked before it is ripe, and laid away in a cool place, and then it will mellow somewhat; otherwise it is too gritty. When it does ripen, it ripens all over and at once, lasts just one day in good condition, and the next it is all mushy. As we are about 1,000 miles from the Rocky Mountain region I am not advised, how it does there; I can only speak for Oregon, Washington and Idaho. Personally I would not give it room in my grounds. It is worse than the Ben Davis apple. HENRY E. DOSCH.
Oregon.

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PEACH LEAF-CURL.

Rain is a fine thing but it has its limitations. The cool, moist weather which has characterized the Spring has been most favorable for the development of Peach leaf-curl. By the time this note comes before the eye of the members of our Reading Course the damage will be done, and while it is too late to talk of remedies, so far as the crop of this year is concerned, yet it will be profitable to them in the light of the future. Every now and then when the peach buds have escaped frost, fruit has set and a crop is fairly well assured, Peach curl comes along as it promises to do this year, and wipes out the prospective harvest.

WHAT THE PEST IS.—This is a fungus disease, and has long been known to orchardists and botanists. Most of you know how it looks. The first indications of its presence are a roughened surface of the leaf with a reddish coloration. With the development of the leaf comes a curling and swelling. Sometimes only a part of the leaf is involved, and again the whole surface. By the time the leaf is full grown the diseased patches are usually a reddish green, occasionally a bleached yellow. As the disease progresses the leaf-stalk is affected also, becomes swollen and loses its deep green color. Later on the surface of the leaves takes on a grayish, powdery appearance. This expression is due to the production of myriads of spores which reproduce and disseminate the disease. The next stage is the withering and dropping of the leaves, which may occur between the middle and end of June. The fall of the leaves does not usually mean the death of the tree, but it does mean the loss of the crop and the serious lowering of the vitality of the tree. It also gives the tree a severe shock and prevents the normal development of its fruit buds; therefore, affects next year's crop.

HOW THE FUNGUS LIVES.—In Bulletin No. 164 of Cornell University, Dr. Duggar says: "The fruit of the fungus (meaning the spores which reproduce the disease) is produced on the surface of the leaf, but the true vegetative state of the fungus is within the tissues of the leaf and the young shoots. The threads, or filaments, which make up this vegetative state, pass in between the cells of the leaf, and it is the irritation due to the presence of these fungous filaments (the mycelium) which causes the leaf to become distorted in form. Passing into the young shoot, the fungus is in a condition to pass the Winter in situ, provided the twig lives, without having to trust to the fortune of winds and rains, as is the case with the spore." The spores live over Winter and affect the buds which open the next season. This then briefly is the way in which the disease lives and is carried over from year to year. Certain climatic conditions greatly influence its development, as we have observed.

REMEDIES.—Fortunately experiments carried on at Cornell and elsewhere enable us to speak quite positively on this side of the question. Experiments in 1898 proved very conclusively that spraying early in the season was a preventive. The following year additional experiments were carried on which demonstrated beyond question that the disease might be thoroughly held in check by careful spraying, provided it was done early enough. Here are the recommendations of Dr. Duggar: "Spray with Bordeaux Mixture (ordinary strength) about the first of April when the buds are beginning to swell. Spray again when the petals have fallen, using two pounds each of copper sulphate and lime to 50 gallons of water." This second spraying may be omitted if the weather is dry and warm, but should it be cool and moist it would be altogether desirable to make the application. Peach foliage is sensitive to the use of copper-salt mixtures, but if used as directed above there will be no danger and the curl will, in a large measure, be prevented. The time element is important. A grower told me last week that he expected Peach curl and was going to spray. I told him that so far as immediate results were concerned he could save himself the trouble. He would undoubtedly kill some of the spores which might spread to other trees, but he would not help the trees very much this year except in the way of preventing a recurrence of the disease on the foliage developed later.

Peach Borers.

P. G. S., Morton, Pa.—I have a small orchard of peach trees on a farm I have just rented. The borers have pretty well killed the trees out—about one-third of the branches are in blossom, the remainder appear to be dead. What shall I do?

ANS.—The thing to do with these trees is to cut them down or grub them out by the roots. They will probably pay the renter and proprietor more in fuel than in fruit. When two-thirds of the branches of an orchard tree are dead it is almost certain that the days of usefulness of that tree are numbered.

H. E. VAN DEMAN.

The Snake River Valley.

F. V., Piqua, O.—Will you give me some information in regard to the Snake River Valley, Idaho? Is that country well settled with farmers? Is there a good farming country around Boise, Idaho? How is the farming country near Market Lake and Blackfoot? Do they grow much fruit? Is it a large prairie country? Do the farmers have wind-breaks; that is, maples, box elders and cottonwood trees? From what part of the United States do they get their fruit trees? By what class of people is that country settled? I am thinking of going to that country to live.

ANS.—Having recently been over a large part of the Snake River Valley, which is mostly in Idaho, I can say from careful observation that there is plenty of good land there. It is decidedly a sage-brush country, and this is a sure indication of a very light rainfall. Irrigation is essential; and wherever water is abundant, as is the case about Boise, Nampa, Payette, Weiser and many other places, there is excellent opportunity to grow almost any crops suitable to the temperate zone. Corn is not grown there much, but all the small grains, grasses, common orchard fruits, berries, vegetables, etc., do finely. They grow windbreaks of many kinds of forest trees, especially the Lombardy poplar, box elder and Yellow locust. There is good fir, pine and other timber in the mountains, but none in the valleys, except a little cottonwood along the streams. The settlers are mostly from the Central States, although some are from the East and a few from Scandinavia, England and Germany. It is a nice place to live and one who contemplates going there need not think of starving, or of not enjoying good society and church and school privileges.

H. E. VAN DEMAN.

Early Clover Seeding.

One of our readers wishes to know whether anyone has ever practiced sowing clover seed as early as December or January, letting it freeze and thaw down into the ground, so as to get a better chance to grow when frost is past.

ANS.—The Michigan Agricultural College sowed clover seed every month in the year, and succeeded in getting more or less of a stand from the sowing each time. The value of such a plan as that proposed in the inquiry would depend almost entirely on the character of the climate. If the person lived in the Northern States, and a thaw occurred in the Winter, and the ground were left in the condition named, and if the character of the Winters in that locality was such that pretty steady and hard weather should follow the thaw, then the plan of sowing seed thus would succeed well. But if, on the other hand, it was probable that there would be much of that weather which produces a honeycombed condition of the ground between the date of sowing the seed and the opening of Spring, or the period of consecutive growth, then there would be more or less danger that the clover would sprout and receive injury from hard freezing after it so sprouted. The danger of this is not very great, but in some climates it would be present more or less; hence, in these it would be prudent to wait until a later period of such freezing and thawing alternately before sowing the seed. In the Northwestern States it happens once in a while, though not frequently, that the Spring clover plants are injured by a hard frost after they have begun to grow; hence, in any climates similar to that, it would be unwise to sow seed during a warm spell in the month of January should such weather occur. [Prof.] THOS. SHAW.

Questions About Pears.

D. E. F., Toledo, O.—In 1882 I planted 10 acres to standard pear trees. The trees have been properly trimmed and the ground well worked throughout the orchard. On the west side I planted five rows of Anjou pear trees, then four rows of Sheldon trees, and next to them Flemish Beauty, Bartlett and Angoulême, all of which bear heavy crops of fruit, excepting the Anjou trees. The latter blossom very full every Spring but bear little, the blossoms all dropping off without setting much fruit. They are planted 20 feet apart each way in the rows, and all thrifty trees. What is the trouble with my Anjous? Does the standard Anjou under any condition ever bear a heavy crop?

ANS.—There is so much complaint of the scant bearing of the Anjou pear, especially on pear roots, that the case mentioned by D. E. F. cannot be considered very unusual. In some cases it bears well and I have in mind some old standard trees that bear regularly and heavy. As a dwarf the Anjou generally bears sufficiently, but the fruit is so large and has such short stems that very much of it is blown off by ordinary winds, and storms are apt about to strip the trees. It is a good late Fall pear, but quite hard to get in paying quantities.

Grafting Dwarf Apples; Various Questions.

J. R. C., Means, O.—1. Can you graft standard on dwarf apples and with what effect? 2. Describe Arkansas Black, Mann and Bismarck apples. Also describe the Grand Duke, Lincoln and Golden Drop plums. Are the above suitable to plant in northeastern Ohio?

ANS.—1. Any variety of apple can be successfully grafted on any other, no matter whether the trees are on standard or dwarf stocks. The stock does not materially change the character of the graft. It will cause it to grow more thriftily if the stock is thrifty, than if it is not so, and the reverse is also true. A dwarf apple stock, such as the Paradise or Doucain, will not allow a scion or bud put upon it to grow into a standard tree, and that is all the effect it has upon it. 2. The Arkansas Black apple is a seedling of Winesap that is so dark red as to be almost black. It is a little larger than its parent but not so good in quality and has the fault of dropping very badly from the tree early in the Fall. It has rarely proved to be worthy of cultivation. Mann is a very late keeper, bears well and is of fair quality when fully ripe, but the color is a dull bronzy green almost as long as it lasts, and this renders it undesirable in market. For home use it is quite suitable. Bismarck is a very newly-introduced apple, and, so far as I have knowledge of it, is more prominent for its early bearing than for anything else. It is of fair size, red striped and attractive, but I would take it only on trial and in a small way. Grand Duke plum is one of the standard market kinds. It is dark purple, large, fair in quality and late in ripening. Lincoln is a fairly good plum in all respects, being medium in size, purple, and of good quality, but of no unusual superiority. Golden Drop is one of the best of the yellow plums. It is large, of good quality and a fairly good bearer. All the varieties mentioned will do fairly well in northeastern Ohio.

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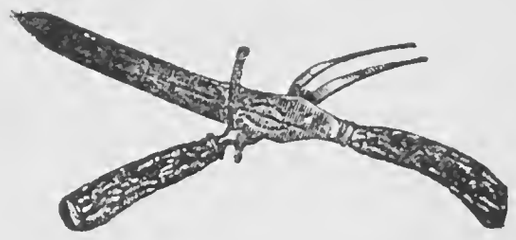

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Ruralisms

NOTES FROM THE RURAL GROUNDS.

PLUM BLOSSOMS.—The illustration, Fig. 163, well represents the profusion of bloom on an established Burbank plum tree. The photograph was taken in the poultry yard of Dr. D. L. Long, Reading, Pa. The trees have only been set three or four years, and bore a good crop last season. No plum of our acquaintance so covers itself with wreaths of bloom as this excellent variety, although most of the Japan sorts produce their flowers in dense clusters. Frequently several fruits develop in a cluster, rendering it necessary to thin out in order to get full-sized specimens. The American and European plums do not usually bloom so densely, and the resulting fruits are better distributed along the branches. The Burbank plum is being largely planted by amateurs as well as fruit growers, and is giving general satisfaction on account of its productiveness and reliability. The plums are of good size and fair quality, but very subject to rot unless well thinned. The spreading habit renders it very suitable for poultry yards, where it thrives exceedingly well. The blossoms of the plum, cherry and some other stone fruits are very ornamental, and are made popular objects of admiration and reverence in Japan. Public festivals are held during the blooming season, that all may enjoy the beautiful effects. While fruit blossoms are not so highly appreciated with us the advent of the flowering period is looked to with the greatest interest by all horticulturists. It is possible to have a long succession of highly ornamental blooms by a judicious selection of varieties. The cool and moist weather has prolonged the present season, which has averaged at least 10 days late for the various sorts. On the Rural Grounds a Harris apricot opened its petals first, quickly followed by Prunus Simoni, and other apricots. Burbank, Wickson and Red June plums came next, merging into other Japan varieties. The American and European plums began to open just as the Japans faded. Peaches and most of the cherries bloomed at the same time. The Rocky Mountain, or Sand cherry, Prunus Besseyi, and the native Beach plum closed the season. They have been veritable clouds of bloom for several days, coming in with the apple and late pear blossoms. The Rocky Mountain cherry has the most symmetrical arrangement of its blooms around the slender branches of any variety we have grown, each twig becoming a perfect cylinder of blossoms. Were it not for its great susceptibility to twig blight it would be a meritorious shrub for ornamental planting. Several beautiful varieties of flowering cherries and plums are offered by good nurseries. The double-flowering plum, Prunus triloba, has pink, very double flowers closely set on the slender branches. The white and red double-flowering "almonds," so often seen in old dooryards, are really plums, varieties of P. Japonica, but the finest trees of this class are the weeping Japan cherries in several varieties. They always arrest attention when in bloom on account of their graceful form and billows of delicate flowers. The botanical name is Cerasus Japonica pendula.

POTATOES UNDER GLASS.—An English gardening journal speaks of an experiment in growing potatoes in a greenhouse. The tubers, of a favorite British variety, were planted in 12-inch pots during midwinter, and only two shoots finally allowed to a pot, 300 of which were placed together in a suitable structure. A mild heat, not often exceeding 60 degrees, was maintained. At the end of April the tops had made a luxuriant growth and the prospect of a good crop of new potatoes was very evident. Whether the price these hothouse potatoes should bring will compensate the grower is another question. Volunteer potato plants often come up in greenhouse benches, the tubers having been included by chance in the potting soil. If not disturbed they make a strong and rapid growth. The writer can testify to the excellent quality of the resulting potatoes, but has no knowledge of this useful esculent being purposely grown under protected conditions for use or profit in this country, though one would think glass-grown potatoes would be fully as desirable as beans and corn grown in the same manner.

BI-SEXUAL STRAWBERRIES INCREASING.—A review of the sexual characteristics of the numerous varieties of strawberries introduced to cultivation during the last 30 years shows that, contrary to general opinion, the proportion of staminate or perfect-flowering varieties is increasing. More than half of the new kinds have blooms of this character, while the great proportion of introductions during the early period in the improvement of native strawberries was exactly the reverse. The older cultivators preferred the pistillate varieties, as they secured better fruits when pollenization was effected by nearby perfect-blooming plants. The theory was that less energy was expended in producing perishable parts in the imperfect or pistillate blooms, and consequently a greater development of the berry pulp might follow. The practical difficulty in securing effective pollenization when large areas of pistillate sorts are planted has been sufficient to create a demand for good perfect varieties, and they have now reached a degree of development closely approaching the incomplete bloomers. While the proportion of staminate varieties is now greater, taking all the late introductions together, we find pistillate flowers greatly predominating among the new strawberries sent to THE R. N.-Y. for trial. We assume the reason to be the number of seedlings submitted by amateurs, who are more concerned with tne size and table quality of their berries than the general hustling qualities of the plants.

W. V. F.

Wide and Narrow Orchard Rows.

In response to F. W. P., on page 371, who wants to know if the plan has been tried which he suggests, for planting apple trees in rows that are wide apart east and west, but close north and south, I may say that it has been tried in my own orchards, and some others that I know for more than 25 years past. The plan works very well. There are several ways of applying the principle, such as the hexagonal, alternate and plain square systems. By either of these it is best to fill in with temporary trees of such varieties as will bear early and be ready to be removed when they interfere too much with those next to them. The distance I planted in Kansas was 33x16½ feet, that of Wellhouse is 32x16 feet, and that of Parker Earle is 32x20 feet. In the Eastern States, where apple trees grow larger and are more tardy in bearing than in the West the distance should be increased to 40x 18 or 50x20 feet. H. E. VAN DEMAN.

In answer to F. W. P., in THE R. N.-Y. of May 25, for the past 10 years I have planted all of my pear orchards (about 30 acres) on the plan he suggests; that is, 16x28 feet, the wide rows north and south. I think the advantages are better opportunity to cultivate crops planted in the orchard while young; when of bearing age a freer passage of air to help pollination when in bloom, and better passage through the orchard when gathering and hauling the fruit. I have known peach orchards planted on this plan which were satisfactory. This mode is better adapted to such fruits as the pear, peach and plum, that are usually planted at less distance than the apple, and soon cover the ground, obstructing free passage of air, cultivation and gathering the fruit. The apple that is usually planted much farther apart, 36 or 40 feet each way, has plenty of room for several years; still I think the plan would be satisfactory, as the same number of trees could be planted on the same ground and have more advantages of air, light, etc. When trees are full grown, if anyone will observe a single row of fruit trees, it will be seen that they do better than the dense shaded orchard.

CHAS. BLACK.

New Jersey.

Rabbits and Fruit Trees.

A friend in Missouri read the call for a device that will prevent rabbits from gnawing fruit trees. He sends a circular describing what is known as Davis's wire protector. The little picture (Fig 167) shows how it operates. The directions for putting it on the tree are as

WIRE TREE PROTECTOR. FIG. 167.

follows: Begin with the lower end of the protector and turn the coils two or three times around the tree (to the right or left according as the protector is coiled), after which the anchor is forced into the ground and the protector taken hold of at the top and turned in the reverse way around the tree until the coils are wound entirely around the same.

York Imperial Apple

Judge Wellhouse, "the apple king," says that while he has 200 acres of York Imperial apples, and they are very satisfactory, yet he would not discard the Ben Davis for them. They are handsomer, are of better flavor than the Ben Davis, and we find that under ordinary conditions, in reach of ordinary people, they keep crisp, hard, sound and juicy long after the Ben Davis had become mellow and practically worthless. Some of our orchardists are enthusiastic over it, and they think it the best apple they have. President Wellhouse says that the trees suffered more than Ben Davis during the extremely low temperature of February, 1899, although they have at the present time recuperated. We find that they come out of cold storage "scalded"; that is, they turn brown soon after coming out of cold store. I think this evidence that they will not stand or do not require as low a temperature as other varieties. Three years ago I put 87 varieties of apples in cold storage; they were in paper sacks, many kinds in the same barrel, so that the conditions must have been the same. The Dominie was the worst looking of all; it was as brown as a walnut all over, and on cutting in half I found that this brown color extended about one-fourth of an inch in depth all around the apple. Within this ring the apple was sound and of good flavor. Some other varieties, the names of which I have forgotten, were brown or scalded all over, but only skin deep, others again were scalded in spots. This proves that we must study each apple separately to determine the best temperature at which to keep it the most perfectly. I do indeed recommend planting the York Imperial, but I do not advise anyone to put his eggs all in one basket. Ben Davis, Missouri Pippin, Winesap, Jonathan, York Imperial, Gano and Ralls Genet make a sure-enough list in Kansas.

Kan. Hort. Society. W. H. BARNES.

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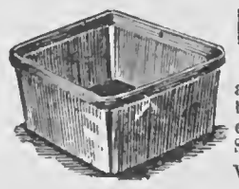

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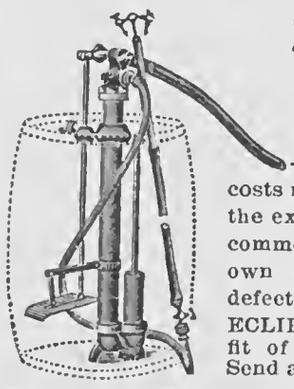

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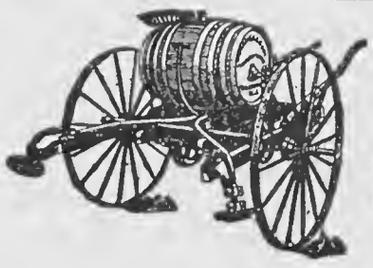

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Hope Farm Notes

MISFIT WEATHER.—It still rains! We had two good days last week and one other that seemed to be trying to be good, but the force of habit was too strong, and it fell—that is, the rain did. We were obliged to start the fires in the house, the weather was so cold and dismal. Well, we can't fit the weather to suit—we shall have to fit the crops to suit the weather. When I was a young man trying to get through college my purse was as empty of cash as May is empty of sunshine. I did not have one full new suit of clothes all through my course. I became the victim or the heir of a couple of men in a distant city who wore their clothes until knees and elbows made a deep and permanent impression, and then gave them to my mother, who sent them to me. I never saw these gentlemen, but the one who sent me trousers was a man of girth and substance. I could give more dignity to his garments now, but in those days they set off my figure about as this wet May fits my farm plans. I used to pin up the slack at the waist and trim off the ends with a pair of shears. Happily the other man had a liking for coats with very long tails or skirts, which mercifully left much of my attempt at tailoring to the imagination. I didn't go to see the girls often in those days, but I learned some habits of taking things as they come which I wouldn't sell for King Edward's wardrobe. Why no, I am not ashamed of the fact I wore this cast-off clothing. I cast off the habit when I could afford to, and not a day before. Far better an old coat than a new debt. Far better to wait and work with faith that the hard condition will wear off at last and give a better fit.

FARM IS BEST.—I thought of all this as the cold rain bagged out and hung about our farm plans as those old clothes used to envelop my limbs. We must make our crops fit a little better, and hang on until we grow bigger. You can't expect a farmer to spend much time over poetry, but some lines by Edwin Markham have been running in my mind. He went down into Wall Street during the recent panic and saw the crazy rush and struggle of the stock gamblers. Here is part of it:

Is this a whirl of madmen ravening
And blowing bubbles in their merriment?
Is Babel come again with shrieking crew
To eat the dust and drink the roaring wind?
And all for what? A handful of bright sand
To buy a shroud with and a length of earth?

Oh, saner are the hearts on stiller ways!
Thrice happier they who, far from these wild hours,
Grow softly as the apples on a bough.
Wiser the plowman with his scudding blade,
Turning a straight, fresh furrow down a field—
Wiser the herdman whistling to his heart,
In the long shadows at the break of day—
Wiser the fisherman with quiet hand
Slanting his sail against the evening wind.

I have heard people who ought to know say that Markham is not a poet, but if what he says here is not true there is no truth left. Give me a farm paid for and stocked, with family and friends about me, and you may take Wall Street and all it represents. There are not millions enough in the Stock Exchange to buy the fun I can have sitting on my old stone wall eating a piece of bread and cheese that I have honestly earned. So rain on! As the children say: "It is good for grass and grain and Grandmother"—and we can't stop it.

RAIN NOTES.—Mind you now, I am not finding fault in relating some of our mishaps; I'm telling what happened. We thought the rain was surely over, and put all hands at work hauling manure for the late potatoes. The field is on the lower farm, naturally wet and sloping to a little brook. We plastered that field thick with fine, well-rotted manure. Nearly all of our Winter's supply went on that small field. Before 20 furrows could be plowed down came the rain again for three days. The nitrates were leached out of that manure in quick order. By this time they may be feeding the fishes in the Atlantic Ocean. You give a Jersey rain full swing and it will undo the work of a cement floor in short order. . . . Spraying is a failure with us this year. Just exactly at the right time a cold rain set in, and lasted three days, with showers following. Under such conditions spraying does little good. I sometimes wonder what the spraying "authorities" would do with their theories were they put on a farm in a season like this, with no salary except what the crops pay them. At the time for spraying the corn ground needs plowing, the first potatoes need cultivating and a dozen other jobs are pressing. It is simply a question of which to let go. . . I expected that the long wet season would ruin the cherry crop, but it has started well with a full "setting."

SOILING STOCK.—We have begun in a small way to cut green feed for the stock. The rye came first. As soon as it was large enough Hugh began to cut a small load every night. We fed it to cows, horses and pigs. The brood sows made good use of it, and it furnished a fair share of their food. Cows do not eat it readily after it gets hard, though Julia, our black cow, cleans it up better than the others. There was no trouble about making the milk taste when we fed the rye just after milking. Our Crimson clover is in the rye this year. This proves to be a mistake, for when the clover is at its best the rye is too hard to feed. The stock pick out the clover and leave the rye. I would cut and cure the whole crop if it were possible to dry it, but the rain prevents that until the rye is too hard to make hay. Thus we shall lose nearly all the feeding value of the clover. Another year I shall sow clover by itself and use wheat in place of part of the rye. We are seeding rape and turnips to feed the pigs during June and July, and corn fodder and sorghum for the cows. This soiling has its drawbacks unless you keep stock enough to make it a business and can put men at it for a fair share of the time. It is a sort of nuisance, after a hard day's work in the field, to take a scythe and cut fodder for a few head of stock. We have a small orchard of young trees across the lane from our pasture. It is now in rye and clover. When these are cut we shall drill fodder corn to throw over the fence to the stock.

LIVE STOCK NOTES.—The two young grade sows gave us 18 pigs between them. Both litters are strong and healthy. Every pig is white as snow, though the sows are grade Berkshires—well marked and nearly solid black! While these litters are late I think the pigs can be sold to good advantage. If not we shall have wastes enough to keep them cheaply. . . . We made our first sale of purebred stock when little Billy Berkshire left the farm. He is a good one—all but his tail, which fell off to a stub. The three little Berkshire sows are not for sale. They are good enough to help their mother give tone to the Hope Farm Berkshires. Billy weighed 31½ pounds at six weeks old. . . . Our "kicker" Julia has subsided. Charlie rigged up a device for crowding her into a corner where there was nothing to kick about. I always believed in prohibition. She gives her 12 quarts and more per day, but still looks out of the corner of her eye when she sees a milk pail. One thing about Julia is that she never "kicks" about her food. Straw, stalks, rye—anything that she can grind with her teeth will make a grist for milk. She would make milk out of what the other cows would "kick" about if given them for bedding.

H. W. C.

WHEN you write advertisers mention THE R. N.-Y. and you will get a quick reply and "a square deal." See our guarantee 8th page.

The Hired Man Again.

FARM HOMES.—The labor and tenant problem touches all. I quite agree with the tenant plan as against the plan of boarding hired help. It is quite enough for hired help to know so much of one's private business without having them familiar with family matters also. It is also pleasanter for them to be rid of the "boss" part of the time. A. W.

Connecticut.

FARM PROFITS.—I see that the "hired man question" still takes space. I have thought sometimes that as I was but a worker and not a scientific man or something else but a workingman, my opinions did not amount to much; but I see that others think about as I do. Yes, I could make $1,000 profit on 100 acres of tillable land in any part of the United States if I had the means to work it properly. Of course, it could not be done in the first year, ad possibly not in the second, for it would take a man one year to learn his farm and perhaps another to find out what the market demanded and where his markets are. F. H.

Plymouth Co., Mass.

OVER-WORKED.—The man who thinks to get two or three times what he pays for out of a hired man or boy might with propriety consider himself a back number. In 1846 I worked for such a one, a big strong man who in the long Summer days drove me from daylight till dark, and got as much out of me by his side as he did himself, and he rested nearly every day from noon till four in the afternoon, while I was at work. He gave me about $9 a month and board, and used up all the day, from up in the morning till bedtime. This was before the war; farm wages for men were $12 or $13 and board; wages now are double what they were then, and board more than double. Reasoning people wonder how any man, even the poorest, can work at the wages Michigan Farmer says he pays and attempt to be satisfied with it.

Connecticut. H.

AT FIRST TABLE.—There is a great difference in hired men, also in the man who hires. I have paid good hands $20 a month and board, and was well pleased to get good men at that. They should have a good house to live in if married. I have worked for $10 a month when I was 20 and 21 years old; could not find my equal then on the farm. I was out in the southwestern part of Monroe Co., N. Y., when 22, and a well-to-do-farmer built a good large house and moved in, letting his hired man live in the old house. The next Summer he said he was going to build a new house as good as his own for his hired man and keep him as long as he was able to work, or as long as they both lived. If my memory serves me right it was ex-Gov. Bradford, of Connecticut, who, when asked by some city friends if he thought it right to eat with hired help, said: "My wife and I have been talking this matter up, and we have come to the conclusion that those who do the work should eat at the first table." Is not that right? Good farm hands first, or as good as there are.

Pennsylvania. J. H. J.

For the land's sake, use Bowker's Fertilizers. They enrich the earth.—*Adv.*

For All Lame Horses

whether they have spavins, ringbones splints, curbs, or other forms of bony enlargement, use

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Cures without a blemish as it does not blister. As a liniment for family use, it has no equal. Price $1, Six for $5. Ask your druggist for Kendall's Spavin Cure, also "A Treatise on the Horse," the book free, or address

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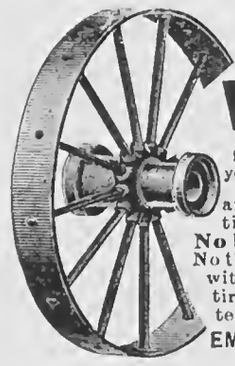

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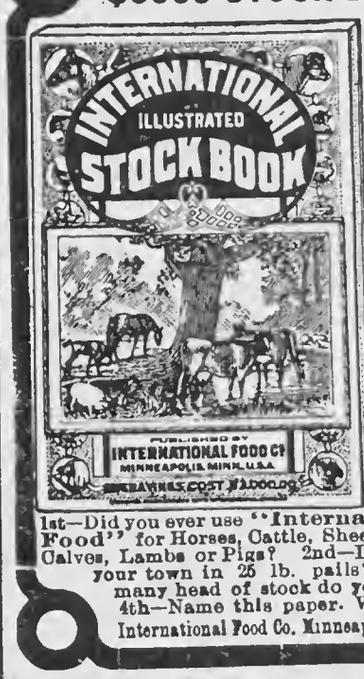

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It affords us great pleasure to quote prices for our famous and well-known grades of binder twine as follows:

Pure White Sisal, 8c per lb. Standard, 8c per lb. Manila, 9¾c per lb.

These prices are for any quantity not less than a 50-pound bale, free on board cars Chicago, and are not subject to discount. TERMS:—Cash to accompany order.

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SAMPLES FREE. We guarantee our twine, every pound of it, and we will refund your money instantly and without a question if it falls to come up to our representation either in quality or count, but if you prefer to see samples before ordering, then write to us and we will send samples by return mail so that you can see and test it.

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The Rural New-Yorker

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Remittances may be made in money order, express order, personal check or bank draft.
THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, JUNE 8, 1901

THE oleo people receive little hope from the courts. Three oleo rogues in Philadelphia were convicted of selling their stuff illegally. They appealed to two higher courts, and were beaten. They then went to the United States Supreme Court, asking to have the decision against them reviewed. This has been denied, and now there is nothing for them to do but to face the music, which in this case might appropriately be "The Rogue's March."

*

Two sets of tendencies or forces work in the development of any animal. One is the tendency to follow after the parents or their ancestors—the other the inclination to vary or "sport." The latter is always strong. When the parents differ widely in type and the ancestors have not been well or uniformly bred it is easily seen that the chances of producing a useful animal are poor. It is a clear case of gambling with all the best cards in your opponent's hands.

*

A MAN who sent $1 to a concern for a "reliable tip" on the stock market, got a reply that stocks would soon go either up or down, they did not know which. Whatever may be said about their method of inducing the man to send his dollar, the reply was an honest one. "Tips" are usually good things to steer clear of, for most people who know how to make money quickly and easily take advantage of their own information rather than go around peddling it at a discount. Money is handy stuff to have, but a man may become fearfully one-sided both mentally and morally by making money-getting his sole aim. It would seem to be foolish for one to narrow and cripple himself in this way.

*

REPORTS from the Central West are that wheat is quite good in quality but that the acreage is light. Many farmers reasoned last Fall that they had had a total loss, and that wheat had not paid for 10 years. When they got a fair crop the price went down to 60 cents. For the first time in the lives of many they had to buy their own seed. About half an acreage was the result. Machine men say that binders were not worn out the last two years, and that there is not the usual demand for them. Mowers are selling well, and corn planters and cultivators quite well. Corn has been the paying crop for several years past. The export demand holds prices up, and many think that it will soon be equal in price with wheat. The large acreage of corn for two years past will make a big wheat sowing this Fall in order to rest land corned twice. Farmers are prosperous, independent and happy. Their homes are more beautiful and convenient than in the past. A good indication of rural prosperity is the fact that many new telephone lines are stretching out to the farmhouses.

*

THE pioneer of a century ago cut a hole in the forest, built a log house and began the struggle for food. His clearing was small at first. The trees about it were high, and shadows brooded in it. It was a dismal place on stormy or gloomy days. Life seemed to be narrowed into a little square. In many cases the woman sickened and pined away. The man lost heart and went back where some one else had made a larger place for the sunshine. Others had stouter hearts. They kept at work with their axes in spite of shadow and doubt and loneliness. Tree by tree the forest fell away and the plow followed. Slowly the farm spread, and the sun came in until, finally, almost before the farmer realized what he was doing he looked out over broad acres and found that he had saved his farm. How proud such a farmer must have been to realize that he had fought the wilderness successfully and cleared the land! Yet, has he any more right to be proud than his son or grandson who, amid all the great changes of industrial and social life, has held the farm true to its old-time tradition? No, we do not think so. In some cases it has been harder to adapt the farm to the changes that have gone on all around it than it was to cut it out of the forest. Yes, farming to-day requires more intelligence, a quicker insight, more patience and a surer grasp of details than ever before. Still, now as ever, the way to broaden opportunity and clear the farm of obstacles is to attack them bravely one by one, and never give up.

*

ON page 415 Mr. Cook alludes to the fact that the annual consumption of cheese per capita in the United States is but three pounds, while in Great Britain the consumption is 18 pounds per capita. He thinks that it would be an advantage not only to the cheese maker, but also to the consumer, if we could encourage a greater use of this nutritious food. Perhaps one reason why we do not eat a greater quantity of cheese is the poor quality of the article as offered in most small or local groceries. Few are the village stores where good cheese is in stock, and the price is usually quite out of proportion for its nutritive value. Lean, bitter and poorly ripened, it is no wonder that consumers find it indigestible, and eat of it but sparingly. It merely makes its appearance as an extra on the tea table or an occasional accompaniment of pastry, instead of forming a part of the actual meal. Cheese should be used freely in cooking, but the leathery filled or skim cheese has disgusted many who have tried to use it, and thus lessened the market for better materials. Plenty of good cheese is made; let us insist that it be supplied, and the home demand will surely increase.

*

A FAIR synopsis of the points covered by the Supreme Court decision in the Porto Rican cases is given in our news column. It appears that when territory is acquired by purchase or conquest it becomes a part of the United States. It does not, however, obtain the full rights enjoyed by the various States until given such rights by Congress, as in the case of Utah or Montana. Thus the supreme power of the land is vested in Congress, and the President merely executes its will. The most important business question involved in this decision was the right of the Government to levy and collect tariff duties on goods brought from Porto Rico. If that Island were as much a part of this country as Maine or Nevada it is clear that any such tariff would be unjust and illegal. The Court decides that since the Island is not yet a State of the Union Congress has a right to fix tariff laws to govern imports from it. American producers of beet sugar, hemp, tobacco, wool and fruits fear the free imports of these products from the Spanish islands. They have argued that when this territory came under the American flag their business would be at the mercy of cheap foreign labor. It now appears that Congress has the right to regulate such imports in case it is evident that free trade would be injurious to the American farmer.

*

DR. E. E. HALE is credited with saying: "If you should take 12 prize-medal men from Harvard and put them in a sinking ship, they would all drown from inability to construct a raft." That is probably true, though it is not likely that one in 1,000 of Harvard men would ever be placed in any such situation. It would puzzle even the most "practical" man alive to make a raft on a modern iron ship! Prof. H. M. Cottrell puts the idea in another way:

> Travelers say the world is full of men who have taken a good general college training, and who have spent thousands on their education, who are glad to get places as walters at lunch counters or as motormen on street cars, while as soon as a man has fitted himself to feed skim-milk calves successfully half a dozen men are waiting to hire him at good wages.

We know from experience that educated men are obliged to take hard and humble jobs at times, but they do not always stay at the foot. Unless there be moral and mental force in the man, the most practical training on earth will never save him. The calf feeder may be so mean, hateful or dishonest that he would even make kickers or "robber cows" out of his calves, though they excelled in size and shape. Are we not overdoing this "practical" business? It has got to the point where Comptroller Coler, of this city, is reported as saying: "In my opinion, the city is better served where there is a man who is not very moral, but who is very smart, than by a man who is absolutely honest but very ignorant." We do not say that there is anything in the great hustle and push after a practical training that should weaken character, but let us remember that the ability to earn a great salary is not the whole story.

THE Massachusetts State Grange has gone into the insurance business. It assumed control of an old mutual fire insurance company, and seems likely to make a success of it. One of our readers thus states the case:

> Of course they do not insure all farm property, only that of members of the Grange, thereby avoiding the most undesirable risks, although they do not refuse to insure desirable village property. While farm property may not be so well protected in case of fire as other property, we consider that the buildings belonging to the members of our organization are as good risks as any others. Our order is composed of intelligent, prudent and careful people, thereby reducing the risk from fire, and we also consider that the moral risk is less than it is with average people.

For several years now many of the regular fire insurance companies have refused to insure farm property. In such States as Michigan and New York farmers have taken the matter into their own hands, and organized coöperative companies, which have been very successful. Organization! That is the watchword everywhere. Organization—not for aggression, but for defence!

*

IT is quite common to find farmers who complain about the wrongs of society. They say that competition, crime, the trusts and other things have created a dangerous class of citizens. Children are growing up in ignorance or with wrong training, who will prove a menace to the country unless they are given a better chance. Much that these farmers say is true. The towns and cities contain thousands of orphan or neglected children who will be left to grow up as best they can, or what is not much better, start life in some "institution" or reform school. Whenever we hear farmers talk about such things we feel like asking them what they are doing to remedy the trouble. The children are here. They cannot be made into good citizens by mere talk and complaint. What they need more than all else is home and home influence. Some of these very farmers might well take one or more of such children and bring them up. That would be true public service—a duty to country and humanity. Not only that, but many a discontented and unhappy farm couple would find life beautiful and ennobled by giving home and love to a child.

*

BREVITIES.

As one who waking in the night
From off the pillow lifts his head,
While o'er him comes a sudden dread,
And yet he dare not seek a light.

And so he will not search it out;
There may be naught, he does not know,
But lest to surety doubt may grow
He lies and hugs his trembling doubt.

O anxious soul, by thoughts oppressed
Of that dread future, far, yet near,
Cease to essay the question here;
Death will respond or else give rest.

—The Lantern World.

LIME lightens low land.

HOW is Ruby Queen doing?

THIS will be a great year for the hay tedder.

WE advise a small trial of Cowhorn turnips in corn.

DISAGREE with people if you must, but don't fight over it.

AN awful season, this, for the people who sell or rent bicycles.

NO, grass cannot grow on rain alone—it must have sunshine.

THIS is bad weather on the contents of the small farm ice house.

WE cannot find a single plant of our Winter oats. They paid their cost last Fall in pasture.

LEAVE the table wishing for another slice, and you will find the wish change to joy that you did not take it.

THINK of a man foolish enough to attempt to conquer the forces of the world before he can conquer himself!

WHETHER it's a question of exportation, consumption or digestion it is always the little surplus that spoils the trade.

A TEAMSTER in this city whose horse was poisoned with cyanide of potassium was ready to swear that "snide potassum" was used.

IS government organized for the benefit of the poor man? Not especially, but he ought to have an equal chance with the rich.

TO get the most out of lime do not put it on the surface after grass or grain has started. Put it on after plowing and harrow it in before sowing the seed.

LAST year the people of this country sent the Chinese $833,710 worth of ginseng. No doubt about it—if we could get them to take that value in American apples all hands would be better off.

ATTENTION is called to the description of the soiling system practiced at the New Jersey Experiment Station. The first article is printed on page 413. We hope to follow the crops right through the season.

ANTHROPOLOGY is the science of man—the study of the human functions and body. A professor of anthropology in Chicago says that a man who parts his hair in the middle "displays unmistakable evidence of a degenerate instinct."

Events of the Week.

DOMESTIC.—Thirteen lives are reported lost as the result of the floods in Tennessee. At Elizabethtown nearly 100 homes were destroyed, and at Watauga there was also heavy loss. In North Carolina there was also much damage, many cottages being flooded at Biltmore, and Asheville being shut off from railroad communication. The Cliffs Hotel, on the Catawba River, near Hickory, floated down the stream. . . . . The Presidential party started home May 25, the remainder of the trip being abandoned on account of Mrs. McKinley's health. . . . . Two electric cars racing for a switch, while going in opposite directions at Albany, N. Y., May 26, came into collision; five persons were killed and 40 injured. . . . An explosion in the Richland mine, Dayton, Tenn., May 27, caused the death of 17 men. . . . . The schooner C. H. Hackley, of Milwaukee, was lost in a gale on Lake Michigan, May 24; seven men drowned. . . . . The Tennessee River has flooded thousands of acres of land, and it is estimated that the farmers near Huntsville, Ala., have lost $100,000.

ADMINISTRATION.—The United States Supreme Court has decided that the Porto Rican tariff act is constitutional. A synopsis of the decision is as follows: Territory acquired by this nation from a foreign power is part of the United States. The right to acquire territory involves the right to govern and dispose of it. When acquired by treaty, the territory is subject to the disposition of Congress. While a part of the United States, Porto Rico and the territories do not come within the Constitutional provisions relating to unrestricted commerce between the States or the relations of the citizens of one Commonwealth to those of another. The Constitution is applicable to territories acquired by conquest or purchase only when and so far as Congress shall so direct. The power to acquire territory by treaty implies the power to prescribe upon what terms the United States will receive its inhabitants and what their status shall be in "The American Empire." The people of the acquired territory are not subject to the merely arbitrary control of Congress, but are entitled, under the privileges of the Constitution, to be protected in life, liberty and property. The Foraker act is constitutional so far as it imposes duties upon imports from Porto Rico. The Supreme Court adjourned May 28 until the October term without announcing decisions in the remaining insular cases. This is interpreted as meaning that the court does not consider the status of the Philippines as parallel with that of Porto Rico. The Government intends to continue collecting duties upon Philippine merchandise. Solicitor General Richards believes that the President is free to govern the Philippines under the Spooner act as their needs may require. . . . . The Platt amendment was accepted by the Cuban Constitutional Convention, May 28, by a vote of 15 to 14.

PHILIPPINES.—Reports from Manila show that there has been much laxity in commissary methods at Manila, in spite of the arrangements made for inspection. An easy opening for fraud—and one which must have seemed apparent from the beginning—was the privilege granted to civilian employees to buy foods of the commissary for their messes. These goods, it appears, have sometimes been bought in larger quantities than needed, and the surplus sold to outsiders. As Uncle Sam sells commissary goods at cost, and as such things are sold at very high prices by Manila merchants who import them, handsome profits were easily realized. . . . . The prosecution against D. M. Carman, Senor Carranza and others accused of trading with the insurgents, has been abandoned. The military authorities consider that although the convictions of a number of Manila merchants would be practically certain were the investigations continued their prosecution would be inexpedient, as the consequent damages to business would outweigh the good accomplished. Provost General Davis, who has reviewed the testimony in the Carman cases, said to-day that while Carman could be convicted of trading with the insurgents, it would be unjust to punish him when nearly every trader in Manila is guilty of similar practices. . . . . A new army scandal has developed in southern Leyte, where several officers have been arrested on the charge of trading in permits to ship hemp from closed ports in that Province.

GENERAL FOREIGN NEWS.—The proposition of the American Government to secure a reduction in the war indemnity demands against China to $200,000,000 has been unanimously rejected by the representatives of the other powers, who will insist upon China paying the full amount claimed—$337,000,000. A despatch received in London from Pekin says that the Government of the United States will under no circumstances consent to any increase in the Chinese tariff, unless commercial advantages are conceded in return. . . . . At Waldenburg, Prussia, May 25, 21 miners lost their lives as the result of fire in a coal mine. . . . . May 24, an explosion in a Welsh colliery entombed nearly 100 miners; 70 lives lost.

FARM AND GARDEN.—Consul General Mason, at Berlin, has informed the State Department that the official German crop report gives a discouraging outlook for German agriculturists. A long and severe Winter and tardy Spring is held to account for a very bad year in crops. In a number of districts from 50 to 90 per cent of the whole Winter wheat failed. Clover has fared badly.

John Z. Miller and Joseph Levering, general manager and superintendent of the Harrison Butterine Company in Kansas City, Kas., were arrested May 22 by A. E. Prescott, a deputy United States marshal, charged with violating the Federal laws for regulating the manufacture and sale of oleomargarine. Specifically, the two officers of the Harrison Company are charged with defrauding the Government in using oleomargarine stamps twice, an offense for which unusually severe penalties are prescribed by the oleomargarine laws and internal revenue regulations. However, from the nature of the cases, it is an open question as to whether the men are really guilty of willful and intentional violation of these Federal laws and regulations. It is charged that large quantities of oleomargarine, returned to the Harrison Company as spoiled or damaged, would be removed from the pails and the pails refilled and shipped out again under the same stamps. The revenue officers contend that this is a violation of the law, as under no circumstances can a pail, package or revenue stamp be used a second time, no matter if the contents are spoiled or unsalable. Inspector McCoy, who has worked up the cases, claims to have evidence to show that upwards of 100,000 pounds of oleomargarine have been returned to the company since last September, while the records show that a comparatively small amount of this had been reported to the revenue office. The tax is two cents a pound. The penalty for violating the oleomargarine stamp laws includes confiscation of the manufacturing apparatus, together with oleomargarine and raw materials on hand, besides a fine not less than $500 and imprisonment for not less than six months.

The Orchard grass seed growers of Kentucky and Indiana, where about 75 per cent of the crop is raised, will combine again this year in the marketing of the crop. This was decided on at a recent meeting of 32 growers held at Goshen, Ky. Twenty-eight of those present voted to combine and to place the business in the hands of P. W. Hardin, of Louisville. Mr. Hardin states that indications are for a shorter crop this year than last, and attributes this to the drought of last Fall and the decrease of acreage, which has been made necessary by the tiring of the land from successive crops. He thinks growers will receive more than $1 a bushel for this year's crop. Growers claim combination is made necessary by what they allege to be a league among dealers to refuse to buy seed till it is offered at their price.

The American Seed Trade Association will hold its annual convention in Rochester, N. Y., June 11-13.

The fourteenth annual meeting of the Florida State Horticultural Society opened at St. Augustine May 21.

Six months in jail and a $10,000 fine is what it cost Albert T. Dow to make bogus butter and swindle Uncle Sam out of the revenue thereon. Dow conducted an illicit oleomargarine plant at 2334 State St., Chicago, Ill., called the Fertile Valley Creamery Company. He received cream daily and sold it without the trouble of transforming it to butter. The revenue office asserts that it was defrauded of $40,000 in special taxes on oleomargarine. The fine was promptly paid and Dow's lawyer pleaded to have the jail sentence set aside. Judge Kohlsaat refused. The fine is the heaviest ever imposed by a United States Court in Chicago.

Broom corn valued at $200,000 was burned in Chicago May 27 by a fire which destroyed a warehouse. The broom corn was owned by W. L. Rosenberg, a Chicago manufacturer. The building, which was valued at $25,000, was owned by the Cortland Wagon Company, of Cortland, N. Y.

The Governor of New York has appointed the following delegates to the Farmers' National Congress at Sioux Falls, October 1 to 10: Geo. L. Flanders and Fred J. H. Kracke, of the Department of Agriculture; Elliot B. Norris, Master of the State Grange; Senator Henry S. Ambler, Edward A. Callahan, Frank E. Dawley, Geo. A. Smith, Gilbert M. Tucker, Wm. D. Barns, Dr. Henry G. Piffard, Frank Urner, W. H. Hallock, Benjamin A. Babcock, J. J. Dillon and W. E. Dana.

CROP PROSPECTS.

Nearly all of the smaller fruits have blossomed abundantly. Apples quite well for the off year, with the exception of R. I. Greening. F. E. D.
Shoreham, Vt.

The fruit trees of all kinds are blossoming very full, and look now as though we would have a full crop. Plums fair and cherry blossoms are falling; apples are just in full bloom. H. F. W.
No. Ferrisburgh, Vt.

Apple, pear and cherry trees blossom full. Very few plums raised here, on account of black knot. It has been impossible properly to spray trees on account of rain. Our fields are flooded; potatoes that are planted are rotten. E. W. M.
Essex, N. Y.

We never saw old potatoes so scarce at this date, as at present. This fact, with South Carolina new crop so seriously injured by drought, and North Carolina's diminished acreage and storm injuries, the outlook presents strong assurance of very high prices for North Carolina and Virginia crops. S. H. & E. H. FROST.
New York.

The prospect for apples seems to be good, with the exception of the Baldwins; there is promise of abundant crops of cherries, peaches, plums and pears. The Winter grain never was put in the ground in poorer condition than last Fall, but I never saw it looking generally better than it does at this writing. E. V. A.
Columbia Co., N. Y.

From the outlook there will be an abundance of fruit of all varieties with the exception of apples, which will not be more than one-third of a crop at the best. Not wishing to count chickens before they hatch, I have waited to see the blossoms rather than guess at the buds. Where are those who prophesied a drought? I would like to have stood them out this forenoon.
Applegate, N. Y. H. I. S.

The fruit in this section wintered fairly. The cherries bloomed abundantly, the variety a small red, a native with us. There are not many of the English varieties near here. The pears are full where there are live trees. The apples alternate here quite a little. The prospect for grafted Winter fruit is small. Spitzenburg is especially naked; Spy also, though our Spies have lost their bearing qualities; Baldwins are (part of them), very full. The peach trees have no blossoms this year; last year they were very full. G. T.
Buel, N. Y.

About a week ago apple blossoms began to appear. Rain has fallen nearly one-third of the time; about a day of misty weather, and for two or three days cool; mercury 45 to 55 degrees; little wind with the rain. Apple raisers and apple buyers are fearing bad effects from the continued rain. A ride of 120 miles the past week along the orchards of Monroe, Genesee, Orleans and Niagara counties makes me think that the estimate of apple men, that the bloom this year is not equal to more than one-third of last year, is about right. I have seen but two and hear of but half a dozen orchards with a bloom of the average of 1900; have seen perhaps a dozen orchards with a half of last year's average blossoming. Curl-leaf has developed on peach trees in this county very fast during the past week. I saw none on peach trees in the western part of Monroe County. Pears seem to be setting full. Wheat and grass are looking fine. It is so wet in some parts of the county that only about one-half of oats are sown that were planned for.
Orleans Co., N. Y. N. C.

Apples show up now about in the order named: Twenty-Ounce, Russet, Snow, Cat Head, Hubbardston, good; Greening, King, light; some Baldwins where none last year; a few Spies. Pear, plum and cherry white with bloom; peaches light. Five steam sprayers, each said to have capacity of 1,800 gallons in 10 hours, have started within a radius of three miles of me this Spring. Everyone acknowledges the necessity of spraying, and there will be more done than ever before, but rain is bothering us just now. W. J. S.
Albion, N. Y.

The prospects for fruit are fairly favorable in this section of western Rutland Co., Vt. and northern Washington Co., N. Y. The early varieties bloomed the fullest. The Winter fruit will not be as much as last season. Plums and cherries bloomed full, also pear trees. There will be abundance of strawberries, field as well as garden berries. Some farmers sprayed when the fruit trees were in bloom. They seem to have the best results. Some of the farmers have their potatoes and corn planted, but most of them have not planted all their corn yet. Those on low land will have to wait for dry weather, as the wet season has been a setback. Pastures are looking fine. I never saw a better prospect for grass at this time of year, especially on newly seeded. Old hay is being bought up and pressed. One man has a contract to load 25 cars. Benson, Vt., furnishes the most. Oats are looking well. Wheat looks fine. I am trying a piece of Ohio beardless barley; it is growing well, for it is on a side hill. J. S. C. P.
Fair Haven, Vt.

CROP AND WEATHER REPORT.

During the past week crop growth in all sections east of the Rocky Mountains has been hindered by the cold. In the central valleys corn is coming on very slowly. The stand in Nebraska and Iowa is fair, and cultivation is in progress. Planting is finished except in New England and the North Atlantic States, where the constant rains have prevented farm work of all kinds. Wheat in the Mississippi and Missouri Valleys needs rain, while in Maryland, Virginia and North Carolina the crop is suffering from an excess of rain. Fly damage is reported in Kansas, Missouri, Illinois and Michigan. In Texas harvesting is in progress. In the Ohio Valley the oat outlook is promising. Cotton conditions have improved, except in the Carolinas, where it has been injured by floods. Tobacco transplanting is going on rapidly. Plants are abundant except in Kentucky, where they are scarce and small. The western apple prospects are not so favorable as before reported. Apples are dropping badly. The latest reports on this crop in New York indicate a slight improvement. Flood damage in the Carolinas and Tennessee is greater than was at first thought. The lowlands are flooded and the high ground badly washed. The crops of some farmers have been entirely wiped out.

In Delaware fruits of all kinds are late. Blooms on tree fruits, including peaches, is heavy. Strawberries, while at least 10 days late, will be fair. Blackberries were injured by the cold Winter. Early potatoes are coming on in good shape. For some time the Florida pine belt has been in great need of rain. This condition is now relieved, and there is promise of a full crop.

In spite of all that has been said about the superiority of Sicilian lemons to those from California, trade in the latter is moving along in great shape. A train of 10 cars, which is said to be the first straight trainload of lemons ever sent from California for the East, is on its way to New York. The whole crop is estimated at about 2,500 cars.

The northern Georgia peach crop will be large. A number of orchards will give their first crop. Shipments of early varieties will begin shortly after the middle of June. Elbertas will not be ready for six weeks or more.

The strawberry outlook along the Hudson Valley is quite promising, with the exception of those on wet ground, where the plants have suffered from the excessive rains.

The financial condition of farmers in the Wilmington section of North Carolina is said to have materially improved during the past two years. The causes are the high prices of cotton last year and the development of the trucking industry. Truck farming worked hard and well managed has eaten up a good many mortgages in the Carolinas and Virginia.

Cantaloupes from North Carolina.

What varieties of cantaloupes should be grown in North Carolina? What size of package would you recommend? What stage of ripeness should they be gathered? Would you advise shipments by refrigerator or open freights, cost considered, from this State? T. B. P.
Hillsboro, N. C.

We receive a great many cantaloupes from North Carolina, and we find the best method for packing is either in third-barrel baskets or a crate similar to the California orange boxes. The best varieties are the Netted Gem, Rocky Ford and Jenny Lind. We would not advise planting any other but these three. If shipped in refrigerator cars they need not be picked until they are almost ready to part from the stem; if shipped by open freight they should be fully mature but not ripe. If ripe they will not carry. ARCHDEACON & CO.
New York.

The Eastern Shore of Maryland.

Farming here is not done on such an extensive scale as in the days of slavery; many of the larger estates have been subdivided into smaller farms, many of which have been purchased by the northern and western settlers, and to-day produce 10 times as much as in former years, when trucking was unknown. The most successful farmer raises a combination crop; he keeps his herd of Jerseys, has two or three acres in strawberries, peach orchard, and from two to 10 acres for canning houses, pears and tomatoes, also asparagus. Last year the pea crop was a failure, on account of the louse. We have a good prospect for large fruit crop. Along the salt water rivers and Chesapeake Bay a failure in peach crop is unknown, especially on the low lands, which are subject to periodical inundation. We have quite an advantage here over the remote northern and western settler, especially in point of climate and market, being within easy access of Washington, Baltimore, Wilmington, Philadelphia and but seven hours to New York City by rail. In one of your recent issues I noticed a picture of an English walnut tree. They grow large and vigorously wherever cultivated above tide water. I know of some very old and large ones; one owned by an old woman brings her about $25 a year. G. T. B.
Cambridge, Md.

Woman and Home

From Day to Day.

THE HARD-TO-PLEASE.

There ain't no pleasin' people on this bloomin' earth below;
In the meltin' days o' Summer they're hollerin' fer snow!
An' when the snow comes siftin' through the winders o' the sky,
They're hollerin' fer Summer an' weather hot an' dry!

It's this way on the hilltop, it's this way on the plain:
"The craps are gittin' dusty; good Lord, send down the rain!"
An' when the rain is failin' an' weather's lookin' rough,
It's "Wonder if they'll drown us? We done had rain enough!"

There ain't no pleasin' people, no matter what you do—
No matter what good fortune, they growl a lifetime through;
An' when they leave this country to seek the final lot,
Heaven won't be cool enough fer them, an' t'other place too hot!

—Atlanta Constitution.

*

HERE is a bit of wisdom from the Straight Edge: "'Bear ye one another's burdens and so fulfil the law of Christ,' means a whole lot more than simply condoling with people in their mental troubles. The law of Christ's kingdom of social and industrial righteousness is to bear the burdens of life's drudgery, and to find ways of relieving those burdens for the largest possible number of people who are laboring under them."

*

THE medical authority of the Chicago board of education asserts that in investigating child study in the public schools he traces dull and weak children back to their infancy, and finds that in most cases they were bottle-fed babies. The Illinois Child Study Society holds that the naturally nourished infant has a better chance by at least 30 per cent than the bottle baby in getting a good start in life. If the bottle were only resorted to as a necessity there would be little cause for comment; unfortunately it is, in too many instances, an effort to evade the responsibilities of motherhood.

*

WE read recently of a small girl who has a way of thinking out things for herself. The other day, when her father asked her to mail some bills that she had chanced to see him making out, she refused. "It's against the law," she said. "Why, I've seen it up everywhere on the fences and telegraph poles—'Post no bills under penalty of the law.'" The same little Jane one day visited one of the upper grades at school, where the teacher was reviewing a class in physiology. Many times she reviewed them on the channels of the blood, the class responding in unison, "Arteries, capillaries and veins." Jane's memory seldom plays her false, so her account of this might be taken as an object lesson in faulty enunciation.

"My blood-vessels are R-trees, caterpillars and worms," she announced glibly at home. "I s'pose it's the trees what makes me grow."

*

CRETONNE-covered boxes for storing clothing in a bedroom are no novelty, but there is one new idea in their making this year, and that is the use of large ornamental brass or bronze hinges on the outside of the lid, instead of the small hinges hidden inside. The lid is fastened by a large hasp matching the hinges, which are just the style of those seen on medieval coffers. The box is upholstered in flowery cretonne, and lined with some delicate color. Such a box is an excellent thing to hold shirt waists, and is quite an ornament in a room. It is not beyond the ability of a home carpenter, though quite expensive to buy readymade. Exceedingly flowery cretonne and chintz are very popular for upholstery and hangings this season; they are usually in demand for Summer homes. Many of the furnishings specially designed for the Summer homes of city people are equally appropriate for the farmhouse. For example, among floor coverings are the Hindu dhurries, rugs woven in a blanket-like texture of worsted and jute, in stripes of red and deep indigo blue. Their usual size is 4x7 feet, and their price ranges from $1 up. Chinese cotton rugs provide another inexpensive material; they are woven like the Smyrna rugs, in pretty patterns of blue and white, green and white, and brown and white; they are very inexpensive, and wash well. Split hickory and rush furniture, made after the old-fashioned models, is now very much the mode for country homes; it is painted and enameled in various colors, or left without any treatment. A farmhouse furnished after the style of a city man's country home will

3727 Fancy Waist
32 to 40 in. Bust.

be pretty and artistic, without being necessarily expensive.

*

VEGETARIAN restaurants are already successful in several cities of the old world; they are not so well known here, in spite of the American tendency to seek after new things. A lunch-room of this class recently opened in New York is hardly a restaurant in the common acceptance of the word; it is headquarters for a coöperative industrial enterprise called the Straight Edge. The people of the Straight Edge, who are trying to apply the Golden Rule to business and social life, say that the problem of getting the ordinary work of cooking, serving meals, washing and scrubbing done without making somebody drudge and slave and be regarded as a "menial" is undoubtedly the biggest problem that coöperative industry has to tackle. Without making any efforts towards a vegetarian propaganda they demonstrate that a well-cooked and tastefully-served meal of vegetables can be provided for a small cost, and to the satisfaction of its partakers. The bill of fare is headed by the motto: "Nothing that ever squealed." The meals are varied day by day, consisting of three or four vegetable dishes, corn and wheat bread, dessert, and tea, coffee, cocoa, etc. A sample bill of fare consists of creamed sweet potatoes, corn fritters, boiled onions with spinach dressing, Straight Edge bread, and spiced fruit pudding. The cooking is excellent—the bread, made from meal ground purposely after the old process, beyond all praise. After lunching in a hurried business restaurant of the ordinary type, with an atmosphere like the tents of Kedar, it is a small slice of the millenium to partake of this "dinner of herbs, where love is." It will be interesting to watch the outcome of the experiment.

3815 Three-Piece Skirt.
22 to 30 in. waist.

The Rural Patterns.

The fancy waist illustrated which, combined with the skirt below, will make a very handsome suit, is made from satin Aiglon in pastel pink with revers of cream guipure over white, soft, full front of white chiffon, and simulated waistcoat of pink panne with band of white ornamented with small jeweled buttons. All soft-finished materials are, however, equally suitable; for odd bodices taffeta, crêpe de Chine and all the familiar soft satins, as well as lace are used, and costumes made from any one, as well as from the simpler henriettas, cashmeres and foulards are eminently appropriate to the design. The foundation is a fitted lining that closes at the center front. The back proper is seamless, but is joined to the fronts by means of under-arm gores. The fronts are plain and turned back to form revers. The full front, or plastron, is attached to the right side of the lining and is hooked over on to the left, and the simulated vest is stitched to position beneath the revers. The sleeves, as shown, are tucked above and below the elbows, but left free to form puffs at shoulders, elbows and wrists, where they are finished with bands of lace, but, if preferred, they can be made plain, the pattern for the lining only being used. To cut this waist for a woman of medium size 4¼ yards of material 21 inches wide, or 2¼ yards 44 inches wide, with ¾ yard of chiffon for full front and ⅝ yard for simulated waistcoat, will be required when tucked sleeves are used; 3¾ yards 21 inches wide, or 1¾ yard 44 inches wide when plain sleeves are used. The pattern No. 3727 is cut in sizes for a 32, 34, 36, 38 and 40-inch bust measure; price 10 cents from this office

A tucked hip yoke is seen on many of the new skirts. All the lighter-weight wools are peculiarly adaptable and such soft silks, cottons and linens as foulard, louisine, crêpe de Chine, taffeta, cotton grenadine, embroidered muslin, batiste and the like are charming. The skirt is cut in three pieces, a narrow front and wide side gores. The fullness at the upper portion is arranged in the graduated tucks over the hips, but is laid in an inverted pleat at the back which provides graceful folds and ample flare at the lower portion. To cut this skirt for a woman of medium size 6¼ yards of material 21 inches wide, 5¾ yards 27 inches wide, 4¾ yards 32 inches wide, 3⅞ yards 44 inches wide or 3⅞ yards 50 inches wide will be required. The pattern No. 3815 is cut in sizes for a 22, 24, 26, 28 and 30-inch waist measure; price 10 cents from this office.

WHEN you write advertisers mention THE R. N.-Y. and you will get a quick reply and "a square deal." See our guarantee 8th page.

An Act of Insubordination.

PART I.

Grandma Doane stopped rocking and sat up very straight. "Did you say that Sarah Sherwood is living in the old place?" she demanded eagerly.

Mrs. Prescott sat by the other south window sewing. "Yes, Mother," she said placidly, "she's lived there all Winter. The old man, Mr. Griffin, died in December, and Luella didn't want to stay there any longer. The old place was left to Mrs. Sherwood, and they came out to live there. Ellen and Mattie live with the old folks. Mr. Sherwood isn't very strong and seems a good deal older than she does. Ellen never was married, and Mattie is a widow. They don't like living there any too well, it's so quiet, but they are just as good to their mother as can be. I'm so glad she is going to spend her declining days in peace and quiet in the house where she was born."

Mrs. Doane had not paid strict attention. She was folding her work with nervous fingers; now she stood up with a determined motion. "If Sarah Sherwood is living in the old place, I'm going straight up there."

Mrs. Prescott looked up quickly. "Why, Mother!" she excialmed, "you must be crazy. It's three miles."

"Not by the old path," Mrs. Doane insisted; "it isn't more than a mile that way."

"It's too late to go to-day, anyway," said the younger woman. "It's almost sunset, now. Besides, a mile is too far for you to walk. I'll take the horse some afternoon and we'll both go up and call on her," she ended with an air of calm finality.

Mrs. Doane sat down submissively, but her face did not show submission; it was rebellious and determined. Her daughter noticed that she seemed absent-minded that evening, and that her face was flushed and her eyes bright. "I do hope she isn't going to be sick," she thought. When she asked if she was not tired, her mother agreed almost eagerly and went to bed very early.

At a quarter past five the next morning the back door of the Prescotts' house opened softly, and Grandma Doane stepped out. She had on bonnet and shawl, and in her hand she carried her shoes and rubbers. After closing the door noiselessly behind her, she sat down on the stone step and with quick motions put on her shoes. When she was all ready she stepped off stealthily, walking on the grass instead of the path, that the crunching of the gravel might not betray her. When she was safely out of sight of the house windows she walked with more assurance, and laughed softly to herself.

It was early April and the morning was clear and cold. The last year's grass and roadside weeds were white with frost, and where the ground was soft it was shot through with anchor frost. Down the road went Mrs. Doane till she came to a wood path which she entered. "There!" she said when she had followed it a few rods, "I guess I'm safe. Nobody saw me, I'm sure. Now I won't have to hurry so."

She passed through a young growth of hard wood, and came to a clump of pines, where the ground was soft with needles. Once she heard the slow beat of a partridge's drum. She paused to listen and it seemed to her that her heart beat faster and faster, in unison with the accelerated measure of the bird's wings. Soon she came to an open pasture, where were rocks and stumps and huckleberry bushes. On the top of one of these perched a song-sparrow, and its sweet voice thrilled the listener; she stood still a long time, her eyes on the bird, and when she went on she stepped softly that she might not lose a note. And now she came to a fork in the path which she did not remember. She hesitated a moment, then took the most trodden one. The way seemed strange, and before long she came to the pond and a gunner's duck stand. "This is not the way," she said, and she hurried to retrace her steps and make up for the time she had lost.

On and on she went through the once familiar path, and at length she came out at the end of the lane which led to the Griffin place. The sun was rising, and its warmth was most welcome, for in spite of her brisk walking the keen air had chilled her slightly. Up the lane she walked more slowly that her eyes might take in each familiar sight. Everything was as she remembered it. The old orchard on one side, the beautiful level mowing field on the other, the garden farther up at the back of the cornhouse, and then the old red barn with its hospitable open shed facing the south. Everything was familiar, even to the turnstile that let one out of the barnyard, and, yes, it squeaked when she went through it just as it always used to. Then she saw the old red brick house; that was the same, too, except that they had built a little veranda at the back door. On the veranda stood a woman. She was tall and straight, and the sunlight fell on her white hair. She looked doubtfully at the woman who was hurrying toward her, then as she came very near she gave a little cry and ran quickly down the steps.

"Mary Trent!" she cried.

"Sarah Griffin!"

And then their arms were about each other. In the first moment of meeting, the years fell away and each called the other by her maiden name.

"I've run away," Mrs. Doane explained as her friend drew her into the house. "I'm going to stay all day with you. And Sarah, I came away without my breakfast, and I'm pretty hungry."

Mrs. Sherwood laughed. "When I first saw you do you know what I thought? I said to myself, 'There's some poor tramp that's been out all night, and I'll give her a cup of coffee.' I'll get you something in two minutes. Just take off your things and find a chair."

She stepped about briskly, getting breakfast for her guest. "I'm specially glad to see you to-day, Mary," she said, "because I'm all alone. Mattie has been off on a visit for a week, and Father and Ellen have gone to the city for a day's shopping. They hesitated about leaving me, but I promised to go to the neighbors', though now you've come I won't have to. They've only just gone, and I was watching them out of sight just as you came along. There—draw up your chair and go to eating, you poor, hungry tramp," and she patted Mrs. Doane affectionately on the shoulder.

When the meal was finished Mrs. Doane arose with brisk determination. "Now, Sarah," she said energetically, "I'm not going to be made company of to-day. I want to work, and you've got to let me. I don't want to complain of my folks and the way they treat me, but they forget that you can get tired to death of resting."

"That's just it," agreed Mrs. Sherwood. "I feel the same way."

"Well, then, we've got the whole day before us. What shall we do? Haven't you got some big piece of work you want to do? Something that's too hard for you and that you ought not to do?"

"Oh, Mary!"—Mrs. Sherwood's eyes sparkled and her cheeks flushed—"there's a quilt I've wanted to tie for a long time, but the girls wouldn't let me. They think it's better to buy the ready-made ones. I've got the batting and the lining all ready. That's just the thing for us to do. Let's hurry and get the work done."

They were putting away the last of the dishes when there was an impatient knock on the back door. They started guiltily and looked at each other, and Mrs. Sherwood went to answer the summons. A boy stood there. His face was anxious and he was breathing hard.

"Mother sent me up on my bicycle to see if Grandma's here," he said.

"Yes," said Mrs. Sherwood, "she is here and she's going to spend the day with me."

"All right," said the boy. "Ma said if she was here to tell her that she'd come up with the horse and get her this afternoon. She'll start at four."

"Very well," said Mrs. Sherwood, "I'll tell her."

"You are safe," she laughed, when the boy had gone. "I'm afraid we are very bad children. I must have caught it of you, for I was all right till you came. But just now I had the strongest desire to tell your grandson that I hadn't seen anything of you. I knew it wouldn't do, though. Now let's get at that quilt. You can carry the chairs into the other room and push the table into the corner while I go up to the attic and bring down the quilting bars."

SUSAN BROWN ROBBINS.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

Laundering Starched Clothes.

In the first place, wash shirts and collars spotlessly clean; then dry on line same as other wash, and when perfectly dry use the following cooked starch. The exact amount of starch cannot be determined; about four level tablespoonfuls to quart of water. The nice point is to make starch just thick enough and not too stiff to rub in linen easily, about like cream before it begins to thicken in churning. Have on hand white wax; it can be bought at any drug store, and gum arabic dissolved in water and bottled. Ten cents worth of each would last an ordinary family a year.

Dissolve starch in as little cold water as can be used and still work it all down to smooth paste; then add boiling water, stirring all the while, until thin enough. Add to one quart of starch one-half teaspoonful of gum arabic, and with a case knife scrape off a small quantity of white wax. It does not readily dissolve in even boiling starch, so scrape it off thin. Use about half a teaspoonful of these shavings, set your starch on stove cover, and boil moderately for half an hour. Have a starching board, one that you use for this purpose and no other, using any wood that will not stain when damp. Our Washington fir is good, but cedar would not do at all. Turn shirts wrong side out and leave so until all is ironed except bosom. To starch, put collars and cuffs, one by one, in starch, just as you take it off stove. With a silver spoon you can move them in starch until they are completely covered. Let them remain until you have shirt bosoms all finished. To begin on these use the starch hot and with spoon spread starch first on right side of bosom, fold together and take bosom on wrong side and give the same twisting motion you do when wringing clothes. This forces the starch through linings, which is very important, for unless this is thoroughly done the bosom, instead of being stiff as a board, will be covered with blisters. Repeat on wrong side, only do not turn when you wring, for if you do all your work on wrong side of bosom you lessen the chances of leaving some soiled spots. Practice will soon show you when you have material full of starch, under pleat and linings. When all is thoroughly worked full of starch place wrong side of bosom directly on board, and with the fingers on right side rub out free from wrinkles. Remember any that you fail to remove now will remain just so when ironed. Treat cuffs of shirt in same manner; then hang on chairs very near a good fire so as to dry fast. Have a room free from dust. Work the starch in cuffs and collars as directed for bosom of shirt, and dry in the same manner until perfectly dry. I don't try to iron the same day, and always starch enough at one time to last a month or two; then they can be put in clean bag and ironed as convenient.

To dampen them for ironing don't sprinkle or dip in cold starch, as you will by so doing spoil all your work. Take a pail or pan full of water, dip shirt flaps in, wring out as dry as you can by hand, lay directly on bosom, wring out another cloth of same thickness and put on other side of bosom, then lay shirt cuffs on top of this damp cloth. Pile layers made in this way one on another, place starching-board on top with irons to weight it down, and in two or three hours the linen is just right to iron. Have the irons clean and smooth, and always have a cloth of beeswax to rub them on. Then always iron the backs of shirts first and make sure your irons are perfectly clean before ironing bosom. Have a bosom board; I use starching board with a flour sack drawn over it. You can put on a beautiful polish on linen starched in this way, and when you consider that your linen will wear twice as long and look well until ready for the wash you will think it as easy a way as the old. It certainly will furnish a number of polished surfaces to reflect back the pride of feeling that the family linen couldn't be told from city laundry work. MRS. KITTIE GRANT.

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Established 1840. 87 Laight Street, New York.

MARKETS

NEW YORK, JUNE 1, 1901.

GRAIN.—Wheat trade has been active. Kansas prospects not as good as at first thought. Corn receipts at shipping points light. In oats both local and export trade are heavy.

Wheat, No. 2, hard, N. Y.	82¾	@	—
No. 1, Northern Duluth	84⅞	@	—
No. 1, Northern Chicago, spot.	83½	@	—
Corn, No. 2, mixed	50	@	—
Oats, No. 2, white	33	@	—
Rye, No. 2, W'n, c. i. f., Buf	—	@	54½
Barley, feeding	50	@	—
Malting, new crop	58	@	62

BEANS.

Marrow, choice, per bu	2 50	@	2 55
Marrow, fair to good	2 20	@	2 45
Pea, bags, choice	2 00	@	—
Red kidney, choice	2 00	@	2 02½
White kidney, choice	2 10	@	2 15

FEED.

Spring bran, coarse	17 00	@	18 00
Winter bran	17 50	@	20 00
Red Dog	19 50	@	20 00
No grade flour	19 00	@	20 00
Linseed meal, ton	—	@	27 50
Cottonseed meal, ton	24 00	@	—

HAY AND STRAW.

Hay, No. 1	90	@	95
No. 2	80	@	85
No. 3	75	@	80
Clover	60	@	65
Clover, mixed	70	@	75
Straw, rye, long	90	@	95

SEEDS.

Clover, per lb	9¼	@	10½
Timothy, per bu	1 90	@	2 50
Flaxseed, whole, bu	6 50	@	7 00
Millet, per lb	2	@	2⅛
Rape, German, per lb	3¼	@	3½
Sunflower, per lb	2¼	@	2½

MILK.

New York Exchange price within 26-cent freight zone two cents per quart.

MILK MATTERS.—At the meeting of the New York Consolidated Milk Exchange May 29 it was decided that the price for the coming month should remain at two cents per quart for all receipts within the 26-cent freight zone.

BUTTER.—Trade here has been quiet. There is no material change in price, but with the large supply buyers are becoming more exacting as to quality.

Creamery, extra, per lb	19	@	—
Firsts	18	@	18½
Seconds	16½	@	17½
Lower grades	15	@	16
State dairy, tubs, fancy	18	@	—
Tubs, firsts	17	@	17½
Tubs, seconds	16	@	16½
Tubs, thirds	—	@	15
W'n imitation creamery, fcy	16	@	16½
Firsts	14½	@	15
Lower grades	13	@	14
W'n factory, large tubs, firsts	—	@	13½
Fair to prime	12½	@	13
Lower grades	11	@	12
Rolls, common to prime	11	@	13
Renovated butter, fancy	16	@	17
Common to choice	12	@	15
Old creamery	12	@	14½
Old Western factory	10	@	13

EGGS.—Receipts have dropped off a little, but there is no scarcity. The market is in a healthy condition, with a slightly firmer tone on the higher grades.

QUOTATIONS, LOSS OFF.

Mich., N. Ohio and N. Indiana, regular packings	—	@	14
Other W'n, northerly sections, regular packings	13½	@	14

QUOTATIONS AT MARK.

Nearby, State & Pa., fresh-gathered, fcy, selected, doz.	—	@	14
Average prime	—	@	13½
Mich., N. Ohio and N. Indiana, storage packings, fancy	13½	@	—
Other W'n, storage packed, selected	13	@	13½
Regular packings, N'n sect'ns.	11½	@	12½
Graded, Southerly sections	12	@	12½
Reg. packings, S'ly sections	10½	@	11½
Ky., best marks, selected	11½	@	12
W'n, fresh-gathered, dirtles	9	@	10
Cheeks	7	@	9

LIVE STOCK.—Supply of native steers and cows light. Calves lower. Sheep and lambs steady except on under grades, which are lower.

Steers	5 25	@	6 25
Bulls	3 00	@	4 50
Cows	2 50	@	4 40
Veal calves	4 00	@	5 75
Mixed calves	3 50	@	4 75
Sheep	3 00	@	4 50
Lambs	6 00	@	7 00

COUNTRY-DRESSED MEATS.

Calves, veal, prime, per lb	—	@	8
Fair to good, per lb	7	@	7½
Common to medium, per lb	5½	@	6½
"Spring" lambs, fancy, each	6 00	@	6 50
Poor to prime	2 00	@	5 00

LIVE POULTRY.—Trade generally slow on account of wet weather. Receipts of Spring chickens light and of poor quality.

Spring chickens, nearby and western, per lb	20	@	22
Southern & S'w'n, per lb	16	@	18
Fowls, per lb	—	@	10
Roosters, per lb	—	@	6
Turkeys, per lb	8	@	9
Ducks, average W'n, per pair	70	@	75
Average Southern, per pair	50	@	55
Geese, average W'n, per pair	90	@	1 00
Average Southern, per pair	70	@	75
Pigeons, per pair	25	@	35

DRESSED POULTRY.—Business very dull, and receivers are making urgent efforts to dispose of the surplus stock.

FRESH PACKED—ICED.

Turkeys, W'n, hens, small	7	@	9
Western, toms	—	@	7
Broilers, Phila., over 3 lbs. to pair, per lb	32	@	35
Phila., under 3 lbs. to pair, lb.	25	@	30
Penn., fair to good, per lb	23	@	30
W'n, dry-picked, per lb	23	@	30
W'n, scalded, per lb	20	@	25
Fowls, W'n, dry-picked, prime	9	@	9½
W'n, scalded, prime	9	@	9½
W'n, poor to good	8	@	8½
Southwestern, prime	—	@	9
Old roosters, per lb	6	@	6½
Ducklings, L. I., and other near-by, per lb	15	@	16
Squabs, choice, large, dark	—	@	2 50
Mixed, per doz	1 75	@	2 00
Dark, per doz	—	@	1 50
Culls, per doz	50	@	1 00

FROZEN.

Turkeys, young hens, No. 1	11	@	—
Mixed young hens and toms, No. 1	10½	@	11
Young toms, No. 1	10	@	10½
No. 2	7	@	9
Broilers, dry-picked, fancy	18	@	20
Scalded, fancy	13	@	15
Chickens, fancy, soft-meated	—	@	12
Average, No. 1	—	@	10
No. 2	7	@	9
Fowls, dry-picked, No. 1	9½	@	—
Capons, fancy, large	15	@	16
Medium sizes	13	@	14
Ducks, fancy	12	@	12½
Geese, fancy	9½	@	10

DRIED FRUITS.

Apples, evaporated, fcy, lb	6¼	@	6¾
Evaporated, choice, per lb	5¾	@	6
Evaporated, prime, per lb	5¼	@	5½
Evaporated, poor to good, lb.	3	@	5
Sun-dried, S'n, sliced, lb	2½	@	3½
Sun-dr'd, State & W'n, qrs., lb.	2½	@	3½
Sun-dried, S'w'n, coarse cut	2¼	@	2¾
Sun-dried, S'n, coarse cut	2¼	@	2½
Chops, per 100 lbs	70	@	1 50
Cores and skins, per 100 lbs.	35	@	1 12
Raspberries, evap., 1900, per lb.	19	@	20
Blackberries, 1900, per lb	5½	@	6
Cherries, 1900, per lb	12	@	14

FRESH FRUITS.—Apples scarce. A few Florida watermelons are selling at high figures. Strawberries plenty and of poor quality.

Apples, Baldwin, ch., d.-h. bbl.	4 00	@	4 50
Baldwin, fair to good	3 25	@	3 75
Russet, com. to choice, bbl.	2 50	@	4 00
Inferior stock	1 50	@	2 50
Cherries, N. C., per 8-lb. bskt.	60	@	75
N. C., per 4-lb. basket	30	@	35
N. C., per quart	7	@	8
Strawberries, N. C., best	8	@	10
N. C., common to fair, qt	4	@	7
Norfolk, fair to good, qt	6	@	8
Maryland, good to ch'ce, qt.	10	@	12
Maryland, ordinary, per qt	7	@	9
Jersey, fair to choice, qt	8	@	12
Watermelons, Fla., each	75	@	1 00

VEGETABLES.

Potatoes, Bermuda, prime, bbl.	4 00	@	5 50
Bermuda, No. 2, per bbl	3 00	@	3 50
Fla., per bbl	3 50	@	4 50
Charleston & Sav., pme, bbl.	3 00	@	4 50
Southern, No. 2, per bbl	1 50	@	2 75
State & W'n, in bulk, 180 lbs.	2 00	@	2 25
State, per sack	2 00	@	—
Asparagus, Colossal, doz. bchs.	4 00	@	5 00
Extra large, green, doz	3 00	@	3 75
Extra prime, white	3 00	@	3 50
Prime, white and green	2 00	@	2 50
Poor to fair, doz. bchs	1 50	@	1 75
Beets, N. C. & Ch'n, 100 bchs	2 50	@	3 00
Norfolk, per 100 bunches	2 50	@	3 00
Cabbages, N. C., per bbl. crate.	1 00	@	—
Norfolk, per bbl. crate	1 00	@	1 12
Cucumbers, Ch'n & Sav., crate.	1 75	@	2 25
Fla., per basket	1 00	@	1 50
Fla., per crate	75	@	1 25
Celery, Fla., per case	1 00	@	1 75
Cauliflowers, nearby, per doz	1 75	@	—
Norfolk, per ½-bbl. bskt	1 75	@	2 00
Eggplants, Fla., per box	1 25	@	2 50
Garlic, New Orleans, per lb	6	@	8
Green peas, Norfolk, per ½-bbl. basket	1 25	@	1 50
Baltimore, per ½-bbl. bskt	—	@	1 50
Eastern shore, per basket	1 50	@	1 75
Kale, L. I., per bbl	35	@	50
Lettuce, L. I., per bbl	1 00	@	2 00
Onions, Bermuda, per crate	1 15	@	1 20
Egyptian, per bag, f. o. b	1 60	@	1 75
New Orleans, per bbl	1 75	@	2 00
New Orleans, per bag	90	@	1 00
Peppers, Fla., per carrier	1 00	@	1 50
Radishes, nearby, per 100 bchs	50	@	60
Squash, Fla., yellow, crate	75	@	1 00
Fla., white, per crate	50	@	75
Charleston, white, bu. bskt	75	@	1 00
String beans, Fla., per crate	40	@	75
Fla., per basket	40	@	1 00
Charleston & Sav., per bskt.	50	@	1 00
N. C., per basket	—	@	1 50
Spinach, L. I., per bbl	1 00	@	1 25
Turnips, Canada, Russia, bbl.	1 25	@	1 50
N. C., new, white, 100 bchs	—	@	1 00
Tomatoes, Fla., fancy, carrier.	2 50	@	2 75
Fla., poor to good	1 25	@	2 25

BUSINESS BITS.

PARAGRENE has now been on the market long enough to be thoroughly tested, and it gives good satisfaction. On Hope Farm it proved satisfactory for Potato bugs. Samples and circulars of Fred L. Lavanburg, New York.

A FENCE that is really ornamental is desirable about any residence. Kokomo Fence Co., 454 North St., Kokomo, Ind., offers 25 designs of all-steel ornamental fence, which is cheaper than wood. The catalogue gives full information—ask for it.

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SCRAPS.

YOUR article and illustration of carrying children to school was fine, and just what is wanted in this town, where politicians make a business of trading candidates, and hang to the old district system. Our farmers do not come to the front as their fathers did in by-gone days, and this rural picture of happy school children riding to school may help the mothers to act in this matter. J. R. C.

Connecticut.

AN APPLE SHED.—During the past two seasons I have put up a temporary apple shed by purchasing 12-foot matched boards, with which I make a lean-to shed on the north side of the barn. A piece of furring on the barn is all that is required to catch the top end of the board, and I leave the nails so that they may be pulled out. At the bottom some posts are set, and a piece of joist is nailed to them to hold the lower end of the boards, and in such a shed, 25 feet long, I can keep 100 barrels from the weather, and the sun will not shine upon the roof.

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THE CROW NUISANCE.—No sooner do practical husbandmen cry down the crow than up starts the theorist who tells how many insects a crow's crop has been found to contain. Our native song birds are growing noticeably fewer year by year. The crows are growing more bold in their depredations; but I have not noticed that insects are any less. Crows seem to be chiefly occupied in stealing the eggs or young of our old-time favorites, many of these insectivorous. I question if these would not, if allowed to grow unmolested, do far more to keep down insect pests than do the crows which destroy them. Let us have a bounty upon the black rascal, as a necessary means of saving our useful birds. F. W. P.

If you find a cold creeping on, keep a bottle of Dr. D. Jayne's Expectorant near at hand, and take a little dose occasionally. It will relieve at once, and soon bring about a cure.—*Adv.*

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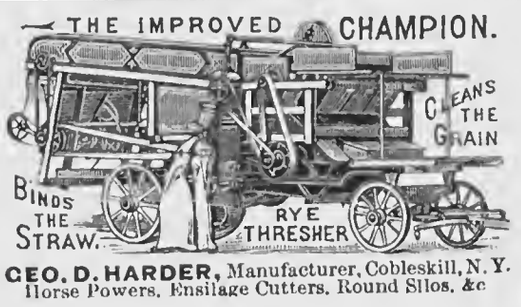

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We do not hesitate to say that this is one of the most interesting books on horticulture that ever was printed. Most reading farmers have heard of the now famous "Stringfellow Method" of planting trees, but few understand clearly what it is. This book tells the whole story in clear-cut, forcible style, which all can understand. Not only is the theory of close root-pruning carefully explained, but the general principles of gardening and fruit-growing are discussed. Mr. Stringfellow is a practical gardener, and he gives his own experience. We commend the book to all without reserve. New Edition, paper covers, 50 cents.

THE RURAL NEW-YORKER, New York.

Market Briefs

PICKED UP HERE AND THERE

A FISH ITEM.—What is supposed to be the largest cargo of fresh fish ever landed has just been unloaded from a vessel at Gloucester, Mass. There were over 200,000 pounds, 150,000 pounds being cod.

SLIGHTLY MIXED.—At the Registry Department of the New York post office a man called for a letter and was told to sign his name on the receipt card in the usual place. He then did some something that probably not one person in a million could do without considerable practice. Taking the pen in his left hand he wrote his name backwards. People standing by looked on curiously, but the man paid no attention to them, and evidently that was his usual way of making a signature.

A NEW FODDERING PLACE.—A man who has opened a small restaurant near THE R. N.-Y. office advertises the fact by means of a sign man who walks around the streets carrying a big canvas sign containing his announcement, name and business motto, which is: "Live and Let Live." It is a relief to know that he does not intend to season his food with Paris-green or strychnine, and that the results of patronizing him are not likely to prove immediately fatal. He evidently means well, but in his effort to appeal to the economical sense of the hungry crowd, has overlooked the fact that there are other lines of business for which this motto would be more appropriate than for an eating-house.

HEAVY GAME SEIZURE.—The law explicitly states that, even though game birds are killed in the open season, it is not permissible to put them in cold storage and offer them for sale during the closed season. The mere fact of having in one's possession during the closed season game birds protected by law, is considered a misdemeanor. State Game Protector Overton recently made a big haul in a cold-storage place in this city. Several thousand game birds were found, enough, it is said, to make a fine of $200,000 if assessed to the full extent of the law. The birds were partridge, quail, grouse, etc. A sample of each kind was taken for evidence and will be turned over to a naturalist to decide the species. At this writing the matter has not been closed up, and there is nothing definite to be said as to fines.

DOCKAGE CHANGES.—The Norwich and Stonington lines of Sound steamers have for 20 years occupied docks at Pier 36, North River. Their lease expires the last of this week, and it is said that the Dock Board has given them notice that the lease will not be renewed. It is evidently the intention of the Dock Board to lease this pier to some transatlantic line and force these Sound steamers to take dockage in the East River. This action comes as a great surprise, and has brought out many protests from merchants and shippers. Pier 36 is near a great business district dealing extensively in the dry goods, shoes and other articles of New England manufacture. In fact, many business houses are in this section largely because they wish to be reasonably near the docks to save trucking long distances. Also this is convenient for the produce commission dealers, who get considerable stuff from these steamers. These people consider that the Dock Board is acting in an extremely arbitrary manner in peremptorily ordering the steamship companies to get out without in any way consulting the interests of the business men who are located in that section. The task of trucking these goods from some pier in the East River across the city is enormous.

FRUIT NOTES.—There is a big surplus of miserably poor strawberries from North Carolina. In going through the markets an occasional crate of fine berries is seen, but they are the exceptions, the bulk on hand at this time being inferior on account of their small size, some but little larger than field berries; or, worse yet, the soft and rotten condition in which many have arrived. In nearly all the fruit houses men are seen picking over the berries and throwing away the poor ones, and in some instances the condition is so bad that they do not sell for enough to pay the freight. Wholesale prices on ordinary lots have been as low as two cents. A very fair grade of picked-over berries is retailing at 10 cents per short quart. The baskets, however, are not marked "short," and this short-package law seems to have frozen out during the Winter. A few North Carolina cherries are seen, some bringing as high as 60 to 75 cents per eight-pound basket, but the bulk received thus far is inferior, and not to be compared with the California cherries, which retail at 12 to 25 cents per pound. There is now and then a small lot of gooseberries, but this fruit does not attract much attention, and the canners usually get the most of it. One fruit man on Washington Street had five watermelons (the first we have seen this season) for which he asked $2 apiece. Judging by their appearance we should say that this would be but a fraction of the amount a man would have to spend for the doctor, and perhaps worse, if he were so rash as to buy one of these melons and let his children help themselves.

W. W. H.

BARN PASTURE FOR COWS.

A Well-Arranged Soiling System.

One of the most interesting dairy farms in this country is located at the New Jersey Experiment Station at New Brunswick. Prof. Voorhees, the Director, is a very practical man, and he has devoted the greater part of the farm to an experiment for providing cheap forage for a large herd of dairy cows. The old idea of providing one or two acres of pasture, over which a cow must roam in order to obtain her food, has been proven to be a back number at this Station. The farm is providing the rough forage for more than one head of stock for every cultivated acre. The cattle are given a small inclosure in which they exercise during a part of the day. The green forage is cut and brought to them, and a succession of forage crops must be provided in order to furnish this barn pasture from the middle of April until the middle of October. Two silos furnish a fine quality of silage for the Winter months, and stand ready to fill any gap made by failure of field crops. On May 28 I went to New Brunswick, so as to be able to tell R. N.-Y. readers just how this soiling system is operated. They had just finished cutting the wheat from two acres, and this and two acres of rye have furnished green food for the stock for May. As soon as these four acres were cut, plows were put at work turning over the stubble, and, as soon as the weather permits, cow peas of the Wonderful variety will be sown. At the proper time these cow peas will be cut so as to fill a niche in the soiling system, the remainder being cured as hay, and then the ground will be plowed again and planted to fodder corn. This will produce a good crop before frost, and, when it has been cut and fed green, wheat or rye will be sown for next Spring's feeding. At the time of my visit, Prof. Voorhees said that he had already green forage for 50 cows and other young stock, enough to last until the middle of July. This meant the Crimson clover, which was seeded in last year's corn; the first cutting of Alfalfa, which, on the day of my visit, stood 30 to 36 inches high; three different sowings of oats and peas; and an acre of mixed grasses, which are to be cut and fed if needed. The first planting of corn had also been made, although the stand was poor on account of the wet weather. In order to understand just what this system means, I will give the following table, which shows how the crops were fed last year:

Kind.	Date of seeding.	Period of cutting and feeding.	Yield, tons.
Rye	Sept. 6, '99	May 1- 4	4.1
Rye	" "	" 4- 7	3.4
Rye	Oct. 12, '99	" 7-12	6.0
Rye	" "	" 12-16	5.4
Wheat	Sept. 27, '99	" 16-19	3.5
Alfalfa (first cutting)	May 14, '98	" 19-25	9.0
Crimson clover.	July 8, '99	" 25-29	5.0
Crimson clover.	" "	to June 2	5.0
Mixed grasses.		June 2- 7	6.2
Oats and peas.	April 3,	" 7-11	5.0
Oats and peas.	" 3,	" 11-16	6.8
Oats and peas.	" 10,	" 16-23	10.2
Oats and peas.	" 10,	" 23-29	10.2
Oats and peas.	" 21,	" -29	10.2
Oats and peas.	" 21,	to July 6	10.2
Corn	May 3,	July 6-10	6.0
Corn	" 3,	" 10-14	6.0
Corn	" 3,	" 14-18	6.0
Corn	" 10,	" 18-24	10.1
Corn	" 10,	" 24-30	11.6
Alfalfa (third cutting)		" -30	4.9
Alfalfa (third cutting)		to Aug. 2	4.9
Cow peas and Teosinte	" 28,	Aug. 2- 6	6.0
Mixed grasses.		" 6-11	6.0
Pearl millet...	" 29,	" 11-16	8.7
Kaffir corn and Velvet beans.	" 26,	" 16-21	8.4
Cow peas and Kaffir corn..	" 26,	" 21-26	8.0
Evergreen sweet corn...	" 28,	" 26-30	5.9
Alfalfa (fourth cutting)		" -30	2.8
Alfalfa (fourth cutting)		to Sept. 2	2.8
Teosinte	" 16,	Sept. 2- 6	8.1
Cow peas	July 12,	" 6-10	6.2
Cow peas	Aug. 1,	" 10-16	8.0
Cow peas	" 1,	" 16-22	8.0
White flint corn	July 10,	" 22-30	11.0

This explains itself, giving the date of sowing, date of cutting, number of days' feeding from each crop, and the full succession from May 1 to October 1. The crops are cut each day with the mower, loaded into wagons and hauled to the barn. As a definite and exact experiment is required, each load is carefully weighed, so that they may know the exact amount produced on each acre. This, of course, takes more time than would be required in a practical dairy, yet it is of great importance, as it gives the actual results. I will ask readers to study the table here given, and hope during the season to carry the crops through, giving the dates of sowing and cutting, the amounts of forage produced, and the results, so far as they are obtained, from time to time. There are many farmers so situated that at least a partial soiling system would be possible, and I feel sure that a visit to the Station and a view of the actual crops in growth would quickly show the advantages of producing this green forage. H. W. C.

THE STUDY OF SHORTHAND.

A reader wishes to know whether this is taught successfully by mail, and how best to practice at home. Yes, certain schools do good work in correspondence instruction in this line; but it must be remembered that really proficient shorthand writers are nearly as scarce as the proverbial hens' teeth. Authorities go so far as to say that there are less than 25 people in the world who are experts in taking down all classes of matter. The thousands who are called stenographers have merely a little smattering of some one branch of this trade, just enough to enable them to do fair work in writing letters, and in some branches of reporting. Through mail instruction the principles may be had, and also hints as to methods of study and practice, but the pupil will find that this word "practice" must be branded on his mind in italics or the biggest capitals. A reasonably thorough knowledge of the best usage in language is necessary. Two points to be aimed at are correct and readable word outlines, and speed. Many try to work up speed at the expense of readable signs and vice versa, instead of aiming to keep an even balance. Here are a few methods of practice for those working at home which we have found of service. Have some one read or talk to you, speaking as rapidly as you can possibly take it and read it afterwards, and gradually increasing the speed so that the writer will be worked to the utmost. This will get to be monotonous, but just such bitter doses, sometimes for an hour on a stretch, will be met in actual shorthand work, and one must be able to take them. A plan for acquiring signs for a good many words, and also some speed, is to take a newspaper, and over each word write the proper outline. Study the strange words and make the signs for them several times. Marked improvement in getting a wide vocabulary will be noted by writing a column a day in this way. Another helpful plan is to take a short newspaper article, read and make the signs for it sentence by sentence. Then lay it aside for a day and try to read it, referring to the original article only when necessary. Even a very limited knowledge of shorthand is of some service, though used only now and then in making notes. The study of it trains the eye, ear, brain and hand to work together. It is like a grindstone for sharpening up one's wits and making him think quickly. It also develops the memory, as in rapid work one will often get a whole sentence behind. He must at the same time be making the outlines for the previous sentence and still thoroughly grasp what the speaker is saying, keeping up this double-barreled performance until a pause of the speaker gives him a chance to catch up. No one need expect even partly to master this trade unless he is willing to go at it in dead earnest. There is no reason to be discouraged, however, for great difficulties and tasks that seem impossible on the start, melt away before careful, persistent work like snowbanks under an April sun.

THE GARDEN BOOK, by T. Greiner. The Farmer Co., Philadelphia, 190 pages; 50 cents. This is a very useful book calling especial attention to the need of every farmer for a garden or truck patch. Explicit and reliable directions are given for growing every variety of vegetable. The diagrams and plans for farmers' gardens are especially useful. A vast quantity of valuable information is contained between its covers.

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Bed-Time.

Going to bed to tumble and toss and dream; to pursue in vain the phantom sleep through long weary hours and rise to a new day unrested and unrefreshed. That is the way with many a woman, who is tormented by the aches and pains resulting from female weakness, and other diseases of the delicate organs of woman. Dr. Pierce's Favorite Prescription was made to cure just such cases and it does what it was made for. It heals ulceration and inflammation, dries debilitating drains, cures female weakness, strengthens the body, soothes the nerves and enriches the blood. It gives lasting strength for the day and sound sleep for the night.

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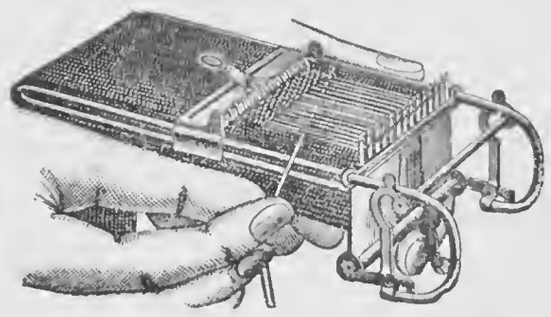
This is the only successful darning machine we ever saw. We have tried others that were absolutely of no value. This one is little short of perfect. It enables you to mend underwear, stockings, curtains, table linens, clothing, and does an endless variety of art and fancy weaving better, easier and quicker than



by any other way. Full directions accompany each machine. When a lady has once used this little machine, she would not do without it for any consideration. We will send it postpaid for $1, or for two new yearly subscriptions at $1 each. All money returned if no satisfied.

Live Stock and Dairy

REMEDIES FOR FLIES ON CATTLE.

The little fly is small indeed, but it requires comparatively few of these to make cattle lose in flesh and milk, and turn from quiet and sedate to wild and nervous animals. This has probably always been the case, but the advent of the little horn fly early in the nineties seemed to make a bad matter worse. These flies appeared in certain sections and clustered about the lower parts of the horns when they were not on the body proper, so that they were dubbed "horn flies." Much was written about them, and various remedies proposed or offered to the public. These pests in some pastures occurred on the cattle in immense numbers, and greatly worried them. While one reads less of these fly pests now than about five years ago, there is no doubt but that they are fully as common, if not more so, than they were then. They are much like the common house fly in appearance, only slightly smaller. The writer has employed various methods to reduce these fly pests. Several forms of manufactured fly killers are on the market, but these are very expensive, and have to be applied anew every three or four days, in order to keep up the effect. One of the very best of these is known as "Shoo-Fly." This has been extensively advertised, and great quantities undoubtedly sold. This is offered at 50 cents a quart by a local druggist of the writer's acquaintance. The 1901 *jobber's price list* of this preparation, which is before me as I write, quotes it at 60 cents a gallon by the barrel, or 70 cents by the 10-gallon lots. Fish oil, which in the writer's experience, is about equally satisfactory, is quoted by the aforesaid druggist at 65 cents per single gallon, or 55 cents in quantity.

If one has but two or three cows, one of these preparations may be very satisfactory, but it is a serious problem to handle a large herd, and the preparation means considerable expense and labor of application. This substance is applied with a wide, flat brush, or by spraying it on, the latter being the only practicable method with many cows. In our experience, a mixture of two tablespoonfuls of crude carbolic acid in a quart of fish oil, gave as satisfactory returns as the commercial preparations. One quart will do for one application on 40 to 50 cows. Pine-tar preparations have been used somewhat, but these are sticky, and their use is not to be recommended. The materials above referred to are intended to keep off flies, but not to kill them, they being offensive to insects. Pure kerosene, however, has an advantage, in that it may be sprayed on the cattle, and will kill many flies if it hits them to a reasonable extent. Each season we do considerable spraying of kerosene in the barns, thus killing immense numbers of flies. On the cooler nights flies collect on the ceilings and warmer spots in the barn, and then we dose them, using ordinary kerosene in a cheap hand spray, such as sells for 50 cents. We also spray them on the cattle.

It is a good policy to break up heaps of manure in the pasture, for the flies breed in these, and thus their development will be repressed. In any event, it is necessary to wage constant war against these flies, if one wish to get the best possible returns from either dairy or beef cattle. The suggestion to keep the cattle in the barn during the Summer days, soiling them there in darkened stables, and then turning them on pasture at night, is worthy of adoption by those situated to do so. Cows should thrive under such conditions. This fly question is a most important one, and the injury these pests do to dairy cows in depreciating milk yield is no doubt very great. Readers of THE R. N.-Y. who have successfully solved the problem at reasonable cost, would confer a favor on many stockmen by contributing their experience to its columns.

C. S. PLUMB.

HOW TO HANDLE ALFALFA HAY.

I find that wherever Alfalfa is discussed the question at once arises, can it be cured and made into hay? Having had seven years experience in making Alfalfa hay I will give some practical points in regard to it. Hay is said to be "grass cut and dried for fodder," and that is just about what the majority of the hay in the country is, having a variable feeding value, according to condition when cut and how the process of drying has been conducted. Plants give off most of their moisture through their leaves, and very little from the stalk. From this it will be readily seen that we must retain the leaves if we expect to get the moisture from the plant quickly. When the plant is growing it is supplied with moisture by the roots; when cut the supply is stopped, but evaporation continues from the leaves, and it quickly wilts. Farmers often say their clover is so heavy they cannot cure it. They spread it, turn it and perhaps run the tedder over it frequently, and finally bunch it up, but it will not dry out, but what moisture can be wrung from the stems by twisting a few of them together. All the time they have been stirring and tedding the clover it has been exposed to the sun, and the leaves being the most delicate part have withered and dried and been shaken from the stem before they could complete the work of carrying off all the moisture from the plant. After losing their leaves the stems dry very slowly, and are likely to mold when put in the barn. Such hay has little food value.

When about one-third to one-half of the Alfalfa plants show the blossom, you will find, if you examine closely, that there are yellow leaves beginning to show at the bottom of the stem. I think this about the right time to cut for hay. When in best condition cut at once; do not allow anything to cause delay, as it will become more woody and contain less digestible matter every day it stands, and you will not only lose in feeding value of the present crop, but will reduce the vigor of the plant, and the next crop will be lighter in consequence. This is one of the secrets of success; in short, Alfalfa should never be allowed to stand beyond the blossoming period if the best results are to be obtained. After cutting it should lie upon the ground undisturbed, from two to four hours, according to the weather conditions at the time, when it will be just nicely wilted; then rake and put into fair-sized bunches. Now, if the weather is good, let it stand two days, when it will be ready to put in the barn, and should be drawn at once without opening the bunches as is sometimes done. Handled in this way there is practically no loss of leaves. If you apply the test of twisting the stems to this hay you will not be able to wring from them much moisture, and yet there will be enough sap left to carry it through the sweating process in the mow without injury. But should the weather be rainy we have found that when well put up it will stand rain better than Red clover. I have had it stand in the field one week, when it rained nearly all the time, with no apparent injury except a little bleaching on the outside of the bunches. Never draw to the barn when there is any water on it.

Another thing I consider of importance is the use of salt on the hay when put in the mow. We use common salt which we buy in barrels. In using, when half a load is off level, the hay in the mow is sown broadcast with about two quarts of salt; then when the load is all off two quarts more are sown upon it. The salt will be dissolved by the sweating of the hay, and will prevent mow-burning or molding. When the hay is all in close the barn doors and have as little circulation of air as possible. As long as there is moisture over the top of the mow there is no danger of the hay spoiling; it will come out all right every time. Another feature of Alfalfa hay is, that when well handled it is never dusty, but makes the sweetest and most nutritious hay I have ever used for all kinds of stock, including hens. We feed practically no grain to our horses, only a little wheat straw to balance the ration, and they are always in fine condition and stand hard work without loss of flesh.

D. R. P.

Tompkins Co., N. Y.

BUTTER FROM KAFFIR CORN.—A dispatch to the daily papers stated that the Overbrook Creamery at Lyndon, Kan., had lost $400 because the cows were fed on Kaffir corn. The Kansas Experiment Station, after investigating this case says among other things: "If Kaffir corn, which has been such a good yielder and drought-resister, should be excluded from the ration of the dairy cow, many farmers in central and western Kansas would be obliged to quit the dairy business. This would result in a loss of thousands of dollars annually. When the season is a poor one for the curing of the crop, and the grain has been left on the fodder, considerable penetrating dust arises from the crop when handled at feeding time. If the feeding is done just before or at milking time particles of this dust, with all the germs that they carry with them, will undoubtedly find their way to the milk pail, and may cause a poor quality of butter. In the instance of the Overbrook Creamery, the manager states that the Kaffir corn in that part of the country had all been damaged by rains, and where the feed was the poorest the milk from that farm made the poorest butter. Indications point to a slight decomposition of the feed. Hay and fodders of any kind contain large number of offensive germs, which if allowed an entrance into the milk pail and permitted to multiply rapidly, will cause a very undesirable quality of butter."

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The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. *Impossible to produce scar or blemish.* Every bottle sold is warranted to give satisfaction Price $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars.

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Newton's Heave, Cough, Distemper and Indigestion Cure. A veterinary specific for wind, throat and stomach troubles. Strong recommends. $1 per can. Dealers, mail or Ex. paid. Newton Horse Remedy Co. (R) Toledo, Ohio.

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Others Cure their Animals, WHY BUTCHER yours? Thousands of cows, mares, sows, etc., restored to breeding in the past 20 years. The best stock farms in the world are our patrons, why not you? ABORTION: Every cow that aborts should be treated with this remedy. You cannot afford to experiment, profit by the experience of expert breeders. Treatment by mail, $1.10. Other remedies just as reliable. Ask for circulars any way.

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Swiss Cow Bells

Made from finest quality of Swiss Bell Metal, they are light but strong and lasting. Musical in the extreme. They add to the appearance of herd besides making them tame and tractable. 4, 5 and 6 in. in diameter. Strap with each. Direct in sets of 3 to introduce. Circulars on Cow, Sheep and Turkey Bells Free.

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Two Grandsons of Exile, sire of 86 tested cows. Solid Color, one and three months old. Handsome. J. A. HERR, R. D. No. 4, Lancaster, Pa.

HIGH-CLASS

Registered Jersey Cattle.

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JERSEY BULLS—Have on hand a few selected Registered Jersey Bull Calves, from two to four months old, from great milk and butter-producing dams, and of the most approved breeding. Improve the quality of your milk and butter output by taking advantage of this offering. We breed for quality and quantity. Will make price low; delivered to your station. Don't miss this opportunity. Correspondence promptly answered. WHITE OAK RIDGE STOCK FARM, East Orange, N. J.

America 196 D. B. C. A. Is due next month. Bred to Belvidere 318.
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FOR SALE—PUREBRED HOLSTEIN-FRIESIANS. Two registered bulls ready for service; also a bargain in one bull calf dropped April 9. All of above from best families. W. W. CHENEY, Manlius, N.Y

Holstein-Friesian Bull

ready for service, and a fine lot of Bull Calves. Best of breeding, and from deep producing families.
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FOR SALE—Thoroughbred
HOLSTEIN-FRIESIAN CATTLE
of the best families. Also, 30 high-bred Bulls at reasonable prices. Write the MAPLES STOCK FARM, Binghamton, N. Y., WM. ROOD, Prop

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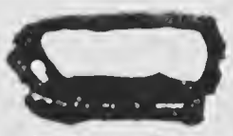

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2000 FERRETS. First-class stock. Some Trained. New price-list free.
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From litter sister to Shep of Hope Farm. Sable and white. Price, $10. C. F. HAIGHT, Millbrook, N. Y

100 finely-bred Lord Britain and Fashoda Does, at following prices: Does scoring 90 to 92 points, $3: Does scoring 92 to 94 points, $4; Does scoring 94 points or better, $5—laid down at your door, express paid. A few very choice bucks at very low prices. All stock scored by P. E. Crabtree or by one of his graduates.
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DAIRY AND FARM NOTES.

Some Facts About Cheese.

GOOD FOOD.—People ought to eat more cheese; the Americans are a butter-consuming nation. We are much interested at times in furthering our export trade in butter, but when we are just about ready to talk with an exporter, domestic consumption increases and absorbs the surplus. Not so with cheese. We need an export demand in order to maintain an active market. While scarcely 10 per cent of our product is exported it is always the surplus that weighs down a market. Consumption could be increased one-half pound per capita; we should exhaust our surplus. We consume three pounds of American cheese per capita, while the English consumption is nearly 18 pounds. Think of buying a pound of steak that contains 70 to 75 per cent moisture, and paying 15 to 20 cents for it, rather than the same price for a pound of Cheddar cheese containing one-half that amount of water. We buy some fiber in the meat, and often a bit of bone. In the cheese not five per cent is waste, and the component parts, fat and casein, are the most digestible and nutritious of foods. Each year we are increasing the use of milk and milk products, which is an indication of good judgment. Much has been said and written about the indigestibility of cheese. It is my judgment that these conclusions have been drawn from skimmed or partly-skimmed cheese, and they are no doubt correct. The presently-accepted method of manufacture followed by the makers of northern New York is producing an article of food that is easily digested, and must soon be recognized as an everyday necessity. Only through the most rigid attention to quality can we hope to succeed in placing the cheese product by the side of meat as a daily food. I have often observed with what relish and haste a plate of soft, fine-flavored, silky-textured cheese would disappear from a hotel table; in fact, no food placed before guests will create more comment, favorable or unfavorable, as the case may warrant. THE R. N.-Y. has been instrumental in forming an Apple Consumers' League. I should like to establish a cheese consumers' league. By the way, the combination would be a good one, the fruit acid emulsifying the fat, and thus aiding digestion and increasing the consumption of two staple and honest products. While we are talking about foods I wish nervous people who are liable to have something the matter with them, or *think* there is, would eat less meat and more cheese, and drink a glass of milk instead of a cup of coffee, stick to it for a year, and report whether or not they have been benefited.

GOOD MILK.—The foundation of good cheese is good milk. It is well that a cow cannot comprehend what is said about her. If there is any trouble with milk at the factory it is often charged to the cow, when the fault was plainly with the owner or caretaker. I would rather trust a cow to do good work than the man who takes care of her. If the manufacturer could get milk always as pure and free from damaging bacteria as the old cow produces it he would have little trouble with his raw material. Probably no one item occasions greater loss among cheese factories and creameries, as presently managed, than taking in tainted milk. It not only injures the product, but decreases the output. Several causes enter into the case. Competition is sharp among manufacturers. Factories are built on every four corners, and farmers are inclined to be quite independent in their attitude; that is, some of them. Then again, makers are often indifferent, and fail properly to examine each can when emptied. During an apprenticeship which I served for 12 years at the weigh can, I found my weakness to be a lack of courage to tell a neighbor that his milk could not be used, and hence he must take it home. Some men have too much courage, and make patrons mad. If there is any one place that requires tact and a fine conception of the difference in human nature, it is at a weigh can. Where milk is purchased at a price arbitrary rules are posted and lived up to. Only a very small proportion of milk is purchased; the great bulk is manufactured on the so-called patron plan. Are the makers of butter and cheese keeping pace with the higher grade of goods demanded? I think they are. In market reports we read: "The quality does not seem to be up to former years." I have read it every year for 10 years. I have been eating butter and cheese through New York State and some eastern towns for eight years, and I positively know that the quality has steadily improved. Of course the consumer is much more critical now than then.

DANGERS FROM WHEY.—In the patron-plan factory the skim-milk and whey are drawn home for feeding purposes in the same can that hauls the milk. I have denounced the system at home and abroad, and have worked hard to inaugurate a plan which would do away with the evil, but nothing tangible has resulted. The farmers feel the feeding value of the by-product in our locality, and are anxious to have both the feeding and fertilizing value on the farm. They do not like to use a double set of cans, and I am not sure but as much harm would come to milk hauled in the same wagon with whey cans, by contact with germs, as comes to the milk from carrying the by-product home. The clean sharp lactic acid in whey or skim-milk does no harm. Lactic acid is a foe to the taint and gas-producing germs, the germs of an alkaline nature; germs producing a slimy or bitter condition. We use a clean, sharp lactic acid starter for butter and cheese to counteract the above troubles. Some milk in my experience and observation causes but comparatively little trouble. The farmer can see it; knows it is wrong, and willingly takes it home, but the other troubles mentioned he cannot see, and much less comprehends their evil effects. We have therefore adopted what seems presently the only alternative; that of keeping the whey tank thoroughly clean. A daily scrubbing with hot sal-soda water does the business, and it certainly has a marked influence on the character of milk as delivered. I am sorry it is true, but I have been in a great many factories, and it is the exception to find this receptacle in condition to keep whey or skim-milk clean enough to permit its entrance into a milk can. This plan adds much to the value of the by-product as a food. I have investigated the manufacture of whey and skim-milk into articles of commerce, and find every investigation bringing the same conclusion; that it is worth more to feed calves and pigs.

H. E. COOK.

Price of Milk for Butter.

What price should I pay for milk that tests four per cent butter fat to be made into butter at 20 and 25 cents per pound? The milk has to be taken two miles every morning and delivered into a separator. I keep the skim-milk. We run a private butter dairy, and as we can use more milk, I thought I might buy more milk as cheaply, if not cheaper than more cows and make it. Z. H. S.

Millis, Mass.

One hundred pounds of milk containing four per cent butter fat should make about 4½ pounds of butter; this selling at 20 cents per pound would bring 90 cents per 100 pounds for the milk. Counting three cents per pound for manufacturing the butter leaves 77½ cents received for 100 pounds of milk. It would probably not be too much for the one buying the milk to take 7½ cents from this amount, which would leave 70 cents per 100, which he could afford to pay for the milk, which on the basis of four per cent fat would be 17 cents a pound for the fat. The price that one could afford to pay for four-per-cent milk when the price obtained for butter is other than 20 cents can be readily worked out on the same basis. L. A.

KILLING FLIES.—After using several of the preparations on the market, I have settled down to the use of kerosene oil and carbolic acid; two ounces acid to gallon of oil. Put on as a spray, and for the purpose of killing the flies.

New York. CLAYTON C. TAYLOR.

UNMATE THE FLOCKS.—There is every reason why the males should be removed from the pens as soon as eggs are no longer wanted for setting. If not wanted for breeding another season their meat will never again be worth so much. Put them in totally dark but ventilated quarters, giving feed and light for a few minutes twice a day. In two weeks their flesh will have increased as much in tenderness as in fat. If left in the light they will keep on the move, and be too uneasy to fatten. A male just from the breeding yards is unfit for food. The flocks of hens will not be so mischievous without the male. The non-fertilized eggs are the only proper ones for putting down. These will keep from June to Thanksgiving with no preservative of any kind, but simply managing to keep the yolks from gravitating upward to the shells. Pack on ends, screw on cover, and invert firkins once in 10 days. Keep in a cool room.

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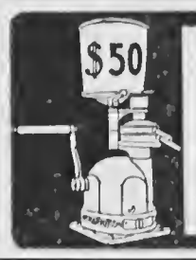

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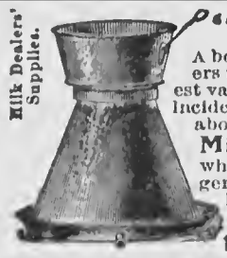

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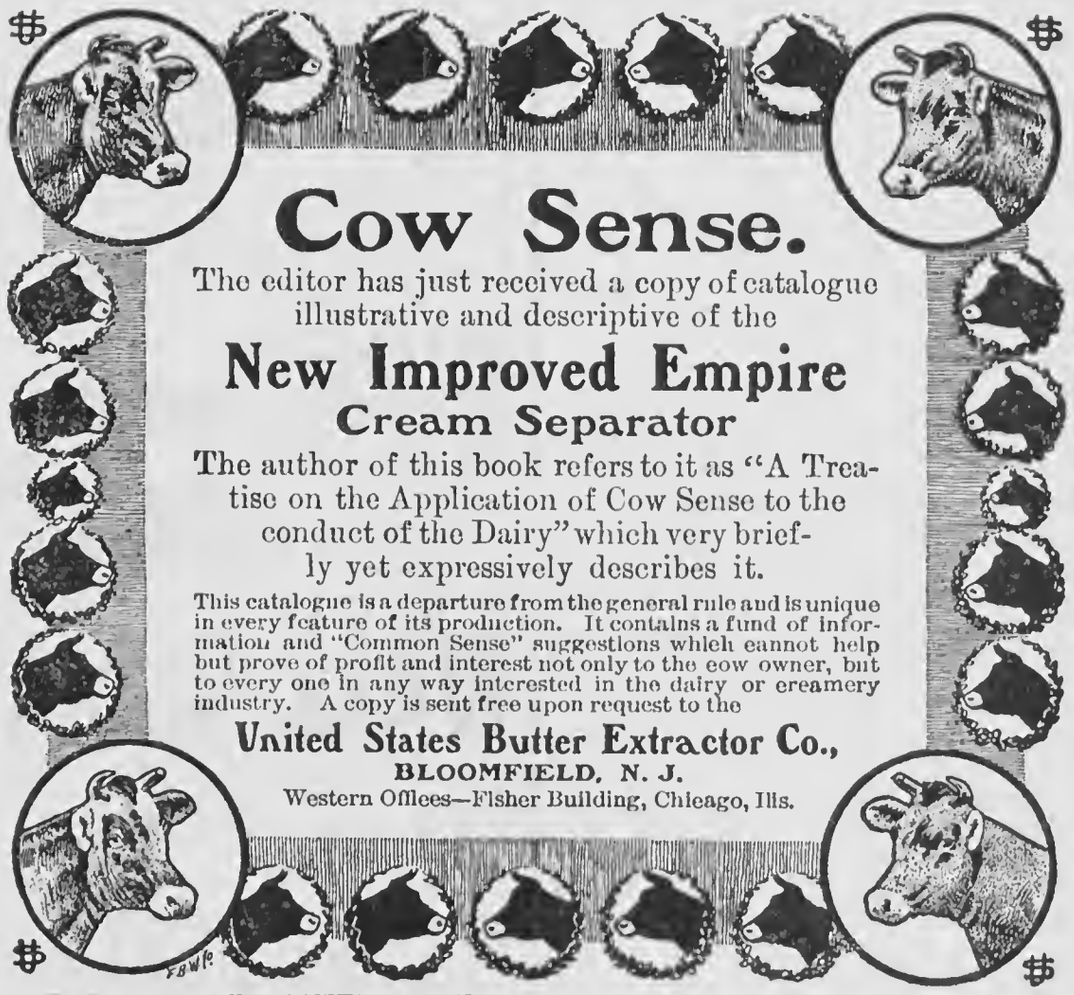

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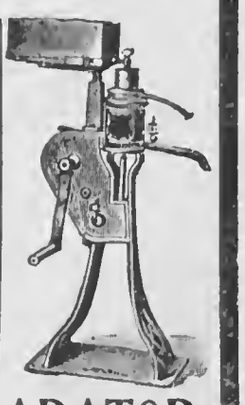

Humorous.

An impudent fellow in Hawarden
Inquired, without asking his pawarden,
Of the learned Colquhoun if the man in the mquhoun
Always lodged in some nobleman's gawarden?
Whereupon the fire-eating Lord Cholmondeley,
Overhearing the words, remarked grolomondeley,
To an awe-stricken neighbor, unsheathing his seighbor,
That the question was beastly uncolmondeley. —Life

"Who are our closest friends, p
"Those who won't lend us a cent, s
son."—Brooklyn Life.

"Why can't a man's nose be r
than 11 inches?" "Oh, if it were over 12 it would be a foot."—Yale Record.

He: "Yes, she is living under an assumed name." She: "Horrible! What is it?" He: "The one she assumed immediately after her husband married her!"—Tit-Bits.

Visitor: "Don't you think it's hard on your daughter to run that grain-drill out on the prairie every day?" Western Farmer: "Why, I didn't think it was anything unusual for a girl to do plain sowing."—Judge.

Barber: "Why is it that you and your brother are so bald, sir?" Victim: "I'll tell you if you'll promise not to say anything more about it." Barber: "Sure, sir." Victim (whispering): "It's because our hair has fallen out."—Tit-Bits.

Uncle Jethro: "There's no trusting these city storekeepers." Aunt Hannah: "What's the matter now, Jethro?" Uncle Jethro: "I bought a porus plaster night before last and when I got home I found it was full of holes."—Boston Transcript.

Said the teacher, "And it came to pass when the king heard it, he rent his clothes. Now, what does that mean children—he rent his clothes?" Up went a little hand. "Well, if you know, tell us." "Please, ma'am," said the child, timidly, "I s'pose he hired 'em out."—Leslie's Weekly.

Amateur Farmer: "Mr. Green, there seems to be something serious the matter with the horse I bought of you yesterday. He coughs and wheezes distressingly, and I think, perhaps, he is wind-broken. What would you advise me to do?" Horse Dealer (promptly): "Sell him as quickly as you can, jes' like I did."—Tit-Bits.

"Our milk," urged the agent, "is sterilized." The housewife laughed scornfully. "There is a lot of foolishness about sterilization and all sorts of health precautions these days," she said. "I don't take any stock in it myself. Our ancestors didn't resort to any such methods." "True," admitted the agent, "and look at the result. They are all dead."—Chicago Post.

"Are you de gemman dat said, 'De hoss mus' go?" asked the colored man. "I am," answered the enthusiast on the subject of mechanics. "Well, sir, I jes' desiahed to take de liberty o' sayin' dat I has de balkies' animal dat ever blocked a street, jes' around' de corner. I sho'ly would be much oblige ef you could come aroun' an' prove yoh words."—Washington Star.

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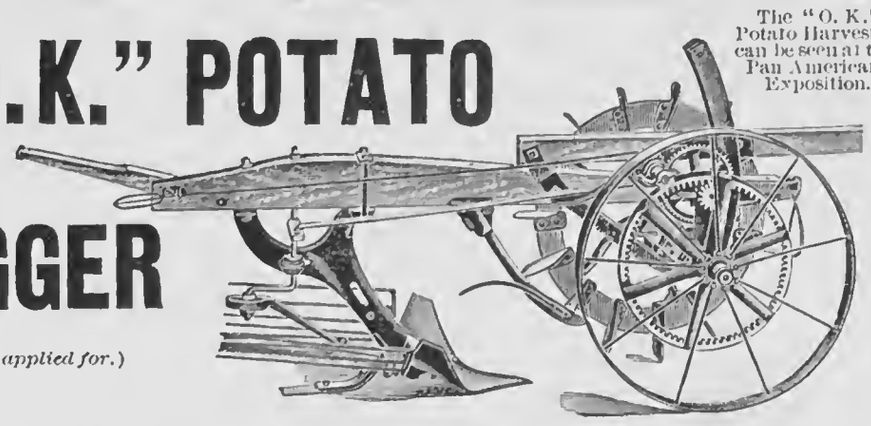
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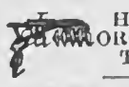
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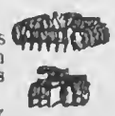
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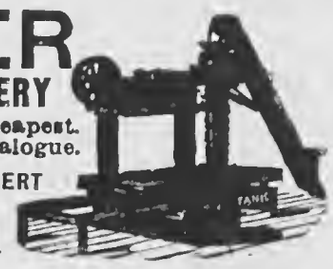
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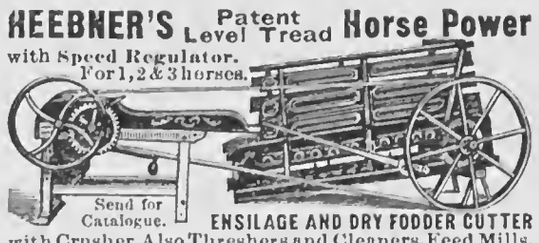
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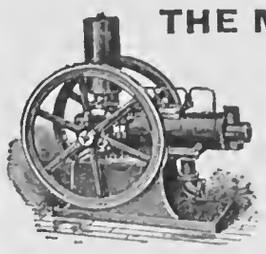
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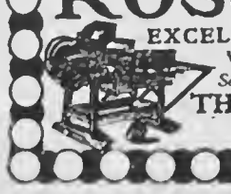
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JUN 14 1901
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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2681. NEW YORK, JUNE 15, 1901. $1 PER YEAR

THE FIGHT AGAINST MOSQUITOES.

UNCLE SAM LEADS THE BATTLE.

Effective Work on Long Island.

For years people have endured the stings and poisons of the deadly mosquitoes—not willingly, but because they knew no remedy. Now science is coming to their aid. Prof. L. O. Howard, of the National Department of Agriculture, issued a valuable bulletin on the mosquito and some of the best methods for fighting it. This has led people in various parts of the country to proclaim a destructive warfare against the insect. Considerable work of this sort has been done on Long Island.

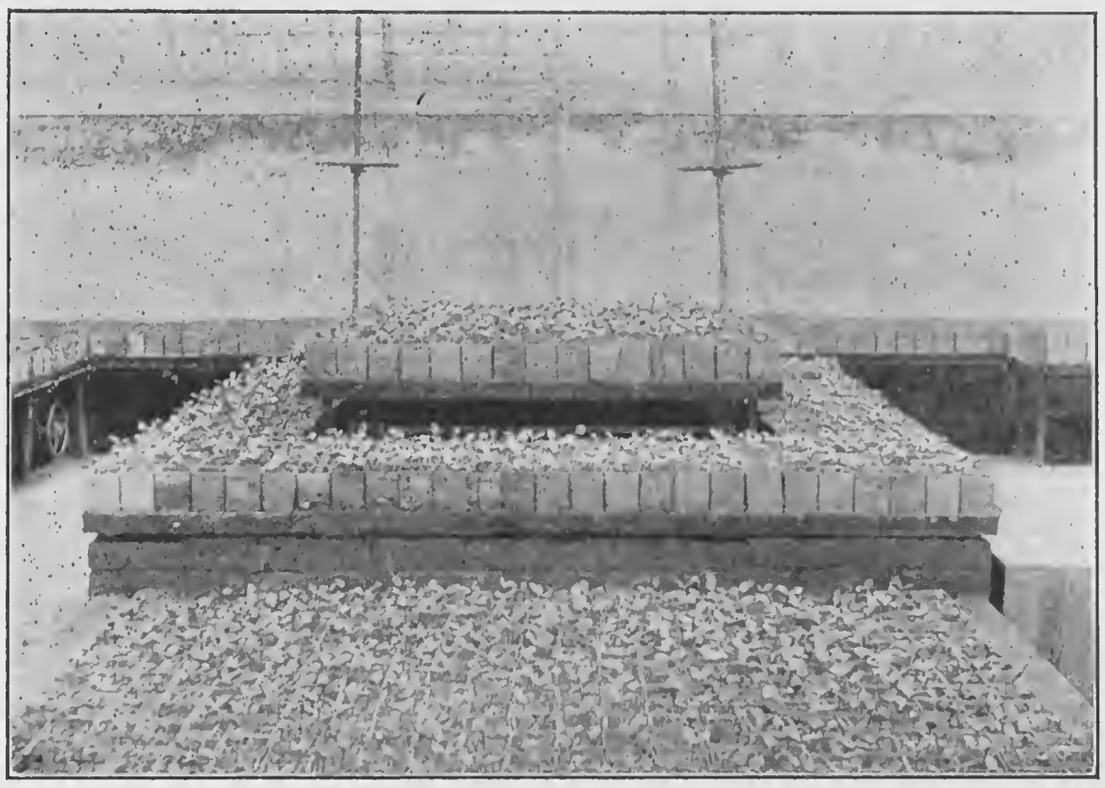
I have been fighting the mosquito practically in the way suggested by Prof. L. O. Howard's bulletin, and I consider the experiments outlined in that bulletin as practical and worthy of the attention of farmers and country people. I do think that mosquitoes may be, in the course of a year, certainly in two years' persistent and intelligent work, entirely exterminated from a given locality. It has been determined conclusively that malaria is not only transmitted by mosquitoes, but that malaria *cannot be* and is not transmitted in any other way! (See Prof. Celli's work on malaria, in which he traces the life history of the malarial germ, and demonstrates this point conclusively. (See also the works of Grassi and Ross on this subject.) Recently it has been proven that yellow fever is transmitted by a certain variety of the Culex mosquito, or what has lately been determined to be a distinct species of mosquito. While it has been demonstrated that these mosquitoes transmit yellow fever, it is not, as in the the case of malaria, the only means by which yellow fever is communicated. When the fact, which has long been known and frequently referred to by Prof. Howard and other eminent entomologists, is considered, that mosquitoes breed only where there is water, that they will not breed in absolutely salt water, the problem of exterminating them becomes comparatively simple. The female mosquito, as you will see by Prof. Howard's bulletin, lays from 200 to 400 eggs, which hatch out in the course of a week or 10 days, at Summer temperature, into little water creatures like minute tadpoles (larvæ). These creatures are obliged, it appears, to come to the surface every few minutes to breathe, and when deprived of this opportunity, will die in the course of a few hours. There are, therefore, three ways of attacking the pest. The first and best method is to drain all water or places where water will lie, even temporarily, for a space of 10 days or two weeks. Such large ponds as cannot be drained may be covered with a film of kerosene oil, a barrel being sufficient, if allowed to flow on the windward side of a pond, to cover three acres of water. As this will evaporate before 10 days or two weeks, the operation must be again repeated. Such ponds as are of an ornamental character and preclude the possibility of being treated with oil, can be filled with a species of fish which devour the mosquito larvæ. Sunfish, sticklebacks and top minnows are suitable for this purpose.

I am convinced from my observations and experiments that no pocket of water which exists as long as three weeks at a time is free from the liability, if not from the absolute certainty of breeding vast numbers of mosquitoes. As Prof. Howard points out, a single mosquito that has hibernated during the Winter in an old building, tree trunk or heap of leaves, will produce from four to six generations of 200 to 400 mosquitoes each in a single season. There are a number of varieties of mosquitoes, even on Long Island, and they differ from each other in habits and appearance as much as birds do from each other. I succeeded last year in eliminating them entirely from my property at Lloyds Neck, Oyster Bay, with the exception of four days, and the mosquitoes that then made their appearance were of a variety not bred on my property. I hope you will arouse the interest of your readers to the importance and practicability of exterminating this pest. I feel that they are as easy to deal with and control as is the spread of smallpox.

Long Island. W. J. MATHESON.

A NOVEL METHOD OF RAISING MELONS.

The illustration, Fig. 170, gives a partial view of the inside of a palm house which is being utilized as a forcing house for early watermelon plants. All the bench space is taken up with the closely-packed wooden boxes, as shown in the picture. There are 4,000 of these boxes, covering an area of about 450 square feet. The boxes are of cheap construction, each one consisting of but one piece, and having no bottom. They are four inches square by six in depth, and will each accommodate two or three plants. There being no bottoms to the boxes it is necessary to place them upon a wooden base of some kind to prevent the roots from penetrating beyond the space allotted to them. The soil used is a medium light loam. The seeds are placed in this the first week in May, and the plants are allowed to grow undisturbed for three weeks. The extended space between the plants and the glass in the forcing house causes the plants to grow spindly, so that it is necessary to harden them off in cold frames before they are placed in the open ground.



STARTING MELONS UNDER GLASS. FIG. 170.

After the plants have hardened off well, and the nights have become moderately mild, the boxes are carried to the field and ripped off from the plants as they are set out. Two boxes or four to six plants are allotted to each hill, but not more than three are allowed to mature. While this particular method would not be practicable as a commercial practice, a similar method could be followed profitably with an ordinary forcing house, allowing one to obtain marketable fruit from two to three weeks earlier than when the seed is simply planted in the field. E. A. B.

R. N.-Y.—Melons are sometimes started on sods or in metal pots, and taken to the field when of fair size. Last season we gained nearly 20 days by such. The metal pots used are those described in Ruralisms.

IS BEN DAVIS SELF-FERTILE?

What Other Varieties are Needed?

I have planted 400 trees of Ben Davis apples. These trees will be at least one-eighth mile distant from any other apple trees. Are they self-fertile enough to produce perfect fruit without planting some other varieties of apples with them? In any event, would they be benefited if other sorts were planted in the same orchard with them? What varieties would you recommend for this purpose, bearing in mind the fact that I only wish to plant red Winter varieties of apples for profitable results? I understand that the Ben Davis is a late bloomer, in fact, I am acquainted with only one or two Winter varieties of apples that bloom as late in the season as the Ben Davis. Would such standard varieties as Baldwin, King and Northern Spy remain in flower long enough to have a beneficial influence on the bloom of the Ben Davis? READER.

New York.

The Ben Davis is grown more than all other varieties combined in the Ozark region, and it is planted largely in blocks in which there are no other trees grown. It is self-fertile enough to produce perfect fruit without the assistance of other varieties. However, it is probable that the yield would be increased to some extent by having other varieties in the orchard, and where it can conveniently be done it is advisable to plant at least a few other trees here and there through the orchard. [Prof.] J. T. STINSON.

Arkansas.

We are not in the Ben Davis section here, and our trees of that variety are not far from other varieties. No instance has ever come under my own observation where it was proven that the Ben Davis did not perfectly fertilize itself, and yet I would not say that it might not be the case sometimes. We do not call the Ben Davis a late bloomer here; it is later than some and earlier than others, for instance, the Willow Twig and the Genet, but I would hardly know how to compare it with the Baldwin, King and Spy, as we grow them in such limited quantities. I generally practice and advise planting varieties so that they may fertilize each other, but more because I think there possibly may be times when it is necessary than from positive knowledge that it is so. L. R. BRYANT.

Princeton, Ill.

Many varieties of apples do not produce enough pollen to cause the best fertilizing of their fruits; besides, it is often better to have pollen from other varieties used for this purpose if it can be done. Sometimes it makes better fruit, and fruit of better color. In some localities certain varieties, like the Ben Davis, produce abundance of pollen, while the same variety in other localities will not produce enough to fertilize itself. Again, there are strains of Ben Davis which give enough pollen thoroughly to fertilize all its fruit, while there are other strains which are deficient. In southern Missouri the Ben Davis will fertilize itself in blocks of 100 acres, while in the very northern part of the State it will not. I do not know just how it acts in New York, but if there is any doubt at all, then plant two rows of Jonathan or York through the center of the orchard. L. A. GOODMAN.

Missouri.

I have no knowledge of stock injured by spray; heard stories of the kind, wonderful ones, years ago, when use of Paris-green was a new thing, but never any reliable account of trouble. I do not think it possible for such trouble to come from use of Bordeaux Mixture. Perhaps you will recall my writing to you a few years ago for advice about a cow of mine which drank as much as four gallons from the top of a barrel of Bordeaux Mixture. I did not have knowledge of it until several hours had elapsed. I then gave the cow 1½ pound salts, which showed their effect most decidedly, but I never saw any ill effect from drinking the Bordeaux Mixture. M. M.

Medway, Mass.

FARMERS AND FARM FIRE INSURANCE.

Discriminations in Favor of Village Property.

It is true that the insurance companies, some of them at least, are not anxious for farm property risks, and under their system of doing business I am not surprised. As I understand it, they depend upon agents chiefly to extend their business and make collections, the agents getting a liberal percentage on the money taken. Under this system the higher the valuation allowed on a building the greater the agent's fee, so there is the constant temptation on his part to value property for all it is worth, or even more. Provided the buildings are not burned the greater is the profit to both the company and the agent. When insurance is undertaken by the Grange I understand that only members of the order are admitted to the privilege, and as the members are all known to one another the risks are much less on the average than where the insured are unknown, as is the case with the officers of the regular companies, except the local agents who, as intimated, may be over-tempted to allow high values on the property insured. So far as I have learned the Grange insurance business thus far has been generally satisfactory to the members. They have saved money by their plan. Of course you know that insurance men are not doing business for either fun or charity, but to make money for themselves. So-called "mutual" companies are mutual to a degree only, as the officers have control of rules, rates and the size of their own salaries. I know of one agent, an assessor, who has often been asked by patrons when on his rounds, whether he was valuing the property as assessor or insurance agent? I am satisfied in my own mind that no building should ever be insured for a higher sum than it is taxed for. An insurance officer tells me that he dislikes farm property in this section because the business of farming is on the decline, and the property is constantly diminishing in value, so that the "moral risk" is too great. When a farm becomes unsalable and the buildings are insured for more than the entire property will readily bring the temptation to be careless about fires is too great. A really dishonest man may have it in his power to "unload" upon the insurance company at better rates than he could get in the real estate market or at private sale.

Insurance offices and officers are almost invariably located in cities or large towns, and in many portions of New England real estate is gradually rising in these, while in the strictly rural portions it is as gradually diminishing in its value. The farmers, as they view it, contend that the people of the cities and towns are partly to blame for this condition, as the laws are made to favor the cities. In most of the cities and large villages now the people are supplied with water under pressure, and have fire engines and other improved methods for controlling fires, so that insurance companies feel that the risk is much less than back in the country, where if a fire gets started it generally finishes the buildings, leaving little besides the cellar and well. It is not a little aggravating to farmers in the outskirts of a town to be charged higher rates for insurance than is charged on center of town property, when they have been taxed heavily to help pay for village water works, fire engines and firemen's salaries. Again, when they see an insurance officer in the center of the town receiving an annual salary for keeping the company books equal to or exceeding the value of a good farm in the country they cannot be blamed for looking about to see whether the insurance business cannot be run on a more economical scale. The Grange people, meeting together as they do every week or fortnight, can transact their insurance business at much less expense than is usual, when the work is done by agents who travel about the country soliciting business and often depending upon their commissions for a living. The members of the Grange, too, are, as a rule, rather a select class. They are more intelligent, more enterprising and less inclined to be careless in the care and management of their business. If this is true the risk on members' property would be less than on the general average, but insurance companies could hardly be expected to make distinctions in rates on these grounds. I do not know what responsibilities the State Grange has assumed by taking on the business of an old company. But I do believe that the organization can do an insurance business for its own members at a saving on the usual rates. It has already been done, which is pretty good proof. A. W. CHEEVER.

Massachusetts.

Insurance by the Massachusetts State Grange.

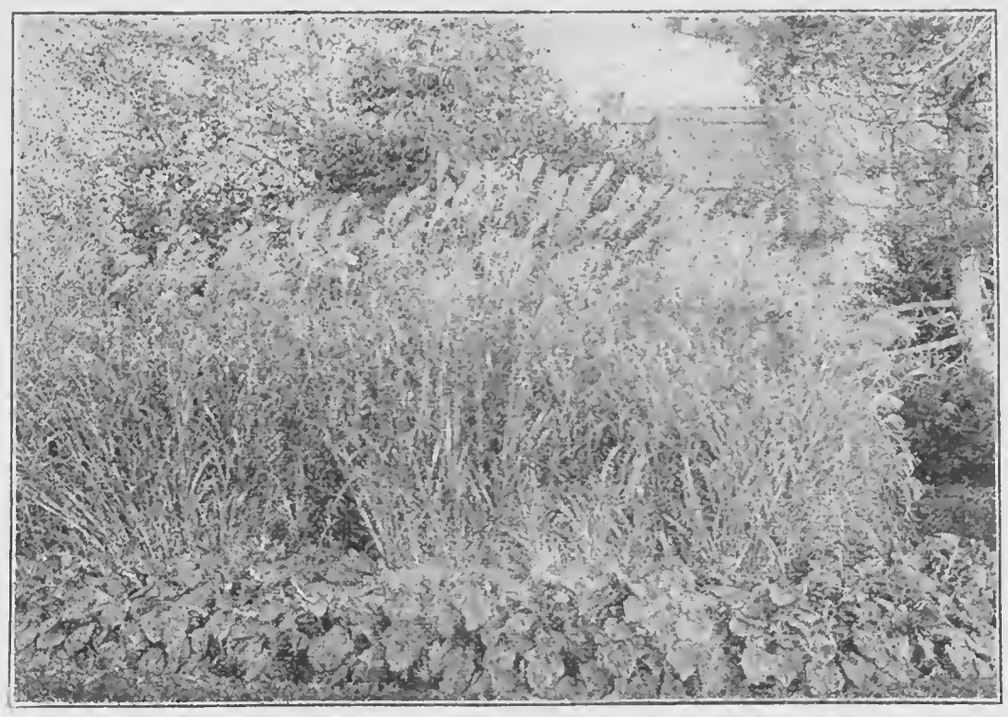
We insure farm property that is owned by members of the Grange and no other farm risks will be taken. We believe in the long run that we shall get a better class of risks by this method, and we desire to encourage farmers to join our order. We insure nothing but private dwellings and private barns and Grange halls, and contents of each of the foregoing. We insure dwellings and private barns other than farm property, whether the owner belongs to the Grange or not. I am aware that there is much truth in the claim of old-line companies in regard to excessive losses on farm property, but we believe that a careful selection of risks will enable us to overcome some of the difficulty. As one who has had considerable experience in the fire insurance business, I will say that one thing we most need is honesty of purpose by property owners. Too many cry up values to insurance agents and cry them away down to assessors. A law that would permit no man to insure his property for more than what he was willing to pay taxes on would be a feature which would tend to place more responsibility on property owners. Something must be done for the farmers in this matter of insurance, as rates are increasing to very high figures with lower dividends due to shorter terms, and many companies absolutely decline the property. The oldest company in our State (the Worcester Mutual) built up its business on farm property, but now declines to take a single new risk in that class, and is dropping many of its old patrons, either entirely or by dividing the amount with some other company. We hope the effort may be a successful one, and in any case do not see how our farmers can be any worse off with us than with others, and they may be much better. WM. A. HOWARD.

Sec. Mass. State Grange.

EDUCATING PURCHASERS AND CONSUMERS

We read a great deal in different papers about educating the farmer as to the proper manner of marketing his produce. Advice, in copious doses, is given as to how he should sort and clean his eggs; as to the proper manner of making, coloring and packing his butter; he is told that he should keep the small potatoes, the knotty apples, the inferior fruits and vegetables of all kinds at home, and thus receive more for the selected specimens than he would otherwise for the whole. One good thing about this advice is that it is cheap. To look at the produce that comes into the New York and other markets one can't help but feel that it is needed. But another class sadly needs advice, also, and that is the purchasers and consumers. While there is a demand, and I think an increasing demand for choice products, nicely and attractively packed, the majority of buyers are not yet educated to the point where they are willing to pay enough more for them to pay the shipper for the extra labor involved. This may be heresy, but it is the truth nevertheless. I don't advocate this careless assorting and packing, but I wish to present the other side of the question, and show that two parties need educating and not one as is generally supposed. I have seen buyer after buyer pay 25 to 50 cents per barrel less for a barrel of poorly-assorted, inferior fruit than he could have obtained choice fruit for. The extra quarter or half dollar looked so big to him that it shut out all appreciation of the difference in quality. Yet the best fruit was really the cheapest. I have seen buyers haggle over the price of a really superior article, claiming that they could get one "just as good" elsewhere at a lower price; and then failing to accomplish their object, return and pay the price demanded, thus belying the former assertions. The education needed here is evidently in the matter of truth telling rather than in appreciation of quality. Instances innumerable have been noted among the commission houses where produce of all kinds put up in good shape, and of superior quality, has not sold for enough more to pay for the extra labor involved. This is not because the commission merchant doesn't appreciate the extra value, but because the purchasers do not. Some commission men have worked up a trade that pays well for these choice products; many have not. The grower of fine produce must shun the latter and find the former.

I know of a shrewd Jerseyman who for years has shipped his large crop of potatoes to the New York market just as he dug them from the ground, little and big. When his commission merchant protests, he simply says: "Sell them enough cheaper to satisfy the buyer; I can't afford to sort them." He has learned that he gets more dollars from the class to whom he sells by following this practice. I know of two celery growers who had about equal areas of celery. One of them sorted out and threw away hundreds of dozens of rusted, slightly rotted and inferior roots; the other threw away nothing unless it was so bad that he couldn't hide it in the middle of a bunch. The same commission merchant sold both lots. The last mentioned grower received considerably less per dozen, but he had more dollars when all was sold. I know of a Michigan farmer who shipped beans to New York so dirty and full of worthless beans that one would think them unsalable. Yet they sold for only 15 to 25 cents per bushel less than they would have brought had they been thoroughly cleaned, not enough to pay for the loss in cleaning, not to speak of the labor. Similar instances might be multiplied indefinitely. Yet there is another phase of this subject that may perhaps excuse the purchasers somewhat. Some dishonest shippers have practiced deception in packing. A barrel faced with fine large Spy or King apples has been found to contain inferior fruit of perhaps half a dozen varieties in the middle. A barrel of potatoes of large size and beautiful appearance on top are half small, wormeaten and worthless in the middle. So with many products. Purchasers have been deceived so much that they conclude to purchase the lowest-priced thinking that they will thus lose less. Some fruit dealers, too, prefer to buy unassorted fruit, and assort and pack it to suit their trade. They make a fine margin by so doing. The whole matter in a nutshell is, that those who put their first-class products in fancy shape must find a market where the purchasers have been educated to the proper point, in order to get proper returns for their labor. What is needed is not less education for the farmers, but more for the purchasers. F. H. V.



EULALIA JAPONICA VAR GRACILLIMA. FIG. 171. SEE PAGE 422

INDIANA FARM NOTES.

ORANGE SORGHUM.—At Sheridan, Ind., the other day I called on George Symons, who has 55 acres of sorghum planted. He makes the best molasses in this section, and cannot near fill the demand. I was surprised to learn that he does not like the Orange cane. He uses the Honeydew. He claims that he has made up and compared tons again and again, and that the Honeydew will yield a third more molasses on an average. It also has a habit of stooling. This is not suckering, but stooling, like wheat. I asked whether the stooling stalks will ripen as soon as the central and parent stalk. He said that there is practically no difference; it sometimes makes it too thick and small, and it should be planted thin. This variety does not lodge worse than the Orange, and it does not have red cracked hearts so badly, and is not affected as much by rains just before ripening. It does not get as ropy; is clear of that tartish taste, can stand longer without cutting and will lie in the pile longer without souring. It seems that it has all the good qualities in one variety. Mr. Symons found it too expensive last year to strip it, and fed it through whole.

BAGASSE FOR SILAGE.—While talking he asked whether I thought the bagasse would keep in the silo. I said that if it were cut and carefully packed it would, but if piled in whole it would sour. He said that he had a plan in view of arranging for patrons having dairies or feeding steers to grow a field of sorghum, bring it to him, and have it milled and run on to a wagon and taken direct to the silo on the patron's farm. This would be getting a double crop from it. It would certainly be rich feed even after milling. All feeds containing much sweets or starch are hard to keep in a silo without souring, unless put in in a fine condition and tramped well. Then they keep as well as other feeds. Cattle eat the bagasse well now, but it is coarse and rough on the mouth; also very mean to handle. If one had the ropy stuff packed in a silo it would be hard to feed.

E. H. COLLINS.

As to stock of any kind being poisoned by eating grass in an orchard where Bordeaux Mixture or Paris-green has been used. I have never known of such a case; do not think there has ever been one in this locality. I have sprayed my orchard this Spring with Bordeaux and arsenic, making it very strong of the arsenic; had hogs in the orchard all the time, and cattle just a few days after the spraying. No harm has resulted. F. E. V. E.

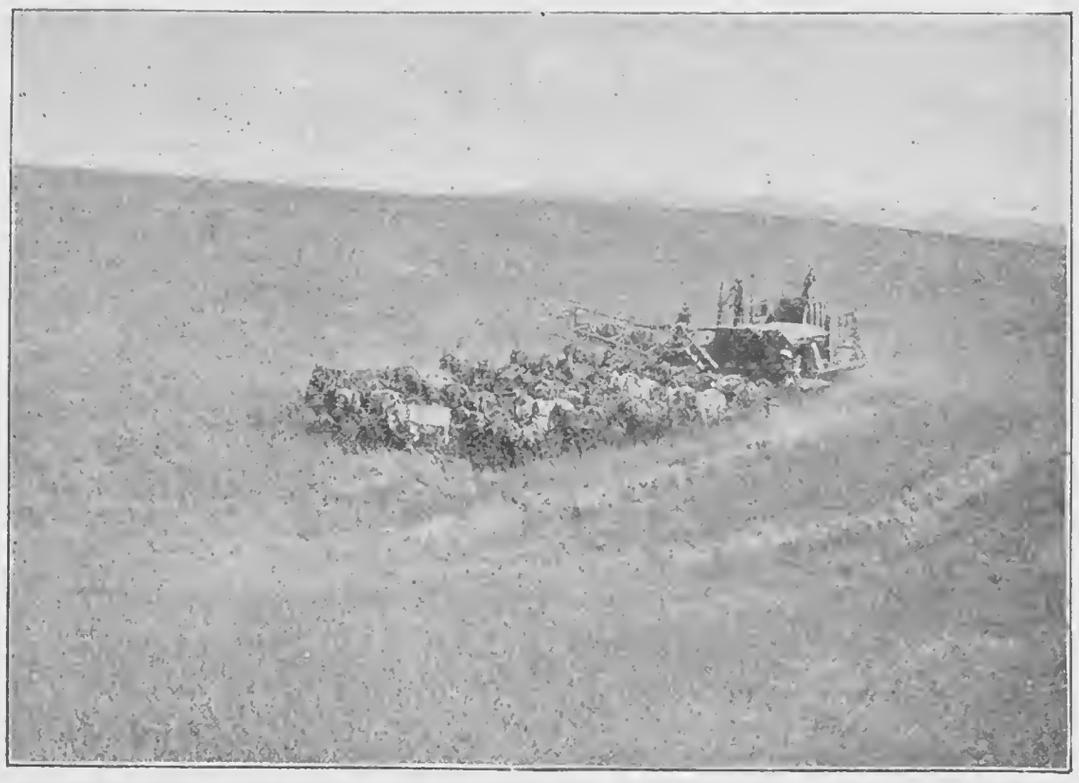
Stanley, N. Y.

THE NATION'S WHEAT FIELD.

Wholesale Operations in Washington.

Last week we gave a picture of a great wheat harvesting outfit used in California. Two more pictures are given this week—both taken from Bulletin 24 issued by the Department of Agriculture. Steam and gasoline are used as motive power for some of these machines, but horses and mules are also employed, especially on the rough and hilly fields. Fig. 172 shows a combined harvester and thrasher used on the hilly sections of California. There are 55 horses on this machine, which cuts the grain, thrashes it and leaves it in bags. Fig. 173 shows a smaller machine—a binder with a 12-foot cut. This is hauled by six horses which walk behind the binder. Of course, in these big operations, it is not considered important to get every head of grain or every straw. The straw is cut rather short, and there is a rush to cover as much ground as possible in a day.

The bulletin from which these pictures are taken gives an interesting account of the efforts made to improve American wheats. Certain improvements are necessary in the great western wheat-growing sections. For example, in the famous "Palouse country" there is an annual drought which occurs about two weeks before harvest time. This often causes the wheat to shrivel—hurting both quality and yield. An early ripening sort is needed. It is said that if some good variety could be produced—ripening 10 to 15 days earlier than the varieties now grown, its culture would add from $1,000,000 to $3,000,000 to the wealth of this one section. In like manner other sections require certain qualities in new wheats. The machinery for harvesting wheat has been wonderfully developed; the perfecting of varieties must follow.



HARVESTER-THRASHER AT WORK NEAR WALLA WALLA, WASH. FIG. 172

HARVESTING WITH WIDE-CUT BINDER NEAR COLFAX, WASH. FIG. 173.

NOTES FROM CALIFORNIA.

We have a fine prospect for a crop of good apples. The Newtown Pippins, White Winter Pearmain, Wealthy, Bellflower and Skinner's Seedling look exceptionally well. We shall have plenty of apples from the time Red Astrachans are ripe all through the season. So far no worms have appeared, although usually in thinning time we find plenty of them. We thin apples when they are as large as filberts if other work is not pressing. Bartlett pears are a failure in this section; other fruits except peaches are very light. Cherries are about one-fifth crop, and badly cracked by rain. The cracking of the cherries makes much work for the girls who pack them for shipment east, as every cherry must be looked over and any crack or imperfection in the skin puts it into the cull box, and when the proportion of culls is large it means less boxes for the packer, and therefore less wages, as they are packed by the box. No one dreads to see the rain more than the cherry packers, as it means more work and less wages. Cull cherries are sometimes sold in local markets, or dried. On the other hand, when there is a good crop and few culls the girls make good wages, and the work is not hard. When a box is completed the packer carries it across the packing room where it is examined by an inspector to see if it is properly marked on the end, with her initials and the number of the orchard. The packer's ticket is then punched and she returns to her place with an empty box which she wipes clean inside, marks her initials and number on the end and proceeds to pack. This getting up to carry the box and get checked is a rest from too continuous sitting. It might be interesting to know that it takes on an average about 250 persons to pick, pack and deliver a carload of 2,000 boxes in one day.

I am much interested in all I see in THE R. N.-Y. about hired help, for it is a continuous problem with us how to get good help, and by good help I mean men who have no bad habits and are industrious. I have worked out, and have also employed many men, and can say from an experience that covers a period of about 30 years, that the curse of the working people is bad habits, and the worst of all is laziness. On this place we draw the line at cigarette smoking and drinking. If a man chews or smokes a pipe, and shows a desire to get rid of the habit, we give him a trial. We have employed a number of soldier boys just back from Manila, and have found them generally very poor help and full of bad habits. I can truly say to any young man who is seeking employment on a farm, or anywhere else for that matter, put forth your best efforts with head and hands for your employer, work for him faithfully, honestly, and with your might. It is surely to your interest to do so. Every hour unnecessarily lost, and all carelessness either in work done or neglected, will hurt you worse than your employer. There is always room for the man who makes himself so useful that he is missed when he leaves the farm for a day. On the other hand, employers who attempt to grind their help in any way are not worthy of the name, and will surely lose by doing so. It pays to treat men well, both from a financial as well as a moral point of view. Make your actions and habits such that they will command respect. You will then be in a position to require decency and respectability on the part of your hired help. H. G. KEESLING.

California.

A CITY MAN TURNS FARMER.

PART VII.

The Rocks of New England.

After an interval of some weeks we open this subject again in order to answer some questions which have come from readers:

The city man who is looking forward to going on a farm some time, and who reads these articles, will be quite likely to have in his mind some questions perhaps like these:

What did you plant that next Summer after you bought the farm? What did you plan for a money crop? How many acres did you plow? What proportion of your hay and grain did you raise? How much did it cost you to live that year? In other words, "How did you get along?" "What mistakes did you make that I can avoid?" Most of the above questions are based on a misconception of this part of the country. One of the first questions asked by a visitor from Long Island, New Jersey or New York is, "Where is your plowed land? I don't see hardly anything but grass."

Dairying is the main business, and cream is the "money crop" of the great majority of the farmers here. Since the silo came into use more corn is planted than formerly, and some farmers raise 50 or 100 bushels of potatoes to sell, but nearly all depend on the monthly check from the creamery for means to buy what costs money. Nearly all the grain used comes from the West. I have heard it stated that at the two railroad stations where grain is sold in this and the adjoining town, over $40,000 was received in one year for grain, and this is a sparsely settled community. There are over 100 miles of roads in this town and the voters are less than 300. "Lazy farmers," you say? No sir! New Englanders are not noted for laziness, at home or abroad. Come up here and plow a piece of sod; then when you want to seed it down pick up the stones. You will need no other reason why more land is not cultivated.

But is this stony soil against New England? On the contrary, a prominent authority says that is the very reason that it can stand constant cropping for 200 years and still yield more bushels of shelled corn per acre than any other section. I have seen the United States statistics, which give 30 bushels per acre for New England and 27 bushels as the highest average elsewhere. Of course there are exceptions; land on the river, where hardly a stone can be seen, and pushing farmers who raise big crops, but the rule is as I have written. On the low lands, however, frost comes two to three weeks earlier, and as much later in Spring, so that those who want to raise peaches and tender things have to go to the hills. There is splendid air drainage among these hills, and water that fairly sparkles. A man will live 20 years longer up here than he would in the city. These mountains should be dotted with the Summer residences of the rich. Such scenery! I have stood on Willington Hill, and looking to the northeast, where great billows of hills, covered with the glory (no other word will answer) of their Autumn foliage, have brought tears to my eyes. G. A. C.

EVERYBODY'S GARDEN.

A WINTER JOB.—In an editorial, page 360, of THE R. N.-Y., this subject was so admirably discussed that it well deserves more than a casual reading. The problem of profitable Winter work is a serious one, and confronts the farmer and gardener alike. To those favorably situated for engaging in the work, I know of no more effectual remedy than growing Winter rhubarb. No costly structure or apparatus is required, and considering the cost of production there is no work for the gardener or small farmer that will give as large returns. The work of forcing is so simple that very little skill or previous experience is required, and being grown in the dark the work goes on regardless of the weather. Since discussing this subject two or three years ago the added experience only proves more conclusively the entire feasibility of the work. The enterprise is growing more extensive each year, and the profits are entirely satisfactory. Any gardener might be satisfied with a return of over $500 from one shed constructed simply of old boards and manure. Yet that was done by one of Detroit's enterprising market gardeners the past Winter. On February 15 a neighbor of mine sold a load of 172 dozen rhubarb to a commission merchant, at 50 cents per dozen, or $86 for the load. These are not fairy tales, but actual experiences. Of course the industry is yet in its infancy, and the question of demand, or a market for the product is a vital question. The history of tomato growing will answer this very readily. So we might recall the history of forcing lettuce, radishes, cucumbers, or any of the vegetables that have been taken out of their regular season and changed by forcing to a Winter produce. But all these require the use of expensive greenhouses, or acres of glass, while the finest quality of rhubarb is grown in the dark, at a very trifling expense, either for structure, or heating apparatus. Location as to market must be considered; also the root supply. As to the latter problem, begin preparing for the Winter's work now, by the careful culture of whatever roots you may have on hand; procure as many as possible from your neighbors, to be taken up after freezing in the early Winter. To many this enterprise may prove a very satisfactory solution of the vexing problem of a Winter job. J. E. MORSE.

Michigan.

I have always left my stock in the orchard when spraying and have never known of any being poisoned, although I have always been careful not to let a large quantity run out of the tank in one place. The bloom on our fruits would now indicate very few Baldwins, one-half crop Greenings, full crop Twenty Ounce, Pound Sweet, Roxbury Russet, Wagener, etc., full crop of plums, peaches, pears and grapes. More spraying is being done this year than ever before. More tent-caterpillars than I ever saw before, and people generally are trying to fight them. Canker worms are just commencing to hatch out. Wayne County fruit growers organized with a membership of 48 on April 6. We expect to have a Summer meeting on some of our farms this month. B. J. CASE.

Wayne Co., N. Y.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Blight on Quince Trees.

G. D., White House, N. J.—Last Summer some kind of blight struck my quince orchard and did considerable damage, killing four trees to the ground. Sometimes it affected the ends of branches, and in other cases it girdled the trunk or main branches. The bark seemed to die quickly. Only older trees were affected, and worst where the ground was moist and rich. I cut the dead parts away. If I see signs of it again this Summer will it help to spray with Bordeaux? What is the cause and remedy?

ANS.—The Quince blight is an old offender, and is apt to bring ruin. This blight is common to pear and apple trees, and there is no better remedy known than the knife. Cut away all the blighted parts, well below the diseased portion, and burn them. The worst plants should be entirely removed. The experiments in spraying for the fire blight have not been so successful as to warrant it as a profitable preventive. However, spraying hits other enemies of quinces at the same time, and might be done with hope of benefit.

BYRON D. HALSTED.
N. J. Experiment Station.

Velvet Bean or Cow Pea.

E. R. D., Barto, Pa.—Can I grow the Velvet bean to maturity or make a sufficient growth of vines, sown about June 15? It is a young orchard which I wish to sow with the beans, and in late Fall plow the vines under to fertilize a crop of corn in 1902.

ANS.—No. We would not advise the Velvet bean. With us the growth is too slow and small. It is a southern plant—not so well suited to northern conditions as the cow pea. Early Black or Whippoorwill cow peas sown by the middle of June will make a good growth. When they are plowed under we would sow rye for a Winter crop.

Dung Worms and White Grubs

W. S. M., Bellaire, O.—This Spring I set out about one acre of strawberry plants. Over one-half the ground I scattered cow and horse manure mixed before harrowing. This manure was fresh, having accumulated only about four weeks. When cultivating the plants the other day I noticed the cow manure under the surface contained numerous small dark-colored grub worms about one-eighth inch long. I wish to inquire whether these grubs are the very young of the grubs of the May beetle, and how came the eggs in the fresh manure which was spread about April 10 long before the appearance of the beetle itself? If not grubs of the May beetle, will they grow larger and attack the plants? I noticed quite a number of long flat black beetles which had holes made in the soil; also some very small beetles about one-eighth inch long.

ANS.—During 1895 and 1896 we discussed at considerable length the question if the true white grubs of May beetles lived in manure, or that plants could become infested with these grubs by the use of manure. We then requested all readers to send us any dung worms they might find, and several readers responded. But none of the dung worms sent was the white grub of May beetles, nor have we ever seen such grubs living in manure. We are quite sure that the small grubs found by W. S. M. in the rather fresh manure on his strawberry bed are the nearly full-grown grubs of an Aphodian dung beetle; the beetle is only about a third of an inch in length, and has red wing-covers and a black head and thorax. These little beetles appear early in the Spring and hover over and bury themselves in freshly-dropped or partly decayed manure in which they lay eggs; the grubs hatching therefrom also live in and eat the manure. If W. S. M. will put some of this infested manure in a box or some soil where it will not dry up, I think that by June 15 he will find that they will have transformed into the little beetles. As these Aphodian dung beetles do not feed upon living vegetation in any of their stages, infested manure may be freely spread upon any crop without fear of injury to the plants. The long, flat, black beetles noticed by W. S. M. were doubtless beneficial Ground beetles, and it is quite possible that the smaller ones were Aphodian dung beetles. We believe one need have no fear of introducing true white grubs or any other injurious plant-feeding insect into strawberry beds with manure.

M. V. SLINGERLAND.

How to Grow Large Melons.

T. W. F., South Bend, Neb.—Give what information you can about growing watermelons of large size. I find that manure increases the amount of vine, but not the size of the melon. I plant five feet apart each way, and thin to one plant in the hill. The vines cover the ground before any melons are ripe. I get lots of melons, but they are too small for market. What effect would it have to cut off the ends of the vine as soon as three or four melons are set?

ANS.—Size in watermelons is more a matter of variety than of cultivation. Of course the vine must be well fed to produce full-sized melons, and we have found a good chemical fertilizer containing eight and 10 per cent respectively of phosphoric acid and potash a useful adjunct to rotted stable manure, which is the foundation of melon growing. The fertilizer may be applied at the rate of two or three pounds to a hill before planting, well mixed with the soil several inches deep, or can be cultivated into the soil after the plants are up. The most effective way where the price of the product warrants it is to apply the fertilizer broadcast at the rate of 1,000 pounds an acre before planting. Pinching the ends of the vine and limiting the fruits from two to four according to strength of the individual vine, would certainly tend to increase size of melons.

What Is Asparagus Rust?

T. R., Trevose, Pa.—In your opinion, would sulphur be of any benefit to put on asparagus for the rust? Would sulphur and salt do any good? I am of the opinion that the rust forms in or under the ground around the roots. Is the rust an insect or a fungus growth? I claim an insect, for I have seen it under a strong glass; others have argued to me it is of fungus growth. The wind spreads the dust and forms on other plants; it has affected the asparagus very much within a few miles of Philadelphia. The prices are good, but with bad weather and blight we do not cut more than half a crop. Would sulphur sprayed on the plants do good or injury?

ANS.—We doubt the value of sulphur. Dr. Halsted, of New Jersey, tried spraying with solutions of glue, gelatin, lime, soap and also milk. The Palmetto variety is less susceptible than some other varieties, because of its thick skin and downy covering. The object of this spraying was to give the plants an artificial coating. These experiments were on a small scale, but the results indicate that this plan of coating the plant is useful. The plants sprayed with soap and with milk were very free from rust, and so were those sprayed with gelatin. You ought to send to the New Jersey Station (New Brunswick) and the Geneva (N. Y.) Station for bulletins on this disease. Bulletin 188 from Geneva shows that the rust is a fungus or parasitic plant which grows within the asparagus and absorbs the juices which should go to build up its tissues. Bordeaux Mixture has been used for spraying the plants, and it seems to be successful where it can be put on all parts—thoroughly. On Long Island a large machine costing over $200 is used for this purpose, and it does its work well. Spraying with small pumps and single nozzles does not give satisfaction.

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Cracking the Butter Bowl.

A. L. D., Southampton, N. Y.—Will someone tell me how to prevent a new butter bowl from cracking? Every one I purchase cracks, so that it is useless in a very short time.

ANS.—Do not let the bowl entirely dry out. Keep it sweet and clean by steaming or thorough scalding, rather than by much sunlight. Wooden trays, or shallow tubs, can be used instead of the butter-bowl, and are just as cheap and easy to handle. J. A. F.

The Slaughter of Tame Pigeons.

E. P. R., Ohio.—You are too severe in criticising hunters and trap-shooters. You are prejudiced. No one but a strict vegetarian can consistently condemn those who shoot or fish. Of course, at first glance, to deprive a bird or animal of life for *sport* seems cruel. But every one who eats meat or fish kills, or by buying encourages another in killing for their *enjoyment.* The hunter or angler has double reason for his course, as he enjoys both the killing and eating of his game and fish. Many as tender-hearted, gentle, men and women as ever lived are fond of hunting and fishing. They are great nature-lovers always. Our late Presidents, Harrison and Cleveland, and, I believe, McKinley also, were and are lovers of shooting and fishing. The Presbyterian and Methodist ministers in my town are ardent lovers of quail shooting. Many ministers are fond of angling. Even the Founder of Christianity "went a fishing," and it was not necessary, for He proved He could create at will as many loaves and fishes as were needed. If it were not for hunters no farming could be done in this country. Bear, deer, wolves and other animals would still be numerous. Even now, if hunting were prohibited for 10 years, rabbits would be a serious menace. One pair breeding five times each Summer, with eight at a litter, making no allowance for accidents would amount in six years to over 250,000,000. One pair of quail multiply as follows counting on an increase of 18 young to each pair per year: End of first year, 20; second, 200; third, 2,000; fourth, 20,000; fifth, 200,000; sixth, 2,000,000; seventh, 20,000,000; eighth, 200,000,000; ninth, 2,000,000,000; tenth, 20,000,000,000.

ANS.—It was not the intention in the editorial referred to to condemn all hunting and fishing; but to show that, as some of these shooting matches are conducted, the effect must be most brutalizing on all who witness or take part in them. We do our share of hunting and fishing as opportunity offers. The wild birds and animals in woodlands which hunters go over thoroughly every year, come to maturity, if they do at all, because of their watchfulness in keeping out of the hunter's way. They have a constant training in looking out for for themselves; but how different it is with the tame pigeons or rabbits! Until let loose to be destroyed, they have been cared for by man, and have not had, like the wild ones, to hustle and scratch to save their lives. What reason have they to fear man as their enemy? All at once this is changed. They are let loose, frightened, and men taking advantage of their helplessness, murder them. If this is sport, then we have not understood the meaning of the word. It looks like treachery of the most brutal stamp, scarcely equaled in savage warfare. There may be sport in hunting the wolf, bear, wildcat or wild turkey, which can get out of the way or defend themselves if cornered, but it would look inconsistent to take this as an excuse for shooting faithful Towser, the house cat, the Jersey cow or the old gobbler for mere sport. Life may not be any sweeter to those domesticated animals than to the wild ones; but should it not be considered that we have taken them under our care, and thus removed from them the wild instinct given by the Creator as a protection, that they might have an equal chance for life with other beings? Man was made to have dominion over all things. The fish, flesh and fowl are for his use, but it does not follow that he should misuse his powers or inflict needless cruelty on any of his subjects. We acknowledge the good work of the hunter and butcher in providing food for us, and preventing the animal population from crowding us out. What we wish to protest against is the degrading brutality shown in some shooting matches, and no doubt E. P. R. holds the same opinion in regard to this phase of the matter.

The Care of an Incubator.

H. S. R., Youngstown, O.—Too many of my chicks die in the shell in the incubator. Could you give me any information to remedy it? We hatch in the cellar, a dry cellar, but always have plenty of moisture in the incubator; have the two-inch ventilators in top of machine about one-half inch apart, and run it steady at 103 degrees. My old chickens are all healthy but somewhat fat. What can I do? The egg shell seems to be tough.

ANS.—Incubators, when running, need a great deal of sweet, fresh air, as it makes the chicks strong, with plenty of kick in them which the poor little things need for their final struggle. The room where they are should be well ventilated twice a day. The air becomes heavy very quickly where a kerosene oil lamp is burning, and the embryo chicks rapidly lose vitality when breathing it. They also need generous airing out. After the first week the egg chamber doors should be left open about five minutes at first, and the time gradually increased, but never allowing the temperature to fall below 90 degrees. The cellar, if well ventilated, and the air fresh and sweet, is a good place for them; as the temperature is more even, and so they need less attention. The valves on top of your machine sound as if your rig may be the Cyphers. This one has, I think, the best ventilating and temperature regulation of any machine on the market, but the valves should be kept closed during the hatch, unless your atmosphere is especially humid. You speak of plenty of moisture in the machine. Most manufacturers of incubators now advise running them dry till they are shut down on the eighteenth day, when either moisture is applied through sprinkling the floor of the room, pans of water set around on shelves, or the vessels supplied for that purpose in the egg chamber filled. I fill my Prairie State pans about half full when I shut down, and I sprinkle the floor about the Cyphers and keep the atmosphere of the room damp from the time the eggs pip till the hatch is finished. The chicks slip out easy and are all right.. The eggs at first contain enough water in themselves till just at the finish, and even then it must be applied judiciously, else the birds will be drowned while in the shell, but a tough skin indicates dryness at the finish, and mature dead birds low vitality and wrong or insufficient ventilation. Each locality where an incubator is run appears to have its own peculiar atmospheric conditions, and the operator has to expend lots of patience and perseverance in solving the problem of handling his rig to get the best possible results. With the most painstaking efforts it is very difficult for outsiders to give efficient advice. It's something like Heaven—each of us has to work out our own salvation "with fear and trembling."

FRANCES ELLEN WHEELER.

When and How to Thin Peaches.

J. H. R., Stuarts Draft, Va.—I was to commence thinning peaches to-day. My neighbor told me I should wait awhile to see how many would drop off. They are as large as marbles and the trees are very thrifty; first crop. I can do it better now than later on account of my work. What is your advice?

ANS.—Peaches should be thinned about when they are the size of full grown peach seeds, and not before. Later than that is said to be better than earlier, by those who have done the work very extensively. The tree naturally often casts considerable of the fruit, and there is thought by some to be more safety in waiting until after this natural drop before thinning, but we have held to the belief that there is not likely to be much dropping if the fruit is not too thick. There is more danger of leaving on too much than too little, so everyone finds upon trial. Mr. Morrill, of Michigan, thins his peaches 10 inches apart, and Mr. Hall, of Connecticut and Georgia, has changed from six inches to eight. The first thing to do in thinning is to shake the tree quite hard, which will cause much of the defective fruit to fall; then thin unmercifully. It pays better to grow fruit than seed on a fruit tree.

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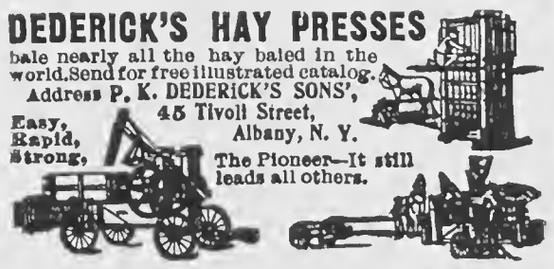

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Ruralisms

NOTES FROM THE RURAL GROUNDS.

STOCKS FOR GRAFTING ROSES.—Something of a controversy is now going on in the horticultural trade journals concerning the best stocks for rose grafting. Jackson Dawson, of the Arnold Arboretum, Boston, who has had much experience in propagating hardy roses, warmly recommends Rosa multiflora, a Chinese species, for the purpose, but most growers are still wedded to the Manetti, a strong growing form of the hybrid China rose found growing wild in Italy nearly 50 years ago. Manetti is the stock almost exclusively used for the imported roses so freely offered in all large cities. It is not at all adapted to our climate, as it makes a great mass of fibrous roots near the surface, subjecting the plant to severe checks from dry weather and to premature ripening in the Fall. There is also a tendency to throw up suckers unless the union of the bud or graft with the stock is very deeply planted. Thousands of purchasers of these tempting grafted roses are soon grieved to find their once thrifty roses replaced by worthless briers, as the Manetti sprout soon monopolizes the whole vitality of the plant. This characteristic is less objectionable when used for grafting forcing roses, as they are grown under such a system of constant inspection that suckers can never make much progress. We have tried many substitutes for Manetti on the Rural Grounds and find the Michigan or Prairie rose (Rosa setigera), R. Wichuraiana and the sweetbriar, R. rubiginosa, have given us good satisfaction where perfect hardiness is required, though certain hybrids of sweetbrier and Wichuraiana are still better. All make good deep roots, and are little affected by dry weather when established, and are not at all disposed to sucker. The best of all stocks in the Rural experience is produced by crossing Crimson Rambler with Clothilde Soupert, both varieties of R. multiflora. Some of the crosses are almost thornless, and of extraordinary vigor in growth. A three-year plant in ordinary soil cut back yearly has developed a woody base nearly three inches through. There is no inclination to throw up sprouts, and for all budding purposes this stock works with great ease. In hardiness it seems little inferior to the native species. For grafting purposes we do not care to use the stems, as sections of the larger roots of any of the species mentioned may be grafted with the ordinary splice graft, as it is not always easy to make a tongue in rose wood on account of the pith. The grafted roots may be well wrapped with waxed cloth like an apple graft, packed in damp moss or old sawdust and kept in a warm place for two or three weeks, after which they should be potted up in small pots and placed on a bench under glass to grow. If the grafting has been carefully managed they will soon make fine plants. For tree rose effects we much prefer to bud high up on strong hybrid sweetbrier shoots, and trim off all other shoots and branches from the stock as soon as the bud has formed a fair top.

The whole question of propagating roses by budding and grafting is still undeveloped in America, though the propagation by cuttings is carried on to greater perfection than abroad, resulting in cheaper plants of most varieties than can be procured elsewhere. While most tender and everblooming roses thrive best on their own roots, some of the finest hardy varieties root with difficulty or make only feeble plants when induced to grow. It is important to find strong-growing stocks suited to our climate for such roses, that we may not be deprived of their beauty and fragrance, and it seems that they are most likely to be produced by hybridizing and breeding. The grape industry of France is being rehabilitated after threatened destruction by Phylloxera by grafting the native vines on American stocks, mostly of hybrid origin, and stocks are being bred for special purposes, such as avoiding chlorosis, a disease caused by a great excess of lime in the soil. Hybrid stocks may be absolutely sterile in themselves, but prove of great value for grafting on account of extraordinary vigor or special adaptation for some important purpose.

A BEAUTIFUL HARDY GRASS.—Reference was made on page 818, volume for 1900, to the value of stems of Eulalia gracillima univittata, now considered as a variety of Miscanthus Sinensis, for Winter protection of shrubby plants. Nothing we have used has given so much satisfaction for mulching or tying up. The leafy stems are light but rigid, and afford good protection, without interfering with the necessary ventilation. We think so highly of it that a privet hedge has been thrown out to make place for it. This Eulalia makes a beautiful Summer hedge or dividing line, but has been little used for this purpose, and while the tall brown feathery tufts are not attractive in Winter they form effective wind-breaks. Fig. 171, page 418, from a cut kindly furnished by Bobbink & Atkins, Rutherford, N. J., shows what can be accomplished by planting it in beds or groups. The edging of this group is evidently made up of Day lilies or Funkias. Repeated trials have shown that cattle and horses eat the growing stems of the Eulalias with relish, and in view of the enormous quantity of forage a small planting would give, it may be worth while to test the different varieties for the purpose. Young plants or divisions may be had for about $5 per 1,000, and if set about two feet by three in good soil a permanent and exceedingly productive green forage planting would be secured. After the second year it may be cut repeatedly without injury, but the feeding value remains to be determined. It is always well to burn over the old tufts every Spring, as the new growth starts more evenly and vigorously than when compelled to push up through the stubble. It has lately been determined that Miscanthus has precedence over Eulalia as the generic name of these beautiful hardy grasses, but we may consider the latter as popularly adopted, and likely to remain in use by most gardeners. The striped variety known as E. Japonica variegata and E. Japonica zebrina are handsome in their way, but much too coarse to be used extensively except for backgrounds.

A GOOD METAL POT.—Early in April last year the Rural Grounds received from S. R. Divine, Loch Sheldrake, N. Y., two dozen metal pots as a substitute for the earthen pots so universally used for growing plants. They were of the standard four-inch size, differing only in having a much larger drainage hole in the bottom than the usual kind. They were of galvanized iron, and had been dipped after being pressed into shape out of a single piece of sheet iron. The drainage hole, being nearly two inches in diameter, must be closed with a piece of sod or other porous material to keep the soil in. Metal pots have always been condemned, as it was thought that porous sides were necessary for successful plant growth, but the thousands of healthy plants in tin cans in window gardens all over the country sufficiently disprove this opinion. We planted melons and cucumbers in these pots, using sods for drainage cover, at the same time planting similar seeds in earthen pots of the same size. When turned out in the field seven weeks later no difference in size or strength of the plants could be noticed, and both lots grew equally well throughout the season. The metal pots nest together very closely and only weigh about one-third as much as the earthen kind, and have the additional advantage of not breaking when dropped, although they can be bent by strong pressure. These sample pots are very well made, and after a year's exposure to weather are as bright as at first. They look as though they would endure many seasons' usage. Mr. Divine says his locality is so cool that it is necessary to start all early melons, beans, sweet corn, etc., in pots under protection to avoid late frosts. He finds these pots, which he has been perfecting for some time, just the thing, as thousands may be handled and stored with little trouble and expenditure of space. We understand that they cannot yet be manufactured at prices to compete with common pots, but he thinks that when their durability and ease of handling is taken into consideration they will in the end prove the cheaper. A season's experience seems to prove the truth of this assertion. W. V. F.

The Worden-Seckel Fear.

In your issue of April 20, some one, in answering H. G. H., of Cadiz, O., says the Worden-Seckel pear originated in Canada. I had always supposed this variety originated with the late Schuyler Worden, Minnetto, N. Y., the father of the famous Worden grape. I wonder if I am mistaken; if so, shall be glad to be set right. H. S. W.
Cayuga, N. Y.

In my reply of April 20 to a former question about the Worden-Seckel pear I did make a mistake about the origin of that variety, as I find from a consultation with one who was personally acquainted with the originator and his work. H. S. W. is correct in his belief, for the seed from which the original tree was grown was taken from a Seckel pear and planted by Schuyler Worden at Minnetto, N. Y., about 1860. The locality is on the west side of Oswego River, and in a good section for growing pears. It is a variety well worthy of being planted by all lovers of good pears, for it is larger and much more handsome than its parent, and as good in quality, which is equal to the best of all pears. My opinion is, that the simple name Worden is sufficient and that it should be so listed by the authorities in pomology and in the catalogues of nurserymen, and be so used by the public in general. H. E. VAN DEMAN.

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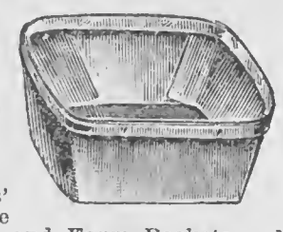

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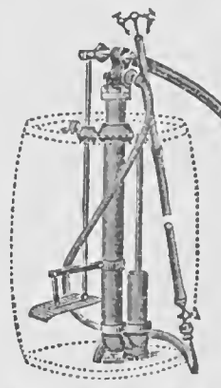

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Hope Farm Notes

WATER WORKS.—That title will fit all work at Hope Farm. It is still wet as a sponge. Rain has fallen more or less every day for the past 11 days. During these 264 hours there may have been 15 hours when evaporation beat precipitation. We saw the sun about three hours on Decoration Day, and the day following tried hard to entice the prodigal sun back to his business. He began work, but in less than an hour a cloud arose and spilled twice as much water on us as the sun pulled out. While that hour was only one-tenth of one per cent of the duration of Noah's deluge, it seemed as though nearly 15 per cent of his total rain fell! Well, we are not "kicking!" We are like Julia, tied up so we can't do anything. Unlike her we might sour the milk of human kindness as circumstances force it out of us, but that would be nonsense. The wise men tell us that the trouble with this weather is the fact that "an area of rain and fog" hangs over the eastern part of the country. There is not energy enough in the air west of it to blow it off into the ocean! It's a great satisfaction to know about these things, but that sort of knowledge doesn't plant corn. We Jerseymen want to know what ails the western people that they can't raise a little more "energy!" This makes me think that men sometimes feel clouds of depression settle down over them until their wives or some one else starts a little "energy" with the tongue, and off rolls the cloud.

FARM PROSPECTS.—Up to June 5 we had not planted a hill of field corn. A small patch of early sweet corn is up, but our corn ground is so hard and moist that we could not plow it properly. I won't plow that ground so it turns up thick and full of clods if I have to wait until the Fourth of July! Some farmers have corn well up, but it is pale in color, and the soil is sticky and full of clods. I think it was plowed too early, and that crops will suffer for several years in consequence. I expected by this time to have at least 12 acres of corn up. It is a sorry outlook for corn! . . . The oats are very fine. The young clover and Orchard grass have "caught" well—in fact, all grass and grain are very promising. We made the mistake of sowing rye and Crimson clover together last Fall. We cut and fed to the stock as long as the rye was tender, and then, rather than lose the clover, cut all with the mower. It is impossible to cure it in this weather, so we hauled several loads to the barn and scattered the green stuff all over the mows. It will make fair feed for the horses and save hay, but the cows will only pick out the clover. . . . We have nearly five acres of potatoes planted. The rain beat us on the rest. We got them in about right—taking time to fit the ground well. I was afraid of this wet, so we used large seed pieces well dusted with sulphur. They have made nearly a perfect stand thus far. In some of the farms near us where small seed pieces were planted very early nearly one-third have failed to sprout. We planted in hills this year, making deep furrows one way and light marks the other. Part of them were covered by running the Acme crosswise of the furrows—others with the cultivator run lengthwise. In this wet season the latter plan seems best. . . . I see some farmers out in the damp weather and wet soil cultivating such crops as have come up. It seems to me that they do more harm than good by such work. The soil is water-logged now. Working the surface will only prevent evaporation. Horse and man pack and paste the mud down into clods. No weeds are destroyed without sunshine—they are only transplanted! A light plow would do better work, but I would keep entirely out of the field.

HOME NOTES.—Our ice has caught the prevailing depression, and is easily moved to tears. Most of the small ice houses all about us are failing this year. Our house was made out of an old hen-house. The ice may last until September, but I doubt it. In case of doubt I believe in action, so we purpose to get some of the benefit of that ice before it all goes. It makes a very nice jacket to go aronnd some of Julia's cream. The Hope Farm family can raise the temperature of their idea as to the value of living several degrees over a can of ice cream. No cornstarch in ours, please—just the pure cream and fruit! What's the use in talking about pie when this combination of cow and ice house can be found on the farm? I have known men who kept 25 cows or more and received less than two cents a quart for milk, to growl like bears if their wives wanted a little cream for home use. What ails such men? I wish their wives would give an opinion! The farmer ought to live on the fat of the land—that is, unless he begins to find it hard to button his last year's vest. In that case he should give his share to the lean members of his family. . . . After waiting a week for a clear day Grandmother came home from the hospital between showers. We had the front room downstairs all ready for her with a wood fire burning in the grate. She was glad enough to get back to Hope Farm. Scrambled eggs were good enough for the rest of us that night, but Grandmother had a squab on toast. We must push some of the little chicks into broilers! Our scales show that Grandmother lost 13½ pounds while in the hospital. Most of us who find our flesh becoming a nuisance would lose it by some other method of pruning if we had our own way. The little girls especially were glad to have Grandmother back. It was pleasant to see the three again sitting together over their sewing.

COW CHARACTER.—I have the following note from a friend in Maine:

I was surprised to read in the Hope Farm Notes of the kicking cow Julia; did not know that any up-to-date farmer had such a cow. I am not strictly up to date myself, but have raised and kept a good many cows, and never had a kicker. If I had a hired man who should discover a kicking cow in my herd I would let him go into some other business, where his talents would be more likely to be appreciated.

H. B. W.

I agree with that. If I should raise a heifer that became a confirmed kicker I should certainly blame myself rather than the cow. We did not raise Julia. I bought her as a four-year-old. She was nearly dry when I looked her over and she did not kick. I didn't like the appearance of her eye, but her other "points" all indicated rich milk, and I risked her eye. The man who sold her must have forgotten her disposition. That is a charitable way of considering him. This cow is naturally ugly. She will fight the other cattle, chase the children, pull down fences and plan like a politician to get what doesn't belong to her. If I ever raise a "kicker" I shall hold myself responsible for her, but Julia is not a Hope Farm product. All we can hope to do is to make her walk a straighter line. We have her daughter with her first calf—as mild and gentle as need be. Another letter that makes me thoughtful is the following:

In your paper dated May 18, page 359, in Hope Farm Notes, I notice the following in reference to richness of milk: "This milk is so good that a gallon of it represents a pound of butter." Your milk being very rich a gallon would not weigh more than eight pounds. This would be equal to about 12 per cent butter fat for 100 pounds of milk. Milk as rich in butter fat as this could be sold in Lancaster, Pa., for 12 cents per quart. I would like to know what strain of cows you secure your milk from. We have a fairly good herd of registered Jersey cows, and they average a pound of butter from 16 pounds of milk.

I thought I made that plain. I said that a gallon of Julia's milk brings money enough to buy a pound of butter made by some man back farther from market. I was afraid, after I wrote it, that some one would get things mixed up. No! No! I do not intend to offer Julia as a famous butter cow. She is a good cow—though probably not so good as those owned by our friend. Her bad habits condemn her, and she will end her days this Fall in a butcher's shop. Her kicking is not patriotic, and unworthy of going down to posterity.

USES OF ADVERSITY.—As I write the clouds gather again and the fog spills down. "Looks as though we might have rain!" The best thing I can do, under the circumstances, is to quote from a letter just at hand from a good friend in California. He puts it better than I can:

I cannot help feeling that the unfavorable seasons, pests, disasters and other unfavorable conditions that we see about us, are for the purpose principally of calling the attention of weak mankind to the fact that there is an over-ruling Power in the universe who knows His business and what is best for man much better than man does himself. For instance, I cannot now see why we should have so much rain at this season, when perhaps three-fourths of the hay in the country is unprotected, and large quantities have been spoiled. It is true that these rains lay the dust and freshen the air, and benefit all trees and growing crops to some extent, but the man whose entire crop is hay cannot or does not feel happy about it. Must we not after all conclude that every man receives just what is best for him in order that he may develop towards perfection and strengthen the individuality that God has given him, or else admit that we are the victims of chance, and that God's plans are not perfect in all their details? H. G. K.

Amen! says the Hope Farm man. The great Manager of the universe knows more about this season than I do. You are right—the only man who is worth counting is he who goes through fire and has the trash burned out of him. Wu Ting-fang, the Chinese Minister, spoke at Grant's tomb on Decoration Day and among other things said:

Twenty-three centuries ago, Mencius, who next to Confucius was the greatest philosopher that has ever flourished in China said: "When Heaven is about to confer a great office on any man, it first exercises his mind with suffering, and his sinews and bones with toil. It exposes his body to hunger, and subjects him to bodily privation. It confounds his undertakings. By all these methods, it hardens his nature and supplies his incompetencies."

It would hardly be appropriate to say "Amen" in referring to a Chinese "sermon," but that strikes me as bed-rock truth—I don't care who said it. Brace up against trials and misfit conditions, and in time one comes to have the power of a giant. Fall down before them and they will roll over you and flatten you like a pancake. Mencius referred to a man who is to hold an "office." I consider that the head of a big farm family occupies one of the noblest offices within the reach of human endeavor. H. W. C.

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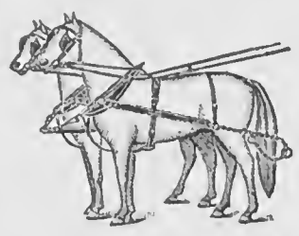

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SATURDAY, JUNE 15, 1901.

REPORTS from some sections are that in spite of a heavy bloom on the apple trees comparatively little fruit has set. The drenching rains during flowering are responsible for this loss. It remains to be seen how general this condition is. In ordinary years a crop estimate made during blooming will give a fair indication as to the crop. This year all such estimates must be revised. We want to hear from readers everywhere about this matter. What are the fruit indications *now*? What proportion of the fruit has actually started? Has spraying been as effective as usual? Now gentlemen, get together on these things!

*

WE are afraid there is trouble ahead for a good many of us. The season so far has been very wet and most farmers are two or three weeks behind. Much land that has been planted has been improperly fitted, plowed, harrowed and planted when too wet. Some have plowed, harrowed and planted almost in mud. Many seeds have rotted; some whole fields of potatoes gone. The land has been fined, as it was too wet to harrow, and the harrow has done more harm than good. The soil is lumpy, and the horses going over fields have simply scratched about an inch on top, while they stamped all under so hard that nothing can easily penetrate the soil. Weeds will be thick, and as haying and hoeing will surely come together, something will be neglected, and we look for poor yields on many farms.

*

DANISH butter enjoys a high reputation in European markets, and it is evident that the dairymen of Denmark intend to keep in advance of the procession. A number of them have formed an association for the employment and maintenance of an expert, who will visit the farms of the members at certain intervals to ascertain the quality and quantity of milk from each cow, and to keep an accurate record of the same. The results will be summed up at stated intervals, and a reliable statement given as to the value of the cows. It is not, however, necessary for a farmer to join an association to carry out such intelligent work; each one may and should carry out these estimates for himself. The interesting point, however, is that Danish farmers are so fully alive to their best interests, and so ready to work together to hold trade. The fact that they have almost a monopoly of markets we are trying to reach makes any study of their methods valuable.

*

A CORRESPONDENT is inclined to criticise the attitude of THE R. N.-Y. on pigeon-shooting and similar brutal sports, claiming that it is no worse than hunting or fishing, which are generally conceded to be legitimate and not inherently cruel pastimes. The hunting of wild game in a sportsmanlike way is vastly different from the deliberate public slaughter of tame doves, with the incidental agony of painful wounds that do not cause instant death. Yet we think that the time has arrived in the progress of real civilization when even the pursuit of wild creatures purely for recreation in populated districts should cease. Game birds and animals really have little chance against the modern battery of dog and perfected gun, and with the exception of a few destructive species they may well be preserved as the friends and companions of man. It should never be forgotten that humanity has as yet barely emerged from barbarism. We all feel a recurring desire to go out and kill something, or at least overreach somebody in one of the many devious ways of legal robbery which constitutes modern business. It is well to restrain these savage longings as much as possible. While progress is slow toward human refinement, nevertheless real advancement is taking place. One of the hopeful opportunities for substitution of artistic interest for cruelty is the pursuit of wild creatures with the camera instead of the gun. Accurate and vivid photographs of birds and animals have been caught in their natural surroundings by skillful and patient amateurs. To secure such pictures requires the exercise of the highest ingenuity of woodcraft, and is a pastime worthy of the most ardent lover of nature. To capture a successful portrait of a wary denizen of the field or forest is a satisfaction that far transcends the brutal exercise of the slaughtering power, and does the timid subject no harm.

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THE proprietors of transportation companies were quick to see the advantage in their controlling grain elevators and other storage facilities. They were thus able to handle the grain, and could practically freeze out those who tried to put up elevators along their lines. While much of the profit thus made is legitimate, and merely the result of business methods which looked into the future and studied the possible relations between carrier and the produce carried, yet there is no doubt that in numerous cases they have taken an unfair advantage of the grain farmer, who was obliged to depend upon their storage and suffer from their manipulation of prices. In some sections of the West farmers are forming associations and putting up elevators of their own in which they can hold grain independently of the railroads. They have no quarrel with the latter, but are simply meeting business methods with business methods, and this seems much nearer to common sense than any attempt to pose as martyrs, or urge the enactment of laws prohibiting carriers from engaging in any outside business.

*

THIS is an era of giving. Hardly a week passes without the report of some wealthy man who has given millions to the cause of education—in fitting out schools or libraries. It is one thing to gather a fortune and then give it away, but quite another to give it away without gathering it. Those who do this are seldom mentioned. One such man is Prof. S. M. Babcock, of Wisconsin. It is safe to say that his invention of the milk test bearing his name revolutionized the dairy industry of this country. The Wisconsin Legislature presented him with a bronze medal, and in the course of his remarks Gov. La Follette said:

> A colossal fortune was within his easy grasp. He put it aside and gave to the public the priceless product of his genius and disinterested labor. In the midst of the commercial spirit in which we live, surrounded by the sordid desire for wealth; its unscrupulous methods of attainment, idolatrous worship, its unworthy power, we have in this act an example of pure-minded, honorable conduct, placing a public benefactor high in the confidence of the people, above all suspicion of taint. And this dedication of his invention to the public possesses even a greater moral than money value.

The rich men who give their millions do well, but they would do better if they gave less accumulated money and more scattered opportunity. The world would be better off in the end if the rich and shrewd would improve conditions, so that poor and middle class would need less of their money!

*

FOR centuries mankind has endured the mosquito—not willingly, but because there seemed no help for it. This little pest has made human life a burden, and has also been the means of spreading malaria, yellow fever and probably other diseases. We failed to fight the mosquito successfully because the warfare was conducted against single adults. They were screened out of the house with partial success, and now and then one was caught in his bloody act and killed. This process proved about as effective as the plan of emptying the ocean with a tablespoon. Now the fight against this pest has been changed from individual combat to wholesale slaughter. The scientific men have shown us how to destroy the baby mosquitoes. Their quiet study of its habits has been more effective than all the groans, slaps and bad language which the practical men have indulged in. The insects breed in still, fresh water. They will not breed in running streams or in salt water. If all the little pools and stagnant ponds in a neighborhood can be drained the mosquito crop will surely fail from drought. Where this drainage is impossible a thin film of kerosene oil over the surface of the water will put an end to the "wigglers." Of course this plan requires the coöperation of neighbors in order to make it effective—for that matter so does every effort against pests which injure us, be they mosquitoes or men. By taking care of all water holes or stagnant places on our own premises we may do much good, but this work of fighting mosquitoes is a public service in which all should take a hand. The so-called "board of health" to be found in most communities might just as well enforce sanitary laws against the mosquito as to quarantine patients who suffer from contagious diseases. It is reported that the city of Winchester, Va., has been made nearly "mosquito proof" by the enforcement of an ordinance requiring people to use kerosene in all vaults and sinks. Formerly the insects were so bad that guests were driven away. On Long Island an area containing 25 square miles has been examined by an engineer and every stagnant pool or pond will be drained or oiled. These things show that people are moving against the mosquito, and it is high time they did so. Science shows how the work may be done, and now provides a motive for doing it by proving that this winged and spurred enemy is responsible for spreading disease.

*

WE know of a farmer who was started into better farming by the questions of a little child. He was a good-natured, easy-going man whose great fault was a lack of system and purpose. At times he would wander aimlessly about doing a job here and another there, without thought or careful planning. His little child tagged him about with one simple question: "Father, what are you going to do next?" She saw her father turning from one thing to another, doing nothing thoroughly—making so many turns and changes that her little mind was confused. "Father, what are you going to do next?" This question was asked again and again. At first it annoyed the man, but he was naturally good natured, and the child was so persistent that at last the man fell to asking himself the same question. He began to see the folly of talking about "the next" thing before the thing in hand was done. He also saw the loss that was sure to occur in taking up the next thing before it was well thought out. This little tale is true. The farmer was driven by his child to ask himself the same question, and in time he was able partly to organize his plans, and make the connection between the present job and the next one more businesslike. What are *you* going to do next?

*

BREVITIES.

Of all the flowers from roses down to tansy
There's nothing hits me like unto the pansy.
Them little posies—jest like people's faces—
Keep noddin' to ye in their proper places.
Proud, patient, smilin', happy, sweet an' sour,
Why, I can sit an' watch 'em by the hour,
An' note their changes; when the sky is bright,
They jest beam out with cheerfulness and light;
But let a cloud come skipping o'er the sun,
An' off their face the happy look will run,
An', like a man that wrinkles up his brow
When trouble comes, them leaves are crinkled now.
An' so they change, from sorrow up to gay,
An' back again the whole day long; I say,
We got no use for any other flowers
Except them pansies in that yard of ours.

DON'T let the hogs suffer for water.

TOO many milch cows are filch cows.

AN unboiled dish rag becomes a rag weed.

READ the "Household tests" for oleo—page 430.

WE would like to know how you cool and handle your milk.

THE best thing a "wet blanket"—human or fiber—can do is to dry up.

HOW can you give your work a "square deal" without cutting the corners?

C. D. L. speaks a good word for the despised skunk in his fruit report on next page.

IT requires a strong antidote of shingle or slipper to correct the doting of some fond aunties.

WE want information about automatic stable cleaners or any devices for handling the manure quickly.

WHY not make the expensive farm machinery so strong and durable that the manufacturer need not expect to sell to the same man twice in a lifetime?

OUR fruit crop reports indicate that the wet weather has been a great hindrance to spraying, and insect troubles are likely to be a serious matter in consequence.

AT one time Holland led Europe as a dairy country. It began to encourage the oleo factory, while Denmark encouraged the cow. Of course, the Danes now lead the Dutch in dairying.

THE patron of a cheese factory will often refuse to buy cheese because it would cut down his monthly check! Yet he will use some of that money to buy meat or more expensive food.

IT seems that poultry men now sell large numbers of little chicks just as they are hatched from the incubators. This plan is said to suit many buyers better than purchasing the eggs.

THIS is the way one reader puts it: "THE R. N.-Y. is a treasure house of joy to the intellect and a source of profit to the pocketbook. May the kicker at Hope Farm be the only one in its clientage!"

No! There are patriotic kickers who serve their country with their toes.

SAN FRANCISCO has instituted quarantine against cases of consumption entering that port. This disease is extremely common in the Philippines, due partly to the climate, and partly to the susceptibility of the natives to the disease.

WE know of one farmer who cut potatoes for two acres, having all preparations made, expecting to plant the next day. Rain set in, and he was unable to plant for three weeks. Although the seed was rolled in plaster and spread out it decayed, and was a total loss.

Events of the Week.

DOMESTIC.—At Philadelphia, Pa., May 30, seven persons were drowned in the Schuylkill River, their boat being swept over the dam. . . . . Three persons were burned to death in a farmhouse fire at Watsema, Ill., May 30. . . . . At Wilmington, Del., May 31, three heavily loaded trolley cars ran away going down a steep grade, killing one man, fatally injuring another, and hurting many. . . . . In a gas explosion in a mine at Newcastle, Col., June 1, two men were killed and eight injured. . . . . In a great fire on the Isthmus of Tehuantepec, Mexico, over 70 persons were burned to death. . . . . Three persons were killed and 16 injured in a railway collision at Atlanta, Ga., June 3, where a switch engine dashed into a passenger train. . . . . Settlers in the Lander Valley, Wyo., are arming, and many families moving into the towns, as the Arapahoe Indians are going on the warpath. . . . . At Iron Mountain, Mich., June 4, eight miners were killed in the Chapin mine by the deadly fumes following an explosion of dynamite. . . . . June 2, a fire at Quincy, Ill., caused a total loss of $75,000. . . . . The town of Willits, Cal., was destroyed by fire June 5. . . . . Twenty tons of smokeless powder at the San Francisco Navy Yard was ignited by chemical action June 5, and in burning destroyed a valuable magazine. There was no explosion.

ADMINISTRATION.—The President and Cabinet decided, May 31, that the action of the Cuban Constitutional Convention was not a "substantial" compliance with the terms of the Platt amendment. The Secretary of War will convey this fact to the Convention. Courteously but positively the Cubans are informed in about 2,000 words that the President cannot accept the action they have taken, and the assumption is conveyed that they will rectify the mistake which they have made. It is pointed out that the President has no right to alter the purpose of Congress or to change the meaning of the directions given him by it, and that the action of the Convention cannot be approved without disobedience to the act of Congress. . . . . The President has determined that existing conditions do not require or warrant calling Congress together during the present Summer or making any change in the policy hitherto pursued and announced in regard to the Philippine Islands. The Cabinet was unanimous in the opinion that the authority to govern the Phillippines vested in the President by the Spooner amendment was ample. . . . . Andres L. Terry y Dortigos filed, June 5, the largest claim that has yet been presented to the Spanish Claims Commission. It is for $588,468.75, and is interesting in that part of the damage for which compensation is asked was not inflicted by Spanish troops, but by Cuban insurgents. Mr. Terry claims that the Spanish government was responsible for this damage, not only because it failed to protect his property from the insurgents, but because it gave them every opportunity to burn and loot.

PHILIPPINES.—The native lumbermen of Manila will petition the Philippine Commission for legislation making compulsory the use of Philippine lumber in insular improvements in preference to that imported from Borneo and the United States.

FARM AND GARDEN.—May 29, Gov. Stone, of Pennsylvania, signed the Snyder anti-oleo bill. Grangers and farmers' interests generally have fought earnestly for the passage of this bill.

At the recent meeting of the Florida State Horticultural Society it was stated that the white fly, hitherto regarded as the most formidable insect ever encountered in Florida, is giving way before the brown fungus (Aschersonia aleyrodis, Webber), insomuch that the most advanced growers of Manatee County now hardly bestow upon it a second thought. The San José scale, the brown rot and the curculio are spreading widely among deciduous fruits, and will require vigorous fighting by the growers to stamp them out.

Reports from Livingston County, N. Y., state that there is such a plague of biting flies in that locality that farmers are obliged to cover the horses' ears with nets, and take other precautions with their stock.

Several cases of anthrax on dairy farms are reported in Genesee and Niagara counties, N. Y. Farmers are having their stock vaccinated against it, and as soon as an animal dies of the disease it is cremated.

Following a secret conference of western Senators and Congressmen in Denver, the Congressmen of Nebraska and Wyoming have issued a call for a meeting to be held at Cheyenne, Wyo., June 20, at which Congressmen will be present from Nebraska, Kansas, North and South Dakota, Utah, Nevada, Colorado, Montana, Oregon, Washington and Idaho, to discuss the throwing open of the arid lands of the West to settlement, and plans for their irrigation. Senator Dietrich, of Nebraska, set forth a scheme for the employment of State and Federal convicts in building canals and reservoirs in the arid lands of the West, and suggested that the prison labor be guarded by United States troops, who would thus be given employment in time of peace. The workmen also would not come into competition with organized labor. Elwood Mead, for the Government's Irrigation Bureau, opposed the laying of the burden upon the Federal Government. Should the lands be thrown open, it is believed two-thirds of them will be secured by the large cattle interests.

The Secretary of State of Kansas granted a charter June 1 to the Farmers' Coöperative Grain and Live Stock Association, which was organized by the farmers at Salina a short time ago. The Association begins with a paid-up capital of $20,000, divided into 2,000 shares, and its object is to buy and sell, on commission or otherwise, farm products of all kinds, including live stock, and to establish and maintain yards, grain elevators and emporiums for the safe keeping, sale and distribution of farm products. The principal office shall be in Topeka, with subordinate offices, if necessary, elsewhere in the United States. The life of the corporation shall be 99 years.

Fruit growers visiting the Pan-American Exposition will find their headquarters at No. 8 Bidwell Parkway, Buffalo, which is within easy walking distance of the Exposition, and where they are likely to meet friends of similar interests.

The American Fruit Company of Porto Rico has been organized at San Juan, for the purpose of doing a nursery business in Citrus fruits, palms, bulbs and florists' stock for the New York market; also to grow Winter vegetables, pineapples and oranges. The officers are: President, Wm. R. Corwine, of the Merchants' Association of New York; secretary and treasurer, H. S. Rankine, assistant corporation counsel, city of New York; manager, F. M. Pennock, San Juan.

The New York fruit exhibit at the Pan-American Exposition is attracting much attention. There are 3,200 plates, chiefly of apples, of which latter there are 345 varieties on show.

The annual meeting of the Oregon State Grange was held at Albany, Ore., May 28-30. There was a large and representative attendance.

FRUIT PROSPECTS.

The prospects for apples are about one-half a crop, mostly Greenings and Fall fruit. Peach trees were loaded with blossoms. R. A.
Marengo, N. Y.

Greening, King, Ben Davis, Spy and Fall apples had a fair amount of blossoms. Baldwins are scarcely blossoming at all. Peaches have not blossomed as full as commonly. Cherries and plums have blossomed full; also prunes. G. A. M.
Sodus Center, N. Y.

The apple trees blossomed about 75 per cent; as for the varieties I could not say, but I think the Spy bloomed the least of any. Pears in most cases blossomed largely, and plums and peaches full. Not many peaches in this section. As for spraying there are not many who spray their fruit trees here. W. W. R.
Preble, N. Y.

Weather cool and rainy; most apples fell off. Stone fruits all sticking well; cherries and strawberries ripe and not abundant. Cutworms and grub worms doing great damage everywhere. Last week I saw where a skunk had dug out 45 grub worms in the space of a few rods of drill row. Protect the skunk and eject the skunk trapper from your premises. C. D. L.
Higginsport, O.

Prospects are good in this section for fruit of all kinds but apples. Grass is looking better than for several years. Early peas are coming out in blossom, and will be a good crop. I have not heard of Green pea-louse so far, but we many get it later on same as last year. We have had no frost this Spring to do any hurt. Tomatoes are being set out in the fields, and I noticed some a week ago in bloom. There are a good many cows kept in this section, and farmers are selling the milk to the Italian cheese factory for 90 cents per hundredweight.
Brant, N. Y. I. B.

The season here is very backward, as it has rained for nearly two weeks more or less and most of the time more. Some oats are not sown (June 1); very little corn is in the ground, and too wet to plow for corn and potatoes. Very light crop of apples in prospect, as the Baldwin did not bloom any and Greening very sparingly. Cherries light crop. Fly is doing serious damage in a great deal of wheat, although some red varieties are looking well, the best being the American Bronze. Canker worms have made their appearance, and all we can do is to let them eat, it being too wet to spray.
Penfield, N. Y. G. W. E.

The early varieties of apples have blossomed freely, and have set for an abundance of fruit. Winter varieties blossom very scantily, especially trees that bore last year (and the majority did). I know an orchard of 150 trees, all Greenings, 1,000 bushels last year, and not enough blossoms to fill two trees this season. My own orchard has not enough blossoms on Spy, Baldwin or Greening to fill one tree each. Roxbury Russet a trifle better. Sour cherries blossomed very full; plums and pears moderately; strawberries very full also. These conditions are general in the four or five towns through which I have passed more or less. H. D. M'K.
Euclid, N. Y.

In this section of Maine there have been many more rainy days and much more rain during this Spring than have been previously known. At intervals there have been a few days of sunshine, but when farmers had just begun to prepare the land for sowing another long storm has set it. Consequently only a small portion of the Spring work has been done. All fruit trees have blossomed fully, and there are no indications but that there will be a good crop of cherries, pears and apples. Not many plums and less peaches grow in Maine. Apple trees, though they bore last year, never looked more beautiful. They are now, June 4, just in full bloom.
Portland, Me. J. H. R.

Farmers are not very jubilant here; wet, 'way behind. Good grass crop promised on land that was well fertilized, but grass is no longer king. Poorest ice cream season to date we ever had; no hot sunny days. Seven acres potatoes in if they don't rot; shall harrow well just as soon as possible. All fruit but apples promise well. Small seeds not coming well. Some farmers have not been able to plant anything up to June 5, and are quite discouraged. Our dairy is doing finely and good demand for butter, which we turn out when cream is dead. We are making considerable cottage cheese, which brings a fair price, 10 cents per pound. This morning's milk was skimmed, buttermilk added to ripen, and at 3 P. M. was made and ready for sale. This beats our record. H. G. M.
Connecticut.

We are having a good deal too much of a good thing just now. It rains regularly every night and quite often all the time between two nights. Result is no corn or potatoes planted, much wheat turning yellow. Timothy meadows in many places much injured. Plums and peaches are rotting before they get jackets off. Curl-leaf in peaches is very bad on all heavy land. Duchess pears almost an entire failure. All late blooming apples like Hubbardston and Northern Spy have aborted, and a mighty slim show for any kind of an apple crop. As an offset, where land is not too wet, oats and barley are making splendid growth. Where it took last seeding, clover was never better; it is now more than knee high, as thick as a mat and with no show of blossoming yet. Thermometer runs along about 50 degrees mornings, and gets up to 65 to 70 through the day. Very little sunshine and with only one warm day so far this season, yet I never saw trees freer from fungus with the exception of Peach curl-leaf. J. S. W.
Niagara Co,, N. Y.

The Hudson River Valley Cherry Crop.

It is rather difficult at the present time to form an intelligent opinion on the cherry prospect. There has been a good setting of fruit with me and not very much dropping so far. The white varieties are showing some little rot in the past few days, and should rains continue will undoubtedly be a failure from this cause. We are very much in need of sunshine and dry weather.
Newburgh. J. R. C.

Sweet cherries set a very heavy crop, probably more than could be ripened, unless with exceptionally favorable conditions. The sour cherry trees were not so heavily loaded. The continued wet weather has caused many of the sweet cherries to fall from the trees. Should all that look healthy now on the trees hang on there will be a fair crop. On some trees rot has made its appearance. Unless we have continued dry weather soon this may spread and destroy the crop. So far there is a fair crop of both sweet and sour cherries on the trees.
Orange County. W. D. B.

The outlook for cherries in the Hudson River Valley and vicinity is most excellent. The blossoming of the trees occurred a little in advance of the excessive rainfall, and the fruit is set exceedingly well. There is at present a very good prospect for a very large crop. The Cherry aphis has made its appearance, and unless the trees are thoroughly sprayed with whale-oil soap or kerosene emulsion the drop will be seriously damaged. I have just made an inspection of my farm at Ghent, and find 500 apricot trees set with the finest crop I have ever known. The peaches are exceedingly heavy set, and if not considerably thinned will have very little value in them. On a four-inch branch of Japan plums I counted 37 well-set fruit, and we are thinning down to just four specimens. The prolonged wet period has already developed mildew on the apricots and they are rotting badly. If this is continued many days longer the peach and cherry crops will be damaged, even at this early period, from the same cause. We are spraying vigorously, even during this rainy period, with Bordeaux Mixture. GEO. T. POWELL.
Westchester County.

CROP AND WEATHER REPORT.

There is serious drought in the Central West, particularly in the Missouri and Upper Mississippi Valleys, while the Eastern States have suffered from the cold and continued rains. The temperature in all the district east of the Mississippi has been abnormally cool and very unfavorable for corn. Cutworms are doing considerable damage. During the latter part of the week the rains in the East stopped and a warm wave followed, causing a rapid growth in plants of all kinds. Winter wheat in the lower Missouri Valley is in bad condition owing to drought and fly damage. Harvesting has begun in Arkansas and will be in full blast in Kansas shortly after the middle of the month. Cotton has made but slow growth, and in the eastern part of the belt it needs cultivation, which has been prevented by the wet weather. The oat outlook in the Ohio Valley and Tennessee has improved. Apples are dropping largely, and the prospect in many important apple States is not promising. On the Pacific coast all crops are doing well. The California yield of wheat and sugar beets will be unusually large. Oregon hops are making good growth. Hungary, Austria, is a great grain district. Reports from there state that rust is rapidly spreading in wheat; that rye and barley are poor and that the sugar beet has suffered from vermin.

PAPER BOXES FOR STRAWBERRIES.

In THE R. N.-Y. a few weeks ago there arose a question concerning paper boxes, instead of the wooden ones. For six years we have used the paper boxes for strawberries with satisfactory results. The boxes we use are made by the Diamond Package Co. of Rochester, N. Y.; they make a box that is very neat and clean, being white paper, costing $2 per 1,000 in 5,000 lots, sold flat. They are also waterproof. They fasten together by locking the ends. We always put them up when our time is not worth much, and as we get fancy prices for our berries we can afford to give the box away and have clean ones every time we go to market. Wooden boxes get dirty and stained, but not worn out, and the fruit does not look well in soiled packages. By using a clean paper box, white and new, the appearance of the package will sell first every time, as I have often noticed. There is where the white paper box man gets to the front with his reputation in fine fancy fruit. Some one said that they get crushed, melt down and go to pieces. Our crates are made so that when a layer of boxes is put in the crate the tray does not rest on the top edges of the boxes as in the old way. There is a cleat on each end of the crate allowing one inch space from top of boxes for filling them full, so when we get to market we have an honest quart. When the cover of the crate shuts down it does not lie on the top layer of boxes, but there is an inch space between each layer, so you see the fruit goes to market in the finest of shape. As the boxes fit snugly together, the moisture from the berries does not wilt the boxes even if picked after a rain. From experience there is nothing like the white paper box for our use for strawberries. C. V.
Lyons, N. Y.

THE HAY CROP.—Many dealers in haying machinery say that sales thus far have been heavier than usual, and their reports indicate that the crop in the East will be exceptionally large. The wet weather has given the meadows such a start that if there is a reasonable amount of sunshine for the next two weeks, it would seem that hay producers may look forward to the biggest job of harvesting that they have had for a number of years. The indications are that in the Central West the crop will be rather light, owing to lack of rain. This will tend to even things up and prevent the usual low prices when the entire country has a heavy yield.

Woman and Home

From Day to Day.

DIFFERENT PATHS.

I lately talked with one who strove
To show that all my way was dim,
That his alone—the road to Heaven;
And thus it was I answered him:

"Strike not the staff I hold away,
You cannot give me yours, dear friend;
Up the steep hill our paths are set
In different wise, to one sure end.

"What though with eagle glance upfixed
On heights beyond our mortal ken,
You tread the broad sure stones of Faith
More firmly than do weaker men:

"To each according to his strength;
But as we leave the plains below,
Let us carve out a wider stair,
A broader pathway through the snow.

"And when upon the golden crest
We stand at last together, freed
From mists that circle round the base,
And clouds that but obscure our creed;

"We shall perceive that though our steps
Have wander'd wide apart, dear friend,
No pathway can be wholly wrong
That leads unto one perfect end."

—Credit Lost.

*

SOME young women are substituting a tiny velvet bow for the little pin or barrette used to gather up loose hairs at the back of the head. The hair is gathered together as for the pin, and the velvet, which is very narrow, slipped through and tied in a bow.

*

PURE grape juice gives a delicious flavor to ice cream; it is well worth trying. It is also excellent in jelly, and makes a fine flavoring for pudding sauce. A mold of grape-juice jelly served in a ring of whipped cream decorated with strawberries, is a handsome dessert formed of materials within the reach of a farm housekeeper.

*

STRAWBERRY pincushions are among the most popular of the small articles sold at the Women's Exchange in New York. They are made of the same shape as the strawberry emery, but the indentations are marked in with pins. Two small strawberry emeries hang from the top of the larger pincushion berry.

*

"WE shall all on us be dead some time, I reckon; it 'ud be better if folks 'ud make much on us beforehand, instid o' beginnin' when we're gone. It's but little good you'll do waterin' a last year's crop." So says sharp-tongued Mrs. Poyser, in Adam Bede. It is well to remember when tempted to give grudgingly of our best to those nearest us—to withhold kindliness, and lessen loving service—that we shall not pass this way again.

*

WOMEN are tacking a little posy of artificial flowers on their parasols this year, and very pretty are the flower-trimmed fluffy sunshades. But for practical use nothing is better than a 24-inch silk sun umbrella perfectly plain, which is useful for both sunshine and showers. Dark red is a desirable color, which gives a becoming shade; the handle should be a big crook or loop of natural wood. Such an umbrella goes well with everything, and always has a nice look.

*

MANY are the smart new belts offered for Summer wear. White alligator leather is one of the newest; it has a buckle of dull gold or silver. Burnt pigskin is another belt novelty. Gray suede with a frosted silver belt is very handsome. White piqué makes a very suitable belt for wear with shirt waists; it has a firm lining, and fastens with a nickel buckle. If one has a nice silver buckle or clasp, the piqué belt may be made at very small expense; line, and put two rows of machine stitching all around the edges. A stock collar of piqué may be suitably worn with it. Little girls are wearing belts of black patent leather with their frocks of white piqué, linen or pongee.

*

ONE of the most comfortable novelties offered by the large stores this season is the shirt-waist gown. With the shirt waist of ordinary design appears a simple skirt of the same material, the entire suit being furnished for a moderate cost. It is a very suitable style for country wear, and one to be recommended to the home dressmaker. Linen, piqué, cotton cheviot, madras and gingham are all desirable materials for shirt-waist suits. Such a suit of white corded lawn or piqué is very attractive.

3831 Misses' and Girls Wrapper, 8 to 16 years.

3765 Morning Gown, 32 to 42 in. bust

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THE effect of climate upon one's moral being has puzzled a good many worthy people. Here is what an energetic New England woman says on the subject in "Penelope's Irish Experiences, a very amusing book by the author of "The Birds' Christmas Carol":

"There's nothin' like a Massachusetts Winter for puttin' the git-up-an'-git into you. Land! you've got to move round smart, or you'd freeze in your tracks. These warm, moist places always make folks lazy; and when they're hot enough, if you take notice, it makes heathen of 'em. It always seems so queer to me that real hot weather and the Christian religion don't seem to git along together. P'r'aps it's just as well that the idol-worshippers should git used to heat in this world, for they'll have it consid'able hot in the next one, I guess!"

The Rural Patterns.

The morning gown figured is made from challie in a soft dove gray, and is trimmed with bands of lace appliqué, but cashmere, wrapper flannel, Scotch flannel, and all similar materials as well as madras, percale and suitable washable fabrics are equally appropriate. The back fits smoothly, being arranged in shirrs at the waist line, below which the skirt portion falls in full folds. The fronts are slightly loose, but are arranged in gathers at the neck and held by a ribbon girdle at the waist. The sleeves are in bishop shape finished with cuffs. To cut this gown for a woman of medium size 11 yards of material 27 inches wide, 9½ yards 32 inches wide or seven yards 44 inches wide, will be required. The pattern No. 3765 is cut in sizes for a 32, 34, 36, 38, 40 and 42-inch bust measure; price 10 cents. The girls' wrapper or lounging robe is made of dimity showing pink spots on a white ground, but all washable materials are suitable as well as light-weight flannels and flannelette for the cooler days. The fronts are slightly full at the neck and widen out to form the skirt portion. The back is full at the neck and drawn in with gathers at the waist line. The neck is finished with a deep turn-over collar and the sleeves are in bishop style. At the waist is a ribbon that is tied slightly toward the left side. To cut this wrapper for a girl 12 years of age, six yards of material 27 inches wide, 4¾ yards 32 inches wide, or 4¼ yards 44 inches wide, will be required. The pattern No. 3834 is cut in sizes for misses of 8, 10, 12, 14 and 16 years of age; price 10 cents from this office.

The blouse waist No. 3812 is one of the very popular sailor styles. Piqué, duck, mercerized pongee, linen batiste, madras and cheviot are all available washable fabrics, while the various waist cloths and simple silks are equally appropriate. When made from any of the latter the lining should be used; but gowns that require to be laundered are better without the foundation and should have the V-shaped shield attached to the fronts beneath the collar. The waist is smooth across the shoulders at the back, but the fronts are each laid in two tiny pleats, and both fronts and back are drawn down in gathers at the waist line. The sailor collar is joined to the open neck. The shield and stock collar are attached permanently to the right side of the lining and hooked over into the left. The sleeves are in bishop style, finished with straight cuffs. To make this blouse for a woman of medium size 3⅞ yards of material 21 inches wide, 3¾ yards 27 inches wide, 2⅝ yards 32 inches wide, or two yards 44 inches wide will be required. The pattern No. 3812 is cut in sizes for a 32, 34, 36, 38 and 40-inch bust measure; price 10 cents. The misses' waist No. 3771 has the back laid in straight tucks at the center back, which are overlapped at the waist line to produce the desired V. The fronts include the center box pleat, through which the closing is effected, with a group of three full-length tucks at each side and successive groups of graduated length that extend to the shoulders, and provide fullness below. The sleeves are in bishop style with pointed cuffs that lap over from the opening at the seams. The neck is finished with a neckband and can be completed by the collar provided in the pattern, by one of white linen, or by ribbon arranged as a stock as preferred. To cut this waist for a miss of 14 years of age 3¼ yards of material 21 inches wide, 2½ yards 27 inches wide, 2½ yards 32 inches wide or 1⅞ yard 44 inches wide will be required. The pattern No. 3771 is cut in sizes for misses of 12, 14 and 16 years of age; price 10 cents from this office.

3771 Misses Shirt Waist, 12 to 16 years.

3812 Woman's Blouse, 32 to 40 in. bust.

Pioneer Experiences.

One of the accomplishments possessed by the pioneer farmer's wife, was the art of painting floors. This became necessary because the rich black soil was so fine that it would track into the house, and no amount of mopping would make the floors look inviting. The oil to be used was first boiled until it would crisp a feather, some litharge was stirred in for its drying qualities; it was then thickened with French yellow, and white lead was also added, or red lead to make a shade that best suited the taste of the artist, the lead making the paint harder and more durable. Then, the room being emptied, the operator, in appropriate costume, proceeded to paint the floor. At first flat sticks were laid down here and there, and boards were laid on them so that there was a place for the cook to walk without injury to the work; but it was found by practice that it was better to lay smooth boards flat, along where it was necessary to walk, as it seemed to mar the paint less. After the first coat a day was allowed for it to dry and then the finishing touch was added by applying the last coat. It was troublesome to live while the floor could be sufficiently dried, but patience brought it out all right. If the housekeeper could keep the family off the paint for a week, the beauty and lasting qualities of the paint would pay her well for the trouble. Afterwards the boards were mopped every day with skim-milk or milk and water which had the effect of making them smooth. The month of May was the usual time for this, it was one of the accompaniments of the annual housecleaning. I have heard some old ladies with pardonable conceit declare that they could mix paint that would outshine in beauty or wearing qualities any that was prepared in the shops. The work of painting was hard while it lasted but was a real labor-saving in the end, besides adding much attraction to the home. Papering was much resorted to, both for the looks, and for the added warmth it gave to the cheaply constructed farmhouse. If nothing else was procurable, newspapers were freely used in the Summer kitchen at least. A paste of rye flour was found to be excellent for use, it causing the paper to adhere to the rough walls better than other preparations.

AUNT RACHEL.

TEACH us to love and give like Thee!
Not narrowly men's claims to measure,
But daily question all our powers,
To whose cup can we add a pleasure?
Whose path can we make bright with flowers?

—Whittier.

Why lack for goodly company
When cheerful thoughts are cheap?
And why, since it must rest with you,
Friendship with others keep?
Your sable musings and your drab
But sorry comrades are.
And choosing, as needs be, why not
Such grim acquaintance bar?

—St. Louis Republic.

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An Act of Insubordination

PART II.

"I pieced this quilt years ago," said Mrs. Sherwood, when they were at last ready to settle down to the tying. "There are a good many pieces that were given me by folks we both used to know. As we work let's see how many of the pieces we can remember."

All the forenoon they worked steadily and talked fast. The pieces in the quilt recalled to mind all their old-time friends. Some were living, some dead and others lost sight of, but there was something to be said of each one. They were so anxious to finish the quilt that they ate only a hasty lunch at noon. They were rather silent over it till suddenly Mrs. Doane laughed gleefully.

Mrs. Sherwood looked up expectantly. "What is it, Mary?" she asked.

"I've been worrying about 4 o'clock," she said. "I've tried not to show it, but it has been on my mind. I don't want to be come after and carried home, and I've just thought what I'll do. I'll start home across lots at four, and when Emily gets here she won't find me. As long as I've been naughty already I'm going to make a day of it. I probably never shall act so again. Do you know, I feel like an old horse that's been shut up in the barn all Winter and when he has a chance to get out he can't keep from capering."

"I feel the same way," confessed Mrs. Sherwood.

"Now that walk this morning; you don't know what it was to me. I always used to think it was the most beautiful path in the world and I think so now, though it has changed—trees cut off in some places and grown up in others." She did not mention losing her way; she was a little ashamed of it.

Mrs. Sherwood looked at the clock. "I hate to think of your going home, but I guess we can finish the quilt."

"I shall be up again before I go," said Mrs. Doane. "That is, unless Emily is so displeased she won't bring me. I don't blame her for being put out. It is a queer way to act on the third day of my visit. I expect she'll feel real ashamed of her mother cutting up so."

"I don't believe it," said Mrs. Sherwood. "She'll tell folks how smart you are for seventy-one."

The quilt was finished at half-past three and all evidences of their guilt effaced. Mrs. Doane began to be nervous and at quarter of four declared she must start. Emily might take a notion to come earlier. The two friends walked slowly down the lane together, as they had done in their girlhood. At the woods they parted. "I feel real mean to leave you to face Emily alone," said Mrs. Doane, "for I don't doubt she'll be a good deal r'iled. Well, good-bye, I've had a lovely time."

She walked on slowly till she was more than half way home, when a new thought struck her. "I'll get supper before Emily gets home," she said. "She won't be back before five, and if I hurry I can have supper all ready when she comes."

She walked along briskly, reaching home only a short time after her daughter had started. The door was locked, but she knew where to find the key. She let herself in and soon had a fire kindled and supper started. As she walked about setting the table she sang softly.

"Well, Mother, if you haven't given us a day of it!" Emily exclaimed when she came home. "Scaring me out of my wits till I found your note, and then sending me on a wild goose chase after you this afternoon. I declare, I'd like to shake you." All Emily's usual good humor was gone. It was Mrs. Doane who was placid now. "I'll help you unharness," she said mildly.

"No," said Emily shortly, "I'll leave the horse for Henry or the boys to 'tend to I've got to go to work now; it's late."

Mrs. Doane followed her into the house.

"And you've gone and got supper!" Emily exclaimed. "Well, Mother, if you don't beat all! What has got into you? I should have thought you'd been tired enough with all that walk—and goodness knows what you did while you were up there—without going to work and getting supper. You'll be sick to-morrow."

"I don't care if I'm sick a week," Mrs. Doane declared calmly. "I've had a beautiful day. I've done just what I've wanted to and the walk was just lovely. All the rest of my visit I'll be quiet and proper, but I've had one beautiful day and nobody can get that away from me."

Emily sighed resignedly. "Well, I'm glad you've had a good time. After all, I suppose folks have got to enjoy themselves in their own way. I declare, I should think when Mattie and Ellen hear of this they'd be thankful their mother is quiet and sensible and don't act so."

Mrs. Doane smiled. "I guess they will be thankful," she said demurely.

SUSAN BROWN ROBBINS.

Rural Recipes.

Rye Breakfast Rolls.—Two cupfuls milk, two cupfuls rye flour, three eggs, half teaspoonful of salt, tablespoonful of sugar. Beat the eggs, add milk and sugar. Stir this into the flour, to which the salt has been added. Have the tins warm when the dough is put in and bake 25 minutes in a quick oven.

Crumb Pie.—Soak a pint of bread crumbs in milk. Beat three eggs; add half a cup of sugar. Line two pie plates with crust and strew over enough raisins

3828 Misses' Sailor Shirt Waist, 10 to 16 years.

3805 Square Yoke Nightgown, 32 to 42 in. bust.

to cover bottom. Add the bread crumbs to egg and milk, sifting in a bit of cinnamon, pour over the raisins and bake about 30 minutes.

Walnut Cake.—Cream two-thirds of a cupful of butter with one cupful of sugar. Separate three eggs; beat the yolks until creamy and add to butter and sugar; then add one cupful of milk alternating with three cupfuls of flour (reserve enough of the flour for the nuts), add two teaspoonfuls of baking powder, one cupful of nut kernels chopped, and last of all fold in the whites of the eggs beaten to a stiff froth. Bake in a loaf tin in a moderate oven from 45 minutes to one hour.

Finnan Haddie with Eggs.—Soak one medium-sized fish in boiling water for five minutes, then broil on both sides over a clear fire. Pull off the flesh in small strips, lay them upon a hot platter, sprinkle with half a saltspoonful of white pepper and half a tablespoonful of melted butter. It will need no salt. Have ready five eggs delicately scrambled and seasoned with a half-teaspoonful of salt and one-fourth as much pepper. Turn the scrambled eggs over the fish and serve very hot.

Marlboro Pie.—Into two cupfuls of stewed and sifted apple sauce stir while still hot two tablespoonfuls of butter; beat the yolks of two eggs, add one cupful of sugar, the juice of one lemon and half the rind grated, one-quarter teaspoonful of salt and one-half cupful of fine cracker crumbs; mix thoroughly and turn into a plate lined and bordered with rich paste; bake in a moderate oven, and when done make a meringue with the whites of four eggs, four tablespoonfuls of powdered sugar and one tablespoonful of lemon juice; pile it lightly over the surface and set it in a moderate oven until slightly colored; serve cold.

Raisin-Cake Squares.—Sift and dry half a pound of flour, rub into this two ounces of butter and a very little lard, add three ounces of sugar, a teaspoonful of baking powder and six ounces of stoned raisins. Beat two eggs with a spoonful of milk, and add to the dry ingredients; add a pinch of ground cinnamon and beat all to a light batter; pour into a greased pudding tin and bake in a sharp oven; when cooled a little cut with a hot knife into squares and serve while still warm.

Fried Rolls.—Soak one-half cake of yeast in one-fourth cupful of warm water. Scald one cupful of milk and add to it one heaped tablespoonful of butter, one rounded teaspoonful of salt. When the milk is cool add the yeast and stir in flour enough to make a smooth batter. Beat the white of one egg stiff, turn it into the batter and when well mixed stir in enough more flour to make a stiff dough. Knead it until smooth. Let it rise in a warm place till light, then knead it down, take out pieces as large as an egg, make them first into balls, then into finger rolls. Let them rise some distance apart and when light drop them into hot fat and cook brown.

A Fresh-Air Pantry.

A shaded, airy hall or porch is a good situation for a fresh-air closet in which to store cooked food from one meal to the next. It is only a frame box with door and sides of wire gauze and shelves across the inside. It is best made fast to the wall at such a height as to be safe from prowling cats, and should have further a trusty lock. Put away food in it in clean earthen dishes, never in any sort of metal, not even in silver. Slip each dish into a separate cheesecloth bag, and twist the bag end tight. If ants, black or red, discover the closet, paint the wood box all outside with camphor once a fortnight. Twice a year take down the whole contrivance and scald it outside and in with boiling soda water. All manner of food keeps beautifully in it from one meal to the next. Things may be put in it while still warm. If they have to go into a tight, unventilated place, as a refrigerator, they must needs be stone cold or they will get soggy and smelly.

Always set away cooked things in uncovered dishes. Wire gauze dish covers will keep out dust and admit of ventilation. They are, however, too costly for many purses. A good substitute is a hoop or oval of stout wire with either cheesecloth or mosquito net sewed firmly over it. Make the hoops of sizes to fit all sorts of dishes, or, rather, of sizes to stand an inch beyond the edges they must cover. The weight of the wire holds them well down. Every week drop the covers in a wash boiler with water and a little soda, boil for five minutes, and dry in the sun. Light and lime, the best of all antiseptics, should be relied on to keep the fresh-air closets sweet. Hang a bag of quicklime somewhere, and change the contents as fast as the lime slakes. In country or suburban houses ants are often a plague. A ring of air-slaked lime an inch wide and a half inch deep will keep them out of a dish holding food. They cannot crawl over a shelf thickly dusted with powdered lime. But since they travel always by definite roads, it is well to find the path and block it by a smear of coal or pine tar applied, if possible, outside the pantry. Save in freezing weather, keep fruits, vegetables, etc., in the fresh-air closet until wanted. Cooked meats and salt ones can stay there the year round. It is the place for such things as cheese, nuts, raisins, dates and olives. All of these lose flavor or grow rank by keeping in a warm place, or by suffering great alternation of temperature.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

He that gives quickly, gives twice.
Give if thou canst, an alms; if not, afford
Instead of that, a sweet and gentle word.
—Herrick.

We can't choose happiness either for ourselves or for another; we can't tell where that will lie. We can only choose whether we will indulge ourselves in the present moment or whether we will renounce that for the sake of obeying the divine voice within us—for the sake of being true to all the motives that sanctify our lives. I know this belief is hard; it has slipped away from me again and again, but I have felt that if I let it go forever I should have no light through the darkness of this life.—George Eliot.

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KENSEE, Ky., March 21, 1900.
I did a double washing for myself yesterday and made 65 cts. from my boarders, besides all my cooking, milking and housework. It takes less soap with your machine than in the old way. I have no need of the washboard any more Mrs. L. A. BARTON.

ONALASKA, Wis., Jan. 4, 1901.
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MARKETS

NEW YORK, JUNE 8, 1901.

GRAIN.—Late reports of showers in the drought-stricken districts gave a weaker tone to the wheat market. Corn trade is light. Export business in oats dull.

Wheat, No. 2, hard, N. Y.	83⅛	@	—
No. 1, Northern Duluth	86⅞	@	—
No. 1, Northern Chicago, spot.	84⅛	@	—
Corn, No. 2, mixed	48¼	@	—
Oats, No. 2, white	33	@	—
Rye, No. 2, W'n, c. i. f., Buf.	—	@	54½
Barley, feeding	50	@	—
Malting, new crop	58	@	62

BEANS.

Marrow, choice, per bu	2 50	@	—
Marrow, fair to good	2 20	@	2 45
Pea, bbls., choice	2 00	@	—
Red kidney, choice	2 00	@	2 02½
White kidney, choice	2 10	@	2 15

FEED.

Spring bran, coarse	16 50	@	17 00
Winter bran	16 50	@	17 50
Red Dog	19 50	@	20 00
No grade flour	—	@	20 75
Linseed meal, ton	—	@	27 50
Cottonseed meal, ton	24 00	@	—

HAY AND STRAW.

Hay, No. 1	85	@	—
No. 2	75	@	80
No. 3	70	@	75
Clover	60	@	65
Clover, mixed	70	@	75
Straw, rye, long	95	@	1 00

SEEDS.

Clover, per lb	9¼	@	10½
Timothy, per bu	1 90	@	2 50
Flaxseed, whole, per bu	6 50	@	7 00
Millet, per lb	2	@	2½
Rape, German, per lb	3¼	@	3½
Sunflower, per lb	2¼	@	2½

MILK.

New York Exchange price within 26-cent freight one two cents per quart.

BUTTER.—Considerable stock is being put into storage on account of slow consumptive demand. Factory butter is most active, and some premium has been paid for fancy grass goods.

Creamery, extra, per lb	—	@	19
Firsts	18	@	18½
Seconds	16½	@	17½
Lower grades	15	@	16
State dairy, tubs, fancy	18	@	—
Tubs, firsts	17	@	17½
Tubs, seconds	16	@	16½
Tubs, thirds	14	@	15
W'n imitation creamery, fancy.	16	@	16½
Firsts	14½	@	15
Lower grades	13	@	14
W'n factory, large tubs, firsts.	—	@	14
Fair to prime	13	@	13½
Lower grades	11½	@	12½
Renovated butter, fancy	16½	@	17
Common to choice	12	@	15½
Old Western factory	10	@	13

EGGS.—The market generally is easier on heavy receipts and light trade.

QUOTATIONS, LOSS OFF.

Mich., N. Ohio and N. Indiana, regular packings	—	@	14
Other W'n, northerly sections, regular packings	—	@	13¾

QUOTATIONS AT MARK.

Nearby, State and Pa., fresh-gathered, f'cy, selected, doz.	—	@	15
Average prime	13½	@	14
W'n, Northerly sections, candied, selected, fancy	—	@	13¾
Reg. packing, N'th'n sect'ns.	12	@	13
Graded, Southerly sections	—	@	12½
Reg. packing, Sth'ly sect'ns.	11	@	12
Ky., best marks, selected	11	@	12
W'n, fresh-gathered, dirties	9½	@	11
Checks	7½	@	9½

LIVE STOCK.—Steers dull; also calves of all grades. Sheep and lambs lower.

Native steers	4 80	@	6 00
Cows	2 50	@	4 25
Oxen	4 65	@	5 20
Bulls	3 15	@	4 70
Veal calves	4 50	@	6 25
Buttermilks	4 00	@	4 25
Sheep	3 00	@	4 25
Lambs	5 00	@	6 65

COUNTRY-DRESSED MEATS.

Calves, veal, prime, per lb	—	@	8
Fair to good, per lb	7	@	7½
Common to medium, per lb	6	@	6½
"Spring" lambs, fancy, each	5 00	@	5 50
Poor to prime	1 00	@	4 00

LIVE POULTRY.—Receipts light and trade in all grades dull.

Spring chickens, nearby and Western, per lb	21	@	22
Southern & S'w'n, per lb	16	@	17
Fowls, per lb	—	@	11
Roosters, per lb	—	@	7
Turkeys, per lb	—	@	9
Ducks, average W'n, per pair	70	@	75
Average Southern, per pair	50	@	55
Geese, average W'n, per pair	90	@	1 00
Average Southern, per pair	70	@	75
Pigeons, per pair	25	@	30

DRESSED POULTRY.—Supplies moderate and market in fair shape.

FRESH PACKED—ICED.

Turkeys, W'n, hens, small	7	@	9
Western, toms	—	@	7
Broilers, Phila., over 3 lbs. to pair, per lb	32	@	35
Phila, under 3 lbs. to pair, lb.	25	@	30
Penn., fair to good, per lb	23	@	30
W'n, dry-picked, per lb	23	@	28
W'n, scalded, per lb	20	@	23
Fowls, W'n, dry-picked, prime.	—	@	10
Western, scalded, prime	9½	@	10
Western, poor to good	8½	@	9
Southwestern, prime	9½	@	10
Old roosters, per lb	6	@	6½
Ducklings, L. I., & other nearby, per lb	13	@	14
Squabs, choice, large, dark	2 25	@	2 50
Mixed, per doz	1 75	@	2 00
Dark, per doz	1 25	@	1 50
Culls, per doz	50	@	1 00

FROZEN.

Turkeys, young hens, No. 1	11	@	—
Mixed young hens and toms, No. 1	10½	@	11
Young toms, No. 1	10	@	10½
No. 2	7	@	9
Broilers, dry-picked, fancy	18	@	20
Scalded, fancy	13	@	15
Chickens, fancy, soft-meated	—	@	12
Average, No. 1	—	@	10
No. 2	7	@	9
Fowls, dry-picked, No. 1	9½	@	—
Capons, fancy, large	15	@	16
Medium sizes	13	@	14
Ducks, fancy	12	@	12½
Geese, fancy	9½	@	10

DRIED FRUITS.

Apples, evaporated, fancy, lb	6¾	@	7
Evaporated, choice, per lb	6¼	@	6½
Evaporated, prime, per lb	5¾	@	6
Evaporated, com. to good, lb.	3½	@	5¼
Sun-dried, S'n, sliced, lb	2¾	@	3½
Sun-dried, State & W'n qrs., per lb	2¾	@	3½
Sun-dried, S'w'n, coarse cut.	2½	@	2¾
Chops, per 100 lbs	70	@	1 50
Cores and skins, per 100 lbs.	40	@	1 25
Raspberries, evap'r'ted, 1900, lb.	19	@	20
Blackberries, 1900, per lb	5½	@	6
Cherries, 1900, per lb	12	@	14

FRESH FRUITS.—Apples scarce and selling well. Peaches inferior; strawberries in better shape.

Apples, Baldwin, choice, per d.-h. bbl	4 50	@	5 25
Russet, com. to choice, bbl.	3 00	@	4 50
Inferior stock	2 00	@	3 00
Peaches, Fla., per carrier	1 50	@	2 50
Georgia, per carrier	1 00	@	2 00
Strawberries, Norfolk, poor to good, per quart	3	@	4
Maryland, good to choice, qt.	6	@	7
Maryland, ordinary, per qt.	4	@	5
Jersey, fair to choice, qt	4	@	7
Huckleberries, N. C. per qt	8	@	12
Gooseberries, green, per qt	6	@	8
Watermelons, Fla., each	40	@	65
Muskmelons, Fla., fancy, per bushel package	3 00	@	4 00
Poor to fair	1 00	@	2 00

VEGETABLES.

Potatoes, Bermuda, prime, bbl.	4 50	@	5 50
Bermuda, No. 2, per bbl	3 00	@	3 50
Florida, per bbl	3 50	@	4 50
Charleston & Sav., p'me, bbl.	3 50	@	4 50
N. C., fair to prime, bbl	3 00	@	4 00
Southern, No. 2, per bbl	2 00	@	3 00
State & W'n, in bulk, 180 lbs.	2 37	@	—
State, per sack	2 25	@	2 37
Asparagus, Colossal, doz. bchs.	3 50	@	4 50
Extra large, green, per doz.	2 50	@	3 00
Extra prime, white	2 50	@	3 00
Prime, white and green	1 75	@	2 25
Poor to fair, doz. bunches	—	@	1 50
Culls, per doz. bunches	75	@	1 00
Beets, N. C. & Ch'n, 100 bchs.	2 50	@	3 00
Norfolk, per bbl	—	@	2 00
Jersey & L. I., per 100 bchs	4 00	@	5 00
Cabbages, N. C., per bbl. crate	40	@	75
Norfolk, per bbl. crate	40	@	90
Norfolk, per bbl	30	@	75
Cucumbers, Ch'n & Sav., crate.	2 25	@	2 50
Florida, per basket	1 50	@	2 25
Florida, per crate	1 50	@	2 00
Celery, Fla., per case	2 50	@	3 50
Cauliflowers, nearby, per doz.	—	@	1 75
Norfolk, per ½-bbl. basket	1 25	@	—
Corn, sweet, Fla., per case	1 50	@	3 00
Eggplants, Fla., per box	2 50	@	3 50
Garlic, New Orleans, per lb	6	@	8
Green peas, Norfolk, per ½-bbl. basket	50	@	1 00
Baltimore, per ½-bbl. bskt	1 00	@	1 25
Eastern shore & Md., bskt.	75	@	1 25
Jersey, per basket	1 00	@	1 25
Lettuce, L. I., per bbl	50	@	1 00
Onions, Bermuda, per crate	1 25	@	1 30
Egyptian, per bag, f. o. b	1 75	@	2 00
New Orleans, per bbl	2 00	@	2 25
New Orleans, per bag	90	@	1 10
Peppers, Fla., per carrier	2 00	@	2 50
Radishes, nearby, 100 bchs	40	@	50
Squash, Fla., yellow, crate	50	@	75
Florida, white, per crate	40	@	60
Charleston, white, bu, bskt.	75	@	1 00
String beans, Ch'n & Sav., wax, per bushel basket	75	@	1 50
Ch'n & Sav., green, bskt	1 00	@	1 75
Spinach, L. I., per bbl	50	@	75
Turnips, Canada, Russia, bbl.	1 25	@	1 50
N. C., new, white, per bbl	1 00	@	1 50
Jersey, white, per 100 bchs	2 00	@	3 00
Tomatoes, Fla., f'cy, carrier.	2 50	@	3 00
Fla., poor to good	1 50	@	2 25

BUSINESS BITS.

ONE housekeeper of our acquaintance says that she has tried many washing machines, but the only one which has met her expectations is the 1900 washer. It is a great labor saver, removing all the dirt, and there is absolutely no risk of tearing the clothes. No housewife should be without one—just see the liberal offer made by the 1900 Washer Co., of Binghamton, N. Y., in this issue.

THE name "Dederick" has been so long associated with the making of good hay presses, Mr. Dederick having been the originator of the hay-baling idea, that a new press from his factory is certain to attract more than passing attention. We believe that hay growers everywhere will welcome Dederick's new continuous belt hay press. We know everyone who grows hay will be interested in it, both on account of its good work and its low cost. Send for circulars to P. K. Dederick's Sons, Tivoli St., Albany, N. Y.

WE are in receipt of an interesting letter from Minard D. Harder, Cobleskill, N. Y., in reference to the new management of the Empire Agricultural Works, with which he has been connected since its establishment, in 1859, and which he owned and managed from 1870 to 1897 when, on account of impaired health, he resigned the business to his son, George D. Harder, who conducted it until his death in February last. After being taken ill, he gave his brother-in-law, Edgar S. Ryder, power of attorney, also making him sole executor of his estate—his son, Frank H. Ryder, Mr. Harder's grandson, acting as general office manager, a young man of unblemished character, who, through his four-year college course, was training himself for a business career, and that business the Harder Agricultural Works. Mr. Edgar S. Ryder is a man not only of irreproachable character, but entirely responsible financially. In regard to the quality of the machinery sent out, it contains the same perfect material and superior workmanship as heretofore, its construction being under the vigilant eye of the same superintendent, S. S. Myers, who has held this position, as also many of the skilled workmen under him for many years. The celebrated Fearless horse power thrashers and cleaners have been manufactured and sold by this house now for 38 years. The Harder round silo with continuous opening front was originated and patented by George D. Harder. This house enjoys an enviable and merited reputation, and the present management can be depended upon to maintain it in the future.

THE expression "O. K." is attributed to President Jackson, who is said to have written "O. K." for "all correct." The letters are now used very generally throughout the United States to signify that all is correct. Elsewhere in this issue is shown an illustration in connection with which the letters "O. K." are used. The picture shows a farmer providing himself with the McCormick binder. With the machine he is buying he will have no difficulty in harvesting his grain crops successfully, and any farmer could well afford to imitate this man. If you haven't a McCormick call on the McCormick agent in your locality, or write at once to the McCormick Harvesting Machine Co., Chicago, U. S. A.

RALPH L. SHAINWALD, president of the Standard Paint Company, New York, the manufacturers of the well-known P&B products, sails for Europe on the Fuerst Bismarck, June 6, on a business trip, remaining abroad until October. The P&B goods are very popular abroad. In China, Ruberoid roofing covers the barracks of both the United States and German troops quartered there. Ruberoid is also used in the De Beers mines in South Africa, and a large lot went to the Klondike fields in Alaska a few months ago. Ruberoid is adaptable to all climates; hence its universal popularity.

Disease and death often lurk in a continuously neglected cold, when it might be speedily eradicated with a few doses of Dr. D. Jayne's Expectorant—*Adv.*

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That Drouth

which usually strikes the *Eastern States* early in June, and always damages crops, can be mitigated by the judicious use of 150 lbs of

Nitrate of Soda

per acre about the middle of May. It invigorates the growth and enables the plants to pass through this trying period unscathed. Try it on your potatoes and garden crops. A request for free literature and ***list of dealers*** will receive prompt attention if made to **John A. Myers**, 12-O John St., New York City.

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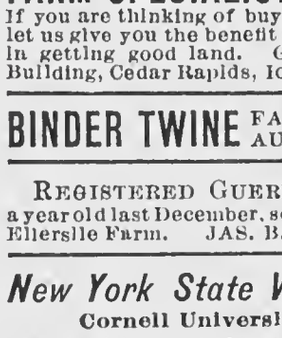

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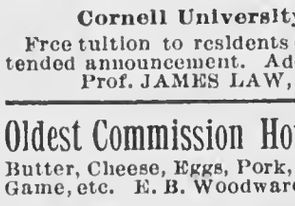

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MY KING and His Service, by Frances Ridley Havergal, well known as a writer of devotional books. We have a few copies of this work beautifully bound in red and silver. Price, postpaid, 15 cents.

THE RURAL NEW-YORKER,
409 Pearl St., New York.

Market Briefs

PICKED UP HERE AND THERE

SMALL FRUIT NOTES.—Large quantities of strawberries are arriving, and some improvement in quality is noted. Prices, however, remain low. There are a good many North Carolina huckleberries of fair quality wholesaling at 10 to 15 cents. The sale for them is limited, however, and from now until the Oswego crop arrives, strawberries will hold first place in the small-fruit market, making blackcaps, blackberries and all others take a back seat. Of late trade in raspberries, both black and red, has not amounted to much, but blackberries of good quality usually do very well.

TO TEST GAME LAWS.—The search for game mentioned last week was continued until about 15,000 pieces of forbidden game were found in this one cold-storage house. Suit is to be brought against the owners of the birds, most of whom belong to the Game Keepers' Association. They purpose to test the constitutionality of the law and have put up $10,000 for this purpose. It is said that an agreement has been made that if the game people lose, their fines shall not exceed $10,000. It is well to have this matter decided definitely one way or another. If this law is not constitutional, it certainly ought to be repealed; if it is, violations of it should be met with the most severe penalties, and no favoritism shown.

WATERMELONS.—Several shipments have arrived from Florida. Those of reasonably good quality sell at very high figures, wholesaling at 40 to 65 cents. All that we have seen have been of the long variety. Reports from Georgia indicate that the acreage this year, both of watermelons and cantaloupes, is not far from 20 per cent less than last, and at present the vines do not look promising. It is rather early to make any definite predictions as to prices for the bulk of the crop, but there is reason to believe that they will be higher, except perhaps at the period when the great rush from both Southern and Central districts comes. Some of the disastrous gluts in the melon market in this city that have occurred in past years might have been prevented if shippers had known the conditions better, and diverted part of their crop to other points.

PEACHES are coming from Georgia and California; but they are green, uninviting and difficult to sell. Few care to buy such inferior peaches so long as there are plenty of fine oranges, cherries and apples to be had. It is a great mistake to ship peaches green. Unlike pears they do not ripen well off the trees. Last year we saw large Elbertas here that were not fit to eat. If left on the tree a little longer they would have been excellent. Of course, it will not do to leave them until "dead" ripe, if they are to be shipped a long distance, but certainly those that are hard as stones when they reach New York must have been picked too soon. A man who buys a basket of nice-looking but hard and tasteless peaches is not likely to invest again, while, if he gets what pleases him he may buy freely. Multiply this man by 10,000, and it is easy to see that this is not an unimportant matter. It may be difficult to figure things out so that the fruit may reach the consumer in just the right shape, but it is necessary to come as near to it as possible if the best results are to be had.

GREAT TRADE IN COCOA.—The value of this product brought into the United States during the past year was more than $5,500,000. This represented about 21 tons of cocoa leaves, shells and beans, twice as much as was used 10 years ago. There has been a steady demand for chocolate in candy making for a long time, but it is only recently that people in this country have used this product to any extent as a beverage. Now nearly all hotels and restaurants supply it in addition to tea and coffee, and it is also found daily on the tables of many families. When properly prepared it is wholesome and free from the objectionable features of strong tea and coffee. In most restaurants it is the custom to put a little dry cocoa into a cup, pour on hot water and milk, stir and serve at once. This does not cook the cocoa sufficiently to get best results, and it has a decidedly raw taste. During the process of boiling, a little vanilla should be added; this gives the rich flavor of French chocolate. Cocoa is adulterated with flour to some extent, and in the cheaper grades considerable of this is worked in. This product comes from the tropical portions of South America and Africa, and from the East and West Indies.

W. W. H.

BARN PASTURE FOR COWS.

A Study for Soiling Crops.

CRIMSON CLOVER.—I said last week that there was green forage enough in sight on the farm to last until July 15, with a surplus to be cut for hay. As we looked over the level stretch of land great streaks or gashes of red appeared where the Crimson clover had headed out. This clover was seeded last Fall in the corn, and in spite of the dry season it made a good growth. It was all ready to cut and haul to the barn for feeding, or it may be turned under and used to feed another crop of corn. Prof. Voorhees has weighed, sampled and analyzed this crop with great care. He has demonstrated that such a crop as is growing at the Station is fully equal to 15 heavy loads of manure per acre. Cattle are very fond of the green clover. The hay is also very strong, but it is hard to cure in a season like this, when there is too much rain. In dairy farming, where a good ration of silage is fed the hay or dry fodder should be strong in protein. Alfalfa, Crimson clover, cow peas or oats and peas are best for the dry part of the ration. In this soiling system Red clover has been about dropped out.

OATS AND PEAS.—This is a favorite crop for soiling. Three different sowings have been made this year. This crop has been called a "ham sandwich for cows," for it seems to give just about the right balance in the ration for milk making. An experiment at the College farm showed that green oats and peas gave a complete ration, keeping up the milk flow of good quality. In feeding other soiling crops the aim is to combine them, so as to give a composition similar to that of oats and peas. This can be done by feeding green corn and grain, corn and clover or Alfalfa, and other combinations—thus saving the great space required for pasture, and part of the money spent for purchased grain. Oats and peas also make a milk of fine flavor and good creaming quality. Another good thing in its favor is the fact that the good qualities of the green crop are carried to the hay. Dried oats and peas make the finest of forage to feed with silage. In some sections the crop is permitted to mature, and the peas and oats are thrashed and ground into a coarse meal. Prof. Voorhees believes that the hay is better than the straw and grain separate. It has been asked how the oats and peas were sown. Last year's crop was on ground Fall-plowed. The seeding was done as early in the Spring as the ground could be worked. Two bushels of peas were broadcast over each acre, and worked in with a disk harrow. Then the oats were drilled in the usual way. The plan of harvesting for hay is to cut about one-third of the field, at one time, with a mowing machine. This is done in the afternoon. The next forenoon the hay is shaken up with a tedder, and in the afternoon put up in medium-sized cocks in which it stands for two or three days. It is then opened out for a few hours and hauled to the barn.

RYE AND WHEAT.—I told last week how these grains had been cut and fed out, so that the ground where they grew was being plowed for cow peas. Prof. Lane gave me the following statistics, which may be compared with the table printed last week. Year after year the crops seem to grow larger, so that there is more surplus left to be cured for dry fodder:

"The rye was sown October 3; fed May 1-21, and yielded 9.6 tons per acre. The wheat was sown September 26; fed May 21-28, and yielded 5.23 tons per acre. I might say in regard to the wheat that it was cut before it began to head, hence the yield was not large. Wheat might have been fed for a much longer period, but Crimson clover and Alfalfa came in at this time, so we had no further use for wheat. In regard to the yield of Crimson clover and Alfalfa, it is too early yet for records this season, so the best I can do is to give you some previous records. Crimson clover yields from six to 11 tons per acre depending upon the season, time of cutting, etc."

ALFALFA.—This is the prize crop at the Station. On May 28 the plants stood from 2½ to three feet high, as thick as a mat. The first cutting is about ready now—closely following the Crimson clover. As will be seen from last week's table the acre of Alfalfa gave green forage for 13 days, besides the second cutting, which was made into hay. This acre of Alfalfa was seeded May 14, 1898. One cutting was obtained that year. In 1899 the total yield was 20.21 tons of green fodder, or 5.05 tons of hay. Last year the yield was 26.60 tons of green fodder, which represented 6.65 tons of hay. Since the acre was seeded therefore—three years ago—it has produced 54.81 tons of green fodder, or 13.70 tons of hay, and it is now as thick and vigorous as ever. The Alfalfa is cut with a mower and fed green to the cattle. At first 30 pounds are given at a feeding, on the second day 40 pounds, and on the third day 50, which becomes the standard ration. The grain ration fed with this consisted of equal parts by weight of cornmeal, wheat bran and dried brewer's grains—six pounds per day being given.

ITS GRAIN VALUE.—The Alfalfa gives a heavy and bulky crop, but that is not the chief reason why it is so valuable for eastern dairymen. It is the "strongest" of the grasses—that is it contains more protein per ton, and produces more to the acre than any other hay or fodder crop. We must understand that "protein" is the most valuable element in all feeds—the part which is used to produce lean meat or fiber. Prof. Voorhees has worked this matter out with great care, and the following tables show the vast possibilities of an acre of Alfalfa as a grain bin:

Total yield per acre in pounds:

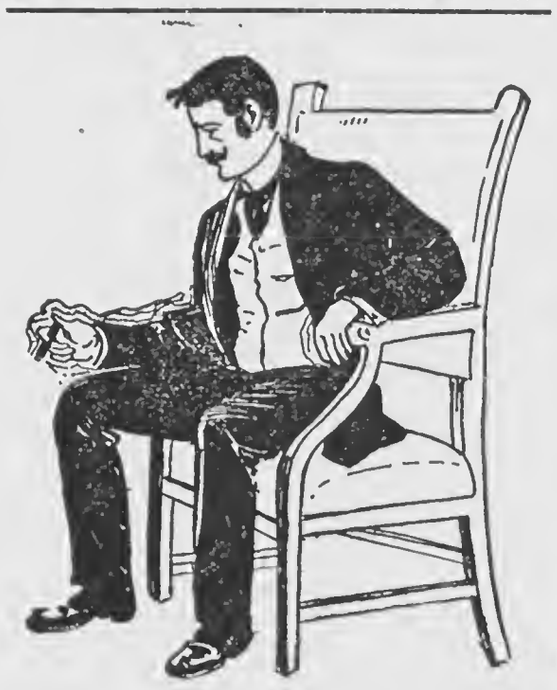
	Green.	Protein.
Alfalfa	36,540	2,214
Corn (entire plant)	24,000	408
Red clover	14,000	616
Barnyard millet	16,000	384
Crimson clover	14,000	434
Cow peas	16,000	384
Oats and peas	14,000	363

Total protein content, pounds:

1 ton Alfalfa hay contains	265
1 " Red clover hay contains	246
1 " oats and peas contains	175
1 " Timothy contains	118
1 " wheat bran contains	308
1 " wheat middlings contains	312
1 " rye bran contains	294
1 " oats contains	236
1 " rice meal contains	240
1 " buckwheat bran contains	248

Thus the acre of Alfalfa produces more than three times as much protein as an acre of Red clover, and will keep on doing it year after year without reseeding. Think of it—the acre of Alfalfa produces as much protein as one will buy in seven tons of wheat bran or 10 tons of oats! But is this protein worth as much in the Alfalfa as it is in the bran? A ton of big bones contain phosphoric acid, but who will say they are equal to a ton of fine bone meal? That is just the point which has been investigated at the New Jersey Station. I will try to tell about it next week.

H. W. C.



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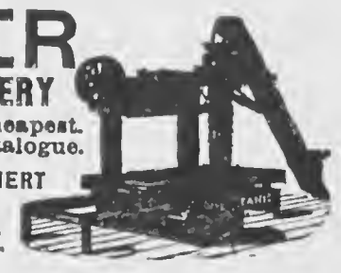

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Live Stock and Dairy

A SURPRISE IN BREEDING.

The Hope Farm man recently said that he had two young Holstein heifers, full sisters, who were nevertheless developing into two quite different types of cows. One was doing what a heifer of a milking breed ought to do; growing into an animal with the incurved thighs and bony framework and generally undefined milky air which are the birthright of the cow born to the dairy. But the other heifer is building herself into a coarse, thick-hided, steer-like looking cow; just what she ought not to be. And from a theoretical standpoint this is strange enough. Unless we knew better from experience, we should say that two heifers born to one dam from one sire should be as alike as two hats made over one block. In general they would be very much alike, but Nature's rules, in the line of breeding at least, are subject to exceptions. One will have to do very little breeding to find that the unexpected often happens. Any man fortunate enough to have a family of children around his dinner table will not have to go abroad to find illustrations of the fact that brothers and sisters in mental and physical traits apparently differ from each other almost as much as they differ from the children in the next house. And what is true of children is just as true of puppies or pigs or calves. The truth is that breeding is very, very far from an exact science. We know that the sum of two and two is four. We may bring together two chemicals in solution in well-placed confidence as to what the precipitate will be. But when we mate two animals, we must be prepared for surprises, and sometimes for disappointments.

The inexplicable reason is this; that every plant or animal which comes into the world is subject to two fundamental laws of life. These two forces are inheritance and variation. No organism ever escaped them. Every one tends to resemble its parents and its far-off ancestry as well, and just as surely everyone tends to vary from its type, to exhibit traits not found in its ancestors. Such variation may be so marked as to be called a "sport" or a "monstrosity." And it is because we cannot with any certainty calculate in advance the relative influence of these forces, or the direction and extent of their action, that breeding has at best a good deal to do with the theory of probabilities. This does not mean that stock-breeding is after all a blind gamble on a happy chance. While it can never become a matter of mathematical certainty in results, yet men know that there are some causes which tend to increase the force of inheritance, and decrease the amount of variation. We know that the offspring of animals which have been long bred within certain blood lines—that is, old-established breeds—are much less likely to show wide variation than where the parents are mongrels. This is the practical benefit of breeds and stock association records. In our best and oldest breeds this tendency toward strong inheritance is pretty well established. The coupling of standard-bred horses will by no means always produce the phenomenal animal of the race tracks, but it will rarely fail to give a horse with the temperament and conformation of the trotter. As a matter of fact, the value of an animal for breeding is largely measured by its ability closely to reproduce itself. This is what we call prepotency, and in its highest form is always to be regarded as a most valuable character. For example, the famous old foundation Short-horn bull Hubback is said to have possessed a "touch," a mellowness of hide, which was incomparable, and which seemed to descend not only to his calves but to their descendants. In fact, the names which are famous in the history of any breed are those of animals which were able by virtue of their innate power to stamp their excellencies upon their descendants. Thus Stoke Pogis 3d, generally acknowledged to have been the greatest of Jersey bulls, almost invariably got calves capable of making more than 14 pounds of butter per week, regardless of the character of the dam.

So in general what is sought after by the breeder is strong inheritance. Yet it must be remembered that variation may also be most useful. Without this force improvement would be impossible. We should be able to breed an animal just as good as its progenitors but no better. While with good animals variations usually means a decline from the high standard already fixed, it may possibly mean a real advance over anything that has gone before. If such variation occurs it is fortunate if there is a master at hand wise enough to see it, and to secure its preservation. But just why these laws of inheritance and variation should act so differently in the case of these two sister calves is as impossible to tell as to account for the origin of life itself, a problem which Herbert Spencer frankly says "cannot be explained in chemico-physical terms," so that the great philosopher of evolution and the most simple-minded man finally reach the same conclusion.

JARED VAN WAGENEN, JR.

R. N.-Y.—The heifers referred to are out of a Jersey cow by a Holstein bull. They are full sisters, but very different in type.

Simple Tests for Oleo.

The Department of Agriculture is soon to issue a bulletin on "Household Tests" which will enable one to detect oleo or "devilled" butter readily.

Two household tests are given—the boiling test and the Waterhouse test. The former has been in use for about 10 years, and was originally used for the detection of oleomargarine, but after the advent of renovated butter the test was found to serve almost equally well in distinguishing this product from genuine butter, although not from oleomargarine. It may be conducted in the kitchen as follows: Take a piece of the sample about the size of a chestnut, put it in an ordinary tablespoon and hold it over the flame of a kerosene lamp, turned low, with chimney off. Hasten the process of melting by stirring with a splinter of wood; then increase the heat and bring it to as brisk a boil as possible. After the boiling has begun, stir the contents of the spoon thoroughly, not neglecting the outer edges, two or three times at intervals during the boiling—always shortly before the boiling ceases. A gas flame, if available, can be more conveniently used. Oleomargarine and renovated butter boil noisily, sputtering (more or less) like a mixture of grease and water when boiled, and produce no foam, or but very little. Renovated butter usually produces a very small amount. Genuine butter boils usually with less noise and produces an abundance of foam. The difference in regard to foam is very marked as a rule.

The Waterhouse test, designed a year or so ago by Mr. C. H. Waterhouse, at that time dairy instructor at the New Hampshire College of Agriculture and Mechanic Arts, is as follows: Half fill a 100 cc. beaker with sweet milk; heat nearly to boiling and add from five to 10 grams of butter or oleomargarine. Stir with a small rod, which is preferably of wood and about the size of a match, until the fat is melted. The beaker is then placed in cold water and the milk stirred until the temperature falls sufficiently for the fat to congeal. At this point the fat, if oleomargarine, can easily be collected together in one lump by means of the rod, while if butter, it will granulate and cannot be so collected. The distinction is very marked. The stirring is not, of necessity, continuous during the cooling, but it should be stirred as the fat is solidifying and for a short time before. The milk should be well mixed before being turned into the beaker, as otherwise cream may be turned from the top and contain so much butter fat that the test is vitiated for oleomargarine.

Short-horn Cows for Dairying.

The reply that W. M. Beninger makes to A. R. H. on page 176 is too misleading to be passed by without some correction. In showing cattle at fairs 10 weeks each year, as he states he has, I cannot guess what territory he covered that he did not meet with some of the dairy Short-horns. He must have kept clear of Bradford Co., Pa., for I know that they have animals there that any dairyman would feel proud of. First, you may take the herd of J. K. Innis, of Granville Center, who had some on exhibition at the Columbian Exposition. Two made records as follows: Kitty Clay 4th, 1592, 9 pounds milk and 62¼ pounds of butter; Kitty Clay 3d, 1230, 6 pounds milk and 50 1-6 pounds of butter. In a letter from Mr. Innis about two years ago he gave me records of some of his young stock that gave even greater promise than the two above mentioned; heifers that would milk up to the time of calving. At a little hamlet called Jillett you will find Aaron Jillett, with a herd that averages 300 pounds of butter per head a year, as he told me last Summer. He sold 10 animals of young stock, to go, I think, to Nebraska, for $1,000. Down around Burlington dairy Short-horns are quite numerous, yet the supply does not equal the demand, and it is difficult for breeders to procure sires to avoid inbreeding.

I have been using purebred sires for some time, have a few females and receive a good many calls for calves for breeding purposes; even a half-bred grade brings an extra price. I could sell many times the number that I have to spare each year. I know that in the West they have been breeding exclusively for beef, and every effort has been made to bring the animals to that point of excellence that they should surpass all other beef breeds as to quality of beef and in profit in making the same, but in the East it is different. There is a call for a general-purpose cow, and the effort being put forth with success on that line I believe that the Short-horn can be made more nearly to approach that point than any other breed.

C. E. ANDREWS.

Breeders' Directory

For Sale—Two reg. Guernsey Bull Calves, about 6 and 8 months old. A. CULBERTSON, Knox, Pa.

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FOR SALE—PUREBRED HOLSTEIN-FRIESIANS Two registered bulls ready for service; also a bargain in one bull calf just dropped. All of above from best families. W. W. CHENEY, Manlius, N. Y.

Holstein-Friesian Bull
ready for service, and a fine lot of Bull Calves. Best of breeding, and from deep producing families.
C. K. RECORD, Peterboro, N. Y.

FOR SALE—Thoroughbred HOLSTEIN-FRIESIAN CATTLE of the best families. Also, 30 high-bred Bulls at reasonable prices. Write the MAPLES STOCK FARM, Binghamton, N. Y., WM. ROOD, Prop

REGISTERED HOLSTEIN Bulls and Heifers FOR SALE cheap. Bulls from fifteen to ten months old. Four heifers two years old this Summer. All handsome individuals. Sired by Dora De Kol's Count No. 23757. Dams finely bred. Inquire P. B. McLENNAN, Syracuse, N. Y.

America 196 D. B. C. A. Bred to Belvidere 318; is due to calve June 25.
Katerina Daughter of Hulda 141; is due next month. If you want a Dutch Belted Calf, write to G. G. GIBBS, Vail, N. J.

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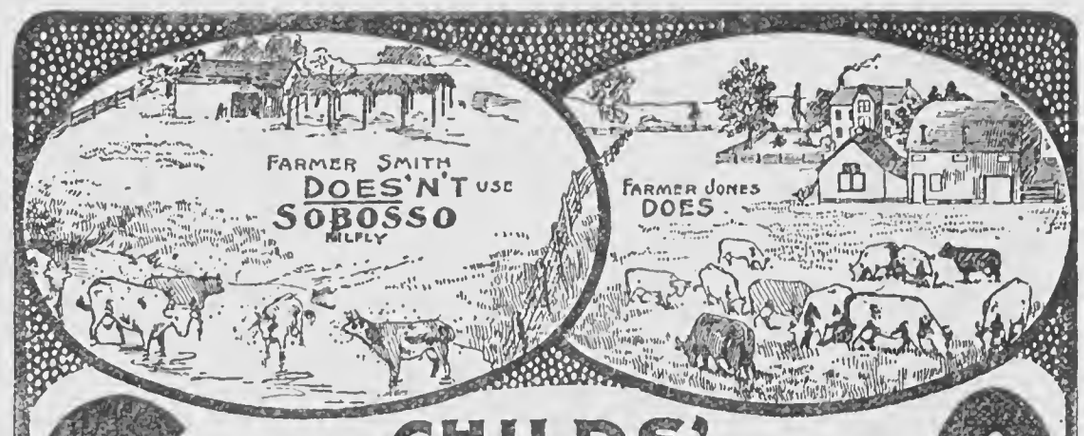

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Abortion in cows, which is caused by a germ—propagated by unsanitary conditions—can be prevented by the use of SO-BOS-SO KILFLY.

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Thousands are in use in America, Canada and Mexico. Shipments have begun to Cuba, the Philippines, South America and Australia.

LENOX, Mass., April 21st, 1900.
I have used So-Bos-So Kilfly with good results. It is a comfort to both man and beast at the milking time. JACOB STEIBEL,
Supt. to the Hon. John E. Parsons.

PHILADELPHIA, PA., May 2, 1900.
Last July the daily quantity of milk produced by my Chester County Dairy fell off very considerably, which I attributed to the annoyance which the cattle received from the flies. About half the time the herd was standing in a stream switching instead of grazing. I ordered a sample of So-Bos-So Kilfly and by having it applied every second morning, greatly relieved the herd and increased the milk product from 15 to 25 per cent, and I have continued to use So-Bos-So Kilfly during hot weather ever since that time. Our herd of about twenty head could be sprayed in the stable in less time than it would require to milk a single cow, and I consider that I saved many times the cost of the So-Bos-So Kilfly used in addition to affording comfort to the herd. G. S. W. BRUBAKER.

LENOX, Mass., April 23, 1900.
We used So-Bos-So Kilfly last summer, on cows and horses with excellent results, it being much more satisfactory than anything else of the kind we have ever tried.
A. H. WINGETT, Supt. Allen Winden Farm.

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Sold by Merchants and the Seedsmen.
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AILING ANIMALS.

ANSWERS BY DR. F. L. KILBORNE.

Knee-Sprung Mare for Breeding

I have a mare eight years old that I would like to breed from. She is sprung in both front legs; would the colt be apt to be sprung also? R. E.
Cross Keys, N. J.

Her colts would probably be all right. If the trouble is congenital with the mare she would be more likely to transmit it to her colts than if the knees were sprung from overwork; but the danger of her having knee-sprung colts is very slight.

Tetanus in Colts.

My yearling colt died of tetanus within two weeks of castration, and a number of other colts in this neighborhood died under similar circumstances; all being castrated by the same veterinarian. Is it possible for a veterinarian to carry the germs of the disease from farm to farm? The veterinarian in question does not, so far as I know, sterilize his instruments. J. H. B.
Romeoville, Ill.

Yes, it is quite possible for a careless operator to carry the germ of tetanus, as well as of other diseases, on his person or instruments, if he does not observe due precautions as to cleanliness and disinfection. It is *inexcusable* for any person to perform an important operation like the castration of colts, without careful disinfection of instruments and hands. The animal ought also to be sponged off with a disinfectant before operating. An operator who will now castrate colts without disinfection ought to be held pecuniarily responsible for any injury or damage resulting from his neglect or failure to disinfect.

MORE CURES FOR KICKING COWS.

Take a strong strap long enough to go around the cow, just in front of the udder; buckle it around tight. It won't hurt the cow but it simply prevents her from raising her hind feet from the floor. As it seems to prevent her from using certain muscles she cannot kick, if the strap is quite tight coming in front of the udder and up around the flank. An old dairyman told me of this when I was trying to break some heifers. As heifers are always more or less nervous, this is a very mild and humane way of breaking them, and never fails when used on any animal.
Castorland, N. Y. W. S. G.

I meant to write to the Hope Farm man when it was first announced that he possessed a kicker. He, like many others (myself included), has formed a habit of commencing at the wrong end of a kicking cow. Procure a snap ring called a bull ring, put it in the cow's nose, and then tie the rope to a post or pulley or something lower than her nose, for when tied tight with her shoulders well up against the stanchion she is going to get on her knees to apologize for her heretofore unkind treatment, and usually will say it good and loud. In one case I had to chain back the hind leg for two milkings and affix the chain for two more. Nose ring cured the worst case within 10 days.
Pennsylvania. E. D. R.

I have been in your trouble with that kicking cow. I have had a good deal of experience with animals of that kind, some of them very vicious ones. It is no use to fight with a kicking cow; you will only make her worse. After trying many devices recommended, which proved failures, I adopted this simple and entirely effectual plan: Fasten a ring in the back of the stall, the cow's head fastened in the stanchions; pass a rope around the leg just above the ankle, tie it securely, pass the other end through the ring, draw it up snug and tie it. Sit down and milk your cow without any fear of her kicking, for she cannot kick without first bringing her foot forward, which she cannot do thus controlled. She will probably at first struggle and attempt to free herself. Be kind and gentle with her, and she will soon find you have control, and will yield and stand quietly while you are milking. Don't sell a good cow because she is a kicker. This simple device will prove effectual; at least it has always done so with me. B. A. B.
Armonk, N. Y.

The batch of "kicking cow" recipes are the most ridiculous rubbish ever offered to a dairy public, and I don't believe a practical cow man wrote one of those marvelous cures. You do not need a lot of breeching, hames, harness poles, bars, etc.; only a simple little piece of ¼-inch rope six or seven feet long. Make a loop in one end (so it can't shirr), put it around Julia very gently directly in front of the udder—in the flank—and up over the back just in front of the points of the hip bones, slip end of rope through your loop and shirr the rope up snug and fasten. That's all; now go on with the circus. Yes, she'll try to kick and if full of vim may possibly flounder just a bit, but she'll soon be the most disgusted cow on earth, and will stand quietly and chew her cud just as she does when the calves milk. I really do not suppose you care very much whether Julia is milked by hand or not, but it's worth knowing by any and all who milk cows, as the device is simple, practical, safe and sure. The drawing of the rope up snug around the cow does not in any way interfere with the natural "giving down" of the milk. Just try it and as the government seed packages say "report results."
Jerome, N. Y. G. C. W.

How to Pasture Hogs.

We never ring our hogs; as our farms are on the hills we let our hogs have large pastures to run in. When we started our pastures they contained a great many brakes or ferns. Our hogs will root these all up and eat the roots, and are killing them out. In the Fall, after the crops are harvested, we let them on our mowing. Some of the mowing is very rocky, and has never been plowed; then there are plots where we have taken the rocks off, and seeded down. We find that the hogs will never root the newly-seeded places, but will work the old mowing thoroughly, and after they have rooted them well over they come into clover. Now, when we turn the hogs on to them, they will feed the clover down, but do not root the turf except under apple trees. We also notice that after the hogs have rooted around the tree the apples are not wormy on that tree the next season, and that the leaves have a deeper color, and the apples are better. I would advise every farmer to keep more hogs, and never ring them. Fence off a plot and let them root, and then seed it down and take another plot. It is surprising to see what the hogs will do for them. Get some good purebred hogs, as it does not cost any more to raise them after one gets started, than it does to raise a grade, and there is a satisfaction in looking at a good uniform herd. As to breed, should advise selecting what the raiser thinks he would like the best, as anyone will be likely to have better success with what he takes a fancy to than with something he is not so interested in. BRADLEY C. NEWELL.
Rowe, Mass.

Trouble With Pigeons.

We have pigeons well situated in a good loft, tended well, and are at a loss to know why they leave their nests. They fly at large, leaving their nests while hatching. They are fed well. I. D.
Taylorsburg, O.

The trouble may come from too many pigeons for size of loft or number of nests, too many like for number of pigeons, or a few particularly quarrelsome birds that are continually fighting other birds from the nests. Pigeons differ in nature in much the same way as people. In the case of the pugnacious pigeons they should be removed from the loft. Unfortunately people of the same nature are not so conveniently taken care of. One pair of pigeons will sometimes take possession of several nest boxes, or the greater part of a loft, and possession and the ability to hold out against all comers is the whole thing with pigeons. This will happen more frequently with birds that fly at large than with those confined in an aviary. If the trouble is lice give them tobacco stems to nest with and they will soon disappear, as lice and tobacco stems will not occupy the same nest, and I know of no better use to which to put tobacco. Pigeons will usually give better results as a whole if confined in an aviary, properly cared for, than if allowed to fly at large. J. E. S.

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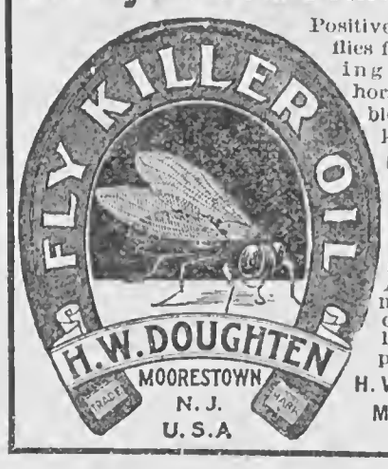

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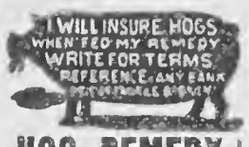

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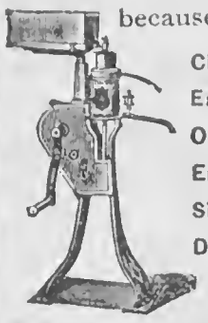
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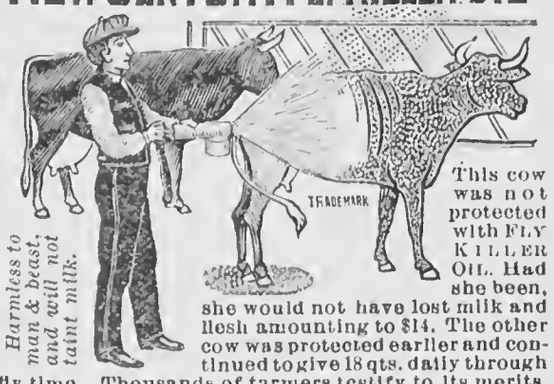

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Hot or cold, no use to mind it!
If it's a sunshiny day,
That's your time for makin' hay!
If it's rainin', fills your wish—
Makes the lakes jest right for fish;
Spring or Winter—Summer—Fall,
Jest be thankful for 'em all!
—Atlanta Constitution.

"He's one in a thousand." "It's not hard to be one in a thousand." "No?" "All the others are merely ciphers."—Credit Lost.

"I wonder what is meant by a green old age." "I guess it's the age attained by the vene[illegible]e victim of the bunco man."—Phi[illegible]lphia Record.

Crawford: "H[illegible] do you figure that the exhibition in [illegible]ffalo is better than the one they ha[illegible] Paris?" Crabshaw: "It doesn't cost [illegible]much to get there."—Judge.

Sue: "This [illegible]cle in the paper says that in Form[illegible] a wife costs five dollars." He: "Well, she ought to be worth it if she is a good wife."—Baltimore World.

"Say, I told that Boston man my fish story, and all he said was 'Kindly alight.' What did he mean?" "Oh, that's just his way of saying 'come off.'"—Philadelphia Press.

Willie: "Teacher told us to-day that there's a certain kind o' tree that grows out o' rocks. I can't remember what it was. Do you know, Pa?" Pa: "It's a family tree, I guess."—Philadelphia Press.

"Farming is a great science, isn't it?" "Say, my friend, it's more than that; it's a composite of many sciences. For instance, to-day, in the ordinary course of my agricultural duties, I had to practice chiropody." "How was that?" "Why, cut the corn on the foot of the hill."—Christian Advocate.

"This," said the inventor, "is my new dredger for river and harbor work." "Ah!" replied the capitalist. "I observe you call it the 'Politician.' Your idea in that, I suppose, is to court favor with the powers that be?" "No, I call it the 'Politician' simply because it throws mud."—Catholic Standard and Times.

"Grandma," said little Allen one day upon his return from Sunday school, "I don't believe the Bible always tells the truth." "Well, Allen," exclaimed the old lady in astonishment, "what makes you think that?" "Because," said the young investigator, "it says every hair of our head is numbered, and I pulled a dozen out of my head to see, but there wasn't a number on one of them."—Colorado Weekly Times.

O.K.

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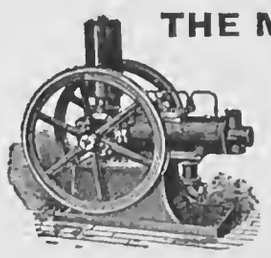

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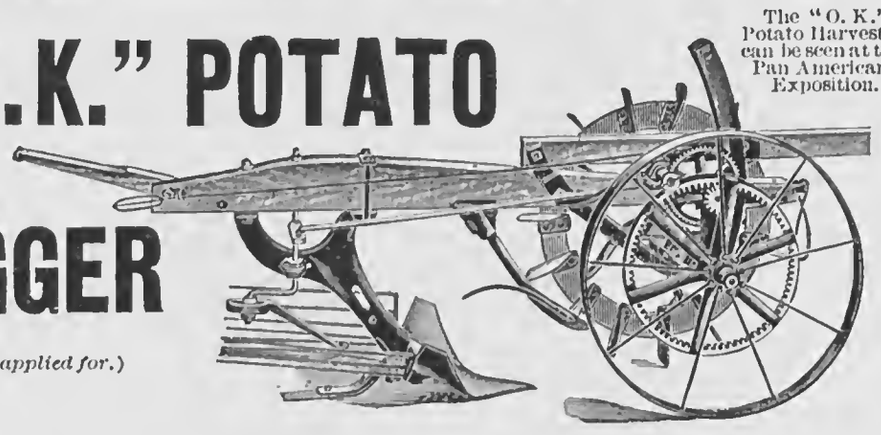

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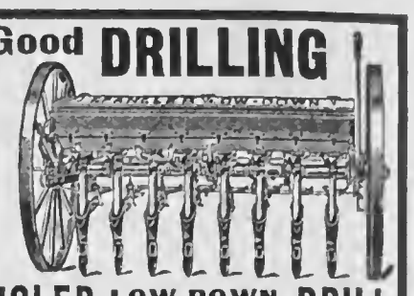

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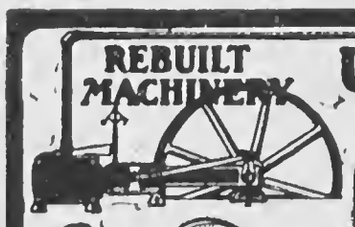

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JUN 22 1901

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2682. NEW YORK, JUNE 22, 1901. $1 PER YEAR.

ASPARAGUS IN NEW JERSEY.

AMONG THE MONMOUTH COUNTY GROWERS.

Rust-Resisting Varieties Needed.

LOW CROP, HIGH PRICES.—Asparagus is a very hardy plant, and will endure much frost when dormant, but it will not grow fast in chilly weather. The cold wet Spring has delayed growth from roots already weakened by attacks of rust last Fall and the result is a shortage of the crop, estimated at nearly one-half of the average cut up to the end of May, among the Monmouth Co., N. J., growers. Prices have been quite satisfactory, however, some of the fancy lots bringing the extreme figures of $6 to $7.50 per dozen bunches of 2½ pounds weight; good prime green and white bringing $3 to $4, and smaller grades $2 to $2.50. The concensus of opinion among experienced growers is that asparagus still pays the careful grower who has suitable soil and facilities better than any similar product, and a larger acreage has been planted this Spring despite the bugbear of rust, than for many years. Reliance is placed on high feeding, very thorough cultivation, a shorter season of cutting, and the selection of resistant varieties.

THE VARIETIES.—Conover's Colossal, which originated in this county a generation ago, is very thoroughly discredited since the coming of the rust, as it proves a ready victim, the tops browning early in August. No asparagus is more productive under ordinary conditions, but it also has a tendency to throw up many small shoots instead of the large solitary sprouts so desired by shippers of prime qualities. The Palmetto has proven most resistant of all, with the possible exception of the French Argenteuil, and nearly 70 acres have just been planted in these varieties, the only exception being a single trial of Donald's Elmira, which is thought to have some of the characteristics of Palmetto. W. B. Conover and F. S. Hendrickson, of Middletown, the former representing a planting of 50 acres or more, have set all their new ground to Palmetto, while Edwin Beekman, also an extensive grower, pins his faith to the Argenteuil. Mr. Beekman's experience with the Argenteuil goes back 17 years. He has imported the French seed by the hundredweight, and thinks it the most vigorous and highly developed variety for his purpose. When heavily fertilized it makes an enormous growth, sending up shoots nearly two inches thick, but it will not tolerate neglect and give profitable cuttings. Mr. Beekman piloted the writer to one field, set last Spring with one-year crowns, where stalks seven feet high could be readily found. The shoots came up singly, and towered up like young pine trees. The soil was a sandy hillside, which had been cropped to exhaustion with corn and grain by former occupants, but good applications of stable manure and chemicals had brought it to a responsive condition for asparagus.

FIGHTING RUST.—The rust-resisting quality is thought to be due to a bloom covering the cuticle of the varieties mentioned, making the germination of the spores more uncertain. It is quite certain that well-fed plants of Palmetto and Argenteuil generally remain green and thrifty late in the Fall, long after the susceptible kinds have died off as far as top growth is concerned. Where these varieties appear to suffer severely from rust investigation shows that either starvation or excessively late cutting is at fault or, more likely, the affected plants are not true to name. Esculent asparagus is largely bisexual in character, and much cross-pollination takes place. The best commercial seeds produce a mixed progeny, as, until the advent of the rust and the discrimination of resistant varieties, it was not considered necessary to grow the seeds carefully. Mr. Beekman finds American-grown Argenteuil seed inferior to the imported for this reason. In the asparagus districts of France practically no other kind is grown, and the seeds are consequently reliable.

NEEDS OF THE PLANT.—The requirements of asparagus have been so carefully studied by growers that little difference of opinion remains. It is an herbaceous plant of the Lily family, with an almost unlimited capacity for storing vital energy in its capacious root system. Give it a warm, light soil and clean culture, and you can scarcely overfeed it with either manure or chemicals. The shortening of the growing season by the rust is, however, a serious matter, and if not controlled by the selection of varieties, the plants must be given a better chance than in the past to recuperate after cutting. Many fields were seen where cutting stopped the last week in May, instead of the old way of continuing until near July 4. The practice of cutting underground to secure white stems with only a tip of green continues in full force, as only such stalks are rated as "prime," and bring the best price. The growers acknowledge better returns in proportion than usual from the culls and green stalks, and an examination of market reports shows much better quotations for green asparagus than for many years past. When the consuming public really learns the difference there will doubtless be an enormous increase in the demand for good green asparagus rather than the hard white stalks.

These Jersey growers do not take much stock in the idea of fighting the rust by means of fungicides. It is hard to get Bordeaux Mixture to adhere to the smooth stems or to cover the finely-divided foliage. The large growers would not stick at the cost of such huge machines as have been developed by the Long Island Experiment Station, which cost about $300, if they could be convinced of their practical efficiency in killing spores and prolonging the growing season of the plant. It takes a large quantity of spraying solution and much power to cover such a mass of vegetation as is represented by an acre of asparagus, averaging five or six feet high when in full growth. Mr. Conover informed me that rust appeared earlier on fields of the Conover variety where cutting ceased earliest, so that the growing season was not much lengthened by shortening the cutting season, but evidently less of the stored energy of the preceding year's growth was consumed. Other growers did not report the same experience. In their view the fields cut least held out best, and responded more energetically the next year. It has become a question whether it may not be possible to lay by weakened fields and only cut alternate years, but all agree that a better price must be obtained for the product to warrant two years' culture for each crop. W. V. F.

HYBRID AQUILEGIAS. FIG. 180. SEE RURALISMS, PAGE 438.

The annual strawberry meeting of the Lorain County (Ohio) Horticultural Society was held at the residence of G. N. Caruthers, near Oberlin, June 14. Strawberry culture was discussed in all its branches.

SELLING CHICKS FROM THE INCUBATOR.

How Shipped? How Sold? How Much?

Poultrymen report considerable trade in little chicks just out of the incubator. Some buyers prefer to pay more for the live chicks rather than run the risk of infertile eggs. The following notes are written by practical breeders:

Selling little chicks right from the incubator is practiced but very little, if any. We have made such sales a few times to near-by points at 25 cents each, from nice well-mated purebred stock. Can be shipped in baskets well protected and not containing too large a number. KNAPP BROS.

Fabius, N. Y.

I have never catered to the trade in young chicks, although I have sold several lots. I securely tied them in baskets lined with woolen goods and covered, sending them on specified trains. There is quite a demand for them, and for chicks three months old, but very few wish to pay much for them. Chicks two days old I consider worth from 15 to 50 cents each, according to value of parents and how mated.

Pottstown, Pa. W. W. KULP.

We have had some experience in that line, but not very extensively, and we would not advocate it, as there is much danger in shipping the chicks at a very great distance, especially in the early part of the season. What we have sold we crate in box with tin can placed in middle of crate, filled with hot water. We should have to have about $5 per dozen for little chicks, or $15 per hundred, if we were going to make a practice of shipping in that way. I do not think it is a custom that will be followed very extensively, as I think it would cause dissatisfaction with customers, as the chicks are liable to chills in transportation and die in customers' hands from the lack of proper brooding. In a great many cases people would try to raise them without much heat, and little chicks *must have* a temperature of about 90 degrees for some time. I think it much better for customers as well as the breeder that the customer buy the eggs and hatch them himself. L. O. TURNER.

Wick, O.

The shipping of young chicks is a new venture in the poultry business; very few are yet offering chicks from the incubator. Two or three are advertising chicks just hatched at $10 per 100, which is a fair price to the buyer and to the operators of machines. Others advertise them two weeks old at $25 per 100, which is very reasonable for chicks from first-class stock. I think that eventually very few eggs will be sold for hatching; that the demand will be for chicks just hatched. There is getting to be so much dissatisfaction in selling eggs that poultrymen are discouraged with the egg business. Next year we shall sell no eggs for hatching at all. When taken from the incubator and put in a lined box, with a hover in Winter or early Spring, the chicks can be shipped almost any distance without food, and will arrive in good condition. After arrival they should be taken out and put in a brooder warmed up to about 90 degrees, and then fed and watered, and with proper food and care 85 per cent should live.

Trenton, N. J. PLANET POULTRY FARM.

The plan of selling chicks right from the incubator is not a general practice, but is certainly increasing. It appears to be satisfactory for the most part. Ten cents is ordinarily charged for common chicks, and they are usually shipped in light boxes or baskets well lined and properly covered. This is also a very common practice in England, if I am rightly informed. The chief danger comes, I suppose, from the liability of our weather to extremes of temperature. I have often thought that eventually large incubator plants would be established in different districts, where the eggs would be handled by experts in such quantities as to warrant constant day and night attendants, and that after hatching, the chicks would be distributed throughout the district to farmers and farmers' wives who would rear the chickens. I think the brooder system will yet be developed, which will help to bring about this condition of the business. Certainly the poultry industry is bound to increase and to progress. It appears to me to be the most lively branch of agriculture carried on in America.

R. I. Exp. Station. A. A. BRIGHAM.

I sell the purebreds in small lots at 15 cents each, and in lots of 50 or less down to 25 at 12½ cents each, and in lots of 100 or more at $10 per 100. I use different plans of shipping in the different kinds of weather, whichever is best suited to conditions. To have buyers on the safe side I guarantee safe arrival, which I have but little trouble to do. This way seems to suit a good many people, as it saves them the bother of hatching, and also of buying poor eggs, which I am sorry to say a great many breeders send out, and then refuse to give their customers anything for their money if they do not get a hatch. In selling eggs for hatching I guarantee safe delivery and satisfaction; that means that if my customers do not get a good hatch I refill their order to their satisfaction, and I find I do more business that way than all of my advertising brings me. I am not expert enough to tell the roosters from the pullets while so young. All that is necessary for the buyer is to have a hen ready to take care of them, or have a brooder ready to put them in on arrival. I do not know how much it is practiced by poultry people generally, but imagine it will soon be overdone, as there will always be some one who will sell anything for the "best chickens." D. A. MOUNT.

Jamesburg, N. J.

EVERYBODY'S GARDEN.

NEVER TOO LATE.—I suspect that there is many a farm, village and suburban home sadly lacking as to a vegetable supply. I suspect that there is many a vacant and unsightly spot around these homes which, notwithstanding the lateness of the season, might still be beautified and utilized for growing a generous supply of late-sown vegetables for Winter use. The following list, for which there is still ample time, will be found very useful in making up the Fall and Winter store of good things to which every farmer's family is richly entitled.

LETTUCE.—The Summer and Fall supply of lettuce is usually cut short by the persistent habit of the early sown, of running up to seed, so that the table is usually minus this delicacy quite early in the season. Select a moist and somewhat shaded spot, work the soil fine and mellow and make very rich with well rotted stable manure, or better still, soak the soil thoroughly with liquid cow manure. After two or three days rake well and sow the seed, not too thickly, and cover lightly. As the plants begin to

WELL LOADED FOR DINNER. FIG. 181.

grow, thin out for use, or transplanting, and the remaining ones as they get more room, will begin to head up nicely, and with plenty of water and good culture will give a supply indefinitely. Any surplus above home or market use will be profitable for poultry, especially if kept in confinement.

CELERY.—For the late crop the plants may be set up to the last of July, and ground previously used for the early sweet corn, early potatoes, peas or beans will do nicely. The ground should be thoroughly worked; but on account of the shallow feeding habit of the plants, five or six inches in depth is sufficient. Thoroughly rotted stable manure is considered by most growers to be the safest and best fertilizer, and should be used without stint. In transplanting, clip the tops and ends of the roots back and set firmly, five or six inches apart, in the row, and unless rain has recently fallen, watering out will be found helpful. If the blanching is done with boards, 30 inches between rows is sufficient, or even less if space is limited. If blanched with soil 3½ to four feet is not too much. The essentials of a large crop and fine crisp quality are rich soil, and abundant moisture, and if the rainfall is not sufficient then watering by some means must be resorted to. The smaller plants, or even larger ones, if set later, may be left in the ground until danger of too much frost. They may then be taken up and placed in a dark cellar, and if set closely together with the roots packed in wet sand, they will make considerable growth and blanch nicely, and the larger stalks may be broken out as desired for use.

ENDIVE.—The late sown is highly prized in many localities as a Winter salad. The seed may be sown in drills as late as July, and when plants are well established should be thinned to 10 or 12 inches in the row. Clean culture is all that is necessary until late Fall, or when wanted for use; the outer leaves are drawn up and tied over the center of the plant, when they will blanch nicely in a few days' time. The Green Curled is a hardy and desirable variety, and blanches to a clear white. J. E. MORSE.

Michigan.

HOW AND WHAT NEW YORKERS EAT.

Farmers hear much about the great markets of New York. The city is a wonderful place. One can buy anything here at any time. The thing that is of most interest to the farmer is the great stomach of the city. In Greater New York and the cities of Newark and Jersey City there were last June 3,875,705 human beings. Probably not over five per cent of these millions contribute anything to the food supply. They are all consumers, eating food which is brought from the very corners of the earth. The farmer is deeply interested in the fact that these 4,000,000 human stomachs should be filled three times each day for 365 days in the year. It is easy to see how agriculture is affected when for any reason these stomachs go empty, or are filled with adulterated or improper food. We hope to give during the Summer a series of articles describing some of the odd and striking things about "city folks at their mangers." They will show country people something of what becomes of the food they produce, and also how their "raw material" is raised in price before it reaches the mouths of consumers.

Our little picture, Fig. 181, shows a figure quite familiar to New Yorkers who visit the large manufacturing buildings at the noon hour. The building in which THE R. N.-Y. office is located has a population larger than that of many country townships. A test vote before the presidential election showed 383 votes. There were enough women, boys and girls to bring the working population of this one building to more than 600. With the wives and children at home it is safe to say that this building represented an industrial and home population of more than 2,000!

The workmen in this city do not all bring their dinners. The great majority of those who work at trades go out to the restaurants where a fair meal can be bought for 20 cents, or send out for a light lunch. The boy shown in the picture is a "printer's devil." He will serve as waiter for a dozen girls or men. In each hand he carries a stick with six hooks driven into it. Little pails partly filled with hot coffee are hung on these hooks, and in the tray hung about his neck he carries sandwiches and pieces of pie—usually wrapped in paper. Some of the lunch counter men have a special trade in goods of this class, and little time is required for filling the orders. The boy goes his rounds day after day, and acquires great skill in balancing his load. A farmer coming in from the field and sitting down to a hearty meal will hardly understand how a man or woman can contribute much energy or force on a diet of pie and coffee—yet thousands of the young people who do the quick, active work in printing offices, binderies, etc., seem to live largely on such food.

LIVE STOCK IN SPRAYED ORCHARDS.

I have never been able to get a definite case of stock poisoning where stock fed under sprayed trees. Once in a while I hear that such a thing has happened; but every attempt that I have made heretofore to trace up the report has failed. It has always landed on some one who heard that such a thing had happened; but either he could not remember where he heard it, or of whom he heard it. Several years ago Prof. A. J. Cook, of the Michigan Agricultural College, in reply to objections of this kind, grazed his horse under a tree thoroughly sprayed with Paris-green. No harm resulted, and so far as I am aware this is the only definite experiment that has ever been made in this direction.

[Prof.] JOHN B. SMITH

For a number of years I have had running in my large orchards sheep, swine and calves, and none of them has been injured, except in one instance where I lost a couple of sheep, and this came about after a dry time, when none of the poison was washed off the leaves, and the sheep reached up and ate the poisoned leaves. In all my experience I have never known of another case of injury of this kind, except where men have been careless and have either spilled or deluged the grass with the poison, when, of course, there would be danger. I have never felt safe in using acetate of lead mixture, for the reason that it does adhere to the leaves so much longer, and there is danger from this source. The case you refer to of stock being so poisoned has doubtless come from just such carelessness as mentioned above, or from the animals eating leaves that still had some of the poison on them. E. V. A.

Columbia Co., N. Y.

There have been a number of cases of supposed poisoning by Paris-green in sprayed orchards reported at farmers' institutes, and one or two by letter here at the Station. In every case I have endeavored to secure definite information, but have been unable to follow any of them up satisfactorily. The only case that has come under my observation which seems to be based upon definite information occurred last Summer near Rochester. I happened to be at a farm just north of the city when two or three of the cattle were taken sick. Two of them died within a few hours. A veterinarian was called, and he stated that the cattle died as a result of arsenical poisoning. They had been kept for several days in an orchard which had just been sprayed with Bordeaux Mixture and Paris-green. Branches of the trees were low enough for the cattle to reach them. The veterinarian was very positive that the trouble was caused by the Paris-green. On the other hand, I have known of a number of cases where sheep and cattle were kept in sprayed orchards with no apparent indications of injury.

Geneva (N. Y.) Station. [Prof.] V. H. LOWE.

AGRICULTURAL EDUCATION.

At an early age the thoughts of a boy begin to dwell upon his future occupation. Too often the boy on the farm begins to plan, long before he puts on long trousers, of going to the city or becoming a professional man. The boy from the farm may be found in the pulpit, behind the desk, in the bank, in the private office of the successful merchant, or on the street carrying the physician's medicine case. But times are changing. The farming profession, for such it is, is beginning to attract, and the farm boy is now content to take a course in an agricultural college instead of a technical or professional institute. A few weeks ago the Students' Agricultural Club of the North Dakota Agricultural College met the mechanical students of the same institution in debate on the following question:

Resolved, That a mechanical course is of more value to the average person than an agricultural course. The negative debaters corresponded with several of the leading colleges of the United States, which brought out some valuable points. It will be clearly seen by the following that 80 to 95 per cent of the students return to the farm to become independent. Of those who do not a position is waiting at good salary. Prof. I. P. Roberts, of Cornell Agricultural College, writes:

Fully 87 per cent of all of the students who have had instruction in the College of Agriculture here have gone back to the farm, and 85 per cent of the graduates. Comparatively few students take the four years' course, or remain to take a post graduate course. The salaries of those who do, and who have secured positions, range from $1,200 to $4,000 per year.

E. Davenport, professor of animal husbandry, Illinois College of Agriculture, writes:

Within the last two years our numbers have increased from 21 to 157, and with this new prominence given to our work have come many calls for young men to fill various positions in agriculture at various salaries. In one case I remember replying that we had no man that we could recommend for the place, and if we had he would be worth a professor's salary. The party replied by return mail that if we could find such a man as he wanted he would give him a salary at the beginning equal to any professor's salary in the University. This is somewhat unusual, of course, and still there are many calls, almost none of which we can fill, because our young men are nearly all expecting to serve themselves rather than others. I am therefore unable to give you very much information of value for your debate, excepting to say that this call for well-trained young men is sharp, and the opening extremely good, the consideration always being that a man can do a particular line of work and do it extremely well.

W. C. Latta, professor of agriculture of Indiana College of Agriculture, writes:

With any worthy young man, it is not a question, "In what line can I make the most money," but "What am I best fitted for by nature?" Having settled this point, the next thing is to seek preparation necessary to be in the highest degree successful in the chosen pursuit. The young man who chooses agricultural or mechanical pursuits for the sole reason that he may make or save more money thereby, has a very low ideal of his calling, and although he may secure his object, he must surely fail of the highest success of life. I believe, however, that with equal preparation and with equal application, the chances are in favor of the young man who takes up agricultural pursuits, from the money standpoint.

F. D. Tucker, of the Minnesota College of Agriculture, writes:

We have about 250 alumni, and I may say that 90 to 95 per cent of these have returned to the farm, many of them to their own farms. I do not think that any of them want for employment. I thoroughly believe that the man who is dealing with the soil and with developments that belong to farming has as large a field of opportunity as in any pursuit, at the present time.

Prof. R. A. Moore, of Wisconsin, writes that it will be well to remember that the short course of which he speaks consist of but 32 weeks' work, two Winters, and the creamery course but 16 weeks.

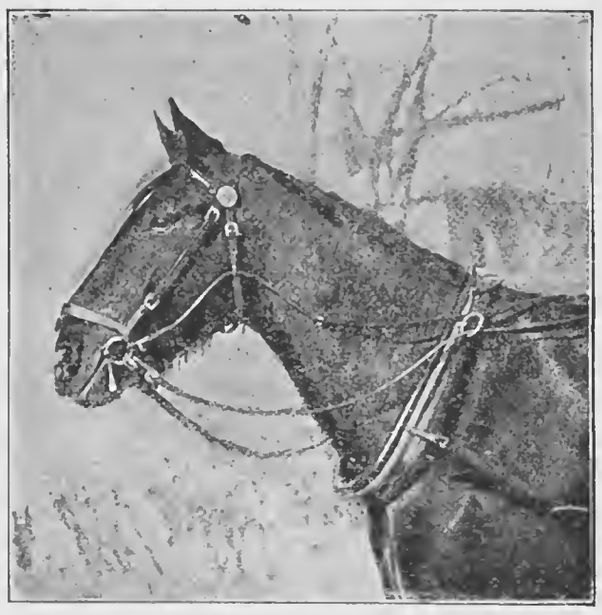
We are giving in the College of Agriculture at the present time four distinct courses, namely, graduate course in agriculture, long course in agriculture, short course in agriculture, and the factory course in butter and cheese making. We have at the present time 297 students in the short course, 120 in the factory course, 17 in the long course and one in the graduate course, or 435 all told. In regard to the short course I wish to state that farmers, dairymen, horticulturists and live-stock men now realize that the young men are being trained along their special lines of work, and within the past 10 days I have received at this office no less than 200 calls for the services of these young men, with wages ranging all the way from $20 to $75 per month, with board, washing, etc. We have an excellent lot of young men attending the short course; 101 in the second-year class, and 197 in the first-year class; the average age of our students for this year is 22 years. The students taking the factory course in butter and cheese making have no difficulty in securing positions as cheese makers and butter makers at from $30 to $75 per month. Of the 2,700 cheese factories and creameries in the State of Wisconsin, 600 were operated last year by students from this college.

Prof. Shepherd has on file in his office at this college calls for eight men at salaries ranging from $800 to $1,200 which he cannot supply. It seems that this ought to settle the question of the financial side of an agricultural education. E. A. CANNON.

North Dakota Ag'l College.

NOTES ON FARM MACHINERY.

CLEAN THE TOOLS.—Many times machinery works hard, does poor work, and gets out of repair simply from sheer neglect. Keep all nuts tight, and when using machinery keep your eyes on parts subject to most rattle and bang. A little watchfulness and turning up of a nut once in a while saves many a repair bill. We like to give all parts that come in contact with the earth a quick clean at close of day. A worn-out whisk broom and an old sack work well. When through with a machine for the season take it

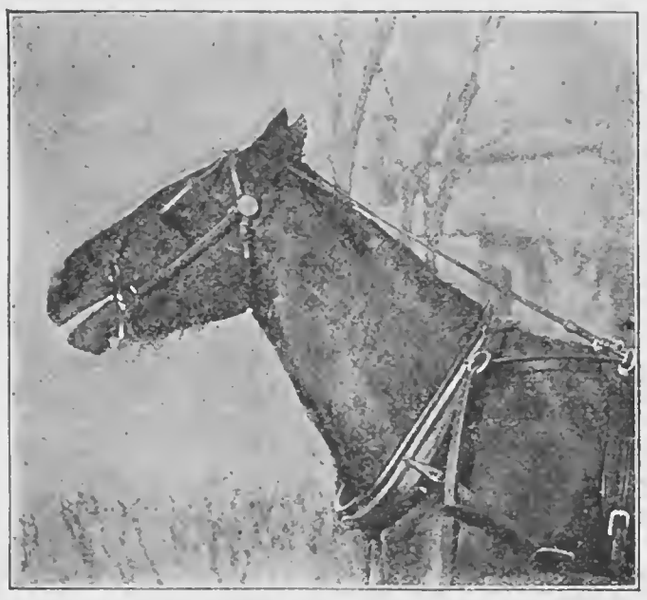


NATURAL AND COMFORTABLE. FIG. 182.

apart and give it a thorough cleaning the first rainy day. It will live longer. We have often found many points of value before unknown during this cleaning process. It pays to know all about the machine and to be able to locate trouble at once. It is surprising how many hard knocks among the rocks some of the modern machinery will stand, and do perfect work.

USE OIL.—The average hired man has an antipathy for an oil can, and will run a machine till its groans can be heard at a distance before he will look into the matter. He must be constantly reminded frequently to oil the machine, be it harrow, planter or reaper. When work crowds as it does at this season, and especially so this year, it pays better than ever to keep all tools well oiled. They work better, much easier on the team, and all hands, team and machine will last longer. Oil is not very expensive and a gallon goes quite a while. We formerly paid 40 to 60 cents per gallon when bought locally. We now buy by the barrel right from the producing region, and get the same grades that cost 40 to 60 cents for 12 to 18 cents. It pays to buy of the producer, and generally to sell to the consumer.

DEFECTS IN HARROWS.—The ordinary harrow makes us tired, for it doesn't do what it pretends. In a season like this, on good loam, or heavier soils for crops that need deep soil, it's worse than a failure;



STRAINED AND MISERABLE. FIG. 183.

it's a positive nuisance. Why? Well, try either the disk or spring-tooth, and it will pulverize the soil on top for an inch or two, hardly ever go much deeper. You may think so, but measure it. All the time you are harrowing the horses are packing down tighter than ever the soil under this loose top, and by the time you have the top in what you call nice condition it's about as hard as before plowing. The harrow will not go deep enough for potatoes, and we've been thoroughly disgusted with their work. It will often be better to wait until the ground is in *right* condition, then plow deep and run over once lightly with weeder or smoothing harrow. The soil then will be mellow clear to depth of furrow plowed.

USE OF WEEDER.—We meet some men who say the weeder is no good, but rightly used it is one of the great labor-saving tools. We use it after the Cutaway and spring-tooth harrow. Then if land is fairly good a vigorous use of the weeder once a week after planting will give the hoe a chance to get rusty. Too many wait until the ground is covered with weeds that have a strong root growth, and expect the weeder to take them out. It won't do it, but take them just as they are sprouting or pricking through the soil, and it will lay them bare to the sun, and a quick death ensues without the slower work of the cultivator or hand hoe. A weeder can be used soon after a rain, and it's surprising how some crops will jump ahead after using it just after a rain; air is admitted freely to the soil; no baking on top. This is the year to push the weeder. H. G. M.

Connecticut.

TORTURE OR COMFORT IN THE CHECK-REIN

The pictures shown at Figs. 182 and 183 are taken from an excellent leaflet issued by the Humane Education Committee at Providence, R. I. This committee is doing a noble work in calling attention to some of the ways in which our domestic animals are abused. A good deal of this abuse is thoughtless—that is, the owner or driver does not desire to torture the animal. He either does not know any better, or else does what others about him have been doing for years. There are many ways in which the tight, overdrawn check-rein annoys or injures the horse. The picture showing the wrong way of "checking" well illustrates the trouble. In fact, the pictures are a whole story in themselves. The leaflet mentioned makes a strong argument against the tight check, quoting some of the most noted breeders, drivers and horsemen against it. Here are two samples—the first from Wm. Pritchard, president of the Royal Veterinary College, London:

The continued pressure of the bit of the bearing-rein (check-rein) deadens the surrounding portion of the mouth with which it is in contact, thus producing a partially insensible condition of it—a condition most ill-suited to receive a sudden impression, as a check from the driver, in the event of the horse stumbling from any cause; I would therefore say that, instead of preventing horses from falling, the bearing-rein is calculated to render falling more frequent. Other not uncommon results of the use of this instrument of torture are distortion of the windpipe to such a degree as to impede the respiration ever afterwards, excoriation of the mouth and lips, paralysis of the muscles of the face, etc. Another writer says: "Tying one part of an animal's body to another does not necessarily keep him on his feet. It is the pull from the arm of the driver that makes the horse regain himself when he stumbles. One might as well say that tying a man's head back to a belt at his waist would prevent him from falling if he stumbled in a race."

USEFUL HAY TOOLS.

The hay tedder is considered by some an unnecessary tool except in seasons that are so "catchy" that hay must be made "between showers." Of course in favorable weather hand work will do the business, but those who have used a tedder find it such a convenience and labor-saver that they would not do without it. All farmers know what a job it is to get the water out of a lot of hay that has been caught in a hard shower and beaten into the stubble. A man who is always kicking makes a disagreeable associate, but it is a real joke to see the tedder kick around, pick up this wet hay and toss it in the air, until the wind and sun do away with the moisture. It is also a big help in drying heavy grass, which would otherwise have to be turned and stirred up several times with forks. The hay-loader is not so well-known in the East, and is not adapted to steep hillsides. In the West it is used on the heaviest of hay, including Alfalfa, peavine or sorghum hay. It is fastened to the rear of the wagon, which moves slowly, the motion working the loader so that it picks up the hay from the ground and carries it up to the load by an endless chain. In heavy hay a loader will keep two men on the load busy They are simple and durable machines, the better ones lasting as long as 20 years with reasonable care.

The side-delivery rake is a comparatively new machine, and an excellent tool. A small boy can run it, as the operator has nothing to do but drive. There is no dumping, the windrows being made lengthwise. It also catches the hay at an angle and is thus more likely to get it all. The hay is not packed together, and thus may be gathered up much sooner than with an ordinary rake, as it is left so loose that the air circulates through it freely. Of course this loose windrow is a disadvantage to the pitcher, more picking being required to get a forkful into shape, but a hay loader will take it all up. These side delivery rakes were really made to work with the loaders.

I have never had anything injured in orchard after spraying, and I know of no such case. Still, we are very careful about turning in sheep, cattle or horses, but hogs I never take out; have not had any injured.

Ontario Co., N. Y. T. B. WILSON.

Van Deman's Fruit Notes.

ALL SORTS OF QUESTIONS ANSWERED.

Wood Veneer Tree Protectors.

E. A. P., Chatham, Pa.—Where can I procure the wood veneer tree protectors referred to in THE R. N.-Y. for June 1? I have tried to find them at one or two large agricultural warehouses.

ANS.—The manufacturers of berry boxes can easily make, if they do not keep in stock, the wood veneer for protecting trees from rabbits and sunscald. Sheets 12 inches across and 18 inches lengthwise of the grain, and 1-16 inch thick, are about right. It would be a little safer to have them a little longer. The box manufacturers ought to advertise these sheets in lots of 1,000 each at cheap rates.

Currants Dropping Fruit.

C. S. R., So. Hingham, Mass.—What is wrong with my currants? I have the Wilder, Victoria and Red Cross, and they all drop their fruit as soon as it is formed. The bushes are very healthy and there are no worms or insects of any kind. There have been no injurious frosts. I am 13 years old and am much interested in fruit culture.

ANS.—As there have been no insects, frosts or fungus diseases (apparently) to injure these currant bushes it is impossible for me to give any reason for their failure to mature their fruit. It may be possible that some fungus affects the bloom or the young fruit, causing it to drop. A spraying of Bordeaux Mixture just as the buds are bursting next Spring and another soon after the flowers have been in bloom would do no harm and might prevent the trouble.

Dry Rot in Apples.

F. T. J., Drownville, R. I.—What is the cause of dry rot in apples and the remedy if any?

ANS.—Apple rots of all kinds are usually caused by the spores of fungus diseases germinating on the inside of the fruit and their "roots" or mycelium entering the skin and pulp and causing the death and decay of the cells, which we call rot. These rots are often quite soft, but sometimes they are rather dry. Spraying with Bordeaux Mixture usually prevents the trouble to a very considerable extent. The work should be done quite late—when the apples are more than half grown, and the ammoniacal solution of copper does not stick and discolor the fruit so much as the other mixture. The study of and remedial measures for these diseases on ripe or ripening fruit are as yet not well perfected.

Various Questions.

C. L. B., Trenton, Ala.—1. What is the best and earliest peach that will not rot before it gets ripe, or within 10 minutes after? 2. What is the best very late grape? 3. Is Campbell Early as good as Moore Early grape? 4. Can you tell me how to prepare seed potatoes for the second crop?

ANS.—1. Among the best of the very early peaches that is not especially subject to rot is the Triumph. It is a yellow peach of very fair size and quality, and seems to be good for either home or market purposes. Sneed is another variety that is considered by the southern growers to be very good. With all of the Hale type, such as Amsden and Alexander, one must usually be ready to eat them before the 10 minutes, as mentioned, have expired. 2. A very good late grape is McPike, which is large and black, and although new gives promise of being valuable. Ives begins to color very early, but is not ripe until late. It does not hang on the bunch very well, which is its worst fault. Catawba is also very late, but it is so subject to rot that Bordeaux Mixture is a necessity in its culture. In quality it is rarely equaled. 3. Campbell Early is better in size of berry and cluster, and in quality than Moore Early. The vine is about all that can be desired, and on the whole it is one of the very best, if not the best of the very early grapes. 4. To prepare early potatoes for planting the second crop they should be laid in a shady place, as under a tree, as soon as dug, and allowed to remain there until well "greened," which usually takes two weeks or more. They may then be covered with old dampened sacks or mats, and allowed to sprout a little before planting. They will usually grow well without the latter treatment.

THE CASH COST OF LIFE.

Experience of American Farmers.

We would like if possible to obtain reliable statistics regarding the household expenses of average farm families. In order to do this, we wish to obtain the facts from a large number of country people with reference to the money they spend for such items as clothing, groceries and meat. Will you tell us just what your bills will average for a year? In other words, what was your grocery bill, your clothing bill and your meat bill for the past 12 months?

The average expenses of my family of four members for a year are: Clothing, $240; groceries, $85; meat, $100. B. D. P.

New Jersey.

There are six in this family. Grocery bill, $60.00; clothing, $80; meat, $10; total, $150. W. H. S.

Connecticut.

Our family averages from three to five persons; our whole expense per year from $250 to $325. This includes taxes. For groceries, $55; meat, $15 to $20; clothing, $50 to $75. C. D. A.

As farmers we killed hogs for our meat. Our grocery bill would be $25 for about four months, and our clothing $15.50 for a family of two. We only kept account for four months. Through these four months we had some hired help also. R. H.

Michigan.

Family of eight persons, from September 1, 1899, to September 1, 1900. Groceries, $113.49; flour, $46.40; kerosene, $17.74; clothing, $127.78; meat, $70 paid to butcher, $80 slaughtered at home; total, $150; slaughtered at home, one two-year-old steer and three nine-months-old pigs, worth not less than the $80 marked. A. C.

Rhode Island.

There were four in our family during the year 1899, consisting of "the Madame," two children, Helen, 10 years old, and Mildred eight years old, and Grandma, 89 years old. Our household expenses, including groceries, postage stamps, wall paper, curtains, etc., were $53.49; "the Madame's" clothing, etc., $10.42; Helen's, $14.80; Mildred's, $8.65. Grandma was confined to her room and bed all the time, so did not require any new clothing. The rest of our living was from the farm. We burn our own wood.

Maine. E. H. C.

I cannot give exact figures except on groceries, of which we have kept strict account. Being farm people we raise our own beef, pork and poultry. I can give the amount consumed, the price by the side, and the retail price in town. Our family consists of four grown people all of the time, hired man nine months, and in the busy season two extra men two weeks. We will on an average consume 600 pounds of beef and pork during the year, which at retail here would cost 10 cents per pound, and by the side six cents. Our grocery bill for the year is $77.40, and for clothing at $20 each, $80. Of course the last figures are estimated. A. C. F.

Michigan.

Our family is made up of my husband and myself, one little boy of our own, eight years old, and a little boy from the Home, aged 11 years; a girl of 16 years from the Home, and a young man who works for us. We raise all our flour, most of our meat; only buy meat from market in the very hot weather. Our doctor's bill is large this last year, on account of a very serious case of scarlet fever; usually we have none, or at least a very small one. We have a great deal of fruit, and in picking time board the help, and so our grocery bill is sometimes larger, sometimes smaller. Grocery bill for 12 months, $63.44; doctor, $65; meat, $12.28; clothing, $109.64.

New York. F. W. C.

The following are our expenses for the past 12 months as near as I can give it. Our family consists of five, my wife, myself, two children and hired man: Meat, $8.40; groceries, $55.60; clothing, $41.16, not including hired man's clothes; total, $105.16. This does not include anything that was raised on the farm, nor a doctor's bill of $19.20. L. W. R.

Pennsylvania.

Cream Will Not Churn.

S. C., New Milford, Conn.—I have a Jersey cow three years old, a good milker, but I cannot make butter from her milk. The cream when churned looks like whipped cream, and when let stand for a while a quantity of very bitter whey settles at the bottom. The only way I can get butter is to churn, then let it stand, and draw off whey and repeat until I get all the whey off, which is a very tedious job. What is the cause; how can I remedy it?

ANS.—Probably you are not thoroughly ripening the cream, that is, the whole mass is not ripened uniformly. Churn at least twice a week. Twenty-four hours before churning mix together thoroughly all the cream to be churned and keep at a temperature of 70 degrees or a little below, depending upon the time of year, until sufficient lactic acid has developed; that is until it is sour enough. If after this the churning continues to be difficult use some one of the commercial starters, like Hansen's or Douglas's lactic ferment. Commercial starters are not very expensive, and full directions come with each package. J. A. F.

NOT MUCH STUFFING.—I appreciate THE R. N.-Y. very much; I think it has the least stuffing in it of any agricultural paper that I have seen. Tell the Hope Farm man to put his house tank in the top of his stock tank, so the water will overflow from it into the stock tank. This will keep the water fresh and cool. H. A. M'Q.

R. N.-Y.—You must remember that what seems mere stuffing to one man may be the real stuff to another.

THE MOTH TRAP.—I have read the story of the moth catcher and also editorial and my faith in the trap as a destroyer of orchard and farm pests is not shaken. I had eight of the traps in my garden and orchard, and caught 80 moths, eight stinging flies and a quantity of bugs in one night—the night of May 23, the only warm one we have had here this Spring. Give the moth catcher a chance and it will prove its ability to vanquish many, if not all, of the insect enemies of the fruit grower, and do not call it a humbug until it has been tried and proved to be one. G. Z. G.

Warsaw, N. Y.

R. N.-Y.—We do not object to the trap, but the way the maker garbles testimonials. How many of the "bugs" you caught were useful to the farmer?

PLANTS—Tomato, Cabbage, Sweet Potato, Pepper and Celery. Price-list free. CALEB BOGGS & SON. Cheswold, Del.

100,000 POTTED STRAWBERRY PLANTS: List free. T. C. KEVITT, Athenia, N. J.

STARK TREES SUCCEED WHERE OTHERS FAIL. Largest Nursery. *Fruit Book Free.* Result of 76 years' experience. STARK BROS., Louisiana, Mo.; Dansville, N.Y.

BUDS IN SEASON

Peach, Apple, Pear and Plum. Write for prices, giving quantity wanted.

HARRISON'S NURSERIES, Box 29, Berlin, Md.

Headquarters

for the **October Purple Plum** and **Green Mountain Grape.** The largest New England nursery. 500 acres. Strong stock of all fruits, ornamental trees and shrubs. Catalogue free.

STEPHEN HOYT'S SONS. New Canaan, Conn.

Transplanted Celery Plants—Parties intending to set, write **Frank Shearer & Son. Binghamton, N. Y.,** for prices on stocky transplanted plants.

CELERY PLANTS ONLY **$1.00** per **1,000**; one million ready July first. **100** *Strawberry Plants*, in pots, for *$1.00.* SLAYMAKER & SON, Dover Del.

CELERY PLANTS.

Grown by the acre, on fine irrigated land. Extra large root development. Large stocky plants. Shipped safely to all parts of the United States and Canada. White Plume, Golden Self-Blanching and Giant Paschal. Price: 500, 75c.; 1,000, $1.25; 5,000, $5. WILSON BROS. & CO., Tecumseh, Mich.

Celery and Cabbage Plants for Sale

Leading varieties, carefully packed with moss in baskets, f. o. b. here. 250 plants at 60c.; 500 for 90c.; 1,000 for $1.50. Special price on quantities over 6,000. Cash with order. Plants ready 15th to 20th of June. WOODLAND FARM, Canastota, Madison Co., N. Y

CABBAGE PLANTS

Leading varieties, 75c. per 1,000. Shipped safely anywhere. A. B. KATKAMIER, Macedon, N. Y.

CABBAGE PLANTS—Wakefield, Early Summer, Succession, All Season, Surehead, Danish Ballhead and Fottler's $1 per 1,000; $4.50 per 5,000. E. J. HULL, Olyphant, Pa.

TRADE MARK PS **CABBAGE PLANTS**

grown from Tillinghasts' famous Puget Sound Seeds Winnigstadt, Succession, Fottler's, Flat Dutch, $1 per 1,000 $7.50 per 10,000. Address W. A. TILLINGHAST, La Plume, Pa.

For Sale—1,000 bu. Clover Seed @ $6 to $7 per bu.; 500 bu. Crimson Clover Seed @ $5 per bu.; 2,000 bu. Cow Peas @ $1.25 to $1.75 per bu. J. E. HOLLAND, Milford, Del.

NEW CRIMSON CLOVER SEED

My own growing. Ready July 1. Orders booked now. Sample and price sent for approval before shipment. Cow Peas. Soja Beans. Circular free. E. G. PACKARD, Seedsman, Dover, Del.

CRIMSON CLOVER Clover is mailed free. In sowing this valuable clover it is important that American seed is used. We supply genuine Delaware seed only. Our special circular describing uses of Crimson HENRY A. DREER, 714 Chestnut St., Philadelphia, Pa.

The New York State Fair Premium List is now ready for distribution. Copies can be had on application to the Secretary, S. C. SHAVER, Albany, N. Y. . . . . . .

The Cornell Reading Course.

Edited by John Craig, Professor of University Extension, and Editor Farmers' Reading Course, Cornell University, Ithaca, N. Y.

JOTTINGS BY THE WAY.

Grange Meetings—Good and Bad.

The Grange as a State institution is a power in the land. The Grange as a local organization rarely lives up to its opportunities. In the State its interests are looked after by wideawake, energetic farmers, who are also business men. The local Grange often lacks these energizing souls, and suffers in consequence. During the past three months the writer has had exceptional opportunities of studying the strength and the weakness of this institution. This experience impresses him with the belief that the success of a Grange often hinges upon the unselfish actions and public spiritedness of one or two of its members. I have attended a number of meetings this Spring, some of these were special, others general. Some were melancholy failures, others heart-cheering successes. What contributed to the successes? What caused the failures?

A Successful Meeting.—Let us illustrate a success and a failure and perhaps we can guess at the underlying cause in each case. Here's one which took place in Genesee County a couple of months ago. The writer was asked to meet with a certain Grange. He acquiesced. On the appointed day he was met at the station and taken to the hall. Although the day was wet, fully 150 men and women were present. The first item was "a Grange luncheon." This was unique and enjoyable. Couples sat vis-a-vis. Board trays were placed on their knees and the serious business commenced. The young served the old. All were merry. It was an indoor picnic! After clearing up and dishwashing the other part of the programme was attacked with vigor. Music—by the audience—an address by the visitor, a question-box by the chairman, completed the afternoon's entertainment. The visitor went away feeling that he had had a good time, done some good and had made some friends. This meeting had been advertised and talked up. *Some one had seen to it.*

The Unsuccessful Kind.—Traveled over 200 miles to attend this one, an evening Grange meeting early in June. It was a beautiful day. I was duly met at station and kindly taken charge of by a Granger who was of the easy-going type. About 8.15 P. M. he "guessed we'd better go over to the hall and see if folks were turning up." About a dozen had arrived. Some of these were surprised to know there "was to be any speakin'." At 8.35 the Grange convened to transact routine work; at 9.30 the speaker was invited to take the floor. Think of beginning a speech to an audience of men who had worked hard in the fields for 12 hours that day at 9.30 P. M., and yet the speaker had been expressly asked for that purpose! A glance at the audience showed an interesting picture. Twenty-five or 30 men and a dozen women sat around the walls with chairs tilted at various angles according to the sitter's idea of comfort—all prepared to take it as easy as possible. And they did. The soothing tones of the speaker's voice sent half a dozen to sleep within 10 minutes. The speaker told an anecdote. This woke one of them, who celebrated his waking by a solo guffaw after everyone else had finished. The women were more interested in studying the attitude of the slumberers than the remarks of the speaker, and finally organized a whispering and tittering club at one side. The speaker struggled on. Finally one sleeper with a throat affection broke into a blood-curdling snore which awoke the entire company, and sent the giggling part of the audience off into a fresh attack of titters. The speaker threw up the sponge and retired as gracefully as possible. It was 10.15. Certainly time for everyone present to be in bed. But the evening had been wasted. The visitor's time and the State's money had been wasted, and the audience went away disappointed. What was the trouble? A listening, thinking audience had not come. No one took it upon him or herself to work up an interest, a newspaper notice or two appeared, but were undoubtedly overlooked. What is everybody's business is nobody's business. Let us labor to make the Grange what it should be—a live factor in the social, business and public life of the farmer.

Next week we will say something about transplanting strawberries during wet weather.

A CITY MAN TURNS FARMER.

Part VIII.

At the commencement of my last article I asked some questions that might be in the mind of a man seeking how he could make a living on a farm, and will proceed to answer them.

In the first place, what did we produce? A 300-pound hog gave us lard enough, and salt pork enough to last a year; the hams and shoulders we cured and smoked, then cut them in slices and partly fried, and packing tightly in stone pars poured the hot fat on top, thus completely sealing them. We have never found any way of keeping hams so good as this. The fresh pork, spare ribs, sausage, etc., kept us in meat nearly all Winter. Milk, butter, eggs, and all the poultry we wanted to eat, with plenty of potatoes, turnips, cabbages and apples, saved any expenditure of money in that direction.

We had four large sweet cherry trees, two of large White Oxhearts, and two of black ones. From one tree we sold $9 worth, and preserved enough to have sold for $3 more. So the output of that one tree was equal to $300 in a savings bank at four per cent. We had preserves of all kinds, field beans enough for a year's supply of baked beans.

Now let us see what there is yet to buy. Flour, tea and coffee, sugar and fresh meat; as to the latter the route of the bi-weekly butcher's cart did not come nearer than half a mile to our house, and the bother of going up to wait for the butcher undoubtedly lessened our meat bill considerably. As we made no attempt to raise our grain, but bought it all, the grain bill was the heaviest single item of expense. But this was more than paid for by the hens, leaving the money received from the sale of butter to pay above expenses. We were so well supplied with clothing when we came from the city that it was several years before the expense for clothes became an item of much consideration. So we did not have to run in debt, but with good management not only paid all expenses, but continually added buildings and conveniences.

I clapboarded the back of the house, put in new window casings, shingled the whole roof, painted the house twice, moved a large grapevine, and put up an arbor on the south side of the house; in fact, made so many improvements that neighbors remarked they would hardly know the place. Being in poor health most of the time I have been compelled to hire all my plowing done, and most of the hoeing and cultivating. Haying for several years I have not attempted to do myself; paying a certain sum to have it cut, cured and put in the barn. Notwithstanding the handicap of ill-health, and being forced to hire so much help, we have not only made a living, but every year have added buildings, new wire fences, set out trees, or other betterments to the farm, and I honestly think that the success we have achieved is due mainly to my hens. That little busy hen, sneered at by most farmers, merely tolerated by some, utterly ignored by others, is, when properly cared for, the most profitable thing on a farm. *"When properly cared for,"* must be put in italics, for nothing will resent neglect quicker.

Can any man, then, make a living on a farm by keeping 200 hens? Undoubtedly no. He must serve his apprenticeship to the business, and must have a natural liking for hens. He must be a henman, as others are horsemen, cowmen, dogmen, etc. And there will be seasons when under precisely similar conditions so far as we can see, the hens will not do so well, but I am convinced that for each dollar of capital invested, taking one year with another, hens will pay better than anything else. G. A. C.

"TAKE A DAY OFF AND REST."

A Maine Farmer Tries It.

Along in June after much planting, sowing, hoeing and whoaing, I had an attack of the farmer's tired feeling, and took a day off, as advised by the editor of this paper. I do not, like some, believe all I see, but I did think I could rely on such a recommendation, and was grievously disappointed, for I think I was never more tired in my life than after that day of rest. I took the little girl, my only boy and boon companion, now her brothers are away at school, and we went down the Kennebec Valley to Augusta, and visited the State House, where every two years wonderful things are talked of which, somehow, never happen as expected. As we lounged about on the slippery seats in the corridors there came to mind a line of the beautiful hymn,

"All the wide world to either pole
Hath not for thee a home."

In these big edifices of brick and stone and iron, marble staircases and luxurious offices, there should be one place for the *owners;* a comfortable room, with settees and a few easy chairs, and lounges, where a farmer, on business at the Capitol, could bring his wife and children. After seeing the sights, the wife could lay the baby down, and the tired girl and boy could rest and sleep, with convenient lavatories, and an attendant or two to take people around and show them all that is worth seeing. There were push buttons in the walls, but in these days of "You push the button and I do the rest," how should I know but I might turn on the electric lights or call out the militia or the whole Augusta fire department; or old Gov. Powers himself might stand in the doorway, shaking his mane and saying, "My friend, what can I do for *you?*" It would be mighty embarrassing this year, for the boys have nominated another man, and I couldn't tell him how pleased I should be to vote for him.

There should be a diagram of the building, with plain directions for the plain men who come here. How could I tell whether the Agricultural Department, for instance, is located up under the dome, in an atmosphere suitable for corn, or down in the basement, in a temperature about right for potatoes or mushrooms? I knew the officers, any of them, would be glad to tell me, would be glad to see me, and learn of the short crop of hay and caterpillars up on the Sebasticook, but I reflected that they would soon learn all about these things in the Boston dailies, so I contented myself with feasting my eyes on the portraits of G. Washington and other worthies which do so much to adorn our public buildings nowadays, as well as "point a moral and adorn a tale" for confiding youth. I used to think that the benignant presence of these gentlemen might be a help to our legislators and enable them to resist temptation when wild schemes are in the air. Some of the doings here might well cause the portraits to blush, but I never heard of their affecting a member that way. The elevator was cosy and inviting, and the little girl rode up and down to her great delight, while I talked with the veteran who managed it and who knew lots of the folks up river. Finally he left his post for a few minutes, and opened up for us the two assembly rooms, where we found the seats "luxuriant," as the little girl called them, and the carpets all but knee deep. But think of their being unseen so long, while we had to rest on the hard seats in the lobbies. And out under the oaks and elms, where there there should be a sort of picnic ground for taxpayers, there was a sign reading: "Newly seeded to grass; no passing." I noticed in passing that the State is in the business of growing hawkweed, which is already ruining farms almost in sight of the Capitol. This whole valley in fact is a flower garden in June, and no wonder the western man said he couldn't see how the farmers of Maine raised anything, all the land seemed devoted to flowers. I think myself that we could well dispute with China the title of "Flowery Kingdom." After our 20-mile ride up river, the little girl was fresh as a daisy, while as to her father, there didn't seem to be much left of him. This illustrates the difference between what the bicyclers call "resilient" youth, and inelastic maturity. C. S. PAINE.

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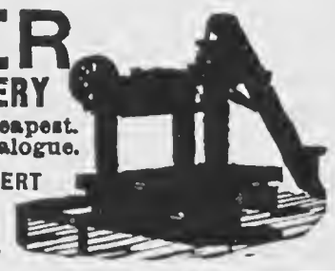
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Ruralisms

NOTES FROM THE RURAL GROUNDS.

SOME ATTRACTIVE COLUMBINES.—One of the brightest and cleanest growing of herbaceous perennials is the Aquilegia, or columbine, not sufficiently seen in country gardens. When met with at all the varieties are usually commonplace seedlings of the European A. vulgaris. The beautiful long-spurred native species, A. Canadensis, so common in eastern woodlands, and A. chrysantha, the golden columbine of the Rocky Mountains, should be more often planted. Many large and brilliant hybrids have been raised between the American and European species, some of which are represented on the first page, Fig. 180. The colors vary from pure white to scarlet and brilliant orange. Some have also beautiful shades of lilac, blue and purple. The foreign varieties run to the latter colors. The most admired of all hybrids is probably A. Stuarti. A plant has just bloomed on the Rural Grounds bearing flowers almost four inches across, bright clear blue, with white center. Seeds of these choice varieties are not always easy to obtain, as when sent out by even the most reliable houses they are often found to produce very inferior forms. This defective seed is probably the result of natural cross-pollination, as the most diverse species hybridize readily when grown together. Columbines may be easily grown from fresh seeds and bloom the second year. Many of the best varieties only bloom two or three seasons before dying out, but they may be kept longer by annual transplanting, which does not greatly impair their blooming qualities. The best plants may be increased by division, but the process is uncertain and seldom resorted to, as seedlings are so readily grown. When as much care is given to the production of Aquilegia seed as is bestowed on more popular plants the result may be a great transformation, as there is more to recommend the genus in its natural state than most others. Some of the older species bear double flowers, but they are not generally so much admired as the more graceful single forms, though they last somewhat longer.

THE LATE SEASON.—The tardiness of the season was made evident to all by the character of the available blooms on Decoration Day, May 30. A few apple blossoms could still be found, but they were too far gone for use. Diervillas, better known as Weigelas, were still in bud, though the light flowered varieties, such as D. rosea and D. candida, are usually expected to be far advanced in bloom by this date. Deutzia gracilis is counted on to furnish its quota of snowy Convallaria-like blooms, and did not entirely disappoint us this trying season, but it was just coming into bloom instead of being nearly through, as in previous years. The effect of the constant rains is now plainly noticed among the tree fruits. Cherries, plums and peaches have set only a fraction of the fruits that might reasonably be expected from the heavy bloom. Pears set very thinly and it is yet too soon to speak of apples, though they may be expected to suffer most, as they scarcely had any sunny weather through their extended flowering period. Strawberries and most bush fruits promise well. It is not easy to understand how the pistillate varieties got their pollen during the persistent foggy and showery weather. The reduction in the number of fruits to be developed may have a good effect in increasing size and quality. One unusual result of the cold and late season is the large quantity of tender seeds used for replanting. Local dealers who sell a few pounds of melon and cucumber seeds and Lima beans in ordinary seasons report sales by the hundredweight. It is necessary to be early in the market with all products, and the truckers or gardeners are willing to take all chances of unfavorable weather in order to secure the earliest possible crop.

NOT SO MANY BUGS.—Last year we were overrun with cutworms, Potato beetles and other enterprising insects at this season, but there is a noticeable scarcity of everything but earthworms in the damp soil. Even the prevalent Rose bug is seldom seen when planting. The cool weather and excess of moisture has evidently much delayed the development of these pests, but they may be expected to put in an appearance later. It is hoped that their numbers will be diminished when they do come. Potatoes have not had such a good local start of the beetles for a generation. They are looking extremely well where planted on well-drained soil, and many plots are showing bloom at this writing (June 8). It will not do to allow our batteries for insect warfare to get out of order, as they may be urgently needed. A comparative immunity from insect pests is often one of the compensations of a wet season. Most insects are livelier, and do more damage, when it is hot and dry.

THE ICICLE RADISH.—This is the very taking name of a highly bred white early radish first offered last season. When grown properly it is clear and crisp enough to warrant the comparison. Much care is taken to breed these improved strains of radishes true to type, and they now come in great perfection of color and form, coming to edible maturity in an incredibly short time. A recent test of 200 varieties is reported in the Gardener's Chronicle, an English publication. Many were found to be identical with those sold under another name, thus reducing the actually distinct forms more than one-half, and not more than 20 varieties were really found worth growing under the conditions of the test. Europeans divide their radishes into "forcing" and "frame" varieties, including all the compact, quick-growing kinds under the first designation. We use practically the same varieties for market forcing, as most radish seed used in this country is imported, but in some localities Summer varieties of good quality have originated which perpetuate their characteristics with much uniformity. In many old gardens these Summer and Fall radishes are highly prized as being of better quality than any grown from commercial seeds. In the extensive trial mentioned it was declared that no distinctive flavor was characteristic of any one of the many varieties, the only difference being degrees of tenderness or succulence. The Icicle radish is a long, smooth, clear white variety of most excellent quality when quickly grown, but it does not stand Summer heat well on the Rural Grounds. W. V. F.

Experiments With Tulips.

Perhaps a little tulip experience will be of interest to some of your readers. I have long been desirous of having them blossom later in the season than they usually do. Reading in some of the periodicals that if bulbs are planted very late, and well mulched, one could have blossoms in Autumn, I put out bulbs December 3 as directed, but greatly to my disappointment they blossomed simultaneously with those set in September. April 11, of the present season, 100 bulbs were planted, and greatly to my surprise they were in full bloom May 24, slightly smaller in size; about 20 varieties were set. Is it possible to have tulips blossom in Autumn? I purpose to make another planting in June as a further experiment. All the authorities are agreed that tulips should be set in the Fall, but my one trial indicates that this practice is not absolutely necessary. I grow tulips by the thousand, of many different varieties, and leave them in the ground unless the bulbs are wanted. They can be planted deep, eight to 10 inches, or more; then when done growing the ground can be spaded without disturbing the bulbs, and late flowers planted, Asters, Zinnias, marigolds and the like. N. R.

Syracuse, N. Y.

R. N.-Y.—It is scarcely possible to induce tulips to bloom in the Fall by any method of delay or bulb storage. It is essentially a Spring-blooming plant. With most bulbous plants a delay in planting the dormant bulbs does not indicate a corresponding delay in the blooming period, as the vital activity rapidly increases after the natural period of growth is passed. Two hyacinths or Gladioli of the same variety may be planted at an interval of several months but their bloom spikes will appear at most a few weeks apart.

Forcing Rhubarb in Winter.

In THE R. N.-Y. of May 4 an article on Winter Delicacies, tells of the forcing of rhubarb. Will you inform me how to prepare it, as I wish to try growing some in my cellar next Winter? B. D. B

Salamanca, N. Y.

The preparation of rhubarb for Winter forcing consist in the selection of strong three or four-year stools, cultivating and fertilizing during the Summer so as to produce a strong leaf growth, with a corresponding storage of vitality in the roots. In early Winter, just before freezing weather, dig up the clumps, preserving as much soil as possible, replace them in the holes from which they have been loosened, covering lightly with loose earth to preserve moisture. When a freezing night is imminent lift out the clumps and expose to frost. In the morning, if well frozen, they can be handled like rocks without crumbling. They may then be removed to the cellar or greenhouse, placed in position in some suitable corner, and sufficient loose soil sifted over to fill all crevices. In a day or two, after the frost is out of the clump, it is necessary to water down well to compact the soil, which should afterward be kept at a growing moisture. In the Rural Grounds cellar the heat is supplied by a hot-water pipe leading to a greenhouse. The ordinary unheated cellar is too cool to force rhubarb much before it grows outside, but by curtaining off a corner with blankets and using a large lantern or oil stove it can be had in midwinter.

CRIMSON CLOVER.—The Crimson clover was the finest we ever had; the tomato ground we plowed the second week in April and set to blackberries. It was six inches high on the pickle ground the last of April and set to raspberries. It was just like setting them in a meadow. We plowed a furrow and set them about six inches deep. Now they are about a foot high. This has been a great Spring for plant setting. We set in all 20 acres. The old bed of strawberries will average from 12 to 15 inches high; our raspberry bushes from five to six feet across top. I have counted 75 to 100 limbs on a bush. Our blackberries are as good as last year. If it doesn't stop raining we will have to mulch our berries with something beside dust this year. As straw is very high I will try shavings.

Syracuse, N. Y. CHAS. SIDDONS.

GRAFTING CHERRIES.—We followed Mr. Van Deman's advice, and grafted one of our black cherry trees. The tree is about 12 inches through and 25 feet high. We got some very good scions from a neighbor, and set them April 22. We sawed the stubs to a 45-degree angle, split one side of the pith, and put in one scion of two buds; so far as we are able to discern from the ground they are all alive. We also grafted several apple trees in the same manner, cutting some stubs four inches in diameter, with excellent results. We were able to graft a large top with about 25 scions, quite an improvement over the commercial plan in vogue here, where 100 or more would have been used! Besides, we have a comparatively low top. We also grafted about 50 plum roots we dug from a thicket with Japan varieties with fair success. This is our first experience. J. A. O.

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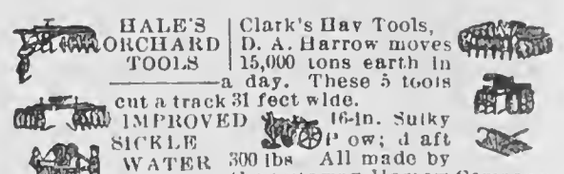

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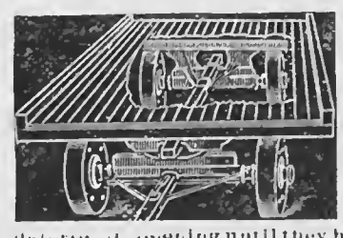

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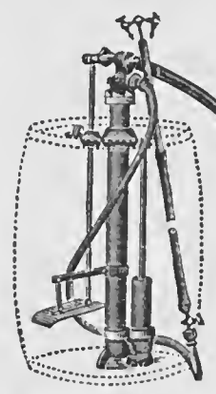

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Hope Farm Notes

MUSIC HATH CHARMS.—When I mentioned Julia, our kicking cow, I had no idea there was so much interest in these heel-and-toe workers. We have had a run of ridicule, advice, suggestion, abuse and sympathy. Now comes a man with a clipping from Hoard's Dairyman. The cow mentioned was "particularly vicious" (though I will match Julia against her):

It was necessary to tie her in the stall while his two boys milked her. Now, Mr. Wentworth's boys are good singers and cannot resist the temptation to indulge in song, while at their work. One day they started up "My Old Kentucky Home" while milking Betsy, and were surprised to discover that the cow suddenly became docile. After that they found it was not necessary to tie her, and she would stand patiently in the yard while the milking was in progress, so long as she heard the refrains of "Dixie," "Take Me Back to Old Virginny" and other old melodies.

I don't pretend to be much of a singer myself. On a few brief occasions when I have tried to sing in public, the audience did not appear to go to sleep. It has been suggested that an appropriate song to sing while pulling Julia's teats would be "My soul, be on thy guard!" That is doubly appropriate, for the best way to receive a kick is to hold up the sole of the boot and let the shin of the kicker strike it! He won't kick twice in the same hour. But we have pretty well conquered Julia. It's a case of prohibition though—and happily, in this case, it prohibits.

THE BLIND SEE.—There are some things about farming so clear and plain that they would be evident to a blind man. We have rye in the old pear orchard which fronts on the main road. I intended to cut the rye early for hay, but the rain prevented that, and it is now well headed. Last year we used this orchard as a sort of experiment place. In one aisle we had cow peas, in another Soy beans, in others sorghum, Kaffir corn, potatoes, corn fodder, etc. The rye clearly shows where the cow peas grew last year. This crop will always show itself in whatever follows it. . . . Another thing with a clear history is the strip in the apple orchard where the oats were not treated with formaldehyde. In sowing the oats Charlie ran a little short of the treated seed, and took part of a bushel which had not been wet with the solution. You can see the difference without trouble. This seems to prove what the scientific men tell us—viz., that the smut germs are in the seed. If they are not destroyed, they begin their work at once in a season like this, and the plant never has a fair chance. . . . Another thing that a man with a wooden leg could feel as he walked over the field is the difference in plowing with our heavy reversible sulky and the light walking plow. Both plows were used in the cornfield. The heavy sulky stayed at its work and turned and crumbled the soil into an ash heap. The lighter walking plow jumped and danced more or less in the tough, sticky soil, and left it cloddy and hard.

FARM NOTES.—Our corn was late, but it went in right. I shall keep planting corn until June 20, and then finish planting potatoes. No, I would not advise others to do this. I shall take the risk because there is nothing else to do. . . . The rye and Crimson clover were well cured. This curing was done in the cock, and the fodder turned out green and bright. The rye is a little too hard for good hay. The horses eat all the clover and all the rye heads, and nibble a fair share of the straw. What they leave makes the finest of bedding. Right now is the time when the farm team should have a soft bed. They should work hard by day and sleep well at night. . . . As usual, where we cut the Crimson clover in the upper orchard many heads were left. There are a few jobs in which it pays to be careless—cutting Crimson clover is one of them. I like to let plenty of the heads go to seed. Thus the crop reseeds itself and comes in year after year—a most welcome visitor to me. . . . I picked wild strawberries at least 10 days before any of the early cultivated varieties were ripe. We have some of these wild or vagrant plants under cultivation to see what they will come to. When these plants get into so-called civilized society I don't believe they will get up quite so early. As they produce larger fruit under cultivation they will take more time for it. . . . Hay and hoeing will come together this year. The grass has made a rapid growth, and will be a heavy and bulky crop, but the quality will be low. There can be no heart in grass or anything else without plenty of sunshine. My "Clark" grass doesn't grow as I hoped it would. It is very thick, but quite short.

THE WEATHER.—The rain finally washed out and the sun began business in a half-hearted way. After a day spent in chasing clouds off the sky he took courage and really went at his business. Oh! but didn't the sunshine do us all good? The blades of grass had begun to turn yellow at the ends. They shook themselves and started again. Every living thing that could do so crawled out of its brooding place and just basked in the sun's rays. After three or four days of brightness it was a pleasant thing to see the sun go out of sight behind the Hope Farm hill. Great squares and patches of light lay along the lawn, and on the oats in the orchard, where the sun poked his last "good night" through the trees. The rye crinkled and waved in the wind and every spring and tiny stream in the valley sparkled and glittered whenever the water passed out of the shadow. But there was little time to stop and look at light and shadow pictures, for no one knew when the next rain was coming. It was jump and get the ground into shape! At present the indications are for fine weather. We need it, but have no time to celebrate its advent.

FRUIT PROSPECTS.—Our apples promise a fair crop. The Baldwins have taken a year off, except in the case of a few trees, which seem to bear year after year. The Greenings promise well, and the early varieties are mostly loaded. I hear some complaint about a failure of trees to set the fruit even after full blooming. I find little of this in our orchards—in fact, there is, if anything, too much fruit on most of the trees. Spraying this year seems a failure. The constant rains kept the leaves thoroughly washed. I can only hope that apple insects will be as scarce as others appear to be. Pears look well with us. The old trees show the result of plowing and manuring, and have put out much new wood and have fine foliage. Cherries promise well. I had given the crop up, as I could not see how the flowers could be properly fertilized during the heavy rains. In some way the work was done, and the trees are already beginning to bend to the ground. My Stringfellow peach trees have surprised us all. Not one per cent has died thus far, and most of them have started a vigorous growth. Some of them, set in a damp place, look sick, but it is no situation for peaches anyway. I am not advocating this method yet—I am watching it.

STOCK AND DAIRY.—The hens laid 642 eggs in May. About 38 hens did this. It is a poor record on paper, but good when compared with many actual results in the yards near us. It is one thing to tell what a hen ought to do, and quite another to make her go and do it. . . . Just two chickens—one Wyandotte and a White Leghorn—remain of the $10 outfit of eggs which were bought early in the season. These $5 birds might well be called *guinea* fowls! They are both roosters, and we hope to give them a chance to hand a few $5 bills down to their daughters. We have not far from 225 little chicks from Hope Farm eggs, as bright and lively as need be. They are the children of old Don, who is ready to fight a horse if need be. In former years we have let the young roosters grow to nearly full size. This year I mean to have them picked out as soon as possible and put by themselves for fattening. The quicker they make their way to the frying pan, the more likely we are to have something to crow over. We may well do our crowing before they do theirs. . . . The milk trade is still good. We usually find it cheaper to sell milk and buy butter, but of late we have been making more or less as cream is left unsold. A fine batch of Hope Farm butter appeared on the table last week. It was so good that I began to investigate to see what churn was used. To my surprise I found that Charlie made it by shaking up the cream in a glass fruit jar! After all, that gives the butter globules about as fair a chance to get together as they are likely to get in any churn. H. W. C.

New York Fruit Display at the Pan-American Exposition.

The fruit display from the State of New York in Horticultural Hall, at the Pan-American Exposition, is so remarkable that it deserves special mention, and I think the people of this State, at least, would be interested in knowing about it. It has been splendidly managed from the first, and great credit is due S. D. Willard and his assistant, F. E. Dawley, who are at the head of it, and under them others who did the work of collecting all over the State, many of whom are unknown to me, but their fruit is here to show what they have done. Every county in the State is represented in the hall at this date, including even the county which comprises the city of New York. Beginning late in the Fall, as they had to do after the appropriation was made and apportioned by the board of management, in order that those managing the fruit display knew just what they had to depend upon, they went vigorously to work and selected apples, pears, quinces and grapes and put them in cold storage in such good condition that they have lasted splendidly, and came out this Spring in some cases with only the loss of three or four specimens in a barrel. Each specimen was wrapped in two thicknesses of paper and placed in the Buffalo Cold Storage Warehouse. When the Exposition was formally opened on May 20 they placed the first fruit on the tables, filling 1,800 plates. It was an astonishment even to themselves to see so fine a showing at so late a date. Even the Catawba and some other varieties of grapes were in good eatable condition, and are so to-day, although they have now been exposed for over three weeks; but some have rotted and been replaced. The coloring of the apples is about as good as could be desired, and the flavor of the apples and pears is about the same as it was last Fall or any time during the Winter, though some of the earlier kinds are somewhat "off" in this respect. Fall Pippin, Rambo and others that are not expected to keep very far into the Winter came out in good condition.

As to the future, we have every reason to believe that the State of New York will be splendidly represented in the fruit line at this Exposition. Those who have the matter in charge are taking active steps to secure every kind of fruit that grows within the limits of the State, and if they are properly treated by the people at home, as they doubtless will be, New York will come out with abundant laurels. While the fruit already shown has been carefully examined, and notes made preparatory to awards, the Exposition authorities are not ready to publish these awards for a little time yet; but everyone who has made creditable contributions to the exhibits will not be disappointed in what he will receive. H. E. VAN DEMAN.

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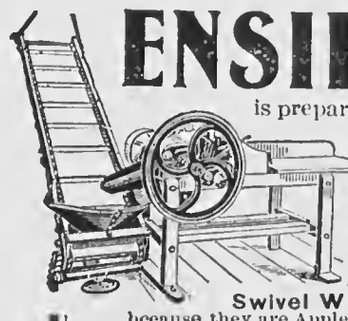

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THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, JUNE 22, 1901.

ASPARAGUS is a crop that seems to offer good chances to the careful grower. Prices have been good. The use of this vegetable is constantly increasing. The rust has killed out many fields, and kept many farmers from starting new ones. These things warn careless growers to shun asparagus, yet invite good and careful farmers to try it. During the season we expect to give a good deal of attention to this crop—especially with reference to the best method of fighting the rust.

*

DURING the 10 months ending in April the total exports from this country amounted to $1,238,554,264. Of this $84,784,364 worth was carried in cars, $64,927,406 in American ships and $1,088,842,498 in foreign ships. The proportion of imports brought in American ships was larger, but it is true that England and Germany are doing most of Uncle Sam's foreign delivery. The question is, would he better off to do it himself? If so, how much? Enough better to afford to pay a big price for the privilege?

*

IF any farmer is frightened into selling his apples at the first low offer this year it will be his own fault. Careful reports are coming in from the sections where fruit is grown largely for market. The cold wet season has undoubtedly hurt the prospect for apples. Even where the bloom was very heavy many trees have but little fruit. It is, of course, still too early to make definite predictions, but as compared with same date in former years the outlook is for a low apple crop—which ought to mean high prices.

*

IT is said that farmers in a section of eastern Washington are about to try a novel plan for marketing their wheat. These wheat fields are on high ground, and great canons make carting it to market a difficult job. The new plan is to build a cable tramway from the bluffs to warehouses on the Snake River, about two miles distant. From this cable will be suspended baskets each holding a two-bushel sack of grain. It will work on the gravity system, and it is expected that from 250,000 to 400,000 bushels will be handled on it this year.

*

NEW Jersey is the mother of trusts and the nurse of oleo peddlers. These bogus butter rogues come across the ferries into New York and attempt to sell their stuff. Now, as appears from the statement on page 444, they send little boys with their wagons, hoping in that way to escape detection. This is their latest wrinkle of conscience, and it is the smallest business yet—in all respects. It is bad enough to turn a man's conscience into tallow, but to turn the cream of a young boy's life into lard gravy is a master stroke in wickedness—even for an oleo rogue.

*

ONE of the large life insurance companies is making total abstinence from intoxicants an object to its policy holders, since those who agree to abstinence during the life of the policy will get cut rates. The innovation was adopted at the solicitation of some of its largest policy holders, who based their claims on the ground that mortuary statistics showed a higher death rate among men who drank than among those who were abstainers, and that consequently the policy holders who did not drink were being charged to make good the losses, accruing from those who did. This plan of making non-drinkers preferred risks has been in vogue for some time in the old world, though new to the United States. The new class will include any accepted policy holder declaring himself a total abstainer, who would agree to remain such during the life of his policy. Among the men at whose instance the plan was put in operation are John Wanamaker, Dr. Edward Everett Hale, Booker T. Washington, Senator Frye, Senator Tillman and ex-Mayor Hewitt, of New York.

*

OUR reports indicate that the Green pea-louse is becoming destructive once more. The wet weather held it in check, but now it is doing great damage in several localities. At Moorestown, N. J., a new spraying machine was tested. It is an expensive machine which picks or shakes up the vines and thoroughly sprays them with the whale-oil soap solution. It works so well that experts declare that it solves the problem where peas are grown on large areas. It is not likely that smaller growers can afford such a costly machine. If the pea-louse continues its destructive work the industry of pea growing for canners may be forced into the hands of a few very large growers, who can plant large areas and use these machines.

*

WE know of people who went to a seaside resort last Summer. They demanded pure milk, but were served with an article that *would not sour*. It was actually so drugged with chemical "preservatives" that it would remain for days without going through the process of souring. Think of giving such stuff to a baby, or even putting any quantity of it into the strongest stomach! The milkman finally agreed to give them milk that would sour—that being the most practical test they could think of to prevent the delivery of milk that might almost be used for embalming purposes! That is the most remarkable milk test we ever heard of. Is it not a shame that this drugged and poisoned milk should be sold? We believe that most of these dangerous chemicals are added by dealers in the city. Any man who will drug milk should be treated as a common poisoner.

*

THE Central-Hudson Steamboat Company has decided to make some changes in its plan of carrying empty fruit packages. They agree to charge three cents for each empty crate or tray carried from New York, and to reduce the freight rate on full packages three cents per package. The rates for gift packages will not be changed. The Company takes this action as a result of the conference with fruit growers recently reported in THE R. N.-Y. When the notice of these changes was first sent out growers were not fully satisfied, as the statement was too indefinite. Another committee called on the steamboat company and finally secured an exact statement. Empty fruit packages will be handled the same as any other freight. These packages will be receipted for and agents will be required to count and deliver as they would if filled with goods. The company agrees to have help enough on the docks to sort out the "empties" and see that they are properly delivered. The company certainly shows a disposition to be fair, and we believe this change will benefit regular shippers of fruit.

*

ON a good many northern farms, haying, hoeing and even planting will crowd into June this season, but we fear that a good many farmers will feel so behind on account of the unusual wet season that has forced the hay crop to early maturity and so hindered planting, that they will put off haying a week or two later than usual rather than commencing a week earlier. This will be very poor economy. Even if one does depend much upon silage, early-cut hay is one of the most important parts of the cow's ration, and one cannot afford to put off haying. It will be better if possible to get extra help and push the haying early. The cows will repay very handsomely all through the year when fed on good early-cut hay. There is just about twice as much nutriment, or rather digestible protein, in the early-cut as against the later-cut hay. The tendency this year will be to plant before properly fitting land, but we have found that expensive, and future cultivation can be decidedly cheapened by having the land in good shape before planting. Otherwise you will have extra cultivation to do, besides hand hoeing in the busiest season.

*

FOR the past few years THE R. N.-Y. has discussed the use of compressed air as power for spraying. We have pictured several machines which did the work well, because they were strong and capable of withstanding a powerful pressure. All this has created a demand for small sprayers which may be operated by an air pump. Some manufacturers have taken advantage of this demand by making extravagant claims for their machines. They issue circulars picturing women putting out fires, men washing wagons, and other jobs which would require the full force of a powerful pump. A customer sends for one of these famous "sprayers" and receives a can holding perhaps 10 quarts with an outlet perhaps the size of a pipe stem. Naturally, after reading the flaming circular the buyer feels that he has been swindled. In his wrath at finding that he cannot wash windows or wagons he forgets that he *can* spray vines and shrubs, and throws the whole thing aside. The manufacturer has no business to make these foolish claims for his little sprayer. The buyer has no more business to believe that any human being can ever give him a business machine for the price of a mere toy.

*

THE following letter from a reader in New York State enables us to explain an important matter:

> I am interested in the contemplated pure butter law, and in what way can I exert the most good for the cause? You have mentioned in THE R. N.-Y. that one Wadsworth is antagonizing the cause of the cow. What is the position he holds, and by whom is he appointed?
> M. J. U.

The "one Wadsworth" referred to is J. W. Wadsworth, a Member of Congress from New York State. He is chairman of the House Committee on Agriculture. We believe that he did all he could to delay and defeat the Grout anti-oleo bill. He was finally beaten in his own committee, and on the floor of the House, but in spite of all he was able to hold the bill back so long that it failed in the Senate for lack of time. He went before the Senate committee and did his best to defeat the bill there. The Grout bill is and was loyally supported by the plain, working farmers of the country. Many who never make or sell a pound of butter support it because the underlying principle of it is opposition to fraudulent or counterfeit food products. Farmers demand the passage of this bill both individually and through their organizations. The following propositions therefore seem fair and clear:

1. The majority of American farmers demand the Grout anti-oleo bill.
2. James W. Wadsworth is determined to prevent its passage if he can.
3. The chairman of the Agricultural Committee can exert great influence for or against the bill.
4. The farmers have a right to demand that the head of this important committee shall be a friend and not an acknowledged foe.

Mr. Wadsworth was appointed by the Speaker of the House, Hon. D. B. Henderson. The most effective work that this correspondent or others like him can do now is to write a strong letter to Mr. Henderson at Washington protesting against Wadsworth as chairman. We would make such letters brief and strong with no possible chance for any "if" or "but." It is entirely possible to write Wadsworth out of his place. By so doing we shall spike one of the great guns of oleo. Up and at him!

*

BREVITIES.

"Show me the perfect man!" the speaker cried,
With arms aloft and large mouth open wide;
"Show him or name him!" Then he paused for breath,
And through a stillness that was like to death,
A little man on a back seat arose—
He cleared his throat and stood upon his toes.
One of these little dried-up, hairless men,
As nervous and important as a hen.
"Know ye this perfect man?" the speaker said.
"I've heard of him full oft, but now, he's dead,
Too good to fit our faulty human plan;
My wife's first husband was the perfect man!"

HAS hot weather really come?

THE ant is a good professor of "animal industry."

HOW do the newer strawberries behave with you?

WE never before found such a demand for "bedbug cures."

THE fumes of hydrocyanic acid gas "go anywhere for business."

WHAT with new bugs and blights and old weather fruit growing has a rocky outlook.

WE are obliged to skip a week in the articles on soiling at the New Jersey Experiment Station.

LET your neighbor buy experience if you will, but thank him for results—don't laugh at him.

IN England it is a finable offense to sell oleomargarine containing more than 10 per cent butter fat.

"No," said Mrs. Apple Tree to Mr. Rain, "your remarks do not set well with my young folks!"

THE wet weather has kept the Potato beetles back. Many have been killed, but "there are others."

IT looks as though there might be something in this plan of selling live chicks from the incubator.

WHY, yes, the horse's jaw or a home grinding outfit will help destroy the mill due which eats up profit.

HOW can a farmer hope to get the best work out of a machine until he has mastered it, and knows how it works?

A SAMPLE report— "Herkimer, N. Y.: Heavy frost here Sunday night, June 9. Wet, wet, wetter. No plowing to speak of. And everybody blue inside and out."

ONE of the ostriches at the Central Park (New York) menagerie died recently. The bird had had violent attacks of coughing, and consumption was supposed to be the cause. An autopsy showed that the lungs were affected, not by tuberculosis, but by a collar button and kernel of corn, which the bird had in some way got into its windpipe.

Events of the Week.

DOMESTIC.—The National Superintendent of Immigration has issued an order that tuberculosis of the lungs is to be considered a contagious disease, and persons suffering from it are not permitted to enter the United States. . . . . The steamer Assyrian, of the Leyland Line, from Antwerp to Montreal, crashed into a rocky cliff near Cape Race, Newfoundland, June 6. No lives were lost, the crew escaping with difficulty, but the vessel and cargo are likely to be a total loss. . . . . By the explosion of a portable farm engine, at Toledo, O., June 7, the building occupied by the Banty Supply Company, dealers in agricultural machinery, was wrecked, and Henry Lingerman was killed. . . . . A fire at Lexington, Ky., June 7, destroyed 23 houses, and caused a loss of $80,000. . . . . A freight-train collision at Vestal, N. Y., June 9, exploded a quantity of dynamite, which killed six men and wounded others. . . . . A tornado and cloudburst swept over Oklahoma June 7, being especially severe in Noble and Kay counties; 10 persons reported killed and much property loss. . . . . The sale of the Kiowa and Comanche reservations in Oklahoma will be stopped by an injunction of the Supreme Court of the District of Columbia. Lands worth millions of dollars were to be distributed by lot. . . . . A baby was killed and several persons were badly injured by a tornado June 11, near Lester, Iowa. Many buildings were destroyed. . . . . Twenty-one lives were lost by the explosion in the Pittsburg Coal Company's mine at Port Royal, Pa., June 10. The dead include members of several rescue parties who went in search of the miners, who were cut off by the first explosion.

ADMINISTRATION.—The dispute with the Cuban Constitutional Convention over the acceptance of the Platt amendment is said to be approaching a critical stage. The President is determined not to withdraw the army until the Convention shall have adopted the amendment unaltered, and it is said that propositions are being made to strengthen the garrisons on the island. Members of the Convention are charged with bad faith in making public confidential correspondence entrusted to them by Secretary Root. . . . . The Auditor for the War Department has prepared a table showing the amount of the claim filed by each State and Territory for fitting out volunteer troops during the war with Spain, the amount allowed in each case and the balance claimed to be due. It appears from the table that the total of the claims filed aggregate $5,870,179; that $3,329,745 has been allowed and paid, and that there is still claimed as due $2,540,434. The amounts claimed run from $938,852, in the case of New York, to $1,000 in the case of Utah. Texas is the only State whose claim has been allowed and paid in full. . . . . The United States Government has formally communicated to the foreign powers the impossibility of joining in a joint guarantee for the payment of the Chinese indemnity. The difficulties in the way of such an arrangement are set forth in the communication, particularly those relating to the constitutional restrictions on the President in making a joint guarantee of this character. The representatives of most of the European Powers in Washington do not believe that a resort to The Hague tribunal, as proposed by the United States, will be acceptable to their governments. . . . . Acting Secretary of War Sanger has received from General Wood a copy of the new regulations as to taxation in Cuba, which go into effect July 1. The interesting feature of the regulations is that plantations destroyed in the war are to pay tax of not more than 66 per cent of properties not destroyed. As to urban property, the tax boards are to prepare new lists to serve as a basis for taxation, and until they are completed the territorial tax will prevail, with a deduction of 25 per cent for repairs and unproductive periods.

FARM AND GARDEN.—Unusual cold was experienced in the Pacific Northwest June 6. The vicinity of Boise, Idaho, was visited by a severe frost, the like of which has not been known at this season for 15 years. The Government Weather Bureau at Boise reports a temperature of 30, while places throughout the valley report temperatures as low as 26 degrees. Fruit is damaged seriously. In the Grande Ronde Valley in Oregon there was snow. The coldest June weather for a period of 20 years was experienced at Baker City, Ore. The mercury fell six degrees below the freezing point. Ice over an inch thick was formed in pools of water on the streets. All fruit was killed, and all vegetables were destroyed. So far as known, growing grain was not seriously injured.

Canada is making a fine exhibit of fruit at the International Exhibition at Glasgow, Scotland, the display of apples from cold storage being especially good.

The agricultural students of the University of Tennessee recently visited Mr. George Vanderbilt's Biltmore Farms near Asheville, N. C. Through the courtesy of Mr. Vanderbilt a series of silver cups and prizes in gold to the value of $110 were offered to the students showing the greatest proficiency in judging Jersey cattle, Berkshire hogs and Southdown sheep respectively. The first two men showing the greatest proficiency in judging all classes of stock were each awarded a sweepstake prize, and to the one writing the best essay on the Biltmore Farms and the lessons to be learned therefrom an additional prize was given. The winners were: Jerseys, first, George W. Machlan, Gowdy, Ind.; second, Gordon E. Kidder, Harriman, Tenn. Swine, first, W. A. Warren, Jr., Mulberry, Tenn.; second, J. W. Young, Clinton, Tenn. Sheep, first, Wm. Fyfe, Covington, Tenn.; second, Horace McRath, Flenniken, Tenn. Sweepstake, first, Horace German, Franklin, Tenn.; second, R. R. Ayres, Harriman, Tenn. Essay, Horace McRath.

E. P. Felt, New York State Entomologist, is trying to secure data concerning the ravages of Hessian fly in that State. Entomologists have been recommending the late sowing of Winter wheat as one of the best methods of keeping the pest in check, the idea being to sow it late enough so that it will escape the greater portion of the flies and if no volunteer wheat is allowed to grow, very few eggs can be laid where they will thrive, and as a consequence the Spring brood will be much reduced. Wheat sown in the latitude of Genesee County after September 21 should as a rule be free from the pest. The date may be pushed forward approximately one day for each 100 feet elevation, as the date given is calculated for sea level. This is matter of great practical importance, and Mr. Felt will be glad to have detailed information regarding many infested or non-infested fields in sections troubled by this pest. He would like farmers throughout the State to answer the following questions, giving name and post office: Approximate elevation of field; date of sowing; degree of infestation and size of field; proximity of other wheat fields and if nearby, the date when they were sown; amount of volunteer or wild wheat nearby in which the pest could winter. Address such information to E. P. Felt, State Entomologist, Albany, N. Y.

CROP PROSPECTS.

JUNE 5.—The orchards in this section along the lake shore were very badly eaten by worms two years ago, with the result that we had very little fruit last year; some orchards not any. The orchards back one or two miles did not suffer so much from worms, hence a fairly good crop last year. The orchards that bore full last year did not blossom much this Spring, but those that did not are very full, except Baldwin and Spy. Snow, King and R. I. Greenings are very full. Pear trees blossomed quite fully, but very few plum trees blossomed. Strawberries bid fair to be a good crop if the weather is favorable. As there are very few worms this season I see no reason why we should not have a good apple crop. The apple buyers took advantage of the farmers last year, made them believe there was a very large crop, and bought them for $1.25 per barrel and charged 25 cents each for barrels. B. C. F.
Willsborough, N. Y.

JUNE 6.—The Greening apples were very heavily loaded with blossoms, but I think the heavy rains at blossoming time injured the crop very much. I should judge more than one-quarter of the blossoms will not produce fruit. However, the quality should be much better, as trees could never have matured all the blossoms. Baldwins did not bloom at all. Strawberries, raspberries and peaches promise a fine crop. Currants are affected with a leaf blight, and stems are very short. Grapes were injured by the severe dry weather of last year and many vines did not start. Asparagus cutting rather light but bringing good prices. F. F. Y.
Cedarcliff, N. Y.

JUNE 7.—Peaches, plums and cherries set full crops; pears about half crop. Apples will be a light crop in this vicinity. Baldwins blossomed the least of any. Weather cool and wet; grass looking good. W. A. W.
Falconer, N. Y.

JUNE 7.—Only a very small amount of apples and pears has actually set, and I have no doubt that it is due to the frequent rains at time of bloom, washing pollen away before it had time to fertilize. From a rather superficial examination I would estimate that apples and pears will be not more than a fifth, or even less, of last year's amount. J. G.
Weedsport, N. Y.

JUNE 7.—The blossoms were very good on most apples except Baldwins, which bore so heavily last year, but in talks with the farmers this morning in different sections all are of one opinion, that the apples are dropping badly. They vary in opinions of the coming crop from one-sixteenth to one-fourth of a crop, compared with last year. It is quite early to get at this very accurately. Small fruits, cherries, pears and peaches are suffering on account of the heavy rains. Wheat within the last month shows very badly from the Hessian fly, and some farmers where it looked fine one month ago, now say that if they were sure of their seed back they would consider themselves lucky. This remark was made by one of our best farmers who has 40 acres upon the ground. J. B.
Albion, N. Y.

JUNE 7.—The fruit in this part of the country is blighting or falling off badly, particularly the apples, prunes and plums. Cherries have set better and now bid fair for a full crop, many trees being heavily loaded with fruit. Of course, it is a little early to predict with certainty yet. My best judgment is that there will not be over from one-third to one-half crop of apples and plums. I have been through three towns in Wayne County and find the same condition of things there as here. Peaches in that county are falling badly and the trees are so badly affected by the curl-leaf that they will lose a large part of the foliage. Corn about half planted. The fly is working in wheat very badly; one-half of the crop will hardly be worth harvesting. Grass, oats and barley are doing well. M. M.
Port Byron, N. Y.

JUNE 8.—The prospect is for a light apple crop, especially Baldwins. Plums and cherries have only moderate crop set. Peaches on old orchards are a failure. Young orchards are very good where the curl-leaf has not dropped them. Sprayed orchards are free from curl.
Kendaia, N. Y. J. H. H.

JUNE 9.—Greening and almost all early apples blossomed full (hardly any Baldwin or Spy). The opinion of the growers in this section is that from one-half to two-thirds of the blooms have set fruit, as the result of wet and cold. Pears, plums and cherries promise a good crop, also berries. Strawberries will not be ripe before June 20. Potatoes are being planted now; will not all be finished this week. Grass and oats look well.
Ionia, N. Y. A. L. B.

JUNE 10.—The green louse has not appeared on peas in the gardens, but there are quite a good many on wheat. All crops are looking fine. Wheat should average between 25 and 30 bushels to acre. Corn is looking well, only backward. I have one field of potatoes with rows shut and white with blossom. S. H. D.
Warwick, Md.

JUNE 10.—The general opinion in this locality is that the apple crop will be light. Although we have had but little heavy rain, we had during the time of blossoming a continuous spell of wet weather, and some damage has been done. My own orchard has set fruit fairly well wherever there were blossoms. The wheat crop, which looked very fine a few weeks ago, is likely to be very near a failure, owing to the work of the Hessian fly; some fields are being plowed up for beans or other late crops, and more would be only for the seeding, which looks well. Oats are looking very well at present. Barley on high land is also good, but on low land is turning yellow from too much water. Corn is not nearly all planted yet; some that was planted early is coming up but looks yellow (too wet and cold); some does not come up. A good many sugar beets have been sown, and they seem to stand the cold and wet very well. Strawberries and small fruits are looking well, but very backward. We are hoping for more favorable weather and better prospects. F. E. V. E.
Stanley, N. Y.

JUNE 10.—The reports of favorable crop indications need revision. Lot of hay if we can get it cured; much ground yet unplowed. It will be too late for corn unless the September frosts hold off. Too wet for potatoes, etc. Cold rain caught the pear blossoms, and washed our pollen; crop will be below average. Rain spoiled half the crop of sweet cherries. Peaches and plums hold on well and need thinning freely. Ravages of worms worse than last year. J. Y. P.
Columbia, N. Y.

JUNE 10.—Cold rain has injured the prospects for a good fruit year in this section very much. Pears, plums and cherries have set very poorly. Peaches are considerably affected with curl-leaf. Baldwin apple trees as a general thing did not bloom. Other varieties had a moderate bloom. The cold rains have not affected the set of apples as far as I can discover. My Baldwin trees blossomed fairly well, and are well set for a moderate crop. A. E. B.
Brighton, N. Y.

JUNE 11.—Plenty of corn and potatoes yet to put in, and some soil hardly fit to work this week if we had no more rain, but the rain continues to-day. Yesterday was the first pleasant Monday we have had in three weeks. A small piece of rye was cut to cure for feed three weeks ago, and yesterday it was, by constant moving, dry enough to draw in. Some are trying to work the corn. Potatoes that were in early look well for the cold wet weather. Oats and barley have a good stand on dry soil; much drowned out, and quite a little put in very late. Wheat is suffering badly from the effects of the fly. Many pieces that looked as if they might yield from 25 to 40 bushels per acre will hardly be worth the harvesting from the present outlook. Grass has grown quite finely but is now almost a standstill. Hay will not be more than a half crop; old meadows thin and in many places very light. Where a good stand of new seeding was secured it looks fine. On the whole the outlook for the farmer is not so bright as one year ago, for many who depend upon the corn crop for fodder, unless uncommon weather follows soon, must be short. Small fruits are promising; apples about one-fourth crop. Early apples setting full, but late varieties light; no Baldwin of any account. Gardens where planted early are looking quite well; many to plant yet.
Cayuga Co., N. Y. A. D. B.

Western Crop Notes.

The stock of old hops on the Pacific coast is nearly cleaned out. The indications are that the yield for Oregon this year will be 90,000 bales, and that the crop for the three coast States will aggregate 170,000 bales.

The vineyards in parts of northern California have been damaged by frosts, and in some sections there will be only half of an ordinary crop.

The apricot yield of southern California is large, and it has escaped frost and hail damage. The canning factories will be in full blast by the latter part of June.

The live-stock trade of Washington is said to be the most active for a long time. The demand for beef for the Klondike and the increasing business with Asia are the causes.

The official reports from Kansas state that the condition of wheat has declined 17.8 per cent since April 5. This is owing to drought and insect pests. The acreage is not far from that of 1893 (5,110,873 acres), which was the largest on record. The corn acreage is half a million less than that of last year, or 6,400,000 acres, and its present condition is decidedly inferior to that of a year ago.

Government Crop Report.

As a rule conditions have been highly favorable during the past week in all sections east of the Rocky Mountains. The Spring wheat region has had abundant rains, which have also been quite general over the central valleys. Corn is coming on slowly, and needs warmer weather. Some frost damage to corn is reported in the extreme north. The Hessian fly is active in the Winter wheat. Harvest has begun in North Carolina, Tennessee and Kansas; and the Maryland and Virginia fields will soon be fit to cut. In the North Central States the oat outlook is promising, but the rains came too late to help this crop in Missouri and Arkansas. Cotton is backward and making slow growth. Some fields in North Carolina have such a poor stand that they are being plowed up for other crops. Winter apples are dropping badly, except in New England, which at present promises a fair crop. Farmers in the Atlantic States are hurrying along their work as rapidly as possible in an effort to make up for the time lost during the rains. Hailstorms in central New Jersey have damaged fruit and vegetables and caused grain to lodge badly. Sugar cane and rice in the Gulf States are doing well.

Mark Lane Express says that the English hay crop will be below the average, owing to dry weather. Also drought and rust are making havoc with the wheat crop in Austria. Indications from the wheat districts of France are most favorable.

The five days preceding May 23 were very cold and cloudy and some rain fell. May 23 and 24 were mostly clear and seasonably warm. On the evening of May 24 we had a thunder shower followed by five days of cold rainy weather. May 29 was the only day that a great amount of water fell. A local paper says that more water fell during six hours of May 29 than fell during the six months from May 1 to November 1, 1900. Another shower June 1, and still another June 2. The earth is well soaked, but I believe it needed it all. We have had an abundance of rain since the middle of March.
Vail, N. J. G. G. S.

Woman and Home

From Day to Day.

THE OLD MAN'S VIEWS.

Back there in the old days when 'pendicitis wasn't known,
Feller'd git to feelin' bad, an' git kind o' out o' tone,
"Doc" ud waltz right in an' say: "Got a fever? Had a chill?
Well, this weather's kind o' bad! Rest awhile an' take a pill!
Be all right to-morrow, Joe!" Stop an' joke some with the kid.
You'd be out the next day, sir, ploughin' like you never did!

Feller gits a chill to-day—Ge-mu-nee! The doctor comes,
Stands an' feels your pulse an' then shakes his head an' haws and hums:
"Gravest symptoms—system is thoroughly run down, I fear;
Sorry, sir, but there's some signs of appendicitis here!
See you in a day or so!" Then a feller lays in bed,
An' appendicitis comes from the worry in his head!

That's the way it seems to me—science is a mighty thing,
But when ignorance is bliss, let's be ignorant, by jing!

—Indianapolis Sun.

*

NICKELS worn smooth by much handling are recommended to remove paint spots from glass. The spots can be scraped away without any risk of scratching the glass.

*

A CEREAL kitchen at the Pan-American Exposition will be under the management of Miss Emma C. Sickles, secretary of the National Pure Food Association. All sorts of cereal foods will be offered at the kitchen, and demonstrations of their proper cooking will be given.

*

AN Ohio correspondent advises the following mode of preparing prunes, instead of the ordinary boiling: "Wash the prunes, and pour over them enough boiling water to cover. Stir occasionally. Serve in 12 or more hours without or with sugar. I use no sugar. These are better than any cooked prunes I have ever eaten."

*

ONE of our friends has developed a new plan—new, at least, to us—of raising money for a charitable object. It is called the calendar plan, and is as follows: The organizer is called the year. She appoints 12 persons as months; each month selects four weeks, and each week seven days. Each person described as a day promises to pay a stated sum—it need be but one or two or three cents—every week, handing this over to the person who is her week. The week keeps track of her days, and hands the money over to her month, who in turn reports to the year. This plan is free from the endless exasperation of the endless chain, but like a sum in arithmetical progression, it mounts up to a very respectable sum. The accounts can be turned in monthly, the weeks being responsible in keeping the days from getting into arrears, and the responsibility is so divided that it does not fall too heavily upon anyone.

*

WOMEN'S shoes show some differences in shape this year, one of the most noticeable changes being the gradual adoption of the Cuban or military heel. The Cuban heel is straight at the back, and does not taper from shoe to ground, being of about the same size from top to bottom. It is not very high, yet it looks high. The military heel is like the Cuban, but is a little straighter and a little higher. It was hard to grow used to these straight heels at first; now that we are accustomed to them, the curved heels look old-fashioned. Among low shoes for Summer wear the Priscilla is the newest; it is the counterpart of those worn by Puritan maidens. It has a high tongue upon the outside, fastening under a broad buckle, and rather high square heels. It is a very becoming shoe. Pigskin shoes are offered for golf and athletic wear, in place of russet leather; they are rather light in color, and usually stitched in black. While the toes of this season's shoes are not so strongly rounded as last year, the whole shoe is broader. Perhaps we are

3819 Woman's Cape
34, 38 and 42 in. bust.

all growing more sensible as regards our shoes; certainly the average shoe salesman now does not hesitate to tell his customer if she is trying to wear a size too small, and the adoption by manufacturers of the so-called French numbers prevents the buyer from having any clear knowledge of her size. Such a number as A-44597, or some similar mystery may convey an idea to the shoe man, but certainly not to the customer.

*

A PHILADELPHIA doctor, in a paper recently read before a medical society, said: "I attribute the enormous increase of appendicitis among women to golf, cricket, the bicycle and other outdoor sports, which at times subject them to prolonged physical exertion and inclement weather." This view is evidently different from that of the old man who thinks this disease comes from the worry about it. The change produced by the modern woman's athletic tastes was well expressed by an old farmer in Maine, who gave some Summer visitors permission to use his pasture land as golf links. The old hired man, scandalized by the sight of tall, athletic girls in scarlet coats, armed with iron-hoofed clubs, striding over the fields, one day reported to his master:

"Them girls in the pasture scare our cows!"

The farmer scratched his head. "Hiram," came his leisurely answer, "times is changed since we was young. Used to be the cows scared the girls!"

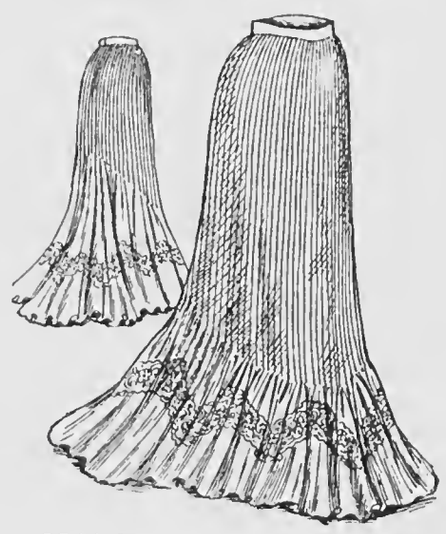
The Rural Patterns.

The Directoire cape figured is of black taffeta lined with white satin, trimmed with heavy cream lace, and with ties of white chiffon. The under or foundation cape is dart-fitted and extends well over the shoulders and is trimmed with the four tiny bias frills. The outer cape is shorter and plain about the edge and is trimmed with the lace appliqué only; while the big revers turn back and are faced with the lace and edged with a single frill. At the neck is a deep turnover collar that meets the revers to which the chiffon ties are attached. If a plainer effect is desired the outer cape can be omitted, the under alone made from either silk or cloth, tailor-stitched, or trimmed as simply or as elaborately as one may choose. To cut this cape for a woman of medium size 2½ yards 21 inches wide or 1¼ yard 50 inches wide will be required with 1⅝ yard of lace appliqué, ⅜ yard of all-over lace, eight yards of ruffling two inches wide, one yard 1½ inch wide for revers and 1½ yard chiffon for ties to trim as illustrated. The pattern No. 3819 is cut in three sizes, large, medium and small; price 10 cents from this office.

The tucked skirt shown is of blue barège trimmed with cream guipure. The skirt is circular in shape and is tucked on parallel lines to the indicated point, where they cease and the material falls free to give the flounce effect. To cut this skirt for a woman of medium size 9¼ yards of material 21 inches wide, seven yards 27 inches wide, 6½ yards 32 inches wide, or 4½ yards 44 inches wide will be required. The pattern No. 3811 is cut in sizes for a 22, 24, 26, 28 and 30-inch waist measure; price 10 cents from this office.

Household Expenses.

Very interesting and suggestive are the accounts in a recent issue under this head. I have studied the last one—a family of two grown-up daughters with mother and father, whose food, firewood, coal and clothing amounted to $334.19 for one year. The insurance and taxes are not in the account, nor the amount of money given to charity. Let us guess that these would swell the amount of expenses to $400 a year for the four. We will count the son out, as earning his own living. Here is a family dwelling in a home, owned, with six acres of land, most all down in grass. There is no evidence that the land brings in anything. They pay out money for milk. Where are the expenses for butter? Where are the traveling expenses of these girls or their parents? Where are the expenses for books or periodicals? It only cost $37 for the four for clothing in a year; they did not weave the cloth, either. Yet they say "We manage to look as well as people who buy new clothes continually." That may seem so to them, if they never go out far and see how others dress. How would the old gentleman feel if he had a tailor measure him properly and clothe him with a pair of trousers costing $10? I think he would feel lively and spruce, and it might ease up his lameness some. Well, this is no joke, I assure you, when you face this whole



3811 Tucked Circular Skirt,
22 to 30 in. waist

problem. There are two sides. This family requires $10,000 at interest at four per cent to get this income. I am not saying they have, but the facts require it. Now that $10,000, in order to bring them an income, is used by men who wear fine clothes, who travel, are well informed and see much life. Maybe it might be in the hands of some other poor farmer who stints, while his wife slaves, and they see nothing but a grind. Alas! we have need to check such tendencies and lift up men to enjoy life. Or it might be in various kinds of business, either of making clothes or shoes, or railroads, or some occupation which calls for activity and intelligence and the enjoyment of a larger and varied life and work.

Now which would you rather be, the ones who have to earn that interest, or live back, like them out of sight, and out of the enjoyment of a larger life? Nine out of ten will answer: "Give me the chance to labor and enjoy life, and let those who want to cramp their lives and that of their children, do so." For, say they, the tendency of the times is right which makes it a duty to spend money, to use good clothing, live comfortably, and keep persons—all of us—in comfortable labor. We do not mean sweatshop labor, but is not stinting in the country as bad as sweatshop labor in the city? Both are wrong and condemned by the common sense of your children, who believe it proper to see and enjoy life since the steam of the kettle has got out from under the lid, and can carry us thousands of miles. Rely upon it, our children do not want to hang around a home just to keep the teakettle boiling; no, not in these times. You have to dress up the boys if you want to keep them on the farm. Listen to what the boy says, when once well out from the home on the farm—that is, some farms, where stinting is the rule:

"Kind as Mother is, she cannot see clearly when she says her make of clothes fit and are good enough for me. I know they do not as soon as I get into town. And I know I deserve good clothes when I earn them by my labor. But as to Father, he allowed her to make his clothes, he was gentle, liked them roomy—easy to take off and put on. Kind, dear old man, but they bagged, not in the knees only, but all over him. And I wonder if that was the reason he hid from the activity of life. Ah! who knows? I will draw a veil over this and I only say it to myself."

JAY.

Some Seasonable Recipes.

We are using dried Gravensteins for pies, which leave nothing to be desired as to quality. A visitor asked if those were cherry pies; and perhaps my wife's original rule for this and other things may be appreciated. A large handful of dried apples is cooked quickly in a tightly-covered granite basin in a little less than a quart of water. Six halves of dried apricots are cut fine and cooked in very little water. Fill in the apple, then the apricot, together with water they were cooked in; add a small cupful of sugar, and nutmeg.

Here is a lemon pie, in eating which a visitor casually remarked, with due praise, that he never ate pie plant. Two cupfuls of rhubarb, chopped and scalded, preferably the stalks whose leaves are still crinkly. This water is turned off. To the rhubarb is added a cupful of sugar, tablespoonful of flour, a beaten egg. Bake in single crust, and cover with beaten white of egg when cold.

The following rule for canning is a decided improvement upon pineapple alone, and the rhubarb taste disappears. Chop and cook equal parts of pineapple and rhubarb, and add a cupful of sugar for each pint jar.

This is for chicken fritters no guest will consider that he fritters away his time upon. Two cupfuls chopped cooked chicken meat, one cupful strained tomato, three rolled crackers, one-half cupful of chicken broth, a pinch of salt, a grasp of black pepper and a speck of red pepper. Make into cakes and fry.

F. W. PROCTOR.

Tied Up

When the muscles feel drawn and tied up and the flesh tender, that tension is

Soreness
and
Stiffness

from cold or over exercise. It lasts but a short time after

St. Jacobs Oil

is applied. The cure is prompt and sure.

Rural Recipes

Pray, what is "Health Food?" Is it not
The fancy name we call
All sorts of thing that haven't got
The slightest taste at all?
—Catholic Standard and Times.

Prune Short Cake.—Make a short cake, using a regular biscuit crust or a short cake batter. For the prune filling wash a pound of prunes, thoroughly cover with cold water and let soak for 24 hours. Then put prunes in double boiler, water and all, and let cook slowly until perfectly tender. Slice a couple of lemons very fine and add to the prunes when half done. Drain off the juice, add half as much sugar and boil to a thick syrup. Put the prunes into a colander and mash with a potato masher so that the pulp will go through and the stones and skins remain. Add syrup and spread over cake while both are warm. Serve with or without cream.

Ice Cream Cake.—Stir one cupful of butter and two cupfuls of sugar to a cream. Add three level teaspoonfuls of baking powder to two cupfuls of sifted flour, add also one cupful of cornstarch and sift again. Add this alternately with one cupful of milk to the creamed butter and sugar, add one teaspoonful of vanilla extract; finally lightly and thoroughly mix in the stiffly-beaten whites of eight eggs. Divide the mixture evenly among four jelly-cake pans and bake in a moderately hot oven 10 to 15 minutes. For the icing, shell and cut in pieces enough pecans to weigh four ounces. Make ready also four ounces of raisins cut in pieces and weighed after being seeded. Cut four ounces of citron in small thin strips. Put 1½ pound of sugar into three-quarters of a pint of boiling water; boil without stirring until clear and thick—it should pour from a spoon in a continuous thread. Pour this hot syrup slowly on to the beaten whites of four eggs and stir until cool. Build the cake with this icing between, sprinkling the mixed pecans, citron and raisins over the icing on the three inner layers and pressing all down gently. Ice the top without the fruit.

Cracked Wheat Muffins.—Two cupfuls of cracked wheat; soak over night in two cupfuls sweet milk; add one teaspoonful of salt, one tablespoonful of sugar, the beaten yolks of two eggs; beat vigorously, fold in the stiffly-beaten whites, and last add one rounding teaspoonful baking powder; bake in well-greased muffin tins in hot oven; break open; do not cut.

Ham Croquettes.—One cupful cooked ham chopped, two cupfuls mashed potatoes, one tablespoonful butter, yolks of three eggs, a dash of cayenne; mix the hot mashed potatoes, butter and yolks of two eggs with the cayenne; beat until smooth and turn out to cool; put the remaining yolk with the ham in a frying pan and stir over the fire for one minute; remove, and when cool form a ball of the mashed potato, pressing into it a large teaspoonful of ham; fold the potato over it, roll in egg and crumbs and fry.

Cabbage with Cheese.—Cut the cabbage in good-sized pieces. Put one piece at a time into rapidly boiling water, having added a tablespoonful of salt and one-fourth teaspoonful of soda. Boil rapidly without covering for 25 minutes. Turn in a colander, drain and cool. Then chop. Make a sauce of one tablespoonful of butter and flour each, one cupful of milk, saltspoonful of salt and a dash of cayenne. Spread a layer of cabbage in baking dish, cover with sauce, then a layer of grated cheese; repeat, and on top place a layer of crumbs which have been rolled in butter. Bake until the sauce bubbles through the crumbs.

Egg Rusks.—The ingredients for this delicious tea bread are seven eggs, a pint of boiled milk, one quarter pound of butter, one-half pound of sugar, two pounds of flour, a saltspoon of salt, and a pint of flour into which a half teaspoonful of soda has been sifted. Beat the whites and yolks separately and as lightly as possible. Into the boiled milk drop the butter and sugar, and after mixing thoroughly add the flour and yeast powder, and lastly the eggs. Put in a warm place to rise, and when light add the pint of flour and soda. When risen the second time, make into small rolls, wipe the tops over with the white of an egg, sprinkle sugar and chopped almonds over them, and bake a light brown.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

When Apples Were Scarce

A writer in the American Kitchen Magazine gives the following suggestion for the use of dried apples:

The children were hungry for fruit; but the apple crop, usually the mother's main resource, had been a failure that year. Apples were extremely high, and, in fact, hardly to be obtained at all. Oranges and bananas in sufficient quantities to supply her large and voraclous flock were quite beyond her small means, and she had been unable to can much fruit that year. What should she do? One day she saw at her grocer's some very white evaporated apple. By a sudden inspiration she thought she saw in it the answer to her question. She bought a pound, which cost her only 10 cents. That night she put the apple into a preserving kettle with plenty of cold water. In the morning it was soft, and the slices could be easily separated and washed. With a sharp knife she carefully removed all brown spots and tough seed cases. Then she added a cupful of seeded raisins and put the whole into fresh water, stewing it slowly until it was reduced to pulp.

After filling her pretty glass fruit bowl with the sauce, she put the rest into pint jars. "I'll fix up this bowlful for the children's lunch," she thought, "and if they don't like it, I can use the rest for pies." First she sweetened the sauce to taste; then she flavored it generously with fresh, fragrant ground cinnamon, and setting it on the table with plenty of good bread and butter, and a plate of little scalloped cakes, she called the children to lunch. They came trooping in, hungry, expectant. The new dish was quickly spied. "What is it, Mother? Apple sauce! And oh! goody, goody! raisins in it!"

They began to eat. There was no sound but the clatter of knives and forks responding briskly to the "hurry call"; but by-and-by one fresh young voice and then another rang out in eager demand: "*More* bread and butter and apple sauce, please, Mother. It's *good!*" And the mother smiled happily upon her contented young brood, and thought, "How easy it is to please them after all. One doesn't need to have much money—just a little loving thought."

The Children's Playhouse.

The three little girls who owned the playhouse thought it the most delightful spot in their little world, and it truly was a charming place. It had been built in less than a day, and did not cost a cent. Two posts seven feet high and two six feet high, firmly planted in the ground, made the framework, with a board roof for covering. The posts were nine feet apart, making the playhouse three yards square. On three sides narrow boards were nailed about two feet apart to the posts to support the vines with which the house was covered, but the front had a wide open space for a door with vines on each side. As the house faced the north the hot sun could not stream through the door. Over the roof was thrown a big square from a binder cover to keep out the sunshine that peeped through the cracks. A tight shingle roof would have been better, but the house had to be built of odds and ends of lumber, for the family was far from rich. The east side was gay till noon every day with purple, pink and blue morning-glories, while the west side was one mass of buff and pink sweet-scented honeysuckle that effectually shut out the sun's rays and filled the air with fragrance. The south side had gourd vines with pretty shiny gourds, big and little, nestling among the green leaves. There were dipper gourds, Job's tears, and half a dozen other kinds, for a package of mixed seeds had been planted in the rich soil and carefully tended by little hands. On each side of the door hop vines rustled their green bells through the long Summer days and furnished a big sack of the light feathery balls for yeast and poultices in Autumn.

Two low trestles supported a table made of pine boards, and this with a cupboard made of starch boxes furnished the playhouse, except the little chairs, which were carried from the house in the morning and taken back. Each little girl had a flat peach basket to put away her doll, work basket and doll clothes in when through playing, and these were stored in the kitchen closet when not in use, so habits of neatness were soon established by the mother. Friends and relatives had kept the playhouse in mind at Christmas and birthdays, so the small cupboard held a generous supply of small mugs, plates and dishes. There were gay little dinner parties within the four green walls, at which the children took turns playing hostess, sewing classes with Mamma for teacher, and many a delightful hour for reading stories and playing games. I am sure these fortunate children will always think some of their best and happiest hours were spent in the cool little playhouse, and I am sorry there are not hundreds like it for country children scattered up and down the United States.

HILDA RICHMOND.

3797 Sun Bonnets, Small medium and large.

3823 Child's Washable Hat, One Size.

Laundry Conveniences.

An ironing table ought to be high enough for the ironer to bend her elbows at right angles and work without stooping. In reckoning the height allow for a thick mat or excelsior cushion under foot, says Emily Holt, in Kansas City Star. It is a great economist of strength and backaches. Pick out sound deal, free of knots or warping, and see that the drawer works easily. To furnish the table properly take first a soft, coarse, all-wool blanket, fold it by a warp thread, lay the fold upon a long edge of the table and make very smooth, then trim all round, save at the fold, exactly as it lies, first making sure that the underside is as free of wrinkles as the upper one. Cut a four-inch square of stout muslin for each corner, double the squares to triangles and sew them fast. Their use is to slip over the corners of the table, thus holding the blanket in place. When the blanket is washed take off the squares and remove the whipping from the edges. Make ironing table covers of unbleached sheeting. Cut them three inches bigger than the table top, all round, hem the edges narrowly and miter three of the corners, sewing them fast; then in the double work a couple of eyelets either side and lace a tape through them. By tying this tape tight after slipping the mitered corners over the table corners all need of pins is done away with and a firm, smooth, unwrinkled surface assured.

Cover skirt and sleeve boards the same way—first the double woolen cloth sewed firmly on, then with removable muslin slips, hemmed at the small ends and laced snug over the large one. Fit under and upper covers well, so either side can be used. A bosom board is a necessity in doing up shirts. It should be also square, of very thick cardboard, covered four-fold with flannel. If there are many children to iron for a small size shirt board and several sizes in sleeve board soon pay for themselves in saving time.

Provide the ironing table further with either a light trivet or asbestos mat to hold the irons, a clean wiping cloth, a shallow wooden box with salt for rubbing a rough iron smooth, a smaller box for either white wax or white soap, and at least three clean, soft holders. In addition, furnish the laundry with a folding clothes horse of white wood, which may be turned into a screen as clean clothes are hung on it; a big starch kettle, agateware or copper or block tin; several cheese cloth strainers and at least three sheets of cheesecloth to cover the clean clothes while they air after ironing.

WEALTH and rule slip down with fortune,
as her wheel turns round;
He who keeps his faith, he only cannot be
discrowned.
Little were a change of station, loss of life
or crown,
But the wreck were past retrieving if the
man fell down.
—James Russell Lowell.

A GIRL cannot too sedulously guard her, if the mother has reached a period where she is more easily wearied than formerly, and where little things vex her. To some of us there come days when our hearts are heavy because we were not so sweet and loving as we might have been, and God alone can help us when this realization comes too late.—Margaret E. Sangster.

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National Lead Co., 100 William Street, New York.

MARKETS

The Week's Quotations.

WHOLESALE PRICES.

NEW YORK, JUNE 15, 1901.

GRAIN.—Wheat two to four cents down on favorable crop reports. Corn also lower. Heavy trade in oats reported.

Wheat, No. 2, hard, N. Y.	78½	@	—
No. 1, Northern Duluth	79½	@	—
No. 1, Northern Chicago, spot.	79	@	—
Corn, No. 2, mixed	46½	@	—
Oats, No. 2, white	32¾	@	—
Rye, No. 2, W'n, c. i. f., Buf.	—	@	52½
Barley, feeding	48	@	—
Malting, new crop	58	@	62

BEANS.

Marrow, choice, per bu	2 50	@	—
Marrow, fair to good	2 20	@	2 45
Pea, bbls., choice	2 00	@	2 05
Red kidney, choice	2 20	@	—
White kidney, choice	2 10	@	2 15

FEED.

Spring bran, coarse	15 00	@	16 00
Winter bran	16 00	@	17 50
Red Dog	18 50	@	19 00
No grade flour	—	@	20 00
Linseed meal, ton	—	@	27 00
Cottonseed meal, ton	24 00	@	—

HAY AND STRAW.

Hay, No. 1	85	@	—
No. 2	75	@	80
No. 3	70	@	75
Clover	60	@	65
Clover, mixed	70	@	75
Straw, rye, long	95	@	1 00

SEEDS.

Clover, per lb	9¼	@	10½
Timothy, per bu	1 90	@	2 50
Flaxseed, whole, per bu	6 50	@	7 00
Millet, per lb	2	@	2½
Rape, German, per lb	3¼	@	3½
Sunflower, per lb	2¼	@	2½

MILK.

New York Exchange price within 26-cent freight zone two cents per quart.

BUTTER.—The market is firm with a rise of one-half cent on all but imitation creamery and renovated goods.

Creamery, extra, per lb	19½	@	—
Firsts	18½	@	19
Seconds	17	@	18
Lower grades	15	@	16
State dairy, tubs, fancy	18½	@	—
Tubs, firsts	17½	@	18
Tubs, seconds	16	@	17
Tubs, thirds	14	@	15
W'n imitation creamery, fancy.	16	@	17
Firsts	14½	@	15
Lower grades	13	@	14
Western factory, fancy	—	@	14½
Firsts	14	@	14¼
Fair to prime	13	@	13½
Lower grades	12	@	12½
Renovated butter, fancy	16½	@	17
Common to choice	12	@	16

EGGS.—Prices are one cent down from last report. There is considerable surplus of the lower grades.

QUOTATIONS, LOSS OFF.

Mich., N. Ohio and N. Indiana, regular packings	—	@	13
Other W'n, northerly sections, regular packings	12¾	@	13

QUOTATIONS AT MARK.

Nearby, State and Pa., fresh-gath'r'd, fancy selected, doz.	—	@	14
Average prime	—	@	13
W'n, Northerly sections, candled, selected, fancy	12¾	@	13
Graded, average prime	12¼	@	12½
Reg. packing, N'n sections	11	@	12
Graded, Southerly sections	—	@	11½
Reg. packings, S'th'ly sect'ns.	10	@	11
W'n, fresh-gathered, dirties	9	@	10
Checks	7½	@	9

LIVE STOCK.—Trade in steers light. Calves, sheep and lambs very dull.

Native steers	5 20	@	6 00
Cows	2 25	@	4 25
Oxen	2 75	@	4 80
Bulls	3 00	@	4 25
Veal calves	3 00	@	5 00
Buttermilks	1 50	@	2 75
Sheep	2 50	@	3 75
Lambs	5 00	@	6 50

LIVE POULTRY.—Receipts are not heavy, and there has been an increased call for small Southern chickens.

Spring chickens, nearby, Ohio and Indiana, per lb	20	@	21
Far Western, per lb	18	@	20
Southern and S'w'n, per lb	16	@	17
Fowls, per lb	—	@	10½
Roosters, per lb	—	@	6½
Turkeys, per lb	—	@	8
Ducks, average W'n, per pair	70	@	75
Average Southern, per pair	50	@	55
Geese, average W'n, per pair	1 00	@	1 12
Average Southern, per pair	70	@	75
Pigeons, per pair	20	@	25

DRESSED POULTRY.—Market in fair shape and stocks on the way reported light.

FRESH PACKED—ICED.

Turkeys, W'n, hens, small	7	@	9
Western, toms	—	@	7
Broilers, Phila. over 3 lbs. to pair, per lb	—	@	30
Phila., under 3 lbs. to pair per lb	25	@	28
Penn., fair to good, per lb	22	@	26
Western, dry-picked, per lb	20	@	24
Western, scalded, per lb	18	@	20
S'n, scalded, small, per lb	15	@	16
Fowls, W'n, dry-picked, prime	—	@	10
Western, scalded, prime	9½	@	10
Western, poor to good	8½	@	9
Southwestern, prime	—	@	10
Old roosters, per lb	—	@	6
Ducklings, L. I. and other nearby, per lb	13	@	14
Squabs, choice, large, dark	—	@	2 25
Mixed, per doz	1 75	@	2 00
Dark, per doz	1 25	@	1 50
Culls, per doz	50	@	1 00

FROZEN.

Turkeys, young hens, No. 1	11	@	11½
Mixed young hens and toms, No. 1	10½	@	11
Young toms, No. 1	—	@	10½
No. 2	7	@	9
Broilers, dry-picked, fancy	18	@	20
Scalded, fancy	13	@	15
Chickens, fancy, soft-meated	12	@	13
Average, No. 1	—	@	10
No. 2	7	@	9
Fowls, dry-picked, No. 1	9½	@	—
Capons, fancy, large	15	@	16
Medium sizes	13	@	14
Ducks, fancy	12	@	12½
Geese, fancy	9½	@	10

COUNTRY-DRESSED MEATS.

Calves, veal, prime, per lb	7½	@	—
Fair to good, per lb	6½	@	7
Common to medium, per lb	5½	@	6

DRIED FRUITS.

Apples, evaporated, fancy lb	7	@	7¼
Evaporated, choice, per lb	6½	@	6¾
Evaporated, prime, per lb	6	@	6⅜
Evaporated, com. to good, lb	3¾	@	5½
Sun-dried, S'n, sliced, lb	2¾	@	4
Sun-dried, State & W'n, qrs., per lb	3	@	4
Sun-dried, S'w'n, coarse cut	2¾	@	3½
Sun-dried, S'n, coarse cut	2½	@	3
Chops, per 100 lbs	75	@	1 50
Cores and skins, per 100 lbs	50	@	1 25
Raspberries, evaporated, 1900, lb.	19½	@	20
Blackberries, 1900, per lb	5½	@	6
Cherries, 1900, per lb	12	@	14

GREEN FRUITS.—Southern peaches show improved quality. Under-grade strawberries and huckleberries are dull. All but the best muskmelons are very hard to sell.

Peaches, Fla., per carrier	1 00	@	2 25
Georgia, per carrier	1 00	@	2 50
South Carolina, per carrier	1 50	@	2 50
Strawberries, Md., good to fancy, per qt	7	@	9
Maryland, ordinary, per qt	4	@	6
Jersey, fair to choice, per qt	6	@	9
Jersey, inferior, per qt	4	@	5
Huckleberries, N C., per qt	4	@	9
Blackberries, N. C., per qt	8	@	12
Gooseberries, green, per qt	—	@	6
Watermelons, Fla., each	35	@	50
Muskmelons, Fla., fancy, per bushel package	2 00	@	2 50
Poor to fair	1 00	@	1 75

VEGETABLES.

Potatoes, Charleston & Sav., Rose, fair to fancy, bbl	3 00	@	3 75
Ch'n & Sav. Chili, prime	2 50	@	3 00
Norfolk & N. C., Rose, fair to fancy, per bbl	3 00	@	3 75
Norfolk & S. C., Chili, prime	2 50	@	3 00
Southern, No. 2, per bbl	1 50	@	2 00
State & W'n, in bulk, 180 lbs	2 00	@	2 25
State, per sack	2 00	@	2 25
Asparagus, Colossal, doz. bchs.	3 50	@	5 00
Extra large green, per doz	2 50	@	3 00
Extra prime, white	2 50	@	3 00
Prime, white and green	1 50	@	2 25
Poor to fair, doz. bchs	—	@	1 50
Culls, per doz. bunches	75	@	1 00
Beets, N. C. & Ch'n, 100 bchs	2 50	@	3 00
Norfolk, per bbl	—	@	2 00
Jersey & L. I., per 100 bchs	—	@	4 00
Carrots, Jersey, 100 small bchs.	—	@	2 00
Cabbages, Norfolk, bbl. crate	50	@	1 12
Norfolk, per bbl	35	@	1 00
Baltimore, per bbl	1 00	@	1 25
Cucumbers, Ch'n, per crate	1 00	@	1 50
Savannah & Fla., per bskt	75	@	1 25
Florida, per crate	75	@	1 00
Eggplants, Florida, per box	3 00	@	4 00
Garlic, New Orleans, per lb	6	@	7
Green peas, Baltimore, per ½-bbl. basket	1 00	@	1 25
Eastern shore & Md., per bskt.	60	@	75
Jersey, per basket	75	@	1 25
L. I., per bag	1 50	@	1 75
Lettuce, L. I., per bbl	50	@	1 00
Onions, Bermuda, per crate	—	@	1 60
Egyptian, per bag, f. o. b	1 75	@	2 00
New Orleans, per bbl	2 00	@	2 25
New Orleans, per bag	1 00	@	1 25
Peppers, Fla., per carrier	2 00	@	3 00
Radishes, nearby, per 100 bchs.	50	@	75
Squash, Fla., yellow, crate	30	@	50
Florida, white, per crate	25	@	40
Charleston, white, p. bu. bskt.	30	@	50
Charleston, yellow, per bskt.	50	@	75
String beans, Ch'n & Sav., wax, per bushel basket	50	@	1 25
Ch'n & Sav., green, per bskt.	1 00	@	1 75
North Carolina, per basket	1 00	@	2 00
Norfolk, per basket	2 00	@	3 00
Spinach, L. I., per bbl	1 00	@	1 50
Turnips, Jersey, white, 100 bchs.	2 00	@	3 00
Tomatoes, Fla., fancy, carrier	2 00	@	2 25
Florida, poor to good	1 00	@	1 75

BUSINESS BITS.

THE tools used by Geo. M. Clark in preparing the ground which yielded the record breaking crops of hay are made by the Cutaway Harrow Co., Higganum, Conn. A mower knife grinder is also one of the products of this factory. It is impossible to heat the knife with this grinder if directions are followed.

A WELL-DRILLING outfit makes a profitable investment for anyone inclined to do this line of work. Keystone Driller Co., Box U, Beaver Falls, Pa., makes a complete and compact outfit for drilling water wells, oil or gas. A 75-page catalogue will be sent to anyone interested.

WITH the prospects in sight for the largest hay crop in many years, farmers will prepare to have their machinery in first class order to handle it. No small expenditure will facilitate haying more than the purchase of a good grinder for the mower knives. Ross Bros., Worcester, Mass., offer one in this issue.

The Southern Potato Crop.

No early potatoes grown for shipment in this section, although about double the usual acreage has been planted and the crop is in good condition. R. M.

Saxon, N. C.

The potato crop is very fine this year; has not been injured by the weather. The stand is over an average; tops are looking better than they have for many years, and bids fair for a good crop to this date. Tubers are about the size of hull walnut to a hen's egg. T. P.

Cape Charles, Va.

The usual acreage of potatoes, not very large, was planted, but the earliest are a poor stand, many having rotted, and the crop was further injured by frost on May 1. Later planted ones not up at that date are now much the better, and the crop will perhaps be an average one. I planted four bushels of Early Rose whole last Thanksgiving Day; they did not come up any earlier than February planted ones, but they grew faster, and I intend to try that again with cut potatoes. F. N. P.

Pocomoke City, Md.

The outlook is for a very poor crop. The weather has been very bad, raining almost continuously since March. The acreage has been about as usual, which is small in this section. In fact, the outlook for anything but grass is very poor in this country. J. E. C.

Greensboro, N. C.

There is about the same amount of Irish potatoes planted here as usual, and the crop is about 50 per cent better than usual, owing to the rainy Spring. However, our crop cuts no figure in the market, as potatoes do not do well here, and are only raised for local use; in fact, our Winter supply always comes from the North. This county, or rather this part of it, is best adapted to fruit. Sweet potato acreage about as usual, but it is early to predict the crop. J. D. S.

Leavitt, N. C.

So far as I have seen the prospect for a good crop of early potatoes is very encouraging. Many lots of them are in full bloom, and there has been ample rain (still coming down) to make them bear well, if we can soon have some genial sunshine. The number who grow potatoes for market in this section is very limited, as they find more money in tobacco than in potatoes. Strawberries are large and abundant, but are rotting badly for want of sunshine. J. E. C.

Drayden, Md.

More Oleo Rogues Caught.

The Metropolitan division of the Department of Agriculture, State of New York, reports the following list of oleomargarine violations and penalties imposed:

Chas. Umla, 3 Alabama Ave., Brooklyn, $25 and costs.
Louis Seifert, 812 Grand St., Brooklyn, $100.
John D. Behn, 865 Liberty Ave., Brooklyn, $100.
Behn Bros., cor. Crescent and Welden Sts., Brooklyn, $100.
Fred N. Muller, 273 Avenue A., N. Y., $25 and costs.
Richard F. Cunneen, 317 Bowery, N. Y., $50 and costs.
Ernst Schwaneman, 1856 Park Ave., N. Y., $25 and costs.
John Murphy, Brooklyn, N. Y., $25 and costs.
Michael Moriarty, 116 Greenwich St., N. Y., $50.
Wm. Seifert, 285 Smith St., Brooklyn, $50 and costs.
Peter Johnson, 40 Jackson Ave., Brooklyn, $25.
Harry Harris, Jersey City, N. J., $100 or 90 days in jail.
Edward Brock, Jersey City, N. J., $100 or 90 days in Catholic Protectory.
George Warren, Jersey City, N. J., sentence suspended.

In this list are three wagon cases of New Jersey peddlers of oleomargarine who were detected selling same in this State. It seems to be a new wrinkle for the Jersey men to send their wagons into this State in charge of small boys. This is probably the result of the recent heavy penalties and term of imprisonment inflicted upon the wagon men, so that they are now unable to secure men for their wagons, and are resorting to the method of putting small boys in charge of them. However, the court, taking a reasonable view of the matter in the case of Edward Broek of Jersey City, who was detected selling oleomargarine, he being a small boy in knickerbockers, and while at first inclined to suspend sentence, imposed a penalty of $100 or 90 days in the Catholic Protectory. In the case of George Warren, Jersey City, another peddler, sentence was suspended for the reason that his employer had been detected selling oleomargarine and is now serving a three months' term in jail, the court feeling satisfied that they had reached the principal in this case.

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Refer to Irving National Bank.

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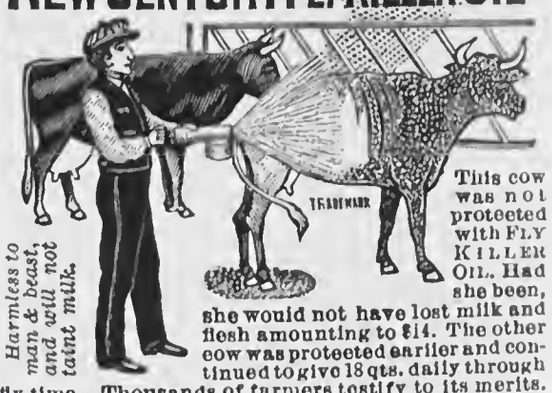

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EVER MADE THE TRIP?

While it has always been a beautiful trip over the Lackawanna Railroad to Buffalo, yet the fact has not been so generally known as it has of late, and the result is that the increase of traffic is very large. One of the most talked-of pieces of scenery is the Delaware Water Gap, and it would pay any one who has never made the trip to Buffalo by way of the Lackawanna to take it and view this beautiful spot. Another great advantage is the shortness of the route. It is a fact that the Lackawanna is the shortest road to Buffalo.—Insurance Times.—*Adv.*

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THE RURAL NEW-YORKER, New York.

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FEEDS and Feeding, by Prof. W. A. Henry; 657 pages, giving in detail the analyses and relative values of feeds, and best methods of feeding live stock. The best work on this subject that we know of. Price, postpaid, $2.

THE RURAL NEW-YORKER,
409 Pearl St., New York.

Market Briefs

PICKED UP HERE AND THERE

STRAWBERRY VS. ORANGE.—The orange is feeling the effect of the large quantity of cheap strawberries on the market, and prices have taken a decided tumble. This is to be expected, and the figures for oranges from this time on will be more or less affected by the various Summer fruits. The drop in price, however, will put the fruit within the reach of many new customers, and thus sales will continue heavy.

LEMON TRADE.—Of course, there is a regular demand for lemons the year around, but an increased Summer trade is always expected, and the ups and downs of this Summer business usually follow very closely those of the thermometer. Most restaurants now furnish lemonade, and in hot weather many patrons take it in preference to tea or coffee. During a long period of hot weather, lemonade stands spring up around the streets like mushrooms.

NEW POTATOES in large quantities are arriving from the South, and prices have declined. In one day this week 8,000 barrels came from the South. Prices run from $1.75 to $3.50. Many of them are of good size and quality, but, like all new potatoes, look bad on account of the tender skin being knocked off. It will be well for shippers to keep in close touch with their markets, so as not to overdo the business and create a surplus that will result in disastrous prices. It is very easy to overstock a market with perishable stuff in hot weather; and, like an animal that has been cloyed by overfeeding, some time is required to get over the effects of such a mistake. Only a few days since the local board of health condemned 1,500 barrels of southern cabbage that had been here too long.

UNRIPE BANANAS.—It is in this condition that they are usually sold and eaten. Those that are intended for shipment to this market are picked green as grass, and many of them are in this shape when unloaded from the steamers. If shipped when too near ripe, they are likely to spoil on the way, melting down in the hold of the vessel into an indescribable mass of rottenness. Great loss is also experienced from this cause when vessels are detained by accident or storm. But few people, however, seem to know that a banana is not ripe enough to be fit to eat until the skin is more or less brown and discolored. As a general rule buyers appear to think that the speck on a banana skin makes the fruit unwholesome, as it would an apple or orange, and they reject all such. The banana peddler has to sell the thoroughly ripe fruit at almost any price to get rid of it, and people go on buying the green bananas which are really raw and to some extent indigestible. More red bananas than usual are seen this year. They cost more, and are more highly nutritious than the yellow ones.

NEW MILK PRODUCT.—It is not really new, yet not at all well known here. Koumiss has been made for a long time in eastern countries, and as prepared there is an intoxicating drink. It is merely fermented milk. It, however, can be made so as not to be intoxicating, and an increasing trade is being worked up in it in drug stores and dairies in this city. When more people learn its value as a Summer drink, this business is bound to increase, and a trade that puts a new value on the product of the cow must be a benefit to the farmer. Some people whose stomachs rebel against milk in any other form, can use koumiss. What to drink in hot weather is not a troublesome question for those who have plenty of pure spring water at hand. As it bubbles up through the gravel or slate rock, one many drink as much as he wishes without harm, and thirst is satisfied, but the reservoir water with which most cities are supplied is a different article. Those who live among these brick walls and pavements during long periods of hot weather are often troubled with a distressing thirst which is difficult to satisfy. Iced city water does not do the business; soda is only an aggravation; and lemonade and cold tea seem to be the most satisfying of ordinary drinks. From repeated trials the better brands of koumiss have been found the most satisfying for this purpose, and it has the further merit of being a food as well as a drink. It has a little of the flavor of sour buttermilk and enough snap and sparkle to make it palatable. It would seem as though some of the dairies which have large plants in the country and supply private customers here, might well boom this trade. If once thoroughly introduced, so that people learned its value, there would be a steady demand for it, as it has all the desirable qualities of the best buttermilk, is much more nutritious, and can be used without harm by those with weak stomachs. W. W. H.

FRUIT IN THE LOWER HUDSON VALLEY.

A Trip Among Growers.

Last week I took a drive through the Hudson River fruit section from Newburgh south as far as Mountainville. I have never before found strawberries so backward at this time in June. The effect of cold wet weather is apparent. For the most part the crop is lacking in foliage, and there is considerable blight, showing lack of fertilization caused no doubt by the excessive rain. There are, of course, some exceptions to this general rule. The Bubach on T. J. Dwyer's grounds at Cornwall is everything that could be desired. I rarely see a more vigorous plant or a stronger or richer foliage than in his field planting of this variety, and the promise of fruit, while possibly a week later than usual, is certainly most encouraging. William Belt on these grounds is also in good condition, and most promising for a fruit yield. But Glen Mary, Brandywine, Cumberland, Triumph and some other varieties have not the growth of foliage nor promise of fruit that the rich condition of the soil and evident care would lead one to expect, and which is usually rewarded on these grounds. At the Phieffer fruit farm near Mountainville, where strawberries usually are at their best, I saw the same conditions—light foliage and blight. At Cyrus Shaw's place at Mountainville the prevailing conditions were the same. Wm. Belt showed decided lack of foliage, and Gibson still more. Both under favorable condition of soil and cultivation.

Cherries, both sour and sweet, are going to be a light crop in this section. They may run from one-third to possibly one-half crop. They, however, show marked evidence of rot, and some indication of immature ripening, and the final result is likely to be rather under than over the above estimates. Pears as a whole are going to be light here, possibly one-third crop. On Mr. Shaw's grounds, however, I saw some young Kieffers which bear a nice crop, and some trees of Seckel were as well loaded as one could wish. Some Anjou trees that had been cut back severely for grafting with Bosc stock had a fine setting on the remaining wood, and will bear more fruit than trees in adjacent rows which were not so pruned. As a rule both the Bartlett and Anjou trees are lacking in foliage, and not well set with fruit, which, of course, the June drop, which is late, will reduce still more.

In peaches and Japan plums, however, the conditions are different. The promise for both these fruits is most encouraging. Trees which bore heavily last year are again loaded down with young fruit now, and this condition prevails at Mr. Dwyer's, Mr. Shaw's and at other places in this section. In Mr. Dwyer's nursery rows Burbank and Abundance are simply a sight to behold. The finest specimens of Abundance are to be seen at Mr. Shaw's place. The trees are set well apart, on rich soil well worked, and the set of fruit is not too heavy as is frequently the case. The result is healthy vigorous trees and an abundance of finely developed young fruit. Both Mr. Dwyer and Mr. Doxey, who has charge of Mr. Shaw's recent plantings, class the Abundance at the head of the plum list, and equal in quality to the strawberry. The October Purple is growing on both these grounds. Some on Mr. Dwyer's ground set in 1899 were bearing liberally. On one such young tree I counted not less than 150 plums, larger and better developed than the Burbank or Abundance nearby, though a later variety. These were on peach stock. The trees on plum stock were smaller, bore only a few plums and those of a small size, but strange to say on Mr. Shaw's grounds this condition was reversed. Those on peach stock winterkilled, trees were small and bore little or no fruit, while the trees on peach stock were larger and more promising in every way. The Wickson does not here compare favorably with the above varieties. The size and shape of tree are not so good, and the foliage is sparse. Mr. Shaw has quite a large planting of young Windsor cherries, but the cherry crop with him is light also.

The crop of peaches on both old and young trees is big. Mr. Shaw's trees bore heavily last year. They are heavily set again now. Some of his older trees, while heavily set with young fruit, show a lack of foliage, probably due partly to the cold wet weather, and partly to the heavy cropping of last year. In his new planting his Elbertas show a denser foliage and a good set of fruit. Currants at Mr. Dwyer's place threaten to come in with the strawberries. Fay is heavily loaded again this year, as it was last. At Mr. Shaw's the old currants were hardly up to the average as a whole. Some bushes are good, but they do not run universally so. The crop was a fair average one, however, on his later plantings. The apple crop is not a big one throughout this section. Mr. Dwyer's crop is good, big in fact, but he is not a large grower. Mr. Shaw is. He had a good crop last year, and will have a good many apples this year, but his trees do not all promise well. While individual trees show a heavy setting many others are light or lacking in fruit entirely, and in foliage as well. Eugene Bartow, near Mountainville, has a large planting of young Kieffer pears. They are looking most thrifty. They are young for fruiting, but there will be fruit later. J. W. Spencer's orchards look thrifty and his home grounds are inviting. Mrs. E. T. Tenney's peaches bear a promise of large crop, in keeping with general conditions of the crop through this section. I will tell about conditions farther up the river next week. J. J. D.

The Chicken Crop.

A GOOD AVERAGE.—From the reports I have had I think the average hatches have been better than usual, and the chicks are doing better than the average season, and much better than one would believe from the very wet weather we have had. There certainly seem to be plenty of chicks in this section and fine healthy ones. I have already marketed this season's hatch of chicks that weighed seven pounds to the pair, and they sold for almost $1 each. They were sold about the middle of May. D. A. MOUNT.
New Jersey.

POOR LUCK.—Most people hereabouts report poor success in hatching and raising chicks this year. A neighbor set two Cyphers incubators holding 220 eggs each, from which he hatched only 80 chicks, all of which died. He is a man of considerable experience, and cannot account for his failure. I believe his later hatches have been better, but are below the average. Our experience has been quite satisfactory and we have no complaint to make. We have a 320-egg Pineland machine, which has hatched three times this season, and which I set for the fourth time to-day. Our chicks have been strong and we have succeeded in raising almost all of them. We have hatched about 60 per cent of the eggs put into the machines. This is not as well as many do, but is not by any means a total failure. We have an indoor sectional brooder and three small outdoor brooders. We like the indoor brooder when the chicks are small as we are able to regulate temperature more evenly. After chicks are three weeks old we shift to outdoor brooders, where they do very well. R. W. R.
Mill Brook, Conn.

HENS DO WELL.—After using the incubator and brooder for five or six years, I came to the conclusion, as I wanted only about 200 chicks a year to keep up my supply of layers, that I could do it better with hens, so now the hens do all the hatching and brooding in the brooder house till the snow is off the ground, and then in some small yards, 4x12 feet, with 18-inch boards and four feet wire netting, I have a small box in one end with a sash of glass over the front for the chicks to get under in case of rain. As far as I can hear the hatchings of chicks have not been above the average around this section. I have set 31 hens this year, and I have now 250 chicks besides those that have died (about 15). This is the best I have ever done, although the weather has been very bad this Spring; 12 inches of rain in April and May. I never had chicks grow as they have this year; two that were hatched February 28, when about 13 weeks old, weighed, Light Brahma cockerel, 4 5-16 pounds, Brahma and P. Rock cockerel, 4 2-16 pounds. The first feed of the chicks was fine cracked corn and whole wheat. In three days I commenced to give beef scraps; cracked corn and scraps are kept before them all the time; the supply is renewed twice a day. Sometimes at noon the smaller ones get sour milk cheese. At night when their crops are full, ready for bed, I give them boiled potatoes which they think is a kind of pie or pudding. So far I am shaking hands with myself over the results this Spring. V. E. HASERICK.
New Hampshire.

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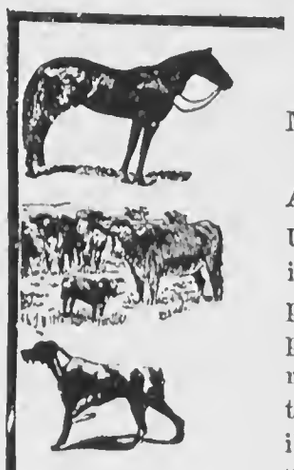

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FEEDING CALVES.

There has been a good deal written on the subject of calf feeding, and it is well, for who knows all there is to know about the subject? Nearly every farmer has his own method, which he follows with some degree of success. As conditions are seldom, if ever, identical there is probably no one method the best, but each has its place. I have had considerable experience in feeding calves during the past few years, raising from 20 to 40 each year, but not always with the best of success. Scours has been the worst enemy to guard against. The best way to cure calf scours is not to have it. This disease can in nine times out of 10 be traced to overfeeding. It must be remembered that a young calf is a very greedy animal. His stomach and digestive organs cannot stand overworking, which is caused when he is fed only twice per day, and about all he cares for. This year I am feeding somewhat different from the usual way, and more carefully, as I consider my calves extra good ones. The result has been so satisfactory that I decided to write of my method of feeding and care for the benefit of my fellow farmers.

The calf is taken from the dam when about one day old and placed in a light, warm, dry place, where he is left to himself for about 12 hours, when he is fed two quarts of milk warm from the cow. The milk is placed in a clean pail. Don't use a sour one, as it will give the calf a bad impression the first thing. Back the calf into a corner of the pen. It is usually best to get astride his back, as he can then be held in place better than when the feeder is at one side. Take the pail of milk in one hand, dip the other in the milk and place to his nose, when he will usually begin to suck. If he doesn't place the fingers gently in his mouth. There are very few calves that will not then suck almost at once. Then draw the hand downward until the milk is reached. He will usually follow down the first time, and seldom fails to after two or three trials. As soon as he gets a good taste of the milk there is no trouble save to get his head into the pail the same way whenever he lets go the fingers. Don't try to force the animal. It is seldom successful. When the calf takes his milk in this way without very much fussing, and knows how to put his head down, which is usually about the third or fourth feed, gradually work the fingers from his mouth and leave him to drink. It is, however, sometimes better not to let him have the fingers at all the third or fourth feed, but keep the pail of milk in front of him, when, after a little fussing, he goes at it and drinks. The young animal's education is then well under way, and he soon eats readily.

For two or three weeks I feed two quarts of whole milk direct from the cow night and morning. Noontimes I feed from one to two quarts of skim-milk warmed to about the same temperature, if possible. Milk that is partly cooled may be used, but must be fed in much smaller quantities than when warmed. At the age of two or three weeks they will eat some good hay, which should be fed in such quantities as will be eaten up clean. It is well to feed just after feeding milk, as it will prevent sucking where two or more have but one pen. The whole milk may now be gradually replaced with sweet skim-milk. It takes one or two weeks to make the change. Then begin to increase the feed. Here is where care and watchfulness count. As soon as there is any indication of scours decrease the feed for a day or two, and then don't increase again until you are sure the calf's capacity to take more warrants it. By following the above method of feeding my calves are in good order, not fat, and are growing nicely. When feeding myself I often increase the feed before the calf is as old as stated above, but extreme watchfulness is necessary. By keeping a careful eye on them one can feed just about all they will stand right along. It is, however, much better to underfeed than to overfeed. This is especially true during the first three months, which is the critical part of the animal's life.

Colebrook, N. H. B. A. C.

SOME CHICKEN NOTES.

Losing Little Chicks.—I have noticed in the late numbers of The R. N.-Y. that some of its readers have been losing chicks raised in brooders. I know how that goes, for more than once out of 200 chicks I have not been able to raise more than three or four. I used to blame the feed, but I am sure now that the principal cause was not keeping the chickens warm and dry. This Spring I have had splendid luck, both in hatching out and raising between 400 and 500. I have not lost more than 10 or 12; some of them the cat killed and two were killed accidentally. The first feed we give to our chicks is pinhead oatmeal, and infertile eggs chopped up fine, shells and all. They also get what I call Dutch cheese once a day mixed up with meal; once a week a feed of lean meat chopped fine. I do not let them out of the brooder house until they are 10 days or two weeks old; after that time they can run out whenever they want to and get no further care, only to see they have plenty to eat and a warm place to run into when they get cold. I am the only one in this neighborhood who uses an incubator and brooders. I find on inquiry from several who raise quite a few chickens in this vicinity that they all report good success, both in the way the eggs hatched out and also in raising the chickens.

A Hen Account.—We keep about 125 hens. They run at large part of the time but in Summer are kept in the yards, one of which is in grass. The feed is principally wheat and buckwheat with feed of oats and corn occasionally. In the morning they get a mash composed of bran, meal, ground oats and middlings, mixed with milk. I have milk before them all the time. I do not feed any meat or bone, but they have crushed shells before them always. We do not keep any males as we buy all our eggs for hatching. We send the eggs to Buffalo once a week. They are stamped and put in pasteboard boxes, one dozen in a box; then the boxes are sealed up and we guarantee every egg with our stamp on it. We have been selling to one man now for 10 years, and in that time we have not had a single complaint about our eggs not being good. Our hens are a mixed lot, but most of them are White Leghorns. We received last year from February, 1900, to March, 1901, $348 for eggs and chickens sold during that time. This does not include eggs that we sold at home or chickens that were sold to Italians. Our expenses during the same time were $197.16. This includes amount we paid for eggs for hatching, oil for running incubator and two brooders, egg boxes and labels for same. This is not so good as some of your readers tell about, but as our other work is not neglected in any way caring for the hens, we are satisfied with the result. We have beside a big lot of manure to the good. J. B.

Erie Co., N. Y.

The Best Breed of Poultry.

Farmers are after the money there is in the poultry business; therefore they want a money-making breed. They want a fowl that will lay a goodly number of eggs and yet give them a fair profit when marketed. The market demands, first of all, a yellow skin and legs; second, a medium size; third, no black pin feathers, and last, no feathered legs. Next comes the question: "What breed is there that meets these demands? Is it the Brahma? Hardly. Those feathered legs, and its slow growth, disqualify it. Is it the Langshan? No; the blue skin stands in the way. The Leghorn? It might be if it were not for its small size. Could it be the Cochin? That breed has yellow legs and skin, but its feathered legs disqualify it. Is it the Wyandotte or Plymouth Rock? It certainly is; that is, one of each variety, namely, the White. In either the White Wyandotte or the White Plymouth Rock we have yellow legs and skin, plump medium size, no feathered legs, or black pin feathers. Then, as they meet the demands of the market, and lay 200 eggs in the year, of course they are the money-making breeds; in other words, the best breeds for the farmer. Each breed lays well and reaches the highest price in the market. They do not take so long to mature as the heavier breeds, and are a better table fowl than those of a lighter weight. The breed that cannot meet both demands is surely not the fowl for the farmer. These two breeds roll the dollars in, in two ways, while the others but one. The farmer may now choose for himself. E. L. K.

North Cohocton, N. Y.

Varieties of Ducks.—Our correspondent F. E. W. made some statements regarding Pekin ducks which were questioned by R. D. B., on page 335. This writer claimed superiority for the Indian Runners. The matter was referred to A. J. Hallock, of Long Island, a high authority, who writes: "As far as my experience goes your statements in regard to the Pekins are correct. Indian Runners will not thrive in confinement. When a Runner weighs two pounds, a Pekin the same age will weigh four. I have never compared the Pekins with the other varieties mentioned. This has been a very hard season on poultry on account of so much rain and cloudy cold days. I have hatched 24,000 Pekins and lost but five per cent; this does not look as if Pekins were not hardy."

Ice House Notes.—Failing to procure easily all the sawdust that I needed, I got a load of shingle-mill sawdust mixed with shavings from the edger. The ice kept so much better than usual that the next year I used more than half of the finer sawdust with most pleasing results. The cement cow stable floor and manure pit are fine—very fine. Next comes the cellar and a walk to the road which, thanks to Mr. Barney, I can do with my man all right. E. D. R.

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FARM AND DAIRY NOTES.

CARE OF MILK.—In 25 years' experience I have not seen milk in such fine condition for the month of May. Natural conditions have been perfect, cool weather with pure air, made so by the frequent showers. We shall without doubt have unfavorable weather during the scason. We must have cleanliness in the dairy. The trouble has been to make people understand what grade of cleanliness they must observe. It is a weakness of human nature to observe those who are not doing as well as we are, and pat ourselves upon the back, thus obtaining a clear conscience. I find myself doing this same thing time and again, and it takes a good deal of will power to reverse the lever and look at the fellow who is doing better, and find out how he does it. There is no contention over clean cans, strainers and pails. There are, however, two points debatable, one straining milk, and the other aeration. I have repeatedly stated in institutes that straining milk is a fraud, and usually bringing out subsequent crlticism, but following the statement with the question: "If a cow puts her foot in the pail, how much could be strained out except the leg?" Listeners were willing to give the idea a moment's thought.

I would much prefer to receive coarse dirt, and that is all a cotton strainer takes out, than to have milk pass through any kind of strainer not absolutely germ proof. The question of aeration has not been discussed by our dairy experts, only from the affirmative. I do not wish to be considered heterodox. I have been one of the strongest advocates of aeration, and honestly so, becausc I had seen good results from it. It is my judgmcnt now that the good effect is due rathcr to the cooling effect of the air than to any effect by coming in contact with the air. If milk has taken on odors from weeds or silage, which are to a certain extent volatile, aeration will matcrially aid in producing a cleaner-flavored product, provided the exposurc took place in an atmosphere not impregnated with germ life. The great danger attendant upon aeration comes from the fact that the work is usually done near the stable or milking barn. I am speaking of the factory patron, from actual count among a large number of farmers, noting the location of the milk cans when milking. Less than 50 per cent had a suitable place to aerate. This will be read by some of our patrons, and, no doubt, they will say at once: "Why have you so strenuously advocated the purchase of aerators?" No, I do not say stop aeration. Our patrons who use the combined aerators and coolers, like the Champion, as a rule deliver the best milk. But the point I wish to make clear is this. The good effect of aeration is more largely due to the cooling which takes place, either by coming in contact with a cool surface or in dropping through the air, which is usually much cooler than the milk, and not due alone to air contact. In my judgment there is only one safe way to care for milk at the farm home when delivered once a day to the creamery or cheese factory, and that is to set the milk cans in cold water, frequently stirring for the first half hour. Ice is the only agent which we can safely employ in checking germ growth. It is practically impossible to keep germs out of milk, but at a 50-degree temperature they develop so slowly that manufacture or consumption takes place before loss.

MILKING TUBES.—I think I have learned one cause of so much trouble following the use of milking tubes. It has been our experience often that more harm was done by increased inflammation than value by using the tube. I have heard farmers in institute meetings give substantially the same testimony. We formerly used no special care of the tube after use; that is, it was not sterilized before using. What better medium for conveying germs into the teat and udder? A coating of milk would adhere to the tube inside and out, just enough to grow these little plants in countless numbers. The tube would be put into a pocket or covered with a rag or hung up by a string, any way but the right way. Of late I have sterilized the tube just before using and the results have been more satisfactory. Of course there is danger under the most favorable conditions, and I would not advise their use if possible to avoid it. But sometimes it is necessary. We have just had two cases, one cow lacerated the end of the teat, and another cow with contagious garget.

GARGET REMEDY.—Dr. Smead gave us a remedy for this trouble that is a fairly good one, made of one part carbolic acid and one part glycerine; one part of this mixture to seven parts raw linseed oil, used on the end and in the passage. Contagious garget is the germ growth on the end of the teat, which finds its way up the passage until all chance for getting the milk is gone. I have used a tube on this teat, dipped each time in the abovc preparation before use, and the teat is improving. It was so far gone that hand pressure failed to start a drop.

FEEDING SILAGE.—We are fecding one dairy silage, and shall continue for two weeks. The cows have abundance of grass, yet they eat the silage as eagerly as in midwinter, but it's as fine as silk; nearly odorless, bright, clean as the day it went in. It was cut fine and well packed. Don't be afraid of cutting fine and distributing ears, stalks and leaves evenly all over the surface, anu then tread every portion alike. Don't tread the sides and let the rcst of it go without. Don't go to extremes any way in anything.

THE WET WEATHER.—Rain, rain, rain everywhere. One can find satisfaction usually in every condition if he has only improved every opportunity in the past. The past dry seasons offered a splendid chance for ditching and draining out the low marshy lands that are too wet in a wet year, and in a dry time the plant food seems quite indigestible. As I write, the clover stands large enough to cut a good swath on land formerly watcr soaked. I have found a saving in energy and expense when work was done at a time natural agencies were helpful. Although rain has been so abundant that soils are sticky and difficult to work, yet it is a much more favorable time to kill weeds, Quack grass and every manner of foul stuff than during severely dry periods. Every seed and root is determined to grow, and frequent working puts an end to their days. While our work has been delayed we have made the best of it and put large fields in the finest condition. H. E. COOK.

BRIEF DAIRY NOTES.

MILKERS AND MILKING.—Our cxperience with milkers and milking doesn't coincide with H. E. Cook, on page 383. We want and like the men who can milk cows the quickest and cleanest. We don't mean men who go at a cow "hammer and tongs," but attend strictly to business, milk fast and gently. Our experience is based upon close observation, backed up by study of daily records kept for several years on from 40 to 60 cows. The slower men almost invariably drop on the record, and are quite as apt to be the ones who are afraid of the nervous cows, and when milking keep the cow stepping and switching her tail. Fast milkers get more milk, are apt to milk more cleanly and we have never seen as the effect of their work "bunches in teats, garget, swelled udder," etc. Milking is one of the vital points in dairying and does not receive the attention it should. We believe one of the great reasons so many fail in dalryIng carried on with other lines of farming is that milkIng can be done at any time, and by anybody. This morning at 4 o'clock, tomorrow at 7, and "any old time" at night. Regularity and the cow at ease will pay.

SPRAYING COWS.—We have tried five of the commercial fly killers, and have not been perfectly satisfied. When applied just before milking most of them are good for that one milking; some may have a salutary effect on the next one, but you can count only on one milking, and it's quite a task and somewhat cxpensive, in the busy season of labor, and also of material to spray 50 or 60 cows twice a day. They are all vile smelling compounds, and ought to be used at least a half hour before milking, and this isn't always possible when the cows are in pasture. We have never observed any ill-effect upon the milk because of the odor connected with them, but have been careful to use them as long before milking as possible, and to keep the milk cans outside of the stable. As our barn has many windows the odor soon disappears. During the latter part of last season my brother was spraying the henhouse with water-gas tar, which we buy at $1 per barrel, and as there was some left in the sprayer it was tried on some of the cows. It drove the flies away, and kept them away two to three days. Since that timc we have used the tar. It seems to have no ill-effect upon the hair or skin, and keeps off the flies twice or three times as long as the fly killers, and costs less than two cents a gallon. Of course it smells bad, but not much if any worse than the commercial preparations. We have used the cheap tin sprayers for such work, but they are hard on the arms, too much friction, and we plan this season to use one of the better makes of the compressed-air sprayers.

TARRING CORN.—We have noticed the directions for spreading tar on corn. Our way is simple, and the corn never clogs or fills up holes in the planter. We use just enough tar, so that by vigorous stirring a minute or two the corn is all black, then spread in the sun a few minutes, pouring the corn on a sack. We mix a half-bushel at a time. The tar dries quickly, and the corn can be handled without blacking the fingers or use of plaster, etc. Don't leave in hot sun too long, as tar absorbs heat very fast, and will burn one's hands if spotted with tar. It might injure the corn.

Connecticut. H. G. M.

EGG-HATCHING RECORD.—On April 27 I set a 120-egg Cyphers incubator and five hens on S. C. White Leghorn eggs from pens of from 15 to 18 females to one male. Promptly on the twenty-first day there were hatched 118 chicks from incubator, and 10, 12, 13, 13 and 15 respectively from the five hens; the first one broke three eggs. There were only five infertile eggs out of the 192 set. Can anyone beat that record? MRS. A. J. A.

Hazardville, Conn.

FERTILIZER FOR RABBITS.—I notice an inquiry from a person in Pennsylvania asking for a wash to prevent rabbits peeling young apple trees. I will give you one that I have tried on apples, pears, peaches, etc., and it worked all right. Mix fresh cow droppings with enough water to make a thick wash; get a brush or a rag on the end of a stick and proceed to wash the trees up as far as needed and the rabbits will pass by on the other side. Put the wash on on a dry day, so that it will dry up quickly. If there is much rain one or more applications may be necessary. I only used one, put on in the Fall.

Bellaire, O. P. A. W.

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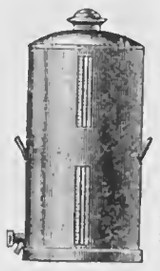

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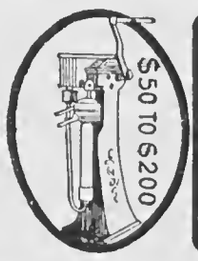

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"DOES running reall[illegible]velop and expand the physique?" [illegible]uite likely, I know that even in t[illegible]se of a board bill the more it runs [illegible]bigger it gets."—Philadelphia Time[illegible]

"HAVE you got a[illegible]ondensed milk," asked the man at [illegible]gate. "No, sir," replied the driver [illegible]the milk wagon, imperturbably. "Nothin' but the expanded kind."—Chicago Tribune.

LADY: "Little boy, are you sure this butter is clean?" Boy from the Country: "I low as how it ought to be. Ma and Sis set up half the night picking the specks out of it."—What to Eat.

MRS. HOON: "Why are people who get married often called the 'contracting parties?'" Mr. Hoon: "I don't know about the bride, but think how small the groom usually looks!"—Puck.

STOUT MAN (struggling and crowding to force himself on to the packed step of a Broadway open car): "Humph! What's this—the hog car?" Elderly Passenger: "Yes! Jump right on."—Life.

MIKE (to chemist): "The docthor said: 'Take wan ov these pills three toimes a day.' I took wan av thim wanst, but the man doesn't live thot kin take wan av them three toimes!"—Detroit Free Press.

TEACHER: "How many genders have we?" Tommy (aged six): "Three. Masculine, feminine and neuter." Teacher: "Correct. Now, tell me the gender of an egg." Tommy: "Can't till it's hatched."—Colorado Weekly Times.

VISITOR: "What was the matter with the man they just brought in?" Doctor: "Stuck his head through a pane of glass." Visitor: "How did he look?" "His face wore an injured expression."—St. Louis and Canadian Photographer.

"I UNDERSTAND that he has long been a student of political economy," said the visitor. "He has," said Senator Glucose, "and his economy in politics has kept him out of office. He thinks he can be elected without spending a cent."—Brooklyn Life.

"I NEVER take advantage of anybody who is not ready to take advantage of some one else," said the Wall Street manipulator. "Shake hands," said the stranger impulsively. "Those are my sentiments precisely. I'm a green goods man."—Washington Star.

MISS GULL: "Mr. Joakley was telling me about a remarkable tadpole he has in his aquarium." Miss Gill: "What was remarkable about it?" Miss Gull: "Why, he says when he got it it was only an inch long, but in a week or so it had grown two feet."—Philadelphia Press.

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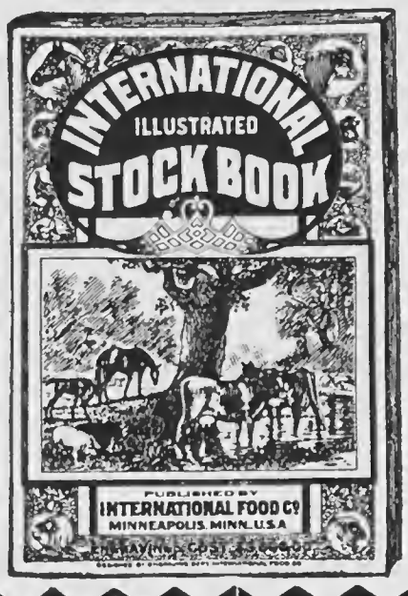

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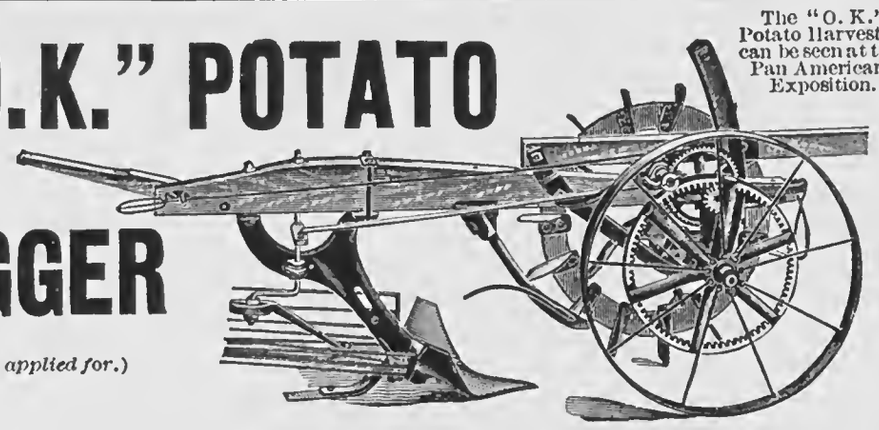

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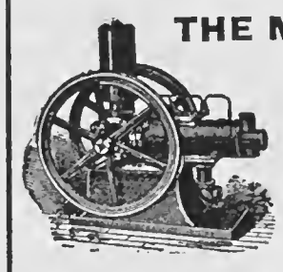

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HOW IT COMPARES WITH BRAN.

Flint Corn Planted Late.

LATE CORN.—The picture shown at Fig. 188 is taken from the last report of the New Jersey Experiment Station. It shows a crop of Thoroughbred flint corn grown as a late crop to provide green food or silage. This corn was planted on July 10 after a crop of oats and peas had been harvested. The oats and peas were seeded April 3, and cut early in July. The ground was then plowed and planted to corn, which made the growth indicated in the picture, and was cut from September 22 to 30. Crimson clover was sown in this corn, making a good growth, so that three crops were really produced. We refer to this in order to show how late-planted corn frequently makes a rapid growth during the latter part of Summer, and will produce a large amount of forage. We have planted this variety of corn as late as July 15 and had it mature grain. This year, when the season is unusually late, we shall continue to plant up to July 1 for the regular crop. We frequently hear of northern farmers who plant corn quite late on the hill tops and rarely fail to secure a full crop for the silo. This year, when many farmers are sadly discouraged at the outlook, we would advise planting corn late. The flint varieties will be most likely to mature grain, but even if they do not there will be a heavy yield of fodder suitable either for silage or for dry feeding.

WHITE FLINT CORN, CUT SEPTEMBER 22—AFTER OATS AND PEAS. FIG. 188.

ALFALFA VS. BRAN. — Two weeks ago we gave the figures prepared by Prof. Voorhees to show how much protein may be produced by an acre in Alfalfa. It will require seven tons of wheat bran or 10 tons of oats to equal the value of one year's output of such a "protein factory." But is not that only one side of the matter? Sawdust contains a certain amount of protein, yet it will not take the place of wheat bran or oats in a ration for cow or horse. To what extent is the Alfalfa hay equal to grain? That is the question farmers want answered—not so much by the chemist as by the cow. In order to answer this Prof. Voorhees took four cows averaging about 1,000 pounds live weight. Two different rations were made up as follows: Ration 1.—35 pounds silage, 11 pounds Alfalfa hay, six pounds mixed hay, two pounds cotton-seed meal. Ration 2.—35 pounds silage, six pounds mixed hay, four pounds wheat bran, four pounds dried brewers' grains, two pounds cotton-seed meal. The first ration cost 12.08 cents and the grain ration 15.38 cents. As will be seen the total protein was about the same in each—the 11 pounds Alfalfa hay giving 1.46 pound, about the same as that in the eight pounds of wheat bran and dried brewers' grains. Two cows were fed on the Alfalfa ration for 15 days while the others were being fed on the grain. Then they were reversed—that is, the two fed on grain were put on the Alfalfa. This was kept up for 60 days and the milk from the cows was accurately weighed and tested. The results show that during the whole period of 60 days the cows fed on bran and grains produced only 113 pounds more milk than those fed on Alfalfa hay. The milk produced from Alfalfa cost 58 cents per 100 pounds, while the cost of a pound of butter was 12 cents. With the grain ration the cost of 100 pounds of milk was 70.7 cents and of a pound of butter 14.3 cents. From these practical results Prof. Voorhees concludes that when wheat bran and dried brewers' grains can be bought for $17 per ton, Alfalfa hay is worth $11.16 for actual feeding. If the Alfalfa hay were ground up as fine as ordinary bran we believe it would be worth practically as much for feeding purposes as the bran. Yet why should the Alfalfa be ground up? The cattle are fully competent to do this grinding.

SILAGE AND ALFALFA.—In connection with this Alfalfa hay feeding I asked Prof. Lane why a ration composed of silage and Alfalfa, without grain, could not be fed. He said: "I see no objection to it, provided too much of the hay is not fed at one time, in which case there would be a possible danger of bloating. The following quantities of these two foods make a fairly well balanced ration: 35 pounds of corn silage and 18 pounds of Alfalfa hay. In feeding such a ration, I would divide the silage equally between the morning and evening feeds, and feed five pounds of hay morning and night, and eight pounds in the middle of the day. We expect to conduct more experiments along this line next Winter."

"What about feeding Alfalfa hay alone?"

"While we have never fed such a ration, it is my opinion that it would not prove satisfactory. In the first place, it is not a balanced ration, the nutritive ratio being 1:38. In the second place, I do not believe that such a ration fed continuously would be as healthful as one containing a larger proportion of carbohydrates. In the third place, it is my opinion that it would be more profitable to feed silage, roots or other foods of this character in connection with it, provided they were cheaper than the hay, which is usually the case in the East."

"We have heard that this is done in the West."

"In regard to Alfalfa hay in Colorado, this fact should be taken into consideration, that Alfalfa hay as it is usually fed in the West is an entirely different article from that represented by the sample we have shown you here. Those who have seen it handled in the Western States report that it is allowed to come nearly to maturity before cutting, hence a large proportion of the leaves is lost. When this is the case, one can readily see that a ration made up of Alfalfa hay of this quality might be a safe food, a healthy food and possibly approach a balanced ration. So you see the question hinges largely upon the quality and cheapness of the hay in considering its value as a ration. In some localities in the West, I have no doubt it is their cheapest food."

"How do you handle the hay?"

"Our method was as follows: As soon as the dew was off in the morning, the Alfalfa was cut, and allowed to remain in the swath until the middle of the afternoon, when it was thoroughly wilted. It was then raked and piled in small cocks of medium size, care being taken to build them with as little slope as possible on the sides to secure a uniform cure. After two days, it was found to be thoroughly cured, and was hauled to the barn, without any further handling, except that the cocks were turned bottom side up for an hour before hauling. Hay of good quality was secured which is in excellent condition after storing. There was practically no loss of leaves from this method of curing. Cattle prefer it to Timothy, Red-top, or oat and pea hay. The yield per acre from the one cutting was 2.21 tons."

Farmers and others are beginning to realize the great possibilities of Alfalfa. There will be thousands of acres started during the next year. Some will sow the seed on ground not well adapted or well prepared, and of course will be disappointed. Others will sow it with no fair idea of what is to be done with the crop. We know of one man who has seeded several acres of orchard with oats and Alfalfa. Under all ordinary circumstances this crop should never go in an orchard. The man we speak of keeps but little stock, and has no clear idea as to what he will do with the crop. He has simply heard the great stories that are told about it. It is not likely that Alfalfa hay will sell readily at first sight in spite of its great value. The point of all this is that Alfalfa is a special crop of great promise. It is not a good crop to sell or to use as green manure, but where one has a fair outfit of stock and a field so situated that it can go into permanent meadow it will surely pay to experiment with Alfalfa.

H. W. C.

CHEMICALS, CLOVER, COWS AND LIME.

A PROSPEROUS NEW JERSEY FARM.

Some Methods and Results Analyzed.

AN OLD STORY.—It is 12 years since I began to study the system of farming at Cranbury, N. J., which has been called "Chemicals and Clover." Every year since then, with one exception, we have had something to say about the farm of D. C. Lewis, and this year the farm was again visited. It is interesting to watch these fields pass, year after year, through the regular rotation without any falling off in crop, but rather with an increase of yield.

The rotation and plan of this farm is a simple one, and is easily stated. This year, for example, there are 16 acres in potatoes, 16 in corn, 18 in wheat, and 34 in grass. The five fields are nearly equal in size. In the potato field one acre is given this year to oats and peas, for cow feed. Starting with corn, all the year's supply of manure is spread on a two-year-old sod and plowed under. Formerly fertilizer was also used on the corn, but since more cows have been kept this has not been necessary. Potatoes follow corn, and from 1,200 to 1,600 pounds per acre of the Mapes potato fertilizer are used. Wheat seeded to clover and Timothy follow the potatoes, the grass being cut two years, and then plowed under for corn. I have seen the farm pass through more than two full rotations, and it is safe to say that in spite of the heavy crops that have been produced and sold, it is now more productive than ever. Formerly Mr. Lewis was almost careless about the supplies of stable manure. The long stalks were nibbled by stock and thrown into the barnyard, to be trodden down by the cattle. Now these stalks are shredded—part of them being put into a silo. A successful creamery in the neighborhood has made it profitable to increase the herd of cows. These cows are well fed. All this means more and better manure, which is crowded on the sod for corn. After three years of this heavier manuring, Mr. Lewis said they begin to see the effect of it, particularly in the grain and grass. There has been no change in the heavy use of fertilizers on potatoes. Mr. Lewis is fully satisfied that this high-grade fertilizer is the best and most economical plant food for the potato crop. For reasons which I shall try to give later, he believes it would be a mistake in his system of farming to use less fertilizer.

FARM INCOME.—In order to show what this New Jersey farm, with about 80 acres under cultivation, will produce with this system, I give the receipts for the last crop year:

Milk and calves	$696.21
Pork	129.54
Wheat	282.57
Cows	251.76
Hay	831.81
Potatoes	829.54
Sundries	16.75
Total	$3,037.18

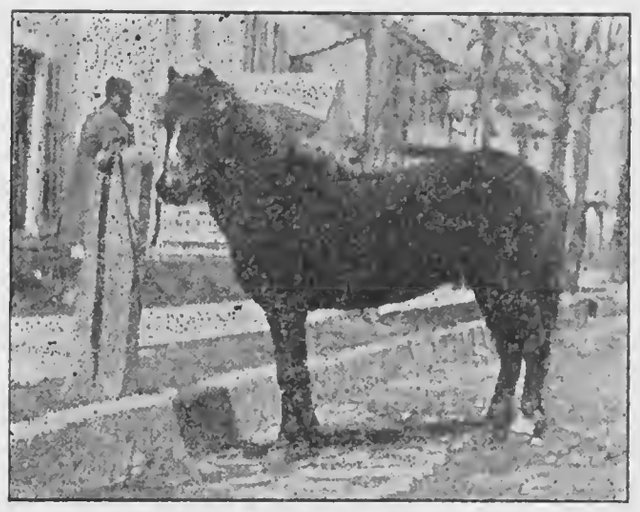
Last year was not a good season for potatoes, as the dry weather hurt the crop. Hay brought more money than usual. Strange to say, there has been less hay consumed on the farm since more cows were kept. The reason for this is the fact that the cornstalks are utilized as never before. The silo makes a place for much of the corn crop, and the dry stalks are shredded so as to provide good roughage for all stock. The result is more hay to sell, as has been the case on thousands of farms where the steel teeth of the shedder have torn the stiffness out of the stalks. It will be noticed that several cows and heifers were sold during the year. It is hard to get good farm hands—especially good milkers—that is the cry wherever we go. The chief reason for keeping the cows on this farm is to provide a market for the cornstalks, which were in former years largely wasted. Bran, linseed, cotton-seed meal and other strong feeds are bought and fed with the silage and shredded fodder, so that the money obtained for milk is largely cornstalk cash. Mr. Lewis says that his 11 head of cattle used barely a ton of hay all through the Winter. The cows are good ones, for an average of about eight of them earned the year's milk money given in table above.

CONSERVATIVE STATEMENT.—It is easy to grow enthusiastic over this system of farming. It seems so easy to follow this well-devised rotation through field after field, crowding the manure upon the corn and the fertilizer upon the potatoes, plowing about 40 per cent of the cultivated area each Spring, and following naturally with planting, cultivating, hoeing, haying, thrashing, digging, seeding and corn cutting. It sounds easy, but I want to avoid the mistake of giving the impression that any man with a 100-acre farm should sell $3,000 worth of produce, or that he is a poor farmer if he does not do so. I have no patience with reporters who attempt to draw such conclusions. Mr. Lewis has a farm that is admirably adapted to the crops he is growing. It is level, well drained and free from stones. I could not possibly duplicate Mr. Lewis's rotation or crops on my own farm, because my soil is rough and hilly and full of stones, while parts of it can never be properly drained. Some of his methods and experiences are, however, of great value to me, and I believe they will be to others. I shall try in future articles to analyze this system of farming, and see how it can be applied to general agriculture. Let it be remembered that farming in this section of New Jersey is more than a century old. These farms supplied food to Washington and his army during the Revolution, yet to-day they are producing larger crops than ever, though all the hay and wheat is sent away from them. Hay is said to be the heart of a farm, yet this farm thrives with its "heart" cut out and a fertilizer bag put in its place!

When I asked Mr. Lewis to name the most important experiment he had tried of late years, he said without hesitation: "The use of lime!" I will try to describe this next week. H. W. C.

PAN-AMERICAN EXPOSITION NOTES.

BEAUTIFUL DISPLAYS.—The Pan-American Exposition is now in full operation, and the grounds and buildings are thronged with visitors every day, who are loud in their expressions of admiration for the beauty of the buildings and the fine exhibits displayed in the various departments. Taken as a whole, this Exposition is perhaps the most beautiful of any that has ever been made, and it is certainly the most beautiful in design and execution of any on this continent, for I have seen all of the leading ones up to the present date. In size, it is not so large as the Columbian Exposition at Chicago, but the color scheme, which has been carried out in the buildings, is much more handsome, being variegated with the softest and most beautiful tints which the artist could intermingle to produce a charming whole, while the buildings at Chicago were, with one or two minor exceptions, plain white, which was quite painful to the eyes on a bright day. At night the electrical display is simply marvelous, and the like



A WELSH PONY. FIG. 189.

has never been seen, and perhaps will not be seen at any Exposition for some time to come, because of the nearness of this city to Niagara Falls, where the power is generated which lights the buildings and grounds so wonderfully. The electrician who planned the lighting of the buildings told me that as nearly as he could calculate there were 40,000 lights on the Electric Tower alone.

HOW TO GET THERE.—To those who are coming to the Exposition it is important to understand the way to enter the grounds, in order to obtain the best view, because the two principal street-car lines, and also the steam railroad, takes visitors mostly to the "back doors", so to speak, of the Exposition, instead of the "front door", or main entrance. If visitors will ask the street-car conductors to put them off at Forest Avenue, which runs east and west, instead of parallel with the main car lines, and then walk either to the Water Gate, or to Lincoln Parkway Gate, which latter is the main entrance, they will be delighted with the appearance and spaciousness of the grounds, and will have a delightful view of the buildings and esplanada as they enter through the Triumphal Causeway. The Causeway itself is a wonderful piece of art. It is composed of four great towers surmounted by gigantic horses bearing heralds. On either side of this main entrance are the principal parts of the ornamental grounds, where are to be seen fine groups of shrubbery and trees from some of the leading nurserymen. There are flower beds of beautiful design, filled with the choicest varieties known. Those who fail to make a careful examination of this part of the Exposition will make a mistake.

THE FLOWER SHOW.—In coming up the Elmwood line of the street-cars, one should get off at the Elmwood gate, if he passes Forest Avenue crossing, and not go on to the Amherst gate. This will take the visitor into one side of the flower gardens, and in front of the Horticulture Building. Such a display of Spring bulbs has never before been seen on any public grounds. The tulip beds in their season have been especially fine. One of them contained 1,200 of the best bulbs from Holland, which were of different colors and planted in ribbon style. The effect was very pleasing. Beds of Hyacinths, Crocuses and other Spring bulbs were almost equally gorgeous in their gay colors. The pansy beds are still very attractive. There is one near the Service Building that is by far the largest and most harmonious in its coloring of any that I have ever seen. It is a plain ellipse, about 40 feet in its longest diameter, and planted in bands of pure yellow, blue, white, and almost black. I doubt if such another pansy bed has ever been planted. It stands in the middle of a lawn, that is well kept, and skirted with a setting of beautiful shrubs and trees.

In the lagoons and sunken gardens are other flowers, which are beautiful beyond description. Among the exotic water lilies will be seen the gigantic Victoria regia and the Nymphæas, from South America, Australia, Japan and Africa. One of these pools is heated by steam, in order to bring the water to a suitable temperature to cause these tender plants to grow and bloom naturally.

THE FRUIT EXHIBIT is continuing to be one of the most pleasing features of the Exposition. The supply of apples in cold storage from several States is ample to keep the display of that fruit good until apples of the new crop are abundant. It is remarkable how well these cold-storage apples keep on the tables. Some of them have endured for four weeks without rotting, but, of course, most of them have to be replaced after about two weeks of exposure. The wrapping with two papers and a uniform temperature of about 35 degrees F. seems to furnish just the right conditions. New York has the largest apple display, but Illinois, Missouri and Ontario are not far behind. Oregon, Washington, Virginia, Delaware, Connecticut, Maine and Michigan also have good apple shows. The strawberries and cherries are coming in. Florida and California are getting in fresh fruits in some degree. Next week I will go more into detail.

H. E. VAN DEMAN.

GRANGE INSURANCE IN MASSACHUSETTS.

It is true that our State Grange has secured a controlling voice in the management of an old-established mutual insurance company. We have had control of the company for just three months, and during that time have written as much insurance as was written during all of last year. We have already discovered that notwithstanding the assertions of most of the mutual companies that their farm business was being done at a loss, their agents at least are very loath to allow their clients to renew with us. We do not believe that the statement so assiduously circulated that farm business is done at a loss which other lines of insurance are obliged to pay is strictly correct. And yet, paradoxical as it may seem, it is possibly commercially correct. I mean by that when a large fire occurs which wipes out millions of dollars, such as the recent Jacksonville fire and the historic Chicago and Boston fires, causing a property loss greater than would occur in all the farm fires of 100 years, the companies all go through a process of bankruptcy and pay only a fractional part of the total losses, and then start over again. If such losses are fully paid we are confident that farm risks will compare favorably with those of other lines.

But aside from this what are the facts in the case? The present rates of the Massachusetts mutual companies, after deducting the by no means certain dividend, are $4 per $1,000 per year. Compare with this the rates of the following which insure farm property exclusively: The Androscoggin of Maine, $2.10 actual average for five years, and $1.78 for another period of five years. The Sandy and Beaver Valley of Ohio $1.53 to $3.23 per year. The Patrons' Fire and Tornado Company of Kansas, $2.26 average for 10 years; the Patrons' Mutual of New Hampshire, $1.87 average for 12 years; the Jefferson County Patrons' Fire Relief Association of New York, $1.78 average for three years. Do you blame us for wanting to investigate the subject by a practical experiment? The farm property is actually in a class by itself so far as hazard is concerned, then it ought to bear its own burdens. One thing is certain; while we are demonstrating the truth or falsity of this statement our members are going to get their insurance at actual cost. We may be obliged to admit the Patrons of Husbandry in Massachusetts are less capable than their brothers in other States, but we think not.

Secretary. E. D. HOWE.

USE FOR THE PONY.—Lady Wales, the Welsh pony shown in Fig. 189, is owned by H. J. Kurtz, of Covington, O. These little horses average a trifle more than 3½ feet high, and weigh from 400 to 600 pounds. From their ancestors and rugged habits in the cold north of Europe, they have inherited strong constitutions, and can stand hardship well, though no animal shows more appreciation of kindness and good care. They are friendly in disposition, and take kindly to all sorts of fussing and petting. This makes them ideal companions for children. But they are more than pets. Some can travel as much as 10 miles an hour on the road, and are highly useful on a farm where there is considerable "running around" to do. The children can harness the pony and drive to town for a plow-point or on some other errand, thus taking the place of a man and horse. The pony will pay for his keep where there are children to handle him and some little work for him to do.

HOOSIER FARM NOTES.

A Defective Stand After Deep Planting.

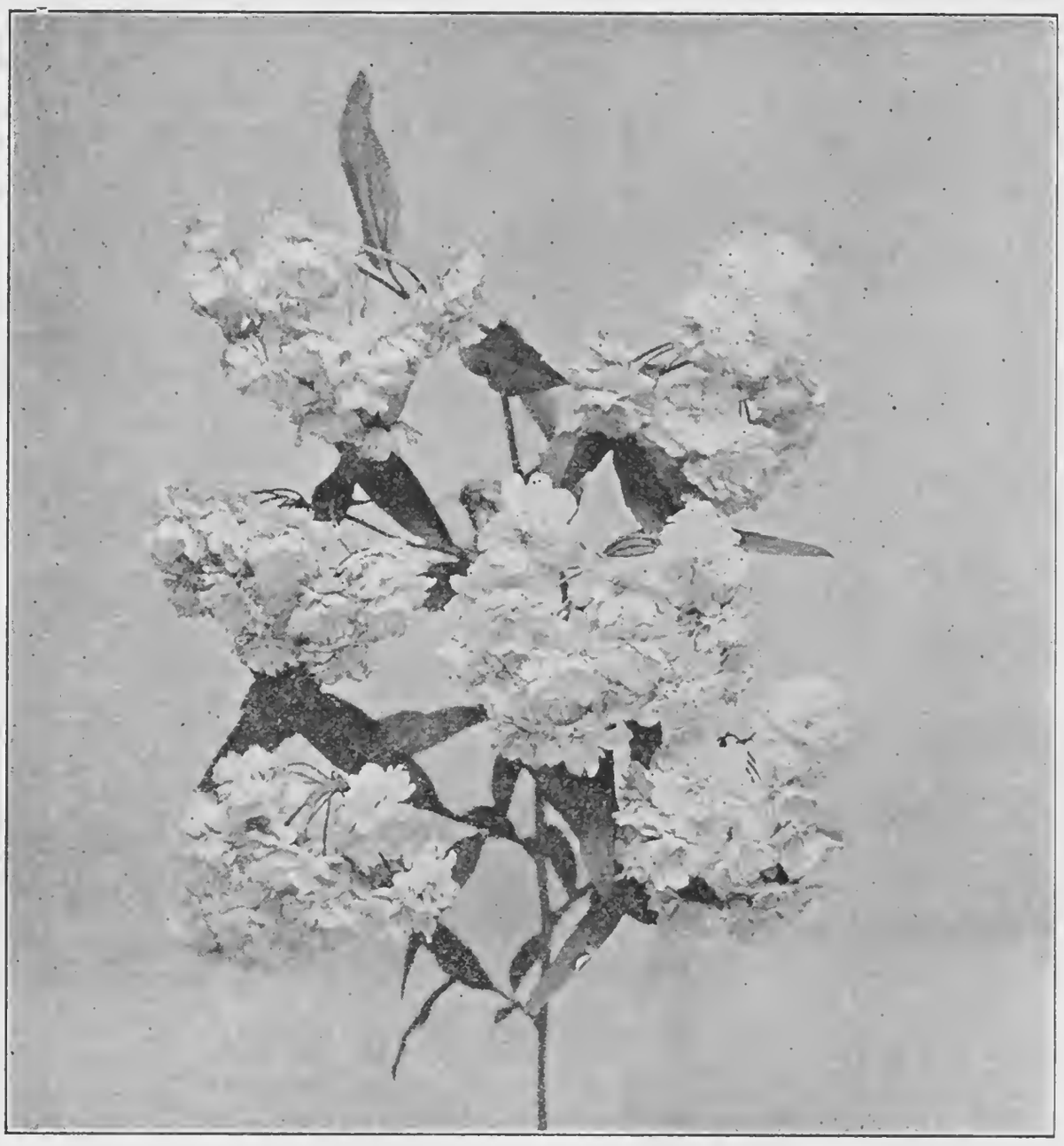
CULTIVATORS.—The writer met with a surprise lately in learning that the once-popular spring-tooth cultivator for corn, either riding or walking, is clear out of date. So sweeping and sudden a change is seldom witnessed. It is claimed after 10 years of popularity that they do not plow deep enough, especially in firm soil, such as our clay upland; that in loose black land they do well. Do not think for a moment that farmers have gone back to the old deep plowing which made the Brown cultivator so popular 20 years ago. But the fact is that the spring-tooth is too radical a change. In traveling quite a good deal among farmers I am pleased to see that in their line they are quite experts. They talk intelligently about methods of cultivating and about farm tools. The cultivating plow that will live must now have four small shovels on a side and they must be set zigzag, that is, not in a stair-step row. They must be arranged so as to run shallow but do effective work when it is needed. The wooden break-pin has also gone to stay and the spring-break is the rage. Of course anyone who knows anything about modern farming understands that everybody buys riding cultivators. One often trades in an old "walker" for a song because the riders are so much better. In fact, they jokingly say that a man is a fool that walks in plowed ground all day, and ought to be kicked right good for having so little sense.

MANY PLANT TOO DEEP.—This is the most common fault noticed. Nature plants about twice the depth of the thickness of the seed. Many farmers plant three or four inches deep. The plumule depends wholly on the starch in the seed to grow to the light, after which it grows hair roots and takes up nourishment from the soil. If deep the plumule is necessarily slender and weak, and if the soil is puddled by heavy rain it will often curl up and not get out at all. If planted shallow it will grow strong and push its way out. A few days ago I was looking at a field that the farmer said he had just finished planting over, and it was June 6. The only trouble was planting too deep. That one mistake had cost him probably half the value of his crop. It was the more aggravating because it was wholly unnecessary. Often one loses from causes that he cannot control, but this was purely a blunder, and a costly one, too. As I said a few weeks ago, the roots of corn, like other grasses, come to the top and his roots were no deeper than if planted shallow. He needed a furrow.

MANY NICE CALVES.—In passing through several central counties lately I noticed from three to 10 beautiful dark red calves in most every barn lot. This is unusual, since they commonly go for veal, or are picked up by feeders. This year the veals are low in price, and the calves having been so high lately are held. Beef being lower than two years ago there is not so much demand in that way. At that time there were two men watching every calf, when a baby, to snap it up as a feeder. In fact, I knew many calves bought last year before they were born.

PLUNGERS.—It is interesting to see how many farmers dash after any new promise. All goes to hay, and tools and barns are prepared. Then a bad crop or two and the notion changes to potatoes, or to hogs and then to rye and Blue grass. But the farmers who make money vary but little and get out before the crash. They maintain their rotation and equilibrium and make a little money each year. It is costly to equip oneself for any crop and to change violently, and often is ruining. I have in mind a farmer who went around to many sales, and went in debt for stock. Here he had to bid against those who will pay enough more for stuff to equal 20 or 30 per cent because off a year without interest. When his notes came due sheep and cattle had fallen till he got nothing for feeding and little for feed. The hogs raised in price and did some good. But he actually paid $5 a head for common sheep that the owner had bought at the yards a few weeks before at $3. This is plunging, and with little judgment, too. Money is seldom made and is very often lost in that way. It is the steady, careful man, who trades judiciously and rotates crops, who makes money on a farm. In the Central West the crops are unusually good. A half acreage of wheat was sown, on account of recent losses of the crop, but it is promising. The grass is good and corn a little late, but may make a great crop. Farmers are in good spirits and farm homes were never more beautiful. E. H. COLLINS.

Indiana.



SPIRÆA LANCEOLATA. DOUBLE-FLOWERING FORM. FIG. 190.

SEE RURALISMS, PAGE 454.

GETTING RICH IN A HURRY.

GUESSING CONTESTS.—We receive letters from people who ask about various "guessing contests" advertised in certain papers. It is hard to believe that any great number of country people really believe that they can win money in such schemes. The rogues appear to think so, however, for this is what an advertising journal says:

He knows just where to go for suckers. Whenever a new guessing contest is originated by him, the first place it is tried out is in the agricultural papers. His latest ad., *"Money—You can put dollars in your pocket,"* is an exclusive offer to farmers. This exclusiveness is because the public, in the larger cities, no longer wastes any time on guessing contests.

Town and city people may have outgrown this particular swindle, but they have done so only to run after worse ones. The plan is to print a number of letters and offer prizes in cash to those who can put them together so as to make the names of several noted cities, vessels or men. It is so easy that thousands of silly people make up the names and expect to win the "prize." In order to "enter" they must send a small amount of money as a year's subscription to a worthless paper! It is sad to think that sane people cannot see through this evident trap. It would seem as though country people above all others ought to realize that life's prizes are seldom distributed as guess-work. A farmer sees the slow, steady growth of Nature's handiwork. The evidences are all about him. It is strange that he can be driven into schemes for securing sudden wealth without work or great skill.

"GREEN GOODS."—Readers are often shocked at receiving typewritten letters marked "confidential" containing the following proposition:

Your name was sent to me by my son, who is my traveling representative. He tells me he has learned that you are a man who has got a still tongue and a reliable and trustworthy man to do business with, and I therefore take the liberty of proposing a scheme to you that 99 out of a hundred up-to-date business men would gladly grasp if they could personally examine the work, thereby convincing themselves of the absolute safety of my offer. I am an expert engraver, having for 23 years been employed in the Bureau of Engraving in Washington, D. C., and for 12 years was superintendent of one of the largest bank note companies in this country. During my leisure hours I took up as a side issue the duplication of Ones, Fives and Tens, and as they were the original denominations I had worked upon, you can believe me when I say they are perfect. I sell them at the following prices:

Four Thousand Dollars in my goods will cost you Five Hundred Dollars.

Seven Thousand in my goods will cost you Seven Hundred Dollars.

Eleven Thousand in my goods will cost you One Thousand Dollars.

Of course this rascal lies when he talks about his "son" or any personal knowledge of your affairs. The letter is a printed circular sent to addresses which these rascals obtain from newspapers or directories. They have no money to sell. The whole thing is a game of bluff. Those who are foolish enough to come here with good money are sure to run up against shrewd and desperate scoundrels. One would think that no one but a fool or a knave would try to buy these "green goods," yet it is a fact that persons who are supposed to be highly moral and respectable at home sneak to this great city after this "money"—and generally sneak home sadder and wiser men.

EVERYBODY'S GARDEN.

KOHL RABI.—This vegetable is grown by many market gardeners at a fair profit, and is desirable even in the small garden. The seed may be sown up to the middle of June, or even later, in drills, the same as turnips. They will be found a valuable acquisition to the table supply, and any surplus above home or market use may be fed to stock with good results. They are cooked the same as turnips, and considered by many superior to that vegetable, and as a drought-resister are more hardy.

CABBAGE WORMS AND LICE.—These pests cause cabbage growers no end of heartaches; but still the cabbage growing industry goes on. Fortunately there are many remedies at hand, and some of them may usually be relied upon to hold their ravages in check. For the Cabbage worm, in small areas, where the use of arsenites may be undesirable, wood ashes, air-slaked lime, tobacco dust or salt are usually effective. They should be applied in the early morning, while the plants are damp with dew. Salt used in the latter stages of growth is not only sure death to the worms, but assists very materially in developing and hardening of the heads. In the larger operations, Paris-green is freely used, and without the least danger, until the cabbage is two-thirds grown or more. One-fourth pound to 35 gallons of water is a safe proportion, and may be used as often as necessary. Green lice often become very troublesome, but are usually themselves held in check by parasitic enemies, which prey upon them. Lack of vigor in the plants is thought to be a favorable condition for their development, and in this case, thorough cultivation, with the application of some active fertilizer, as nitrate of soda, will help to overcome the difficulty. Doubtless weather conditions have most to do with their development, and cool, damp weather is thought to be most favorable for their onslaught. For this reason they should never be planted in shaded ground, but where the sunlight has as much play as possible. The remedies are pyrethrum dusted on, or sprayed on in solution in the proportion of a tablespoonful to two gallons of water. Kerosene emulsion, air-slaked lime or tobacco dust are also used; but whatever the remedy, care must be taken to get it to the undersides of the leaves, as that is where the insects work, and hence the difficulty in reaching them with any of the remedies.

CAULIFLOWER.—The general culture of the cauliflower is essentially the same as for cabbage, both requiring rich soil and constant cultivation. This late in the season it is preferable to buy the plants for setting, rather than to grow them from the seed. Blanching is done the same as endive, requiring but a few days of time. Select stock always finds a ready market, especially the late-grown, and at very satisfactory prices. With the addition of beets, carrots, beans, etc., for which there is still ample time, a very satisfactory garden may still be grown this year. J. E. MORSE.

Michigan.

BIG MELONS.—In the issue of June 15, on page 420, I saw an inquiry from T. W. F., South Bend, Neb., about raising large watermelons. He says he plants them five feet apart each way, and complains about their growing small. In southern New Jersey we always plant watermelons nine feet apart each way and thin to one plant in each hill, and we always have large melons if we plant a large-growing variety. R. M. S.

Erma, N. J.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Lime on Manure.

Reader, Lopez, Wash.—Shall I put air-slaked lime on manure in stable? If not, would it do to mix in when manure is hauled out to compost heap? I am using sawdust as absorbent, and wish to rot it before putting on land.

ANS.—We would not put lime in the manure. You will lose more than you gain by doing so. Lime, especially in the stables with the liquid manure, will set free more or less ammonia. Plaster or sulphate of lime is much better as an absorbent, though it will not rot the sawdust. If the sawdust is well soaked in the liquids and packed with the horse manure it will be fit for use in a reasonable time.

Snout Beetle on Fruit.

J. H. W., Blaine, W. Va.—I send you sample bug that I find on my young orchard. They are something new to me. They eat the young shoot where it joins the tree. I think one of these bugs would kill a young apple tree in a few days. They do not eat the leaves, only the sprout where it joins the tree. They eat on the under side through the old bark, and the shoot will wither and die. I have some trees that have not a green twig on them, all eaten off in the last week.

ANS.—The depredators are a large snout-beetle, known as the Imbricated snout-beetle, which has been found feeding on a very large number of different plants. The eggs of this insect are laid in May and June, between two leaves on various plants, one female being capable of laying over 500 eggs. The grubs hatching from these eggs have been reared on strawberry leaves. There is but one generation or brood of the insect in a year, the adults or beetles hibernating. The beetles are most injurious in May. Like its near relative, the Plum curculio, this Imbricated snout-beetle also drops to the ground when disturbed, so that the beetles could be easily jarred from the trees into curculio-catchers or sheets spread on the ground, and then destroyed. This is a practicable and effective method for J. H. W. to use in his young apple orchard.

M. V. SLINGERLAND.

Cow Peas and Timothy.

E. L. P., Hartford Co., Conn.—I have a piece of turf land which was plowed late last Fall and sown to rye. The rye does not promise to amount to anything. I wish to get the land into mowing. With this end in view, would it do to wheel-harrow it and sow cow peas and Timothy seed? If so, when should it be done, and could the cow-pea vines be left to decompose on the land without injury to the grass?

ANS.—While we have never tried it we should consider cow peas and Timothy a worse team to work together than an ox and a trotting horse. The time for sowing cow peas is not the natural time for seeding Timothy. You would not be likely to obtain a good stand of the grass. We should sow the cow peas alone, plow them under about September 1 and then prepare the land thoroughly and seed to Timothy and Red-top.

VAN DEMAN'S FRUIT NOTES.

ALL SORTS OF QUESTIONS ANSWERED.

Seedling Peach Trees; Mulching.

R. E. D., Springland, N. Y.—1. Last Fall I planted about 300 peach pits of a very superior grade. They came up to a pit, are in one single row about 20 feet long and are about six inches high. What would you advise me to do with them, as I wish to plant them when large enough? I don't wish to bud them. 2. I have trees that have been set out one and two years, pears, peaches, quinces and plums. I wish to mulch them, but people around here think that is a waste of time as the trees are in good order. Will you advise me whether it would be best to mulch them? 3. Which is the largest chicken that grows?

ANS.—1. These little seedlings seem to be properly planted in every way and in good condition for making thrifty trees for planting into orchard form next year, except that they are too close together. They should stand from six to eight inches apart in the row. My plan would be to watch for a nice time for transplanting, and carefully remove the larger part of them to other rows where they may have plenty of room to grow. Early next Spring they should be planted into the orchard. 2. Mulching trees in an orchard is all right if it is continued indefinitely. That is the way nature grows trees. But if the plan is changed from mulching to plowing and cultivating there will be trouble, for the roots will come to the surface of the soil just under the mulch and be torn badly by the tools. In case the mulching plan is followed the entire surface of the orchard should be deeply covered with straw or some other such material, and the richer it is in manurial elements the better will it be for the trees; provided it is not ordinary farm manure, which might be too rich. But the better plan in nearly all cases is to till the ground thoroughly. It is cheaper than mulching except in very stony or hilly land, and is usually much more practicable.

3. The Dark and Light Brahmas are the largest breeds of chickens.

Round-Headed Apple-Tree Borer.

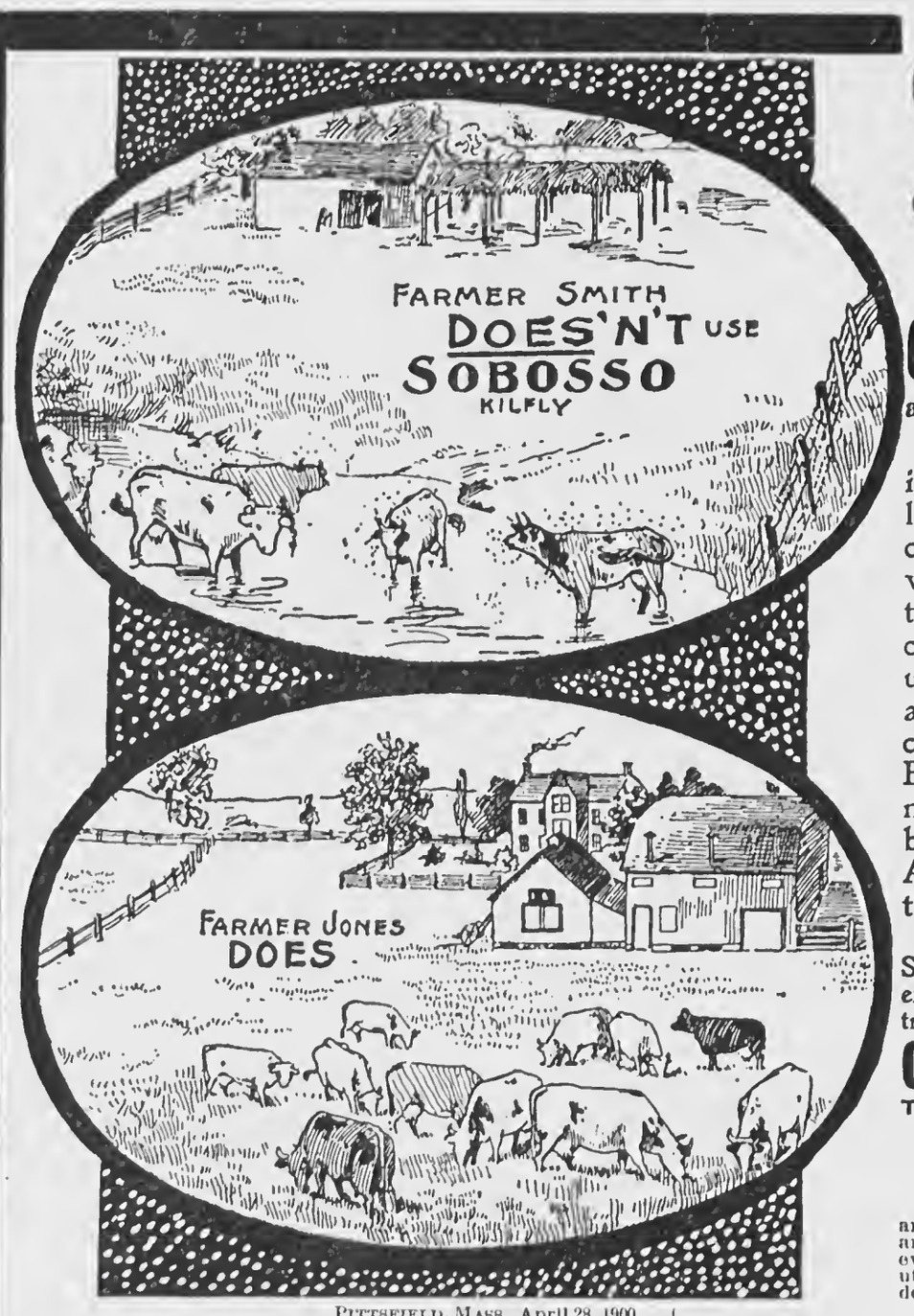
A. C. C., Millstone, Ky.—I have a young orchard which is infested by some pests I wish to get rid of. Several weeks ago I noticed that a few trees were dying, and on examination I found that they had small holes bored through the bark just above the ground. The holes are about the size of a small gimlet hole, and range down. I split one of the holes from the root and found a large striped beetle. There are fresh trees attacked every day. What is it, and what the remedy?

ANS.—The writer does not say what kind of an orchard he has, but it is probably an apple orchard, judging by the description of the insect and its work. It is almost certainly the Round-headed Apple-tree borer that is doing the mischief. This borer comes from eggs that are laid by a striped beetle with long antennæ or "horns," and on the trunk near the surface of the ground. The tiny borers soon eat into the tender bark and as the season progresses they get into the sap wood. They live two years in the tree and the second Fall they burrow upwards in the wood, sometimes tunneling six or more inches above the collar of the tree, and lie there dormant in the chrysalis stage until Spring. Then they emerge as striped beetles and the females soon lay their eggs. The best and only remedy is the knife to cut and a limber wire to follow the burrows when they are deep, after they are once in the tree. The trees should be carefully gone over with these tools every Spring, and when they are clear of insects wrap stiff paper tightly about the trunk from a little below the surface of the ground to nearly a foot above it. This prevents the beetles from laying their eggs at the place where nature indicates, and in case they are laid it is easy to find the borers. Mounding with earth is about as good. The trees should also be critically examined for young borers every Fall.

FARMERS AND WAIFS.—I saw a piece in your paper last week about farmers who complain about the wrongs of society and are doing nothing to prevent orphan and neglected children from growing up as best they can, and becoming a dangerous class of citizens. I want to say that such may be the case in the State of New York, but it will be found entirely different in the western part of Massachusetts. There are 60 city children to be found in two small towns in this part of our State. These children are in nearly every case treated as a member of the family in which they live, they are all influenced to attend church and Sabbath school; some of them have settled on our farms and in our villages, and have become honest, reliable, Christian citizens, while others have been adopted by our farmers and are being brought up and educated to fill responsible positions. In the past 25 years my parents have had five such boys in the family, one remaining seven years, and said it was the only home he ever knew. Three of these boys I am sure will make honorable citizens. If the writer of that article would investigate this matter during his Summer vacation he would find that the farmers were doing their "duty to country and humanity." F.

Massachusetts.

R. N.-Y.—We know of course that there are thousands of farmers who do their full duty toward such children. Our remarks were directed at those who do not!



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and better milk if protected from Flies by the use of CHILDS' SO-BOS-SO KILFLY.

It is a thorough fly killer and germicide, destroys all bacterial germs, insures health, greater strength and vigor to the animals, and by the absolute relief afforded to them increases the amount of milk $8.00 to $10.00 per cow during the season, making it a first-class investment. It allays nervousness in horses as well as cows, and keeps both in better general condition by the comfort it gives. As an antiseptic and for scours in calves, hog cholera, swine plague, and foul in Cattles' feet it is unequaled and may be used either in the stable, cow-shed, chicken house or pig pen. It is easily and rapidly applied with Childs' Electric Sprayer, and a herd of 30 to 50 cows can be sprayed in a few moments. Prior to the invention of SO-BOS-SO KILFLY and the Electric Sprayer there was nothing on the market that would successfully combat the annoyance and loss occasioned by flies and insects. SO-BOS-SO is absolutely harmless to man and beast. Abortion in cows, which is caused by a germ—propagated by unsanitary conditions—can be prevented by the use of SO-BOS-SO KILFLY.

Sold only in gallon cans. Ask your dealer, or send $2.00 for one gal. can and Electric Sprayer complete, securely packed and express paid to any point east of Mississippi river except State of Maine. The sprayer can also be used for spraying potato vines, bushes, trees, etc. Beware of imitations.

CONVENIENT. CHEAP. PRACTICAL.

Thousands are in use in America, Canada and Mexico. Shipments have begun to Cuba, the Philippines, South America and Australia.

The following testimonials speak for themselves:

MUNHALL, Allegheny Co., Pa., July 7, '99.
I received the So-Bos-So Kilfly and Sprayer and am very well pleased with it. I have a herd of 27 cows, and when we put them in the stable to milk these hot evenings, flies torment them very much, but a few minutes with the sprayer and all is quiet, and we can then do our milking in peace. JAMES C. KEARNEY.

LOWELL'S STATION, PA., April 18, 1900.
We can highly recommend So-Bos-So Kilfly as by keeping off the flies it increases the flow of milk and insures comfort to the cows. If So-Bos-So Kilfly is used on cattle during the summer, it will undoubtedly keep them free from lice and scurf during the winter.
C. F. MCCRAY & SON, Maplewood Stock Farm.

PITTSFIELD, MASS., April 28, 1900.
We have found the So-Bos So Kilfly to be an excellent article doing perfectly the work intended. Our customers report that it protects the cattle from flies very thoroughly, and consequently increases the flow of milk. Another great point in its favor is that it is reasonable in price. In some instances, it has been used quite extensively on horses. One of our customers wishing to photograph his team found it necessary to use So-Bos-So Kilfly with successful results. HOWARD & MORROW.

PHILADELPHIA, PA., May 2, 1900.
Last July the daily quantity of milk produced by my Chester County dairy fell off very considerably, which I attributed to the annoyance which the cattle received from the flies. About half the time the herd was standing in the stream switching instead of grazing. I ordered a sample of So-Bos-So Kilfly and by having it applied every second morning, greatly relieved the herd and increased the milk product from 15 to 25 per cent. and I have continued to use So-Bos-So Kilfly during hot weather ever since that time. Our herd of about 20 head could be sprayed in the stable in less time than it would require to milk a single cow, and I consider that I have saved many times the cost of the So-Bos-So Kilfly used, in addition to affording comfort to the herd.
G. S. W. BRUBAKER.

LENOX, MASS., April 21st, 1900.
I have used So-Bos-So Kilfly with good results. It is a comfort to both man and beast at the milking time.
JACOB STRIBEL, Supt. to the Hon. John E. Parsons.

CHAS. H. CHILDS & CO., Sole Manufacturers, 12 La Fayette Street, UTICA, N. Y.

The Cornell Reading Course.

Edited by John Craig, Professor of University Extension, and Editor Farmers' Reading Course, Cornell University, Ithaca, N. Y.

ORCHARD COVER CROPS.

The subject of orchard cover crops has excited a good deal of interest this year, and perhaps fruit growers are paying more attention to that question than ever before. I have been very anxious to obtain the coöperation of interested fruit growers throughout the country in testing a number of cover crop plants. With this object in view I have sent the following circular to a number of leading orchardists. It has met with a very gratifying response, and I feel certain that by the beginning of next season we shall have collected a considerable amount of valuable data. The circular is inserted here, not so much for the purpose of suggesting that we shall be glad to extend our experiments, but to encourage growers to try the series of experiments for themselves.

How to preserve a proper balance of the elements of fertility in an orchard soil is one of the most important subjects claiming the fruit growers' attention at the present time. Much can be accomplished by the judicious use of cover crops. The plants which are used for the purpose may be divided into two classes. This division is based on their power to collect nitrogen on the one hand, or consume it only, on the other. The legumes—clovers, peas and beans—collect and store up atmospheric nitrogen in excess of the amount they consume; while rye, buckwheat, oats and rape do not, so far as is known, consume more than is sufficient to enable them to perform their life functions. The legumes are therefore the richest green manures. Aside from the manurial value of the legumes—especially the clovers—their deep-rooting habit improved the physical condition of the soil to an important degree.

EXPERIMENTS SUGGESTED.—Plow or harrow the orchard early, and keep the soil in a perfect state of tillage up to the middle of July. If it has been plowed in Spring the surface should be thoroughly fined by frequent harrowings. Surface tillage is required, not deep cultivation. Sow cover crop between July 15 and August 1.

Plot 1. Cow peas drilled or broadcast at the rate of 1½ bushel per acre. If the soil is dry drilling is preferable; if reasonably moist broadcasting and rolling will answer.

Plot 2. Cow peas 1½ bushel, Red clover six pounds per acre. Cow peas drilled, clover broadcast and then rolled.

Plot 3. Hairy vetch (Vicia villosa) 1½ bushel per acre, drilled.

Plot 4. Alfalfa 12 pounds per acre; Red clover eight pounds mixed and broadcast together and rolled.

Plot 5. Crimson clover 20 pounds per acre, broadcast and rolled.

GENERAL REMARKS.—Each plot should contain not less than one-tenth of an acre, and may be as much larger as convenience and inclination dictate. If your trees are making satisfactory growth, they may not need the nitrogen furnished by the above crops. But a crop of some kind should cover the ground in Winter. Rape or rye may be sown as late as September 1 with fair results. Careful notes should be made. These should cover such points as time of seeding, date of appearance of young plants, character of growth, kind of cover afforded, height of plants when touched by frost, effect of frost, and finally how the various plants wintered.

ADVERSE EXPERIENCE.—A letter received a day or two ago suggests that cover crops should be used with certain limitations. This man (a peach grower in the central part of the State) writes me that last season he cultivated his orchard thoroughly during the fore part of the season, and then on one-half of it broadcast Early Essex rape. The season was excessively dry. The rape did fairly well under the circumstances. It was pastured with sheep in the Autumn. The other part was cultivated till midsummer or a little later. The orchard site is dry and gravelly. Now comes the curious part of it. This year over 30 per cent of the peach trees on the part of the orchard sown to rape are dead, and five or 10 per cent in a sickly condition, while those on the clean, uncropped ground are in fair condition. This would look like a clear case against the cover crop, and it is possible that there is a reasonable explanation based on the moisture question. Last season, as stated, was exceedingly dry; the trees needed all the moisture there was; the rape proved a too successful competitor, and the vitality of the trees was so lowered by the time Winter arrived that they were unable to withstand the usual low temperature. In this case a cover crop should have been planted in such a way as to admit of cultivation. If cow peas had been put in, for instance, drilled in rows far enough apart to admit of the passage of a horse cultivator, we could have had our cover crop and saved our moisture as well. A little lesson of this kind is important.

Weeds; Bushel Crate.

I send you some weeds that I wish to have identified. Nos. 1 and 2 are bad weeds. Can you give the size of a crate that will hold just a bushel level full of anything that has to be rounded up in measuring, such as potatoes, apples, etc.? That is, how many cubic inches in such a bushel? H. L. J.

The plants received are three more or less common farm weeds. Curiously enough two of these specimens are tramps from Europe, and these are the two worst. No. 1 is mayweed, which botanists call Anthemis Cotula. It is an annual and bears an ox-eye daisy-like flower and is fonder of moist and wettish places than dry land. No. 2 is a member of the Mint tribe. It is known to farmers by the name of dead nettle, while botanists glorify by the name Lamium amplexicaule. This is also a tramp from across the water, and is a biennial. It, like the mayweed, prefers moist land to dry land. No. 3 belongs to the Crowfoot tribe. It is recognized generally by the name of Bristly crowfoot (Ranunculus). There is only one remedy for this class of weeds, and that is hoed crops and good cultivation. The first two weeds are not eaten by domestic animals; neither is the last one, which is a sort of waste drylsh land plant. If good cultivation with a proper rotation of crops is given, no trouble will be experienced.

One bushel contains 2,150.42 cubic inches dry measure. For instance, a box 17x14x9 inches will contain approximately one bushel. In Connecticut and Kansas the heap bushel contains 2,564 cubic inches. In New Jersey, Pennsylvania, Nebraska, Tennessee, Missouri and Washington it contains 2,150.42 cubic inches.

HORSE SHOE FARM NOTES.

Saturday night, June 2, after supper, I took a hoe and went over my fields, making little channels to let the surplus water out of the holes, and turn the temporary streams off from the potatoes and grain. "Never saw so much water in these fields," I grumbled, as wearily I plodded home through the mud at 8.30 P. M. The stars were shining, and I hoped for better weather. Only a sullen, occasional roar in the far west indicated there might be a clearing shower before a change. No corn planted, beets unsown, weeds getting ahead of the newly-set strawberries; I do not see how things could be much worse, were the moody reflections of a cross, tired man, as I prepared for bed, at 9.15 P. M. In 15 minutes more it was raining; hail was beating against the house, and the flashes of lightning drove the household from their beds to the sitting room, except myself. I always have felt safer in bed; was tired and had seen all the rain I wanted to.

All at once I heard, away up on a hill, the steady roar of what I thought was wind, and as it came closer, there was something unusual about it which made me shiver down into bed and think: "When it strikes, the house will go!" A second more and it was past the house. I jumped from bed, half dressed, ran down stairs, lit a lantern, opened the door, and the storm was over. The wind did not blow, and but very little water was coming down. At 9.45 P. M. it was starlight again. Hearing a noise in the cellar we found the flood had broken in the southwest windows and filled that end of the cellar with dirt and stone. The incubator, in which the chicks were just hatching, lacked just an inch of being filled through the ventilator. The stone carried across the cellar blocked the back door, which is luckily on the level of the floor, and we had to cut a hole out of the bottom from the outside to let the water out. At 1 A. M. we had enough water out, so we could start the lamp again. But little water came into the house, because the stone and mud banked up on the porch, stopping the crack under the door and turning the water to one side. In the morning we found two enormous ditches the whole length of the hillside, and probably 600 loads of stone deposited in the road, yard and field. Crops were torn out, covered over and ruined to such an extent, we seemed to be wearing colored glasses of blue. Stones too large to lift, holes nine feet deep, trees uprooted and a half acre covered with stone, all done in 15 minutes, attest the power of the forces of nature.

Sunday was a day long to be remembered, and the peril seemed to grow, the more I looked it over. Man can accomplish much, but his efforts are puny beside rushing water. Monday I worked so hard I had no time to worry, and with a kind neighbor's help we drew 45 two-horse loads of stone and mud from in front of the door. What a blessing labor we so often grumble at, may be. I was heavy hearted, but slept in spite of the mind cloud which hung over me, thanks to the work. A friend came to see the ruins and remarked: "A thousand dollars will not make this good, but I would pay it and agree to wheel it all away in a wheelbarrow if I could have my wife back again." After he had gone I grew ashamed of my hard feelings over my little misfortune, and a spirit of thankfulness came over me that we were all spared to plan and build over the ruin together. The second cloud was burst by sympathy for another, and as the sun shone the grass looked green again. The dirt drawn from the yard covered an unsightly stone pile along the road side, and when seeded will be easily mowed with a machine. I have wanted to cover them for three years, but could not get time. The stone and gravel in the cellar, after removing the mud, will make a splendid foundation for a cement floor, and it's all in there for me. The road commissioner has agreed to set a stone crusher in the meadow and use the debris for road making. Already the effort to overcome the effect of the forces of nature is creating a new interest in making things better than before. We have many stones and are sometimes bothered for a place to put them, but a place is provided now in the two big ditches that will last for several years.

There were 100 chicks in the incubator when I waded to it Monday. Things might be worse. A hen turkey with 15 three-day-old chicks sat in the henyard and faced the storm. The overflow from the main torrent nearly engulfed her; but she hugged the ground the tighter and faced the danger to protect her young. In the morning she was half buried with mud and had to make considerable effort to get loose. Only two chicks were dead, and they had been smothered by her successful effort to keep out the water; an example of pluck and affection worthy of notice. She did all she could, and would have given her life to preserve her young. My father came over and said: "Here is some cash to aid in getting things in shape again. You will need it more now than later." Fathers and turkeys think more of their children than they show or get credit for, sometimes, and I write of this only to remind parents that they should not wait for a cloudburst to wake them up to the fact that loving words and stray dollars will do the children more good *now* than when they do not need them.

C. E. CHAPMAN.

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PLANTS—Tomato, Cabbage, Sweet Potato, Pepper and Celery. Price-list free CALEB BOGGS & SON, Cheswold, Del.

100,000 POTTED STRAWBERRY PLANTS. List free. T. C. KEVITT, Athenia, N. J.

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Leading varieties, carefully packed with moss in baskets, f. o. b. here. 250 plants at 60c.; 500 for 90c.; 1,000 for $1.50. Special price on quantities over 6,000. Cash with order. Plants ready 15th to 20th of June. WOODLAND FARM, Canastota, Madison Co., N. Y

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PAGE

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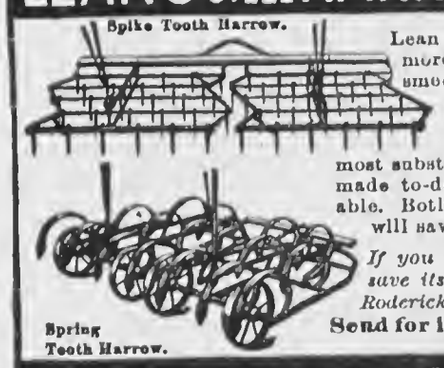
Spike Tooth Harrow.



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Lean harrows make fat harvests. They do more work and do it more efficiently than any other harrow. They tear up the ground, smooth it for sowing, harrow in the seed, kill the weeds after the crop comes up. The teeth are adjusted to suit any condition of the soil. By a touch of a lever they are instantly cleared of trash without stopping the team. The most substantial and finest finished farm implements made to-day. Made entirely of steel, light and durable. Both the spiked tooth and spring tooth harrow will save enough in a year to pay for itself.

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Steel Land Roller

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Ruralisms

NOTES FROM THE RURAL GROUNDS.

EFFECTS OF THE PETROLEUM SPRAY.—Soon after Prof. J. B. Smith, of the New Jersey Experiment Station, recommended crude petroleum as a remedy for San José and other destructive scales, he was horrified to find successful users advocating it as a cure-all for the diseases afflicting fruit trees, so marked was the occasional increase of vigor following its application. It is true, many trees were injured or killed outright, but in all investigated cases, it was found that old or thickened oil had been used. The trees sprayed on the Rural Grounds last March, consisting of Abundance, Satsuma and Bailey Japan plums have now the darkest and most luxuriant foilage of all. We do not think the oil can add anything to the vigor of the trees, but the thorough applications we gave, going over every twig twice, have not only exterminated the scales, but surely must have buried beyond all resuscitation any fungus spores that adhered to the bark, as the surface is still coated with paraffin, which will remain, according to previous experience, until late next Spring. The incessant rains that prevailed through April and May favored the extension of fungus troubles, and the foliage of the best of the unsprayed trees of similar varieties show the result of their attacks. While Prof. Smith is the last authority likely to claim fungicide properties for petroleum and much regretted the early dissemination of all reports of increased vigor following its use it is quite possible that it may prove more efficient in this respect than he is willing to admit. Fungus spores, like seeds of higher plants, require moisture for their germination, and a coating of oil or wax may be as efficient in preventing growth as if there was some chemical action, which is highly improbable. It is not safe to recommend an annual oil bath for trees affected with anything less deadly than the Pernicious scale, but in view of its seeming persistence in keeping off dangerous bark-inhabiting insects and the possibility that it may cover up and render inert the Winter spores of such destructive fungi as the brown rot, Peach leaf-curl and the shot-hole disease of the foliage, some careful experiments are in order. Bordeaux Mixture, now the chief reliance for combating these minute pests, is effective where it hits, but is very fugitive in its effects, being easily washed off by a heavy rain, while oil persists for many months. There is yet much to learn about mineral oils as applied to dormant trees, but the main requisite is to ascertain its limits of safety. If increased vigor follows an application, it is not reasonable to credit it to a direct beneficial effect of the oil, but rather to the destruction of irritating parasites. If it can be shown that petroleum either destroys or seals up fungus spores, so as to prevent their development for a season, the fact would prove a strong additional incentive for its use when dangerous scales infest the tree. Here is a chance for investigation by our experiment workers.

THE LANCE-LEAVED SPIRAEA.—The true Spiræas are all desirable, low-growing, extremely hardy shrubs. They are of the very easiest culture, and remain many years in good condition when once established. The season for flowering for the different varieties runs from the middle of May to nearly September, while the colors vary from pure white to deep crimson in Anthony Waterer, the new variety of the pink Japan species, S. Bumalda. Spiræas are so varied in character that it is not easy to settle on the variety one really prefers. Fig. 190, on page 451, represents the double flowering form of Spiræa lanceolata, often catalogued as S. Reevesi. When this fine sort blooms in June, we always think it the best of all, but popular preference is usually given to the elegant S. Van Houttei, flowering a week or two earlier. This is a variety of garden origin, and is supposed to be a hybrid. It is one of the most beautiful of all hardy shrubs when its drooping branches are hidden with great clusters of snowy blossoms. The flowers are single, however, and the petals fall readily, which is not good for cutting. S. lanceolata, especially in the preferred double form, is acceptable both as a garden and cut flower. When in bloom, the plant is completely covered with little white rose-like flowers, shown in the engraving. The blooming period lasts nearly two weeks, and the plant always presents a neat appearance from the symmetrical arrangement of its narrow foliage.

A DISAPPOINTING STRAWBERRY.—When the "everbearing" European strawberry, Saint Joseph, was introduced, three years ago, great hopes were entertained that we had at last received a variety capable of bearing Autumn fruit. It was so highly recommended that many trials were made, only to end in disappointment. Saint Joseph makes a pitiably small plant, as compared with our best native varieties, though it does not lack vigor, and produces a few small, pale, but well-flavored fruits under ordinary cultivation. If strongly fertilized and irrigated during dry weather, it throws out a profusion of runners, the earliest of which bear fruit soon after rooting, thus it is possible to get a limited supply of berries in the Fall. They have the agreeable taste of the Alpine strawberry, Fragaria elatior, and it is likely that this species was a factor in the production of the new variety. Realizing last season that the good quality of the Saint Joseph was a more important characteristic than its capacity for repeated cropping, we crossed it with the Greenville, a robust and prolific native kind, of very indifferent flavor. The result as determined by the seedlings already planted is the most complete blending of desirable qualities we have yet seen in strawberry hybrids. The vigor of the plant and prolific tendency of the Greenville not only remains, but in some cases is apparently increased, while the sweetness and high flavor is fully retained. We have never seen such a promising lot of seedlings, yet it is highly probable that none may prove of commercial utility. A new strawberry must now possess many points of positive merit to justify an introduction to extended cultivation. Much experience has taught us that the high anticipations aroused by the first fruition of a hybrid plant are too often rudely dissipated by more extended trials. It is too soon to ascertain whether the autumnal fruiting tendency is to be retained in any of the seedlings. W. V. F.

APPLES IN THE HUDSON VALLEY.

Shall It Be Ben Davis?

There is no doubt that at present Ben Davis is a profitable variety of apple to grow. Whether it will continue to be so in the face of continued large plantings is now simply a matter of opinion. We have set no Ben Davis, and may have erred in judgment. In addition to Baldwin, King and Northern Spy, Jonathan does well and is a good market apple. Sutton is said to do well here and has hearty commendations. I don't think that anyone who sets either of these varieties will make a mistake.

W. D. BARNS.

Ben Davis is certainly profitable at present, but may not be in the future. It needs the whole of a long season to develop as it should, and grew finely in 1899. The flavor and appearance are dependent greatly upon foliage, which often deteriorates late in the season. Hubbardston and Sutton are strong of foliage, and very satisfactory, especially the latter, in some ways. With me Sutton is slow on its own trunk and liable to bark trouble, like King. It should be top-worked on Spy. In order of preference I would say Baldwin, Spy, Sutton, Hubbardston, King, Ben Davis.

W. H. HART.

I would not recommend to plant Ben Davis in the Hudson River Valley. Before the trees could come into bearing the millions of trees of that variety already growing in the West and Southwest, where it does far better than here, will fill the markets with all of this quality of fruit that will be wanted, in my opinion. I would plant Sutton, Haas and York Imperial. We may be too far north for the latter, but I would try it, as it is a long keeper. The Haas has sold this season for more money than any other kind, because of its beautiful color and size. The Spy is a grand apple when well grown, but under poor care it is one of our poorest apples, of no flavor or value. The King is not worth growing on its own roots in consequence of the blight of the bark next the ground which kills the tree just as it gets into full bearing. It should be top-worked on Spy or other hardy kinds.

WALTER F. TABOR.

I think Ben Davis is, and will be for some time to come at least, a profitable variety for this section. They are vigorous growers, healthy foliage and early and abundant bearers of fruit that sells at the top of the market. So long as these things are true this apple is preeminently a money maker, and I raise them for that and not sentiment. If the time comes when they will no longer sell readily I shall top-work them with some variety that will, and then be many dollars ahead of the man who has been growing apples that have quality and nothing else in their favor. I should not thing of setting either Spy or King for profit. The latter is too slow in bearing and too susceptible to scab and except in a few peculiarly situated orchards that I know of is not a profitable variety for this section. King will do if top-grafted on to Spy or Ben Davis stock; otherwise it is a very delicate and short-lived tree. The Sutton is first class, particularly when top-grafted; Hubbardston the same. I should also set R. I. Greening. I answer the above from a purely commercial standpoint as to Winter varieties. I think that the Fall Pippin, Maiden Blush and Oldenburg are all very profitable as Fall varieties. EDWARD VAN ALSTYNE.

THE HIRED MAN.—As I am a reader of THE R. N.-Y. my attention was recently called to the article on an ideal farm hand. Do the farmers who advertise for an ideal man stop to consider that if a hired man is allowed good wages with fair treatment he will be encouraged to give more and better work? It is not a one-sided affair, but there are duties on both sides. From personal observation I have found that help fairly treated has a more willing disposition to do well, and a man who is strictly reliable, and takes an interest in his work, surely ought to command better wages. It has become a well-known fact that men who employ help demand too long hours, with few privileges, and are not willing to pay for labor performed. It would be wise to remember the Golden Rule. A CONNECTICUT READER.

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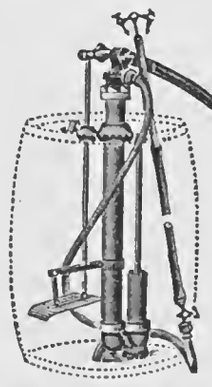

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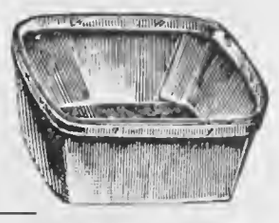

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Hope Farm Notes

FINE WEATHER.—It came at last the second week in June, with sun and drying wind that quickly put a polish and sparkle on the woods and fields. The sun even went into that dark hole in the northwest where most of our storms come from and chased every cloud out of sight. No doubt some of us will be calling for more rain before July, but right now we are enjoying perfect June days. The poet tells us that such days are the rarest thing in nature. I agree with him when they are as well done as nature served them this year. The man who couldn't feel, 'way down to his toe, the glory and blessing of living as the breeze crept over the hill and rippled the sunshine into him is a dangerous character. He ought to be in jail, for the evil in his heart is too strong for ordinary things to overcome. If a perfect June day can't melt him—he's lost.

STONE WALL AGAIN.—Of course I am not urging any man to get down in the grass and dream away a June day while the corn is unplanted and the grass and weeds are jumping in the potatoes. I refer more particularly to Sunday, though a farmer can be thankful for good weather without losing a stroke of his hoe. I suppose I ought not to talk about my Sunday afternoons, for since I spoke of sitting on that stone wall I have felt like a target. Here, for example comes a man from Illinois:

> You probably were not aware that I was a life subscriber, and would continue it in the future if it were not for the uncertainty of it being allowed to circulate where I am going. I do not think a paper whose writers sit on a stone fence Sundays building air castles instead of taking the Bud and the Graft to Sunday school, and showing them the other side and beyond the fence would have admittance.

I still think that a man might be in much worse business than spending a Sunday hour on my hill looking off over the valley. The children go to Sunday school with the Madame every Sunday morning. On a recent Sunday the Bud had a sore foot, and could not go. I put the little saddle on the pony and, with the Bud on his back, while I held the halter we wandered over the hills and through the woods for hours. We would stop now and then to let Peter eat while we sat on walls or logs and talked the things which come so readily to a man and his little girl. A child that cannot pick up a more thoughtful view of life or gain some little strength of character from looking over the great, beautiful stretch of country that lay below us would hardly be worth raising! As to the circulation of THE R. N.-Y. in the great, mysterious "undiscovered country" I know nothing about it. I feel pretty sure that people will not be able to take their gold, their selfishness, their profit or their bigotry and narrow creed along with them. As for the love, sacrifice and humble contentment I hope that will go.

FARM CROPS.—The ground is thoroughly soaked after our long rains. I think there is moisture enough in the soil to mature a crop of corn or potatoes if we can hold it there. Our soil is naturally heavy. Stony soils usually hold moisture well. As soon as the soil would stand it we got into the potatoes with the cultivators. With Dan and Nellie on the double cultivator and Frank escorting the single a big area could be worked over in a day. It was a bright, windy day just right for killing weeds. The potatoes are in hills, and we shall ridge up around them a little at each working. . . . We finally planted five acres of corn by June 7. In seven days it was up nicely, and is growing rapidly. This corn was all tarred and the crows have no use for it. This corn is at the top of a high hill, and I expect it to make grain—also four acres more lower down. I shall plant our flint corn up to July 1. . . . Our first grass was ready to cut by June 20. I believe in cutting grass early when the weather is right for it. Our rye and Crimson clover was cured in the cock this year. It lay on the ground long enough to wilt and was then raked up into large cocks. These were opened or turned over to the wind several times, but not spread out. In spite of the wet weather this fodder cured well. It is a great mistake to sunburn hay. I was at a fair once where a number of men were talking of farm work. "I'm a farmer," said one, "see how brown my hands are!" He held his hands out—backs up. A quiet old farmer stepped up, caught one of the hands and turned it. "Turn them hands over!" he said. You see a baseball player or a golfer or even a dude might sunburn the back of the hand, but the true badge of farming was the callous on the palm! Some people go so far as to think hay is not properly cured unless it is as brown as old straw. The cow knows better—she wants the green color and the sweet smell. . . . This is to be a fearful season for weeds. They are getting a great start, and they enjoy the sun as well as the next plant. We are using the weeder wherever we can, but there will be much hand hoeing in spite of all. Three days after the corn was planted Charlie went over the field with the Acme harrow, and thus killed millions of the little weeds. . . . It is almost impossible to find a Cabbage butterfly this year. Usually they are here by the thousand at this time. Potato beetles have been kept back by the wet season, but we now find plenty of hard-shelled rascals, and their children will rise up to curse us later.

GREEN STUFF.—Our first early peas (Alaska) were ready June 19. This is later than usual, but earlier than we hoped for at one time. The first mess of peas makes an event with our family that is worth recording. . . . Turnip greens were ready June 14, and the little turnips will follow quickly. I am very fond of boiled turnip tops. . . . Beets are late this year. They grow slowly and our own crop will not be ready for some days yet. Nothing can be finer in the season than the first inch beets boiled until they are tender and well pickled. . . . Those Florida cabbage plants are doing well. They began to head up early in June and have made a good growth from the start. One of our friends in Dakota says this:

> I don't think it fair to New Jersey to put New Jersey hotbed cabbage plants by the side of outdoor grown Florida plants. I think the test would be fairer if outdoor or cold-frame New Jersey plants were used.

Of course I want to give New Jersey every chance she is entitled to. It may be that plants sown in the Fall and wintered over in the frame would beat the Florida plants sown in the open in January and reset several times, but as compared with our Spring-started plants, I think Florida will win, though it may cost too much to get them here. . . . Some of the Lima beans required several plantings this year before we could hope for even a fair stand. We have it at last and with the return of the sun the beans are fairly dancing. That's good—for they will be bread and meat to us in August.

CUD AND KICKING.—Three things connected with our life at Hope Farm seem to have stirred readers up with a long stick. I told about spanking the children and several good friends seemed willing to undertake the job of giving me a dose of the same medicine. I sat on a stone wall of a Sunday afternoon and thus sat down on a whole regiment of pet theories and ideas. I spoke of Julia, the kicker, and straightway I learn of dozens of such animals. I am led to conclude that spanking, philosophizing and kicking are both popular and unpopular, with strong partisans on both sides. Here is a good one:

> I see you had some experience with a kicking cow. I broke in eight heifers this Spring, and six of them were reasonably quiet, but two were kickers. One of them was the worst case I ever saw, without any exception. She was large and strong as an ox; she would not own her calf; if it came near her she kicked it clear across the stable. I put that cow in her stanchion and pushed her around against the stanchions and strapped her to them so she could not throw herself or lie down; then I tied a rope around the leg next to me and pulled it back and tied it fast about right to milk her. She kicked and flounced and tried to lie down. I kept right on milking. She could not bring her foot forward any more to hurt me. After a week's milking she gave up, and now she walks right into the stable and puts her foot back as gently as any cow could to be milked. The other kicker gave up much sooner. I have always noticed that when a cow chews her cud there is no kick in her heart, and when a cow does that it is not necessary to have a rope on her any longer. A. L. S.
>
> Huron Co., Mich.

That is about the way we made Julia quit—prohibition did it. The relations between cud and kicking are too much for me. In my younger days I once saw a prize fighter preparing for the ring. He chewed gum continually. While meditating and planning for his hardest blow he kept his jaws at work. He claimed that this working of the jaws overcame his nervousness, deceived the man he was trying to hit, while the mass of gum might ease a blow on the mouth. I have never had occasion to try it—but it looks reasonable. Julia is mean enough to chew the milker off his guard and then put her foot 'way through him. The "cud" is really a wad or parcel of "grass hash" floated up from the great stomach of the cow within reach of her tongue for chewing over. If some men I know could reach back into their past actions and bring up a mental cud for rethinking I should think they would aim several hard kicks at themselves.

H. W. C.

DOUBLE SUNSHINE.—We had just finished reading Hope Farm Notes and were trying to bask in its imaginative sunshine, and wearily watching the dripping trees, as we have been wont to do for days and days, wondering when real sunshine would come. As we have suffered from a climatic disorder for several weeks, and were waiting for Nature's great physician, the sun, perhaps impatiently, the male portion of our neighborhood came stalking into our yard with axes and saws, and at once pounced upon our (un) fortunate pile of logs that had been secured at our last sleighing. It is needless to say that our log pile was soon transformed into a goodly wood pile, and though the lowering clouds did drip a little, it was hard, very hard, to rain where there was so much sunshine. In the afternoon the clouds broke away and there was more sunshine, and we just felt thankful for two kinds of sunshine, and that we could enjoy them both. J. A. O.

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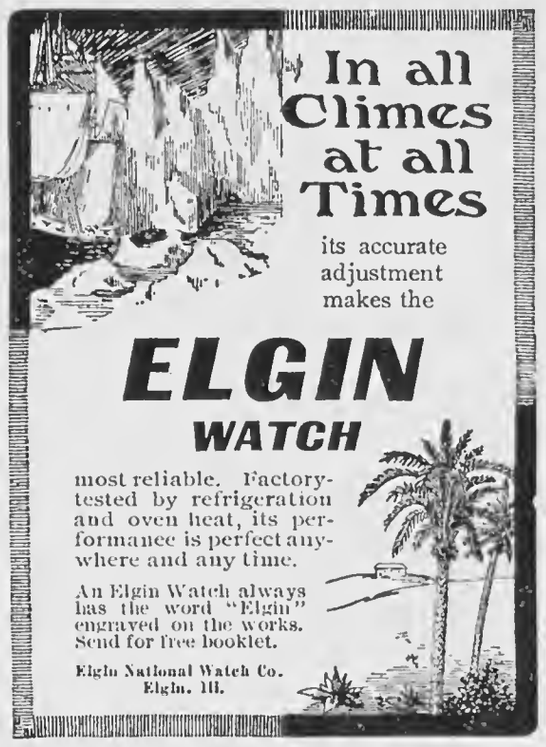

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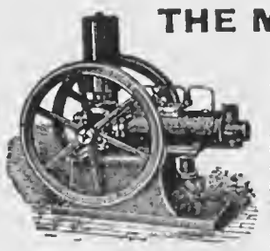

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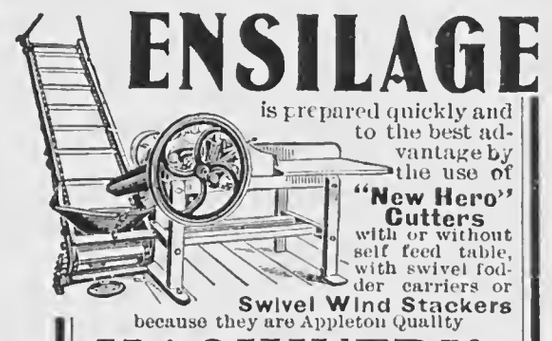

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SATURDAY, JUNE 29, 1901.

INDICATIONS multiply that, as a whole, the apple crop will be short. Early apples ought to bring more money than usual. We do not go on record yet as predicting a very short crop, for the outcome is many days away yet. The chances are, however, that good apples will be scarce. This will be a good year for drying some of the fruit that would be thrown away in an ordinary season.

*

ONE of the greatest industrial developments of late years is the use of cement for building purposes. There has been such a sudden increase in the use of this material that in some sections the lumber trade has been affected. Thomas A. Edison now announces that he has discovered a new process of making Portland cement which will greatly cheapen the price. If this prove true still more cement will be used, and we may expect to see outbuildings and dwelling houses made for a very little money, and by ordinary farm labor. This will probably benefit farmers more than any other class.

*

BEFORE the fate of the Grout bill was settled THE R. N.-Y. began to protest against the reappointment of J. W. Wadsworth as chairman of the House Agricultural Committee. For months we protested alone —now help is pouring in from all sides. The New York State Grange has issued a strong call to arms—which in this case means a call to pen and ink. The agricultural papers are falling into line. We urge all who are interested in the cow to begin at once to *vote with the postage stamp.* Wadsworth should be put back in the ranks. When Speaker Henderson returns from Europe he should find his desk hidden beneath a flood of strong letters protesting against Wadsworth as chairman. Vaccinate Mr. Henderson with ink, and he will be made immune to the oleo disease.

*

FARMERS and truckers through the manufacturing section of New Jersey complain bitterly of the losses they sustain from petty thieves, who loot both fruit and vegetable crops, even going so far as to dig potatoes out of the ground. They say that the worst offenders are Italians of the lowest class, who spend their leisure in scouring the country, picking up everything that they can find. Even when caught in the act of robbery, the farmer has no redress, being unable to name or locate the depredators when trying to get a warrant for their arrest. An attempt was made to pass a law permitting farmers to be sworn in as special constables, that they might have power to arrest such thieves without the delay of seeking a warrant. This law, however, failed, and it is said that the chief opposition to it came from local justices, who feared that they would be deprived of their fees, by thus giving farmers the right to protect their property. The farmer's property right is expected to stand back for the man with a political pull.

*

WE have heard of an old farmer who became tired of farming, and had a longing for town life. He engaged a real estate agent to advertise and sell the old homestead. This man had little sentiment about him, but he knew what appealed to buyers, and he wrote a description of the farm and printed it. When the paper containing the advertisement came and the wife read it aloud, the old farmer sat silent in his easy chair for a long time. At last he said: "Mother, that's a description of our farm, is it? The grand old lane—fine orchards of all kinds of fruits—cosy homestead, surrounded with magnificent trees and shrubs —an ideal spot in nature, eh?" "That's what it says here," answered the wife, as she looked out on the sloping green pasture field at the cows contentedly chewing their cud under the shade of an elm tree. "Well," said the farmer, "I'll countermand the order, for Old Elms Farm is not for sale. If others see all these attractions on the old farm, why they must be here. We've kinder grown up with them, and didn't notice 'em. I guess it's good enough place for us to end our days on, too." There was a man whose life had grown on so softly and slowly amid familiar scenes that he could hardly realize the beauty and peacefulness of his home until they were pointed out by others. It is a sad thing that so few farmers can fully enjoy and appreciate nature in all its bountiful beauty. The dollar and cent vision will, if we permit it, cloud over and obscure the best things of farm life—best because something better than gold must be paid for them.

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ON page 450 is an account of a 100-acre farm in New Jersey from which $3,000 worth of farm products were sold last year. This money did not come from sales of fruit or truck or other special crops, but from the common farm crops such as grain, hay, potatoes and milk. It would be a sad mistake simply to give these figures and then leave it to be inferred that any 100-acre farmer who fails to do as well is falling short of his possibilities. That is the feeling left after reading some reports of farm operations. It is easy for any practical man to see that such conclusions are wrong. There are dozens of important things back of the $3,000 income from the New Jersey farm which must be taken into account. In fact, when you come to analyze any great farm success you will find that special conditions of soil, locality or markets have much to do with it. We believe that much harm has been done in the past by the recital of glowing accounts of what successful farmers have done without a fair analysis of the reasons for success. We have heard much about the advantages of the Far West as a grain region. Can any western reader give us the record of a 160-acre farm that produces a more valuable crop of farm staples than this New Jersey homestead?

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CONSTANT references are made in the public press to the great National prosperity we are enjoying. We are exporting unheard-of amounts, and capturing the commerce of the most enterprising trading nations. We are buying back our own shares and loaning money to great foreign enterprises. Our industries are earning unprecedented profits, and the dividends to be paid by the great trusts and corporations in July are to break all records. Everything is booming, and the prices of stocks are higher than ever. All this is very gratifying, but how does *your* share of this prosperity figure out? It is not to be denied that labor is more generally employed than for the last nine years; that consumption of commodities is in a measure keeping pace with the greatly increased wage of the producers. This is gratifying while it lasts, but one of the best tests of real prosperity can be found in the selling price of farm lands. Are productive farms more readily sold than in recent years? We do not find it so. If a corporation, or wealthy individual wants land for some particular purpose, a sale is quickly made, but there is little demand for farms for agricultural purposes except in certain localities peculiarly well adapted to fruit growing or some special crop. We would like to obtain statistics from readers. Has the value of farm land for agricultural purposes increased in your locality?

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THE papers are full of reports concerning the scarcity of farm help in Kansas. Somehow Kansas always succeeds in advertising her wants and needs, but farmers of other States are just as badly in need of help. Wherever we go we find farmers worrying because they cannot find suitable help in house and field. In parts of Pennsylvania clergymen and others are writing to the New York papers begging the city unemployed to come to the farms. One such letter reads as follows:

> Help was never so scarce, especially house help for the farmers' wives. You have thousands of unfortunate workers in your city who would be better off in the country. The railroads offer them half fare, and the farmers and their wives will give them work and wages and good homes here. Women, or men with wives but *without children*, are especially in demand, as they can go right into the homes and live with their employers.

"With wives, but without children!" There is the same old provision which has done so much to drive some of the best of farm hands away from the farm. The poor little child is barred alike from the broad farm and the narrow city flat. What a difference there would be if a comfortable tenant house could be built on the farm so that the workman could live with his own family. Just now the city is a poor place in which to hunt for farm laborers. We receive letters from men in the country who ask whether they cannot find profitable work on the new tunnel. Our advice is to stay away from the city. The good jobs are all taken up. There are, or ought to be, far better chances on good farms.

*

THE complete census returns give some interesting figures for comparison. The total population of the country on June 1, 1900, was 76,303,387, including Alaska, Hawaii and the Indians. This is a gain of 21 per cent during the past 10 years. We give below the figures showing how the older States have increased in population during the last century. In 1800 there were 21 States, and we have compared the census figures for 1800 with those of last year:

State.	Population. 1900.	Population. 1800.	Per cent gain, 1900.	Per cent gain, 1800.	Persons, per sq. mile, 1900.	Persons, per sq. mile, 1800.
Connecticut	908,420	251,002	21.7	5.5	187.5	51.
Delaware	184,735	64,273	9.6	8.8	94.	32.
Georgia	2,216,331	162,686	20.6	97.	37.6	2.8
Indiana	2,516,462	5,641	14.8	.....	.....	....
Kentucky	2,147,174	220,955	15.5	199.	53.7	5.5
Maine	694,466	151,719	5.	57.	23.2	5.1
Maryland	1,188,044	341,543	14.	6.8	120.5	34.6
Massachusetts	2,805,346	422,845	25.	11.	348.	52.
Mississippi	1,551,270	8,850	20.	.....	33.5	0.2
New Hampshire.	411,588	183,858	9.3	29.	45.7	20.4
New Jersey	1,883,669	211,149	30.	14.7	250.	28.
New York	7,268,894	589,051	21.	73.	152.6	12.4
N. Carolina	1,893,810	478,103	17.	21.	39.	9.8
Ohio	4,157,545	45,365	13.	.....	102.	1.1
Pennsylvania	6,302,115	602,365	20.	38.	140.	13.4
R. Island	428,556	69,122	24.	½.	407.	63.7
S. Carolina	1,340,316	345,591	16.	..,..	44.4	11.5
Tennessee	2,020,616	105,602	16.4	38.	48.4	2.5
Vermont	343,641	154,465	3.4	80.	37.6	16.9
Virginia	1,854,184	880,200	12.	17.	46.2	13.6

These figures show something of the movement of population in this country. In the early part of the last century and up to the Civil War there was a steady movement away from the older-settled States to the West. It was argued that the East would be slowly drained of population and thus lose much of its old-time character and power. The figures show that these predictions have failed. The nine North Atlantic States, Maine to Pennsylvania, contain over 27 per cent of the total population. They made a gain of 21 per cent during the past 10 years. During the same time the 12 great States of the Central West —Ohio to Kansas—gained but 17½ per cent. Maine gained five per cent, while Kansas gained less than three; Vermont 3½ per cent, Nebraska less than one per cent. The growth in the East is not confined to the towns and cities, for the agricultural counties have made fair gains. The theory has been that eastern factories would gravitate to the southern cotton fields and western mines and forests, and that food producers would be forced to migrate to the richer soil of the Far West. The actual facts upset this theory.

*

BREVITIES.

—He would not scald his cans,
But rinsed them with warm water and a rag
That once was clean, and said "That's good enough!"
And all the while, in every crack and seam
A breeding band of bad bacteria
Lurked till the milkers poured the new milk in.
Then how they went about their evil work;
Millions of tiny rascals, each one bent
On mischief till the whole big can of milk
Began to turn, and then the foolish man
Thought he could cover up his carelessness
By using some vile, drugged "preservative."
Oh! why not learn that water boiling hot
And sunshine—Nature's simple gifts to man,
Are far more deadly to the wretched imps
That sour our milk than all your poisoned drugs.

BEAT sugar—the taffy of the tree agent.

SOME "farm help" really prove a hindrance.

JUMPING out of the frying pan seldom pans out very well.

STOP planting and take care of what you have in the ground!

IN spite of favorable reports we think the hay crop will be short.

PAYING dearly for knowledge seems to be a sort of hire education.

WHEN a man's neighbors all speak well of him what do you suspect?

So it seems (page 463) that a cow is often a robber because she is robbed.

WHO has seeded Timothy and clover with buckwheat and succeeded with all three?

WHY, yes, I'll sorrow thy berry, says Mr. White Grub, as he sharpens his teeth on the strawberry roots.

WHO can tell of an easy way of getting manure out of the stable, or is this like milking, bound to be a hard, hand job?

IT is surprising how much Alsike clover one finds in grass fields. The practice of mixing Alsike with Red clover is growing.

HERE is a report on Ruby Queen rose: "The Ruby Queen rose is like the Irishman's colleen, the completist, the sweetest, the natest that's adornin' my garden today."

THE Ben Davis apple is certainly a stayer. A neighbor brought us fair specimens on June 20. They were kept in a dug-out storage house! But who wants to eat Ben Davis apples in strawberry time?

THERE are 10,602 incorporated places in the United States. They vary in population from over 1,000,000 to below 500. About 47 per cent of the total population of this country lives in these places. Ten years ago this proportion was about 41 per cent.

Events of the Week.

DOMESTIC.—A cloudburst near Bellaire, O., June 13, carried away three boys, drowning them in a swollen creek. . . . . The Mineral Springs Hotel at West Baden, Ind., was destroyed by fire June 14; no one was hurt, but the property loss was $500,000. . . . . The Staten Island ferryboat Northfield came into collision with the Jersey Central ferryboat Mauch Chunk off the Battery, New York City, June 14, and sank soon after. There were 1,200 persons on the Northfield, and a panic occurred; five persons drowned. . . . . Mayor Ashbridge, of Philadelphia, Pa., has ignored the offer of $2,500,000 made by John Wanamaker, and the protests of the people of the city, and signed the ordinances giving away franchises for 14 city railways, elevated, underground and surface. Mr. Wanamaker said he could cheerfully pay the sum of $2,500,000 but suggested that if the new ordinances required the franchises to be put up at auction and sold to the highest bidder an amount largely in excess of that which he had offered could be obtained readily. His offer, he declared, was merely an indication in concrete form of the magnitude of the gift conferred upon private citizens without return to the people. . . . . A hail and rain storm in the vicinity of Knoxville, Tenn., June 18, greatly damaged and in some sections completely destroyed fruit and vegetable crops. Wheat and corn suffered much, and there was great damage to fencing, soils, bridges and roads. The loss was over $100,000. . . . . A cloudburst and heavy floods in Virginia June 18 caused much damage. At Harrisonburg three persons were drowned. . . . . A fire in a big furniture establishment in Brooklyn, N. Y., June 18, caused a loss of $435,000.

ADMINISTRATION.—The Russian Ambassador has notified the State Department that in consequence of the American Government applying tariff restrictions against Russian petroleum, the Russian Minister of Finance has imposed the high tariff rate of the Russian schedule on American white resin, or colophony, galipot (white turpentine) brewers' pitch and bicycles. . . . . The Treasury Department has imposed a countervailing duty upon Italian beet sugar, in consequence of indirect export bounties alleged to be paid by Italy. . . . . Information has reached Washington that under a recent classification plows with one wheel imported into Italy are to be regarded as instruments for art and trade, instead of agricultural machines, and that the change involves a higher rate of duty. The United States Government is likely to protest.

PHILIPPINES.—Two officers of the War Department will make an investigation of the mysterious loss of large quantities of commissary and medical supplies on transports between San Francisco and Manila. These officers are Major John L. Chamberlain, Inspector-General, and William T. Kent, accountant of the Inspector-General's office. It is apparently the belief of officials that the losses sustained have not occurred while the transports are on the high sea, but at the ports, where opportunity arose for the quiet transfer of convenient articles to persons acting in collusion with those on board the ships. The extent of the losses suffered by the Government is not known. They are said to be large. In any event army officers say that it is the duty of the Government to make an investigation, and to stop the irregularities. Regarding the San Francisco frauds, Lieutenant-Colonel Maus, the inspector, who discovered them, has telegraphed Inspector-General Breckinridge that no commanding officers are involved, and that the irregularities are confined to the Presidio. . . . . Colonel Bolanos, with five officers and 41 rifles, has surrendered at Lipa, Batangas Province. The recent battle with the insurgents at Lipa, in which Lieutenant Springer was killed and Captain Wilhelm and Lieutenant Lee were mortally wounded, was begun by the Americans. The disproportionate number of officers hit is said to be chargeable to the fact that there were several deserters from the American army with the rebels.

CUBA.—The main obstacle to complete independence for Cuba has been removed by the action of the Constitutional Convention in accepting the Platt amendment without the explanatory appendix which was objectionable to this Government. It is not likely that a new government for the island will be established before Congress meets next December, and the earliest withdrawal of American troops cannot begin until next year.

GENERAL FOREIGN NEWS.—A fire which started in a shipyard at St. Petersburg, Russia, June 14, caused the death of 12 persons and damage amounting to 10,000,000 rubles (about $6,000,000). . . . . An explosion in a cartridge factory at Les Moulineaux, near Paris, France, June 14, killed 15 persons and injured 20 others.

FARM AND GARDEN.—The National Grain Growers' Association met at St. Paul, Minn., June 11. At the conclusion of the National convention the State Grain Growers' and Farmers' Alliance and Industrial Union held their annual conventions at the same place. This meeting was expected to be the largest gathering of farmers ever held in the country. Excursions were formed to bring them from Illinois, Iowa, Nebraska, Wisconsin, North and South Dakota and Minnesota. Among the many notable speakers were Governor Van Sant, Senator Clapp, Congressman Stevens, Archbishop Ireland, General M. D. Flower, Chief Grain Inspector Retshus, E. W. Randall, Professor Hayes and others. The Allied Agricultural Associations, which met in Minneapolis at the same time, gave a banquet June 13 to George H. Phillips, of Chicago, in appreciation of his efforts in raising the price of corn from 30 to 55 cents per bushel. He was made an honorary member of the Grain Growers' Association.

The prizes in the recent stock judging contest by the students of the Department of Agriculture of the Ohio State University were awarded June 13 as follows: First prize, Henry H. Hamilton, Brownsville, O.; second, W. B. Smith, Chesterhill, O.; third, Herbert L. Belden, Middiefield, O.; fourth, C. C. Poindexter, Parkersburg, W. Va.; fifth, M. O. Bugby, Kingsville, O. The prizes, aggregating $35, have been given annually for a number of years by W. B. Smith & Son, of Columbus, O.

The Western Seedsmen's Association is the name of a new association of 10 western seedsmen, formed in Sioux City, Ia., on June 1. Its object is to have a better understanding and feeling among seedsmen whose traveling men cover the same territory in Iowa, Minnesota, North and South Dakota, Nebraska and Kansas. H. A. Johns, Sioux City, Ia., is president; J. O. Littlejohn, Independence, Ia., treasurer; Mel. L. Webster, Independence, Ia., secretary.

The Wholesale Seed Merchants' League held a protracted meeting at Powers Hotel, Rochester, N. Y., June 14. Many matters of trade importance were up for discussion. The new members of the board of directors are: Burnet Landreth, W. A. Burpee, T. T. Maynard and H. W. Wood, the latter to fill the unexpired term of Robt. Buist. Officers were elected as follows: President, F. W. Bruggerhof; vice-president, S. F. Leonard; secretary and treasurer, Burnet Landreth.

An examination of the recently published session laws of the last Illinois Legislature discloses the fact that the game law under the statute offers no protection to quails. After July 1 next the birds may be killed indiscriminately at all seasons of the year. A number of neighboring States have recently enacted laws prohibiting the killing of quails for a number of years, and it is expected that hunters from all over the country will pour into Illinois, and that an indiscriminate slaughter will follow. Sportsmen predict that the quails will be exterminated within the next two years.

Prof. W. T. Carrington, Missouri State Superintendent of Schools, has conferred with Geo. D. Ellis, secretary of the State Board of Agriculture, and Dean H. J. Waters, of the Agricultural College, in reference to plans for the introduction of the teaching of the elements of agriculture into the rural schools of Missouri. It was agreed that Dr. Charles Thom, professor of botany, prepare a teacher's guide for plant study. Prof. J. M. Stedman, teacher of entomology, will prepare a similar guide for the study of animals and insects, which will be followed immediately without lines for agriculture and horticulture by Prof. M. R. Smith and Prof. J. C. Whitten. The State Board of Agriculture will publish and distribute this literature among the teachers who desire the work.

CROP PROSPECTS.

JUNE 10.—Wheat is badly damaged by the fly. Some early fields were broken up for corn. Late wheat is better, but is falling badly; will not be more than a half crop. The poorest stand of corn in years; cause, mainly on account of cold wet Spring, and secondly on account of planting too deep. One-horse drills are cause of deep plantings. Two-horse planters give a fair stand. Oats and grasses promise a fair crop. Peaches promise a fine crop, apples a poor one; other fruits fair. Potato crop was late in planting, but is coming splendidly now.
New Bellsville, Ind. C. W. F.

JUNE 10.—Wheat is looking well; the best we have had it in four years. No signs of insects in it yet; it was not winterkilled to any extent, and promises a heavy crop. Corn is in poor shape on account of cold weather and lack of rain. Oats are looking poorly; too cold and dry. Rye will be a light crop; has been too dry all the Spring for it to stool. Hay will be a scarce article here this year; old meadows promise nothing; some small pieces of new seeding looking well, but the majority is very poor. Potato planting is well under way. The acreage will be about three-fourths of what it was last year, nearly double the early varieties planted that were last year. Nearly all the late varieties planted will be Rural or Carman. This is a potato country, that being the main money crop. W. B.
Mecosta Co., Mich.

JUNE 11.—A good proportion of the young fruit on the apple trees seem to remain yet, especially the early fruit, as Duchess, Twenty Ounce, etc. Peaches are very scarce on the trees. Pears and quinces are promising well. Plums are blighted, and expect about half a crop. Wheat is looking very poor; the insect is working in it quite extensively. B. W. B.
Hilton, N. Y.

JUNE 12.—I think the long cold wet weather has done less damage than was expected. We in this immediate vicinity did not have heavy bloom to begin with, but there appears yet perhaps one-third an average crop of fruit. Cherries have suffered more than apples. Baldwins are grown here to a large proportion, and they are decidedly scarce; did not blossom even where well cared for. Early varieties blossomed quite profusely and are still carrying the fruit where properly sprayed. C. B.
Spencerport, N. Y.

JUNE 14.—Cold, very wet backward Spring. Corn planting not finished. Grass heavy, prospects for large hay crop. Wheat badly injured by fly; will not be over half crop in county. Farmers blue as usual; last year too dry; this year too wet. We are never satisfied. We complain too much. Let us take things as they come and be thankful. E. D.
Penn Yan, N. Y.

JUNE 12.—Apples blossomed very light in this section, excepting early fruit, which set well. The Baldwins did not blossom. Greening about one-third, and they are not setting very well. It is a little too early to tell definitely. Pears and plums have set a fair crop. Tent caterpillars have been very thick, and the canker worms are getting in their work now. Farmers are very slack in spraying this year, as the wet weather has hindered, and very light show for crop. W. P. R.
Williamson, N. Y.

JUNE 14.—Fruit trees of all kinds are quite full of blossoms, and as we had no frost to hurt the buds we expect a big crop, but the east wind and rain blasted most of the buds. There is a full crop of peaches, currants and raspberries; plenty of plums and pears on some trees; about one-fourth crop of cherries; full crop of grapes but very few apples, though the trees were all quite full of blossoms. I suppose it is better the way it is, for if there had been a full crop we would get nothing for it at all. Wheat, oats and grass are as good as I ever saw, though wheat was put in last Fall the worst way on account of dry weather. Crops depend more on soil and weather than on science. B. R.
Fayette Co., Pa.

JUNE 15.—We have 300 Ben Davis which bloomed full; nearly two-thirds of bloom false; 100 Kings bloomed full; nearly one-half were weak and fell off. Apples now on look nice. Oldenburg trees are loaded down. Our 600 Greening, Baldwin and Russet did not bloom well, and are a failure; Bartlett pear one-half crop; Seckel two-thirds crop. We sprayed before blossoms and once after, using white arsenic, sal soda and lime, which killed worms. Sprayed pears once with Bordeaux. C. M. H.
Medway, N. Y.

JUNE 15.—Farm conditions in this section of New Hampshire—near the sea—have been much the same as reported in your columns by your New York correspondents; constant foggy and rainy weather through April and May, causing most farm work to be late. Many have not yet finished planting, and there is a general report of rotted potato seed. Old potatoes scarce, and $1 per bushel in the stores. Early plantings on light land have come well, however, but are unusually infested with bugs. Much complaint from farmers and gardeners of cut and grub worms. Notwithstanding the long wet period there is now much need of rain, as we have had a fortnight of dry scorching winds, and heavy land is baked hard. Hay crop will not be heavy as the long drought of 1900 burned up old fields. There will be no apples in this section this year. Greenings, Spy and early varieties bloomed well, but the cold and wet evidently prevented setting. Farmers in this section have not yet learned to spray as your New York orchardists do. They wait until the canker worms have badly eaten the foliage and then dose heavily with Paris-green. Very few use Bordeaux Mixture. Many orchards are now brown and must be badly damaged. All in all crop prospects are not bright. Pastures that have been looking finely now need rain. D. L. P.
Dover Point, N. H.

JUNE 17.—Pears and apples except Spy and Astrachan were in heavy bloom; but not more than an eighth or tenth part of the blossoms set. A few tent worms and fewer forest worms. But little spraying was done, owing to the rain. Grass is good; corn backward. A. L. H.
Norway, N. Y.

JUNE 17.—Apples can hardly be estimated at 30 per cent; pears are a little better; cherries set full but are falling some. Small fruit is a good crop. We have had about 10 days of very fine warm growing weather and things look brighter. W. B. T.
Standing Stone, Pa.

JUNE 17.—Baldwin apples had scarcely any bloom but have set some fruit; outlook for a fair crop of other Winter varieties. Not many commercial orchards here. Peaches, cherries and plums will be a full crop. Wheat, oats and grass looking well. Corn late on account of wet season. G. W. H.
Ogle, Pa.

JUNE 16.—There will be a good crop of apples in this section, but as many growers do not spray, there will not be over 50 per cent of crop fine fruit. Peaches will be about a half crop. Frost is supposed to have injured them badly, causing them to drop, although some orchards will have a full crop. Plums are a light crop, but some orchards that have been sprayed right, show up finely. Pears, light crop; weather favorable for spraying after blossoms dropped. Hay not a full crop.
Allegan Co., Mich. H. M.

JUNE 15.—This is the regular year for apples to bear well here, and trees bloomed full and set well generally. Some are now scabbing very badly, especially Winesap. As a rule Winesap brings in more money to this section than all other varieties combined. I sprayed mine this year pretty thoroughly and it seems to have had a good effect, but has not entirely prevented the scab by any means. In some unsprayed orchards the apples are so scabby that it is disgusting to look at them. The prospect for Albemarle Pippins is first rate. Other fruits promise well. Cherries are ripening; fruit very small.
Barboursville, Va. A. R. L.

JUNE 17.—Our wheat is partly lodged, and I don't think will fill as it would if it had not rained so much. I don't think the hay crop will be as large as anticipated by a great many. The meadows are not thick in the bottom, but still it may thicken up yet. I hear of potatoes not sprouting; ours came up fairly well, but it has been so wet we could not cultivate nor hoe, so they are full of weeds, and it is not much of a year to use a weeder. Our apple trees blossomed about the time the rain commenced, and I never saw trees whiter, but the cold wet weather blasted the blossoms, so we will have no apples and not much other fruit. There is a big complaint about cows falling off in milk. Ours have shrunk from 250 to 210 quarts in the last two weeks, not doing as well as they did last June, for all it was so dry.
Hop Bottom, Pa. E. P. B.

Crop and Weather Report.

The past week on the Pacific coast has been cool, with frosts in the northern part. With the exceptions of drought in Texas and Missouri and heavy rains in the South Atlantic States, weather conditions east of the Mississippi have been favorable. The condition of corn is improving, but considerable damage from cutworms is reported in the Dakotas. Winter wheat harvest is going on rapidly in Kansas and Missouri and is commencing in the Central States, where the fly is still active. Spring wheat in Minnesota and the Dakotas is improving. Cotton is looking well except in the eastern sections of the district, where rains have prevented cultivation. The prospect for the tobacco plant is favorable, but some damage from worms is reported in the Carolinas. Apples are dropping heavily in Ohio and other States of the Central West. In New York and the New England States the hay crop will be heavy, and cutting will soon begin. Potato bugs and other insect pests are numerous. Strawberries are being marketed from southern Jersey; tree fruits are dropping badly. In Maryland and Delaware work has been hindered by rains. Hay will be light. The peach yield will be fair. In Virginia, potatoes are fine and melons fair. The Georgia peach crop has come through in fair shape so far. In May there was an extensive drop caused by curculio stinging, but this amounted to only a wholesome thinning. Some report that the size is better than last year. Cantaloupes, while several days later than last season, promise well, and the acreage is nearly double in some sections.

Woman and Home

From Day to Day.

"HANKERIN'."

May in the East! and the apple trees
White with bloom and alive with bees!
Hummin' of bees and the robin's song
Helpin' the Springtime hymn along!
Oh, 'pears to me I can hear the "zoom"
Of the busy wings in the apple bloom;
And the bumblebee with his blundering boom
In the green of the fuzzy willer!

Spring comes 'round; and the breath o' May,
Stirrin' the locks on my temples gray,
Brings me sounds from the old homestead—
Wakenin' thrills that I thought was dead!—
Sounds that ring in the Hoosier brain,
Echoing over and over again,
The shriek of the quail from the locust lane,
An' the click of the old corn planter!

May in the East! I know the best
And sunniest land is the Golden West;
But 'long at the end o' the month o' May—
Just when it's visitin' June—someway,
There's something stirs in my ole warm blood
An' makes it flow in a homesick flood,
With a hankerin' sigh for the apple bloom;
For the robin's song and the droning "zoom;"
The buzzin' o' wings and the blundering boom
In the green o' the fuzzy willer!

L'ENVOI.

For after all it's the way of all
To hear at times the homeland's call;
The red deer, warm in the sunny vale,
Longs at times for the sleet and hail;
For the dead-gray rocks on the cheerless peak;
The stinging snow and the winds that shriek
Through the deep crevasse in the storm-cloud gloam—
The scenes and haunts that he first called home!

* * * * * *

Go North—go South, or East, or West—
It's the old home place you loved the best!
—L. O. Reese in San Francisco Bulletin.

*

A NEW neck wrap for a windy Summer day is a boa of taffeta with fringed-out edges. It is seen in all plain colors, and also in changeable silk. It is pretty and becoming, though of very little practical use.

*

WASHABLE white rugs are one of the new ideas for Summer cottages. They are merely rag carpet, made from white cotton or linen rags. They are used in Summer bedrooms, or on the veranda. Sometimes a few strips of color are added across the ends. They are easily washed and look very dainty.

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DURING June old-time housewives used to collect and dry the leaves and stems of pipsissewa or prince's pine, which, made into a tea, was regarded as a valuable tonic, or given for disorders of the digestion. It is a useful addition to homemade root beer. The Indians used to regard the pipsessewa as possessing marvelous powers of healing, and colonial housekeepers derived their faith in the herb from the aborigines.

*

A GIRL who has collected a great many pretty sketches in black and white, most of them being from high-class magazines, devised an original manner of mounting them to decorate a corner of her own room. She secured some large sheets of gray paper, cut it into pieces large enough to form mats for her pictures, having three-inch margins. The pictures were then laid on the mats and fastened by large drops of red or black sealing wax, about the size of fifty-cent pieces. The wax was pressed down by a monogram seal, but this is immaterial. The number of seals and their position were varied as much as possible; sometimes one at each corner, sometimes less. When grouped on a wall together the effect was very good. A similar way of mounting may be used when photographs or engravings are arranged without frames upon a strip of cartridge paper stretched along the wall. A strip of dull green or gray, the full width of the cartridge paper, stretched along the wall above a divan, bearing a collection of pictures affixed with black or red seals, makes a picturesque cozy corner arrangement.

*

A SMALL girl who had been visiting her grandparents in the country was asked how she had enjoyed her visit. "Oh, pretty well," she replied, "but I'd

3836 Girl's Costume,
6 to 12 years.

like the country better if it was here in town." She is not alone in her view; a good many lonely women will echo the opinion. The best way to make country life interesting is to put some interest into it. If our life is narrowed down to one small country community there is little wisdom in deciding that real interests can only lie outside it.

*

AMONG Summer underwear we see shirt waist corset covers, which differ from the ordinary make in having three frills, about three inches deep, put one below the other across the front. They are intended for flat-chested women, to whom a thin shirt waist is an unkind revelation, and are a decided improvement upon the various mechanical deceits offered each Summer for the same purpose. The shirt waist is a leveler of feminine beauty, for its simplicity of make does not permit the various disguises of outline permitted by an elaborately trimmed bodice. Whereas a good dressmaker can bring any figure not absolutely deformed into comeliness of some sort, if allowed full latitude in cut and trimmings, the shirt waist does not permit these artifices, and is often most unkind in its revelations, like the bathing suit. Each year we notice an extensive crop of belts and fastenings for the purpose of holding the shirt waist in place. We have always believed this gear to be invented by men, to whom feminine apparel is a mystery, but, after meeting a dozen women in each block whose shirt waists always hike away from their belts, and whose plackets invariably gape hungrily open, we don't wonder that an inventive man locks himself up in a machine shop, and devises a combination vise and shafting, warranted to hold the most vociferous wardrobe together. One style offered last year suggested that steel corset with immovable hasps, invented by Catherine de Medici, which was warranted to reduce the most obstinate waist to 13 inches. Women look admiringly at these contrivances—sometimes even buy them—and then go on pinning themselves together in the same old way.

The Rural Patterns.

The girl's dress shown has a fitted lining that closes at the center front. On it are arranged the full front and the waist, which is tucked and joined to a square yoke and finished with a novel and becoming color. The sleeves include snug upper portions, with the soft cuffs. The skirt is slightly circular, with a flounce at the lower edge, and is tucked to form a hip yoke, but is laid in inverted plaits at the back. To cut this costume for a girl eight years of age, 6⅛ yards of material 21 inches wide, 4½ yards 32 inches wide, or 3¾ yards 44 inches wide, will be required, with one yard 21 inches wide for chemisette and undersleeves, 4½ yards of insertion and ¼ yard of all-over lace for collar, to trim as illustrated. The pattern 3836 is cut in sizes for girls 6, 8, 10 and 12 years of age; price 10 cents.

The waist No. 3792 is made over a fitted lining which closes at the center front, but when washable stuffs are used the lining can be omitted. The chemisette is attached to the right side of the lining, and hooked on to the left, or when the waist is unlined, is stitched to the right side beneath the collar and hooked on to the left, otherwise there is little difference in the method of making. When lined the fronts and back are arranged upon the foundation before the shoulder and under-arm seams are closed, and the gathers are attached at the waist-line; when unlined the fullness at the waist is simply stayed, or tapes are inserted in a casing by means of which it can be drawn up. In either case the sailor collar finishes the low neck, the stock is attached to the chemisette. The sleeves are in bishop style, finished with pointed cuffs that lap over from the seam. To make this waist for a woman of medium size, 3¼ yards of material 21 inches wide, 2⅞ yards 27 inches wide, 2 yards 32 inches wide or 1½ yard 44 inches wide, will be required, with 1 yard 18 inches wide for the collar, shield stock collar.

3792 Shirt Waist,
32 to 42 in. bust

3837 Child's Long Waisted Petticoat,
2 to 10 years.

The pattern 3792 is cut in sizes for a 32, 34, 36, 38, 40 and 42-inch bust measure; price 10 cents.

The child's long-waisted petticoat is meant for wear with the long-waisted frocks now in vogue. The original is of nainsook with trimming of needlework, but linen cambric and long cloth are all used, and simple strong lace can be substituted as trimming when preferred. The body portion is fitted smoothly and accurately, the shaping being accomplished by means of shoulder and under-arm seams. The skirt is simply full, gathered at the upper edge, where it is seamed to the long body. To cut this petticoat for a child six years of age, 2½ yards of material 36 inches wide, with 3¾ yards of needlework for frill and 1⅞ yard of narrow ruffling will be required. The pattern 3837 is cut in sizes for children 2, 4, 6, 8 and 10 years of age; price 10 cents.

A MAN should choose for a wife only such a woman as he would choose for a friend, were she a man.—Joubert.

What She Looked For.

"Why do I look so sorrowful? As long as you've asked me, Mary, I'm just going to tell you. I look that way because I am sorry. Every time I see you lately I feel the same way, and it gives me the blues until I see somebody else or get to thinking of something different.

"Not very complimentary? No, it ain't; but you asked me, and I'm going to show you if I can just how things are. It ain't right for you to go around making everybody unhappy, and I don't think you'd do it if you realized. We've been good friends ever since we've known each other, and I hope you'll listen to what I say and not get out of patience with an old lady that speaks pretty plain sometimes, but means well by you.

"It's going on towards a year now since I began to notice a difference. What it was started you, I don't know, but the first time I noticed it you was talking dretful hard about one of your neighbors. I tried to put in a good word for her, but no, you wouldn't listen. You couldn't have it that there was anything good about her.

"Well, ever since then you have been getting worse and worse. Now, take this afternoon: You haven't said anything good about anybody, and if you had to admit that some of them might not be all bad, you admitted it grudgingly, as if it made you miserable. If you get hold of any bit of scandal, it seems to please you more than anything you could find. It is an awful bad thing for you. You ain't really happy, as you used to be, and you make everyone you see more or less unhappy, too.

"What is that? You don't tell anything but what's true? I don't s'pose you meant to, but you've told me lots of things that I know wa'n't so. You see, this habit you've got into is spoiling your sense of truth. You needn't look so offended. I don't go 'round telling folks you're a liar. If I'd got into the same habit you have, you might be worried, but I haven't talked like this to anyone but you.

"Did you ever have any trouble with your eyes and go to an optician to have 'em examined? For one thing, he has you look at some lines like the spokes of a wheel and tell which ones look blackest and which ones look faint. Maybe the up and down ones you can see plain and the crossways ones you can't hardly see at all. Well, there's some trouble with you. You've got so you see the mean, bad traits of human nature awful plain and black, but the good and loving ones you can't hardly make out at all. If I could fix it so you'd look at things just the other way, why, I'd feel prouder 'n 's though I was the best optician in Boston. It's different from what 'twould be if 'twas your eyes, though, because it's your own fault that you've got into this way, and it's only yourself that can get you out of it.

"We all find what we look for in this world. When you are riding along to the village you can hear the birds singing, and you can look at the pretty trees

and the blue sky and smell the sweet air; or you can make yourself miserable by listening to the buggy squeaking, and seeing the old tin cans and rubbish that's been dumped at the side of the road, and choking yourself over the dust the horse stirs up when he walks up the hills.

"Once, when I was a girl, there was a phrenologist come to town, and we all had our heads examined. I got more interested than any of the rest of the girls, and I bought a plaster head and some books and went to studying. When I was in the city, I would go to the Natural History Rooms and look at the skulls, and I wished I had one to study. Well, all that time, whenever I went out for a walk in the woods or pastures, I'd most always find some little animal's skull—a rabbit's or a woodchuck's, or, maybe, some bird's. I got quite a collection of them. You see it was what I was interested in at that time, and so, having it in my mind, I saw skulls everywhere. Probably I'd been over that same ground dozens of times before I was interested in skulls and hadn't seen one.

"It's the same way with you. For some reason you've got interested in the mean side of folks. You are on the lookout for bits of scandal and for all such unwholesome things. In order to find 'em, you've got to be thinking about such things, and have 'em always in your mind, or else you would not see 'em. You've been at it a year, and I declare my collection of skulls looks pretty small side of your collection of mean stories about folks. If I'd been more interested and looked harder, I might have found more, but you've been real industrious, I must say.

"There, there! Mary, I didn't mean to make you cry.

"What's that? You've a good mind never to open your mouth again? Fiddlesticks, child! That's no way to mend matters. Maybe, I've been a little hard on you, but I knew you didn't realize, and I wanted to make you see, if I could. Now, wipe your eyes—that's right—and put up your handkerchief, and we'll see what kind of glasses we can fix up for you.

"Let's see; what did I get interested in after the skulls? I guess 'twas birds that come next. Yes; I'm pretty sure it was birds. I'd see 'em and hear 'em everywhere I went, and I most forgot there was such a thing as phrenology. Now, Mary, don't you s'pose you could get interested in the nice things about folks? If you can't find 'em, why, just try doing some nice, kind, neighborly things yourself. I tell you, it's doing just the little bits of thoughtful things for folks that makes kind feelings and good neighbors.

"You've got some dretful pretty flowers in your garden this Summer, and if I was you I'd make up little bouquets and give 'em to the neighbors when you go to see 'em. And then I'd talk about the flowers, and be kind and sympathetic if folks tell you their troubles, and I'd make it a rule never to say a word about anybody unless 'twas something kind and pleasant.

"You'll find that people will appreciate your flowers, and they'll feel more cheerful when you go away than when you come, instead of feeling bluer. And the world will be a different place for you, too. You'll see kindness and loving feelings where you never thought of looking for 'em before, and you'll most forget there is such things as scandal and hateful actions in the world. You just try it for a while and see if I ain't right. I do believe I can see that you begin to look happier already.

"Got to go? Well, I didn't know 'twas so late. Just wait a minute; I've got something for you. I know how interested you are in old-fashioned things, and a week or so ago I come across this old foot-stove, and I've been keeping it for you.

"Oh, that's all right; I want you to have it, and I'm real glad if you like it. Come over again soon, and good-bye and good luck to you."

SUSAN BROWN ROBBINS.

MOTHERS.—Besure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

Rural Recipes.

Rhubarb Jelly.—Cut off the leaves and ends from the stalks, and wipe with a clean, damp cloth. Use an earthen dish for cooking. Without removing the skins, cut the rhubarb into pieces 2½ inches long, and put over them 1½ cupful of sugar, a piece of lemon peel, and a pint of water, this proportion to two pounds of rhubarb. Cover and set in the oven on a shelf. Moisten a half-ounce of white gelatine in a quarter of a cupful of cold water. When the rhubarb is tender put the gelatine in a large bowl, on which an earthen colander is placed. Pour the rhubarb on this, but remove it very soon to a dish, in order to retain sufficient juice with it. Stir the hot liquid underneath, and when the gelatine is dissolved pour into teacups or molds dipped in cold water. Only about a quart of liquid from the compote is needed for the jelly, the rhubarb, in sufficient juice, being available as a dish by itself.

Graham Crackers.—One cupful of sifted graham flour, two-thirds of a cupful of white flour, two teaspoonfuls of sugar, a dust of salt, two even tablespoonfuls of cold butter rubbed through the flour and sugar. Mix with sufficient cold water to make a dough. Roll them, cut in small oblong and round shapes. Bake in a quick oven. They should be about as thick as gingersnaps. They are very nice.

Chocolate Taploca.—Soak three tablespoonfuls of tapioca in a cup of cold water for half an hour; add three pints of hot milk, one cupful of sugar, yolks of two eggs and three tablespoonfuls of grated chocolate. Cook in a double boiler until the tapioca is tender. Serve with a meringue made from the whites of two eggs and powdered sugar or whipped cream.

Ornaloo.—Peel a dozen white onions, cover with cold water and steep for an hour. Then boil until soft; mash them and add to an equal quantity of mashed white potatoes; add two or three well-beaten eggs, about a cup of milk; do not have the mixture too soft, and salt, pepper and nutmeg to taste. Whip the mixture until quite light; turn into a baking dish and bake in a quick oven half an hour. When half done, pour a little melted butter or gravy over the top.

Eggs with Asparagus.—Cut about two dozen stalks of asparagus, leaving out the hard parts, into inch lengths, and boil tender. Drain, pour upon them a cupful of drawn butter, stir until hot, then turn into a baking dish. Break six eggs upon top and put a bit of butter upon each one, also salt and pepper, and place in a quick oven until the eggs are set.

Fresh Strawberry Pie.—Bake an empty bottom crust, making it extra nice; prick holes all over the bottom and sides, to prevent its getting out of shape. As soon as baked sprinkle the inside with sugar and fill with ripe berries; also well dredge with sugar. Cover with sweetened whipped cream and then cover all with a meringue of the frothed whites of two eggs mixed with two tablespoonfuls of sugar and a dash of lemon juice. Invert a plate in the oven and place the pie plate on top of it and brown. If the work is very carefully done the berries will not be even heated, and the result will be delicious. The pie should be thoroughly chilled before serving.

Gingerade.—Dissolve three pounds of loaf sugar in two gallons of water, add beaten whites of three eggs and two ounces ground Jamaica ginger moistened with a little water; bring slowly to the boiling point, skim and settle. When cold add juice of a large lemon and one-fourth yeast cake dissolved in two tablespoonfuls warm water. Mix, strain, bottle, tie the corks down, and in two days it is ready to use.

Too Many Cooks.

The Youth's Companion tells of a bright Englishwoman traveling recently in America, who showed herself so appreciative of all good things American that she was met everywhere with the utmost eagerness to afford such information and explanation as she desired. At home she was the owner of a beautiful estate where she entertained largely and it occurred to her that she might offer an agreeable variety to her English guests and a welcome reminiscence of home to American friends if she could carry back to her cook some recipes for dishes distinctively American. She broached the idea while lunching with three of her new Yankee acquaintances. They were most responsive.

"Beans!" cried the lady from Boston, instantly. "My dear, beans!"

"But we have beans in England," remarked the Englishwoman. "And I really shouldn't imagine they afforded much opportunity for—"

"Fine cookery? But they do, I assure you. Boston baked beans are quite different from any other beans. Our beans—"

"Chowder!" interrupted explosively the lady from Rhode Island, smitten with a sudden happy thought. "Beans are nothing to it. Clam chowder! There's no dish so purely and deliciously American as a good clam chowder—none. It originated—"

"Maybe it did, and maybe it didn't," broke in the Maine lady, unexpectedly. "It's a disputed question; but succotash is *sure*. Succotash is Indian beyond a doubt—real, native, aboriginal Indian. It's the one Indian dish. The Indians—"

"No more than hominy and chowder. Chowder is Indian, too. First you want your clams—good, fresh ones—"

"I don't admit that Indian dishes are as typically American as some others. We're not Indians, and our ancestors weren't. Now, with baked beans it's different. The distinction is—"

And just there the cooks began to stir the broth and mix it. "Perfectly fresh ones, you know, and milk and corn and onions and potatoes and pilot-crackers. Some people don't put in corn, but I think"—"taught the settlers. It's corn and beans together, and really most appetizing when"—"baked for hours and hours as slowly as possible; and they come out the loveliest brown, and so tender and rich"—"fire of driftwood and smother it under with seaweed and roast the ears in the ashes to eat with it"—"every Sunday morning all over New England since nobody knows when"—"the most characteristic kind of a Yankee good time. Till you've been to a Rhode Island clambake you actually can't imagine"—"why, when it's so simple, most people don't mix their beans and corn in the right proportion. I don't know; but they don't, although everything depends"—"sure you'd be delighted"—"say it was simply delicious"—"never tasted such a tempting mouthful in your life"—"just a sniff is enough to make you hungry as a hunter"—"there's nothing else in the world one wants to eat so much of—it's almost shocking!"

The English lady recorded in her note book:

"Succotash: A popular American dish invented by the Indians; a kind of fish stew, prepared with maize, beans, seaweed and the variety of mussel called clam. It is simmered over night in the oven in a deep earthen pot, and is customarily served on Sundays throughout the States."

With the Procession.

FREELY Thou givest, and Thy word
Is "freely give."
He only who forgets to hoard
Has learned to live.
—Keble.

A WOMAN'S lot is made for her by the love she accepts.—George Eliot.

A WOMAN'S hopes are woven as sunbeams; a shadow annihilates them.—George Eliot.

IF WOMAN did turn man out of Paradise, she has done her best ever since to make it up to him.—Sheldon.

THAT is true philanthropy that buries not its gold in ostentatious charity, but builds its hospital in the human heart.—Harley.

THE most commonplace person has wild regions—wildernesses it may be—of thought and feeling, which even his most intimate friends hardly ever enter.—Arthur Helps.

THE only faith that wears well and holds its color in all weathers is that which is woven of conviction and set with the sharp mordant of experience.—James Russell Lowell.

How mankind defers from day to day the best it can do and the most beautiful things it can enjoy, without thinking that every day may be the last one and that lost time is lost eternity.—Max Muller.

EACH man has to seek out his own special aptitude for a higher life in the midst of the humble and inevitable reality of daily existence. Than this there can be no abler aim in life.—Maeterlinck.

HE only is advancing in life whose heart is getting softer, whose blood is warmer, whose brain quicker, whose spirit is entering into living peace. And the men who have this life in them are the only lords and kings of the earth—they, and they only!—Ruskin.

ARMSTRONG & McKELVY Pittsburgh.
BEYMER-BAUMAN Pittsburgh.
DAVIS-CHAMBERS Pittsburgh.
FAHNESTOCK Pittsburgh.
ANCHOR, ECKSTEIN — Cincinnati.
ATLANTIC, BRADLEY, BROOKLYN, JEWETT, ULSTER, UNION — New York.
SOUTHERN, SHIPMAN — Chicago.
COLLIER, MISSOURI, RED SEAL, SOUTHERN — St. Louis.
JOHN T. LEWIS & BROS CO Philadelphia.
MORLEY Cleveland.
SALEM Salem, Mass.
CORNELL Buffalo.
KENTUCKY Louisville.

IS THERE any Pure White Lead nowadays? Yes, and it is made in the old-fashioned way by the "*old Dutch process*" of slow corrosion.

The brands named in margin are genuine, and, with pure Linseed Oil, they make the only durable and satisfactory paint.

For any color or shade required, use NATIONAL LEAD COMPANY'S Pure White Lead Tinting Colors. Pamphlet sent free upon application.

National Lead Co., 100 William Street, New York.

MARKETS

The Week's Quotations.

WHOLESALE PRICES.

NEW YORK, JUNE 22, 1901.

GRAIN.—Wheat is lower and export trade and speculation dull. Corn has advanced on heavy Chicago trading. Business in oats in quite heavy, both for home and export trade.

Wheat, No. 2, hard, N. Y.	77¾	@	—
No. 1, Northern Duluth	77½	@	—
No. 1, North'n Chicago, spot.	78⅝	@	—
Corn, No. 2, mixed	48	@	—
Oats, No. 2, white	33¼	@	—
Rye, No. 2, W'n, c. i. f., Buf	—	@	52½
Barley, feeding	48	@	—
Malting, new crop	58	@	—

BEANS.

Marrow, choice, per bu	2 50	@	—
Marrow, fair to good	2 20	@	2 45
Pea, bbls., choice	2 00	@	2 05
Red kidney, choice	2 20	@	2 30
White kidney, choice	2 10	@	2 20

FEED.

Spring bran, coarse	15 00	@	15 50
Winter bran	16 00	@	17 50
Red Dog	18 25	@	18 50
No grade flour	—	@	20 00
Linseed meal, ton	—	@	26 00
Cottonseed meal, ton	22 00	@	—

HAY AND STRAW.

Hay, No. 1	80	@	85
No. 2	75	@	80
No. 3	70	@	75
Clover	60	@	65
Clover, mixed	70	@	75
Straw, rye, long	95	@	1 00

SEEDS.

Clover, per lb	9½	@	10½
Timothy, per bu	1 90	@	2 50
Flaxseed, whole, per bu	6 50	@	7 00
Millet, per lb	2	@	2⅛
Rape, German, per lb	3¼	@	3½
Sunflower, per lb	2¼	@	2½

MILK.

New York Exchange price at stations $1.11 per 40-quart can. This is the gross price, and from it must be taken cost of transportation and fees at receiving stations where such charges are made.

BUTTER.—Better grades are firm and the advance reported last week has been maintained.

Creamery, extra, per lb	19½	@	—
Firsts	18½	@	19¼
Seconds	17	@	18
Lower grades	15	@	16
State dairy, tubs, fancy	18½	@	—
Tubs, firsts	17½	@	18
Tubs, seconds	16	@	17
Tubs, thirds	14	@	15
W'n imitation creamery, fancy.	16	@	17
Firsts	15	@	—
Lower grades	13½	@	14½
Western factory, fancy	—	@	15
Firsts	14½	@	14¾
Fair to prime	13½	@	14¼
Lower grades	12½	@	13
Renovated butter, fancy	16½	@	17
Common to choice	13	@	16
Old Western factory	11	@	14

CHEESE.

NEW.

Full cream, white, small, fcy.	9	@	9⅛
Colored, small, fancy	9⅛	@	9½
Small, fair to choice	8⅝	@	8⅞
White, large, fancy	—	@	9⅛
White, large, fair to choice	8¾	@	9
Colored, large, fancy	—	@	9⅛
Colored, large, fair to choice.	8¾	@	9
Common	7	@	8
Light skims, small, choice	7¼	@	7⅜
Large, choice	7	@	7½
Part skims, prime	5¾	@	6
Fair to good	4½	@	5¼
Common	3	@	3½

EGGS.—Strictly choice qualities of candled and closely-graded stock rather scarce. Under grades are working out well, and general tone of the market is firm.

QUOTATIONS, LOSS OFF.

State & Pa., avge. prime, doz	—	@	14
Mich., N. Ohio & N. Indiana, regular packings	—	@	13½
Other W'n, northerly sect'ns, regular packings	—	@	13½

QUOTATIONS AT MARK.

Nearby, State & Pa., fresh-gath'rd, fcy, selected, doz.	14½	@	15
Nearby, State & Pa., fresh-gathered, average prime	13	@	13½
W'n, Northerly sect'ns, candled, selected, fancy	—	@	13½
W'n, Northerly sect'ns, graded, average prime	—	@	13
Regular packing, N'th'n sec's.	11½	@	12½
Graded, Southerly sections	—	@	12
Rcg. packings, S'ly sect'ns	11	@	11½
W'n, fresh-gathered, dirties	10	@	11
Checks	8½	@	9½

LIVE STOCK.

Veal calves	5	@	6¼
Sheep	3	@	4¼
Lambs	6¼	@	6¾

COUNTRY-DRESSED MEATS.

Calves, veal, prime, per lb	8½	@	—
Fair to good, per lb	7½	@	8
Common to medium, per lb	6	@	7

LIVE POULTRY.—Receipts light and Spring chickens selling slowly. Fowls and roosters steady.

Spring chickens, large, per lb	17	@	19
Small to medium, per lb	15	@	16
Fowls, per lb	—	@	10½
Roosters, per lb	—	@	6½
Turkeys, per lb	—	@	8
Ducks, avge. West'n, per pair.	70	@	75
Average Southern, per pair	50	@	55
Geese, avge. West'n, per pair	1 00	@	1 12
Average Southern, per pair	90	@	1 00
Pigeons, per pair	20	@	25

DRESSED POULTRY.—Supplies are moderate and market on iced fowls quite firm. Spring ducks plenty and weak.

FRESH PACKED—ICED.

Turkeys, W'n, hens, small	7	@	8½
Western, toms	—	@	7
Broilers, Phila., over 4 lbs. to pair, per lb	—	@	25
Phila., mixed sizes, per lb	20	@	23
Penn., fair to good, per lb	20	@	23
Western, dry-picked, per lb	19	@	21
Western, scalded, per lb	17	@	19
Small, dry-picked or scalded, per lb	14	@	16
Fowls, W'n, dry-picked, prime.	—	@	10
Western, scalded, prime	—	@	10
Western, poor to good	8	@	9
Southwestern, prime	9½	@	10
Old roosters, per lb	—	@	6
Ducklings, L. I., and other nearby, per lb	13	@	14
Squabs, choice, large, dark	—	@	2 25
Mixed, per doz	1 75	@	2 00
Mixed, per doz	1 75	@	2 00
Dark, per doz	1 25	@	1 50
Culls, per doz	50	@	1 00

FROZEN.

Turkeys, young hens, No. 1	11	@	11½
Mixed young hens and toms, No. 1	10½	@	11
Young toms, No. 1	—	@	10½
No. 2	7	@	9
Broilers, dry-picked, fancy	18	@	20
Scalded, fancy	—	@	14
Chickens, fancy, soft-meated	12	@	13
Average, No. 1	—	@	10
No. 2	7	@	9
Fowls, dry-picked, No. 1	9½	@	—
Capons, fancy, large	15	@	16
Medium sizes	13	@	14
Ducks, fancy	12	@	12½
Geese, fancy	9½	@	10

DRIED FRUITS.

Apples, evaporated, fancy, lb	7	@	7¼
Evaporated, choice, per lb	6⅝	@	6¾
Evaporated, prime, per lb	6¼	@	6½
Evaporated, com. to good, lb.	4	@	5½
Sun-dried, S'n, sliced, lb	3	@	4
Sun-dried, State & W'n, qrs., per lb	3	@	4
Sun-dried, S'w'n, coarse cut.	3	@	3½
Sun-dried, S'n, coarse cut	2¾	@	3
Chops, per 100 lbs	75	@	1 60
Cores and skins, per 100 lbs	50	@	1 30
Raspberries, evap'rt'd, 1900, lb.	20	@	—
Blackberries, 1900, per lb	5½	@	5¾
Cherries, 1900, per lb	12	@	14

FRESH FRUITS.

Peaches, Fla., per carrier	1 25	@	1 75
Georgia, per carrier	50	@	1 25
S. Carolina, per carrier	75	@	1 37
Cherries, black, large, 8-lb. basket	50	@	60
White, large, 8-lb. bskt	40	@	50
Small, sweet, 8-lb. bskt	30	@	40
Strawberries, Md., good to choice, per qt	5	@	7
Md., ordinary, per qt	—	@	4
Jersey, fair to choice, qt.	6	@	8
Jersey, inferior, per qt	4	@	5
Up-river, per qt	6	@	10
Hilton & Irv'g'tn, N. J., qt.	7	@	15
Western N. Y., per qt	8	@	12
Huckleberries, N. C., blue, per qt	10	@	12
Black, per qt	7	@	9
Raspberries, Md. and Del., red, per pint	10	@	12
Blackberries, N. C., per qt	7	@	9
Gooseberries, small, green, per qt	3	@	4
Medium, green, per qt	5	@	6
Large, green, per qt	8	@	9
Watermelons, Fla., per 100	35 00	@	40 00
Per carload	350 00	@	400 00
Muskmelons, Fla., fancy, per bushel package	2 50	@	3 00
Poor to fair	1 00	@	2 25

VEGETABLES.

Potatoes, S'n, Rose, extra, bbl.	—	@	3 25
S'n, Rose, fair to prime	2 75	@	3 00
Southern, Chili, white, fair to prime	2 25	@	2 75
S'n, Chili, red, fair to prime	2 25	@	2 50
S'n, No. 2, per bbl	1 50	@	1 75
State & W'n, in bulk, 180 lbs.	2 50	@	2 62
State, per sack	2 37	@	2 50
Asparagus, Colossal, doz. bchs.	3 50	@	5 00
Extra large green, per doz	2 50	@	3 00
Extra prime, white	2 50	@	3 00
Prime, white and green	1 50	@	2 25
Culls, per doz. bunches	75	@	—
Beets, N. C. & Ch'n, 100 bchs.	1 50	@	2 50
Norfolk, per 100 bunches	2 00	@	3 00
Jersey & L. I., 100 bchs	3 00	@	4 00
Carrots, Jersey, 100 small bchs.	—	@	2 00
Corn, N. C., per crate	2 50	@	3 00
Per 100	1 50	@	2 00
Cabbages, Norfolk, bbl. crate	75	@	1 25
Baltimore, per bbl	1 25	@	1 37
Cauliflowers, nearby, per bbl.	2 50	@	3 25
Cucumbers, Ch'n, per crate	1 00	@	1 50
Savannah & Fla., per basket.	75	@	1 25
Florida, per crate	50	@	75
Eggplants, Fla., per box	2 00	@	3 00
Garlic, New Orleans, per lb	6	@	7
Green peas, Jersey, per bskt	75	@	1 00
Keyport, per bag	1 00	@	1 25
L. I., Telephone, per bag	—	@	1 25
L. I., small, per bag	1 00	@	1 12
Lettuce, L. I., per bbl	50	@	75
Onions, Bermuda, per crate	1 60	@	1 75
Egyptian, per bag, f. o. b	1 90	@	2 25
New Orleans, per bbl	3 00	@	3 25
New Orleans, per bag	1 30	@	1 35
Eastern shore, yellow, bskt.	1 00	@	1 25
Eastern shore, white, bskt.	1 00	@	1 50
Peppers, Fla., per carrier	1 50	@	2 50
Radishes, nearby, 100 bchs	50	@	75
Squash, S'n, yellow, per bbl	1 50	@	2 50
Southern, white, per bbl	1 00	@	2 00
Southern Marrow, per bbl	2 00	@	2 50
String beans, Ch'n & Sav., wax, per bushel basket	50	@	75
Ch'n & Sav., green, per bskt.	75	@	1 00
N. C., green, per basket	1 00	@	1 25
N. C., wax, per basket	50	@	75
Norfolk, green, per basket	1 50	@	2 00
Norfolk, wax, per basket	75	@	1 25
Spinach, L. I., per bbl	1 00	@	1 25
Turnips, Jersey, white, per 100 bunches	2 00	@	2 50
Tomatoes, Fla., fancy, carrier.	—	@	1 25
Florida, poor to good	60	@	1 00

BUSINESS BITS.

THE shock compressor offered by J. B. Hughes, Greensburg, Ind., is a neat little device that will be found convenient and valuable to a great many. Write for price list—a sample costs only 45 cents.

THE 1901 illustrated catalogue of the E. W. Ross Co., Springfield, O., will be sent free to any reader asking for it. The implements made by this company have been on the market for more than 50 years, giving entire satisfaction to farmers in every part of the country. The Ross silage and fodder cutters are now made with blower attachment. The blower has been tested for three years, and the Ross Co. guarantee it to work satisfactory in every way.

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WHERE it is possible to do so, there is certainly a great saving in buying direct from the manufacturer. A number of carriage manufacturers who formerly sold to dealers have now adopted the plan of selling direct. One of these is the Columbus Carriage and Harness Co., Columbus, O. The same grade of wagon sold by dealers can be had at a saving of from 10 to 25 per cent. Send for illustrated catalogue.

Interesting Canadian Notes.

I have been thinking our weather here rather trying. I have nearly an acre sown with onion seed. It has come up very well, but for about three weeks the plants have remained at a standstill, corn the same, that is, that came up. I have one piece of corn on lighter, warmer land that came up well, and with the weather of the few last days will now push ahead finely. Potatoes look well; also sugar beets. I am in doubt as to what I ought to do with the asparagus. The rust of the two past years has damaged it badly. Some of it I have had plowed up already. Shall I plow up the rest is my problem. Pears and plums promised to be a large crop. The trees were white with bloom. Wet weather and one night of frost have broken the promise; the crop will be fair only, and so perhaps more profitable. I am trying four new varieties of potatoes from Michigan—Early Pink-eye, Early Pingree, Early Snowball and King of Michigan, all highly recommended, of course.

After buying Aster seed, sowing it in the house and transplanting into a hot bed I discovered hundreds of plants ever so much finer growing in the bed where I had Asters last year. I have been able to supply over a dozen of my neighbors and friends with just as many as they would take. In this vicinity Winter apples will not be a good crop; but early and Fall apples will be, at least, if I may form an opinion from my few trees. Cherries promise well. I have a half-acre strawberry patch. The Winter, though milder than usual, was severe on it. The plants were not as well covered as they ought to have been. I will look after them next time myself. Mild as was the Winter, I hear of more complaint than usual of its hurtful effect on clover, on shrubs, and on the trees. A third of my colonies of bees died through the Winter, and yet with all the cold wet weather I have had as large or larger proportion of early swarms as usual. I do not understand why! I wonder whether one can become immune to the stings of bees by their frequent repetition. I mind a sting very little. I have seen some suffer more from the bite of a mosquito than I do from the sting of a bee. This year and last I supplied myself with flowering plants for my garden, such as carnations, geraniums, Verbenas, Fuchias, Salvias, Petunias, Coleus, Alternantheras, heliotropes, etc., by buying "rooted cuttings." These can be had for about $1.50 per 100, some a little more, some as low as 70 cents, Verbenas for instance. By putting these in a hot-bed they soon grow to fine plants. On May 26 I went to a place on the south shore of Georgian Bay, and was surprised to find the trees and garden stuff as far ahead as they were at home, though, I think, this cannot be usual. The soil there is sandy and the rock not much below the surface.

W. O. E.

Whitby, Ontario.

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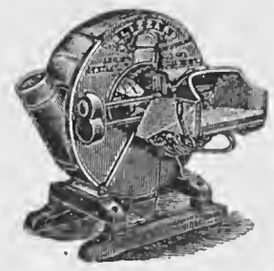

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Market Briefs

PICKED UP HERE AND THERE

ODD FRUIT NOTES.—Peaches are arriving in car-lots from Georgia, but the quality is inferior. Some of them which look really fine taste but little better than pumpkin or raw potato. Probably the trouble is that the fruit is picked too green. A good many eastern cherries are seen, but largely of poor quality. California plums are on hand in large quantities. As usual they are put up in good shape, but are disappointing when one tries to eat them. A little later in the season they will be better. Watermelons are coming by the carload. The quality is good, but price too high for general consumption. The better grades of muskmelons are scarce. There are plenty of strawberries, but prime lots are the exception. We see a great many that are small, sandy and more or less crushed in transit. A few Maryland red raspberries have been received and peddled out at 10 to 12 cents a pint. Large blue huckleberries are selling well, and the same is true of prime blackberries.

UNSATISFACTORY SALES.—A correspondent sends us a memorandum of the returns received by him for a shipment of maple sugar and syrup sold by a New York general commission merchant, and feels that the low price secured practically amounts to robbery. The figures given do seem rather low, but the market for maple products of late has been very dull, and it is possible that this concern got as much for the shipment as anyone could. We have bought excellent maple sugar here (as nearly pure as any that is to be had) at 10 cents a pound retail. This commission firm, of which our correspondent complains, has a good name, and is to all appearances doing a square business; but they are more in the line of fruits and vegetables, potatoes being their specialty, and such products as maple sugar are merely a side issue. We think that as a rule it pays better to ship uncommon products of this sort to dealers who make a specialty of them. There are those who handle nothing but honey, maple sugar and syrup; and others have a large trade in these goods in addition to other products. The chances are that either of these classes would handle a shipment of maple sugar to better advantage than those who perhaps do not receive more than one or two consignments of it during a season. Unless some chance buyer comes along, they have to go out and hunt up a dealer who will take it off their hands, probably at a discount. There is a great difference in men in this particular. We have seen commission dealers who, in an effort to sell some shipment they had received, and for which there was no call, would chase around the streets and spend in time more than the value of their commission trying to make a satisfactory sale. Others make no special effort in such cases, letting the stuff stand around in their stores until it spoils or is sold for a trifle. In either case the shipper growls at the returns, and the man who takes some trouble to make a sale feels that he gets small thanks. The dissatisfaction of shippers over prices received is a common complaint. There is good ground for it in many cases where receivers, through shiftless methods of handling, allow stuff to spoil, and then write the shipper that it was in that condition when received. The reputation of the better dealers suffers from the methods of these snides, whose chief qualities are laziness and dishonesty. Judging from what shippers have told us, we believe that when one finds a commission merchant who knows his business and is careful and honest, it is a good plan to stick to him. There are plenty of this class without patronizing the frothy concerns whose chief capital consists of flaming letter heads and great promises, which they never carry out. W. W. H.

FRUIT IN THE LOWER HUDSON VALLEY.

A Trip Among Growers.

PART II.

Last week I ended up a 200-mile drive through Orange, Sullivan and Ulster counties, N. Y., in a two-days' trip in the Hudson River section from southern Ulster to Cornwall. Starting from New Paltz in Ulster County one plunges right into the fruit orchards at the threshold of the village. Through this whole section peaches are light. There are some exceptions in individual trees, but the general conditions are light foliage, with considerable blight and light setting of fruit. C. M. Harcourt had some trees pretty well set. His peaches were good and plums heavily loaded. His ground showed thorough cultivation. Elting T. Deyo owns the adjoining place, and while apparently not cultivating a large acreage his plantings look well. A young peach orchard of great promise, we were told, belongs to J. M. Hasbrouck. The trees seemed to be about three years from planting. They are heavily loaded and look as if there was not likely to be any more drop. Mr. Hasbrouck is also a large grape grower. His currants are heavily loaded, but are shelling some, and show signs of early color, probably due to the fact that the plow had turned the earth away from the canes and left them somewhat exposed. This mistake is pretty sure to hurt the crop. This place also has a young orchard of apples which promise a nice crop. Nathan Elting runs largely to grapes and pears, but grows some peaches also. The Kieffer seems to do well here as elsewhere. H. E. Brown, who enjoys the reputation among some of his neighbors of being the best fruit man in his section, has about 100 trees that reports say never net him less than $1 a tree, and sometimes run close to $1.50. About the only fruit that seems at all neglected in this section is the grape. This is not universally true, but poor tillage and neglect are frequent enough to cause comment, where other fields are so well tilled. The condition was explained by one man on the ground that the grape crop had not been a remunerative one of late.

Right in the heart of this great fruit district one meets good farms devoted to dairying. Nathan Rose owns one of these, sending his milk to the creamery at New Paltz on the Exchange basis, which is now 1¾ cents per quart to him. A threatening cloud hurried us past Jacob La Fevre's place, which looks inviting but which is not largely devoted to fruit. The storm drove us to shelter in the barn of Philip H. Dubois, who with his son Henry is operating a large dairy farm, making from eight to 16 cans of milk a day. This goes to the Borden condensery at Wallkill at 1½ cent. The distance is 14 miles. His place contains a large planting of young apple trees. His criticism of farming conditions in that section is that farmers do not keep stock enough. They take all off the farm and put nothing back to keep up fertility. Henry is manifesting some pardonable pride in a five-year-old Hambletonian mare which he has recently purchased. Close to Clintondale we passed a large fruit farm owned by Henry J. Dubois, and quite a large planting of young grapes by Geo. Hull. The finest field of Delawares that we saw in this section belong to Hurd Brothers just west of Clintondale. They also had the best-looking field of Mariboro raspberries we had seen up to this point, but farther on we saw a fine field on Henry Roe's ground and one or two others farther along towards the river, but raspberries are generally light and unpromising.

One of the finest cultivated fruit farms that we saw is that one owned by C. A. Jenkins and his son, Irwin Jenkins, on towards Highland. I believe they are two separate farms, though joining each other. Mr. Jenkins put us on the right road to Milton, and we tarried long enough to learn something of his fruit industry. He has nearly 4,000 grapevines and 250 Japan plums. He likes Burbank best. His currants are promising, no drop to speak of. His Bartletts have dropped badly, and he does not expect one bushel where he had 100 last year. Thrips and borers seem to be his greatest annoyance. He has some notion of spraying a weak solution of tar on the under side of grape leaves for the annoyance of thrips. We encouraged the experiment, and would be glad to learn later what effect it will have on this restless little pest. All through our ride of over 200 miles up to this point we found blackberries heavily loaded with blossoms and strong vigorous canes. In the vicinity of Milton and Mariboro, however, the canes had winterkilled badly, and this section will be an exception apparently to the generally favorable conditions at this time. Complaint of a short strawberry crop is also general in this section. The fields show lack of foliage, some rust, and for the most part light setting of fruit, and fully a week or 10 days or more late. Wm. Belt seems the favorite with quite a large planting of Gibson. In this section currants are quite badly affected with a scald or leaf blight, which in some places has also attacked the fruit. J. A. Hepworth, of Marlboro, has the worst affected piece we saw. He has a large planting of Fillers. They are well set, and before the blight struck them the promise for a large crop must have been most encouraging. They seem to be less affected on the low ground and where shaded than on the high portions of the field. It is difficult to find a satisfactory reason for this condition. It may possibly be due to the intensive cropping in this section. Mr. Hepworth has great encouragement, however, in his prospect for peaches. He has a large acreage of well-tilled, well-cared-for trees, and the promise for a large crop is all that could be desired.

After all these observations we did not feel entirely satisfied without a look in on John R. Cornell, of Newburg. We knew that if any man could grow currants and pears he could, and so he has. Except for an occasional tree here and there he has the only crop of Seckel pears we saw on the whole trip. His trees will need to be thinned, and the heavy, rich foliage promises to carry the fruit through to maturity. The trees show effect of liberal fertility, thorough culture and plenty of spraying. He sprayed with arsenate of lead, one pound to 50 gallons of water, and four to five gallons to the tree. "I was there myself, and the spray went on until I said enough," was the way he put it. The arsenate of lead is favored because "it sticks like lead through all the rain." Ground bone, potash, spray material and cultivation seem to be the elements in Mr. Cornell's genius for pear growing. His Bartletts are set lighter than Seckels, but most trees have all the fruit they ought to carry. He has some Bosc top-worked on old Lawrence which are well set. Two points that he makes for Bosc are that it sets fruit all over the tree, and that the long stems swing in the wind and the fruit does not drop. His currants are almost as promising as the pears. One piece has rusted a little, but not seriously. The aphis is bothering some, but as a whole his bushes are looking well, with good healthy foliage and heavy setting of fruit. He was inclined to think lightly of his strawberry crop, but after visiting other places we thought he had a good crop, though like others late.

From here we returned to the point of starting, the Orange County Nurseries at Cornwall, Mr. Dwyer having accompanied me on the entire trip. He seems to have the art of growing strawberries as completely conquered as Mr. Cornell has pears. The week had done wonders for his vines. The plants and foliage had developed, and the promise of fruit was such as we saw nowhere else. Sharpless, Lovett's Early, and especially Glen Mary yet showed signs of the blight referred to last week, and light foliage, but they were bearing a nice lot of fruit. The Bubach had kept on developing, and was by all odds the best seen on the road. The set of berries was in keeping with the foliage. Gandy, Wm. Belt, Marshall and Parker Earl had all developed a rich foliage, strong stem and heavy setting of fruit. The older planting of Gibson was light here as elsewhere, but a young bed looked strong and had a good setting of fruit. This is a berry of fine quality, and it is hoped that it will prove a more vigorous grower than this wet season seems to indicate. The Rough Rider seen here is a vigorous grower; the fruit is medium in size, rather irregular in form and of low quality. Among other varieties doing well was the Nic Ohmer. It was growing in a young bed, vigorous plants, rich foliage and good setting of large shapely berries of high flavor. The Marshall continues to do well on these grounds. I put a tape on one berry picked from a young bed that measured 9½ inches around. Of course, this was exceptional, but shows the vigor of the plant, and gives some intimation of its prolific qualities.

To sum up the whole fruit situation in the Hudson River Valley, and omitting the exceptions, cherries are almost an entire failure; apples and pears will be very light; strawberries generally light and late; peaches promise an abundant crop; currants from present indications good; raspberries for the most part light, and blackberries unusually promising. Plums abundant. J. J. D.

JAMES WRIGHT, of the produce commission house of Jelliffe, Wright & Co., of this city, died suddenly while on his way home from business June 18. Mr. Wright was 62 years old and had been with this firm for 30 years. He was born in northern New York and spent part of his early life as a school teacher and clerk in a store. At the time of his death he was serving his second term as member of the Board of Education of Brooklyn. He was connected with the order of Good Templars, and was active in church work.

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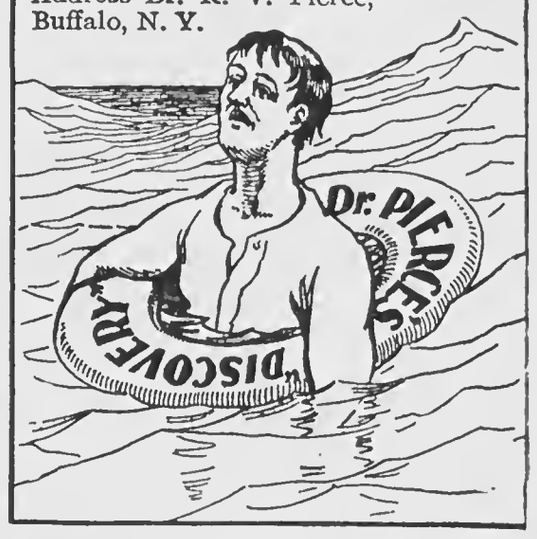

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Live Stock and Dairy

SILAGE FOR HORSES.

Inquiry is made in a recent issue regarding the value of silage as food for horses. As with other kinds of stock, much will depend on the quality of the silage, but there seems no reason why good corn, well preserved, should not be as valuable for the equine as the bovine tribe. In this locality, in the first experiments with silos, the mistake was made of planting vigorous growing varieties of corn, such as Mammoth Cuban, Red Cob, Ensilage, etc., the aim being to raise as great a bulk of feed as possible. Owing to the proximity to Lake Ontario, the crop usually failed to mature sufficiently before harvesting became necessary to escape the early frosts, which sometimes occur here by the middle of September. Silos filled with this unripe stuff could not turn out a good, sweet, nutritious food. Now, some of the early maturing flint corns have become popular, the desire being to obtain a good yield of grain, less stress than formerly being laid on the amount of stalk secured. On silage of this kind, cut when the grain was getting hard, we have wintered four horses, feeding it steadily until June 5. It is mixed in the proportion of two parts silage to three of cut oats or wheat straw. No water is put on it, as with cut straw or hay. During the Winter, when work was slack, some chopped oats were added, the quantity being increased when heavy work began in the Spring, to a gallon each. I am emphatically of the opinion that it is the cheapest, wholesomest and best feed we can get here, being much superior to the best hay fed with a similar quantity of oats. The horses have never looked so well. One would suppose they would be soft when put to steady work. On the contrary, their power of endurance has increased. Even when commencing hard work there was less sweating than usual, and their flesh is firm and coats clean and glossy. One animal that was sometimes troubled with colic if not carefully fed, has shown no sign of it since going on the new diet. The only injurious effect I have been able to discover is that they are doing their best to kick the stable to pieces during their hours of rest.

It is sometimes argued that all animals being fed on cut feed should be fed at intervals with uncut straw or hay, presumably as an aid to digestion by promoting a flow of saliva, possibly that they may in a measure earn their "vittles." Our cattle have been enjoying practically the same kind of feed as our horses since last November, and although not one of them has sampled a forkful of uncut hay or straw, they are all looking better than ever before. The silo has come to stay, and I am satisfied that in Ontario, once noted for its barley and wheat, it will be found that corn is king, but differing in this respect from some of the corn-growing States of the Union, that instead of our corn being shipped abroad, it will be fed at home, the fertility of our farms maintained, and the quality of our finished products made better than the best. B. C. W.

Oakville, Ont.

CARE AND SALE OF MILK.

About 30 years ago very little attention was given in this section either to the production or manufacture of milk into butter and cheese. Precautions to keep the milk free from odors in the barn and house, I might say, were not known or considered. About this time came the patron factory, for making cheese; then followed the addition for making butter and cheese, and this continued, till after the railways were called upon to help supply New York with whole milk. This outlet steadily increased, and pushed out farther from year to year, till our whole territory here is mostly given up to this mode of disposing of our milk. In the meantime, our State institute and its scientific instructors, holding meetings in all parts of the State, began to enlighten the producers and farmers, and instruct them in better methods. The agricultural papers have also done much in this line through their columns, so that, as the farmers began to read and hear, they began to act and organize through the Grange for mutual improvement, until all the questions relating to the sanitary conditions and modes of taking better care of their product are well considered. I need not say that a rapid progress has been made in all the details of milk production and handling. To keep the milk cool and sweet, we use ice mostly; some have cold running water from a spring, or a cold spring covered by a small building. The aerator is also used; any of these means to remove as quickly as possible the animal heat. Milk coolers are not so much in use now, the 40-quart can taking their place.

As to the Milk Producers' Association, its work has been along the line of marketing and combining interests, so as to be able to continue business, as the Milk Exchange had forced down arbitrarily the price below the actual cost of producing. A few words as to the milk when it leaves the farms. Great care and neatness are observed in milking the cows; good ventilation, barn free from odors and the milk as soon as drawn from the cow is taken outside the barn to empty into the can for cooling. When properly cooled, it is taken to the shipping station, and I say right here that very little milk as it leaves the farm, but what will exceed by quite a little the per cent butter fat required by law. It is pure and wholesome, and if the city fails to receive such quality of milk, it must be the fault of unscrupulous dealers. I should have added that it is these dealers that the F. S. M. P. A. is organized against, trusting in the near future to sell and deliver to the consumer pure and wholesome milk, as it comes from the farm, and at less price, and at the same time receive for the producers a fair price. We are now receiving in this section about 60 cents per 100, and you pay the dealer about eight cents per quart. Such a wide difference speaks for itself, allowing you receive as good quality as we ship. W. F. J.

Earlville, N. Y.

Angora Goats.

Thanks are due THE R. N.-Y. for the conservative view it took of the Angora goat question, when so many writers were sounding praises of this animal so loudly, and even the Agricultural Department at Washington seemed willing to circulate statements too full of praise to be easily credible. Our own little experience leads us to advise caution. Evidently a very large band of goats in a small pasture will clear out the brush, but what will prevent the goats from losing flesh in the time it takes to accomplish this? Then in climates where Winters are long it will put a big hollow in the grain pen to bring them into condition again. Something to clear pastures from brush, that would raise a profit to the farmer at the same time, is very pleasant to read about, but for those whose eyes begin to be opened by experience it is too much to expect in the cold Northern climates. The fine-sounding declaration that the long staple fleece that shows the Angoras up so beautifully, will bring much more money that wool, loses a lot of its alluring charm when a whole fleece from the average flock will only sell for 60 to 90 cents, while that from ordinary sheep would bring from $1 to $1.65. The man who looks on to behold his neighbor buy the experience in goats, is adhering to good business principles, and if he builds his fences good and tight when the land is too full of water to cultivate, and keeps a little flock of sheep, he will surely make a profit, while the chances are more than even that there will be a loss to the larger half of those going through the experimental stage with Angoras. To keep sheep and improve the flock, and look into the goat industry after a few years have passed, seems now good judgment for the New England farmer. There is always a lot of volunteers in any new enterprise, and there will be those in this section who will take an early venture in the Angora goat business. J. H. R.

Portland, Me.

Vaseline for Cows.

We find vaseline is a valuable adjunct in the cow barn. Sores on the teat or udder, caused by bruises, barbed wire, etc., are quickly healed. Sometimes, when cows are first let out to pasture, a hot, sunny day will sunburn many of the udders, provided they are large enough, so that the cow's tail and legs can't hide them. The cow will be uneasy, and walking with distended udder chafes her. Now is the time to rub in a little vaseline and a trifle on the teats before milking—not enough to make things greasy. You will have less to try your patience, the cow will give more milk, because she is more comfortable. Vaseline is a trade-mark name. Petroleum jelly is the same material, and can be bought much cheaper and in bulk at any drug store. H. G. M.

Fly Killers on Cattle.

The best preventive that I have used to this time is a mixture of fish oil and carbolic acid. For a quart of oil a tea or dessertspoonful acid to the oil. Apply with a sponge after milking. JAMES R. ORR.

Ohio.

Shoo Fly comes the nearest to filling the bill of anything I have found, but it should be put on after milking, or say 30 minutes before milking, followed by ventilation of stables. C. L. PECK.

Pennsylvania.

The best remedy we have tried is the Shoo Fly. As long as we can keep it fresh we have no trouble with flies or other insects. For the past few years we have been troubled very little with flies or gnats in this climate, which makes a very desirable place for cattle.

Arkansas. JAMES T. HENDERSON.

I find the oil effective as a means of keeping flies from the cattle, particularly milch cows; much better than the grease formerly used. The oil is used with a sprayer that is made for the purpose. There seems to be no danger of any odor penetrating the milk, while the heat of the milk is passing off. H. F. P.

Brewster, N. Y.

Any preparation that will stick affects the pores of the skin, and I know of damage from their use. Those that are of a volatile nature are the safest and best, but are useful only as applied at each milking. We have used kerosene, and theoretically it will kill every fly it touches, but many of them are driven away by the application, and come again as soon as the odor has gone. If there is one spot untouched by any preparation they find it at once, and stay there. I am inclined to think crude petroleum or kerosene about as good as anything. I might add that among our patrons those who feed liberally during the shortage of pasture grass are those who complain least about the flies. I have not seen any effect in the milk when these preparations have been used before milking. H. E. COOK.

New York.

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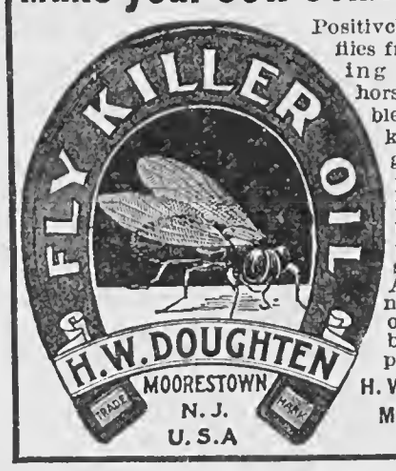

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DAIRY AND FARM NOTES.

Reform the Robber Cow.

I have a two-year-old heifer giving 26 pounds of milk per day. She is not built on "dairy lines." Will she be likely to improve and make a profitable cow, or should I beef her? C.

RESPECT FOR COWS.—Every day and year in dairy experience adds to my respect and consideration for a cow. I read and hear about the unprofitable or "robber cow," and there are thousands of them. But the one thing that taxes my patience and excites my sympathy is this constant howl about poor cows, when these same poor cows so often do not have any chance to show the stuff that's in them. I have had the courage, against strong odds, to say from the institute platform that we are more in need, as a whole, of food and care than breed. In other words, the opportunity is far greater, the chances for failure further removed, less danger of drawing a blank, and less money expended, in developing what we have than in paying extravagant prices for purebred animals, some of them being valuable chiefly for the length of their pedigree. I do not wish to ignore the value of pedigreed stock, or improvement in stock by selection and breeding. Without this constant selection, we should soon revert to the original stock.

MAN AND NATURE.—Did you ever observe, as written in geological history, that nature was slowly but surely evolving a higher development of animal and plant life during prehistoric ages. When a man assumed command and began a development of animal life, a marvelous change took place, and now if man withholds his energy, reversion rapidly takes place toward the original type. Let us, therefore, look carefully to our breeding stock, but remember that food and care, with selection, have built up our great producers. Six of Blackwell's 10 rules for stock improvement pertained to food and care. Cow education has therefore come to be as much of science as pedagogy. This long preface has been written that I may not be misunderstood. Animal life and the laws that govern it are complex; they are not easily changed, or rather, results are not momentarily changed. This robber cow in the hands of Smith may become a profitable cow when Jones gets a chance to educate and develop the animal.

BEGIN WITH CALF.—This development must begin with calfhood for best results, and right here I wish to make a general observation that I feel confident those who have the same opportunity to observe will readily accept. Communities of dairy farmers who have produced butter year after year, without regard to its value in comparison to cheese or crude milk, carefully fed their skim-milk to their young, growing stock, have prospered very favorably in comparison with sellers of milk or manufacturers of cheese, although the last named as a rule receive considerably more for their milk than the butter producers. The feeding of milk to the young calf during its first year, the only natural food, develops digestive powers never lost during after years of hard work at the pail. While at the time of reckoning the milk seller gets larger returns in the end if he raises his stock they must suffer in development and power of digestion, or, as found in most cases, the dairymen do not raise them at all, but depend upon the dealer to bring in a fresh supply and take away the worn-out animals for beef or bologna, depending upon their condition.

TRAINED ROBBERS.—Among the farmers in the milk-selling sections are numberless "robber" cows. They buy them of farmers who have not been good feeders, and put them upon heavy feed at once. Their milking machinery is about as well adapted to utilizing this raw material, and converting it into milk as would be the Erie Canal for a man-of-war. If these cows had received an early training, made up of well-balanced rations, suited to their individual needs, not necessarily compounded in accordance with some chemist's theory of foods, given rational care, not sentimental care, the food fed later in life would have returned a profit. My friend, Gould, says some sensible things along this line in the issue of Hoard's Dairyman for June 7.

FAT HEIFERS.—Would you put a heifer two years old in the robber class, giving 26 pounds of rich milk a day? Of course, this is quite indefinite. C. does not give the per cent of fat nor cost of keep, two essentials. But I should consider this animal far removed from the robber class, unless she has a tapeworm, and consequently, eats everything in sight. If this heifer is giving four-per-cent milk, she is making 8½ pounds of butter a week, or producing enough fat to make it, if carefully manipulated. How much milk she will give in a six-year-old form no one could tell. I have been greatly interested of late in studying the difference in families. We have a family of Holsteins that gave nearly as much milk in their three and four-year-old form as later in life. Another family that came on later was so inferior to the first mentioned that we disposed of the bull that sired them, feeling we had made a serious blunder. At five and six years old these cows came to their maturity, as the first ones did at three and four, and were deep, heavy milkers. I would not care to go on record as saying a heifer at two years old of inferior dairy form and ability would develop into a profitable cow at six. The good cows have their sign out with their first calf, not necessarily at 20 months to two years old. I am of the opinion that many otherwise strong, healthy cows have been permanently hurt by early calving.

EARLY CALVING.—It is the most veritable humbug that a heifer must calve before maturity, or she will develop into a beefy steer. Ten years of persistent milking is a long, hard strain, coupled with an annual reproduction, and no better preparation can be given than to have the heifer strong, well ripened, and fat, if necessary. If her breeding has been from dairy animals and her food adapted and liberal, the beef will come off, the thick neck will come down, and this heifer will have a start, "a constitution like an ox." The first mentioned family of Holsteins were of this type, calving at 2½ to three years old, and usually fat. We soon pumped that out into the milk pail, and fed cornmeal to get it back again. I am not speaking of the breeder who is selling stock and making records, but of the or for the farmer, who gets his living and pays for his farm out of the milk receipts.

FEEDING PROBLEMS.—A point connected with animal development which does not receive full consideration, unless it is from farmers who milk their cows as near as possible to freshening time, is the character of the food fed during the late period of gestation. This idea will apply as forcibly to the heifer with her first calf. Farm-grown foods are usually of the carbonaceous order, having a nutritive ratio of 1:7 or wider, not well suited to the development of the young calf nor the building of an udder without inflammation. Otherwise good dairymen object to a grain ration from Fall to Spring for a heifer preparing to drop her first calf, fearing udder troubles. Many years' experience has confirmed an opinion that no such danger is imminent, and I do firmly believe that such a well-balanced ration as wheat bran, oats, mixed hay and silage, or if all home-grown, oats and peas, mixed hay and silage, fed in such quantities as the individual may require for steady growth and health, will develop an udder of more capacity, and the good cows without large udders are in the imagination, whatever may be our theory or conception of milk secretion.

CLEAN VESSELS.—So many of the young things that have been raised on everything but milk seem to require such an an abnormal amount of food, or else are mincing and dainty. The calves usually suffer with periodical scouring, due to over-feed on the days of excessive thirst or hunger. I speak from experience. We have tried everything to take the place of milk. I am ready to admit that I don't know any patent combination to take its place, and we have come to give fresh, new milk in varying quantities if skim-milk is not at hand. Of course, it is expensive, but better not to raise the calf than do as we have at times tried to do. Small quantities of feed, and not overfeed should always be the rule. I wonder whether every dairy farmer reader of THE R. N. Y. scrubs and scalds his skim-milk or whey storage barrel or tank every day. As I ride through our town whey barrels are out in the sun without cleaning, until one locates them without sight. Is it possible for young calves' stomachs to digest this army of germs? A calf that can live through this should certainly have a constitution and be hardy. Constitution, digestion, a good udder; that's enough. Horsemen say: "Give me good feet and legs and an appetite, and we will do the rest." Give me the above mentioned essentials in a cow, and I think we can make a good, clean 10 per cent profit.

H. E. COOK.

More Kicking Cures.

I see that H. W. C. is troubled with a kicking cow. I suppose he has received lots of advice about managing her, but think he might like my way. I take a leather strap and pass it around the dew-claw of the right fore leg, and through the loop raise the foot up and buckle the strap around the leg. V. G.

Maine.

My plan is to take a strap about 2½ or three feet long with buckle on one end, and put it around hind legs just above gambrel or hock joint; cross it between legs and buckle it up tight as may be necessary on outside of leg next to milker. It will be in shape of figure eight when on. I have used this plan about 14 years on several different cows, and never saw one yet that could kick. I am using it every day on two cows with good results. It is easily put on and taken off, and the cow cannot hurt herself nor the milker, as I have known some to do with strap or rope around body. Let the Hope Farm man try this on Julia and report result.

Pennsylvania. J. O. L.

We have Mr. Stewart's "self-cleaning stable," or steel grating for 24 cows. It is very nice to keep cattle clean. Ours is in basement on south side of barn, over stone cement gutter. It would save lots of work if it could be arranged to clean out right through bottom of gutter into cart. J. T. S.

Massachusetts.

MARK LANE EXPRESS tells of the conviction of the proprietor of a butter factory, who was charged with adulterating the butter with milk and water. Special machinery had been devised for forcing moisture into butter, and some samples analyzed contained 10 per cent excess of moisture. As this appeared to be a clear case of fraud in selling milk and water at the weight price of butter, a fine of $100 and $75 costs was imposed.

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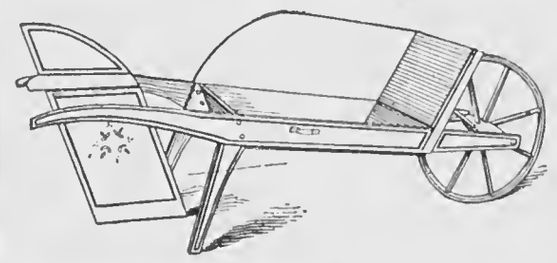

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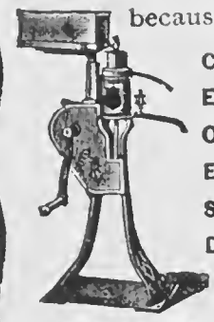

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The first gray hair she cried;
But soon she wiped the tears away—
And then went off and dyed.
—Chicago Daily [illegible]s.

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"So he nailed the lie at l[illegible] eh? How?" He nailed it by fasteni[illegible] on somebody else."—Philadelphia [illegible]es.

SHE: "Why do they always [illegible]k of 'the sad sea waves?'" He: "[illegible]ppose because they usually look bl[illegible]—Harlem Life.

HOAX: "I wonder if insom[illegible] is ever contagious?" Joax: "Well, I find it affects me whenever our baby has it."—Credit Lost.

TEACHER (severely): "Thomas, this map is ruled crooked, very crooked, indeed!" Thomas: "I know it, mum. It's a map of New York City, mum!"—Judge.

CUSTOMER: "That last butter was rather strong." Dealer: "Shouldn't wonder. It was from a union dairy. In union there is strength, you know."—Boston Transcript.

"I SAW Jack Splurge to-day. He seems to be prosperous. Says his income now is out of sight." "I should think it would be—he lives so far beyond it."—Philadelphia Record.

"IF a boy should strike you," suggested the schoolmaster, "you would, of course, forgive him, wouldn't you?" "Yes, sir," he replied, "if I couldn't catch him."—Tit-Bits.

TOWNE: "See that man? Well, sir, he landed in this country with bare feet, and now he's got millions." Browne: "Gee whizz! He's worse than a centipede, isn't he?"—Seattle Post-Intelligencer.

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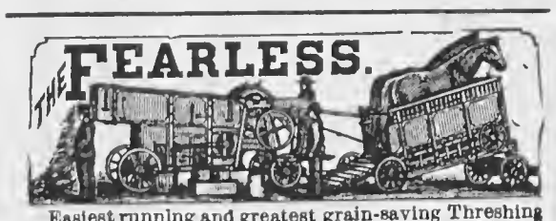
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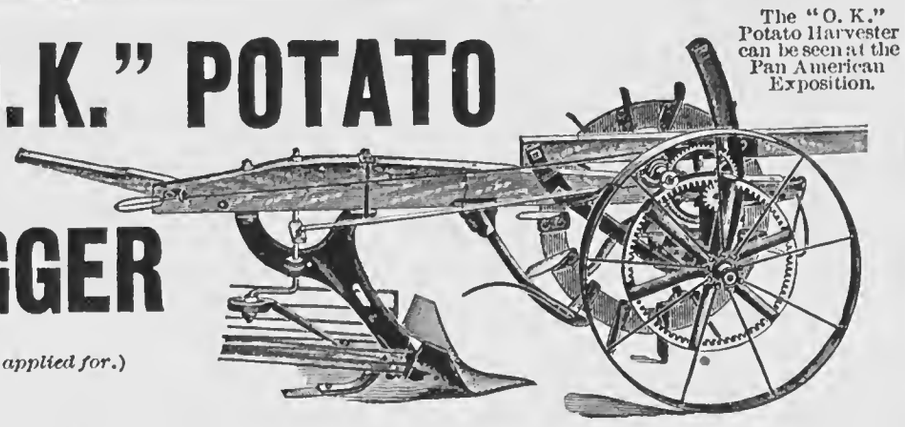
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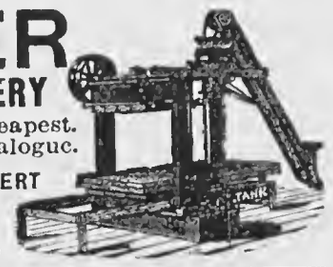
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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2684. NEW YORK, JULY 6, 1901. $1 PER YEAR.

MODERN CRANBERRY CULTURE.

ESSENTIAL PRINCIPLES OF THE BUSINESS

How to Start a Bog.

A GOOD BUSINESS.—That all interested in cranberry culture will object to some of the methods described here is expected, and perhaps there may not be any one grower who will agree with them all. I am not going to complain of this, because most of the methods herein described are original with us, and as yet have not been adopted by other growers to any great extent. With present prices of cranberries, ranging from $3 to $6 per barrel, it becomes necessary to depart from the old methods and resort to those that are practical and up-to-date in order to eliminate as far as possible the element of chance in the business, and insure a profit to the grower. What I desire to do is to describe in plain English how to select, prepare and care for a cranberry bog, and in doing this I shall refrain from advancing any theories, and shall describe only those methods that I know to have been successfully tried. At the outset it is stated that these instructions are intended to apply with equal force to all localities and conditions, but any exceptions will be carefully noted. Formerly, any swamp that could not be flowed at short notice to prevent frost from injuring the fruit was considered worthless, but with the introduction of earlier and hardier varieties of fruit this theory has become exploded, and among the most successful bogs there are many "dry" ones.

WATER.—Of course water has its uses in cranberry culture, and I shall speak of them later, but at the beginning of making a bog it is more important to get it off the swamp than to get it on. This brings me to the subject of drainage, which is really the first thing to be considered, and I earnestly advise everyone before investing any money in rough swamp to be sure that it can be properly drained. It is imperative that the surface of the bog be kept dry from the middle of April until after harvesting. It is to be expected that during the Winter more or less water will collect in swamps, especially where the surrounding land is high. This does no harm, but is rather a benefit if the bog is submerged deep enough. It is dangerous, however, to have it flooded but a few inches, for if ice is made among the vines, it will not only winterkill them, but is liable to pull them out by the roots. Either flood deep or not at all is a good rule to follow.

MARSH OR SWAMP.—The next thing to consider is the swamp itself, and right here is a good time to distinguish between marshes and swamps. Marshes, according to my idea, are tracts of low, wet land that are covered with grass, and so far as I can find out are worthless to cranberry growers. In view of the fact that one man I know vainly spent $200,000 in trying to grow cranberries on them, I advise others to let them alone. Swamps, generally, are covered with wood, and while those that are covered with maple or huckleberry are considered the most valuable, on account of the rich peat bottom, any swamp is worth making into bog provided it does not contain alkali, lime or oil. Another thing that is very important in the construction of a cranberry bog is coarse sand or gravel. Either through ignorance of its value, or on account of the extra expense, this item has been slighted by many growers, to their cost. Experience teaches that it is indispensable in the making of a successful bog for the reason that it checks a too rapid growth of the vines, and prevents them from growing woody and unfruitful. It also keeps the weeds down, and prevents the sun from drawing the moisture out of the peat bottom of the swamp. The sand should contain no alkali, lime or loam; should be loose and gravelly, and all stones larger than a hen's egg should be taken out before it is spread on the swamp. Just what a swamp that is suitable for making into a cranberry bog is worth in its rough state depends considerably on its location. On or in the vicinity of Cape Cod, Mass., its value is not far from $100 per acre, and much higher prices have been paid for exceptionally good pieces.

A PAIR OF VETERAN FARM HELPERS. FIG 194. SEE PAGE 478

CAPE COD FRUIT.—While it is a fact that Cape Cod cranberries bring better prices than those grown elsewhere, it does not follow that they are the best, and I believe, in fact I know, that they can be grown equally as well in other places. One reason why Cape Cod berries are so good is that there cranberry culture has been a succession of experiments for more than 30 years, with the result that the culture has been reduced to a science, and at present each grower knows just what variety is best suited to his bog. Another reason is that in making a bog there they spare no expense, for they know that a bog properly made will bear good crops, and is easily cared for.

THE COST.—The cost of making varies, according to whether the drainage is natural or artificial, and how far one has to go for sand, but the average price is not far from $200 per acre. Allowing $100 as the value of the rough swamp, we have a total cost of $300 per acre for bog that is ready to set out. The cost of caring for an acre of bog for four years, or until it is ready to bear a full crop, is very small, and the berries harvested the second and third years ought more than to cover all expenses of care. When the bog is four years old it is worth at least $1,000 per acre, being an increase in four years of $700. It is no wonder that cranberry culture is the chief industry of Cape Cod, and that rough swamps bring such high prices.

SOME ESSENTIALS.—Many farmers in other places who have tried to grow cranberries and failed have thought that their swamps were not adapted to the fruit, and complained that there was no money in the business. Upon investigation we found that either ignorance or a mistaken sense of economy prevented them from properly preparing the bog. Some, after removing the wood from the swamp, tried to plow and harrow the surface as if they were preparing a field for turnips. Others spent considerable money in ditching and grading, and then spoiled the whole thing by putting on loam instead of sand, the loam being easier to get at, and costing less to put on than sand. It is the results of such attempts as these that have discouraged others from going into the business, and it is a fact that there are swamp owners within 50 miles of Cape Cod who do not believe there is a profit in cranberries. They claim that they have tried it, and know all about it, and that at present prices there is no money in it; that it costs too much to harvest the fruit; that they never had good crops; that their vines were eaten by worms, and that their bogs were overrun with weeds. No one is to blame for this state of affairs but themselves. If they had spent a little more money in making the bogs properly at the start, and then taken care of them afterwards, they would have had no just cause for complaint. In a previous article I have briefly explained how to prepare a cranberry bog, but it will do no harm to explain it again a little more carefully, for since writing it I have been in receipt of numerous letters from persons who were interested, asking for more information. "Whatever is worth doing at all is worth doing well," is a motto that can be applied to the making of a cranberry bog, and I presume it is the same with the description of the making, therefore I shall reserve that for another chapter, in which I shall carefully describe the most practical methods and also the implements used in construction. F. A. MAKEPEACE.

Massachusetts.

OATS AND PEAS.—Fig. 197 shows a crop of oats and peas at the New Jersey Experiment Station—ready to be cut. This combination of green food is a favorite one with many dairymen. It gives just about an ideal green forage ration for milch cows. When making rations out of other green crops Prof. Voorhees takes oats and peas for the standard. The picture shows the oats well headed out, and this is about the right time for cutting either for green forage or hay. Oat and pea hay, when well cured, makes a good Winter forage to feed with silage. We think it better to make good hay of the crop rather than to let the seeds ripen fully and thrash them out.

A VERY PROMISING NEW STRAWBERRY.

On June 14 I visited the farm of Thomas R. Hunt, of Lambertville, N. J. I had heard of Mr. Hunt as a successful farmer who makes use of an irrigation plant. He wrote about a heavy piece of grass, and the chief object of the visit was to see how it compared with Mr. Clark's famous field. The grass was there, but I was surprised to find about the best collection of seedling strawberries I have ever seen growing together. Mr. Hunt has been growing seedlings for many years. He has probably tested nearly 2,000 in all, but at last has half a dozen or so that seem worth all the waiting and watching. The berry shown at Fig. 196 is one of the best we have seen. There were plenty of specimens fully as large as the one pictured here. The color is a dark, rich red, the flavor is excellent and the flesh is solid and firm. There was but little appearance of rust on the foliage, which is strong and thrifty. Mr. Hunt calls this new berry President, and it certainly looks as though it were well qualified to stand at the head. There are several other good seedlings. One called No. 8 has been quite largely planted by nearby growers as an early variety, and another called Amwell is locally popular. The President is the best of the lot, and looks like one of the season's leaders. I know how disappointing some of these new varieties often prove. A few years ago I gave what seemed to me the facts about Gladstone. At Mr. Merceron's place it was certainly a wonder, yet at Mr. Hunt's, with the same treatment which all others received, it was inferior to President or Nick Ohmer. This seems to indicate that many varieties of strawberries are very superior in certain localities or under certain conditions, and yet fail when deprived of just the soil or treatment which they need. Perhaps the President will prove to be of this class, but as grown by Mr. Hunt it is the finest berry I have seen this year. On June 24 Mr. Hunt wrote the following letter:

"Thinking you might like to have an estimate of the yield per acre of my grass, I write the following: The plot was 254x224 feet, and contains about 1.3 acre. The hay was hauled in seven loads, the last two not being quite full, but the others being loaded wide and long, and as big as could be hauled into the barn. We estimate the weight as at least five tons, but that being only guesswork, won't go. The bulk can be testified to. If it had been allowed to stand until it was older, and got the weight it should have had, there would surely have been more than five tons.

"The strawberries are doing fully what they promised, especially Nick Ohmer. The President has gone clear out of sight of anything I ever saw in the strawberry line. While not quite so large as when you were here, the form and color are still perfect, and the berries are perfectly solid yet. It has held out this way in spite of the fact that we have had no rain for over two weeks, and will bring up the last berry. Nick Ohmer is still very nice, and although run down considerably in size, is still extra fine, and I command the market here. Have not sold any of the good berries below 12 cents wholesale, and only a very few crates of poor stock at eight cents; have sold more than enough at 13 cents to overcome that. I think I should have put my irrigating plant in operation, but have put it off waiting for rain until it is too late now probably to accomplish any good."

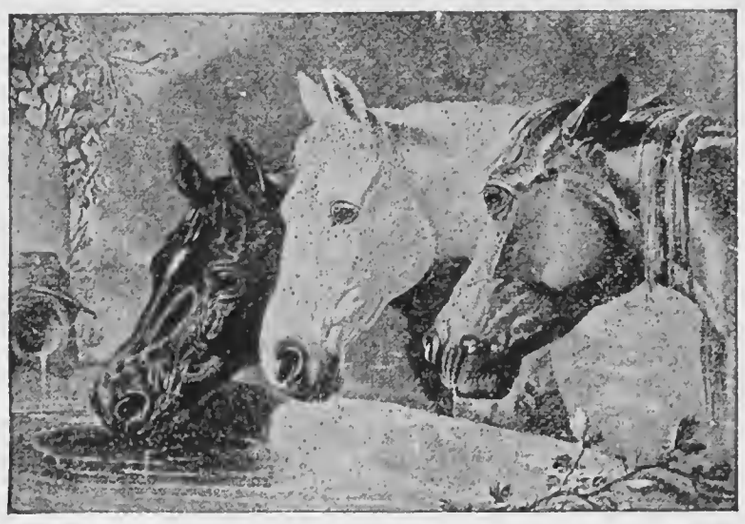
The grass mentioned was mostly clover—the Timothy having been beaten down by heavy rains and smothered by the clover. It was seeded after strawberries and onions with little working of the soil. This matter of the grass and the irrigation is so interesting that I shall make it the subject of another article. H. W. C.

CHILDREN AND CHICKENS IN CUBA.

Last year we printed several brief accounts of the work done at the Industrial Home at Matanzas, Cuba. Elmer E. Hubbard, a former New York State boy, established a home for orphan children. He has had a hard struggle to maintain the home, for the people who know of such things and would be glad to help them have many calls. It will be remembered that Mr. Hubbard imported Brown Leghorn hens from the States. The following letter from him gives a new side to the Cuban problem:

Last November we had to give up the building and 70 acres of land, where we had the boys and the hens, and let the hens go back to the Government, which had loaned them to us, and moved the boys into the girls' home. In this one home we cared for about 40 children through the Winter, and tried to make it a real home to them as much as possible. Two months ago we thought it time to have two homes again, and now are excellently located—the boys in a home on the hill with about an acre of garden attached, and the girls in a home on the shore of the bay which was formerly the home of the Spanish governor of Matanzas at the time when some of these children were made orphans. While I have found much satisfaction with the children I can't say that I have been very successful with the hens and the garden. With so many small untrained children to look after, and with little or no grown-up Cuban help, we two or three Americans have had our hands nearly full of the indoor work, and could not give much attention to outdoor work. Though we could sell eggs for from 25 to 30 cents a dozen all through the Summer and Fall there was not much profit in 20 eggs a day from 100 hens with corn at 90 cents a bushel and with a very long moulting season in the Fall. About 15 of the hens died in the six months that we had them.

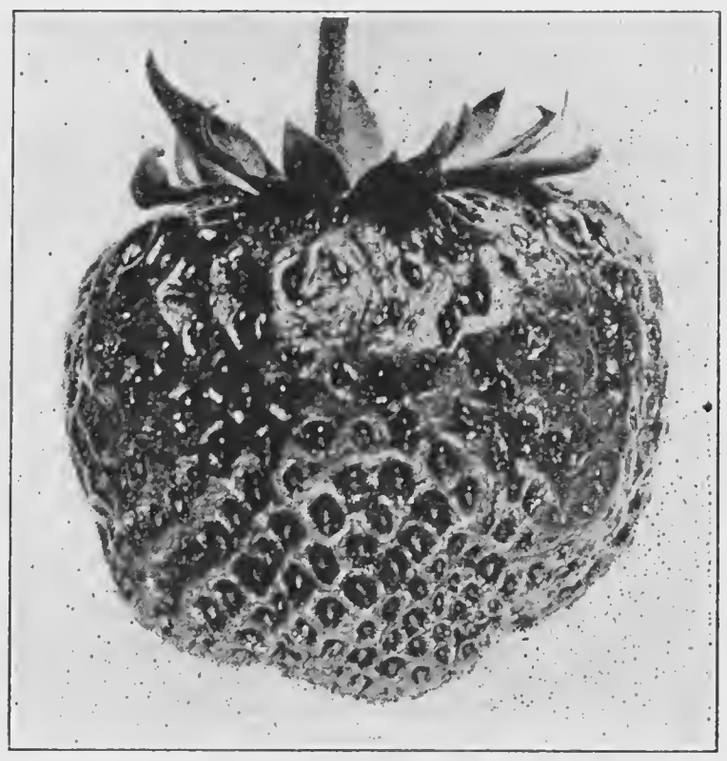
Our boys have raised some vegetables, especially radishes, beets, squash, lettuce and egg plant, but it seems that not much successful gardening can be done in Cuba without an artificial supply of water. Even now in the so-called rainy season, after a week of pouring rains the very porous soil in the following week of hot sunshine becomes so dry that plants that



TAKE A DRINK WITH ME! Fig. 195.

have not their roots reaching far down from the surface do not make much growth, and in the dry season, when we have weeks and months of almost constant sunshine, abundant daily watering is necessary to make things grow. I hope that some time we can have one branch of our work so located that we can do some profitable gardening.

With all the famed fertility of the Cuban soil it would seem that we ought not to have to pay long the present prices for what we have to eat. Potatoes, $1.40 a bushel; beans, $3.20 a bushel; beef, 15 to 20 cents a pound; salt pork, 12 cents a pound; butter, 40 cents a pound, and oleomargarine, 20 cents a pound, with nothing much cheaper to take their places. I have just received two barrels of beans and four barrels of wheat from western New York. The cost of the beans there was $1.80 a bushel, and the freight and duty made the cost here $2.60 a bushel. The wheat,



THE PRESIDENT STRAWBERRY. Fig. 196.

which cost there 80 cents a bushel, cost here $1.46.

We shall be very glad if we can see our work grow, for there is certainly need of much more being done. Only to-day I have gone to see a widow with her seven children, three of whom she wants us to take into our homes. They lost their home and property during the war, and her husband died, and she by strength of body and strength of character has kept all her children with her till now her physical strength is nearly gone, and she is broken down in health. She has taken such good care of her children that they are a family of which any mother might well be proud, but now some one must help her to take care of them. There are many similar cases.

ELMER E. HUBBARD.

TAKING A DRINK.—The picture shown at Fig. 195 is taken from an excellent leaflet published by the Humane Education Committee, Providence, R. I. This leaflet is an appeal from the horses to their owners and drivers. During this hot weather the horse will highly appreciate an invitation to take a drink. Horses suffer greatly from thirst when worked hard in the hot sun. It is not only humane but profitable to keep them well supplied with water.

BIG STORIES OF APPLES.

On page 371 we gave some figures showing the income from a 14-acre apple orchard owned by Mrs. L. E. Allen, of South Hero, Vt. The net cash returns for apples were $2,564.14! Prof. F. A. Waugh, who made the report, says that some people call this "a fish story"—too big to be true. He has secured the following figures from two other Vermont orchards:

Mr. Lucian Allen, also of South Hero, has 300 bearing apple trees, covering between five and six acres of land. From these he sold in New York 237 barrels of the crop of 1900, for which he received a gross return of $875.25, or an average price of $3.40 a barrel. Freight, cartage and commissions ate up $174.75 of this sum, leaving a net cash return of $700.50. These figures are taken directly from the returns of the commission man, (and the commission man seldom returns more money than the fruit brings). In addition to the $700.50 received for apples sold in New York, Mr. Allen sold a considerable quantity at home, from which he realized an additional $198.50. This makes a total of $899 for the year's crop, or $150 to $180 an acre. Another Vermont apple grower, who objects to having his name used, but whose accounts have been examined and found correct, has made still more remarkable sales. Last year his total sales (not net) were $3,543.25 from 10½ acres. One single block of trees, covering 4½ acres gave a net return of $1,272, or over $282 an acre clear profit on the farming.

Prof. Waugh vouches for these figures, and we believe they are correct. We have looked over the figures of several New England fruit growers, and know that they received nearly as much per acre or tree as did the Vermont farmers. What are we to conclude from all this? That New England is a land overflowing with fruit and money, and that any man or any soil can earn this amount of cash? No—that is the most dangerous conclusion that could possibly be drawn from these accurate figures. There are soils and locations peculiarly adapted to the development of certain varieties of apples. There are also men who by natural inclination and long and patient study come to know just how an apple tree should be cared for. When the capable man grows apples on the fit soil the results may be in time like those given above. The careless man on the best soil, or the best man on the unresponsive soil, can never reach them. There are many who start to climb the rocky road to the highest possibility in farming—yet few there be who do not wait by the wayside.

BEE STINGS FOR CURING RHEUMATISM.

We frequently see items floating in the papers regarding the effect of continued stinging of bees. It is claimed that such stinging is a reasonably sure cure for rheumatism. As we understand it, the claim is that the acid developed by the sting of the bee renders the patient immune to the disease. It is also said that after a person has been stung a large number of times, he is not likely to feel any ill effects from future stings. What is your opinion regarding this?

This matter has been up in the bee journals for years past; but the testimony, like that in regard to many other things, seems to be conflicting. We have been compelled to decide that, while stings may be a perfect remedy for certain kinds of rheumatism, it is equally certain that they do not always cure other kinds, and that it does not work alike on different persons. I have conversed with bee-keepers who declared they were troubled with rheumatism during the Winter, when not working with the bees; but as soon as the season opens up, and they get stung more or less every day, the trouble disappears entirely. I have sometimes thought the outdoor work, warm weather and perspiration may have had something to do with it as well as the stings. A medicine is prepared directly from the poison sac of the bee, removing it for this special purpose. We have at different times filled orders from manufacturers of medicines, for bee stings taken directly from the live bees. But I am not satisfied that the poison induced by the sting of a bee has any direct effect on rheumatism. I say this when I remember the wonderful cures that are being performed all the time with electropoise, absent treatment, mind cure, and a thousand other whims and superstitions. For years I labored to convince the people that electropoise had neither sense nor science about it; but long strings of testimonials from multitudes were against me, and so I gave up in despair, deciding to "let the world wag." Soon after, however, one after another of the victims who persisted so strenuously that it was a scientific apparatus, opened up a "new era," etc., dropped it of his own accord, and now it has gone out of sight. Perhaps I am a little hasty in thinking the bee-sting cure may be something along this line; but for some reason or other but little is said about it now, even though it made quite a stir when the matter first came up, years ago. It is true beyond question, I believe, that, after a person has been stung a sufficient number of times, the poison begins to have less effect, and finally produces no swelling at all; and this condition of the system seems to remain permanently. When I first commenced with bees, every sting produced such a swelling that my friends hardly knew me. In a few months, however, this gradually ceased, and year after year when I began again with the bees in the Spring, the stings produced only a momentary inconvenience. It is now many years since I was stung repeatedly; but I always find that, when it is necessary for me to go among the bees, I am just as immune in regard to the swelling and pain as I was 20 years ago when I was stung dozens of times daily.

Medina, O. A. I. ROOT.

CHEMICALS, CLOVER, COWS AND LIME.

Some Methods and Results Analyzed.

PART II.

WHY USE LIME?—There are some fields around Cranbury that seem to blush for shame at their sad and sour condition. They are red with sorrel. Great patches of this red signal of distress are to be seen here and there. In one field used for a pasture the sorrel was so thick that one would think the cows were in danger of giving buttermilk or clabber. Mr. Lewis is satisfied that the appearance of this sorrel indicates an acid condition of the soil which is not favorable to the growth of clover, grass or grain. It will often be noticed that on soil which we know is strong and well fertilized clover will not start readily, while Timothy and other grasses gradually fall out, and sorrel comes in freely. It may be that a growth of sorrel does not always indicate that the soil is too acid, but it is a pretty reliable indication that lime is needed. Mr. Lewis had noticed for several years that the catch of clover was not satisfactory on his farm, especially on some of the fields. My own experience has been that different soils on the same farm, or even close together, may vary greatly in their need of lime. This partial failure of the clover and the appearance of the sorrel on neighboring farms convinced Mr. Lewis that liming once in five years will pay. He selected the wheat crop as best in all respects for the lime. One object is to use the lime so as to keep it as far as possible from the potato crop. This is because lime corrects the acid condition of the soil, and encourages the development of the scab germ on potatoes. If there are any of these germs on the seed or in the soil lime will surely produce a scabby crop. As wheat follows potatoes in this rotation it makes the safest point for the lime. The liming was begun in the Fall of 1899. Twenty bushels or 1,600 pounds per acre were used. The best way to use the lime is to harrow it in after plowing, although Mr. Lewis says he has in some cases broadcast it over the growing wheat. The results of the first application are quite evident in the clover and grass which follow last year's wheat. This year's clover too has given a fine "catch." Mr. Lewis feels confident that this use of lime once in five years will help the farm. He does not regard the lime as plant food. The fertilizer used on potatoes contains plenty of lime in a condition to supply the food needs of the plants. The lime used on the wheat unlocks plant food now in the soil, and makes it available, and neutralizes the acids so that grain, clover and grass may grow to better advantage. It is the difference between food and medicine. There is no thought of using less fertilizer or less manure, but it seems evident that the lime will enable the crops, especially the clover and grass, to make better use of the soil and what it contains.

A FIELD OF OATS AND PEAS READY TO CUT. FIG. 197. SEE FIRST PAGE.

POTATOES.—The potatoes on this farm were the best I have seen anywhere this year. They are in a well-drained soil—perhaps the best field on the farm for potatoes. The soil was well fitted and the potatoes were started right. They kept growing slowly through the wet, dull weather of May, making a slow, healthy growth, so that when the sunny days finally came they were not stunted, but started off rapidly. One secret of successful potato growing is to keep the crop moving. It must never stop or stand still, but must be forced from the time the plants show above ground. Mr. Lewis feels confident that the crop will be at least a fair one this year. The plants are large, dark green in color, and with thick, heavy stems. "I know what is behind them!" says Mr. Lewis—meaning that he knows that the fertilizer close to their roots contains everything they need to produce a full crop. The soil, too, is well filled with moisture, and by means of good cultivation much of this can be retained. In planting potatoes this year something of a new plan was tried. The Robbins planter was used, and the furrows were first opened alone—without any attempt to drop fertilizer or seed. Then the fertilizer feed was reversed so as to drop the fertilizer before rather than behind, and the machine was run along the open furrows. In this way it is thought that the fertilizer was put just where it was most needed, and the extra working seems to have paid.

FERTILIZER PROBLEMS.—Mr. Lewis has used the same brand of fertilizer for many years. Farmers are frequently tempted to change from high-grade to low-grade goods, the chief argument being a lower price. Many of these men have studied the fertilizer problem, and know something of the value of plant food. After a year of light crop or low prices they are quite likely to drop the fertilizer which has proved reliable through a long series of years, and try some new mixture which is offered for several dollars less per ton. Sometimes a single season's test indicates that the lower-priced mixture by the side of the standard goods will give nearly as good results in crop. They then conclude that it is just as good. Mr. Lewis says that during the 20 years he has been working the farm through the present rotation he has had but three maximum crops of potatoes. What he means is that only three times in 20 years has he been able to produce an average of 340 bushels per acre, and these results were obtained on three different fields. The same fertilizer has been used all through this period, with the same culture and care, yet all the conditions needed to produce a full crop have been present only three times. Mr. Lewis argues from this that a single year's results from a change of fertilizer prove little or nothing. The only way to fertilize potatoes is to use large quantities of a mixture known to suit the crop, and thus be always prepared for a combination of conditions that will just suit it. The experiment with the poorer goods might be made in a year when the best results were possible, and in that case there might be a serious loss. When asked whether the other crops in the rotation, wheat, grass, clover and corn, varied as the potatoes do, Mr Lewis said no—that under his system they were always sure of fair crops. This year's grass is very heavy, while most of the wheat looks good for 35-40 bushels per acre. Mr. Lewis says that when the potato crop is average or below he does not use fertilizer on the wheat, since there is enough left by the potatoes. After a very heavy potato crop he would probably use extra fertilizer.

H. W. C.

GOOD CULTURE FOR CORN.

A good crop of corn can be raised while Summer fallowing, and all the weeds and foul stuff can be killed out just the same. The better you cultivate your corn the better corn you will have, and also the better wheat. Fit your ground well enough for a garden; then mark it both ways. I plant with an American Standard planter, and can easily plant seven acres a day; then as soon as I get my field planted I roll the ground, and when the corn is rooted in the hill so that it won't be knocked out of place, I give it a thorough harrowing with a 60 spike-tooth harrow going both ways. The trouble with most farmers is that they get in too big a hurry to plant. They say they will fit their ground after planting with good cultivation, but this will never do. After my corn is nicely up I harrow it again; the harrow loosens the earth right in the hill. You must have the teeth in your harrow good and sharp or pointed. The first time that I did this I almost shut my eyes, it seemed such harsh treatment for the tender corn, but in a couple of days I saw that it had done no harm to the corn. I never saw any hand hoeing or cultivating that did corn so much good as this did. Of course the field must be free from sticks, large stones and sods or the corn will be pulled out.

I like to use the old-fashioned one-horse cultivator, for I always cultivate my corn diagonally through the rows. Cultivating this way the hills do not come opposite each other, the operator only has one hill to watch, and can get much closer to the hill. Therefore the cultivator can be set fully as wide as the rows, and can be jogged over, so as to root grass and weeds almost right out of the hill. When a two-horse cultivator is used you have to allow for the spreading of the hill and set your cultivator accordingly. I have no two-horse cultivator, but I have a common two-horse disk, and I take off the two inside disks and can cultivate with it till the corn is from 18 inches to two feet high, straddling the rows the same as with the two-horse cultivator, and can do just as good and thorough work with it. I have never had a failure of corn or wheat since I followed this method. Corn has always gone over 100 bushels to the acre. I don't like to see a good clean corn stubble go over the Winter. I always think what a good opportunity is lost for raising a crop of wheat. I like a good cover crop of some kind on all of my land.

A. L. S.

Huron Co., Mich.

LATE POTATOES AFTER EARLY PEAS.

I tried an experiment this year with Canada peas and potatoes that may be interesting to your readers. The large potato growers in this vicinity generally plant in June. We tried it last year for the first time, and for growing potatoes cheaply it was a success. I have been a market gardener in years past, and raised a great many peas for market, one year having put them into market on June 4. My own experience is that peavines plowed under are a great benefit to the soil, but I never plowed them under until the vines were dead. What benefit green vines plowed under will be to the soil or to the potato crop I am unable to state, but hope to be able to know all about it when the potato crop is harvested. We plowed a 10-acre field on April 10, 11, 12, dragged it and drilled in the peas April 16 and 17, putting 1½ bushel of seed and 200 pounds of potato fertilizer to the acre. Following this was one of the heaviest, wettest and most disagreeable snowstorms ever known in this vicinity. The peas commenced to break through the ground on May 1. About this time we were able to put in five acres more. To-day the field is a solid green; I measured the vines, and they are 19 inches high and seven branches on each stock. My neighbors admit that the crop of peas is a success; therefore it must be so. The season all know has been backward. Weeds have come up between the drill rows so thick that there is no ground visible. The continued rains have delayed all farm work, and some farmers had not finished planting corn by June 15. Some had finished planting potatoes, while most of the large potato growers were waiting for the ground to get dry enough to plow. I began to plow these peas under by June 17. Whether this will be a success in growing potatoes the future alone can tell. As a weed killer and soil renovator there can be no doubt of its being successful. The weeds will all be plowed under. The ground being plowed twice and the extra cultivating to put in the peas and the potato fertilizer must help the crop of potatoes whether the peavines will or not.

K. S. WING.

Portage Co., O.

R. N.-Y.—We would like to know the result at digging time. The plan seems a good one in theory, but in our own location late planting seldom gives a good yield unless we use second-crop seed. For the potato crop we would prefer the green vines to dead ones, and the peas might follow rye or Winter oats, thus filling the soil with humus.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Seeding Grass With Buckwheat.

What are the chances of obtaining a good catch of Timothy and clover by seeding them with buckwheat this Summer?

This system has been used in this State, and with satisfaction, provided the season is at all favorable, and the buckwheat does not grow so heavy as to lodge, and thus smother the young grass. Personally, however, I would prefer to take chances on plowing the land now and keeping it raw until July, and then seeding to grass. You would stand a much better chance to get a good catch now and a crop next year, than if seeded with buckwheat.

E. B. VOORHEES.

New Jersey Exp. Station.

We have never attempted to sow Timothy or clover in connection with buckwheat, and I do not know of anyone having done this. The habit of growth of the buckwheat is such that I should not anticipate satisfactory results from such a combination. Possibly grass and clover might make a good start should the buckwheat be sown very thin, but if sown in the usual quantity the crop of buckwheat from the branching habit and broad leaves of the plants, would be sure to shade the ground to much greater extent than would be favorable to the grass. I should prefer planting the land to corn. Corn for the silo might be best, but late sweet corn would answer. I should sow the mixed grass and clover seeds in the corn about August 1.

Mass. Exp. Station. WM. P. BROOKS.

I hear of many persons who have seeded not only with Timothy and ordinary Medium Red clover, but with Crimson clover in buckwheat most successfully. The time for sowing buckwheat gives opportunity for fitting the land well. I may say, however, that better results are secured if the land is plowed and left to weather for two or three weeks before the seeding, which gives time for harrowing and compacting the sub-surface soil. However, it is now too late to give much time for weathering. Usually, buckwheat ground is very poorly prepared. Harrow, roll, harrow, and then harrow again before sowing. Do not sow over one-half bushel of buckwheat per acre. Even a less amount would give better opportunity for the clover and grasses. Use commercial fertilizers rather liberally. We have discovered in the last few years that few crops respond to a judicious application of fertilizers as promptly as does buckwheat. The fertilizers will assist materially in getting a perfect seeding of grasses. I. P. ROBERTS.

New York Exp. Station.

An Experience With Spraying.

G. W. H., Ogle, Pa.—This season has been my first to try spraying apple trees. Although it rained a great deal, I kept right at it; used Bordeaux Mixture with London purple at the rate of four to five ounces to 50 gallons Mixture. Could this be too much London purple? I find a great many of the leaves are scorched; also some of the fruit on upper side. The trouble seems to be the worst on early varieties, and on the sunny side of the trees. Could this have been caused by spraying when the sun was shining direct on the tree? Will the fruit thus damaged grow to maturity, or will it be one-sided or drop off?

ANS.—London purple is not nearly so safe to use as Paris-green, for it varies in composition, and often contains much free or soluble arsenic, which is what burns foliage. But I cannot understand how so small amount as G. W. H. used, and in combination with Bordeaux Mixture too, could have burned apple foliage. Possibly the ingredients of the Bordeaux were badly combined, so there was a surplus of the copper-sulphate solution. With properly made Bordeaux Mixture we should be able to use Paris-green at the rate of one pound in 100 gallons on apples without danger of injuring; this is the strength now used by many New York apple growers. Spraying when the sun was shining should not have caused the spray to burn the leaves. I cannot determine from the description of the injury to the fruit whether it will outgrow the affection or not. Doubtless a few days of this growing weather will soon demonstrate one way or the other.

M. V. SLINGERLAND.

Spraying for the Codling Moth.

G. H., Walla Walla, Wash.—Which is the best spraying material for Codling moth only, irrespective of cost, sulphate of copper solution, Paris-green and lime, the Bordeaux Mixture, the ammoniacal mixture, or the London purple with lime? Also, why is it, as great stress is put forth in your valuable article of April 20 in THE R. N.-Y. on spraying early, that my early Summer apples last Summer were not affected with five per cent Codling moth, while with Fall varieties, at least 50 per cent was affected? My first spraying was not done for three weeks after the last blossoms had fallen off, but I do not think I sprayed later enough in the season.

ANS.—A solution of sulphate of copper, or Bordeaux Mixture, or the ammoniacal mixture, are all fungicides, and will thus prove of little avail against the Codling moth, and they should be used for combating fungous diseases only—like the apple scab, etc. To check the Codling moth with a spray it is necessary to use a poison, and there is little choice between London purple and Paris-green, provided plenty of lime is used with each. New York apple growers are using a poison at the rate of one pound in 100 gallons of Bordeaux Mixture or lime and water; many are using white arsenic boiled with lime or sal soda, and find it just as effectual and much cheaper than Paris-green.

The all-important time to spray for the Codling moth is within a week after the blossoms fall, so as to get some of the poison into the cup at the calyx or blossom end of the fruit before the calyx leaves close up this cup. It is in this cup or cavity that most of the first brood of the caterpillars of the Codling moth spend the first few days of their life, and get their first meals. A thorough spraying at this all-important time in the growth of the fruit will be more effectual in reducing the number of wormy apples than three or four or more applications after that time, although oftentimes these later sprayings are necessary, and materially help in the warfare, especially in the West, where the insect has more than one brood annually. Do not fail to spray at this opportune time. Where the Codling moth has two or three broods, as in the Far West, it will pay to supplement the poison spray with the banding system; that is bandages of burlap or some similar material put around the trunk of the tree and examined every week to kill the caterpillars which have crawled under the band to transform. This weekly examination of the bands is all-important, and quite necessary to the success of the method.

M. V. SLINGERLAND.

Grafting Questions.

W. J. G. W., Raleigh, Tenn.—1. I would like to bud the pecan on the hickory, and wish to know how it is done. I know it is difficult to do, but will not be discouraged by failure. 2. Can the Scuppernong be grafted on the Muscadine? If so, how would you proceed? 3. Name some work on grafting and budding that would be of value to the novice.

ANS.—1. The best method of budding the pecan on the hickory or upon pecan is by the ring method. This is done by selecting scions that have well developed buds, and if they have those that project into spurs they are very good. Cut out a ring of bark from the scion about an inch or two long. Place it on the stock as a pattern and cut out a piece of bark just the size to admit it. Bind it fast with waxed cloth, and it will quite surely grow. This should be done when the buds and stocks are well grown, which will usually be about August or September. 2. The Scuppernong grape may be grafted on the Muscadine, but with great difficulty. The stock should be cut off a few inches below the surface of the ground, and trimmed to a sharp wedge at the top. The scion should be about a foot long and a slit or gash cut in it about the middle. This slit should be straddled over the wedge of the stock, and the projecting butt end of the scion pushed into the ground. This makes a sort of combined cutting and graft, which is much more likely to grow than an ordinary graft. 3. The Nursery Book, by L. H. Bailey, which may be had through THE R. N.-Y., price $1, gives full directions for budding and grafting. H. E. VAN DEMAN.

Planting Asparagus in the Fall.

T. H. M., Niagara, Ont.—Have you any experience in planting asparagus roots in the Fall? I purpose trying two-year-old plants.

ANS.—We have seen asparagus successfully planted in the Fall in Tennessee, and see no reason why it should not succeed in your locality. In the asparagus regions about New York planting is always done in the Spring, but only, as we understand it, as a matter of convenience in arranging work. If planted the usual depth of three to five inches well covered and mulched to lessen heaving, it should not be harmed by frost, as it is a very hardy plant. As a rule, however, Spring is the best time to plant herbaceous subjects.

Starting Strawberry Seeds.

P. A. R., Gardena, Cal.—I would like some information in regard to growing strawberry seedlings. I find it hard to get the seeds to germinate. How should I treat them?

ANS.—Crush the strawberries in some kind of absorbent paper. Scrape off the pulp and mix with enough dry sand to separate the seeds, which may be immediately sown thinly, sand and all, in pots or shallow boxes of light soil. If the seeds are viable they should soon come up, and the little plants may be pricked out and transplanted to similar boxes or small pots as soon as they can be handled. The seeds should be lightly covered, and the soil kept moist, but not sodden, until they germinate.

Subduing Wild Growth.

L. D. L., New Market, N. J.—How can I get rid of briers in a sandy two-acre patch that I wish to use? The old farmers around here cannot see any way to subdue them, and their plows are not fitted to cut through them. I would like to learn the best way to treat the field and the best crop to cultivate. The land is old, and has been cultivated until the last few years.

ANS.—Apparently the only way to subdue wild growths on old fields is to cut down or grub up the worst growths, and tear up the soil with a strong plow. All roots and trash should be gathered and burned, and the field planted to corn, potatoes or some crop needing prolonged cultivation. Two or three seasons of persistent work should tame the wildest land if there are no stumps or thick roots.

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PAN-AMERICAN EXPOSITION NOTES.

THE ROSE SHOW is one of the greatest attractions at the Exposition just now. There are extensive beds of Hybrid Remontants and others now in bloom, showing every color from the darkest crimson, such as Meteor, down through all the shades of crimson, red and pink to pure white Mme. Plantier. The beds have been beautifully planned by Mr. Wm. Scott, who has charge of the Department of Floriculture, and the planting and care of the beds has been all that could be desired. The cool weather has kept them back somewhat, but the rains have made them grow vigorously and now the warm sunny days have caused them to bloom most profusely. Such an exhibition of Hybrid Remontant roses is said by good judges never to have been seen before in America, and I am sure it is true. There are several displays of the Crimson Rambler, and there is one very large bed devoted to it entirely, which is at present a mass of buds, and within the next two or three weeks this variety will be a perfect glory of bloom. It is well worth coming to see, and those who visit the Exposition should not fail to make note of this and see one of the finest sights in the floral department.

STRAWBERRY NOTES.—The strawberry display is just now at its best and New York and Ontario make the best show, as we might reasonably expect, because of their nearness to Buffalo. Clyde is perhaps the most showy and prevalent variety on exhibition. Williams is the leading market strawberry of Ontario, and it certainly does remarkably well there. It is of a beautiful brilliant red color and a fair quality, but the larger berries have the fault of being somewhat furrowed on two sides, which is a slight objection. The variety called New York is particularly bad in this respect. In fact it is decidedly coxcomb shaped and all of the larger berries are considerably distorted and irregular, I am sorry to say, because in growth of plant and in some other respects it is quite desirable. The old Haverland holds its own very well, as it is not only of good shape and color, but very fine in flavor. The Aroma is one of the very good kinds, as it is neither too large nor too small, clear red without any green tip, and of a delicious flavor. It seems to stand shipment very well. Several shipments of the Clark strawberry have come from Oregon, and after being transported over 3,000 miles, at least half the amount sent has reached here in very good condition. This is evidently a good shipper. It is the leading strawberry of Oregon, and especially of the Hood River section. Connecticut has sent on a good many varieties of the strawberry, and for the most part they have reached here in good condition. The list of varieties from that State has been quite large, and the specimens have averaged well up to the standard. One seedling variety from Brocton, N. Y., is worthy of special note. The color is quite ideal, being bright red inside as well as outside; solid and of just the right shape, which is conical, rarely showing any disposition to being furrowed or coxcombed. It is rather soft, so far as can now be judged, but not especially so, and the flavor is more than ordinarily good. Plants that are shown in fruit taken directly from the field, prove that it is very vigorous in growth, and has a large heavy leaf, and the fruit is held up well from the ground on stout stems. It has been named Ryckman, in honor of the introducer.

WEST AND SOUTH.—Idaho has sent the first consignment of a fine display of sweet cherries. Bing is the principal variety shown so far. It is so dark as to be almost black, very large and of the sweetest flavor. It is an excellent shipper, for the flesh is very firm. The Florida fruit exhibit is increasing in interest. The first consignment, of consequence, of pineapples arrived from Orlando. The variety is the Smooth Cayenne, which is the principal variety grown in that region. This is only the beginning of what we confidently expect to be the finest display of pineapples ever shown to the public. This feature of the Florida exhibit will continue to increase until the middle of August, when it will perhaps be at its height. In one of the conservatories is a large bed of pineapple plants transported from Orlando. This exhibit is being made by the Association of Pineapple Growers at Orlando, and they expect to continue it throughout the season, showing just how the pineapples are grown there, and anyone who feels interest in this subject should not fail to see this miniature pinery.

DAIRY AND MUSIC.—The dairy test is being made in the most thorough manner in the Dairy Barn under the direct supervision of E. Van Alstyne of Kinderhook, N. Y. All the principal dairy breeds are represented and in most cases by animals of the highest type. Those interested in dairying should visit this barn when they come to the Exposition, as they will be able to gather considerable information that will be of interest to them. They can see the product and record of each animal up to date. The music on the Exposition grounds is of the very highest order. There is a grand Temple of Music which has a seating capacity of 2,200; the exterior is beautiful in the extreme, both in point of architecture, in color and in design of doorways and other minor features; and on the inside it is almost incomparable in its beauty. The fresco work is very elaborate and extremely pleasing. There is an immense organ on one side and a large stage in front for the various bands which visit the Exposition. The concerts are all free. The music out of doors is in band-stands which are beautifully constructed and conveniently located. Visitors can sit within easy distance of them while listening to the music of such bands as Sousa's, the Mexican Artillery band, the band of the Seventy-first New York regiment, the Thirteenth of Hamilton, Ont., and others, and at the same time enjoy the view of the buildings by daytime, and in the evening be charmed by the glow of lights that bring out the buildings in beautiful relief with the sky as a background. There are also exceptionally fine displays of fireworks at least once a week, and sometimes oftener. These exhibitions are held where they are reflected in all their glory in the lake, which is one of the charming features of the park. Now that the rains have ceased and given the Exposition management an opportunity to complete the work upon the grounds, everything is in fine condition, and those who contemplate coming to the Exposition need have no fear of being disappointed. H. E. VAN DEMAN.

Scales on Maple Trees.

L. E. L., Coventry, Vt.—Will Prof. Slingerland tell us what the trouble is with our maple trees? The twigs all over the trees are covered like those inclosed. I haven't seen any other insects on the trees.

ANS.—The twigs bore a very large and dangerous crop of one of the soft-shelled scale insects, a species of Lecanium. A few years ago a similar scale killed many plum trees in western New York. Upon tipping over one of the large, fat, brown scales, we found it filled with minute white eggs, which will hatch out about July 1 the tiny baby scales. These young scales will crawl on to the leaves and suck out their living, but growing slowly. In the Fall, before the leaves drop, the one-fourth grown scales will migrate on to the bark of the smaller branches and go into hibernation. As soon as growth begins in the Spring, they will begin to suck the sap from the bark, and increase wonderfully in size. Just before they mature, their outer skin hardens, forming a hard brown shell in which the eggs are laid. The best time to fight this pest is during the Winter or early Spring, when the leaves are off. Then the partly grown scales on the bark succumb to thorough work with a whale-oil soap spray (use one pound soap in three gallons water). Usually their enemies soon get the upper hands of these scales.

M. V. SLINGERLAND.

Plant Lice on Plum Trees.

F. E. H., Maywood, Ill.—I send you small flies found on my neighbor's plum trees. Can you tell me name of flies and how to get rid of them? I also send a curled plum leaf; is that the work of the flies, or is it a disease of the tree? I think it the work of flies.

ANS.—The "small flies" were plant-lice, and in sucking their food from the leaves they cause the latter to curl, thus the curled leaves sent result from the work of the lice. In order to kill plant-lice it is necessary to *hit* them with an oil or a soap spray, and this is a difficult thing to accomplish when they are inclosed in a curled leaf. If one has a strong water pressure, turn the hose, with a good nozzle, on the trees about twice a week, and much can be done to stop the work of these little creatures. If possible hit the lice with a spray of whale-oil soap, one pound in five gallons of water.

M. V. SLINGERLAND.

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Ruralisms

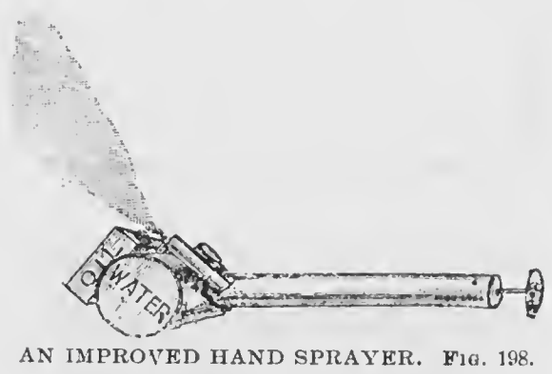
NOTES FROM THE RURAL GROUNDS.

POTATOES LIKE RAIN.—Potatoes have seldom looked better than at the present moment. The cool weather and abundant rains have encouraged a strong growth, and if the soil moisture holds out a fine crop should result. The only exceptions noticed are in very early plantings in undrained soil, where the excess of moisture caused the seed tubers to rot. The worst enemy to the potato as a money crop is neither bugs, blight nor infertile soils, but dry weather. The other pests and deficiencies may be successfully overcome by energy and forethought, but a severe drought at any stage of development will check growth and greatly reduce the yield. Much may be done to modify the effects of a scanty rainfall by industrious cultivation, but the resulting crop does not always pay for the extra effort. With a fair amount of moisture in the soil the intelligent care of a field of potatoes is often better compensated than any other staple crop. The beetles were much delayed by the cool weather, and made their first appearance in a very unobtrusive manner compared with former years, after the earlier plantings began to bloom, and will doubtless be disposed of very easily. There is occasionally too much rain at the ripening period, but during the early stages of growth potatoes like moisture.

AN EXTRAORDINARY NEW COLEUS.—Over 50 species of Coleus are known, all of which are native to tropical Asia and Africa, but the innumerable garden varieties now grown for their brilliantly colored foliage have all descended from C. Blumei, found originally in Java. Some of the old varieties, such as Golden Bedder, brilliant yellow, and Verschaffeltii, velvety crimson, have never been superseded. They always make a brilliant show, and endure dry weather very well. Coleuses are not used as much as formerly, as the taste for carpet bedding is diminishing. They make excellent specimens for the window garden or greenhouse, but have to be renewed frequently by propagation, as old plants become leggy and lose their bright colors. The bloom of these foliage varieties is small and weedy. It is always sheared off as a detriment to the plant unless seeds are wanted. The new species, Coleus thyrsoideus, however, bears large spikes, 10 or 12 inches long, of brilliant blue flowers, just the shade of the much admired Salvia patens, and probably the rarest of all colors. The plant grows well with little more heat than is required for a Pelargonium, and blooms readily in Winter, when blue flowers are especially scarce, few window plants having blooms of that color. It is said to possess a pleasing fragrance which will add to its usefulness if it proves adapted to our climatic conditions. The foliage is not highly colored, but the handsome flowers, lasting in good condition nearly a month, should make it a conspicuous subject for window decoration. Few plants are yet procurable in this county, but it will probably be offered freely next year.

AN IMPROVED HAND SPRAYER.—This has not been a good season for dealers in spraying materials. The almost constant rain and fog has prevented much work of this kind that would be undertaken in an ordinarily dry Spring, greatly limiting the demand for pumps and chemicals. While the weather conditions hindered the development of most insects, many fungus troubles got a good start and various aphides or plant lice seem to have found things about to their liking, and are rapidly overrunning the plants of their selection. One of the handiest little sprayers we have used is the improved Dewey, made by Leggett & Bro., New York, a representation of which is given in Fig. 198. With the chambers filled with kerosene and water respectively it is always ready for instant use and makes a very effective mechanical emulsion spray for soft-bodied insects. The proportion of oil to water can be readily graduated by a valve not shown in the engraving. As made last year the Dewey projected only a horizontal spray, and often failed to reach the under surface of drooping leaves, but now they are caused to direct the spray upward by the very simple expedient of connecting the air compressor with the reservoirs at an angle instead of horizontally, as heretofore.

THE COMBINATION TOMATO.—It is always pleasing to learn that varieties of useful or ornamental plants originating on the Rural Grounds succeed under the conditions of general culture elsewhere. Climate and locality are such important factors in the development of plants that one reads with many misgivings the results of trials in distant places even of the most promising new developments of our experimental work. The Illinois Department of Agriculture has been growing in its new vegetable forcing house about 83 plants of the red tomato Combination, produced six years ago by hybridizing the Dwarf Champion with Lorillard. A most excellent tomato for forcing or field culture under our local conditions resulted. It has been widely disseminated by a Philadelphia seed house, and many flattering reports are



AN IMPROVED HAND SPRAYER. FIG. 198.

constantly received, though it does not meet the requirements of every grower. Even after this lapse of time an occasional plant will bear a dull red fruit like the Champion, though the color should be intense scarlet. This is apparently its only fault. The Illinois experiment reports a yield of this variety as exceeding that expected by most commercial growers. W. V. F.

The York Imperial Apple.

After about 20 years' personal experience with York Imperial, and a number of years' careful observation of its behavior in different counties of the State, I am satisfied that it varies greatly, both as to eating and keeping qualities, according to the section where it is grown. It is not a good apple in the Fall or early Winter either for eating or cooking, but when grown in a location to which it is adopted, and kept in shallow bins in a cool cellar, or better yet, a cave, it comes out in the Spring a fairly good apple for any purpose. It will stand up longer and bear more handling than any of the finer varieties, and coming when all of the strictly high-class varieties are out of the market, it sells well. For this reason the growers of Franklin, Adams, York and some parts of Cumberland County have found it very profitable.

York Imperials grown in my orchard at Harrisburg on the banks of the Susquehanna, about 30 or 40 feet above the level of the river, do not keep any better than Baldwins, they are not salable in the Fall because they will not cook soft, and they ripen up about the holidays, and must be sold in competition with Baldwins and Bellflowers—consequently I have not found them profitable, and would not advise anyone similarly located to plant them. But if I were planting an orchard along the foothills of any of our mountain ranges, on moderately heavy ground, I would certainly plant some York Imperial. I have eaten fine specimens grown on such land in probably half the counties of the State. Wherever it can be grown in perfection—wherever conditions are such as to develop its keeping qualities—it will be found profitable, but it cannot be universally recommended.

Pennsylvania. GABRIEL HIESTER.

Notes from Tennessee.

We are much interested in cow peas, which are as common here as wheat or corn, and have been the principal legume plant for many years. The farmers have been turning their attention to fruit culture of late years, and the result is that the strawberry season closed last week with a record of 50,000 crates for Rhea County, mostly shipped to Cincinnati and other northern cities, netting our shippers an average of over $1 per crate, or $50,000 net for the strawberry crop. Then we have the raspberry and blackberry (growing wild) in abundance; fine-flavored, early peaches are produced in large quantities, and very fine specimens, the first shipment being made last week, the season continuing perhaps for two months. We cultivate the trees generally, but almost every farm is dotted with peach trees of seedling varieties that product good fruit for home use, and sell for about 50 cents per bushel. The Cumberland Mountains give us the best fruit and berries, although coming in later, which extends the strawberry season from about May 10th to last of June for mountain berries. We are ever ready for improvement in culture and care of fruit, and believe this section is an ideal one for the fruit farmer. We have the Tennessee River at our door with its fertile corn land; then the Mission Ridge, which runs from Chattanooga through this county, extending for 75 miles up the river, which is admirally adapted to strawberries and early peaches, and is near the Cincinnati Southern Railroad at all points, making easy shipping facilities. We have had plenty of rain, and wheat is fine and ready to harvest; oats doing well. Corn land was overflowed in river bottoms, and much of it had to be planted over. We sow Whippoorwill peas for hay in this month.

Dayton, Tenn. H. L. R.

Scraps.

OHIO RAIN.—Perhaps it will help the Hope Farm man to know that it has been raining over here in Ohio, and for a few days past the wind has been blowing from the east, so I don't see how we are to send any surplus energy to our Jersey brethren. Of course, there is lots of it going to waste out here, but it's a commodity hard to transfer. With all the rain we have had intervals of fair weather sufficient to get planting done reasonably seasonable, and a fair amount of cultivation done. A wet season makes these hills teem with verdure, and the weary farmer can turn from his weedy cornfield and feast his eyes on the beauty of the everlasting hills—if he's inclined that way.

Ohio. W. L. A.

RETRIBUTION.—A number of years ago a man in this city who, by the most grasping business practices, including oppression of the poor and unfortunate, had gained $100,000, became the victim of a strange mental disease, which took such a hold on him that he was finally put into an asylum, where he died. He thought that he was starving to death, and, to all appearances, suffered the agony of one in that condition. Such cases would seem to show that at times nature brings swift punishment upon those who, by unjust treatment of others, gain wealth or position. In a strictly literal sense this man's "violent dealings came down on his own pate."

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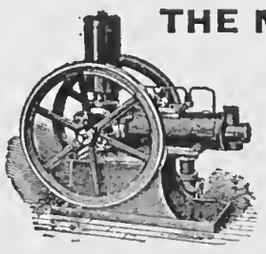

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does the work on stock and poultry. We warrant it. Best agr'l authorities in U. S. endorse it. Can you ask more? Rapid seller. Big profit. Sure success. 1,000 live agents wanted. Write for prices, Exc. territory given. The J. H. Ames Co., Bowdoinham, Me.

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instantly removes all flies, mosquitoes, lice and other insects from cattle, horses and other animals sprayed with it. It is healing to any sore. Animals rest easy and feed quietly all day. Cows give ¼ more milk, which is a big saving. 1 gal. will protect 500 cows. Money refunded if animals are not protected. Indorsed by the best class of people. Order at once and secure agency, you can sell hundreds of gallons. 1 gal. $1.10, 2 gal. $2.10, 5 gal. $4.50, 10 gal. $9.00. Rippley's Special Sprayer to apply same, $1. 5 gal. Compressed Air Sprayer to apply same on large herds, $6.25. Address,
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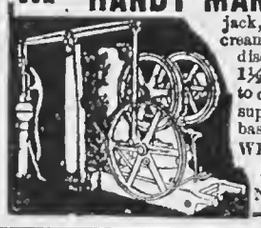
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Hope Farm Notes

FIELD NOTES.—After 10 days of sun and wind, in spite of all the rain, the soil in the valleys turned dry as a chip. A peculiar thing about our country is the fact that the lower lands are often sandy and warm while the hills are cold and late. The valley people began to suffer for lack of moisture. You could follow the track of a wagon on the lower roads by the dust kicked up by the horses. For weeks and weeks farmers were finding fault because they had too much wet, and here they were calling for more of it. That's pretty good evidence of the futility of human efforts to change the regular order of things. . . . While our friends in the valley were getting ready to growl, our heavier soil was not suffering. The upper surface looked dry, but the light scratch of hoe or cultivator would turn up the dark color that lightens up our hopes in dry weather. On one lower field, which was plowed June 21 for corn and potatoes, the soil was almost too wet for the plow. I feel sure that most of our soil would mature a crop, even though we had not a drop of rain before September. While this is true we were grateful for a lively shower on June 23—just enough to moisten the soil well. . . . The cultivator and weeder have been moving lively in the corn and potatoes. Somehow we have had more use for the weeder this season than ever before, and this extra use has increased our respect for the tool. Our plan has been to use the Acme harrow before the corn came up. This left the surface level and smooth. As soon as the corn began to peek through the weeder was started, first in one direction and then in another. This has been very effective, and our corn is very clean thus far. . . The "Clark" grass was quite disappointing until the Timothy began to head out. It was short and failed to grow properly. All of a sudden the heads shot up, and it is now quite satisfactory, though far short of Mr. Clark's own field.

FRUIT MATTERS.—Apples will be a good crop with us. I thought the wet weather had prevented the fruit from "setting," but in some way the trees have hatched out all they can carry. The constant rains prevented us from spraying, yet so far as I can judge, the fruit is remarkably free from insects or diseases. I believe the general apple crop of the country is short. With the general upset and mix caused by the late, wet season, the early apples ought to be salable this year at fair prices. Many of my best trees are of early varieties—planted by people now long dead. . . . The cherry crop is not very cheering. In spite of the wet the fruit started well, but has dropped badly, and is rotting. The aphis are lunching on the trees and take it all through we cannot brag. My neighbor, an old man, who has lived here many years, says that if we get a full cherry crop once in five years we should be thankful. I thought last year I would show him a thing or two about cherries, but now I am very glad I didn't say a word, for he knew more about it then I did. I do not see any great profit in cherries, but I shall continue to set the trees along the stone walls, for our most vigorous trees are there, and nothing else seems to want to hug a stone wall except wild grapevines, weeds—and the Hope Farm man on Sunday afternoons. . . . Those blueberry bushes which were sent from New Hampshire have made a good start. If they do well I shall plant more of them and try to cover quite a space. The so-called huckleberries which I find growing on our hills are poor things. I hope these imported Yankees will show them how to do their duty. It's pretty hard when a man or huckleberry must be shown what to do in order to fill his proper place in nature!

CHANGE OF PLANS.—It is a good thing to have your work organized and thoroughly planned. That is true, yet I think it is wiser sometimes to break that plan short off when circumstances make it necessary. This year, for example, we tried to make our plans early. We figured it out with care, so that with an ordinary season every tillable acre would be provided with some useful crop. The rains came, and June 10 found us just about where we planned to be by May 15. It was hard to stop, with good soil unplowed and growing up to grass and weeds, but I knew that it was better to take care of what we had in rather than to increase the acreage and half care for all. It was hard to do this, for a farmer hates to see some of his best fields lying idle or worse, yet I reasoned that cultivator, hoe, weeder and mower were more useful than plow and harrow. So we quit planting and went to nursing what we had planted. When our crops are cared for we shall plow again, and the fields now standing still will go into late fodder corn and buckwheat. I wish to try seeding clover and possibly Timothy with buckwheat. I do not know much about the buckwheat crop. I shall use it this year because I have not been able to fit the ground for corn and potatoes, and I want to raise some crop that will return grain or cash without much hand work. The old farmers about us say that buckwheat should go on the poorest fields of the farm. Others say use strong ground or add fertilizer. Who *knows?*

LIVE STOCK NOTES.—The man who bought our little Billy Berkshire has been keeping track of his weight, and he sends the following interesting record:

I herewith give you the weight of little Billy Berkshire, a little boar of my own breeding, cross of Berkshire boar and scrub sow, a little sow same age as Billy out of that litter of five pigs I told you about before; and a little Berkshire sow I bought recently:

	Billy Berk. Lbs.	John York. Lbs.	Scrub sow. Lbs.	B'rk. sow. Lbs.
March	19	20	19	..
May 15	31½	31½	32½	..
May 26	39	40½	42	..
June 1	40½	43½	45½	..
June 13	....	53½	55	37

The two boars are in the same pen and were fed a little extra. The sow is in a pen with 15 more of different size, receiving no extra care; still she is in the lead. So far the cross breeds make a better showing, but of course it is too soon to form an opinion. This is not to say that I am in favor of cross breeds, but it seems they are a little coarser in their make-up. Comparing the two Berkshires with the two scrubs, it is like comparing two race horses with two track horses; you may say blood tells. The two little Berks are a fine pair, and in spite of Billy's being the light weight he is boss in the pen and quite spunky. Next year I am going to experiment a little, whether the pure breeds or the cross breeds are better for the making of pork, making the most weight from farrowing to killing time. C. J.

I am glad to know that Billy is spunky and inclined to be boss of the pen. He had some of Julia's skim-milk to drink, so we should expect him to be a kicker. I would rather have spunk and vigor than weight or pork in the head of the herd. Take our old rooster Don for example. He is not a large bird, and he would hardly be noticed at a poultry show, but he would fight a lion in defence of his wives. Chicks from some high-scoring birds come feebly into the world, and tumble over dead at an east wind. Old Don's sons and daughters have the spirit of their sire. They kick themselves out of the shell, and make the world shell out a good living and a fair start. The size of the sire doesn't count half so much as the spirit. I am told that the father of John L. Sullivan was a little bit of a man. He lacked the size needed to give his son a sound thrashing, yet it was his spirit which enabled the big fellow to whip the best men the world could furnish.

HOUSEHOLD NOTES.—I have heard people joke about country living, and say that farmers eat salt pork and potatoes from one year's end to the other. Sensible people pay little attention to such stuff now, for they know better. The Hope Farmers are not growing dyspeptic over a diet of pork and potatoes. We have eaten strawberries until our noses are red, peas until we are at peace with the world, with turnip, beets, onions to fill out. The fattest of the hens want to sit and we set them right in the oven where they hatch out a fine meal. There are dozens of chicks growing into little balls of fat—just right for the frying pan, and half a dozen roasting pigs all ready to crawl into the hot oven. The cherries are ripe, and they will last until the Red Astrachan apples are ready for baking and sauce! You take one of Aunt Jennie's cherry pies and cover it all out of sight with Julia's thickest cream!! Why, it's enough to make a man forget that he was brought up in the belief that cherries and milk together are poisonous! The Hope Farm man is no confirmed pie-eater, and he has a horror of putting on too much fat, but his plate goes up the second time! I speak of these things to show what an American farmer can put on his table at light cash expense if he wants to. . . . I got home the other night and found the little Graft hobbling about with a sore foot. He had stepped on a little bone and stuck it into the bottom of his foot. I had a close call from lockjaw when I was a boy, and I didn't like the looks of that foot. So we hustled out old Major and carried the Graft and the two little girls to see the old doctor. He bathed the wound with listerine and put a piece of fat pork on it. It was not long before the Graft announced that he could "work his toes" and he celebrated this condition by eating a big supper. This is one of the dangers of "going barefoot," still, we think it a good thing for the children to "shed their shoes" in Summer. H. W. C.

A Costly Breakfast.

The Washington Star tells of a scientific man who was hunting in the Rocky Mountains for specimens for the Smithsonian Institute. He was particularly anxious to get eggs of a certain rare variety of partridges, and was prepared to pay an enormous price for them if necessary. One morning he ran across a miner who had just been cooking his breakfast, and on the ground the scientist saw shells of the very eggs he was after. The miner had eaten six of them, and he turned pale when the professor told him that he would gladly have paid $100 apiece for the eggs. The thought that he had eaten a $600 breakfast was maddening, but the miner believed they could find more of these eggs, as he had found this nest without looking for it at all. They hunted together for a week, but with no success, and the professor finally got some himself 100 miles from that place. Several years after he got a letter from the miner, who was still in Colorado, and said that that $600 breakfast had taken away his appetite for eggs to such an extent that he had not been able to eat any since. Most people who buy anything at an extravagant price do not realize it until later, and those who laugh at this miner's expensive mistake may be more than duplicating his blunder in other ways. How about a man who to get carriages, costly machinery or furniture that he does not need, fastens on his farm a mortgage that through poor crops or other misfortunes grows until it eats up the farm and turns him out of doors? Or what about people who through dissipation chop off 25 years from their lives?

WHERE LIBERTY ENDS.—Rev. Louis A. Banks, of New York, in speaking of faith healers of various types who refuse to have medical attendance for any of their family who are ill, says that one has a right to believe anything he pleases, no matter how ridiculous or foolish; but just as soon as he carries that belief to such an extent that the health or lives of others are in peril, the law should step in and stop him. As an illustration he told of an absent-minded man who was walking along the street talking to himself and emphasizing his conversation by flourishing an umbrella recklessly. Finally he hit a passerby on the nose with it, and the man at once knocked him down. The absent-minded party was very indignant, and wished to know if this was not a free country. "Yes," replied the other, "this is a free country, but your liberty to flourish that umbrella ends where my nose begins."

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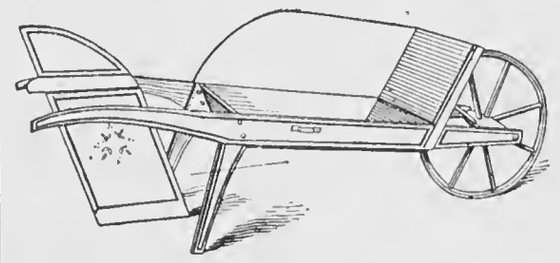

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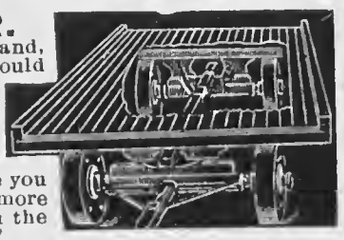

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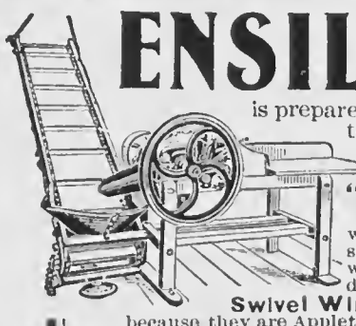

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THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, JULY 6, 1901.

WE have had many questions about cranberries and their culture. Some people with low, swampy land seem to think there is money in growing this tart and spicy fruit. There is a lack of practical information on the subject, and we have arranged for a series of articles which will, we hope, tell the story. Questions will be welcomed from those who do not find in these articles what they wish to know.

*

A NEW and strange disease has broken out among city horses. Over 15,000 horses in this city alone are reported sick. It is said to be a germ disease, and spreads rapidly. The cold, wet Spring was too much for many of these horses. They were kept hard at work, though drenched with cold rains day after day. The disease is likely to end in pneumonia unless carefully watched. It has not yet been troublesome in the country—where horses are not crowded together and on the whole are kept under better sanitary conditions. In view of the fearful sickness here there is all the more reason why farm horses should be well cared for.

*

WE observe that trade papers and other interested parties are already beginning to talk "big crop" when discussing the apple prospect. Their object evidently is to make eastern growers believe that the western crop is very large—with more than enough surplus to overcome the evident shortage in the East. From all that we can learn the western crop, while larger than last year, will be less than the average. At the same time it is too early yet to tell accurately about it. The Government report puts the fruit crop of New York State at 75 per cent of an average. That seems little short of ridiculous in view of the facts and is little more than a guess at conditions.

*

PULLING a mower through heavy grass in the broiling sun is about as hard work as a farmer can ask his team to do, and the discomfort of the horses is increased by the bites of savage flies, which swarm at this season of the year. We have seen men work their teams before the mower until the poor animals were covered with foam, and nearly wild through the annoyance of flies. This might be avoided by stopping now and then when facing the wind, lifting the collars and giving the hot shoulders a chance to cool; and a slight investment in some effective fly killer would be an act of kindness to the horses, which have but little chance to fight the fly pest when in the harness.

*

THE authorities have issued a fraud order against "Watson & Co." of this city. This so-called firm advertised in country newspapers, offering loans on real estate. Hundreds of country people with useless farm property jumped at the chance to obtain ready money on it. They were first met with a demand for "brokerage fees" which were $20 or more. Then there was a demand for money to pay for searching the title and later, another for additional expenses. Strange to say there were many who made all these payments. They were put off on one excuse after another, until finally they were informed that the loan could not be made after all! It cannot be found that a single loan was ever made by the so-called "firm," though they must have taken in hundreds of dollars in fees. This is a fair sample of the rogues who prosper at the expense of country people. A farmer once said about such a man: "He must be all right, for his office is on Broadway—the great business street of New York." The man he referred to simply had a post office box at a small cigar store and spent most of his time in a saloon. After all the warning that has been printed we find it hard to raise much sympathy for one who sends money to such rogues.

*

THERE seems to be no doubt about the fact that the general quality of the milk shipped to this market has improved during the past few years. It is cleaner, and better cared for and cooled before it leaves the farms. There are a number of reasons for this. People know more about milk and its needs than they used to. The scientific men have taught us a good deal about germs and bacteria, and we understand more of the importance of keeping them out of the pan and can. It is also true that the Five States Milk Producers' Association has been influential in providing better milk. Any organization for business purposes in these days is sure to teach the people the necessity of putting pure, wholesome food on the market if they hope to command respect. That is one of the great advantages of coöperation among farmers, and the milk producers are learning it.

*

WHAT are the requirements as to mail boxes under free rural mail delivery? The Post Office Department requires that such boxes be uniform on all routes established hereafter. The Department offers a list of 14 different styles of boxes. This plan is to have patrons along a proposed route decide by vote or otherwise which of these 14 boxes they prefer. This having been decided the boxes must be uniform—all of the type agreed upon. On routes which were started before March 28 any suitable box is permitted, but as such boxes become unfit they will be condemned and must be replaced by one of the 14 mentioned. The boxes which are endorsed by the Department will be entitled to the protection of the United States Statutes, which will mean much to the owners. We see no fair objection to this plan of securing uniform boxes of approved shape and size.

*

A MEMBER of the Wisconsin Legislature proposes that the State establish a steam laundry at every cross-roads, to which the farmers' washing and ironing may be brought each week. As Wisconsin is pretty well covered with creameries and cheese factories there is in many places abundant power to operate such public laundries, and the idea is more practical than it at first appears. Free mail delivery and the telephone promise much in the way of relief from the monotony of country life, but the possibility of lifting the drudgery of the weekly wash from the farmer's wife should deserve the most earnest consideration. Much has been done to lighten the physical labors of the farmer in the way of riding tools and coöperative methods of harvesting bulky crops, but with the sole exception of relief from the care of dairy products in the creamery and milk shipping districts, the toils of the farm wife are as exacting as in past generations. Whether immediate practical action is taken on this progressive idea or not, the discussion of its possibilities will do much to familiarize the public with the need of lightening the toil of the most deserving class of the entire population of our country.

*

THE daily papers have had much to say about the so-called "Platt amendment," and its acceptance by the Cubans. Comparatively few Americans know what this amendment is. Most people are ready to leave such things to the Administration and go about their own business until "hard times" shall once more turn them into unfair critics or stiff-necked partisans. In a general way people understand that the Cubans will receive a measure of political independence, but there are other things on the island which are even more important. They are more important because they deal with the development of human character, without which independence will prove a mere mockery. Mr. Hubbard refers to one of these things on page 466. When the war ended Cuba was filled with orphan or deserted children. In the single Province of Matanzas, out of a population of 190,000, there were 33,000 widows and 32,000 little ones left without father or mother. This was but a part of the awful sacrifice which Cubans made for liberty. Many of these little ones starved to death, while others lived like little savages on roots or wastes. Of what value will independence be to Cuba if the future Cubans are to be brought up in this fashion? The Platt amendment may be all very well, but there are other things on the Cuban platter that should be amended also. Mr. Hubbard and others like him are facing this problem bravely, and doing their best with limited funds. Many of these homeless children have been sent to this country, and have found homes here. Others are fitting themselves for citizenship in their native land. The parents of these children died for liberty. It is the duty of Americans to see that the offering was not made in vain.

QUICK sales are necessary in the perishable fruit trade during hot weather. Sometimes produce is too ripe when shipped, stands too long in the sun at shipping stations, or is delayed in transit, and gets here just on the verge of decay. In such cases the dealer often has to decide between selling it at once at a cut price, and letting it go to the garbage barrel. Of course the former plan is always the better, and those who have a regular commission merchant who has dealt squarely with them will be wise to leave such matters entirely to his judgment. Unfortunately there are unscrupulous dealers who let stuff spoil on their hands through neglect or careless handling, and too often the farmer has a just cause for complaint. A man guilty of wilful neglect in handling the goods of another is amenable to the law, if the complainant can prove his case, which is usually difficult, as he is not here, and does not know anything about it until the damage is done, while the receiver can lay it to anything but his own neglect.

*

A FEW weeks since we referred to a manufacturer who attempted to deceive the public by misquoting an endorsement. A scientist wrote a report of his experiments with a moth trap. He said it was effective against a few insects, but worthless in fighting others more dangerous. The manufacturer cut out all qualifying statements and made the report read as though the scientist endorsed the trap without any reserve. A somewhat similar case is reported from California. The laws of that State require two restrictions to the sale of Paris-green. It must contain at least 50 per cent of arsenous oxide, and not over four per cent of this shall be in a free or soluble form. The object of this is to prevent the sale of Paris-green which would burn or scald the foliage. A manufacturer sent a sample of his "green" to the Experiment Station for analysis. It contained the proper amount of arsenous oxide, but nearly 17 per cent of it was free. This was four times the amount permitted by law, yet the manufacturer said nothing about it. He used as much of the analysis as he thought would suit him, and cut out the rest! Much of this work is done because the manufacturer or dealer thinks the man he quotes will not bother about correcting a small thing. Therefore they carve or stretch the truth to suit themselves. The men who are misquoted in this way should make it their business to see that such things are righted!

*

BREVITIES.

I saw a little child play in the sand,
And try to fill his box with fistfuls small.
It ran like water through his chubby hand,
His little fingers could not hold it all.
And then, with childish petulance he threw
His pail of water on the hateful sand.
When, lo! it took on strength and purpose new;
He held it safely in his little hand.

I thought how often we reach out for things
That lack cohesion, order, unity.
And, like the sand, no record ever clings
To show our work and prove our constancy.
Until almost by accident we throw
Water upon the bright, elusive sand,
And, strange to say, we feel life's purpose grow
Into firm character within our hand.
Sand is the dry, hard, grinding toil that burns
The brand of drudgery upon the clod,
Water the love, ambition, faith, that turns
The child of toil to lift his eyes to God.

HOW the corn is jumping!

VIRTUE is the antidote for vice.

A HOT wind winds up the weeds.

READ Mr. Van Deman's Exposition notes.

A QUESTION is wise or foolish according to the spirit in which you ask it.

A FRENCH automobile has covered five miles in four minutes and 44 seconds.

HAVE you not found graded stock on the whole more vigorous than pure bloods?

ALL who have tried Mr. Clark's method of grass culture please stand up and report.

THE leaves of Alfalfa are strong in protein. Cut and cure the plant so as to save them.

ANKYLOSTOMIASIS is the name for a new disease, or rather a rare old one. We are glad it is rare.

MR. LEWIS says he has had three maximum crops of potatoes in 20 years. Can you beat that? If so, how was it done?

"FRENCH bitters"—a good name for Paris-green. Some "bitters" designed for human consumption are slower but nearly as sure!

THE Kansas Experiment Station suggests dried blood as a calf tonic. Pure blood may answer, but some of the cheaper grades used for fertilizing will not do.

MISSISSIPPI has a State university and an agricultural college. There is hope in the report that the university had 150 students, while the agricultural school had 500!

DURING the past few days we have received a good many letters asking just how to make the Bordeaux Mixture. Every experiment station in the country has given this information time and again, and it has also appeared in many pamphlets and catalogues. Whose fault is it if any intelligent man fails to know how to prepare the Mixture?

Events of the Week.

DOMESTIC.—Justice Bradley, in the Equity Court in Washington, June 21, denied the application of Lone Wolf and other Indians for an injunction against the Secretary of War, to restrain him from opening the Kiowa, Comanche and Apache lands, in Oklahoma, to settlement. He held that the question was purely a political one, with which the Court had no power to deal. An appeal was taken. . . . . Three persons were killed and several injured during an electric storm which swept over Indiana June 20. At Greentown trees were uprooted and crops badly damaged by hail, the loss being put at $40,000. At Hartford City 50 oil derricks were blown down, and several buildings damaged; loss $25,000. . . . . A fire following an explosion of fireworks in a store at Paterson, N. J., June 21, caused the death of 18 persons, and injuries to many others. . . . . Adelbert S. Hay, son of Secretary of State Hay, fell from a window in the fourth story of a hotel at New Haven, Conn., June 22, and was instantly killed. Mr. Hay was 25 years old. In May, 1900, he was appointed United States Consul at Pretoria, South Africa, returning to this country last March. Had he lived two days longer he would have been appointed assistant secretary to the President. . . . . A great flood swept down the Elkhorn River Valley, West Virginia, June 23, as the result of a cloudburst. The resulting devastation reached a length of 35 miles, a dozen small towns being destroyed, and nearly a score of coal mines wrecked. The property loss will be about half a million, and 60 lives or more were lost. Full details have been received very slowly, communication being destroyed. . . . . By a storm around Pittsburg, Pa., June 22, four lives were lost, and a property damage of $500,000 was sustained. . . . . A fire which started in a brush factory at Newark, N. J., June 22, caused a loss of $160,000. . . . . Ten new cases of smallpox were reported in Brooklyn, N. Y., June 25, and the disease continues to appear all through Greater New York.

PHILIPPINES.—Civil government will be established in the Philippine Islands on July 4, Judge Taft becoming Civil Governor. General Chaffee has been appointed Military Governor.

GENERAL FOREIGN NEWS.—Light on the recent campaign in China of the allied forces is furnished by the report of General Chaffee, the American commander, made to the War Department. Among other things, it tells of looting and killing by the soldiers, the victims slain including women and children. For every Boxer killed he estimates that 50 harmless persons were slain. Cities, towns and country were plundered. . . . . During the week ending June 22 there were 155 new cases and 152 deaths from plague at Hongkong.

FARM AND GARDEN.—Henry Xavier, well known as an expert on winemaking grapes, died at Mt. Vernon, N. Y., June 19, aged 75. He was a native of Lyons, France, coming to this country when young. He made many trips to Europe in connection with the introduction of wine-producing grapevines into this country. He brought, all told, 842 varieties, practically every known species from Italy, France, Spain, Germany, Hungary, and other vine growing countries. He conducted many experiments and produced many crosses which have proved successful in the wine producing regions of America.

The following dates have been arranged for special exhibitions at the Pan-American Exposition: Hardy roses, June 18 to 28; sweet peas, July 23 to August 2; Gladiolus, August 6 to 17; Asters, August 27 to September 7; Dahlias, September 17 to 27; Chrysanthemums, October 22 to 31.

The Nurserymen's Mutual Protective Association held its annual meeting June 12, and reëlected the following officers: President, N. H. Albaugh, Phoneton, O.; vice-president, Wm. C. Barry, Rochester, N. Y.; secretary-treasurer, George C. Seager, Rochester, N. Y. Executive committee, E. Albertson, Bridgeport, Ind.; Irving Rouse, Rochester, F. Stannard, Ottawa, Can. On the same date the American Nurserymen's Protective Association held a meeting when the following officers were chosen: Wm. Pitkins, Rochester, president; A. L. Brooke, North Topeka, Kan., vice-president; T. B. Meehan, Germantown, Pa., secretary; Peter Youngers, Geneva, Neb., treasurer. Executive committee, Messrs. C. J. Brown and Wm. Pitkin, of Rochester, N. Y., and J. H. Dayton, Painesville, O.

At the recent meeting of the Florida State Horticultural Society, Tampa was selected as the next place of meeting, and the old officers were elected, with exception of third vice-president: President, George L. Taber, Glen St. Mary; vice-presidents, Dr. George Kerr, Pierson, G. W. Wailson, Jacksonville; W. A. Cooper, Orlando; secretary, S. Powers, Jacksonville; treasurer, W. S. Hart, Hawks Park.

At the recent convention of the American Association of Nurserymen, at Niagara Falls, N. Y., the transportation committee reported having obtained a reduction in the southern freight rates of from 25 to 50 per cent. Irving Rouse reported on behalf of tariff committee that special efforts should be made to secure fairer appraisements at ports of entry. C. L. Watrous, chairman of the legislative committee, gave details of efforts of that committee to ward off inimical legislation. Officers were elected as follows: President, Robert C. Berckmans, Augusta, Ga.; vice-president, R. J. Coe, Fort Atkinson, Wis.; secretary, Geo. C. Seager, Rochester, N. Y.; treasurer, Charles L. Yates, Rochester, N. Y.; executive committee, Peter Youngers, Nebraska; M. W. Hale, Knoxville, Tenn.; William Pitkins, Rochester, N. Y. Next place of meeting Milwaukee. Resolutions were passed condemning proposed free distribution of nursery stock by the Federal Government and asking legislative committee to use its influence to combat the proposed action.

Since the New York State Fair prize list was printed the Short-horn Breeders' Association of America offers to duplicate all premiums offered by the New York State Fair Commission, which makes this class amount to $1,085.

At a joint meeting of State engineers and Senators and Representatives of western States held at Cheyenne, Wyo., a bill was prepared by a committee embodying a scheme for Government aid in the reclamation of the arid region. A meeting of the delegations of the Western States in Congress is to be held in Washington just prior to the next session of Congress, when this bill will be considered for introduction and a plan of action decided upon to secure its passage. The proposed measure, in part, is as follows: "That all money received from the sale or disposal of public lands in Arizona, California, Colorado, Idaho, Utah, Montana, Wyoming, Kansas, Nebraska, Nevada, New Mexico, North Dakota, Oregon, South Dakota and Washington, beginning with the fiscal year ending June 30, 1902, shall be reserved for the benefit of the State or Territory in which said lands are sold, to be kept as a special fund, known as the 'arid land reclamation fund,' under the direction of the Secretary of the Interior. Each State shall maintain an engineer's office, who shall plan and make the estimate for the reservoirs. The plans shall be submitted to the Secretary of the Interior, who may approve or reject them. If approved the Secretary shall set aside money for their construction and such lands are to be exempt from entry. The State may sell the completed works to actual users of water."

The Government has dismissed the criminal prosecution brought at Kansas City a month ago against officers of the Harrison Butterine Company, on a charge of violating the revenue laws.

The Pennsylvania Senate has confirmed the reappointments of Secretary of Agriculture Hamilton and Dairy and Food Commissioner Cope.

The Mississippi Valley Apple Growers' Association met at Quincy, Ill., June 20. The meeting was unusually well attended and was presided over by Henry Clay Cupp, of Fall Creek. James Handly, of Quincy, served as secretary. In the immediate vicinity of Quincy it was the consensus of opinion that there would be but 50 per cent of a full crop. If this result should be reached, the crop will be twice as large as that of last year. This estimate is made in the face of the fact that in several localities the trees are bare, and in others not more than 10 or 15 per cent of the crop can be expected. In other localities in this district there is an assurance of full 75 per cent of a crop. Jefferson County reports it will have 60 per cent of a crop. It is noticeable that failure of the crops is confined chiefly to the old orchards, which is an indication that the younger orchards are receiving more intelligent care and attention. In the southern part of Illinois the crop is more promising than in the central portion. In Franklin County the crop is unusually heavy. Isaac D. Snedecker, of Jerseyville, furnished a very interesting paper on "Spraying." Daniel Shank, of Clayton, read an instructive paper on the "Propagation of the Ben Davis Apple." Dr. C. W. Rook, of Quincy, favored the meeting with a timely talk on "Roots of Trees."

CROP PROSPECTS.

Wheat very poor, hay good, beans looking well, oats and corn good; apples mostly fallen off. C. D. A.
Chelsea, Mich.

Rains came too late for oats and potatoes. Wheat will be short, and some thrashing outfits are being shipped out for work in other counties. B.
Neosha Co., Kan.

The apple crop will not be over 10 per cent, owing to rains and cool weather at blooming time. The potato crop will be large and very fine in this section, barring future contingencies. J. L. B.
Norfolk, Va.

The majority of No. 6 white wheat is hardly worth harvesting. The fields look as though one had sown chess rather than wheat. A new wheat, Golden Chaff by name, has been grown by a few farmers near here, which appears to stand up against the fly. I have 10 acres rye which stands up well. One cannot be seen in the field, it is so high, put on for a cover crop but could not plow it under this Spring. When I read of your experience broadcasting fertilizers, I smiled to think one would try it that way. It was only yesterday, however, that I was disappointed in getting a drill for that purpose, and four men waiting to plant potatoes. Well, we sowed fertilizer broadcast. I can now sympathize with you; at that time I did not. C. H. C.
Jeddo, N. Y.

The outlook for the hay crop in the major portion of the country is unusually good. Probably it will be very heavy in most sections. The trade in haying tools has been larger than usual. This seems more marked, as the trade in haying tools was not good the previous year. The haying tools which we manufacture are mowing machines, rakes and tedders. The improvements in haying machinery during the last few years have not consisted to any great extent in radical changes in design, but in a closer study of the machine, resulting in improving materially various parts. Roller bearings have been introduced. There was a call for mowers of wider cut, and for wider hay rakes, and while this was carried to an extreme the trade seems to have settled back somewhat to take a bar six inches or a foot wider than was once considered standard. Judging from the demand for tedders this year, we should say that they are being used more than ever before, especially in the older States. It is our opinion that the hay crop will be very large this year, which is a fortunate thing, owing to the great scarcity of hay in the country.
JOHNSTON HARVESTER CO.

JUNE 24.—Apple outlook in this and surrounding counties is very discouraging. Practically no Baldwins, few R. I. Greenings, Ben Davis and Russets. Pears will be light crop. Peaches badly affected with curl-leaf. Large commercial growers are very despondent over the situation. Rot is showing on grapes, one-half crop peaches, and fair crop prunes only. This is emphatically an "off" year, but we hope for better ones. E. W. C.
Wayne Co., N. Y.

JUNE 24.—The prospects are that there will be few apples in this vicinity. The cold late Spring and late frost have damaged the crops. I think I shall have less than one-half usual yield. I had to drag up my corn ground and sow it to oats and peas; corn rotted in the hill. My oats and peas were not sown until June. The ground was so wet I could not work it. Horses would be knee-deep in mud, and this on ground where I had potatoes last year. Hay is good on new meadows and not so good as some suppose on old ones. Grass tall, but thin. Yellow clover is coming into our meadows and pastures. We cannot account for it. Stock like it. What is its feeding value? S. C. A.
Warren Co., N. Y.

Government Crop Report.

The temperature for the past week has been generally favorable for growing crops, with the exception of the Rocky Mountain region and parts of the Pacific coast, where it was abnormally cool. Corn conditions are greatly improved, but in southern Missouri and Texas rain is needed. Cultivation is progressing rapidly in the Middle and Eastern States, where the previous rains gave the weeds a great start. Winter wheat harvest is in full blast. Fly is doing damage to the standing crop in parts of Michigan, Pennsylvania and New York, and rust is reported in Ohio and Virginia. The outlook in the Spring wheat region is favorable and the crop is now heading out. Haying is under way in most of the Northern States. The crop is lighter than usual in parts of Ohio, Maryland, Missouri and Mississippi. Oats in the Ohio Valley and Middle Atlantic States look promising. Cotton in the central parts of the belt has improved, but in the eastern section the fields are very grassy and some have been abandoned. More favorable reports on apples are received from Ohio, Indiana, Illinois and Kansas, but in the other principal apple States, the outlook is not so good. In the Maine potato section bugs are very active, and the sweet potato flea is doing destructive work in southern Jersey.

Stock in Sprayed Orchard.

I have never known a case of live stock being killed when allowed to run in an orchard where spraying was being done, except chickens. We kept some chickens last year confined under plum trees which we sprayed. There was no grass under the trees, but a few weeds, particularly shepherd's purse. The chickens having no green stuff to eat except this shepherd's purse probably ate more freely of it than they would have done otherwise, and a few were killed. I have heard of one other such case as this. I have never known, however, of any cattle, sheep, horses or hogs being killed, although we have allowed them to run in the orchard during the time of spraying. We have even noticed that the animals seemed to like to follow the sprayer around and eat the damp grass when it is covered with the poisonous mixture, but none has ever been killed. I have expected an accident of this kind, because it often happens in our spraying that the hose becomes loosened from the pipe, or bursts, and considerable quantities of liquid run out on the grass. In order to make a thorough test of the matter we have kept stock in the orchard purposely, during all the time of spraying, and I think now that there is no danger, unless stock should get at the mixture and drink it, which would not be likely.
Ohio Exp. Station. [Prof.] W. J. GREEN.

FRUIT NOTES.—An improvement is noted in the quality of strawberries. Some from the Oswego district are selling at a premium above quotations, and all grades are in better demand than last week. Better peaches are also arriving, but they are still unsatisfactory, and buyers are waiting for fancy grades. Watermelons are coming in at the rate of 10 or 12 cars a day. The quality is excellent and they are bringing good prices. There is an excessive supply of cherries, especially under grades, and any reasonable offer is accepted for such lots. A few southern plums are seen, but they do not sell well, preference being given to the Californias, which are larger and put up in more attractive shape. There is a good call for prime muskmelons, but the bulk of the receipts are of miserable quality. Business in bush fruits is dull, and gooseberries hard to sell.

NEW YORK FRUIT GROWERS.—Wayne County is the banner county in the New York State Fruit Grower's Association, having 49 members. At a recent meeting of the Wayne Pomona Grange Hon. L. T. Yeomans, president of the New York State Fruit Growers' Association, gave a very interesting talk on "Why do the Fruit Growers Organize?" He spoke mainly along the line of protection and coöperation, and cited as examples the organizations of California and Delaware. He mentioned the crop report of the Department of Agriculture, and criticised its estimate, which is 76 per cent for New York State, whereas the sources of information of the Association would not place the estimate over half that amount. The estimate from a number of growers present placed the prospect for Wayne County at about 25 per cent. A great meeting of farmers and fruit growers is planned for August 19 at the farm of B. J. Case, Sodus, N. Y. C. E. C.

CALIFORNIA PROSPECTS.—After nearly three months of almost rainless weather, the last day of April and the first part of May gave Santa Barbara County and most of southern California a rainfall of from 1¼ to nearly four inches which, with two weeks of rather moist cool weather, caused a large part of of the grain fields to take a new start, so that even where failure was anticipated, a good crop of hay and grain will be harvested. Much of the land designed for corn and beans was put in better trim for planting, so we have a brighter prospect along that line. Deciduous fruits are not promising well, so I think the result a short crop. Much of the fruit-bearing wood is still dormant, which may start during the month of June. Lemons promise well and many have been and are being gathered, stored and sent to market. Oranges are ripe and luscious. This county does not grow enough for home use, so there is more or less shipped in from orchards further east and south, where there are plenty and to spare. Walnuts promise fairly well. Much of the best land is planted with beans, mostly Limas. Many of the garden varieties are grown for the eastern seedsmen on contract. The seedsmen furnish seed and pay so much per 100 pounds for the crop f. o. b. on cars or steamers. The rainfall has not been sufficient to wet thoroughly and deep, but we are looking for better crops than for two years past. All will irrigate so far as the water can be obtained. Water is still being developed, and new plants are being made ready for irrigation. O. N. C.
Santa Barbara Co., Cal.

Woman and Home

From Day to Day.

KEEP A-GOIN'!

If you strike a thorn or rose,
Keep a-goin'!
If it hails or if it snows,
Keep a-goin'!
'Taint no use to sit and whine,
When the fish ain't on your line;
Bait your hook and keep on tryin'—
Keep a-goin'!

When the weather kills your crop,
Keep a-goin'!
When you tumble from the top,
Keep a-goin'!
S'pose you're out o' every dime?
Gettin' broke ain't any crime;
Tell the world you're feelin' prime!
Keep a-goin'!

When it looks like all is up,
Keep a-goin'!
Drain the sweetness from the cup,
Keep a-goin'!
See the wild birds on the wing!
Hear the bells that sweetly ring!
When you feel like singin'—sing!
Keep a-goin'!
—Atlanta Constitution.

*

A CHERRY stoner only costs five cents, and is certainly worth much more in saving trouble. It is a doubled wire with a wooden handle. The wire is bent a little at the end; this is thrust into the fruit at the stem opening, the spoon-like stoner slipped in, and the stone removed with little loss of flesh.

*

A MEMBER of the Wisconsin Legislature, F. J. Frost by name, will go down to posterity as the first lawmaker who ever tried to lessen the drudgery of the farm housewife. He wants a steam laundry established at every cross-roads in the State, where farmers' wives may bring their weekly washing, and thus save themselves one of their hardest duties. The legislator believes a steam laundry could easily be operated in connection with each creamery and cheese factory. He has not developed any definite plan yet for the establishment and maintenance of the laundries, but believes that it may be done.

*

FOUNDATIONS for ribbon stocks are now sold in several styles. One, which costs 25 cents, consists of a collar of coarse canvas having a pocket inside of the front, in which a perforated piece of celluloid is run. A cheaper one, quite as satisfactory, and much cooler, is of stiffened muslin kept in place by six flat wires like whalebone casings. The little turnover collars of lace or embroidery are basted in place on this foundation, and the ribbon twisted around and slipped under the turnover when the foundation is adjusted. Broad soft turnover collars of hemstitched lawn are seen on many new shirt waists, in place of the stiff linen.

*

PACKING trunks is now a profession, and the work of the professional is worth studying for one's own instruction. It is troublesome, but it is better to spend a little extra time in packing than a great deal in pressing out obstinate wrinkles afterwards. To fold a skirt, do not turn it inside out and do not bring a crease down the middle of the front. Bring the center of the front and the center of the back together, the creases at the sides; arrange the folds in the back, and if necessary fold back from the sides. Fold over once horizontally, putting a little tissue paper in the folds; the result is that there are no creases in the front. In folding coats or waists, lay them back down, right side out; bring the fronts together. Tuck a little soft tissue paper into the tops of the sleeves, not enough to round them out too much, but enough to prevent creases. Any trimmings likely to become creased should be filled out with tissue paper. The sleeves are brought forward, and bent once at the elbow; if any further horizontal folding is required, it should be done below the waist line, so as to avoid creasing. Skirts and waists are held in place in the trunk by tapes tacked at the sides and ends, and tied across. Shoes are wrapped in tissue paper and tied together. They should be kept in a tray with other solid articles, and not distributed through the

3844 Child's Dress.
2 to 8 years.

garments. Hats are usually held in place by tapes across the compartment devoted to them, but some of the new trunks have cloth-covered frames to which the hat is pinned firmly. Efforts to save space in packing hats are likely to be disastrous.

*

HANDKERCHIEFS of silk gauze 45 inches square, in all sorts of bright and delicate colors, are offered for $1.25; they are used to trim outing hats of Panama or straw braid, and are very light and summery. By another year we are likely to see a great many Panama hats for women; their lightness and durability are making them very popular, and it is not likely that their use will be confined to men. Porto Rican palm-leaf hats are now freely offered, and are inexpensive. We can hardly consider the fine Panama hats expensive, when their wearing qualities are considered; we heard recently of a man who paid $30 for one of these hats, 15 years ago; he has worn it every season since, and was recently offered $15 for it by a dealer. He expects, however, to wear it for another 15 years at least.

The Rural Patterns.

The child's dress shown has the French effect of long waist and short skirt. The long waist is made over a body lining that fits smoothly, without being tight. On it is faced the round yoke, and over the lower part are arranged the full portions of the waist proper, and to the lower edge is attached the straight full skirt, which in this instance is made of flouncing. The sleeves are simply full, in guimpe style, and, as shown, the lining is cut away beneath the yoke, but this last is entirely optional. Over the seam which forms the skirt to the waist are arranged a succession of straps or bands beneath which the silk ribbon sash is passed, and which serve to keep it in place. To cut this dress for a girl four years of age, 3½ yards of material 21 inches wide, 2¾ yards 32 inches wide, or 2¼ yards 44 inches wide, will be required, with ¼ yard of all-over tucking for yoke; or 1⅜ yard of plain material 32 inches wide, 2⅛ yards of flouncing 13 inches wide for skirt, 1¼ yard of embroidered frills, ¼ yard of inserted tucking, and ¾ yard of insertion, to make as illustrated. The pattern No. 3844 is cut in sizes for children, 2, 4, 6 and 8 years of age; price 10 cents.

The kimona dressing sacque will be found very comfortable in warm weather. The original is made from Japanese cotton crape with a band of plain colored Japanese silk, but flowered muslins and dimities are pretty for warm days. French and Scotch flannel and flannelette are excellent for cooler weather, and still handsomer sacques can be made of figured oriental or foulard silks. The yoke is perfectly smooth and extends over the shoulders at the front. The skirt portion is simply gathered and seamed to its lower edge, while a band extends round the entire garment, making a finish. The sleeves are loose and flowing, with a slight fullness at the shoulders. To cut this kimona for a woman of medium size, four yards of material 21 inches wide, three yards 27 inches wide, or 2¾ yards 32 inches wide will be required, with 1¾ yard in any width for bands. The pattern No. 3839 is cut in three sizes—small, medium and large; price 10 cents from this office.

The wrapper or lounging robe shown is also a comfort on hot days. It is loose and unlined, with Watteau back. The sleeves are cut in one piece and extend to the elbows only, where they terminate in becoming frills. At the neck is a big ornamental collar which is held by ribbon ties beneath the chin. To cut this wrapper for a woman of medium size, 10 yards of material 27 inches wide, nine yards 32 inches wide, or 5⅞ yards 44 inches wide, will be required, with frill at lower edge 8½ yards 27 inches wide, 7¾ yards 32 inches wide without frill. The pattern No. 3824 is cut in sizes for a 32, 34, 36, 38, 40 and 42-inch bust measure; price 10 cents.

Sam Griggs's Carrier Hens.

UNCLE SILE TELLS THE STORY OF HIS BROTHER-IN-LAW'S SUCCESSFUL EXPERIMENT.

"Less see," remarked Uncle Sile, as he settled himself in a new position on a box in front of the store, "Did I ever tell ye 'bout the time my brother'n-law had raisin' carrier hens up to Killawog a spell ago?"

"Carrier hens?" interrupted Bud Brown. "Ye mean carrier pidgins, don't ye?"

The old man stared carefully at Bud for nearly a minute and then drawled, "When I say carrier hens, I mean carrier hens. Who's a tellin' this story, anyhow?" Thus interrogated, Bud said nothing, and turning to the others, Uncle Sile resumed:

"That brother'n-law of mine was an ingenious cuss—a most ingenious cuss—

3839 Kimona Dressing Sacque, 32, 36 and 40 in. bust.

3824 Woman's Wrapper 32 to 42 in. bust.

always inventin' somethin'. Had a barn full o' contraptions, but I think his breed o' carrier hens is a leetle mite the smartest thing he ever done. One day he read a piece in the paper 'bout these here carrier pidgins, and how useful they wuz in war, and Sam got to wonderin' if he couldn't make use ov the 'fundamental principle' 's he called it. He thought on't fer several days, an' one afternoon, as he was drivin' one ov Bill Jasper's hens out ov the tomater patch, a bright idee struck him.

"Jasper owned a farm a few rods down the crick from his'n, and this old hen used to cross th' crick and go up to Griggs's barn to lay every day. She was the worst thing to steal her nest you ever see. Sam's idee was to git holt ov that hen and start a breed ov carriers. He offered to swop a dozen aigs fer her, and Jasper allowed he'd take him up, bein' 's how the hen wuz up to Griggs's most ov th' time, anyhow—leastwise most ov the time when she ort to be on duty, 's ye might say, to home. Only Jasper said he thought it tuck considerable nerve to offer to swop aigs fer her, long's most of the aigs wuz his'n, by rights.

"However, Sam got the hen and went to work right away experimentin' with his new breed. Knowin' that hens can't fly very far, he decided to make his'n walkers, and mated the hen with the longest legged Shanghai rooster he could find. Well, sir, the scheme worked like a charm. By Fall Sam had a big flock ov young pullets, and every one of 'em carriers. They wa'n't much to look at, but they wuz good layers. He built a lot of coops on the sidehill back ov the house, and put a few pullets in each one, and ev'ry mornin' as reg'lar as clockwork they all come down to the barn to lay, and then went back ag'in. Sam kept movin' the coops further away till some o' them pullets walked two miles ev'ry day to lay. The exercise seemed to be good fer 'em, and they laid bigger and nicer lookin' aigs than anybody else's. Sam always got a cent or two a dozen more fer 'em at the store. The storekeeper told the neighbors what nice aigs Sam wuz gittin', and Sam he kept braggin' 'em up, tell by Spring ev'rybody in the county had heard ov 'em, and ev'rybody 'at heard ov 'em wanted a settin ov aigs. So Sam supplied the hull neighborhood at a good figger, but he didn't say nothin' 'bout their bein' carriers.

"That Summer Sam spent a good deal ov his time fixin' up cosy little nestin' places all about the place, and along toward Fall the fun commenced. Jest as soon as one ov them pullets got ready to lay, instinct wuz too much fer her, an' she would kind o' sidle off tell nobody wuz lookin', and then make a bee line to Griggs's to hunt a nest. Sam was kept pretty busy gatherin' the aigs, and I guess they would have been a drug on the market if Sam hadn't got in with a feller from New York 'at give him a good price fer 'em on account ov their size and looks.

"The neighbors couldn't understand why they didn't git more aigs, but they never mistrusted the new hens, 'cause Sam's wuz doin' so well. The next Spring Sam paid off the mortgage on his house with the purceeds from them aigs, an' if it hadn't been fer his everlastin' experimentin' I 'spose he might o' had a fortune by this time."

Here Uncle Sile paused, as if he had reached the end of his story, until Dave Miller broke the silence by inquiring, "What finally become ov the carrier hens, Uncle Sile?"

"The carrier hens?" echoed the old

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gentleman, carelessly, as if they were the furthest from his thoughts. "Oh, yes. Well, you see, Sam wa'n't willin' to let well enough alone. He kept breedin' them hens up so'st they would be able to stand it to be sold further away from home. After he'd got 'em started, 'pears like the homin' instinct got stronger with ev'ry new batch of chickens. This would 'a' been all right if it hadn't got into the aigs, but when they got so'st they'd roll right out ov the box an' start fer home if they wasn't smashed, it spoiled Sam's market. At first they thought it was rats, but finally they ketched 'em at it. Sam had killed off all the old stock and the new ones wouldn't lay anythin' else. He tried to start the instinct back ag'in, but it wouldn't work, an' he finally wrung the necks ov the hull flock and quit the business. It nearly broke Sam's heart to do it, but I guess it kind o' cured him ov experimentin' too much." And before anybody could ask further questions, Uncle Sile had adjusted his battered hat on his bald head and shuffled up the road in the twilight toward home.—New York Tribune.

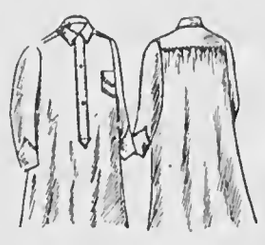
A Dream Realized.

The old, nearly square, two-story farmhouse, painted white, with green blinds, stood close by the roadside, facing the west. I reckon you are all familiar with this type, so common to New England, and have learned to appreciate the pleasant rooms of the interior, which belie the promise of the plain, bare, exterior. Imagine it the home of a farmer's wife, who is fond of flowers, who has always longed for more room for her plants. To be sure she has always kept plants with pretty good success, considering unfavorable conditions; some at the one south window in the sitting room, which overflowed, or were often promoted to the west front windows on special occasions to the discomfort of the family, until at times there seemed to be no window in the house one could see through. She also kept a few at the south window in the bedroom, moving them out at night. Some way she managed to keep a good many through every Winter, upstairs, down cellar, and "in my lady's chamber," moving them about, according to the weather and growth.

But now you have only to open your eyes to see an addition built across the south end of the old farmhouse six feet wide. This addition satisfies three needs. At the east end is a clothes press five by six feet, with a door opening into the bedroom. Next comes the plant room or conservatory 6x14 feet, finished in southern pine with four large windows (with only a post between) facing south and a glass door facing west, opening on to a cozy little porch 6x12 feet. This door is of course kept closed in Winter, making five windows for plants. A doorway opens from the plant room into the sitting room, and a glass door which can be closed when desired opens also into the bedroom, so the sun and light shine through into the inside rooms more freely than before. A close underpinning of stone and brick under the whole addition insures warm floors, the heat coming from sitting room and through bedroom making it plenty warm enough for the plants, on sunny days almost too warm. During very cold nights frames covered with thick brown paper are slipped between the benches of plants and the windows and door, as an extra protection against freezing. A few early doubters (there will always be doubters) declared plants would freeze there some Winter, but they have been proven mistaken, and doubt no more.

Even this fortunate farmer's wife doubted whether she should ever be able to fill her room without going to the florist. But before she had much time to doubt her room was full to overflowing, and might have taken a premium as an autograph room, so many of her friends and neighbors were represented there. She had already several varieties of Chrysanthemums which she thought would help fill up early. They did. Every window reflected a different variety of these beautiful showy blossoms. One window contained a box of mammoth dark red variegated with gold; another large, golden, curved-petaled, fragrant blossoms; another masses of snowy white bloom, and still another a wealth of golden clusters, while boxes of star-pointed white, old rose, pink and yellow were banked at each end of the room. These made the room gorgeously gay until nearly Christmas time. Long before they were gone the other plants began to crowd and fairly clamor for room and sunshine, until her husband declared that they would have to take in the porch by another year. Seven varieties of Begonia found room on a table at the back of the room, between the doorways, receiving almost too much sun there, while a spotted-leaved one over six feet tall, filled the corner niche by the sitting-room doorway. Giant red and pink cactus flanked the Begonia table at each end, which will be transformed into things of beauty toward Spring.

A florist told her that if she would fill some long narrow boxes with sand and set her plant pots down into the sand the plants would grow much better, as the sun would not burn the roots, and the earth would hold the moisture. So after moving the Chrysanthemums she put in her window boxes, resting on stool-like frames, and planted her pots of geraniums, pinks, double Petunias, heliotrope, Mahernia, etc. The Christmas and lobster cactus, which were full



3814 Boy's Night Shirt, 6 to 16 years.

3832 Boy's Outing Shirt, 8 to 16 years.

of buds, she suspended before the windows, by screwing large screw eyes into the ceiling, and making suspending wires of telephone wire bent at each end. Small brackets at the side of the windows held small pots of smilax, Fuchsia, double nasturtium and pink Oxalis; the white Oxalis being so large as to require a small round table. Three varieties of Gloxinias in one large pot, which at first could find a place anywhere soon required another round table, but make a beautiful show of velvety leaves and buds now. The calla also begins to call for room and water.

She made the common mistake of trying to force the Spring bloomers, consequently two large Hydrangeas turned yellow, and were shedding their leaves and sprouting anew when they should begin to bud. They should have gone into the cellar in the Fall for a while as usual. One of the contributions, a five-foot fig tree, met with the same consequences. The century plants went into the cellar to begin with, and she begins to think a gift fern-ball should have been put away until toward Spring instead of trying to start it at once. Many busy but pleasant hours has this farmer's wife spent in her new plant room with her bird and flowers. She has discovered that her husband's fly-killer, bought last Summer, is just the thing for spraying her plants. She treats them not only to clear water baths, but with tobacco water, and smokes them w tobacco to destroy lice and white flies. The whole family find it a delightful sewing and reading room both in Summer and Winter and consider it worth all it cost aside from the plants, which give much pleasure. ALICE E. PINNEY.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

Rural Recipes

Stewed Figs.—Use the California figs and stew or steam them same as prunes, but without soaking, until tender; drain them from the water in which they are cooked, using it for making a syrup, flavor with a little stick cinnamon. The imported figs may be used, but must be thoroughly washed in warm water.

Chicken Sauté.—Cut a small spring chicken into four pieces and place on ice to get very cold, or dip quickly into ice water. Season with salt and pepper and cover well with flour. Put enough fat, vegetable oil is best, in a frying pan nearly to cover the pieces of chicken, fry each piece a rich brown on all sides; when done, place on a hot dish. When all are fried, make a cream sauce with two tablespoonfuls of the fat in the pan, two level tablespoonfuls of flour, a half pint of milk and salt and pepper to taste. Pour this over the chicken and sprinkle a little finely minced parsley over it.

Scallop of Corned Beef.—When fresh vegetables are plenty it is economical to have a meat dish of some left over. Put one pint of milk in double boiler, add a cupful of celery cut in dice, and three small onions. Cover closely, heat to boiling point. Cream together four level tablespoonfuls butter; the same of flour; stir into the hot milk, first removing the onion and celery. Stir and cool until sauce is smooth and rather thick (about 15 minutes). Then add two cupfuls of corned beef cut in cubes. Pour the whole in a buttered baking dish. Cover with fine bread crumbs, moisten well with melted butter. Bake in oven until crumbs are brown.

Panned Tomatoes.—These are excellent served with roast meats. Put in a pan with two ounces of butter six firm tomatoes that have been cut and halved. Cook slowly on the top of the range for 10 minutes, then brown quickly in the oven. Remove the tomatoes to a hot platter, and make a sauce by adding to the browned butter two tablespoonfuls of flour, and after it is rubbed smooth one pint of milk. Stir until boiling. Season well with salt and pepper and pour over the tomatoes. Garnish with parsley and points of toast.

Rhubarb Jelly With Apples.—If you are fortunate enough to have some good cooking apples left by the time rhubarb is well grown this is a good recipe to use: Skin and cut into bits five pounds of rhubarb. Add to it three pounds of cooking apples peeled and quartered, the juice of six lemons, and the grated peel of one, and two pints of water. Stew them together gently until they are a pulp, then strain through a cheesecloth bag. For each pint of juice use a pound of granulated sugar, let it boil, skim carefully, and when it will "jell" when dropped on a saucer take it off. Pour into glasses and cover.

Rice with Strawberry Sauce.—Put four cupfuls of milk in a double boiler, and when boiling hot pour in three-fourths of a cupful of rice, one tablespoonful of butter, one scant teaspoonful of salt, three tablespoonfuls of sugar, and cook one hour. For the dressing, use one cupful of powdered sugar, one tablespoonful of butter, beat to a cream, one large cupful of fresh ripe strawberries, mashed through a sieve, add to sugar and cream, and lastly stir in the well-beaten white of an egg. In serving pour the rice hot or cold on a platter, then pour the strawberry around it.

"Never Fail" Sponge Cake can be both made and baked in 35 minutes: A good sponge should be yellow as gold, of velvety softness and tender as a marshmallow. If the rule here given is strictly followed, such a cake will be the sure result: Separate the whites and yolks of four eggs. Beat the whites until stiff enough to remain in bowl if it is inverted, then beat into them one-half cup of sugar, which must be fine granulated (powdered sugar makes tough cake and proper beating does away entirely with the grains). Beat the yolks, add to them one-half cupful of sugar, beating for five minutes by the clock—this latter being important, as the delicate texture of the cake depends upon it; add to the yolks the grated rind and juice of one lemon. Now beat well together the yolks and white. At this stage beating is in order, but must be absolutely avoided after adding the flour, of which take one cupful. The mixture should now look like a puff ball, and the flour is to be tossed or stirred into it with a light turn of the wooden spoon. Stirring is quite different from beating. The cupful of sugar must be generous, the flour scanty. Bake for 25 minutes in a moderate oven. Just before putting in the oven sprinkle on top through a sifter about a tablespoonful of granulated sugar. This gives the "crackly" top crust so desirable.

THE "1900" FAMILY WASHER FREE.

Greatest Invention of the Age. Labor and Expense of Washing Clothes Cut in Two.

No More Stooping, Rubbing or Boiling of Clothes.

Every Household Needs One.

THE "1900" BALL-BEARING FAMILY WASHER

will be sent absolutely free to anyone answering this advertisement, without deposit or advance payment of any kind, freight paid, on 30 days trial. The 1900 Ball-Bearing Washer is unquestionably the greatest labor-saving machine ever invented for family use. **Entirely new principle.** It is simplicity itself. There are no wheels, paddles, rockers, cranks or complicated machinery. It revolves on **bicycle ball-bearings,** making it by far the easiest running washer on the market. No strength required, a child can operate it.

No more stooping, rubbing, boiling of clothes. Hot water and soap all that is needed. It will wash **large quantities of clothes** (no matter how soiled) **perfectly clean in 6 minutes.** Impossible to injure the most delicate fabrics. As the Sup't. of the Savannah Yacht Club says:

"*It is a wonder. Our washing is very large and we have always had two women on Monday and one on Tuesday. Our cook and the yard boy* **now do** *the washing in 4 hours much better than before.*"

NEWMAN, Ills., July 5, 1900.
I can testify that the 1900 is the best washer and the easiest running machine. It will **absolutely clean** the clothes, cuffs, and bottoms of ladies white skirts better than can be done by hand. The washings that took my wife from 5 to 7 hours to put out by hand, can easily be done in 2 hours. R. A. SKINNER.

KENSEE, Ky., March 21, 1900.
I did a double washing for myself yesterday and made 65 cts. from my boarders, besides all my cooking, milking and housework. It takes less soap with your machine than in the old way. I have no need of the washboard any more Mrs. L. A. BARTON.

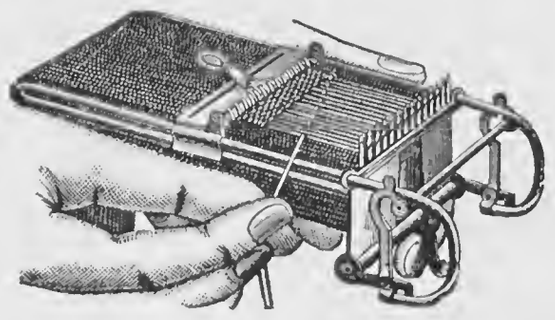
ONALASKA, Wis., Jan. 4, 1901.
We are a family of 5 and as I had a 3 weeks wash it was an immense one. I had it all out in 3 hours and never had nicer looking clothes. I did not even put my hands into the water. I cannot too strongly recommend the "1900" washer. Mrs. J. M. WILSON

Write at once for catalogue and full particulars to

"1900" WASHER CO.
143 J State Street, Binghamton, N. Y.

A Darning Machine.

This is the only successful darning machine we ever saw. We have tried others that were absolutely of no value. This one is little short of perfect. It enables you to mend underwear, stockings, curtains, table linens, clothing, and does an endless variety of art and fancy weaving better, easier and quicker than



by any other way. Full directions accompany each machine. When a lady has once used this little machine, she would not do without it for any consideration. We will send it postpaid for $1, or for two new yearly subscriptions at $1 each. All money returned if no satisfied.

MARKETS

The Week's Quotations

WHOLESALE PRICES.

NEW YORK, JUNE 29, 1901.

GRAIN.—Wheat down one to two cents, and export business active. Corn one-fourth cent up on dry weather reports west. Trade in oats heavy.

Wheat, No. 2, hard, N. Y.	—	@	76½
No. 1, Northern Duluth	—	@	75
No. 1, Northern Chicago, spot.	—	@	75½
Corn, No. 2, mixed	—	@	48¼
Oats, No. 2, white	33¼	@	—
Rye, No. 2, W'n, c. i. f., Buf.	—	@	51
Barley, feeding	48	@	—
Malting, new crop	58	@	62

BEANS.

Marrow, choice, per bu	2 50	@	2 55
Fair to good	2 20	@	2 45
Pea, bbls., choice	2 10	@	2 12½
Red kidney, choice	—	@	2 30
White kidney, choice	2 10	@	2 20

FEED.

Spring bran, coarse	15 50	@	16 00
Winter bran	16 00	@	17 50
Red Dog	18 00	@	18 50
No grade flour	—	@	20 00
Linseed meal, ton	—	@	26 00
Cottonseed meal, ton	—	@	22 00

HAY AND STRAW.

Hay, No. 1	80	@	85
No. 2	75	@	80
No. 3	70	@	72½
Clover	60	@	65
Clover, mixed	70	@	75
Straw, rye, long	1 00	@	1 05

SEEDS.

Clover, per lb	9½	@	10½
Timothy, per bu	1 90	@	2 50
Flaxseed, whole, per bu	6 50	@	7 00
Millet, per lb	2	@	2⅛
Rape, German, per lb	3¼	@	3½
Sunflower, per lb	2¼	@	2½

MILK.

New York Exchange price at stations $1.11 per 40-quart can. This is the gross price, and from it must be taken cost of transportation and fees at receiving stations where such charges are made.

BUTTER.—A little falling off in the demand is reported on account of hot weather and the lower grades are accumulating. European steamers sailing June 27 took 3,887 packages to Liverpool and Southampton.

Creamery, extra, per lb	19½	@	—
Firsts	18½	@	19¼
Seconds	17	@	18
Lower grades	15	@	16
State dairy, tubs, fancy	18½	@	—
Tubs, firsts	17½	@	18
Tubs, seconds	16	@	17
Tubs, thirds	14	@	15
Tins, etc	14	@	17½
W'n imitation creamery, fancy	16	@	17
Firsts	15	@	15½
Lower grades	14	@	14½
Western factory, fancy	15¼	@	15½
Firsts	14¾	@	15
Fair to prime	14	@	14½
Lower grades	13	@	13½
Renovated butter, fancy	16½	@	17
Common to choice	13½	@	16
Old Western factory	11	@	14¼

CHEESE.—Receipts here are not large, but the general demand is light, and exporters are not doing much.

NEW.

Full cream, white, small, fancy.	9½	@	9⅝
Colored, small, fancy	9⅝	@	9¾
Small, fair to choice	9	@	9⅜
White, large, fancy	—	@	9½
White, large, fair to choice	9⅛	@	9⅜
Colored, large, fancy	9½	@	9⅝
Colored, large, fair to choice.	9⅛	@	9⅜
Common	7	@	8
Light skims, small, choice	8¼	@	8½
Large, choice	7¾	@	8
Part skims, prime	6¼	@	6½
Fair to good	5	@	6
Common	3	@	4
Full skims	2	@	2¼

EGGS.—Some hot-weather damage is reported, and strictly choice eggs are scarce at present.

QUOTATIONS, LOSS OFF.

State & Pa., avge. prime, doz.	14½	@	15
Mich., N. Ohio and N. Indiana, regular packings	—	@	14½
Other W'n, northerly sections, regular packings	14	@	14½

QUOTATIONS AT MARK.

Nearby, State & Pa., fresh-gathered, f'cy selected, doz.	15	@	15½
Average prime	14	@	14½
W'n, northerly sect'ns, candled, selected, fancy	13½	@	14
Reg. packings, north'ly sec's.	11½	@	13
Graded, southerly sections	—	@	12
Regular packings, S'ly sect's.	10½	@	11½
Fresh-gathered, dirties	10	@	11
Checks	8½	@	9½

LIVE STOCK.

Veals	5½	@	6¼
Buttermilks	3½	@	3¾
Sheep	3½	@	4
Lambs	5	@	6½

COUNTRY-DRESSED MEATS.

Calves, veal, prime, per lb	8½	@	9
Fair to good, per lb	7½	@	8
Common to medium, per lb	6	@	7

LIVE POULTRY.—Receipts light and trade dull. Prices practically unchanged.

Spring chickens, large, per lb	18	@	20
Small to medium, per lb	16	@	17
Fowls, per lb	—	@	11
Roosters, per lb	—	@	6½
Turkeys, per lb	—	@	8
Ducks, average W'n, per pair	70	@	75
Average Southern, per pair	50	@	55
Geese, average W'n, per pair	1 00	@	1 12
Average Southern, per pair	90	@	1 00
Pigeons, per pair	15	@	20

DRESSED POULTRY.—Supplies of fresh stock are moderate, but the only real scarcity noted is in prime Spring chickens.

FRESH PACKED—ICED.

Turkeys, W'n hens, small	7	@	8½
Western, toms	—	@	7
Broilers, Phila., over 4 lbs. to pair, per lb	26	@	27
Phila., mixed sizes, per lb	23	@	25
Penn., fair to good, per lb	21	@	24
Western, dry-picked, per lb	21	@	23
Western, scalded, per lb	19	@	21
Small, dry-picked or scalded, per lb	16	@	18
Fowls, W'n, dry-picked, prime.	—	@	10½
Western, scalded, prime	10	@	10½
Western, poor to good	8	@	9½
Southwestern, prime	—	@	10½
Old roosters, per lb	—	@	6
Ducks, Spring, L. I. and other nearby, per lb	—	@	12
Geese, Spring, Eastern	—	@	20
Squabs, choice, large, dark	—	@	2 25
Mixed, per doz	1 75	@	2 00
Dark, per doz	1 25	@	1 50
Culls, per doz	50	@	1 00

FROZEN.

Turkeys, young hens, No. 1	11	@	11½
Mixed young hens and toms, No. 1	10½	@	11
Young toms, No. 1	—	@	10½
No. 2	7	@	9
Broilers, dry-picked, fancy	18	@	20
Scalded, fancy	—	@	14
Chickens, fancy, soft-meated	12	@	13
Average, No. 1	—	@	10
No. 2	7	@	9
Fowls, dry-picked, No. 1	—	@	9½
Capons, fancy, large	15	@	16
Medium sizes	13	@	14
Ducks, fancy	12	@	12½
Geese, fancy	9½	@	10

DRIED FRUITS.

Apples, evaporated, fancy, lb	7¼	@	7½
Evaporated, choice, per lb	6¾	@	7
Evaporated, prime, per lb	6¾	@	6⅝
Evaporated, com. to good, lb.	4	@	5¾
Sun-dried, State & W'n, qrs., per lb	3¼	@	4¼
Sun-dried, S'w'n, coarse cut	3	@	3¼
Sun-dried, S'n, coarse cut	3	@	3¼
Chops, per 100 lbs	90	@	1 75
Cores and skins, per 100 lbs	60	@	1 37
Raspberries, evap., 1900, lb	—	@	20
Blackberries, 1900, per lb	5½	@	5¾
Cherries, 1900, per lb	12	@	14

FRESH FRUITS.

Peaches, Fla., per carrier	1 25	@	1 75
Georgia, per carrier	1 25	@	1 75
South Carolina, per carrier	75	@	2 50
Plums, Ga., Botan, carrier	1 50	@	1 75
Ga., Robinson, per carrier	1 50	@	1 75
Cherries, blk., ord., 8-lb, bbl	25	@	40
Blk., fancy, large, per lb	6	@	7
White, ord., 8-lb basket	20	@	30
White & red, fcy, large, lb.	6	@	7
Small, sweet, 8-lb bask	10	@	20
Sour, per 8-lb basket	20	@	35
Currants, poor to fair qt	4	@	5
Strawb'rs, Jersey, inf., qt	4	@	6
Up-river, per quart	5	@	12
Staten Isl. per qt	8	@	14
Western N. Y., per qt	5	@	12
Huckleberries, N. C., bl., qt.	8	@	12
N. C., ordinary, per qt	5	@	7
Maryland, black, per qt	7	@	8
Raspb'rs, Md. & Del., red, qt.	6	@	10
Jersey, red per pint	8	@	10
Md. & Del., b. c., per pt	4	@	5
Jersey, blackcap, per qt	5	@	6
Blackberries, N. C., per qt.	7	@	9
Md, Harvest, per qt	8	@	10
Gooseberries, small, gr., qt.	—	@	3
Large, green, per qt	6	@	7
Watermelons, Fla., per 100	25 00	@	30 00
Per carload	250 00	@	300 00
Muskmelons, Fla., fancy, bu. package	1 50	@	2 50
Poor to fair	75	@	1 25

VEGETABLES.

Potatoes—So. Rose, ex., bbl		@	2 00
So., Rose, fair to prime	1 62	@	1 75
Southern, Chili, white, fair to prime	1 50	@	1 75
So., Chili, rd., f'r to pme	1 50	@	1 62
Southern, No. 2, per bbl	75	@	1 00
State & W., in blk., 180 lbs	1 75	@	2 00
State, per sack	1 75	@	2 00
Asparagus—Colossal, dz bch	3 50	@	5 00
Extra large gr., per doz.	2 50	@	3 00
Extra prime, white	2 50	@	3 00
Prime, white and green.	1 50	@	2 25
Fair to good, per doz	1 25	@	1 50
Culls, per dz. bunches	75	@	1 00
Beets, Balt., 100 bunches	2 00	@	3 00
Jersey & L. I., 100 bnchs.	2 00	@	3 50
Carrots—Jersey, 100 small b.	1 50	@	2 00
Corn, N. C., per crate	1 00	@	1 50
Cabbages, Norfolk, bbl. crte.	50	@	1 00
Norfolk, per bbl	50	@	75
Baltimore, per bbl	1 00	@	1 25
Long Island, per 100	3 50	@	4 00
Long Island, per bbl	1 00	@	1 25
Cauliflowers, nearby, bbl	1 50	@	1 75
Cucumbers—Charleston, bsk.	1 10	@	1 50
Savannah & Fla., per bask	1 00	@	1 25
North Carolina, per crate	1 25	@	1 50
Virginia, per basket	1 50	@	2 00
Southern, per bbl	2 00	@	4 50
Eggplants—Fla., per box	1 50	@	2 00
Garlic, New Orleans, per lb.	6	@	7
Green Peas—Jersey, basket	40	@	50
Keyport, per bag	40	@	50
Long Island, per bag	50	@	75
West. N. Y., bu basket	40	@	50
West. N. Y., per bag	50	@	75
Onions—New Orleans, bbl.	3 00	@	3 25
New Orleans, per bag	1 30	@	1 35
Md. & Del., potato, bskt.	1 00	@	1 25
Eastern shore, potato, bk.	75	@	1 00
Jersey, white, basket	1 25	@	1 50
Peppers—Jersey, per crate	1 50	@	2 00
Savannah, per carrier	1 75	@	2 00
Squash—So., yellow, per bbl.	1 00	@	1 50
Southern, white per bbl.	75	@	1 00
Southern Marrow, bbl.	75	@	1 00
String beans, Jersey, wax, b.	50	@	75
Md., green per basket	50	@	75
Md., wax, per basket	50	@	75
Norfolk, green, per basket	50	@	75
Norfolk, wax, per basket	30	@	50
Spinach—Long Island, bbl.	1 00	@	1 25
Turnips—Jersey, white, 100 b	1 50	@	1 75
Tomatoes—Fla., ch'ce, p car	1 50	@	1 75
Florida, poor to good	75	@	1 25
Savannah, per carrier	1 50	@	2 00
Mississippi, per 4-till case	90	@	1 00

BUSINESS BITS.

THE advantages of a wheelbarrow around a farm or country place need not be dwelt upon. It is convenient in a thousand ways. Don A. Gilbert & Co., Bainbridge, N. Y., offer a good one at a reasonable price, or you can buy the wheel and make the body yourself. Write for full information.

EVERY farmer can be his own blacksmith to a certain extent. There may be some jobs requiring skilled labor; ordinary repairing he can manage if he has a forge and proper tools. J. M. Drew, St. Anthony Park, Minn., offers a book telling all about tempering steel, shoeing horses and, in fact, all farm work. The price is 50 cents, postpaid.

THE patent grooved-tire wheels made only by the Havana Metal Wheel Co., of Havana, Ill., have, after testing them for four years, proved to be entirely reliable and satisfactory. The groove in the rim of the wheel is a feature not found in any other wheel, and one that adds much to the durability of a wheel, as the heads of the spokes are down in the groove and are so protected that they cannot wear off. When the heads of the spokes wear off the wheel is gone, as the spokes simply pull out of the tire. These wheels are made any size to fit any skeins. This concern also makes 10 kinds of low-down truck wagons. Write them for prices.

THE farmer who possesses his own thrashing outfit reaps many benefits over the man who depends upon the professional thrasher for the thrashing of his crops. Beside saving the loss and delay attendant upon waiting the convenience of the traveling thrasher there is a big gain in actual cash. The Columbia thrasher, built by the Belle City Manufacturing Company, of Racine, Wis., is one of the most popular machines among farmers in all sections of the country. It is a small thrasher of large capacity and guaranteed to thrash, clean and separate all grain as satisfactorily as the large machines. It is small and compact, can be run by any kind of power—horse, tread, steam or gas engine—and is light and portable, can be hauled anywhere that a wagon can be taken and with as little trouble. It requires but few men and the parts are so constructed as not easily to get out of order. All parties interested should write to the makers for their large and handsome catalogue fully describing this machine, as well as their full line of other farming implements. It is sent free to any address.

GREAT RESULTS.—Without any desire to "go one better" than Mr. Peek and Mr. Allen, regarding the truth of catalogue illustration, I have this to say: Last Fall I saw a bed of white Aster (Ostrich Plume) that was a wonder to the entire county (Washington, N. Y.) A picture would have looked like a solid white cover over some bushes, so thick were the blossoms. Within a few feet of this glorious display of snow-white flowers, was a small pear tree, upon which the fruit hung so heavy as to require stringing up with a perfect network of twine, with three poles stuck tent fashion. There was hardly a leaf to be seen; the pears were a Winter variety, rich green, with just a flushed cheek from the sun's kisses, and so uniform in size as to remind one of molding bullets. I could reach to topmost pear, without any effort, or as much as an extra blade of grass under my feet. A picture of this tree would have been put down as too absurd for use, as the limbs would have looked for all the world like *strings of beads* instead of natural fruit. The yield from this tiny little tree was five bushels. Some dwarf nasturtiums were the most gorgeous in colors and size I have ever seen; and although we picked thousands daily, there never seemed to be any fewer blossoms until the middle of October when frost killed them in "full dress." So you see nature does respond when treated right.

E. M. M.

The discomforts of Influenza, the danger from Grip, and kindred disorders, can be modified and cured—perhaps altogether prevented—by a prompt resort to Dr. D. Jayne's Expectorant.—*Adv.*

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Field-grown, healthy plants, sheared back several times. White Plume, Heartwell Perfection, Dwarf Golden Heart and Celeriac Erfurter. Price, 500, 75c.; 1,000, $1.25; 5,000, $5. Write for prices on 25,000, 50,000 and 100,000. Cash with order, please. LUDWIG MOSBAK, 8500 Anthony Ave., South Chicago, Ill.

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Fruit Farm—97 acres. 7,300 trees: choicest varieties, mostly bearing. Modern house, ample buildings. Hour and a quarter from city; station, 10 minutes. ATWATER, 156 Broadway, New York.

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My King and His Service, by Frances Ridley Havergal, well known as a writer of devotional books. We have a few copies of this work beautifully bound in red and silver. Price, postpaid, 15 cents.

The Horticulturist's Rule Book, by Prof. L. H. Bailey. A great amount of information in condensed form for fruit growers, truck gardeners, and florists. Remedies for injurious insects and plant diseases, and methods of killing pernicious weeds. Tables and rules useful in farm computations. Price, postpaid, $1.

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Chemicals and Clover.
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Milk, Making and Marketing.
Accidents and Emergencies.

The New Rhubarb Culture, by J. E. Morse. R. N.-Y. readers are acquainted with Mr. Morse's writings on this subject, and gardening in general. Part I. gives full details of his methods of growing and preparing rhubarb for market, with 34 recipes for cooking and preserving it. Part II. deals with the methods of other well-known growers; 29 illustrations. Price, postpaid, 50 cents.

A TRIP THROUGH SOUTHERN NEW YORK.

Leaving the Hudson River at the west near Newburg one soon gets beyond the general fruit belt; but driving through this country one cannot help but observe the evidences of old settlements as indicated, less perhaps in the cultivation of the fields than in the improvements of farm buildings, and especially in the decorations of the home grounds. The city suburbs and rural towns no longer monopolize the evidences of culture and refinemen. The farm homes bear every indication of comfort, and the grounds about them bloom with the rose, the honeysuckle, Spiræa, snowball, and countless other varieties of flower, creeping vine and ornamental foliage. One is a little disappointed, however, in driving through this rich and fertile country, to observe the neglect of orchards and the general lack of small fruits for family purposes. In some sections, and to a large degree in all sections, the lack of vegetable gardens is also apparent. Some parts of Orange County have run too exclusively to the horse and the cow, yet while Kentucky may beat her in raising fast horses, and Delaware and Madison counties may rival her in the production of milk, she is yet favored in matter of location, in climate and in soil, and besides her sons are now as they ever have been prominent in the councils of both State and Nation. I drove over the old turnpike which connects the Hudson with the Delaware almost its entire length. At Montgomery we crossed the Wallkill, with its rich fertile meadows, leaving the village of Walden, where it is said 80 per cent of the knives manufactured in this country are made. It is a rich fertile farming section all the way up to the base of the Shawangunk Mountains at Bloomingburg, but the frequent piles of weatherbeaten manure seen in the farmyards give an idea of want of thrift hardly in keeping with the county as a whole.

As one climbs the mountains and passes over into Sullivan County, the whole condition of the county is changed. In Orange the improvements seem to be for the comforts of the family; as you approach Sullivan the preparations all seem to be for the entertainment of Summer boarders. On one side of the mountain you leave fertile fields; on the other, except for a narrow valley at the base of the hills, you approach barren wastes. You leave behind sluggish streams; you meet clear bubbling springs of crystal water, murmuring brooks, and rapid streams. "That tired feeling" seems to have left you as you climb the first hill beyond the narrow valley. There is no malaria in Sullivan, nature seems to have fitted it for a Summer home for tired city people. For the first 12 miles there is little attempt at cultivation. It is a dry stretch of barren waste. Yet leaving Wurtsboro one sees Summer cottages built by city men stretching along for miles, and others in course of construction. On the topmost brow of this barren plateau is the Sullivan County Club. A number of individuals secured possession of a large tract of land here, including some fresh water lakes, and erected a club house. Others have bought sites and built cottages. I was agreeably surprised at the number of these cottages as well as by their neat and attractive appearance. The view from the point is extensive and most interesting. General cultivation begins again as the Neversink River is approached, and farm conditions improve to the west as far as Callicoon and north to the Ulster County line; but the Summer boarder and the city Summer resident are getting to be more and more a factor in the development of the county, not only in the villages and special resorts, but also on the farms throughout the length and breadth of the whole county. It is hard to get any idea of the number of people who go to summer on the farms; but at Monticello nearly 4,000 people rest for longer or shorter time as circumstances will permit. City men are also buying farms and building Summer residences in this vicinity. What is probably one of the finest private Summer homes in the county is located on a high elevation just east of the depot. It has recently been erected by Mr. John O'Neil. When the ground was first purchased there was little to recommend it except its superb location and commanding view. A liberal fortune has been expended in clearing the grounds, in masonry and in building; the house is modern in all its appointments as well as in finish and general construction, and commands a view as far as the eye can see, covering a radius of not less than 25 miles. The grounds have already been planted with ornamental shrubbery and with plans now under contemplation to furnish it with well developed stock adapted to the location and severe climate of this section, the landscape effect will be in keeping with Mr. O'Neil's original and lavish plan for a Summer house.

J. J. D.

LONG ISLAND NOTES.

Black Soil.—On the road from Long Island City to Flushing one sees a good many small patches, half an acre or a little more, of low land, which has been drained and is used for vegetable growing. This soil, largely decayed vegetable matter, is black as tar, and, when so fertilized as to give it a proper balance of plant food, produces excellent crops, especially of onions. Weeds are the great pest to the tiller of this soil, and in wet seasons like the present it is almost impossible to keep them down, as they grow so fast, and the land is too soft and greasy to work. I saw some plots of onions so completely overgrown with weeds that the owners had evidently abandoned them. In one place I stopped to look at what appeared to be a field of cultivated mustard, but found that it was planted to corn. The wild mustard had taken complete possession, and was waving its yellow flag to such an extent that the corn was entirely hidden.

A Back-Aching Job.—Of course weeds between the rows of vegetables can be subdued by cultivation, but those in the rows must be pulled out by hand, something of an undertaking in large fields. Considerable of this gardening is done by foreigners from sections of Europe where women are accustomed to working in the fields, and a good many are seen here, weeding or hoeing. I have seen workers using a little box or stool to sit on while pulling weeds, but the more common way is to get down on the knees. Now and then a man whose backbone seems to be fitted with ball bearings, stands up to it. Those doing such work as picking up potatoes can materially lessen the backache by learning to bend at the hips and keeping the backbone as nearly straight as possible. A man who was noted for his ability as a potato picker gave me this hint, and I have found it quite effective.

Horseradish is cultivated to some extent in this section of the Island. This is an uncertain crop; that is, the price obtained varies greatly. Sometimes it sells for $1 a barrel or less, and at others $1 for a small basket, about three pecks. As everyone knows who has tried to exterminate it, it is a strong grower, and every little piece of root that is left in the soil will make a new plant. It is, if anything, harder to get rid of than the artichoke. When planted for commercial purposes, the roots are set in Spring 10 or 12 inches apart in rows three feet apart, and cultivated the same as corn. Of course, the richer the soil the larger and finer the roots. In digging it is necessary to be careful about breaking off the roots, if the field is to be used for another crop the next season. I saw some plots of horseradish in the black soil spoken of above. This is well suited to it, being deep and mellow, so that the roots have every chance to develop, and are easily dug.

Asparagus.—About 15 miles northeast of Flushing is a tract of land six or seven miles wide, extending into the water about five miles. On one side is Hempstead Harbor, and on the other Oyster Bay. In this section great quantities of asparagus were formerly grown, but of late years the rust has worked such havoc that many have given up the business. There are, however, scattered pieces here and there, and those who have had fair crops this year have been well paid for their perseverance on account of the high prices received. In some notes from this vicinity last year, mention was made of an asparagus man who, while others were giving up the business in disgust, was setting a large new bed. This man is George H. Townsend, of Glenhead, and he is the most extensive grower I found in that district, having at present about 25 acres in asparagus. The new plot he set out last year looks unusually fine. Worms and beetles have been active on some of his fields. A spray of Paris-green had destroyed a good many of them; but there were enough left, either new arrivals or those that had escaped, to make another dose soon necessary. Mr. Townsend intends to use Bordeaux Mixture for the rust this season. Thus far he has worked on the principle of high fertilization and good care, and his success is certainly a strong argument for these methods. He believes in setting out strong roots, giving them every chance to develop, and not continuing the cutting season too long. The plants are thus much more likely to get the start of the rust and pull through the season in fair shape than those that are starved and cut until they have but little vitality left. In the new bed above mentioned, cutting was stopped about June 1. Conover's Colossal is the variety Mr. Townsend uses most extensively. He is making tests of Palmetto, which is claimed by some to be partly rust-proof, but did not seem to be very enthusiastic over it. However, his tests have not been carried out long enough to give any very definite results. He believes that high culture and the use of Bordeaux Mixture, where it can be applied properly, are the best means of dealing with this rust. No one with common sense would expect to get the best work from a hired man by starving him and making him work 18 hours a day; and the same principle, to some extent at least, will doubtless apply to a starved and overworked asparagus plant.

Fruit.—Long Island is not considered a fruit section, yet here and there are fair-sized orchards of various kinds, and most farmers have at least a few trees for their own use. The outlook for apples and pears is slim. I found some farmers near Glenhead and Roslyn who thought they might have half a crop, but most orchards that I examined showed but few pears and fewer apples.

Rye for Straw.—No great amount of rye is sown for grain, but a good many farmers have a small field which they cut for horse bedding. For this purpose it is cut after it is too large for hay, but before ripening, and while the grain is so soft that in curing it dries away to a mere skin. In this stage the straw is exceedingly tough, and makes much better bedding than ripe straw. Most of the farmers who do this either have fine horses of their own, or sell the straw to those who keep fancy horses, many of which are found in the vicinity of Mineola.

Potato Bugs.—The hot, dry weather of the past week brought these pests out in full force, and growers have had to be liberal in their use of "French bitters," as one man said, referring to Paris-green. If some one would invent a scheme for extracting the active principle from poison ivy and preparing it so as to be fatal to the Potato beetle, enough of this might be gathered from the rougher parts of Long Island to make way with all the Potato bugs in existence. The cold wet spell made potato planting several days late. Some fields had to be planted over on account of the seed rotting in the ground. Others used damaged seed that had been cut and held for several days because of the rain, and these plants looked sickly. They may come along in fair shape later, but it is doubtful whether they will make a satisfactory crop. Planting inferior seed of any sort is a poor investment.

Acres of Garden, yes, hundreds of acres of it, may be seen in the vicinity of East Williston, Mineola, Garden City and Hyde Park. This section is a great flat, and the most intensive culture is practiced. These large tracts of land get better care and fertilization than most farmers give to their small gardens. I saw potato fields containing from 25 to 30 acres, the rows straight as a bee line, and the vines that healthy dark green that a potato shows when he is well satisfied with the conditions under which he is living. W. W. H.

On page 387, upper right-hand corner, writing of balsams, the types made the writer say "Keeping off all dead branches," when it should be *side* branches. The result of keeping off the side branches is to grow the plant as straight as a broomstick with flowers thickly set on the trunk from bottom to top. J. Y. P.

A Lice Killer.—One ounce crude carbolic acid to one quart crude petroleum makes a very good lice killer for chicken houses, and we find it very satisfactory, sprayed on, for keeping flies off cattle. I have used the commercial article, but found it expensive, and think this an excellent substitute, and cheaper. C. P. L.

The Jolly Girl

Often changes to the jaded woman. "I can't see what's come over Mary; she used to be such a jolly girl," was the remark of a young woman visiting a married schoolmate. Marriage changes a woman. The drains and pains which are so often the sequence of marriage rob her of all vitality. Give her back her former strength and she'll be as "jolly" a wife as she was a maid. Doctor Pierce's Favorite Prescription gives back the lost strength by re-establishing the health of the delicate womanly organs. It dries the drains and stops the pains. It cures ulceration, inflammation and female weakness. It makes weak women strong and sick women well.

"For two years I had been a sufferer from chronic diseases and female weakness," writes Mrs. Allen A. Bobson, of 1125 Rodman Street, Philadelphia, Pa. "I had two different doctors, and they gave me medicine which only relieved me for a time. My niece advised me to take Dr. Pierce's Favorite Prescription. I concluded that to open a correspondence with you for your advice would be safest, so I did, and have been highly benefited. I find that after taking six bottles of 'Favorite Prescription' and five of 'Golden Medical Discovery' and following your advice in regard to local treatment, I am now a strong woman. Accept my sincere thanks for the interest manifested in my case and the happy results obtained."

Sick women are invited to consult Dr. Pierce by letter *free*. Correspondence private. Address Dr. R. V. Pierce, Buffalo, N. Y.

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2 oz., 25c.; 8 oz., 50c.; 5-lb. pkge., $4.

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Live Stock and Dairy

HOW TO MAKE SMALL CHEESE.

Can you inform me where I can get full directions for making cheese in a small way for family use? C. O. H.
Lewisboro, N. Y.

To give full directions for making cheese to one not accustomed to "curd mixing" would be no easy task, and I should not care to guarantee the product. Since I have gone on record advising cheese as a daily food on account of its digestibility, I fear the maker, if he has no other source of knowledge, only what he may glean from these notes, may consider that I am "off" on cheese as a food, or on methods.

Here are a few principles and rules that may be given, and if good judgment is used may prove satisfactory. We will assume the quantity of milk to be 500 pounds of four-per-cent milk, and if more or less, the amount of rennet, salt, etc., may be changed accordingly. The night's milk should be kept at a temperature of 65 degrees Fahrenheit, after being exposed to the air after milking. In the morning mix the two milkings together in a vat or tub not exceeding 20 inches deep; 15 inches would be better. The curd would cook more thoroughly, with less danger of packing in the bottom. A very simple and effective way of heating will be to use two small cans seven inches in diameter, and high enough to come above the milk. Fill these cans with hot water, moving the cans and agitating the milk until warmed to 84 degrees. If one desires colored cheese then add one-half ounce of some standard cheese color mixed with a half pint of water; mix thoroughly. Provide yourself also with 1½ ounce of rennet extract. Put the extract into a half pint of cool water; do not use warm water or keep it where it is warm, and add to this milk, stirring for two minutes. In about 25 minutes this coagulated mass will be ready to cut. Put the finger gently into the curd, and when it breaks clean over the finger it is ready. If no cheese knife is at hand previously provide yourself with a piece of galvanized iron woven wire with a half inch mesh, about six inches by 15 inches; draw it through the mass lengthwise, crosswise and from top to bottom. Of course it is a crude way of cutting, but will serve the purpose of breaking the mass and starting the whey. Keep the mass stirred so each particle will remain independent of another. In 10 minutes the heating cans should be brought on again, filled with hot water. Keep them moving as well as the curd to prevent overheating any portion of it. When the thermometer registers 98 degrees take out the cans and keep the mass stirred until the curd particles do not readily adhere; then stir occasionally until—well, let's see. This point is not so easily told. The old, old way was to take off the whey when the curd squeaked between the teeth— that's not bad. I should of course rather depend upon the feeling and by smelling, but the beginners would better use the first rule mentioned aided by the feeling. Take a handful of curd, squeeze it hard, let go. If it has an elastic feeling showing it to be well dried out, then take off the whey.

Keep the curd well stirred until it is free from moisture and cool, which will require about half an hour. It may be more convenient after removing the whey to take the curd into some other receptacle, where the moisture will drain out more easily and quickly, either by a slanting bottom or a rack with a cloth over it through which the moisture can drip. One pound of clean salt will be sufficient; add and thoroughly mix, and allow to remain before pressing for 15 minutes. Two hoops 11 inches in diameter and 12 inches deep, or one hoop 14 inches in diameter and 14 inches deep, will be needed, or if small 12-pound cheeses are wanted, get four seven-inch hoops, one foot deep. The amount of cheese produced from the milk will depend upon its fat contents. One can safely figure 2.65 pounds cured cheese to each pound fat in the milk, if the milk contains anywhere from 3½ to 4½ per cent butter fat. Make a cheese bandage to fit, and long enough to project past each end one inch or even two inches; it can be cut off. The bandage may be placed in before putting in curd and turned over the top edge of the hoop, to hold it while filling; use a round piece of cotton cloth at each end of the cheese. I would not advise any cheap, uncertain method of pressing; a 1½-inch screw set in a frame with means of turning, or send to a dairy supply house and get a press. If sufficient pressure is not applied the rind will not form and the whole job will be a failure.

After pressing an hour, take out, adjust the bandage smooth and cover the edges nicely, put on cap cloths of same material, with the cotton press cloths on top, and at bottom the same; put on a closely fitting follower, put to press again, and keep it there until the following day. Then take it out and cure in a room from 60 to 65 degrees for three weeks. If you have not slipped a cog somewhere the cheese will be presentable and eatable. From an economic standpoint, however, the job will be a failure. An equal amount of cheese can be purchased much cheaper of some reliable manufacturer or dealer, quality guaranteed. H. E. COOK.

WHAT GRAIN WITH PASTURE?

Will you give me a ration for milch cows, using oil meal, bran and shorts, clover and grass pasture in day time, hay at night? Would chop feed of corn, barley and oats do to mix in? C. H.
Lopez, Wash.

Formulating rations is much like taking some proprietary medicine when a fellow is ailing. Of course it won't usually hurt him, because as a rule there is not medicinal property sufficient in the emulsion to do so, but there is no knowledge except the advertisement on the package that it will benefit the case. With the present exhaustive tabulated list of food analyses formulating rations is much like dropping in a nickel and the machine does the rest. A man without actual experience in feeding stock can grind out rations and formulas as well as a cooking school graduate can compound wonderful mixtures of baked dough, etc., for mankind. In institute work I have always been very guarded in giving ration formulas, because there are so many unknown conditions. Among them are size of cow, power of digestion, age, breed, period of lactation, season of the year, temperatures, likes and dislikes of the cow, and last but not least, the disposition of the man who feeds and cares for her. I assume in this case that the cow is in fine flow of milk. If her clover and grass pasture is luxuriant, give her all she will eat of it, and three or four pounds of grain made up of equal parts of bran and shorts would be all the grain she could profitably consume. The amount of oil meal will depend upon the character of hay fed at night. If it is nice early-cut clover hay why feed her any oil meal? The ration will contain all of the protein necessary, and if the cow is a free milker she may need a pound or two of cornmeal. Her condition will indicate her needs. Do not fear abundance of green succulent food. The great Holstein breed was not built up on concentrated foods—plenty of grass did it. Her condition will be an index of the demand for concentrated food and its kind. If she is thin in flesh feed cornmeal, barley or oats. If fleshy add oil meal, cottonseed, wheat bran, brewer's grains (dried) or gluten. The milk flow will usually increase in either case. In the first case cornmeal will do it by giving her additional reserve force in the form of fat. In the second instance, the large per cent of protein will furnish the lacking vital force of milk production. These are general rules. The individuality of the cow can in no wise be cast out. Some cows, like some children, pay no regard to the findings of the chemist. They grow and thrive and perform their allotted functions on carbonaceous food. Many farmers who are not informed in the science of food, observe this peculiarity of certain animals, and consequently become incredulous as to the findings of science, and therefore lose much and sometimes all profit. H. E. COOK.

The Veteran Farm Team.

The picture on our first page, Fig. 194, shows our friend L. J. Farmer and his wife with two faithful old horses. This team for many years did the hard work of the farm, and also the lighter work on the road. They were faithful and true during their more than 25 years of service—more faithful than many of the humans who took a hand at the farm work during the same time. Finally in their old age, when stiff, sore and feeble, the old horses were humanely put out of the way, and we certainly regard this as a merciful act. There are many families who are troubled with the problem of what to do with the faithful old horse. He is past his prime, and both business and pleasure demand swifter feet and stronger shoulders. A younger and more active horse is needed, but the old fellow has done his duty for years, and has endeared himself to all the family. He might perhaps bring a few dollars if sold to some horse jockey or stable keeper, but who could bear to see the old horse abused? We all know the fate of the poor old horse who falls into the hands of some huckster or truckman. Some farmers avoid this trouble and responsibility by changing their horses frequently—always selling them before they are fully past their prime and buying younger horses in their place. We do not like to do this for various reasons, and as a result we are sure to be obliged to face the old-horse problem. We think it much better to kill the old horse—when he becomes feeble, but how is this to be done quickly and humanely? After experimenting with poison and chloroform we believe that a bullet sent by a good marksman into the brain or a heavy blow on the head with a sledge hammer is the best way to end life. The horse may be driven to the woods or fields where he is to be buried and there killed without pain. It is a bad job though, for one who loved the old horse in his youth.

ON March 28 I set three hens on 51 eggs; April 18 hatched out 47 nice strong chicks. Again on May 12 set seven hens on 105 eggs, which hatched out 101 chicks. What incubator can do as well? B. R.
Center Bridge, Pa.

R. N.-Y.—We have never found one that equaled this record.

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Holds them firmly, draws them forward when lying down, pushes back when standing, gives freedom of head, keeps them clean
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Others Cure their Animals. WHY BUTCHER yours? Thousands of cows, mares, sows, etc., restored to breeding in the past 20 years. The best stock farms in the world are our patrons, why not you? ABORTION: Every cow that aborts should be treated with this remedy. You cannot afford to experiment, profit by the experience of expert breeders. Treatment by mail, $1.10. Other remedies just as reliable. Ask for circulars any way.
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CO-OPERATIVE CREAMERY NOTES.

A Successful Enterprise.

The Union Center (Broome Co., N. Y.) Coöperative Creamery Company produced during the month of April 3,345 cans of milk, manufactured 14,242 pounds of butter ,and sold the butter in Binghamton at the highest market quotation. The milk netted 76 cents a can for the butter sold, with the separated milk returned free. The New York Exchange price for April was 74 cents a can. Two cents a can on 3,345 cans, $66.90; estimating 3,000 cans of separated milk returned at 10 cents a can (the patrons of Union Center claim it is worth 17 cents to feed) gives $300, aggregating $366.90 received above Exchange price for April. On the same basis for June, with Exchange price 20 cents a can lower, and butter one-half cent a pound higher than for April, 3,345 cans at 22 cents, $735.90; 3,000 cans separated milk returned, at 10 cents, $300; 14,242 pounds of butter one-half cent higher, $71.21, aggregates $1,107.11 above Exchange price for one little creamery for one short month. Report for May received since writing the above is as follows: 4,480 cans produced; price of butter same as for April. Amount received for butter and separated milk above Exchange price was for the month $955.52. If the increased quantity of milk for May over April should be maintained for June its surplus would be increased $350; 30 per cent annual dividends are paid on stock. J. J. B.

Campville, N. Y.

In Sullivan County.

Frank Beyer is still making a success of the management of the farmers' coöperative creamery at Mongaup Valley, N. Y. Like all other lines of business, he loses a customer occasionally, but gets another to take his place. A city milkman seems to have worked the old game on some of the producers who patronized the coöperative creamery last year. He opened a creamery, contracted for milk, paid more or less promptly for a month or two, then let the bills run and finally disappeared between two days. The game has been worked so often it would seem that producers would be familiar enough with it to recognize the ear marks at once, but they don't. The farmers' coöperative creamery drove the Exchange creamery at Stevensville out of business last year. It is now closed. There seem to be no regrets on the part of farmers. Some of its old patrons are now carting to Liberty, where the farmers have a large coöperative creamery, which they are leasing this year under favorable conditions.

Easy Way to Handle Milk.

Having no running water, nor ice, we use an old-fashioned refrigerator, which is simply a water-tight box, with double lid, given a coating of boiled oil and mineral paint, and allowed to harden thoroughly, renewing from time to time. In the center of the bottom, where the strainer was, we insert a plug. Two tin pails, without covers, are used for the milk, and set in enough water from a deep cold well nearly to submerge the pails. A little stick under the edge of the cover gives ventilation, until the animal heat has escaped. In about two hours we pull the plug, letting the water run out, and fill again—when the milk becomes thoroughly chilled. We place this box on the north side of the house, under the shade of a tree, where the sun never strikes it, and have kept milk 48 hours perfectly sweet in the hottest weather, and raised about all the cream. We go through the same process after every milking. It works as well in Winter, the water never freezing until the thermometer reaches about zero. The beauty of this arrangement is that it is so easily cleaned. Needless to say, the utmost cleanliness is observed about the milking, and plenty of boiling water used in scalding all the milk vessels, including the box itself. CHAS. P. LEAKE.

New Jersey.

Questions About Oleo.

The following note is found in a recent R. N.-Y.:

At one time Holland led Europe as a dairy country. It began to encourage the oleo factory, while Denmark encouraged the cow. Of course, the Danes now lead the Dutch in dairying.

As a matter of fact does not Denmark buy more oleo from the United States than any other nation, considering population? Personally, I use nothing but best Jersey butter, made at home from my own cows; at the same time, out of curiosity bought some oleo butter several years ago, and could see nothing objectionable in its appearance or taste. Do you know that there is a firm opinion among the people, not farmers, that the creameries are the best customers for oleo, and are the ones that fight oleo butter to retain a monopoly of a mixed article? The farmer and his butter is simply "not in it." E. O. NATHURST.

Tennessee.

R. N.-Y.—In 1900 there were exported from this country 4,256,067 pounds of oleo and 146,739,681 pounds of the oleo oil. This oil was sent chiefly to Europe, where it is mixed with other fats and sold as oleo. The following table shows where most of this oleo oil went to:

	Pounds.
Holland	85,976,846
Germany	26,780,986
Sweden and Norway	13,500,332
Denmark	8,628,948
United Kingdom	7,265,764
Belgium	2,892,778

The largest exports of the manufactured oleo were as follows:

British West Indies	1,466,638
Germany	448,769
United Kingdom	364,712
Cuba	516,463
Porto Rico	219,140

The great bulk of the manufactured oleo goes to the West Indies and former Spanish islands. Our trade in this product with Europe or temperate countries is insignificant, because such countries buy the oil and do the mixing at home. It will be seen that Holland buys nearly 60 per cent of all the oil we export. It is quite notorious abroad that Holland has become the great headquarters for oleo making and that Dutch butter is regarded with suspicion. It was formerly classed with the best, but is now seldom quoted in the English market reports. Denmark imports about one-tenth as much of the oil as Holland does. The Danes do not buy a pound of the manufactured oleo. We believe that Denmark has a strict law prohibiting the manufacture or use of oleo colored to imitate butter. If made at all it must be of the natural color of the fats composing it. We have no objection to the use of oleo provided it is not sold as butter. We simply regard the yellow color as a counterfeit which enables unscrupulous dealers to sell a mixture of cheap fats under the guise of the genuine product of cow's milk. The opinion you refer to does not exist in this part of the country, and those who really investigate the creameries know how absurd such claims are.

Painting the Inside of the Silo.

What is the best thing to use to paint the inside of a silo? How would linseed oil (half boiled and half raw) do for it?

Lakeville, N. Y. R. H. M.

Opinion is very much divided. We have two silos, and they are not painted outside or inside. One of the silos has a portion of the staves painted with gas tar. We have not been able to see that the silage keeps any better where the staves are painted than it does where the staves are not painted. We have not found as yet any material which is better than common gas tar for the interior of the silo. This is better applied while hot, as it is then more penetrating than when cold. In heating gas tar the work should be done away from buildings, as the tar has a habit of boiling over the sides of the kettle, and the whole kettle of tar may take fire. Should this occur dump the kettle upside down upon the ground and the fire will be quickly extinguished. Painting the inside of the silo is for two purposes; that the silage may be better preserved, and that the staves or walls of the silo may be protected from decay. We cannot at the present time recommend any material better than gas tar. A preservative known as Carbolineum avenarius is said to possess wonderful powers as a wood preservative. We are making some tests of the material but we cannot state from experience its value. There are several mixtures on the market for painting boat bottoms. Some of these are of value for painting the inside of silos. We would not recommend linseed oil for the purpose. L. A. CLINTON.

Dried Blood for Calves.

We have heard much about the value of live blood introduced to the calf through the parent. Now Prof. D. H. Otis tells in a recent bulletin from the Kansas Station of the value of dried blood as a tonic for young calves. He gives two cases where blood seems to have saved the lives of sick animals, and given them a good start. He says:

"The Kansas Experiment Station has just purchased 20 young calves. Frequently these calves arrive at the Station badly affected with scours; a little dried blood always brings about a cure. Recently a test was made with five calves that happened to be scouring at the same time. With two of these dried blood was fed after reducing the regular feed of milk. With the other three the dried blood was fed without changing the supply of milk. In the former case the calves recovered from the scours after two feeds; in the latter after three feeds. With the 70 young calves under experiment at the Kansas Station during the past year, there has not been a single case of scours that dried blood has failed to check. In feeding dried blood, a teaspoonful at a feed is a great plenty. This should be continued until the scours disappear. In case of a weak calf, the allowance may be gradually increased to a tablespoonful at a feed. To prevent the dried blood from settling to the bottom of the pail, where the calf will be unable to get it, it may be stirred in the milk while the calf is drinking, or the milk and blood may be fed immediately after being thoroughly mixed."

NON-CRACKING BUTTER BOWLS.—In selecting a butter bowl care should be taken to get one as smooth as possible, as it is a sure indication of fine, close-grained wood if properly turned; a thorough sand-papering will improve all new bowls. Any new bowl will crack if water is applied to the inside only, or left in it any length of time before wetting the outside, as the wet surface immediately commences to absorb water and swell, while the outside remaining dry does not expand or swell, consequently when the pressure from within overcomes the resistance from the dry outside it has to crack. The bowl should be immersed in cold water for a few seconds and then aired for a few minutes, so that the expansion will be gradual and from all of the surface at once. Repeat the operation until the wood is thoroughly watersoaked; then it may be scalded in the usual way. Always wet the outside when in use. M. T. W.

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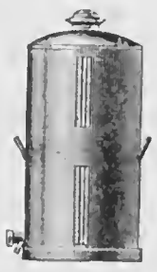

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Cow Sense.

The editor has just received a copy of catalogue illustrative and descriptive of the

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—Phila. Record.

TOMMY: "Pa, which is heaviest, lead or gold?" Mr. Fi... "Gold, of course. It's ever so much... der to pick up."—Tit-Bits.

"I AM surprised to h... hat Mr. Waters was drowned; I... ught he was such a good swimme... "Yes, but he had just eaten some... is wife's trial biscuits."—The King.

HE: "They can ph... raph the voice now." She: "Goodness! I hope I'll never live to see a picture of the things you say when your collar button drops down your back."—Christian Endeavor World.

AGENT: "You really ought to buy one of these new machines, and try to keep up with the times." Farmer: "Bless yer life, I ain't a-tryin' t' keep up with th' times; I'm t-tryin' to keep up with th' weeds."—Chicago Record-Herald.

"I HAVE heard," remarked the student of social problems, "that in marriage it doesn't cost any more for two to live than for one." "Say," said the married man with a worried look, "were you ever the father of twins?"—Philadelphia Record.

PIKEY: "And just because you had lost your nickel the conductor made you get off the car and walk all the way home?" Bilkey: "Oh, no. He only put me off. I could have sat by the roadside all night if I had wanted to."—Baltimore World.

"MY being a good musician saved my life the last time the levee gave way," said Mrs. Mississippi. "Why, how was that?" said Mrs. Boston. "Well, you see, my husband floated down the river on the stove"— "Well?" "I accompanied him on the piano."—Judge.

MCJIGGER: "Did you ever notice what frightfully bad grammar some of our statesmen use?" Thingumbob: "Yes, I suppose they do their best to imitate Washington." McJigger: "What nonsense! Washington was a cultured man." Thingumbob: "And yet there is no doubt that he slaughtered the King's English."—Philadelphia Press.

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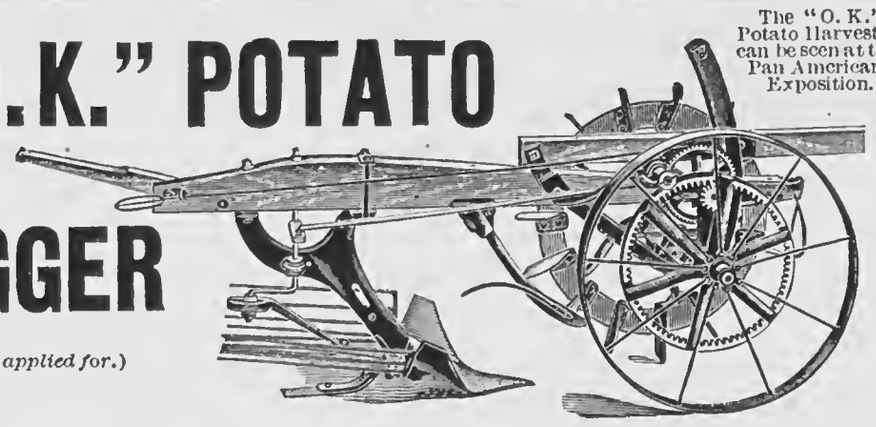
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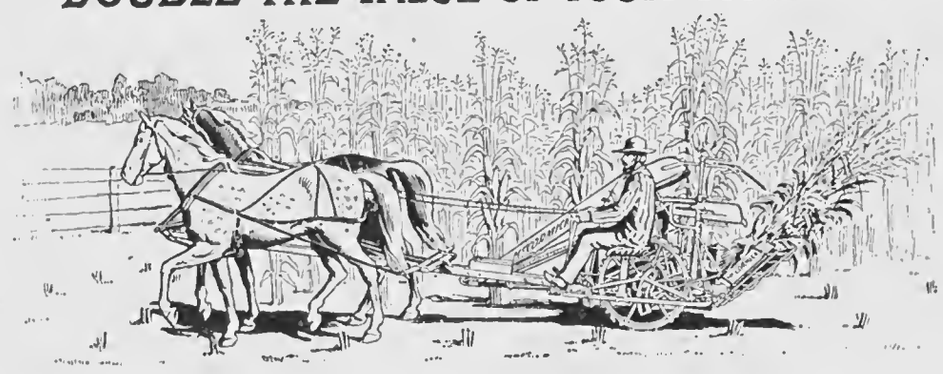
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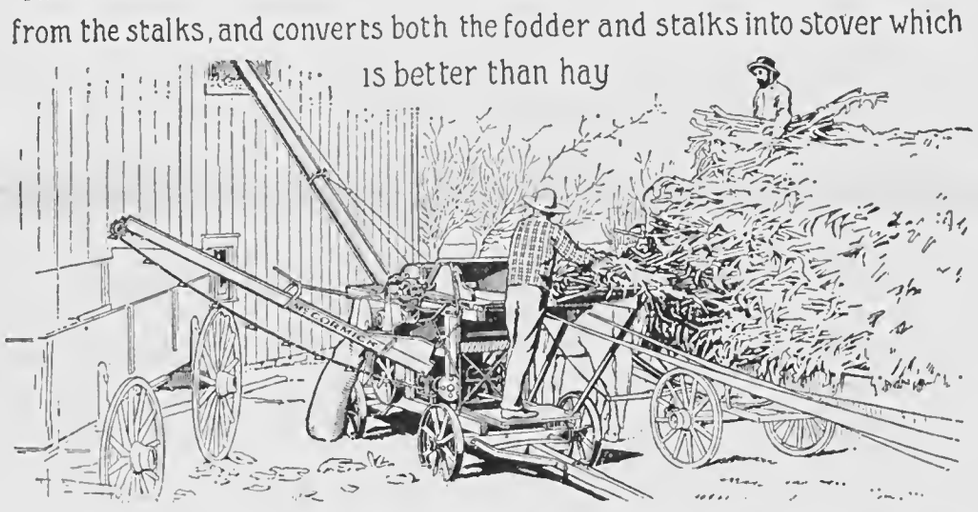
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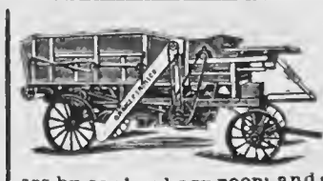
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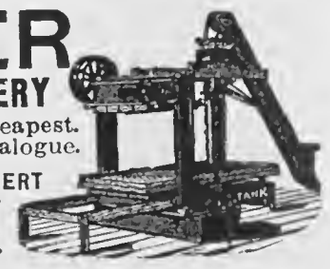
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CORNELL UNIVERSITY
JUL 12 1901

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2685. NEW YORK, JULY 13, 1901. $1 PER YEAR

SUCCESSFUL SPRAYER FOR THE PEA LOUSE

IT OPERATES ON A LARGE SCALE.

And Seems to Solve the Problem.

THE LATE SEASON.—The Green pea-louse is again threatening the late crop of peas. In this section last Winter was very favorable for the development of the pest, and we rather expected to see it make an early appearance. The continued cold, rainy weather of April and May throughout Maryland, Delaware and New Jersey, however, effectually checked its development, and as a result, as far as we can ascertain, early varieties have been practically uninjured in these States, and in Delaware nothing but early peas were planted. On May 16 the writer was able to find but a single louse on peas here and there after a most careful search, and failed to find them on clover entirely. But the rapid power of reproduction of this pest was then well shown. On June 5 the same fields were examined, and most of the terminals of Alaska were well stocked with lice, and Blue Beauty vines were well covered. The former variety was ready to cut, so that no injury was done it, and the latter was so nearly made that any injury would have been slight. Had any late peas been planted, however, they must have been inevitably as seriously injured as during the past two seasons. The absence of the lice on the clover in May is of interest, and raises some questions concerning the life history of the pest, which probably will need further study as regards its migration from one plant to another.

NEW SPRAYER NEEDED.—In THE R. N.-Y. for June 10, 1900, we gave an account of the Pea louse, and then mentioned that we were experimenting with spraying kerosene and water mixture. We found that 15 per cent kerosene was ineffectual against the louse on a hot day, evaporating so rapidly that no injury was done the lice; 25 per cent, however, killed all the lice it hit and did no injury to the vines as far as we tried it—on about one-fourth of an acre. Almost all of the lice were killed by the 25 per cent kerosene, which was very thoroughly sprayed over the vines from an attachment to a kerowater pump covering four rows at once, with one nozzle to each row. But knowing that the kerosene at this strength would probably do considerable injury when used on a large scale, no further tests were made with it. Our work convinced us that with four nozzles to a row, so that the vines could be thoroughly sprayed, and with the pump geared to the wheel of the cart, the Pea louse could be combated successfully, even on a large scale. We were led to give attention to the possibility of profitably spraying for this pest on account of the fact that some growers had not been successful with the brush and cultivator method, it failing to destroy a very large percentage of the lice brushed off on cool days, or on stiff soil forming lumps when cultivated. Furthermore, it is evident that in brushing, using either the cultivator or pan drawn between the rows, as the young lice in the buds are not disturbed, though very large numbers of the adult lice might be destroyed, especially when they had become numerous, it would be impossible to check the development of the first brood of the pest by brushing, as might be done with a spray which would reach and destroy the young lice securely resting between the terminal leaves. We therefore planned to construct an attachment for a barrel sprayer which would cover several rows with several nozzles to each row, and had submitted our plans to several spray-pump companies, when we learned through James Good, of Philadelphia, the manufacturer of whale-oil soap, that Messrs. Brakeley, of Bordentown, N. J., had constructed a satisfactory sprayer, and had last year successfully combated the Pea louse, using about 140 barrels of whale-oil soap. Upon corresponding with Messrs. Brakeley we learned that they considered their sprayer entirely satisfactory; after having sprayed a large acreage, and saved their crop by means of spraying last year, that they had duplicated their order of last year for 140 barrels of whale-oil soap, and intended to spray their whole crop of over 500 acres this year. Feeling satisfied that these men must have solved the problem of spraying the Pea louse, and as it was doing no damage to early peas in Delaware, we dropped the matter of constructing a sprayer, and awaited with interest a promised public exhibition of their machine. On May 13 Messrs. Brakeley kindly invited a number of persons interested to inspect the working of the sprayer in the field, among whom were Dr. J. B. Smith, New Jersey State Entomologist; E. J. Judge, of The Trade, of Baltimore, a prominent Philadelphia dealer in canned goods, and the writer.

NEW SPRAYING MACHINE FOR PEA LOUSE. FIG. 204.

TANK FOR HOLDING THE SPRAYING MIXTURE. FIG. 205.

A BIG MACHINE.—At a distance the sprayer looks something like a large grain drill. It consists of a large tank containing a simple pump, with air chamber on top of the tank, which is attached by gearing to one of the two wheels of the sprayer. Beneath the tank are pipes leading to nozzles, and the guides and lifters for holding the vines while they are being sprayed. The sprayer covers three rows at once, the peas having been planted in this way, but the inventors think that planting two rows at once and having a machine covering two rows would be preferable. As the sprayer passes along the vines are picked up by a wooden V-shaped fork, and pass between parallel iron bars which hold them upright. These bars are movable so that they do not tear the vines. Above each row is a cluster of three nozzles—Bordeaux nozzles are used—one directed forward, one backward and one stralght down. On either side of each row are two nozzles, one directed forward and one backward, and just above the ground is a nozzle on either side directed upward so as to give the vines a thorough under spray. The nozzles with the pipes and guides can all be thrown up about a foot by means of a lever, permitting the turning of the sprayer. The whole plan of the machine is simple and practical. It can be readily understood from the accompanying illustrations, Figs. 204 and 205.

VERY EFFECTIVE WORK.—Messrs. Brakeley were just finishing a 24-acre peafield, upon which six sprayers had been working half a day, when we arrived. The vines were about 15 inches high, being Champion Jr., a medium sweet wrinkled pea. The lice were not very numerous, although almost every bud had a small family of fast-maturing young. The vines were very thoroughly covered by the spray, and as nearly as we could approximate it from 80 to 90 per cent of the lice were killed; had they been thick fully 95 per cent or more must inevitably have been destroyed. On May 20 Mr. Brakeley wrote me that he could find but very few lice in this field, which is about ready to cut. Whale-oil soap was used at the rate of one pound to six gallons of water. It had been used more dilute, but it was found that a larger quantity of spray was required to be as effectual, and it was better therefore to use it stronger to avoid handling so much material. When the vines are small about 160 gallons, and when nearly full grown 300 gallons, are used per acre, which at three cents per pound for soap would mean $1.50 per acre for the materials. The soap was readily mixed with cold water, one barrel of soap being mixed to form three barrels, and this then dipped into the tanks, in which it was diluted and carried to the sprayers. The water for the tanks was pumped from a small brook, which had been dammed up, by means of a traction engine. One tank carried soap for each sprayer. With these six sprayers, six tanks, engine and three extra men, 50 acres a day are sprayed at a cost of $42.50 for labor and $75 for materials, or a total cost of $2.44 per acre. This may seem a good price to pay for combating the Pea louse, but when one spraying will ensure a first-class crop of medium and late peas, while otherwise they would be of in-

ferior grade, those who are growing a first-class article can well afford the expense, and were the lice thick enough to threaten the life of the crop two sprayings would certainly be profitable. Mr. Brakeley is spraying his whole crop of 510 acres this year, and though the lice are not thick enough to do any serious damage he believes that the spraying will pay in the superior quality of the peas, and we believe he is right. This sprayer was invented by Messrs. Brakeley and is covered by patents. They were unable to give us any exact estimate of the cost, but it was thought by those present that the machine could be built to order for between $150 and $200, and possibly for less if manufactured in quantities. Of course a small grower could hardly afford to own and operate such an outfit, but where peas are grown for the cannery on contract the packer might own and operate the machine, or some one owning a traction engine or doing similar work might find the work profitable. Messrs. Brakeley's sprayer was granted patents upon the combination of the device for lifting the vines and nozzles for spraying them. Of course various arrangements of nozzles for spraying crops in rows have previously been patented, and put on the market by spray-pump manufacturers. Early in the season, while the vines are still upright, we believe that any machine which will spray two to four rows with four nozzles to a row will be found satisfactory—and early in the season, before the lice have become numerous, is the time to spray with profit. But as soon as the vines fall over and run, a device for lifting them is absolutely essential, and Brakeley's sprayer is of value. If the Pea louse is to be with us every year—as it now looks—and we must fight it by spraying, it will be found desirable to grow low-growing sorts and to plant in perfectly regular rows.

Should the weather conditions be unfavorable for its development next year may see a practical disappearance of the Pea louse; but on the other hand, it may be as bad as ever, and should it not occur next year it may appear any time as suddenly as in 1899. As it should be fought early in the season to prevent injury we believe that spraying will be found profitable, and that the possession of a first-class spraying outfit, and its prompt use, will solve the problem of growing peas in spite of the Pea louse.

Delaware Exp. Station. [Prof.] E. D. SANDERSON.

MODERN CRANBERRY CULTURE.

ESSENTIAL PRINCIPLES OF THE BUSINESS

How to Start a Bog.

PART II.

CLEARING THE LAND.—During the Winter it is a good plan to get rid of the wood and brush on and around the swamp. The brush can be cut with a heavy brush scythe, or a billhook, and should be piled up and burned. The upland around the swamp should be cleared at least a rod back from where the shore ditch is going to be. This is to prevent the young vines from being shaded, and it gives room for a road around the swamp, which in harvesting time will be very convenient. When the frost comes out of the ground, find out which end of the swamp is highest, and then dig a main ditch through the center from there to the lower end. The width of this ditch should be regulated by the amount of swamp to be drained, but usually three feet in width at the top and two at the bottom of it is enough. In swamps that have a small stream running through them all that is necessary is to dig the shore ditch and then run the cross ditches from that to the stream, striking it at right angles.

DRAINING.—The upper end of the swamp being naturally the driest the work of turfing and grading is usually commenced there. The tools for this work consist of a broad-bladed ax, called a turf ax, and a heavy hoe with a blade about four inches wide and eight inches long, called a stub or grading hoe. These can generally be obtained at hardware stores, or if they do not keep them in stock they can get them from any wholesale hardware firm in Boston, Mass. The turf ax is used in cutting the turf into squares of about two feet each way, and these are pulled bottom up with the hoes. It is very important that the turf be turned over for the reason that it not only gives the surface a chance to drain and dry, but it also gives the graders a chance to chop up the roots of many sprouts that would spring up if this were not done. It kills the vegetation and gives a better surface for working. If there are any holes or soft spots in the swamp these should be carefully filled up and allowed to settle before any sand is put on. In grading, it is necessary to keep the surface as level as possible. All roots of any size should be taken out and burned or carried off. The surplus turf can be used to good advantage in smoothing up the rough spots in a road around the bog, or in laying the foundations of a dyke at the lower end if there is water enough to flow with. It is best, however, to keep the swamp level as high as possible, hence it is better to keep all good material on the bog. The surface of a bog that is continually wet in the Summer is worthless, and it will grow anything but cranberries.

PUTTING ON SAND.—The next thing is to open a sand-hole. This is done by clearing away the loam from the surface of a high bank until good sand is found. In some places around the swamp, the loam is not so deep, and it is a good plan to dig small holes in the banks until a shallow spot is found. Of course where there is only one high bank convenient this must be entered, no matter how deep the loam may be. When sand is found, a runway is dug into the bank about on a level with the swamp, and planks about six inches wide and two inches thick are laid from it out upon the swamp. The sand is then shoveled into a wheelbarrow and rolled out and dumped on the bog, where it is spread out very evenly at an average depth of three inches. When the bog can be flowed in Winter many wait until the water is frozen, and then do their sanding on the ice. This dispenses with the use of planks, and where the swamp is large saves quite a sum. The sand is spread on the ice the same as on the bog, and it soon works its way through, and will be found in Spring as level as desired.

SETTING THE VINES.—The month of April is the best time to set out vines, and they may be set out as late as June if the water can be raised so as to keep the bog wet. Some set them out in the Fall, but nothing is gained by that, as the vines do not root any sooner than if they were set out the next Spring. The vines are set out in hills consisting of five or six pieces of vine about six inches long. There are no roots connected with these, and one end of the hill is shoved through the sand into the mud or peat, and the other end is left projecting an inch or two above the sand. Just how far to set these hills apart is a matter of some discussion among growers, and perhaps the distance should be varied according to the variety of vines used. Eighteen inches apart each way for early vines and 14 or 16 for late ones is a safe rule to follow. A good marker is made by inserting hard wood or iron pins about an inch in diameter, with the points rounded, in a piece of 2x4 scantling at the desired intervals. By dragging this first one way and then the other, and setting the hills where the lines intersect, a regularity is obtained which will enable the grower to ascertain the exact progress of the vines in covering, and which variety covers the quickest. It is best to keep each variety ditched off on a section by itself. This prevents mixing the varieties, and gives the grower a chance to see if he is getting what he ordered, and what is more important, it enables him to tell what variety is best suited to his bog.

THE VARIETIES.—It is a good rule to choose vines according to the climate that they are to be grown in. There are about 200 different varieties, but many of them are worthless, and have only been results of experiments in crossing good varieties. Among those that can be relied upon are the Early Black and Early Red for early berries that ripen from the first to the middle of September, the Howe and Smalley's, that come a little later, and for late varieties, the Bugle berry and the McFarland. For those desiring early shipments on account of frost, sound fruit and good yielders, I cannot speak too highly of the Early Black and Early Red, especially the latter, which is a large, round berry, solid to the core. This berry ripens about September 10, and while it is a fair keeper, I advise immediate shipments, relying upon its good appearanec for a ready sale even though the market is temporarily overstocked. The advantage of the Early Black lies in its early ripening and rich, dark appearance, and also from the fact that it is a heavy yielder. I have seen 200 barrels of this fruit gathered from a single acre, and though they were marketed in the early part of September, they found a ready sale at a good average price.

Probably there is no berry better known to growers than the Howe. It ripens about September 25, and good reports are heard from it wherever it is grown. It is a sound berry of good size, of a purplish tinge when ripe, and is valued especially for its keeping qualities. It is a very hardy variety, and it takes a severe frost to injure the fruit. The Smalley is about the same except that it is more pear-shaped than the Howe, and when ripe its appearance is apt to be mottled or spotted, but it is a good yielder and keeper, and a favorite with most growers. The Bugle or Bell berry is an old-fashioned, late variety that takes its name from its shape, and was a favorite in the days when swamps were flowed to prevent frost from injuring fruit. It ripens very late, and as it does not keep any better than the Howe or Smalley, it is fast going out of use. The McFarland is a very large, fancy fruit, and is raised chiefly to take prizes at fairs. It rots quickly either on the vines or off, and is not a very profitable kind to grow. In another article I shall describe a model screening and packing house, also how to take care of young vines, and describe best methods of harvesting.

F. A. MAKEPEACE.

ROOT-PRUNED TREES FAIL FROM DROUGHT

Mr. Stringfellow's Texas Experiment.

To prove how greatly mistaken your Mexican correspondent, H. L. T. (page 397), is in supposing that the success of root-pruning is "merely a question of latitude," I will state that my planting of 3,000 trees this year is almost a total failure from drought, while I feel confident that nearly every one set at Hope Farm as well as at Boonsboro and Coleman in Maryland will grow. It is simply a question of moisture, not latitude. New York nurserymen every year grow thousands of vines and trees from cuttings and short-piece root grafts, identical with the root-pruned tree, nor have I ever before seen a Winter and Spring so dry that a root-pruned tree would not callus and grow off readily. This immediate locality has had only a total of five inches of rain since the great storm of September 8, and of that we have only had as much as one inch at a time once. The remainder has fallen in light showers that wet the ground but a few inches. I planted my trees in driven holes about 10 inches deep in November, pouring into them about a pint of water to the hole. This of course was quickly absorbed by the thirsty earth, and since then not a particle of moisture has ever reached the roots. This applies to all but about 100 trees planted immediately along the base of the hill where the moisture has been forced up to the surface. Every tree there is growing nicely, while all on the flat 10-acre hilltop and on the valley below have failed to push a bud, and are as dead as the proverbial "door nail." But the trees set on a part of this hilltop last year, which was quite seasonable, are standing the drought bravely and a few of them have peaches on them, which, if it ever rains and they mature, I will send the editor as the first fruit ever grown on a "driven hole" tree.

As to planting orchards in this way in droughty sections like this, where the soil is rocky and the water level 75 feet or more below the surface, I give it up as too risky. The safer plan will be to plow in Summer and cultivate for two years, when the trees should be put to grass and mown, leaving clippings on the ground. As to best depth to set, two trees were planted last year in driven holes 18 inches deep, only one inch of the tops with a single bud being above ground. The trees alongside were planted from eight to 10 inches deep, and I see no difference now between them. As to my whole experiment here I will say that I moved to Lampasas only 18 months ago, from the coast country of Texas, where it generally rains too much, and while I give it up that the driven hole in sod ground is too risky for dry countries, I feel confident that the experiments now being made will prove it to be a success in all sections with a reasonable amount of rainfall. For the encouragement of those who are experimenting, I will give an extract from the report on close root-pruning by Prof. Henry E. Dosch, of the Oregon State Horticultural Department. He says:

> I procured 50 trees, one, two and three years old, of pears, apples, prunes, plums and cherries, grafted on different kinds of roots, removing every fiber from the stubs; the tops were cut off to 30 inches. The first year the trees made but a few inches growth, and I had fears, as my soil is a heavy clay underlined with hardpan, and a very dry season followed. I hoed and cultivated as if planted in orchard, but when Fall came, concluded it was a failure and paid no further attention to them. The following Spring, when preparing my garden, where they were planted, I started to pull them up, when to my surprise I could not do it. On examining the little things I noticed the buds were swelling, so allowed them to remain, and when they did begin to grow I thought they never would stop. The prune trees grew eight feet, the apple and pear trees three and four feet. The fruit growers' convention met that year in July at Newburg, to which I took a number of these trees to show the result of my experiment, and, like myself, all present were greatly astonished. The most surprising fact of all was, not the large top growth, but the perfect root system these trees had formed, all of them throwing out three or four strong roots from each stub, which struck diagonally down into the soil. Those which I exhibited at Newburg had grown roots down into this heavy clay soil over four feet, penetrating the hardpan and throwing out hundreds of lateral rootlets, but none grew near the surface, hence out of reach of the plow. A more perfect and symmetrical root system could not be formed. As to age of tree best adapted to this method, I could see no difference whatever, the three-year-old trees making the same perfect root system as the one and two-year-old. The only difference was that the three-year-old pear and cherry trees set some fruit which matured nicely.

So don't be discouraged if root-pruned trees do not do as well the first year as you think they ought to.

H. M. STRINGFELLOW.

I WANT to tell you how much your investigation of the apple crop and probable prices did for me last Fall. Buyers were around here trying to make us believe that they could almost get apples given to them in New York State. Many of my neighbors sold their crops for 50 cents per barrel; pick them and haul to the station. Acting on the advice of THE R. N.-Y. I would not sell to them, but put them in barrels and sent them to a commission man in Philadelphia. They netted me above $1 per barrel. W. W. H.

New Hope, Pa.

THE ROCKY FORD MELON DISTRICT.

REMARKABLE THINGS IN A NEW COUNTRY.

Irrigation and Alfalfa in the West.

THE MELON INDUSTRY has made Rocky Ford, Col., famous. The melons are excellent in quality, the acreage is large, the business has been well advertised. The result is that Rocky Ford is known far and wide as the most aggressive of melon-growing regions. The secrets of this success are irrigation, sunny climate, loose, rich soil. Twenty-five years ago the country was a treeless waste. Along the streams were sage brush and alkali, and on the upper lands were endless stretches of parched Gramma grass and Buffalo grass, over which the cowboys ranged the cattle. In the higher lands far away from the rivers, the country is still practically almost a desert, for the annual rainfall is only about 13 inches, and sometimes it is much less. Aside from the native grasses only Alfalfa can persist, and even this leads a precarious existence, even where it can grow at all. The country needs only water, however, to make it a garden. Here and there, on the plains that stretch away to the horizon without a tree or a bush, one may see a patch of green and he knows that water and Alfalfa are there. A grove of cottonwoods has been planted and a home has been built like an oasis in a desert.

IRRIGATION POSSIBILITIES.—In the river valleys, agriculture has great possibilities. Irrigating ditches are taken from the streams at intervals, and a water right is conveyed with every piece of land. One buys water quite as much as land. Rocky Ford is in the valley of the Arkansas, lying well towards the southern part of the plains of Colorado, east of the Continental Divide. The river supplies water in abundance, and the country is developing rapidly. One may travel much without finding a community that shows greater evidences of thrift and prosperity than this. Irrigable lands are in brisk demand at figures ranging from $75 to $200 per acre; and some of the best lands nearest the town cannot be secured for the latter figure. The soil on the "second bottoms," comprising lands that are somewhat elevated above the river, is mostly a sandy loam of several feet in depth. When properly irrigated and tilled it remains loose and friable on top, but with careless flooding it is likely to bake and harden on the surface.

EFFECT OF HYBRIDIZING ROSA FERRUGINEA. Fig. 206. See Ruralisms, Page 486.

DO NOT FLOOD.—Hereby arises a very important point in this irrigating of tilled crops, and one that may be applied wherever plants are watered: All the melon growers insist on applying the water in furrows close beside the plants, and not on top of the ground about the plants. If the water is applied about the plant, the soil puddles and bakes, the foliage is likely to be injured by the mud, and there is little opportunity to correct the difficulty by means of horse tillage. The irrigating furrow is run within three or four inches of the row of plants, and is four or five inches deep. From this furrow the water percolates into the soil beneath, and the surface of the land remains loose and open. As soon as the water has thoroughly percolated into the soil, the furrow is filled with a cultivator, and an ideal surface tillage is maintained. The novice usually irrigates too much. The "old stager" irrigates a crop of melons or beets perhaps only two to four times, but he practices the best of tillage. Irrigation enforces tillage for conservation of moisture. In the East, do we not make a mistake by watering newly-set plants on the surface of the ground? Why not make a hole near the plant with a clip of the hoe, apply the water to the hole and thereby moisten only the sub-surface?

"DON'T WANT RAIN."—It was a day in June that I visited a farmer at Rocky Ford. He was irrigating beets and orchard. It threatened rain. I asked him why he did not wait for the shower.

"I don't want the rain," he answered. "Rain is a nuisance. It packs down the earth. It makes the place muddy. It knocks down the plants and drives them into the mud. It upsets all my calculations. We have too much rain."

Although this represents an extreme view, it nevertheless contains much truth. We of the humid East have a species of commiseration and sympathy for the man who lives where there is scanty rainfall; but this man in the arid regions has a similar commiseration for the easterner who must wait for the weather. To a large degree, the irrigator is independent. He applies water when the plants need it. The thriftiness of the crops, as well as of the people, in this Arkansas Valley testify to the fact that the farmer is boss despite the lack of rain.

ALFALFA REIGNS.—The foundation crop of all this country is Alfalfa. Gradually the great open pasture ranges are giving way to inclosures, and stock is being fed and housed. In much of Colorado the general pasture range will persist for years, perhaps forever, but the tendency here, as elsewhere, is to centralize and intensify. Fifteen years ago this valley was the home of the cowboy and the pioneer. Today it is the home of the farmer, with staid and steady purposes, and the country is one of pleasant and substantial homes. With the increase of the Alfalfa acreage scientific stock raising is bound to develop. However, the second crop in importance in this Rocky Ford region is melons, particularly muskmelons, or cantaloupes as they are called here. It is about 20 years ago that the melon was first raised here, although the commercial melon industry has developed mostly within the last 10 years. Netted Gem is the variety mostly grown. It is planted directly in the field, not being started under glass, as the custom is in the East. The lands are level and easy of irrigation, and the raising of the crop has presented no special difficulties until within the last year or two, when the blight (Macrosporium, or fungus) has begun to be troublesome. The melon harvest begins early in August. According to Mr. Griffin, who has charge of the Arkansas Valley Experiment Station, the acreage of melons in 1900 was about 2,500, and 780 cars were shipped. This area is not confined to Rocky Ford itself, although all the output is popularly known as Rocky Ford melons. The area extends from near Pueblo practically to the Kansas line, a distance of more than 100 miles.

SUGAR BEETS.—This year the sugar beet is attracting more attention than any other crop. A beet factory was erected last year at Rocky Ford, and in order to secure its location a certain acreage had to be pledged. This naturally reduces the area available for melons on many farms. It is a common report at Rocky Ford that the acreage of melons is much decreased this year, sugar beets promising much surer and more direct returns. Possibly this is true at Rocky Ford itself, but recent estimates of the entire region place this year's melon acreage at 3,000 acres.

The agriculture of the Arkansas Valley in Colorado is not confined to the crops mentioned above. Fruits and vegetables are grown in abundance. It is not a corn country, as the nights are too cool, and corn can be procured cheaply from Kansas. There are good orchards of apples (chiefly Ben Davis and Winesap), native plums and to less extent of German and Italian prunes, sour cherries, and large plantations of gooseberries and other small fruits. The Winters are too cold for certain results with peaches, although I saw many trees well laden with fruit, but most of them had been laid down for protection. Pears are practically prohibited because of the blight. For a new country, the agricultural industries at Rocky Ford are remarkably varied. This means much for its future development. [Prof.] L. H. BAILEY.

ASPARAGUS NOTES FROM A. DONALD.

I see in The R. N.-Y. much said about Asparagus rust. That is something we have not yet been troubled with here in Chemung County; but for the last two seasons there has been a small striped bug, and some that are quite red, that have destroyed some beds. One man set one acre of plants one year ago, and it was eaten badly last year, and this season the insects have taken all that was left. They eat the bark from the tender shoots, to which the egg is stuck fast. They hatch out in a few days, and trim up the plant in a short time. I have a small planting in my garden put out last season; it was eaten quite badly this year. I have caught the bugs and killed them, and destroyed the slug, but I find this is slow work and all the grass is worth. I have a neighbor who put out one acre a year ago; when the insects commenced to work he used a fine sprayer with kerosene oil, and it appears to be effective, as I looked over the field yesterday, and did not see much if any that had been hurt either by the oil or beetle. Have any of the growers of New Jersey or Long Island had this trouble, and if so, what remedy do they use?

This neighbor who set the acre last Spring, 1900, had been asking me about the effects of salt on asparagus. I told him I believed it a good thing. I had used five tons to the acre with good results, so he has had some good, coarse salt, such as they use in salting green hides. He sent a boy to put it on. He spread 350 pounds on a strip 36 feet long by seven feet wide, making less than one square rod, and this was put on after the young asparagus had come up, and was growing. I went yesterday and looked over, and found the ground all white, crusted with salt, but no harm was done to the plants. You may figure for yourself how much salt there was to the acre. The soil is a sandy loam. If the Jersey growers would use five to 10 tons of salt and 100 to 150 bushels lime every three or four years might it not help to control the blight or rust? If it has not been used in such quantity try it. A. DONALD.

Elmira, N. Y.

R. N. Y.—The insect referred to is the well-known Asparagus beetle, long a pest in the Jersey and Long Island fields. It can be fought in a small way by dusting or spraying with hellebore or Paris-green after the cutting season is over. Large growers do not pay much attention to it, as, like the Cabbage worm, it is less destructive in large areas. Applications may be made whenever beetles or slugs appear. Salt is not regarded as beneficial here near the coast, but is advised farther inland. Asparagus roots very deeply, and can bear strong applications of salt.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Peach Root-Aphis.

W. F. F., Fisherville, Pa.—I have a young peach orchard one year planted. Part of the trees are seriously affected by a small black insect working on the roots. I find them in colonies on roots of trees and they simply such out their life. I never had anything like it on my farm, and I have been in the peach business for 14 years. What is the insect called, and what is to be done? Can those affected trees be saved, and can I prevent the rogues from going to the rest of the trees that are still healthy?

ANS.—The culprit is doubtless the Peach root-aphis or plant-louse, which works both on the roots and above ground on the foliage. It is a very serious pest in young orchards, but old bearing trees are not often seriously injured. Recent observations indicate that ants have much to do with the distribution of the lice from tree to tree, and other more vital relations are suspected between the ants and their cows—the lice. The lice working on the leaves readily succumb to a spray of whale-oil soap or tobacco water, but the more destructive root-feeding forms are difficult to reach. The best results seem to have been attained by digging in liberal quantities of fine tobacco dust about the bases of infested trees. If there are ants in noticeable numbers in the soil in the orchard they will doubtless soon carry the lice from infested to healthy trees. Carbon bisulphide is too dangerous to use in the soil at the base of the tree, and solutions of soap and tobacco poured around the base have not been effectual. Keep the trees well fed and cultivated, and use tobacco dust freely, and it is probable that the trees can be carried through their youth and get growth enough so that the lice will not noticeably injure them as bearing trees. One should always carefully examine the roots of peach nursery stock for these dark brown plant-lice, and if any indications of their presence are found either destroy the stock or dip it in a strong whale-oil soap solution, or better still have it fumigated by experts or reliable persons. M. V. SLINGERLAND.

Woolly Aphis on Apple Roots.

J. W. W., Woodford Co., Ky.—I send some kind of insect that is on roots of apple trees in my nursery. What will kill them while trees are standing in nursery rows without hurting the trees? Are they the Woolly aphis, and will they hurt trees to amount to anything? Are other nurseries subject to them?

ANS.—The apple roots bore many genuine Woolly aphids or plant-lice. This insect is a dangerous pest in a nursery or young orchard. No nurseryman should send out trees thus infested, and the orchardist should keep a sharp lookout that he does not get trees infested with Woolly aphids. They are a difficult pest to handle, and it is a case where an ounce of prevention is worth many pounds of trying to cure. Liberal quantities of tobacco dust dug in around the base of the trees has given the best results thus far reported, and there is no danger of its injuring the trees, but it would be rather an expensive operation in a nursery. I would root out and burn all infested trees, and grow some other trees, like peaches or plums, which the pest does not attack, in their places. I would rather stop growing apple trees for a time than to send out infested trees. Destroy all trees where roots are badly knotted by the lice, and fumigate all others thoroughly before selling. M. V. SLINGERLAND.

A Talk About Plant Lice.

E. D. A., Poughkeepsie, N. Y.—Is any remedy known for the insects like lice now infesting maple trees, covering the leaves with a glaze which causes them to fall?

ANS.—Plant-lice of all kinds seem to be much more numerous this year than usual. To combat them successfully one must understand how they eat. They do not have jaws for biting off pieces of food, like the Potato beetle or a caterpillar. Their mouth parts are drawn out into a beak with which they suck the sap from the interior of the plant in a way similar to that by which a mosquito sucks the blood from us. Therefore one cannot fight these sucking insects with Paris-green or similar poisons, by putting it on the surface of the plant, nor is it possible to inoculate the plant with any substances which will go into the sap and thus be taken up by the insect. Such sucking insects then can only be killed by actually *hitting* them with a spray of a soap or an oil which will either close their breathing holes or soak through their skin. The fact that we have to aim our spray much more accurately in fighting sucking insects makes it a very difficult matter to kill them, and this is especially true where they infest such large-leaved trees as the maple. It would not often be practicable to spray a maple tree for these insects. However, I find that the enemies of plant-lice are now fast getting the upper hand, and millions of the lice are being included in the daily menu of ladybird beetles and their other numerous enemies, so I think that in a short time the maple trees will probably be relieved of most of the tiny pumps which are now sapping the life from the leaves. M. V. SLINGERLAND.

Seventeen-Year Locust; Watermelon Bug; Strawberries.

W. E. B., Romney, W. Va.—1. What effect will the Seventeen-year locust have on young peach trees one year old, also on trees set the Fall previous to locust year? If they have a bad effect would spraying help to protect the trees at time the locusts are on trees? 2. I have been troubled several years with the Watermelon bug, and have used several preparations. All seem to be detrimental to the vine. What is the best thing to do? 3. Can you set strawberries out in September and get a good crop the following Spring?

ANS.—1. The Seventeen-year locust is capable of doing very serious injury to young orchard trees; trees set the Fall previous might be killed, and one-year-old trees so maimed as to ruin their symmetry of growth. But usually such injury occurs only when the locusts appear in very great numbers, and in the near neighborhood of the orchard. The injury is done by the female locust in depositing her eggs, which she prefers to do in slits cut into the tender growth of young trees. As serious injury to young orchard trees by this insect is of comparatively rare occurrence, I would never hesitate to set trees at any time in regions where the locusts are scheduled to appear. But I can suggest no practicable method of preventing the locusts from laying their eggs in the trees. One cannot feed them a poison, as they suck what little food they may eat, and I do not think any substance sprayed on the bark would prevent them from ovipositing. Possibly a good coating of crude petroleum applied in early Spring might have some deterrent effect, but I would not depend much on it. It would probably require so strong an oil or a soap spray to kill the locusts that it would also seriously injure the trees. 2. I am not quite sure what insect is called the "Watermelon bug" in West Virginia. If it is the striped beetle, thorough work with the Bordeaux Mixture has been found very effectual. But the "bug" may be an entirely different creature, perhaps a sucking insect. 3. A strawberry expert tells me that if one sets potted strawberry plants in September a fairly good crop of fruit may be raised the following season. But with ordinary runner plants one should not expect to let the vines bear much the next year. M. V. SLINGERLAND.

Plant Lice on Apples.

E. M. M., Irving, Ill.—Enclosed find leaves taken from an apple tree in my orchard. Will you tell me with what the leaves are infested?

ANS.—The apple leaves were infested with plant-lice or aphids. These little insects suck the sap from the inside of the leaves, hence one cannot feed them a poison spray, but each louse must *be*

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PITTSFIELD, MASS., April 28, 1900.
We have found the So-Bos-So Kilfly to be an excellent article doing perfectly the work intended. Our customers report that it protects the cattle from flies very thoroughly, and consequently increases the flow of milk. Another great point in its favor is that it is reasonable in price. In some instances, it has been used quite extensively on horses. One of our customers wishing to photograph his team found it necessary to use So-Bos-So Kilfly with successful results. HOWARD & MORROW.

MUNHALL, Allegheny Co., Pa., July 7, '99.
I received the So-Bos-So Kilfly and Sprayer and am very well pleased with it. I have a herd of 27 cows, and when we put them in the stable to milk these hot evenings, flies torment them very much, but a few minutes with the sprayer and all is quiet, and we can then do our milking in peace. JAMES C. KEARNEY.

PHILADELPHIA, PA., May 2, 1900.
Last July the daily quantity of milk produced by my Chester County dairy fell off very considerably, which I attributed to the annoyance which the cattle received from the flies. About half the time the herd was standing in the stream switching instead of grazing. I ordered a sample of So-Bos-So Kilfly and by having it applied every second morning, greatly relieved the herd and increased the milk product from 15 to 25 per cent. and I have continued to use So-Bos-So Kilfly during hot weather ever since that time. Our herd of about 20 head could be sprayed in the stable in less time than it would require to milk a single cow, and I consider that I have saved many times the cost of the So-Bos-So Kilfly used, in addition to affording comfort to the herd. G. S. W. BRUBAKER.

LOWELL'S STATION, PA., April 18, 1900.
We can highly recommend So-Bos-So Kilfly as by keeping off the flies it increases the flow of milk and insures comfort to the cows. If So-Bos-So Kilfly is used on cattle during the summer, it will undoubtedly keep them free from lice and scurf during the winter.
C. F. MCCRAY & SON, Maplewood Stock Farm.

LENOX, MASS., April 21st, 1900.
I have used So-Bos-So Kilfly with good results. It is a comfort to both man and beast at the milking time.
JACOB STEIBEL, Supt. to the Hon. John E. Parsons.

CHAS. H. CHILDS & CO., Sole Manufacturers, 12 La Fayette Street, UTICA, N. Y.

hit with an oil or a soap spray to kill it; a strong tobacco decoction will also kill them. Usually this Apple aphis does not do much damage in large trees, but small trees may suffer noticeably, and thus need to be treated. Spray thoroughly, aiming at the lice, with whale-oil soap, using one pound in five gallons of water. M. V. SLINGERLAND.

A Grist of Fruit Questions.

S., Woodlawn, Va.—1. I have seen a number of apple trees where the ends of the limbs were dying, which I think is caused by some kind of insect. Is there any remedy to prevent this? 2. Please advise the best method of planting and cultivating apple, peach, pear and plum seed. 3. Can you recommend some western nurserymen who can furnish grape cuttings, apple and pear scions, also seedlings? 4. Is there any special machine for digging and transplanting nursery stock? 5. What do men generally charge for budding nursery stock, and how many trees can they bud a day? 6. What is the duty on about 15,000 seedlings from France?

ANS.—1. It would be quite impossible to tell what is the matter with the trees mentioned, as there are a great many insects that trouble apple trees. However, it might be that the damage mentioned is from the eating of the foliage by the Spring canker worm. If so, the damage is practically over now, that is, the insects have done their work and gone into the ground, but next Spring the trees should be sprayed with an arsenical preparation as soon as the leaves begin to come out, so as to cover them with poison, and in the end poisoning the little worms which will hatch out from the eggs laid by the insects and crawl up the trees in the Spring. 2. Briefly stated, these seeds should be planted in the late Fall, or very early in the Spring. In the latter case they should be kept over Winter in moist earth, so that they will not heat, and yet they will keep moist, fresh, plump and in good germinating condition. They should then be planted very early in the Spring. As to cultivation, they should be kept just as clean as possible, and the ground loose. The planting should be in rows about two feet apart, so that they could be worked either by horse, or by hand. 3. Almost any nurseryman in any part of the country can furnish cuttings of the crab apple and pear, and many of them seedlings also. You can observe the advertisements in THE R. N.-Y., and correspond with those whom you think best. 4. There are good machines, or tree diggers for digging nursery trees by horse power, and I know at least one nursery that uses steam traction for pulling the tree digger, which seems to work very well. 5. Budding is done by the day, and a reasonable price for an expert would be $2 or $3 per day, provided he can set about 1,500 or 2,000, with a tier to follow who should do the tying at the cost of the owner of the stock, and, of course, be paid extra. If the budder does his own tying he could not, of course, put in so many, and about 1,000 would be a reasonable number for a day's work. There are those who can exceed this, but they are hard to find, and sometimes their work is not satisfactory. One of the main things is to do budding so that the buds will take. It is not so much the number of buds put in, but to make sure that the buds will succeed, as anyone can easily see would be the proper view to take of the matter. 6. The duty on seedlings from France, or any other country, is 20 per cent of their value.

H. E. VAN DEMAN.

Harvesting the Onion Crop.

Reader.—Will some onion grower tell how the onion crop is handled in the field?

ANS.—The thorough farmer has no weeds in his onions when harvest time comes. A clean field adds greatly to the pleasure and economy of harvesting the crop. White onions should be pulled as soon as fungus spots begin to show on the outer leaves. Pull three rows at a time, and lay together straight, with the tops all one way. Let them lie 24 hours if good weather before piling. Two forms of piles are used here, the small round pile and the long pile. For the small pile make a square bottom of barrel staves or boards nailed to cleats. It will be the square of the length of a barrel stave. Pile three windrows or nine onion rows into one row of piles. Grasp a large handful of onions by the tops and set them on the barrel stave platform with tops outside and so on around, leaving a six-inch air shaft, and drawing in near the top. Keep the onions in and tops out. Bring the tops together and point up in a conical or old-fashioned beehive shape. Some weeds or a fertilizer sack held on with stones finishes the pile. Such a pile will cut out from one to two bushels. The long pile is made by nailing four or five four-inch fence slats upon cross cleats. On these the onions are piled, with bulbs in and tops out, drawn in at the top, making a pile 2½ feet high. One of our neighbors goes further than this, and puts a slat rack through the middle, so that the air can have free circulation endwise through the pile. Another plan where one has barn room enough, is to cart in in barrels the day after pulling, and leave the onions in barrel dump piles in rows on the floor. These rows of piles give an opportunity for the circulation of air between. After a few days these piles are turned over into new piles or ridges.

Red and yellow onions require less care than the whites, and some growers pull them into 12-row windrows and let them lie there for a month, raking them over for a day or two, if good weather, before carting. But a brighter onion can be made by piling into small piles preventing sunburn and weathering. One of our inventive farmers has patented a pulling attachment to a wheel hoe which works well in clean ground, and by it onions are loosened rapidly row by row and then raked into windrows. Weeds should be cleaned off as soon as the onions are pulled, if there are weeds. A good horse hoe for this purpose is made from an old saw blade or similar piece of steel about three feet long, having the ends turned up and fitted for the rear holes of a wooden horse cultivator. The blade should be sharp and dipped enough to take hold. The forward feet of the cultivator may be removed. It would be difficult to give a hard and fast rule for grading onions. The pickles are the little fellows, finger-end size. The seconds, those go-betweens, so big that you are ashamed to have them in the pickles and so small that you are ashamed to have them in the big ones. Any rule of diameter would be rather difficult of application.

E. C. BIRGE.

Devices for Manure Cleaning.

Many people throughout the country are thinking of building new barns or making over old ones, and they want to put in the conveniences, both labor-saving and sanitary. Among other things there is a great demand for some automatic or other device for getting rid of the manure. The ordinary plan of handling it with a dung fork and throwing it out of the window by the cows is not at all satisfactory. What in your judgment is the best advice to give a man who wants either an automatic or some other labor-saving device for handling liquids and solids?

You ask for some good automatic device by which the manure may be taken out of the stables. I know of none that is entirely satisfactory. Some use grating through which the manure is supposed to fall into a pit below, but the gratings become clogged, befouled and filthy. Bad odors and cold drafts of wind come up through them, which is bad for the milkers and worse for the cows. Some flush the gutters with water with the idea of washing out the manure, but this is expensive and wasteful of fertilizers. Where many animals are stabled there is probably no better way than to have stables so arranged as to drive through with manure spreader, wagon, cart or sled each day, and convey the manure to the field. Where a smaller number of animals is kept a manure carrier made to run on a track can quickly be filled and sent out to the covered barnyard, or dumped into a cart outside. These carriers should be made with drop bottoms that may be operated by a rope or wire from the stable. We have fitted up barns in this way, and they are very satisfactory.

On our own farms the cow stables are cleaned out twice a day and collected in the covered barnyard, whence it goes to the field in February, July or December. The manure from the horse stables, the stables being large box stalls, is hauled directly to the fields when they are in condition to receive it—that is, in condition for driving over them. If the fields are unfit to drive over the manure is then wheeled out into the covered barnyard to await the general cleaning up, the object being always to produce just as much manure as possible. Much refuse matter of various kinds that is burned up on many farms we consign to the manure yards to be converted into manure. The tenant is charged not to burn the rakings from the yard or garden, but to cart them to the manure yard.

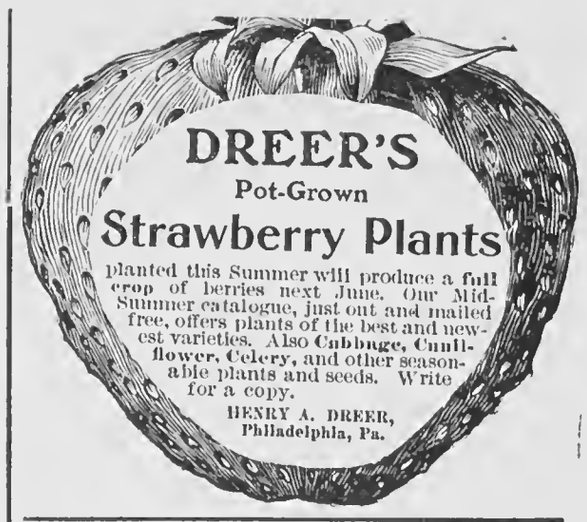
JOHN L. SHAWVER.

Ohio.

Notes on the Cowhorn Turnip.

The Cowhorn turnip has been a standard sort in our list of table varieties for a number of years, but we have never had it to grow to anything like the size of those spoken of in a recent issue of THE R. N.-Y. in our trial grounds, where it has been planted and grown under ordinary conditions. We would say that the average length of well-grown turnips of this variety in good soil would be seven to eight inches, tapering in form, and usually curved or one-sided, hence the suggestive name, with tops of rather greater length. Regarding its keeping qualities, we would say that the flesh is firm and solid, but we do not think that it has the keeping qualities of the ruta baga, as it is distinctly one of the rough-leaved turnips. We do not think the keeping qualities enter into the plan of green manuring, as the chief requisite is to secure a large and quick growth of vegetable matter to turn under, and this would probably be one of the best varieties for this purpose, as the long roots will penetrate the soil more deeply then the globe-shaped or flat-rooted sorts. As we understand it, the crop can either be turned down late in the Fall or allowed to die down for Spring plowing. In our climate and farther north we should prefer to turn them under just before the ground freezes, so as to secure the greatest benefit from the decay of the vegetable matter which is to enrich the soil. Harvesting them for Winter feeding is, of course, a different matter, and we would prefer a larger globe-shaped root for this purpose. You will be interested to know that we have had considerable demand for this variety this season, in all probability due to the articles in the agricultural press and State bulletins.

W. ATLEE BURPEE & CO.



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These prices are for any quantity not less than a 50-pound bale, free on board cars Chicago, and are not subject to discount. TERMS:—Cash to accompany order.

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Ruralisms

NOTES FROM THE RURAL GROUNDS.

THE LOCAL STRAWBERRY SEASON.—As experienced growers predicted at blooming time the local strawberry crop is short in quantity, but of fair quality. The rains were so incessant that one wonders how pollination was effected at all. The sunny intervals were so few that the bees had little chance to transfer pollen from staminate to pistillate blooms. The anthers of the best of perfect flowering varieties are not very conspicuous, but they liberate a great quantity of very diffusible pollen when they are dry enough to burst, and it is quickly carried to neighboring imperfect blossoms by various insects, and possibly to a limited extent by the wind. Prolonged wet weather, lasting without intermission throughout the life of many blooms, without doubt greatly reduces the chances of pollination of the seed ovules, and the consequent development of the strawberry "fruit," which is really the fleshy and swollen end of the pedicel supporting the seeds, always considered by botanists as the real fruits of the plant. The strawberry, however, has quite an extended period of bloom, and a considerable number of blossoms is likely to reach the receptive stage between rains even in the most trying seasons, and the result, other conditions being equal, should be a light crop of well-developed berries. This fairly represents the present condition, which is equalized to a greater degree, from the grower's standpoint, by the receipt of fair prices for well-graded berries. The worst general defect is a prevalence of sunscald, as the cool moist weather before the blooming season did not favor the development of dense foliage, and the ripening fruit has been unduly exposed to the sun.

The Gandy leads all varieties in this district, and is still more largely planted than any other, though the Michigan, Bubach and Wm. Belt have their advocates. Early berries are practically not grown for market, the southern product having captured the trade exclusively, but varieties later than Gandy, presenting as good appearance when boxed for market, are earnestly desired, but so far none has made headway with growers. Quality does not count much with a market berry, but color, size, firmness and uniformity are important factors, ranking only with productiveness and reliability. Commercial strawberry culture has long been a recognized industry in Monmouth Co., N. J. Hovey's Seedling was grown for the New York market 50 years ago, and was most highly regarded as the first valuable native berry produced by scientific hybridization. Following the Hovey came the famous Wilson, generally known at the time as Wilson's Albany. This was probably the most productive of all strawberries, and old growers tell of large fields visibly red at a distance from the vivid color of the abundant fruits. It was firm and a good shipper, but sharply acid, and of low table quality. These noted old varieties have entirely disappeared from northern fields. It would scarcely be possible to find a typical plant of the Hovey, and the Wilson practically survives only in the tough and viciously sour early berries sent up from the far South during the late Winter months. Jersey berries are still grown under the name of Wilson, but they really seem to belong to some of the many kinds that immediately supplanted that prime old favorite. The Bubach had a long sway, but is now being discarded in favor of the popular Gandy. Of the legion of new kinds that gained more or less favor in their day Jersey Beauty and Sharpless stand out prominently, the former for fine appearance and good market quality, though of small size, and the latter as a standard of table quality, though to many palates it is rather insipid. Sharpless, however, was one of the first large-fruited varieties to have a real sugary flavor, in distinction to the acidity supposed to be characteristic of the strawberry. It had several good points, and is still prized by many, but its poor color and irregular form have nearly driven it from the market. Gladstone, widely advertised as a great improvement on Sharpless, has not proven so in this locality, being generally unable to bring its crop of berries to perfection. Growers who properly cared for their planting during the dry weather last year, and provided a fertilizing mulch to carry the crowns through the sharp, dry, February winds, that did such extensive damage, have not found their investment altogether unprofitable, but the careless growers who took their usual chances are getting low profits, as poor berries are not wanted this season.

HYBRIDIZING WILD ROSES.—Our prized garden and glasshouse roses are, of course, descended from the various botanical species dispersed over the northern temperate zone. Roses have been cultivated from such ancient times that all record of the origin of many favorite types is lost, while others are so involved in a maze of hybridity that their parentage is undecipherable. There is now a tendency to utilize hitherto neglected species by combining them with highly improved garden forms, with the hope of getting new and distinct features. Much work of this kind is done on the Rural Grounds with results often interesting, if not valuable. Our native wild roses are very fixed in their type, and resist for at least two generations the influence of foreign pollen, though if they continue to produce viable seeds it is likely that a break will occur sooner or later, and a hybrid result showing characters of both parents. One old species that seems to have been little used is the Purple-leaved rose from the mountains of northern Europe, Rosa ferruginea. This species is very hardy and long-lived. In congenial soils it grows tall and strong. The foliage is dense and rich purple in the Spring, becoming dark green as the season advances. The flowers are borne in clusters during June. They are deep-pink in color, and pleasantly fragrant. The Purple-leaved rose is only planted in backgrounds for the color effect of its foliage or as a botanical specimen, and is consequently rarely seen. We have industriously hybridized this distinct wild rose with the best accessible garden forms for several years, and have grown many seedlings, none of which has shown the slightest variation from the type except the double rose on the right in Fig. 206, page 483, the type species being shown on the left. The pollen parent of the hybrid rose was Magna Charta, an excellent hardy variety bearing large, highly-scented, bright pink very double blooms. As will be seen the new kind is densely double, with petals of great substance, lasting a long time both when cut or on the plant. The color may be described as a silvery rose, intermediate between the parents, and the fragrance is also characteristic and pleasing. The foliage is bronzy purple, very dark when young, but turning green sooner than the parent. An odd feature of this hybrid is the almost total absence of thorns. The new shoots for the first season are as smooth as a willow wand, but the blooming branches thrown out next Spring usually have each a few small thorns. Both parents are densely covered with sharp and persistent spines. As the old blooming canes of the hybrid may be cut away each Fall the bush is no more objectionable during Winter than a currant or lilac. This new rose, from its compact shape, durability, pleasing color and fragrance, together with its known hardiness and absence of thorns, would seem to be desirable for general planting, but it has the defect of not propagating readily. W. V. F.

The Lawrence Pear.

A correspondent complains about the premature ripening of the Lawrence pear, also of its not being a profitable market variety on account of shy bearing. The premature ripening was caused by long continued hot and dry weather, which caused mine to begin to ripen in September, fully six weeks ahead of schedule time. Other late pears were less affected by the heat and drought. The shyness of bearing is probably a result of being planted in a soil unsuited to its requirements, and also a bad location. My own experience with it has been variable and unsatisfactory; because some trees would bear heavily, while others would have few fruit, or none at all. Unlike the Bartlett and Flemish Beauty, it responds well to shallow Summer culture. A noted pear grower says that it is the most profitable variety he has, but his soil and elevated location are especially adapted to the Lawrence. He reports crops that are double the amount of mine that are in a heavy clay soil. He gets more than twice the price for the Lawrence that he does for the Bartlett. The good points of the Lawrence are good color, fine quality, very hardy in tree and fruit buds; no regular off years of bearing, like the unrivaled Anjou; a heavy bearer if planted in a suitable soil and location, and holding its leaves until very late in the Fall, which feature I claim accounts for all of the foregoing good points. F. F. WOODSIDE.

Ohio.

The Ruby Queen Rose.

The thousands of Ruby Queen rose plants distributed to subscribers last year have had their blooms delayed, in common with all varieties, by the late Spring, and July 4 finds us in receipt of so few blooms for competition that it is best to postpone the award of $25 in prizes until July 15, 1902. The plants will have gained additional vigor by another season, and a fairer representation may be expected from all parts of the country.

A few errors in labeling have been reported, which will be made good by forwarding the true variety as soon as they can be safely propagated. In the preparation and mailing to individual addresses of such an immense number of young plants a small percentage of errors is almost inevitable.

The growers of Ruby Queen think that the color of this charming rose has become lighter this season than when it received its somewhat misleading name and that there is a tendency to sport back toward its seed parent, the white-flowered Rosa Wichuraiana. This would be very unusual in a true rose hybrid but if the original bright, clear carmine tint lightens under repeated propagation there would appear to be no help for it. A bright and beautiful rose, hardy, healthy and reliable would still remain. The Rural Grounds plant has shown no change, and is a dainty specimen, admired by all visitors in competition with the finest roses the world has yet produced.

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DUSTS TREE, BUSH OR VINE.
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And other Insects can be Controlled by Using
Good's Caustic Potash Whale-Oil Tobacco Soap No. 6.
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Large quantities Special Rates. Send for Circulars.
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Guaranteed 98 to 99 per cent., for generating
Hydrocyanic Acid Gas
the most effective fumigating material, to destroy scale insects on fruit trees and plants. The only positive eradicator of the dreaded San Jose Scale. Endorsed by all Agricultural Experiment Stations. "A perfect practical remedy," says Prof. W. G. Johnson, State Etymologist of Maryland.
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always finds a ready market, but to bring top prices. It must be put up in neat, attractive and substantial packages. We have everything in the basket line.
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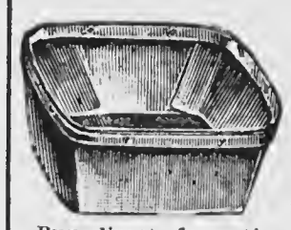

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Hope Farm Notes

I meet people here and there who have some odd notions about Hope Farm. Some of them say openly that they do not believe there is any such place. They say without any reserve that it is all an imaginary picture. Others say there may be a farm, but they are not sure of it. It may not be out of place for me to answer here some of the questions that are frequently asked.

Where is Hope Farm?

In Bergen Co., New Jersey. Our post office is Woodcliff. The farm is nearly two miles from the railroad, about eight miles west of the Hudson River and four miles south of the New York State line.

How large is the farm?

The deed calls for a little over 87 acres.

Is it all in one block?

No, the deed describes three pieces. One is a long narrow strip of 50 acres. There is also an oblong strip of 30 acres, and an irregular piece of seven. The last two strips join at the corner, but the larger strip is separate.

Is it all tillable?

No. There are 25 acres or more of good chestnut timber, and 12 or 15 more grown up to brush and briers. Several other acres are so rocky that they cannot be plowed readily, and there is one low field below a spring that is used as a pasture.

What is the character of the soil?

It varies greatly. The buildings are grouped at the lower end of the long 50-acre tract. The soil here is strong and heavy, but was set out years ago in early apples and in pears, so that it cannot be used for other crops, to which it is well suited. There is a gentle rise up the farm from the road for about 600 feet, where a ledge of rock comes close to the surface—cropping out in places. Beyond this is a little valley or depression, which receives the wash from several farms to the south and also the water from a large spring. Beyond the spring the ground rises abruptly to the west to form a high hill, and then slopes down more gradually to the woods. The soil on this large tract is strong, with a fair amount of clay. On the hillsides there are places where the ledge comes close to the surface, or even crops out.

Is the land stony?

Very. Former owners picked and piled the rocks and stones until there are over three miles of stone walls bordering the farm. The lower part has been quite well cleared, but the upper hills are covered.

Why did you buy such a rough and unpromising place?

I do not call it unpromising. Others did so, and therefore the price was made low. I thought it was a bargain, and we were situated so that we had to live on a farm.

What did you pay for it?

That is a personal matter, but I have no objection to stating that the farm cost us $4,500. It was in the hands of a firm of lawyers who had acquired the property under foreclosure. I may say here that the farm is assessed at $5,500. The buildings are good and quite convenient.

Why was the property not bought? There is usually good reason when farm property stands still—without buyers.

It think the chief reason was that there was no water at the house. For some reason former owners had never provided anything but cistern water. Drinking water had to be brought from the distant spring. We drilled a well down through the rock, and this gives us a constant supply of the purest water, which is piped to house and barn. This is but one of the "possibilities" I have mentioned. The failure to utilize them hurt the reputation of the farm. When they are developed the farm will gain more of a reputation than it deserves.

What are some of the other "possibilities?"

The chestnut timber in the woods will with care provide a steady income. We have already sold over $500 worth of poles—taking the larger trees out, so that the smaller ones can make a better growth. There will be, I think, a yearly income of several hundred dollars without injuring the woods. The little valley below the spring can, I am sure, be drained. Open ditches will relieve the surface wash from other farms and stone drains or tile will make the soil fit for early crops. I feel quite sure that we can scrape out a fair-sized pond below the spring, and thus hold the water stored up for irrigation when needed. In this way the lower part of the farm could be made very productive. There is also water enough from the spring to run a small power if desired.

What do you expect to do with the farm?

I have not yet fully decided. We raise the ordinary crops while studying the soil and its needs.

Haven't you any plan?

Only in a general way, because I do not yet fully understand the farm. We have owned it but two years. I do not feel like making permanent plans until we know what is best for it. There are about 250 apple trees from 20 to 40 years old. They were neglected when we found them, but have responded so well to culture and care that I feel sure the land is well suited to fruit. At present I expect to work the hill above the spring and the western slope into an apple orchard.

What varieties?

My belief is that such varieties as Baldwin, Sutton Beauty, Russet and Greening will pay best. I shall experiment with York Imperial and Rome Beauty. We have top-worked about 50 trees to some of the newer varieties for trial. On the upper part of the 30-acre strip I would like to grow peaches. We have already set out 600 peach trees on the Stringfellow plan.

What did you do that for?

Because I wanted to give the matter a fair trial. If it will work up here I can see great chances in it for some of our waste hillside land.

You want a fruit farm, then?

That is my idea at present, because this rough and rocky location seems well adapted to trees. We raise fair crops of potatoes, corn and hay, but the shape of the fields and the lay of the land will not permit the most economical working of such crops. I believe many farmers have failed by trying to force a farm to yield crops which were not suited to its soil or conditions. While one is bringing an apple or peach orchard into profitable bearing there can be no regular rotation of crops, but a farmer must do what he can as time goes on. There are dozens of things we would like to do. We hear of people who make great fortunes out of hens, ducks, asparagus, currants, strawberries and other products. We have paid expenses and a little more with some of these things, but the great profits in any of them seem to go to the few who have some special knowledge or location, or some very favoring circumstance to help them out.

Then you do not believe it possible to make a great fortune on the farm?

I have never made one. I do not see any in sight, nor do I know of anyone who has made a vast amount of money on a fair-sized farm. At some distant day I think land in our locality will increase greatly in value for building purposes. I shall not wait with folded hands for this time to come, but shall do my best to make Hope Farm valuable for its *earning* capacity.

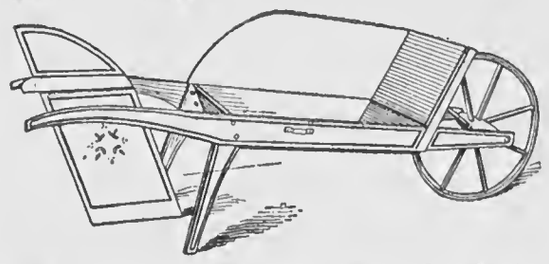
FARM NOTES.—I have written more than I intended about this. All farmers ought to be interested in the future of their farms. One reason why I like an orchard farm is the fact that the labor spent on it is work of a permanent character. I look upon a thrifty and well-selected apple orchard as about the noblest monument that a man can leave behind him. . . . A hot wave came upon us during the last days of June. It was awful—on man and beast alike—though the old stone house was quite cool. We are not yet suffering from drought, for our soil retains the moisture well—with surface cultivation. . . . The Potato beetles came out suddenly this year. Almost before we knew it they had stripped whole plants down to the stems. With the Eclipse pump mounted on the market wagon and the three nozzles aimed behind there was wholesale slaughter of the bugs. This year we tried the experiment of adding a pound of Paris-green and a pound of Leggett's Fungiroid to each barrel of water. The Fungiroid is supposed to be a dry Bordeaux Mixture, to be blown dry upon the plants. This combination quickly put an end to the bugs. There are evidences of the copper on the leaves, but we have had practically no blight this year, and I doubt whether spraying would pay. Our potatoes are at the top of a wind-swept hill, with good drainage for air and water. . . . I receive so many letters about making Bordeaux Mixture that I want to give our soda-Bordeaux formula once more. Take a one-pound can of Lewis lye and dissolve it in water. Then dissolve three pounds sulphate of copper. It can be put in a coarse sack and hung in a bucket or barrel of water. Add five gallons of water to the lye, and 10 gallons to the copper solution. Pour them together into a barrel and add enough water to make 30 gallons. Four or five ounces of lime made into a paste may be added and well stirred in. This costs more than the lime Bordeaux but it sprays well and does effective work. In spite of all that the experiment stations have printed about the Bordeaux Mixture I find many farmers who say they have tried to make it with lime and failed. H. W. C.

Opposed to the Centralized School.

I wish to speak about the carrying of children to the center or village to school. There being so few pupils in some of the districts in our town some are transferred to other districts. One of the carriers is a little girl about 10 years old, and she has tipped over once to my knowledge, and as they have a somewhat spirited horse it is a wonder some of the children were not hurt. Another of the carriers is a man who seldom is without a smokestack in his mouth. We are very thankful our children do not have to go on any of these routes. We are thankful that we do not live in a village (just on account of our children), with its cigarette smoking crowd lounging around, teaching children to be smart, etc. But if they are going to be carried to the village to school, we would much rather live in the village than to have them carried from one to three miles twice a day, crowded in with all sorts and conditions. We believe the best place for a child's morals (and perhaps for its parents, too), is under the eye of its parents as much as possible. Superintendents of schools and some others are clamoring for a big school at the center, so that it may be graded and have better schools. Suppose Abraham Lincoln, David Livingstone and D. L. Moody had been carried to the center of town or graded school, would they have been the men they were, do you think?

New Braintree, Mass. J. T. S.

WHEEL BARROWS.



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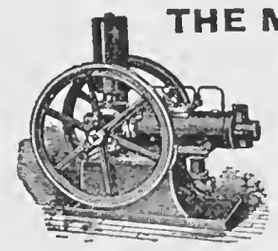

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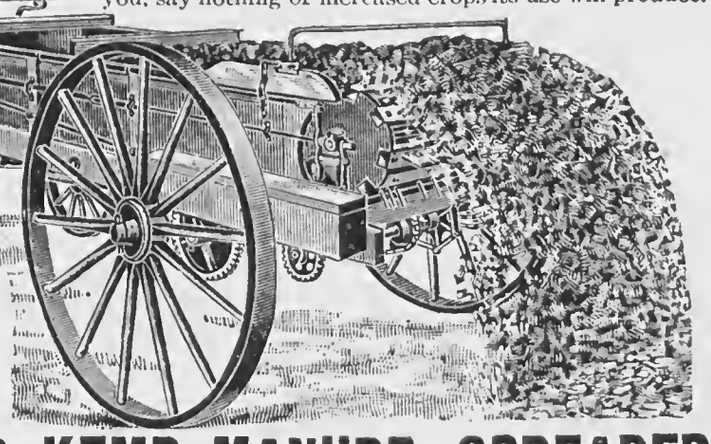
It's Almost Past Believing

the amount of time, labor and money this machine saves you, say nothing of increased crops its use will produce.



It spreads all kinds of manure, lime, salt, ashes, compost, etc., rapidly, evenly and better than it can possibly be done by hand.

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THE IMPROVED KEMP MANURE SPREADER

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The Rural New-Yorker

THE BUSINESS FARMER'S PAPER.

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Remittances may be made in money order, express order, personal check or bank draft.
THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, JULY 13, 1901.

PROF. King on page 495 gives some facts not generally known about the changes in the silo. It was supposed for a long time that these changes were much the same as those which occur when fruit is preserved by sealing it, while hot, in tight vessels. Later investigations go to show that the processes of silage are different. At any rate Prof. King makes it clear that the airtight silo means better silage.

*

THE apple crop! It is one thing to produce it and quite another to sell it at a fair figure. In order to sell it to advantage we must know what we have to sell. The Government reports are useful, in their way, but they cannot be as reliable as a collection of reports from wideawake growers who realize what it means to be accurate. One of the reasons for organizing the New York State Fruit Growers' Association was to collect just such reports. Every apple grower in the country is interested in knowing what to expect from New York. F. E. Dawley, Fayetteville, N. Y., is secretary of the Association, and he should receive thousands of reports.

*

IN seasons like the present when, on account of the lateness of planting, haying and cultivating are crowded closely together, it is the custom of some to hurry the horses constantly, and thus make them work harder than they should. When to this extra work is added the discomfort of excessively hot weather like the present, the wonder is that more horses are not killed outright in the fields. We have known some men who avoided this without neglecting their work by stopping for three or four hours in the heat of the day and making it up in the light of the full moon. Of course haying by moonlight would hardly be a success, but plowing or cultivating can be done very well.

*

A FEW years ago some of the scientific people tried to frighten us by figuring that the world's supply of nitrogen is limited, and that unless new supplies can be obtained famine must be expected. Such statements do not annoy the average citizen, whose thoughts go but little beyond the dollar which buys his food, but experimenters are still at work trying to solve the problems of a new nitrogen supply. Some of them go so far as to claim that nitrogen will yet be taken from the air in large enough quantities to cheapen the cost of fertilizing. The electric current is expected to aid in this, and we understand that results have already been obtained which show beyond a doubt that our children or grandchildren will be able to "use the air for a fertilizer sack."

*

WE are receiving a number of reports from farmers regarding the selling value of farm property. One good test of prosperity is the ease with which one's capital can be converted into cash. A farmer, let us say, has a 100-acre farm which cost $70 an acre 20 years ago. What would it sell for now, or is it salable at all? While it is quite probable that the majority of farmers in this country would not care to sell their farms for what they cost, still if farm property has depreciated in value, as is claimed, the facts should be known, for there must be some good reason for it. We know of farms that give larger returns than 15 years ago, yet the selling price is less than then, and it is almost impossible to dispose of them for agricultural purposes. In some fruit-growing locations land suitable for apples or peaches commands fair sale at increased prices. This, however, is not a fair indication of the average farm conditions. We shall be glad to have readers tell us how the selling values of their farms will compare with those of former years, and whether the income from the farm is more or less.

*

DURING the fearful heat in this city two lemonade peddlers got into trouble over a piece of ice. Each claimed the ice, and from words they fell to blows. After a long squabble in the police court the policeman agreed to divide the ice in two parts. When he came to cut it the ice had vanished. There was nothing left but a wet place on the bricks! We have before now seen the farmers quarrel over property or so-called personal rights. When the final division was made it was found that the "ice" had gone to the lawyers or other parties who sat on the fence and egged on the conflict. Why can we not learn to divide before we fight?

*

A MAN with a horse and wagon but no harness except a bridle, wished to get the whole outfit to a stable a mile and a half away as quickly as possible. He studied the situation for a minute. Like the evolutionists, the "missing link" was what bothered him; but, unlike them, he soon found a solution. Why not make a harness of himself? Jumping on the horse's back he asked a bystander to hand him the wagon thills, and with one in each hand away he went on a gallop. The scheme worked well; better, probably, than if he had had long hills to climb or had been riding a bucking broncho or runaway. After all, the men who are most esteemed are those who can fit themselves into the real needs of life without any loss of time.

*

REPORTS of the damage done to the wheat crop by the Hessian fly show that some varieties of the grain are either not badly molested by the insect or else able to resist its attacks. If there were only a single report here and there we should consider that something else must be responsible for the difference, but the reports are numerous and we conclude that there is some basis for them. We desire to hear from all wheat growers who have noticed any difference in the ability of certain varieties to resist the fly. What varieties are best and what appears to be the reason for it? Why should it not be possible to develop in a variety of wheat the habits of growth necessary to give it a good chance against the fly? If there really are such varieties the public should know about them.

*

THE Postmaster General has issued a drastic order prohibiting carriers engaged in the free rural mail delivery from engaging in any outside work, with one single exception—that of taking subscriptions for newspapers or periodicals. The Department claims that some carriers have been so active in outside work as to show lack of energy in their official duties. Some of them acted as agents for various express companies, which was detrimental to the Post Office Department, it being claimed that they induced patrons to send parcels by express, rather than mail, thereby earning a commission. Considering the fact that our parcels post system is expensive and inconvenient, and that it is generally believed that the express companies have influenced legislation to this end, complaint of their further influence upon the carriers seems a trifle amusing. Rural carriers who are among our readers complain that Uncle Sam is a very parsimonious paymaster, which accounts for their willingness to add extra work to their official duties, which seem so poorly paid.

*

THE hot weather for the past 10 days has caused dreadful suffering and serious loss. It has been worse in these respects than many a plague or epidemic of contagious disease. It is likely that nearly 1,000 persons died from the effects of the heat in New York City alone, while many more were prostrated and seriously injured. Horses died like sheep during the worst of the heat, and thousands of dollars worth of perishable property was destroyed. The farmer, with open fields and growing things about him, may find the heat uncomfortable, but his family will not suffer as do the people in the brick and stone ovens of the city. There is relief in the country at night, but in the city the brick and stone retain the heat so that those who swelter inside are denied the sleep which ought to refresh and fit them for another day. Yes, the country is the place for comfort, yet we regret to say that there are so-called farmers who fail to take advantage of these opportunities. With abundant facilities for housing ice they have no ice house. With ample land they seldom know what it is to have the table loaded with cooling fruits or agreeable vegetables. With all the possibilities for shade the house stands bare to the sun, with no cooling shades from tree or shrub about it, but an open exposure to the pitiless sun. It is not possible for people to suffer on the farms as human beings do in the city, but what a shame it is for farmers to neglect their privileges, and refuse to surround themselves with the things that make life better worth the living!

*

IT is claimed that one of the three most important scientific advances during the past 10 years is the discovery that mosquitoes spread malaria, yellow fever and other diseases. Gen. Sternberg, of the United States Army, describes in the Popular Science Monthly some of the experiments conducted in Cuba:

It is quite certain that malaria is caused by a parasite that lives in the red corpuscles of the blood, and can be transmitted only by a mosquito of a certain kind, which must bite first the patient suffering from malaria, and then the person to whom the disease is given.

As to yellow fever, seven soldiers permitted themselves to be bitten by mosquitoes which were known to have bitten yellow fever patients. Six of them contracted the disease, and one surgeon who attended them died. Other soldiers slept in the bedding and wore the clothes of yellow fever patients, but not one became diseased. These experiments and others go to show that if mosquitoes can be destroyed in large numbers the chances of contracting diseases like malaria and some other fevers would be greatly diminished. The life habits of the mosquito were described on page 417 of THE R. N.-Y. If the inhabitants of towns or communities can work together with a few simple remedies the mosquito pest can be nearly wiped out.

*

WE hear quite a little complaint from farmers about some of the bulletins issued from the experiment stations. This complaint is not confined to the class who might be called dull or ignorant, but it often comes from men who have been highly successful in farming, and who have conservatively taken up many of the new methods and scientific practices. The chief criticism these men make is that the station bulletins are not always clear and easily understood. The facts are given with scientific accuracy, but it often seems as though the author or editor had mistaken his audience. He seems to be aiming at men well trained in scientific terms or methods, and not at practical men who have little time left in a busy life to study such details. In the opinion of these men the station people fail as popular editors, yet it is a fair question as to whether it is the duty of a station director to attempt a popular bulletin. We think some of the stations have made mistakes in attempting too much "popular" work. Men who are fitted by nature for scientific research have attempted to write these results down to the comprehension of the practical men who do little true studying. We think they would have done better if they had simply issued a technical report of their experiments and left to others the task of making the information popular, in the common acceptance of the term.

*

BREVITIES.

"No man is born into the world, whose work
Is not born with him—there is always work,
And tools to work withal, for those who will—
And blest are the horny hands of toil!
The busy world shoves angrily aside
The man who stands with arms akimbo set,
Until occasion tells him what to do—
And he who waits to have his task marked out
Shall die and leave his errand unfulfilled."
—Lowell.

"THE shovel plow on the hog's nose."

THE do all purpose man is a Jack of all trades.

SOME men go around a rock—others pull it out!

OBSERVE how often the cows line up at the brook this weather.

IF lack of hay makes you forlorn—get out and plant more fodder corn.

PRETTY tough—when a farmer takes city boarders and has to buy his vegetables!

WE never saw crops quit and fall down as rapidly as they did during the recent hot period.

To knock out a man and declare him dead beat just mix the humidity up with the heat!

WE plant late peas where the early ones grew—plowing the first vines under. In this way we obtain a surer crop.

WHY do we say "cool as a cucumber?" The hottest business on the farm is picking cucumbers on a Summer afternoon.

No, we do not like to see a housewife so opposed to dirt that she will hurt herself during this hot weather, trying to scrub it all out.

OBSERVERS are likely to be deceived in estimating this year's hay crop. The grass on many old meadows is tall but very thin, and will not weigh out well.

THERE is complaint of a shortage of horses in central Kansas. So many animals have been purchased by the British government that prices have increased nearly 50 per cent.

"SICKNESS or disease is any departure from, failure in, or perversion of normal physiological action in the material constitution or functional integrity of the living organism."

MILITARISM bows before agriculture in Kansas. The annual target practice of one of the State regiments was indefinitely postponed recently because the members were so busy in the fields.

Events of the Week.

DOMESTIC.—The Wabash limited train from Boston to St. Louis was wrecked near Peru, Ind., June 26; 13 persons killed and many injured. . . . . Fire destroyed a breaker and washery of the Delaware and Hudson Coal Company at Wilkesbarre, Pa., June 26; loss $100,000. . . . . Fire at Mayfield, Ky., June 26, destroyed seven tobacco rehandling houses, a large quantity of tobacco, a cooper shop and 32 small residences and stores. Scores of persons were rendered homeless. The loss is estimated at $200,000, partially insured. . . . . The excursion steamer Mohawk struck a rock in Long Island Sound, near Glen Island, June 30, and sank within 20 minutes. There were 900 persons on board, but no lives were lost. . . . . A corner plot at Broadway and Thirty-fourth St., New York City, comprising less than half a city lot, was recently sold for $375,000. . . . . At Chicago, Ill., July 1, 11 persons were killed by lightning, which struck a pier on the Lake shore under which they had crowded for refuge from the storm. . . . . July 1, 81 persons died in New York from the heat. It was the hottest July 1 on record, the official temperature, 20 stories above the street, being 98 degrees, while the street temperature was 103 to 107 degrees. The mortality among horses was vastly greater in proportion than among men. The Bergh Society estimates that not less than 250 horses died from the heat in the city between sunrise and sunset July 1. At the New York Veterinary Hospital nine doctors were kept busily employed all day, and they treated more than 150 horses suffering from heat prostration. It was the general verdict of veterinary surgeons that more horses died July 1 in New York than on any single day since the great epizoötic ravages of many years ago. The fact is that the horses have been going through another epizoötic siege of late, a sort of horse grip, with the result that many of them were in a low physical condition when the present burst of heat came and were ill-fortified to meet it. The heat extended over the entire country east of the Mississippi. The high temperature continued July 2, when 161 deaths from heat were reported in Greater New York, and the heat increased July 3. . . . . Fire at Huntington, W. Va., July 2, destroyed hotel and other property valued at $200,000. The city water reservoirs were empty, and all the fire engines were out of repair. . . . . A large new apartment house in New York City was struck by lightning July 2 and burned down; loss $300,000.

ADMINISTRATION.—When Secretary Gage's action in imposing countervailing duties on Russian sugar exported to the United States was followed by so disproportionate reprisal as the imposition of 30 per cent increased duties on the most important American importations there, the importers of American tools and machinery seemed stunned. They were disposed to support Russia on the legal aspects, but some of them reëxamined the matter, and concluded that the Russian sugar regulations amount to practical compulsion to manufacture for export. They still doubt the expediency of Secretary Gage's action, but latterly they have concluded that if the policy was mistaken, of which, after all, Washington, knowing the complete facts and fostering American interests throughout the world, was the best judge, it does not follow that a backdown is now expedient. They claim that such a precedent would weaken American commercial and political prestige. Attention is directed to the increasing disinclination of the Russian authorities to permit the importation of any goods which the Russians can produce, no matter what they cost. This policy, more than the tariff, obstructs foreign trade. It is recalled that the government recently narrowly restricted the use of foreign goods in the Russian army and navy factories, and that the same policy is pursued wherever the government influence extends.

PHILIPPINES.—General Chaffee is preparing to push Malvar, the insurgent chief in Southern Luzon. He has ordered the transfer of the Fifth Infantry from Northern Luzon to Batangas Province. The general has been informed that Malvar's principal headquarters are in a mountain town in Northern Tayabas, whose inhabitants are contributing to Malvar's support. General Chaffee has not formulated plans for the occupation of the Island of Mindoro. General Hughes, at his request, will be permitted to continue in command of the Visayas Islands until the Samar campaign is completed. Consequently, General Davis will continue, temporarily, to be provost marshal at Manila. Four American prisoners, who escaped from Calapan, Mindoro, June 25, in a sailboat, have been recaptured. Six others are reported to be in Southern Mindoro. Bills have been passed establishing a board of health for the Philippines and providing for laboratories in connection therewith. The salary of the health commissioner will be $6,000. . . . . Three officers of the Forty-third Infantry are under investigation on charges of violations of orders by permitting trade between ports that were closed to trade. This was an offense considered grave in itself, but with it was coupled the charges of bribery and corruption. It is claimed by witnesses, both native and American, that these officers not only permitted steamers to go into prohibited waters, but in several instances went personally themselves on such trips to collect what was due them. Some witnesses charge that as high as $500 Mexican has been paid by the owners of steamers for illegal permission to go into closed ports, where a very profitable trade was driven in hemp and rice. It is asserted that the rice taken went into insurgent towns, where its value was doubled. Some steamers paid high rates for privilege of going into the rice districts and securing cargoes, which, it is claimed, were sold at high rates of profit.

GENERAL FOREIGN NEWS.—A despatch from St. Petersburg says the crops in the province of Saratoff are withering and the grass is scorched, owing to the prolonged heat and drought. The price of corn is jumping up and the outlook at Saratoff and in the neighboring Volga district is alarming. The scarcity promises to be as severe as the famine of a decade ago. . . . . Fresh reports of fighting in Manchuria and on the frontier of Chi-Li Province have been received in Tientsin. A pitched battle has been fought at Shan-Yang, in which the natives defeated the Mohammedans. Advices received in Simla from the Sikkim border say that an edict, signed by the Emperor and Empress Dowager of China, has been posted in Chinese Thibet announcing that the European Powers have been victorious in Northern China and ordering that the lives of missionaries and Christian converts be respected on pain of decapitation.

FARM AND GARDEN.—Representatives of the Japanese government have been in Chicago to inquire into the methods of American horse breeding. The members of the party are connected with the agricultural college of the Japanese government. They say horses in Japan are, as a rule, of inferior breeds, which operates as a serious handicap not only from military point of view, but from a domestic point. The superior quality of the American horse is becoming recognized the world over, the visitors say, and while they will visit England, France and Germany before their return to their native land, they are frank to admit they are of the opinion that the best horses in the world are being bred in this country.

The National Live Stock Association is testing the constitutionality of the Colorado State law which requires State inspection of live stock after a clean bill of health has been given by the Federal authorities.

The annual convention of the National Apple Shippers' Association will be held in Toronto, Canada, opening August 7.

Illinois Corn Carnival will be held at Peoria, October 7—19; Bert L. Heylman, secretary.

The Canadian Horticultural Association will hold its annual convention at London, Ont., August 5—6; secretary, A. H. Ewing, Berlin, Ont.

CROP PROSPECTS.

JULY 3.—Not much of an apple country around here; a fair bloom, but nearly all dropped off; not as many on the trees now as last year by one-half. F. C. J.
Kishwaukee, Ill.

JULY 3.—Apples less than one-fourth crop in this county. Corn very backward owing to cold wet Spring. Early potatoes less than one-half crop; late crop will be very short unless we have rain soon. Farmers commenced harvesting; wheat good, hay fair. This section is suffering for the want of rain and from excessive heat.
Espy, Pa. M. C. M'C.

JULY 4.—We haven't had any rain since early in June, and our potatoes must be badly injured. Grass fields are brown from the burning sun. Hay all secured in good condition. Corn is coming forward nicely, and will wait awhile for the rain. We commence the wheat harvest to-morrow. D. C. L.
Middlesex Co., N. J.

JULY 4.—In this part of Allegany County, N. Y., planting is just being finished. I planted corn June 4—5 that is now eight inches high. Potatoes planted in May are choked in the bricky ground. I have planted 11 acres of potatoes from June 26 to July 2; ground in ideal condition. Others are planting yet. Grass is in large quantity, but seems to have but little feeding value. I have some oats treated with formalin; (two ounces to one gallon water and sprayed on till the oats were wet and then air-dried.) Will they do to feed horses, 16 quarts a day? No apples except a few Greening and Spy.
Whitney Crossing, N. Y. J. S. B.
R. N.-Y.—The oats may be fed with safety.

Many foreign buyers are in the Kansas wheat district making contracts for exporting the grain. The French have a preference for Kansas wheat, their millers considering it superior for flouring.

J. A. Davis, a former New York produce dealer, now raising strawberries at Goldsboro, Md., expects that before the season is over he will have shipped 500,000 quarts of berries. The cost of handling this crop will be not far from $7,000.

The apple crop will be very small in this section. Wheat a fair crop; hay a good yield. I have just finished hauling clover from a nine-acre field that yielded 23 two-horse loads, over a ton to the load. Corn backward; beans looking well, large acreage planted; potatoes, small acreage planted; crop promising. W. N. R.
St. Johns, Mich.

It is reported that 20 Kansas farmers, whose grain was going to waste for lack of help in harvesting, armed themselves with revolvers and held up a train containing 200 men who were bound for the grain fields in the Far West. According to the account the men resented this original and strenuous method of solving the labor problem, and for half an hour there was a free fight. At last a compromise was made, the harvesters agreeing to stop there and work at $3.50 per day.

The present indication from the entire apple-growing belt of the United States is that the crop will be very much below the average. Reports from other States indicate that there will be a good demand for New York apples, and it is greatly to our interest to know as nearly as possible what the yield will be. We are making some efforts to secure reports about the crop in other States. F. E. DAWLEY.
Sec'y N. Y. Fruit Growers' Association.

ORLEANS CO., N. Y.—We have had a very wet Spring, and as we have nearly 50 acres of beans up it has worried us to keep ahead of the weeds, but thanks to a new weeder (Z. Breed) we are out of the woods in good shape. A heavy rain packed the ground so hard that the weeder would not break the crust, so we put two bags of dirt (75 to 100 pounds) on to make it go through, and as the beans were up well it looked rather rough to folks who saw what we were doing; but it does my heart good to see how we cleaned out the weeds. The prospects in the county are very poor for most kinds of fruit, but J. E. Ailis will have a fair crop of peaches, but no pears. Last year most of the wheat went down badly in this section, all except a new kind, Dawson's Golden Chaff, and those who sowed that kind have a fine crop; all other kinds are a complete failure. The fly has the crop in this section and most farmers have plowed or pastured or will cut the wheat for hay, as the Timothy has made a good growth. One of our best farmers said he would not get two loads of straw from 25 acres, and some are worse off for straw than that. My wheat will go 40 bushels per acre. Some pieces of beans have suffered very much from the weevil or some kind of insect or worm, and some have replanted, but my brother has 90 acres and I 46 acres and they are very good, so if nothing prevents we can have baked beans and the sheep bean fodder next Winter. CLARK ALLIS.

I have examined four wheat fields of Dawson's Golden Chaff on four different farms, and find them all comparatively free from the fly. One of these was sown early and had no fertilizer. I have four acres of Carman No. 2 that is going to give 25 bushels to the acre, if I am any judge. I have also over 20 acres of Clawson that I expect to mow and cure for the sheep. There is more Timothy than wheat. These looked equally well on April 1. I have visited another field of white wheat sown on oat stubble, fertilized very heavy for the oats, but didn't grow many, and then had about 300 pounds to the acre on the wheat. It is a fine field of wheat as it stands to-day. I would think that one-half of the crop in Seneca and Tompkins counties is ruined. T. H. K.
Tompkins Co., N. Y.

Our wet weather has gone dry with a hot wave that is killing to man and team. Many have had to put up the horses and wait for cooler weather. The ground is harder than I ever knew it before, and is cracking open. We cultivate and fume and hurry, and sow our crops over several times, and then only get a moderate stand. It makes lots of work. My sugar beets have been a trial so far. I have had them washed out, packed down and dried down, till I hardly knew what to do; have sown them all twice over, and shall put about an acre of them into cabbages. They begin to grow now. Wheat is all destroyed by Hessian fly; oats are turning red with some trouble, and raspberries are dying with the new blight. The only healthy crop just now is corn, which will be as large as usual by July 4, always counting in weeds, which are plenty. Nothing seems to ail them. If it were not for the comfort I get from reading THE R. N.-Y. and hearing from friends through it I would get awfully blue these days. C. E. C.
Tompkins Co., N. Y.

Items of Interest.

According to the irrigation expert of the Department of Agriculture, irrigation has increased the value of a tract of land in Texas, larger than all New England, from $2.50 per acre to $50; and in sections of certain Rocky Mountain States a still greater increase in valuations has been made.

It is said that several carloads of bananas were given away in Jersey City one day recently. For some reason the consignees refused to accept them, and the fruit was in such a state that it had to be disposed of at once. Word was sent to an Italian settlement near, and customers for the bananas arrived in short order. Some brought push carts and wagons, intending to lay in a stock for peddling, but the railroad men refused to give except in small quantities to those who had baskets. This free distribution ruined the business of local banana dealers for a day or two.

Fruit Crop in Oregon.

Our horticultural commissioners report very bright prospects for Oregon fruits this year. While in some sections of the State the apple crop is not so heavy as last year—on account of overbearing—in other sections the 100 mark will be reached. In the aggregate the apple crop will be large, say 90 per cent, and of fine quality, as our fruit growers are up-to-date, giving thorough cultivation and eternal war upon fungus and insect pests. The Italian prune is grown extensively in Oregon, and this year our prospects are for a record breaker. There is no doubt but what thousands of tons will go to waste, for want of drier capacity to handle them. Pears will make 75 per cent of a crop. Peaches in eastern Oregon will make heavy crop; in southern Oregon 75 per cent, and in western Oregon 50 per cent. Cherries promised a heavy crop, but the continued cold rainy unseasonable weather is causing a heavy drop. Strawberries and all small fruits are a full average crop. Grapes, in sections where grown, will make 100. GEO. H. LAMBERSON.
Sec. Oregon State Board of Horticulture.

Crop and Weather Report.

All sections east of the Rocky Mountains have been suffering from intense heat, which has been partly relieved by local showers. Crops thus far have not been seriously damaged. Nebraska corn was in a critical state, but a heavy rain came just in time to save it. In the Ohio Valley and central Gulf States corn leaves are rolling badly, and heat and rust damage are reported to oats in the north. On the Pacific coast and the plateau east to the Rockies the weather has been abnormally cool, with light frosts in parts of Idaho and Utah. Small grain has ripened rapidly, the wheat harvest being about completed in Kansas and Missouri. Spring wheat in the Dakotas is heading out. Thrashing is in progress in southern Illinois and Indiana. Chinch bugs are active in the northern parts of those States. Cotton conditions are not promising. Cultivation in the eastern Gulf States was delayed by the early rains, and in a large part of Texas the plant is in need of rain. In central Minnesota heavy winds and floods have damaged crops. The apple prospect continues to decrease. Reports from several important apple States are less promising than a week ago.

NEW HAMPSHIRE NOTES.—There has been a decided improvement in crop conditions in this section of the Granite State during the past two weeks. Cloudless and windless days up to June 22, with temperature about 70 degrees. On June 22 and 23 heavy showers came just right; will be an increase in yield of hay in consequence. Early sorts of potatoes in full bloom June 29, and never looked better. Those who planted higher ground seem to have hit the mark. All agree that both early and late crops will bring top-notch prices. Corn is making phenomenal growth. Haying already begun, but grass is yet very green. We have experienced an unprecedented hot wave here this week, and it has been a dangerous experiment to work out in fields during middle of day. Great for crops, as soil is moist. Mercury has registered from 90 to 102 degrees in shade for four days. Heavy showers with wind of tornado variety did great damage to crops in some parts of Strafford County June 29. Good prospects for grapes, raspberries, strawberries and all garden crops. D. L. P.
Dover Point, N. H.

Woman and Home

From Day to Day.

A DREAM OF LUXURY.

If I had a mlillon dollars I would surely take my ease.
I would go where'er I llsted and I'd wear whate'er I please.
I wouldn't wear stiff-bosomed shlrts nor collars strong and high,
Intended greatly to impress the easual passer-by;
I wouldn't wear my well-made coat nor patent leather shoes,
I'd change the style of hat that I habitually use;
These stern decrees of custom whieh so hold me in their power—
If I had a milllon dollars I'd diseard them in an hour.

I'd get myself a pair of shoes a long ways off from small,
And if I found some eool plowed ground, why, I'd wear none at all.
I'd wear a great big hat of straw wlth overhanging brlm,
And look just llke the hired man, while a-swopping yarns wlth hlm.
I'd only have one gallus, and I'd wear a gingham shirt,
And I'd keep away from town, so's no one's feelings would be hurt.
And I'd make long trips to Nowhere, underneath tho rustling trees—
If I had a mlllion dollars I would surely take my ease.

—Washington Star.

*

KHAKI, which had a great vogue for Summer outing dresses two years ago, is now being utilized for cushion covers for outdoor usage. It is cool, weatherproof, and does not soil like delicate chintzes and llnens.

*

A LITTLE convenience we saw recently for the first time was a washboard small enough to use in an ordinary pail. It looked at first sight as though it belonged to a juvenile laundry, but was deep enough to stand in the pail, and only about six inches wide. It is really a very great convenience in washing out a piece or two, too small to demand a regular washtub.

*

NEVER throw mllky water down a sink without following it with a flushing of soda. The milk is especially likely to clog the pipe. Lime water is also excellent for flushing sink pipes. After washing sandy vegetables pour off the dirty water, so that the sand may be caught and removed, not thrown down the sink, for grit cuts and wears the plpes. In scouring faucets, care should be taken to keep the scouring grit out of the joints, as it cuts away the screw threads.

*

THE Chicago Record-Herald tells this of a small girl who appeared to think that phonetic affinity in names must imply kinship. Katie, the romping six-year-old, came dancing and singing into the parlor. Then, seeing a strange caller, she stopped, abashed.

"This is my little daughter," said her mother. "Katie, thls is Mrs. Baggs."

"How do you do, Mrs. Baggs?" said Katie, anxious to remove any unfavorable lmpression the visitor might have formed. "I know a little girl at school named Saxe. Is she any relation of yours?"

*

IT is noticeable that the baby clothes now offered by the best stores do not show the senseless elaboration of trimming or make common a few years ago. Rows of tucks or hemstitching—perhaps only a deep hem—finish the long robe, instead of an embroidered flounce; yokes and sleeves are plain, and the daintiness of the robe depends upon fine hand work rather than laces and embroideries. The same is true of petticoats, wrappers and cloaks. Certainly no fashion could be more senseless than that of elaborate baby clothes, with scratchy frills and heavy folds to torment the young flesh. Ruffles put on in bertha style form the finish around the yoke or guimpe. Ribbon sashes are never put on young babies, but sometimes a sash of nainsook or lawn star's from rows of shirring in the front of the robe, tying at the back. It is far better to omit such a sash, however.

*

A READER asks us what material to use to clean brass. If lacquered, brass articles should be well washed with warm soapsuds, carefully wiped with a dry

3850 Girl's Costume, 4 to 12 Years.

cloth and then put before the fire or in the sun to dry perfectly. If not lacquered, oxalic acid or polishing paste may be used. The acid (whlch is very poisonous) is excellent for cleaning brass that is badly stained; it should be applied with a brush, and the article well scrubbed, then washed, and polished, with a dry flannel. Salt and strong vinegar is our usual material for cleaning brass preserving kettles; the brass should be well washed and thoroughly dried afterwards. Rotten-stone made into a paste with kerosene or lard oil is excellent; this is used by engineers to keep the brass portions of their machinery bright. It should be well rubbed on with a flannel cloth or brush, until the metal has taken a fine polish; then washed off wlth strong soapsuds, and the surface wiped dry and polished wlth dry flannel or chamois.

*

AN Inquirer asks how to launder wash-silk waists. Wash in hot water with white soap or soap jelly; rinse with a little salt or vinegar in the last water, and iron with a rather cool iron. Soap jelly is made by shredding little pieces of white soap into hot water, and dissolving them. Pour enough of the jelly into the water to make a good lather. Dry wash-silk walsts (and indeed, any fabric of delicate color) in the shade. A good wash silk seems to wear for ever, and is extremely cool; after washing, however, it never has the crispness of cotton or linen, and does not usually fit as well. It cannot be lined without spoiling its character as a wash waist, and without the lining it becomes rather "slimpsy." The most serviceable of all washing silks is tussah, which has long been a favorite in England for Summer gowns, dust cloaks and shirt waists, and is now gaining popularity in this country. It is made in China and Bengal from the cocoon of a caterpillar distinct from the regular silkworm, and is brown or khaki color. Rather stiff at first, it loses this wlth frequent washings, continuing to become softer and silkier, and wears perpetually.

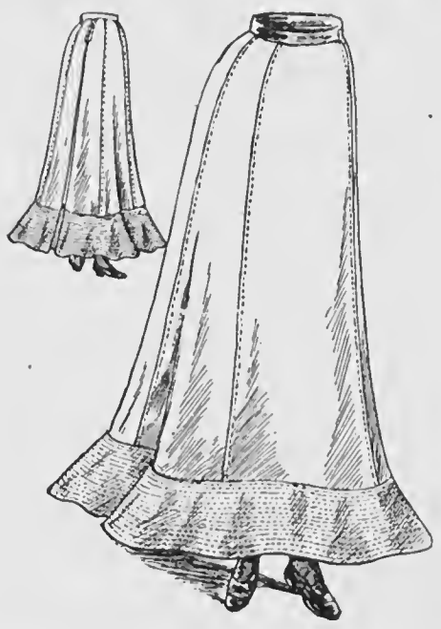
The Rural Patterns.

The girl's frock shown is of the simple style, belted at the waist, now so popular, and is admirably suited to piqué, linen, chambray and tne like, as well as to lightweight cloths and cheviots. The back is adjusted by means of the box pleats, but the blouse fronts are separate and seamed to the gored skirt under the curved belt. At the neck is a round collar of the material overlaid by one of lace, but otherwise the dress is quite plain, the edges and shield being simply stitched or trimmed with rows of narrow braid. To cut this costume for a girl eight years of age, four yards of material 32 inches wide, or 3¼ yards 44 inches wide, will be required, with ⅝ yard of all-over lace for collar, and ½ yard of tucking for shield. The pattern 3850 is cut in sizes for girls 4, 6, 8, 10 and 12 years of age; price 10 cents.

The short skirt figured is a very economical one to cut, and may be made with or without the flounce, as desired. The original is of homespun in soft mixed grays, but cheviot, serge and canvas cloth are equally suitable as well as pique, linen and duck. The skirt is cut in seven gores and fits smoothly at the upper portion, while it flares about the feet. The flounce is circular and can be seamed to the edge, the material belng cut away beneath, or applied over the full length skirt as preferred. To cut this skirt for a woman of medium size, eight yards of material 32 inches wide, 5½ yards 44 inches wide, or 5¼ yards 50 inches wide, will be required for full length skirt with flounce, 5¾ yards 32 inches wide, 3¾ yards 44 lnches wide, or 3½ yards 50 inches wide, when skirt is made plain. The pattern 3852 is cut in sizes for a 22, 24, 26, 28, 30 and 32 inches waist measure; price 10 cents.

A Successful Failure.

It was one day last Summer, wash day, too, for I remember so distinctly



3852 Seven-Gored Walking Skirt, 22 to 32 Waist

how dolefully long the morning had seemed, and how I even ate my dinner hastily, that I might the sooner go upstairs and take a good long rest. Mamma was away, and when dinner was nearly over, Mabel said to Papa:

"Is the corn down in the patch ready to use?"

"Yes," came the reply. "Do you want some?"

"Why, yes," said Mabel, "I think we'll try canning some this afternoon." I opened my mouth to speak, but closed it with only a sigh, but to one accustomed to read sighs that would have expressed volumes. Visions of my little bed upstairs came up before my eyes, and I was sure I had that morning discovered at least 13 new muscles whose only known use was to ache. How that corn would have suffered by standing until morning I couldn't see, but Mabel was "sot." We got down Dr. Chase's book, and found his recipe for canning corn. His recipes are always so good that we followed it without hesitation. Here it is:

"Cut the raw corn off the cob and fill your cans (after thoroughly scalding them), with the corn. Take a spoon and press very hard so as to fill the can full; put on the cover loosely. Put the cans into a wash boiler, after putting something under them to keep them from breaking, like the grate from the oven. Fill in cold water up to the bulge of the can, put on the boiler, cover and boil four hours. Take off the stove and let stand until cool enough to handle; fasten the covers tight and set in a cool place in the cellar. Take the corn when it is just right for the table."

"Four hours," I murmured, "why, Mabel, we won't be through till midnight!" Mabel smiled again, one of her calm reassuring smiles, and replied:

"Oh, yes, dear, we will get it all ready to cook by three, and then it will be off by seven, and that's not so very late."

Papa brought in the corn and we husked and cut and scraped and scraped and cut and husked, until it grew most painfully monotonous, especially as by three o'clock we could scarcely see the end of husking, and we didn't get that corn on to cook until 'way after four! We had some factory tin cans, and used them. The lids have little holes in them and are soldered on before the cooking commenced. The holes were left open for steam to pass out. We packed the corn in just as tight as ever we could, leaving very little room for expansion, but we went according to directions. I've often wondered since whether Chase calculated on that expansion or not. If any other reader of THE R. N.-Y. ever tried the same I wish she would tell about it.

Well, something after seven o'clock we assembled in the kitchen to wait, and were dreaming of the corn of coming days, when pop—hiss—bang—clatter—clutter—spluch! The boiler lid was lifted clear off somewhere, the stove was a sight, the floor recarpeted lmpromptu, the pipes and pump scarcely recognizable, and Mabel's bonnet was

ARMSTRONG & McKELVY Pittsburgh.
BEYMER-BAUMAN Pittsburgh.
DAVIS-CHAMBERS Pittsburgh.
FAHNESTOCK Pittsburgh.
ANCHOR, ECKSTEIN } Cincinnatl.
ATLANTIC, BRADLEY, BROOKLYN, JEWETT, ULSTER, UNION } New York.
SOUTHERN, SHIPMAN } Chicago.
COLLIER, MISSOURI, RED SEAL, SOUTHERN } St. Louis.
JOHN T. LEWIS & BROS CO Philadelphia.
MORLEY Cleveland.
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patched with a material entirely foreign to that of which it was originally composed. Mabel was surprised, and papa was vexed, I was flustered and two cans of corn were burst. We waited for no further catastrophe, but removed the corn immediately. Papa soldered the holes in the lids, to the best of his ability, but not saying anything against his ability, the next morn there were five lids we could easily stick pins through. There were two cans left, and with what pride we exhibited them as the grand result of our labor!

When worried or blue, I used to go to the pantry, and as I looked at those two cans of corn I would say to myself: "My dear, be not cast down, see what thou hast accomplished even in the hour of vexation and discouragement." And then I would feel better. Proudly we led Mamma to see them, and all she could say was "Why, girls!" Mabel seemed to comprehend her instantly, but I pondered over her words for some time, and wondered whether it was only strong emotion, or if there could have been a tinge of reproach in her tones.

One day a week or two after that, I was ironing near the pantry door, when my attention was attracted by a peculiar sound emanating from thence. Curiously seeking its cause, I peeped inside the door, but quickly turned back feeling pale. "Oh, Mabel," I moaned. "Why, my dear, what is the matter?" I didn't answer, but groaned, pointed to the pantry and staggered toward a chair Mabel would never have admitted it, but I know she must have had frightful visions of snakes and spiders and crowds of creeping things—but she saw only corn—that's all—there were some other things there above and behind and under the corn, but over the floor and wall and shelf, over crock and kettle, and pitcher and pan, there was a slimy coat of corn.

Mabel said she would clean it up if I would wash the milk cans. Bless her dear heart, she was fearfully exasperating in her calmness sometimes, but so sweet and good at others. I despised to wash milk cans, but it was pleasure unspeakable compared with working with that vile stuff in the pantry. We have one can left from the nine. It stands to-day a monument in loving remembrance of its vanished brothers and of our departed glory, and we cherish it as dearly as if it were our one ewe lamb.

E. F. H.

Don't Worry.

It is amazing how much trouble a human heart can hold without exploding, says the Chicago Record-Herald. It is even more amazing how many imaginary grievances some misguided mortals can conjure out of their own thoughts. Wait until you have a real grief. Wait until you have a trouble so deep and terrible that you can't shed a tear to save your life. Then you'll wonder why you ever wept your nose red because the collar of your Spring coat had a pair of crow's-feet in its seams. You'll be amazed at your own foolishness for worrying over wall paper that didn't match the green rug. It will set you thinking hard when your mind wanders back to the day when you thought you wanted to die because you had a blister on your heel and a long tear in your new swiss gown.

The world is much the sort of a place that you make it yourself. If you haven't any troubles, for heaven's sake do not put on your Sunday hat and rush out to seek them. What if the oven of the gas stove is broken? You can eat bread if you can't have toast. What does it matter if your shirt waist sleeves are just a bit too short? That's nothing. Anyhow, not enough to make yourself miserable and sick about. If you have nothing more to worry you than the simple mistakes and mixed-up events of ordinary existence, get down on your knees and thank God from the depths of your heart. You are in luck. You are in great good luck. You should be shouting anthems of joy and thanksgiving.

There are few individuals in this sad, beautiful old world who, one time or another, do not feel the heart-illness of a crushing sorrow. It seems as if these painful experiences were necessary to make us realize that the privilege of being alive is a tremendous one, and one which should not be overlooked. When your dose comes, take it like a man, put on the boldest front you can—and hope.

There is a woman who lives not a million miles away from Chicago who has everything on earth that a sane woman should or could want. But, bless your heart, she stays awake nights so as not to get behind with all the fretting she has on file. If she has to make a pretty petticoat for the baby she has all sorts of mental spasms because she paid a little too much for the embroidery. If the cook lets the bacon get a bit too crisp tnat woman is in acute despair. When the rain beats down and the cellar looks like a tidal wave let loose she shrieks all sorts of shrill high notes from low A to high C, and then takes to her bed with an ice pack on her head. When a burglar picks at the basement door and walks away with a bag of clothespins and the clothes-wringer, she acts as if the entire family had been seized with the smallpox.

Poor lady! She doesn't know how lucky she is to have the bacon too crisp or the basement of the house a bit too moist. And she doesn't know how much precious time she is wasting in fretting over trivial matters which are so unavoidable and which, compared with real troubles, amount to nothing at all. The trouble with this particular type of femininity is that she burdens everyone she meets with her long, doleful recitals of tear-compelling trials. One wants to run around the block at the first glimpse of the bobbing aigrette on her hat.

Rural Recipes.

"Good Lord, in every time and place
Give meat enough for saying grace;
But if no meat Thou art bestowing,
Give bread enough to keep us going!"
—Atlanta Constitution.

Rhubarb Jelly.—This is best made when the rhubarb is well grown, towards the end of the rhubarb season. Wash the stalks, but do not peel, as the pink skin gives an attractive tint to the jelly. Cut the stalks into medium-sized bits, never mind stringing them, and to each pound of fruit allow a cupful of water. Stew gently until a perfect pulp. Strain through a cheesecloth bag, and to each pint of juice allow a pound of granulated sugar. Let the juice boil for about 20 minutes, add the sugar, and stir until the sugar is quite dissolved. When the syrup is thick turn into glasses and cover when cold. You have here a very agreeable, pretty jelly, its pale pink tone being unusual and an ornament to any table.

Peach Cake.—Make a good, rich baking powder biscuit dough and roll out until not more than half an inch thick. Place in long biscuit pans; brush well with butter and cover the entire top of each cake with sliced peaches, arranged in symmetrical rows. Sprinkle generously with granulated sugar, cover the pan with a tin baking sheet or another biscuit pan and bake for 25 or 30 minutes. The idea is to cook the fruit thoroughly without reducing it to a pulp or drying it up, and to retain the shape. If peaches are well ripened they may be cut into halves and placed with rounded side up.

Apple Cake.—Measure two cupfuls of sifted flour, add two teaspoonfuls of baking powder and half a teaspoonful of salt and sift again into a mixing bowl; make a well in the center; beat whites of two and yolk of one egg until light, add grated rind of a lemon, one tablespoonful of melted butter and a cupful of milk; mix this gradually into the flour until you have a thick batter or very soft dough. Spread this on shallow, well-buttered tins, having batter not more than half an inch thick. Pare and cut into eighths enough large, tart apples to cover the top of the cakes by laying the pieces close together in rows, pressing the sharp edges into the dough; brush well with softened but not melted butter, sprinkle thickly with granulated sugar and bake in a hot oven. When done dust with powdered sugar and cinnamon.

Pineapple Cake.—For the cake part, beat three eggs without separating until very light and foamy. Add 1½ cupful of sugar and juice of a half a lemon and beat again until it is a foamy mass. Then beat in a scant cupful of cold water (not ice-cold) measure two cupfuls of sifted flour, add two teaspoonfuls of baking powder and sift again. Add this to the cake mixture and beat until the batter is very smooth. Spread the batter in two layer cake tins and bake in a rather slow oven for at least 25 minutes. It must be thoroughly done but not baked too dry. For the filling, select a very ripe sugar-loaf pineapple, pare and remove eyes and core, chop as fine as possible and then pound to a paste; add sugar enough to sweeten the pineapple to taste and spread between the layers quarter of an inch thick; or cook the pineapple and sugar together until you have a thick marmalade; this will prevent the juices from running away from the pulp while the meringue is baking. When the cake is put together, cover it with a meringue made by beating the whites of three eggs to a stiff froth and adding three tablespoonfuls of powdered sugar and a tablespoonful of lemon juice. Bake the meringue very slowly in the oven for 10 minutes; if it cooks too fast it will be spoiled.

Bacon with Cream Gravy.—Cut the bacon into the thinnest of slices and soak in milk for 10 or 15 minutes. Grease a hot frying pan with a little of the fat, dip the slices of bacon into flour, and fry brown, laying them on brown paper to drain. Pour out the fat into the pan, and put in the milk the bacon was soaked in. Mix a tablespoonful of flour with a little cold milk and add when the milk is at the boiling point. Stir well, let it boil up once and pour over the bacon.

String Beans.—This is the way Mrs. Lincoln cooks string or wax beans: One quart of beans. If not fresh picked, put them in cold water to make firm and crisp. Remove the strings and cut in thin slanting slices. Put again in cold water; do not prepare them more than half an hour before needed. Allow one heaped tablespoonful of butter, one-fourth teaspoonful of pepper, one-fourth teaspoonful of nutmeg and one level teaspoonful of salt. Do not be afraid to use the nutmeg. It may seem out of place with beans. You will not recognize it as nutmeg, and yet you will miss something delicate and delicious if you do not use it. Put the butter, salt, pepper and nutmeg in a broad granite stewpan with tight cover. When the butter is melted, take the beans from the water in handfuls with only the water which clings to them, and put them into the butter. Use no more water. Cover tightly. As soon as they become hot set them where they will cook very slowly, yet there must be heat enough to make steam. The butter and liquid drawn from the beans make sufficient moisture to steam them, and they will be perfectly tender if they cook slowly and be of finer and entirely different flavor than when deluged with water. Stir from the bottom occasionally that all may have the seasoning. So long as there is liquid enough to cover the bottom they are safe. If they cook too rapidly and are dry, you may add two or three tablespoonfuls of hot water. When done they should be quite dry, except for the coating of butter. Send at once to table. Small fresh picked beans will cook tender in 30 to 50 minutes; if they have stood over night it requires an hour longer. It will do no harm to let them stand on back of range if they are tender before you are ready for them.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

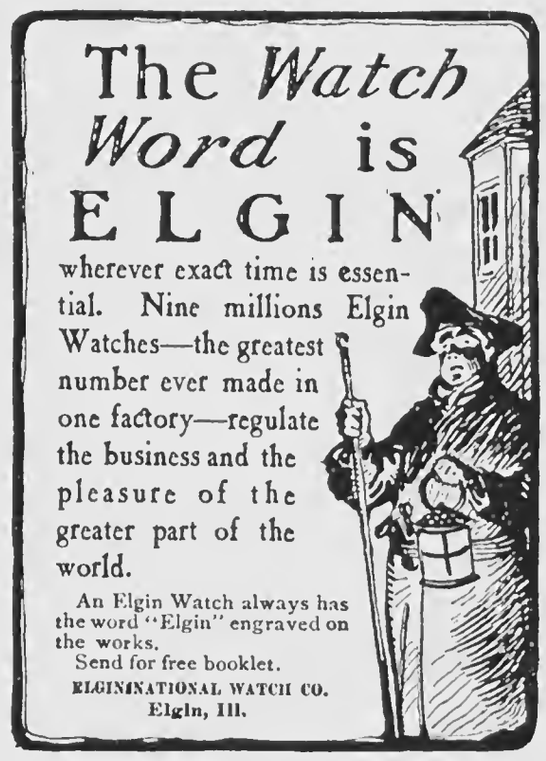
Seasonable Recipes.

Canned Strawberries.—To can strawberries so that they will keep their shape and color, after the berries are picked over, put them in a jar, with a layer of sugar and then of berries until all are used. Set them in the cellar over night, and the sugar will penetrate them, and no water must be added; there will be sufficient juice. Have a sugar syrup on the stove hot, put the strawberries in and let them boil up gently; then fill cans with the fruit and juice all cooked together. Screw on the cover, stand the can upside down a few minutes, then turn again, changing it in this way until it is cool, and the berries will not rise to the top. This way preserves the shape, color, and flavor of the fruit.

Or-Ra-Cur.—Five pounds of currants, five pounds of sugar, juice and grated rind of three oranges, one pound chopped raisins. Boil 20 minutes, and put in cans.

Chopped Cucumber Pickles.—12 large cucumbers, six onions, one-half cupful salt, one-half cupful white mustard seed, one teaspoonful pepper, a little cayenne. Chop fine, cover with sharp vinegar; can or cover tightly without cooking. It is ready at once, and is very fine.

AUNT RACHEL.



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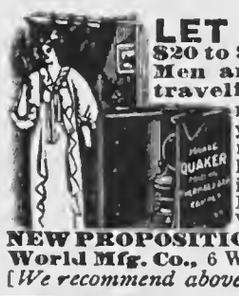

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MARKETS

The Week's Quotations.

WHOLESALE PRICES.

NEW YORK, JULY 6, 1901.

GRAIN.—Heavy export trade in wheat is reported for shipment from Gulf points. Corn trade is active all around. Drought damage in the West forced prices up a little, but conditions are more favorable now.

Wheat, No. 2, red, spot	—	@	74¾
No. 1, Northern Duluth	—	@	74½
No. 1, Northern New York	—	@	74¾
Corn, No. 2, mixed	—	@	49½
Oats, No. 2, white	—	@	33¼
Rye, No. 2, W'n, c. i. f., Buf	—	@	50
Barley, feeding	—	@	48
Malting, new crop	58	@	62

BEANS.

Marrow, choice, per bu	2 50	@	2 55
Fair to good	2 20	@	2 45
Pea, bbls., choice	2 10	@	2 12½
Red kidney, choice	—	@	2 30
White kidney, choice	2 10	@	2 20

FEED.

Spring bran, coarse	15 50	@	16 00
Winter bran	16 00	@	17 50
Red Dog	18 00	@	18 50
No grade flour	—	@	20 00
Linseed meal, ton	—	@	26 50
Cottonseed meal, ton	—	@	22 00

HAY AND STRAW.

Hay, No. 1	80	@	82½
No. 2	72½	@	75
No. 3	70	@	72½
Clover	55	@	60
Clover, mixed	65	@	70
Straw, rye, long	95	@	1 00

SEEDS.

Clover, per lb	9½	@	10½
Timothy, per bu	1 90	@	2 50
Flaxseed, whole, per bu	6 50	@	7 00
Millet, per lb	2	@	2⅛
Rape, German, per lb	3¼	@	3½
Sunflower, per lb	2¼	@	2½

MILK.

New York Exchange price at stations $1.11 per 40-quart can. This is the gross price, and from it must be taken cost of transportation and fees at receiving stations where such charges are made.

BUTTER.—The Summer holidays have caused a decided drop in the local demand, and there is some accumulation of grades just under firsts. A good many receipts have come in very soft, and have had to be stored in freezers before offering for sale.

Creamery, extra, per lb	—	@	19½
Firsts	18½	@	19
Seconds	17	@	18
Lower grades	15	@	16
State dairy, tubs, fancy	—	@	18½
Tubs, firsts	17½	@	18
Tubs, seconds	16	@	17
Tubs, thirds	14	@	15
Tins, etc	14	@	17½
W'n imitation creamery, fancy	16	@	17
Firsts	15	@	15½
Lower grades	14	@	14½
Western factory, fancy	15¼	@	15½
Firsts	14¾	@	15
Fair to prime	14	@	14½
Lower grades	13	@	13½
Renovated butter, fancy	16½	@	17
Common to choice	13½	@	16
Packing stock	13	@	14½

CHEESE.—The market is in bad shape owing to hot-weather damage received by stock in transit.

NEW.

Full cream, white, small, fcy	—	@	9
Colored, small, fancy	—	@	9
Small, fair to choice	8½	@	8¾
White, large, fancy	8⅞	@	9
White, large, fair to choice	8½	@	8¾
Colored, large, fancy	8⅞	@	9
Colored, large, fair to choice	8½	@	8¾
Common	7	@	8
Light skims, small, choice	7¾	@	8
Large, choice	7¼	@	7½
Part skims, prime	5½	@	6
Fair to good	4½	@	5
Common	3	@	4
Full skims	2	@	2½

EGGS.—Trade is demoralized owing to the effect of the heat which is seen in many packages of fancy marks. Dealers are anxious to sell and shaky about holding their stock.

QUOTATIONS, LOSS OFF.

State & Pa., avge. prime, doz	15½	@	—
Mich., N. Ohio and N. Indiana, regular packings	—	@	15
Other W'n, Northerly sect'ns, regular packings	14½	@	15

QUOTATIONS AT MARK.

Nearby, State & Pa., fresh-gath'rd, fancy, selected, dz.	—	@	15½
Nearby, State & Pa., fresh-gathered, average prime	14	@	14½
W'n, N'ly sections, candled, selected, fancy	13½	@	14½
Reg. packings, N'th'n sect'ns	10½	@	12½
Graded, Southerly sections	11	@	11½
Regular packings, S'ly sec's	10	@	10½
Very inferior, per case	2 40	@	2 50
W'n, fresh-gathered, dirtles	8	@	10
Checks	7½	@	8½
Inferior culls, per case	1 50	@	2 10

LIVE STOCK.

Steers	4 85	@	5 85
Bulls	2 75	@	4 10
Cows	2 00	@	3 00
Veals	3 50	@	5 50
Buttermilks	2 50	@	3 00
Sheep	2 50	@	3 00
Lambs	5 00	@	6 00

COUNTRY-DRESSED MEATS.

Calves, veal, prime, per lb	7½	@	8
Fair to good, per lb	6	@	7
Common to medium, per lb	4	@	5

LIVE POULTRY.—Prime large chickens selling well. Small Southern lower. Roosters and pigeons dull.

Spring chickens, 4-lb. avge. to pair, per lb	—	@	18
Under 4-lb. avge. to pair, lb	14	@	15
Fowls, per lb	—	@	11
Roosters, per lb	—	@	6½
Turkeys, per lb	—	@	8
Ducks, avge. W'n, per pair	70	@	75
Average Southern, per pair	50	@	55
Geese, avge. W'n, per pair	1 00	@	1 12
Average Southern, per pair	90	@	1 00
Pigeons, per pair	15	@	20

DRESSED POULTRY.—Trade weak and market unsettled. In common with most produce fresh arrivals are more or less out of condition owing to heat.

FRESH PACKED—ICED.

Turkeys, W'n hens, small	7	@	8½
Western, toms	—	@	7
Broilers, Phila., over 4 lbs. to pair, per lb	25	@	26
Phila., mixed sizes, per lb	22	@	23
Penn., fair to good, per lb	20	@	22
Western, dry-picked, per lb	18	@	20
Western, scalded, per lb	16	@	17
Small, dry-picked or scalded, per lb	12	@	14
Fowls, W'n, dry-picked, prime	—	@	9½
Western, scalded, prime	—	@	9½
Western, poor to good	6	@	9
Southwestern, prime	9	@	9½
Old roosters, per lb	—	@	5½
Ducks, Spring, L. I., and other nearby, per lb	—	@	12
Western	7	@	9
Geese, Spring, Eastern	—	@	20
Squabs, choice, large, dark	—	@	2 25
Mixed, per doz	1 75	@	2 00
Dark, per doz	1 25	@	1 50
Culls, per doz	50	@	1 00

FROZEN.

Turkeys, young hens, No. 1	11	@	11½
Mixed young hens and toms, No. 1	10½	@	11
Young toms, No. 1	—	@	10½
No. 2	7	@	9
Broilers, dry-picked, fancy	18	@	20
Scalded, fancy	—	@	14
Chickens, fancy, soft-meated	12	@	13
Average, No. 1	—	@	10
No. 2	7	@	9
Fowls, dry-picked, No. 1	—	@	9½
Capons, fancy, large	15	@	16
Medium sizes	13	@	14
Ducks, fancy	12	@	12½
Geese, fancy	9½	@	10

DRIED FRUITS.

Apples, evaporated, fancy, lb	7½	@	7¾
Evaporated, choice, per lb	7	@	7¼
Evaporated, prime, per lb	—	@	6¾
Evap'rated, com. to good, lb.	4½	@	6
Sun-dried, State & Western, qrs., per lb	3¼	@	4½
Sun-dried, S'w'n, coarse cut	3	@	4
Sun-dried, S'n, coarse cut	3	@	3½
Chops, per 100 lbs	1 00	@	1 85
Cores and skins, per 100 lbs	60	@	1 40
Raspberries, evap'r't'd, 1900, lb.	—	@	20
Blackberries, 1900, per lb	5½	@	5¾
Cherries, 1900, per lb	12	@	13

FRESH FRUITS.

Pears, Le Conte, S'n, bbl	5 00	@	6 00
Peaches, Fla., per carrier	1 25	@	1 75
Georgia, per carrier	75	@	2 25
S. Carolina, per carrier	75	@	2 00
Plums, Ga., Botan, carrier	75	@	1 00
Cherries, black, common to good, 8-lb. basket	25	@	40
Black, fancy, large, per lb.	6	@	7
White, common to good, 8-lb. basket	20	@	35
Wh. & red, f'cy, large, lb.	5	@	6
Small, or soft, sweet, lb	2	@	4
Small, sweet, 8-lb. bskt	10	@	20
Sour, per 8-lb. basket	20	@	30
Currants, fancy, per qt	—	@	5
Poor to fair, per qt	3	@	4
Strawberries, up-river, qt	8	@	12
Hilton & Irv'ton, N. J., qt.	8	@	10
Staten Island, per qt	8	@	10
W'n N. Y., Atlantic, qt	8	@	12
W'n N. Y., other kinds, qt.	6	@	9
Huckleber's, N. C., blue, qt.	9	@	12
N. C., ordinary, per qt	6	@	8
Maryland, black, per qt	7	@	8
Jersey, per qt	8	@	12
Pa. Mountain, per qt	10	@	14
Raspberries, Md. & Del., red, per pint	6	@	9
Jersey, red, per pint	6	@	9
Up-river, red, per pint	8	@	10
Md. & Del., black cap, pt.	2	@	5
Jersey, black cap, pint	3	@	5
Blackberries, N. C., per qt	4	@	6
Md., cultivated, large, qt	8	@	12
Md., Harvest, per qt	8	@	9
Gooseberries, small, green, per quart	2	@	3
Medium, green, per qt	—	@	4
Watermelons, Fla., per 100	35 00	@	50 00
Per carload	400 00	@	500 00
Muskmelons, Fla., fancy, per bushel package	1 50	@	2 00
Poor to fair	75	@	1 25

VEGETABLES.

Potatoes, S'th'n Rose, ex., bbl	2 12	@	2 25
S'th'n, Rose, fair to prime	1 75	@	2 00
Southern, Chili, white, fair to prime	1 75	@	2 00
S'th'n, Chili, red, fair to pme	1 50	@	1 75
Southern, No. 2, per bbl	75	@	1 25
State & W'n, bulk, 180 lbs	1 00	@	1 25
State, per sack	1 00	@	1 25
Asparagus, Colossal, doz. bchs	3 50	@	5 00
Extra large, green, per doz	2 50	@	3 00
Extra prime, white	2 50	@	3 00
Prime, white and green	1 75	@	2 25
Poor to fair, per doz	75	@	1 50
Culls, per doz. bchs	—	@	75
Beets, Balt., per 100 bchs	—	@	1 00
Jersey & L. I., per 100 bchs	1 25	@	1 50
Carrots, L. I., 100 small bchs	—	@	1 00
Corn, N. C., per 100	50	@	1 75
Jersey, per 100	1 75	@	2 00
Cabbages, Baltimore, per bbl	—	@	1 00
L. I., per 100	2 50	@	3 00
L. I., per bbl	—	@	90
Cauliflowers, ncarby, per bbl	1 00	@	1 50
Cucumbers, Ch'n, per bskt	30	@	50
N. C., per crate	40	@	60
Norfolk, per bushel basket	50	@	75
Southern, per bbl	1 00	@	2 25
Eggplant, Fla., per box	1 50	@	2 00
Green peas, L. I., per bag	75	@	1 00
Western N. Y., per bag	50	@	1 00
Onions, New Orleans, per bbl	—	@	2 75
New Orleans, per bag	—	@	1 25
Md. & Del., Potato, bskt	1 00	@	1 12
Eastern shore, Potato, bskt	75	@	1 00
Eastern shore, white, bskt	75	@	1 00
Jersey, white, per bskt	75	@	1 25
Kentucky, per bbl	2 00	@	2 25
Peppers, Jersey, per crate	1 50	@	2 50
Southern, per carrier	1 50	@	2 00
Squash, S'th'n, yellow, bbl	75	@	1 00
Southern, white, per bbl	50	@	1 00
Southern, Marrow, per bbl	1 00	@	1 50
String beans, L. I., per bag	—	@	1 50
Jersey, wax, per basket	60	@	75
Maryland, wax, per basket	50	@	75
Baltimore, per basket	50	@	65
Norfolk, green, per basket	40	@	60
Norfolk, wax, per basket	30	@	50
Spinach, L. I., per bbl	—	@	1 00
Turnips, Jersey, wh., 100 bchs	1 50	@	2 00
Jersey, Russia, per bbl	1 00	@	1 25
Tomatoes, Fla., choice, carrier	1 75	@	2 00
Florida, poor to good	1 00	@	1 50
Savannah, per carrier	1 50	@	2 25
Mississippi, per 4-till case	1 00	@	1 10
Jersey, per bushel box	1 50	@	2 25

BUSINESS BITS.

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Market Briefs

PICKED UP HERE AND THERE

NATURAL INDIGO is the product of certain leguminous plants, cultivated to a large extent in British India, China, Java and Guatemala. For 20 years German scientists have been actively engaged in efforts to make artificial indigo, and it is claimed that they have now succeeded in getting up an article which is equal to the natural product and can be made cheaper. Whether this artificial blue will prove as durable and generally satisfactory as the natural under varying conditions can be told better when the results of tests now under way are known. Shipments of woolen clothing dyed in this way have been sent to tropical countries, where it will be severely tested. If no drawback is found in this artificial product, planters will have to lessen the cost of production or get out of the business. Many of them are feeling blue over the outlook, but it is more than likely methods of growing and handling the plants will be improved, as the question is already being studied seriously by the planters. The wholesale price of indigo, as quoted in New York, runs from 40 cents to $1.15 per pound, according to quality.

THE CAT-TEASER is an invention intended chiefly for the relief of people in the residence section of cities who are tormented by cats, which travel back and forth through the backyards between rows of houses, breaking down plants in flower beds and making the night air lurid with their yowls. Most people simply endure this nuisance, protesting now and then by saying "scat" or throwing things out of the windows, which, of course, never hit the cats. The best of these cat-teasers is thoroughly effective for those who have a tight fence so that the only way the animals can get into the yard is to jump over. It consists of a lot of wires seven or eight inches long set in a strip or joist about two inches apart, and sharpened at the top. They come in sections, and a row of them around the top of the fence fixes it so that no cat can get in or out. The sharp points give them no chance to jump or climb over. One man tried a plan which worked fairly well for a time. He was an electrician by trade, rigged a wire along the top of the fence, and attached a battery giving quite a strong current. Any cat that touched the wire would be greatly surprised and get off the fence at once. A good barn cat is a highly profitable piece of live stock for a farmer. There are too many, however, in cities. While no cruelty should be tolerated, people certainly have a right to use harmless methods to keep them off their property.

FRUIT NOTES.—No doubt readers understand that any statement about the market conditions of perishable products in a large city can only give the facts at the time the report is made, as the next day conditions may be entirely changed. In notes of this sort it seems better to give the situation at the time the paper goes to press, rather than attempt to review the conditions for the whole week, which might be more or less confusing. The receipt and distribution of produce like fruits and vegetables in a large market are not unlike the ebb and flow of the tide in the ocean. The motion is fully as constant and as necessary to the health of the market. Stagnant water and stagnant markets are alike undesirable. Southern peaches are showing better quality. Prices for fancy grades run high, but inferior ones are hard to sell at any figure. Plums are low, but sell for more than they are worth, if those that we have tried were fair samples. There are still a good many damaged cherries seen, and none but the better grades sell for anything like fair prices. There are a few currants, but quality seems to be below prime. There is not much call for these as table fruit, except those that are large and fully ripe. Canners get the bulk of the lower grades. This fruit, second only to the strawberry when at its best, has never received the attention it merits. People pass by the currant and take the insipid raspberry or blackberry, which soon lose their flavor when exposed on the street. The strawberry season is practically over. Hot weather has boomed the trade in watermelons and lemons. W. W. H.

Observations on Strawberry Varieties.

Tice C. Kevitt had a strawberry field meeting on his grounds at Athenia (near Paterson) N. J., June 15. The day was cloudy and showery; attendance small. Mr. Kevitt has over four acres of berries, on soil adapted to growing fine fruit; gives them best of culture, and the exposure is such as to favor early ripening. He has a special market, disposing of all at his packing house to near residents, retail grocers and peddlers having the best paying class of customers. Few growers have equal facilities for raising fine fruit, and demand for all grades at full retail prices, even to the lowest grade. June 15 was not suitable for close observation, and I revisited his grounds again on June 18. Mr. Kevitt selects varieties of large size, seeks productiveness, and quality is a requisite. In the trial row were Jersey Market, William Belt, Sample, Ridgeway, Marshall, Bisel, Lovett, Improved Parker Earl, Parker Earl, Jr., Nic Ohmer, Gandy, Bismarck, Warfield, Duff I. S. Palmer, Haverland, Tennessee, Enormous, New York, Brunette, Johnson's Early, Clyde, Bush Cluster and Oom Paul. All these varieties were set in other portions of grounds, so that a fair judgment of merits could be obtained with accuracy.

New York made the best showing, quality first rate, sub-acid, no core, prolific and matured full crop. Is a seedling of Jessie, which it closely resembles in plant and fruit, and as a pollenizer of pistillate varieties far excels it, and in many localities is being set instead of Jessie as a pollenizer. Is of large size, color good, inclined to irregularity. Sample, a close competitor of New York, lacks character, and is inclined to be a little soft. More regular in shape and as productive as New York. Is proving to be a good berry for near market. Jersey Market is an old variety in some sections, though apt to be deficient in plant growth; good, high flavor, rather acid, large size, attractive in color. Set full, but did not mature crop well, yet the season has been such that only about 40 per cent of setting of most varieties has matured in the best strawberry sections of northern New Jersey. It ripened average crop for the season.

Glen Mary and Bismarck were said by Mr. Kevitt to be his most profitable varieties. Enormous, too irregular in shape and too acid to become popular; not extremely large for coxcombed berries. Brunette, large, regular dark red in color and flesh; fine quality, prolific, foliage inclined to blight. Bush Cluster, fruit resembles Crescent; not quite as acid; fruit stalks fully a foot long, extending above foliage, and while it matured a large crop, yet the long fruit stalks caused berries to sunscald badly. Bisel, large, prolific, fine quality for very acid berry, but too soft and delicate for even home use, unless great care is exercised in handling. Duff, very early, very prolific, ripened full crop; good size for early berry; lacks character. Very acid, large core, good early market berry. Warfield, too soft and poor to be profitable. Haverland, fine showing; very soft, and although its tough skin aids in marketing, yet not profitable. Clyde, while in most places a total failure from blight of foliage, here a perfect success.

Gandy was here, as in most of northern New Jersey, a failure as to yield. Mr. Kevitt had the true Gandy, known in many sections as the Jersey Gandy to distinguish it from the many seedlings grown from it. In many sections of North Carolina, Maryland and Delaware the Gandys sent to market are seedlings, as the original is too soft and unproductive to ship with them. I have found in Newark, N. J., market at least four seedlings which growers acknowledge to be such and carry very firmly. Nic Ohmer, Pride of Cumberland, Tennessee, Johnson's Early, Marshall, Lovett and Bubach were a failure as to yield.

Among new varieties, I. S. Palmer was originated at Stuyvesant, Columbia Co., N. Y., by I. S. Palmer, from Jessie and Bubach No. 5; very early, quality the very best, and berry possesses every characteristic of fine quality, yet being a new seedling its character is not fixed. It ripened at Mr. Kevitt's place June 1, four days before Duff; noted as very early. It is as productive as most very early berries, yet when compared with Duff is sadly deficient as to yield. Will be put on market next Fall. Oom Paul, origin and parentage same as I. S. Palmer; large size, prolific, in shape inclined to Jessie; good quality, rather acid, foliage inclined to blight. Will be put out next Fall.

J. B. ROGERS.

A Trip Through Southern New York.

Ex-Mayor C. W. C. Chapin, of Brooklyn, has purchased a large tract of wild land a few miles to the west and south of Monticello. I heard so much of it that I drove two hours to see it. To say that I was disappointed does not express it. A more forbidding place I never saw. It makes one picture the ex-Mayor as a long-bearded lord of iron will and selfish heart without a spark of fellow feeling or a drop of human kindness in his whole make-up. A workman told us all in three short sentences: "There are 17,000 acres; 20 miles of fence, and 32 wires on each post." There is nothing to be added except that the general neglect of the place is emphasized by frequent signs forbidding trespass; but why anyone would trespass on these forbidden grounds is not apparent. Even the diminutive garden is surrounded with a fence 10 feet high made of poultry netting with a mesh so close that the passer-by could hardly see through it. We were told that the ex-Mayor wanted to keep the place wild as a game preserve. As far as wild is concerned he is succeeding admirably. We saw one rabbit cross the road. White Lake is one of the most popular Summer resorts of the county. Surrounding it is a very good farming country. Edward Nolan and Hon. Luke Stapleton, of Brooklyn, have a Summer home and farm here, and the Sloan Bros., of New York, have one a little to the south. They have some young plantings of apples, pears and plums that are doing remarkably well. From the evident care given them nothing that can now be seen will prevent a nice crop of fruit from these plantings in the course of the next three or four years.

About eight miles to the north one comes into the territory reached through the Ontario and Western Railroad. This is a good farming section, and the country for miles on both sides of the railroad is literally overrun with Summer boarders during the season. At Liberty, Ferndale, Loch Sheldrake, Navesink, Woodburn and so on to Ellenville the villages and farmhouses are being put in readiness to receive the city guests. These people seem, however, to give themselves up to the task of housing their visitors. Home products for the table seems to be almost entirely neglected, milk alone being furnished from the farms. Meats and, for the most part, chickens and eggs, fruits and vegetables are shipped in from New York City. It seems a pity that farmers in this section should neglect this local market brought close to their own doors. It is a greater pity, because all these edibles become stale when shipped from city markets, while if delivered from the farms near by daily the luxury would make the city people rave with delight. It seems a shame that canned goods from New Jersey and Michigan, and sweet corn over-ripe and withered should be shipped into this farming county to feed the people who leave their city homes in the hope of escaping just such staples of the city markets. Our trip was planned to recross the Shawangunk Mountains, over a new road from Ellenville. This is a most delightful and interesting drive. For seven miles you climb a steady grade, leaving the beautiful little village nestled at the base of the mountain and confined to a narrow and fertile valley by the abrupt hills to the west. The new State's prison in course of erection is seen in the valley to the north. This road takes you past Arvosing and Minnewaska Lakes, at the extreme top of the mountain, the latter 10 miles up, without a sign of habitation intervening. Here the famous mountain Summer houses, "The Cliff" and "Wildmere" are located. They accommodate about 250 guests and are always filled to overflowing. The dark waters of the lake below, the blue sky above, and the stunted growth of trees and abrupt cliffs for miles around are the attractions of the place. Lake Mohonk lies five miles to the northeast: the drives are many and picturesque. About seven miles down the east side of the mountain you suddenly come to an abrupt bluff, and over this you see one of the most delightful farming countries to be found anywhere—the fertile valley of the Wallkill, and the fresh gardens of southern Ulster.

J. J. D.

ONE of those "pesky" brooder lamps got smoking the other night and burned a hole through the zinc and smothered about 25 handsome six and 10-weeks-old chicks. It isn't all honey in the chicken business.

M.

I HAVE closed out all of my different breeds; have made up my mind that the White Leghorn is good enough for me. I shall keep the S. C. and R. C. White. We are selling eggs for hatching, fowls for breeding, and then after the breeding season is over ship eggs to New York. The bred selected lays more eggs, larger and whiter than the Brown; is larger and better for table. H. J. BROWN.

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Doctor Pierce's Golden Medical Discovery cures diseases of the stomach and organs of digestion and nutrition. It eliminates from the blood disease breeding poisons. It makes the blood rich and pure, and furnishes a foundation for sound, physical health.

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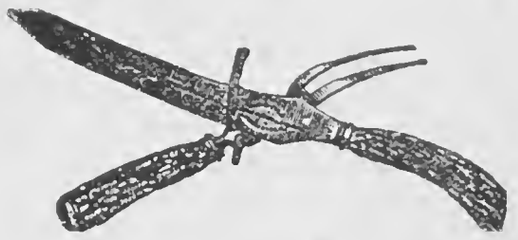

steel blade, buckhorn handle, fork and steel. Price, $1.90; or we will send it for a club of two new subscriptions at $1 each and $1.25 extra money, or free for a club of six at $1 each.

Live Stock and Dairy

THE DUAL-PURPOSE COW.

Eastern and Western Ideals.

TWO-SIDED COWS.—Improper feeding, causing indigestion and the manifold troubles that the dairyman must meet, has been to some degree responsible for the demand for a dual-purpose cow. A scientific breeder, writer or speaker may not face the dairy problems like the men who meet their obligations from cheese, butter or milk checks. The pure dairy type, which cannot put on an ounce of meat, may be the ideal cow. I do not believe we should ask one machine to plow, sow, reap and thrash, yet we run a grain drill that sows grain, grass and clover with fertilizer, each one or all, with absolute certainty. I have found it no easy matter to keep one's teaching along lines that would be understood as coinciding wth actual practice. Columns are being written and long speeches made for and against the dual-purpose cow. Any idea or interest usually suffers in the hands of an extremist. The men who see only one side of a subject are not the safest men. I am reminded of the old man who, frequently passing through his son's sleeping apartment, observed that John always slept on his left side. Bringing the matter to his wife's attention he said that boy might as well quit studying law, because he could not *lie* on both sides. We must from a business standpoint look at things from every point of view. To go into a community where no specific dairy form is recognized and preach that saving grace will come to the dairyman who breeds only the extreme dairy form as found exemplified in many Jerseys, is a decided error!

BEEF AND BUTTER.—This question had its inception in the West, and has for its present champion Prof. Shaw, of the Minnesota Agricultural College. Prof. Shaw looks at the magnificent specimens of Short-horns at the Station barns, steps into the dairy barn adjoining and finds the thin bony Jersey, and says at once: "We need a combination of these, and behold both beef and milk; i. e., the mother gives 300 pounds of butter and drops a heifer calf to duplicate her performance, and the following year a bull calf that in its steer form tops the market in Chicago." It can't be done, but thousands of western farmers are trying it, at a loss. It is contrary to all laws of animal life. The dairy animal puts its fat into the udder and pail; she does not do it by chance any more than a smart boy is so by chance. You need not inquire, when you meet a bright, energetic, level-headed man, about his parentage; he had a good mother. The beef animal of the beef breeds is so far removed from dairy form and ability that only by the use of a wet nurse can the offspring be reared.

CAN'T BE DONE.—Viewing the case from the western conditions it seems incredible that any sane man could expect for a moment to breed a profitable dairy. The dual-purpose cow of the West and the dual-purpose cow of the East are as unlike as the beef and dairy types. With the western idea I have no sympathy; with the eastern notion there is at least debatable ground. I am satisfied that the dairy conformation has been carried to an extreme in many instances, coupled with early breeding and inbreeding, until constitution and vitality have been so weakened that tuberculosis is sure to result. As surely as one extreme follows another have breeders followed delusions and produced skin and bones. I have in mind a Jersey cow that failed at a State fair to receive the prize that her record, which no one disputed, warranted her in taking, because she was skin and bones and nothing else. Fat is not muscle, but it is to a degree stored energy, and my observation teaches me that when our cows drop below a condition of flesh which I cannot describe, but know as any dairyman knows, when seen, that they are more subject to ailments. This thin condition may be brought on through excessive feeding of protein foods, milking the vitality out of the udder, but this is not a general fault. Is it wise therefore to breed to an extreme dairy type?

RESERVE FORCE.—Self-preservation is nature's first law. Man has taken the dairy cow so far from the natural cow that produced a calf, fed it and quit, that this law no longer applies. She may be so well bred that her milking machinery runs away with her boiler capacity. We must keep reserve force on hand. The bank that keeps no reserve fund in the first place offends the statute law, and also an economic law. The nervous man unconsciously works beyond his strength, his nerve weakens, and he has to stop and restore again the wasted tissue. The nervous temperament is all right to a degree. If we possess at this early period in our National history any distinctly American characteristic it is surely this development of our hustling nervous energy, an ability to work 18 hours a day, two days in one. This tremendous high pressure construction has built our Nation and its present supremacy on land and sea. The two-minute trotter and pacer, the 200-egg hen and 600-pound butter cow, are examples in lower life of the same tendency in breeding. This seems heterodox, and you ask: "Shall we stop our advancement?" No, don't worry; nature will take care of the whole business. The slower plodding nature of the German immigrant is already making its personality felt in great sections of the country. He rears large families without the vital effort or loss of vital force. The children are strong, robust boys and girls, keeping close to nature and nature's laws. At 20 they marry without fuss or feathers, settle down to work, buy a farm and pay for it. The other fellow has gone, and they are in possession through quiet conquest. The trotter that has been bred for generations to use up vitality at a tremendous pace has no value as a producer. He puts 12 quarts of oats and a wisp of hay into a few minutes' work. The high-class nervous people are not raising large families. The fact in comparison with the immigrants mentioned needs no elaboration. It is easy to calculate who will control in the following generation.

COW COMPARISON.—Have we a comparison in our dairy stock? I think so. That dairy temperament is nervous temperament is well understood and accepted. What are some of our troubles? Uterine weaknesses, failure to breed, abortion and kindred troubles resulting from the inability of the constitution to meet the demands upon it by drainage in milk production. These forces are all self-regulating; of course man thinks he does it. Nothing of the kind. If man could have his way about it he would increase production without limit. But nature, so careful to preserve an equilibrium, does not permit man to run away with her.

THE EASTERN IDEAL.—What is the eastern idea of dual purpose? It is a cow that will give from 5,000 to 7,000 pounds of milk a year under favorable conditions, and when her usefulness at the pail ceases the carcass will weigh 600 pounds, that will bring in our country markets $36. I am not giving extreme figures in this statement. It is so easy to make our deductions from the one-in-a-hundred instance. I could give a case, but it does not happen often with us. We just sold a cow for beef that had been a 10,000-pound cow, for $65. She weighed 1,360 pounds, and was a model, a perfect milking machine, and yet had sufficient form to hold meat, so that she was not worthless. I can pick out 75 cows out of our dairies that will answer my first proposition when they cease to milk for this reason, or that, without extra feed than the milking condition, and we succeed in obtaining an average of 7,000 pounds per cow.

The great trouble and misunderstanding over this question has arisen from an effort on the part of the beef producer of the West to breed milk from beef type, which is a failure, and the eastern effort to get milk first and a second-class beef subsequently, or in case of accident to udders, the selling price will approximate the cost of another cow. This type of cow, distinguished from the extreme dairy type which has been held to our view, is the idea I wish to bring out. This idea as practically followed will not breed phenomenal producers, but it will breed 250 to 300-pound cows with constitution and vigor. The great rank and file of northern New York farmers are not doing this much. Their breeding is drifting along without much careful thought. At times a public-spirited man buys a purebred bull, and it is surprising how far-reaching the effect of his service may be, to the third and fourth generation. Fig. 209, page 495, illustrates my idea of a dual-purpose cow. These cows have ranged from 9,000 to 10,000 pounds of milk. Three of them have been sold. Cow No. 1 is the one referred to in these notes, sold for $65. No. 2 was sold for $50; No. 5 brought $42, all sold for beef. The cows No. 3 and No. 4 are still in the dairy, and would sell at present time at probably $75, the two making a total of $232, or an average of $46 per head. To illustrate more fully this matter I have just purchased two cows at $45 each, that are now giving 80 pounds of milk a day without grain feed. These cows are capable of taking the place of these shown in Fig. 209 at the pail, but not at the shambles. They are not quite as heavy.

H. E. COOK.

Poultry Notes.

Our Leghorn hatches seem to be the best; these very good, but the P. Rock, Wyandotte, Orpington and Minorca varieties not so much so. Average rather low. Chicks hatched are generally doing well. Bronze turkey hatches reported from my customers have been very satisfactory so far.

ARTHUR J. M'CAIN.

Delaware, N. J.

The reports from this and surrounding vicinities are to the effect that the Spring brood of chicks is only about 50 to 60 per cent of the usual crop. We have had so much cold weather that the young perish after hatching, while from some cause (which I am not able to explain), the hatches have only been about 60 per cent, some running as low as 15 to 20 per cent. Some breeders have not been trying of late to run their incubators on account of early failures.

HENRY WALLINGFORD.

Bonaparte, Iowa.

Reports from my customers show that very early in the season eggs were not hatching well, but after the fowls got out of doors hatches were good and chicks strong. The season has been backward, wet and cold, and as a rule people in this vicinity have fewer early chickens than usual, and are trying to make up with late ones. We have out about 2,000 chicks, and expect 500 more soon. Our own chicks are very strong, growing finely, and the prospect is good for a fine lot of birds next Fall, although the adverse season has made it more difficult than usual to care for them.

H. J. BLANCHARD.

Groton, N. Y.

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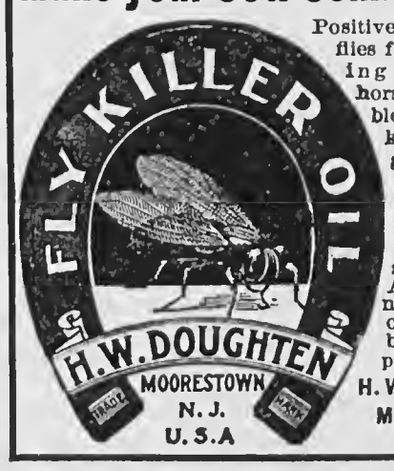

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CHEMICAL CHANGES IN THE SILO.

What Takes Place in Silage?

THE AIR "BURNS."—When silage is first cut into the silo the live tissues of the plant remain active for a considerable length of time, and rapidly consume the oxygen contained in the air which is carried into the silo with the cut material, so that in a comparatively short time nearly or quite all of the oxygen has been removed from the air, and in its place has been developed carbon dioxide, and probably more or less of other gases. If the silo is sufficiently tight so that no air can enter from the sides, and none can enter from above, the rapid action which occurs at first nearly ceases, and from this time on only comparatively small changes take place, which result in the production of substances in the gaseous form. What changes may occur after this in the silo which result in the formation of liquid or solid substances have not yet been determined, but it is certain that in the silos of airtight construction the changes are so small that the total loss in dry matter from well-matured corn silage need not exceed 1½ to four per cent after a period of standing as long as six months or even a year.

CHEMICAL CHANGES.—No one has satisfactorily demonstrated just what products are produced in the process of siloing. It is known that carbon dioxide is given off at first in quite large quantities. We have demonstrated that for a time at least considerable quantities of some combustible gas are also given off, though Drs. Babcock and Russell did not find evidence of this in their experiments. In addition to these gases considerable quantities of acids are developed, especially if the corn is put into the silo a little under ripe; that is, before the kernels of corn are well matured and the sugars and other less stable compounds have been transformed into the more stable compounds which occur in the kernels. The causes which produce these changes have not yet been thoroughly demonstrated. The observations made by Drs. Babcock and Russell indicate that the bacterial action is not as great as it has formerly been supposed in the cases where air is completely excluded from the silage, and it is their opinion that direct chemical changes whose nature is not yet fully demonstrated may take place and be responsible for the larger part of the first heating, and perhaps to the subsequent changes which take place in the silage, rather than to the type of fermentation which bacterial organisms are known to produce.

LOSS IN OPEN SILOS.—To whatever causes the changes which occur in the green materials put into a silo may be due, this is satisfactorily demonstrated: Wherever air is entangled in the silo in large quantities and under whatever conditions air may be admitted to the silage after it has been put into the silo, losses in dry matter inevitably occur, and the products which are produced are to a considerable extent of a gaseous nature, and the more thoroughly oxygen is excluded the smaller the inevitable losses are likely to be. This proposition we have demonstrated abundantly in our own observations and experiments made both in actual silos, and in small vessels ranging from a pint in capacity up to those holding 1,500 pounds of silage. In every one of our numerous trials where the air has been thoroughly excluded, there the losses in dry matter as gaseous products or those which are volatile when the sample is dried in the dry oven have been small, but where the air has had access with any degree of freedom there have been losses of dry matter ranging from 10 up to 30 and 40 per cent of that put in.

One of the strangest sets of facts which we have obtained in our experimental studies is that a given sample of corn may undergo such changes as to amount to 18 and even as high as 25 per cent of the dry matter in the sample, and yet the sample viewed from its external appearances and its taste may resemble silage of fairly good quality which has sustained a loss of less than 10 per cent. This is a very important observation which practical men should keep in mind, because it is undoubtedly the fact which leads many who are using the cheaply-constructed stave silos, which are known not thoroughly to exclude the air from the silage, to feel satisfied with the results which they get in the apparently good silage taken from such silos. The observations which we record in our last bulletin prove conclusively that large losses do occur in the stave silos as the result of air finding its way between the unjointed staves, and yet the silage appears fairly good, and the cattle eat it with relish, as they do that which has sustained a much smaller loss of dry matter.

AIRTIGHT BEST.—It must of course be admitted that no observations have yet been made of the feeding value of silage which has sustained a loss of from 15 to 20 per cent of its dry matter, and that which has sustained a loss of only 1½ to two per cent of its dry matter, and hence no rigid conclusion can be drawn as to how much the actual saving is in the thoroughly well-constructed silos over those which preserve the silage in moderately good condition, so that it does not develop the undesirable odors, and has not seriously molded or decayed. In the absence of such evidence, however, it is safest for practical experience to be guided by the supposition that the feeding value of silage which has sustained the smallest loss in dry matter is a better feed than one which has sustained the heavier loss, and the conclusion that only well-constructed silos, such as are known to be permanent in their essential features, and are known to possess the power of excluding air from the silage are the only safe ones for practical men to follow. If it is true that a thoroughly good silo will save from five to 10 per cent of the feeding value of the silage put into the silo more than the poorly-constructed silo will save, there can be no question about the desirablity of going to a somewhat greater expense to secure the conditions which will make the small losses possible. [Prof.] F. H. KING.

Wisconsin Exp. Station.

The preparation which I use is So-Bos-So Kilfly. This preparation will keep flies from live stock, and I find that my cattle which I used it on are free from warbles this Spring. While using this preparation we have some things to look to, namely, to keep it from penetrating the milk. We have never had any bother with it, but in the first place we milk and strain, and have everything put in place before spraying the milch cows. Where care is taken I think there is no danger of the milk being tainted. I have also used Kilfly on my hogs, which will rid them of lice, but for lice on hogs I like a light application of crude oil the best.

Noblestown, Pa. H. M. K.

A GROUP OF DUAL-PURPOSE COWS. FIG. 209.

Cleaning the Stable.

Some one asked through THE R. N. Y. for a device for cleaning stables. Where the stable is built with considerable space behind the stalls (mine is seven feet), and with a door at one or both ends of the space its full width, I think the following will be found the quickest and easiest of any. Spread a wire cloth the width and length of the space on the floor when it is clean, and cover it with straw or other litter, and leave it there until you wish to clean out. Then hook the end of the wire carpet that is by the door to the doorsill and hitch a horse to the other end and drive him over the wire, and out of the door the wire cloth rolls, taking all the manure with it, and unloads it just out of the door. By putting some inclined plank from the door to top of wagon, and lengthening the carpet, it can be unloaded into the wagon. Of course then one would have to use a rope to hitch the horse to, long enough to reach the length of the stable and out over the wagon. I presume that tarred rope matting would work as well as the wire cloth while it remained sound. I don't know how long it would last used in the stable. Of course the carpet must be put down again at once and covered as before. C. C. C.

Dowagiac, Mich.

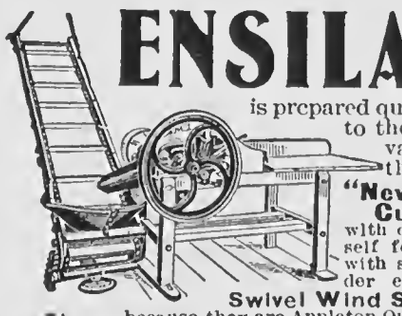
R. N.-Y.—We have heard of one case where a wide scraper was used. A horse was hitched to this scraper by means of a long rope and with a man behind to guide the scraper the manure was all pulled out.

Butter and Cream Fat.

What amount of butter is contained, or can be made, from one gallon of cream, containing 30 per cent of butter fat? I wish to figure out the relative value of cream and butter on that basis, so as to decide whether to sell cream or butter.

Whitewood, S. D. T. E. B.

One gallon of cream containing 30 per cent fat will produce 2¾ pounds of butter if the cream has been carefully ripened and exhaustively churned. Selling butter at 20 cents a pound would make a gross return of 55 cents; deducting average expense of manufacture of .03 per pound butter would leave a net per gallon of cream of 47 cents. A very safe and accurate rule for computing the butter value of milk or cream is found by multiplying the pounds of milk or cream by its per cent of fat, and then add .15 to the product. My experience has not warranted an excess of butter over butter fat to exceed the above amount. Careful experiment has shown that butter fat cannot assimilate to exceed one-half of its own weight of water. Butter contains a small per cent of foreign matter which just about balances the loss in separation and churning when it has been as complete as present machinery and skill can make it. When the excess runs under 10 per cent or over 17 per cent something is out of gear in the method. Many tests are figured on a basis of 80 per cent fat; this calls for 20 per cent excess, which does not correspond with actual creamery practice. H. E. COOK.



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Without the slightest f[illegible]f germs!
—W[illegible]ngton Star.

BLOBBS: "Why doe[illegible]r old maid aunt always wear [illegible]on gloves?" Slobbs: "She doesn't [illegible]kids."—Philadelphia Record.

CHURCH: "What i[illegible] principal musical instrument in [illegible]na—the lyre?" Gotham: "No; I be[illegible] it is the loot."—Yonkers Statesman.

CUSTOMER (in restaurant): "Look here, waiter, I've found a button in this salad!" Waiter: "That's all right, sir; it's a part of the dressing."—Tit-Bits.

MRS. COBWIGGER: "Yes, Freddy, the doctor brought us the new baby." Freddy: "Say, Ma! Is it because we have a homeopathic doctor that the kid is so small?"—Puck.

HAPPY FATHER: "We've got a new baby at our house." Friend: "So? What do you call him?" Happy Father: "We don't call him; he does all the calling himself."—Detroit Free Press.

RESCUER: "Miss Properleigh, give me your hand." Drowning Maiden (preparing to sink for the third time): "Oh, Mr. Manley, this is so sudden; so unexpected! You will have to ask Mamma!"—Harlem Life.

DEACON No. 1: "If we have a sounding-board placed back of the minister's pulpit it will throw out the sound when he is preaching." Deacon No. 2: "Great Scott! Don't do that. If you throw out the sound of his sermons there would be nothing left."—Baltimore World.

"WHAT did Columbus discover?" asked the teacher of the juvenile class. "The Atlantic Ocean," answered the small boy at the foot of the class. "How do you know that?" asked the teacher. "Because," replied the youthful student, "my book says he came across it."—Chicago News.

"JOSIAH," said Mrs. Corntossel, "what is these neglijay shirts I see advertised in the bargain sales?" "Well, they ain't quite so prim an' scratchy as a b'iled shirt—that is to say, a reg'lar hard-b'iled shirt. I reckon neglijay is what you might call a soft-b'iled shirt."—Washington Star.

PAPA (severely): "Did you ask Mamma if you could have that apple?" Five-Year-Old: "Yes, Papa." Papa: "Be careful now. I'll ask Mamma, and if she says you didn't ask her I'll whip you for telling a story. Did you ask Mamma?" Five-Year-Old: "Papa, I asked her. (A pause.) She said I couldn't have it."—Tit-Bits.

"YOU people down here spent $5,000 boring a hole in the ground for coal, didn't you?" asked the passenger who was walking up and down the station platform to stretch his legs while the engine was taking in a feed of coal and water. "Yes, sir," returned the humpshouldered native sitting on a nail keg. "That's about the size of it," "And what have you got to show for it?" "Well, mister," said the native, taking a fresh chew of Missouri plug, "we've still got the hole."—Chicago Tribune.

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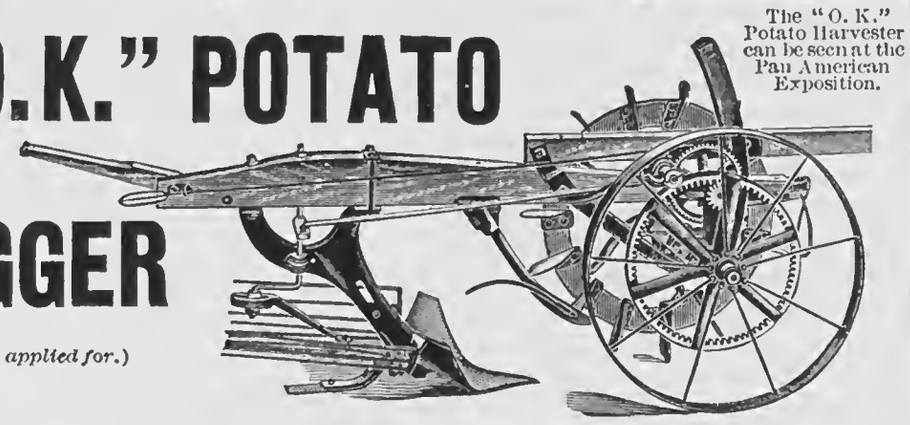
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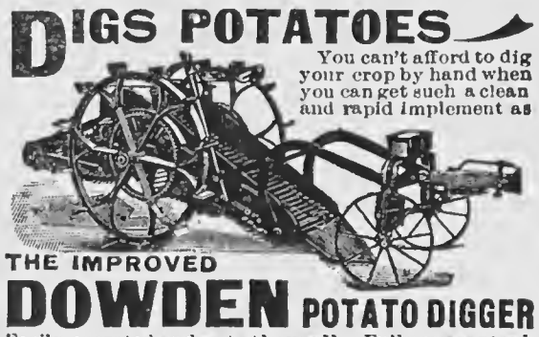
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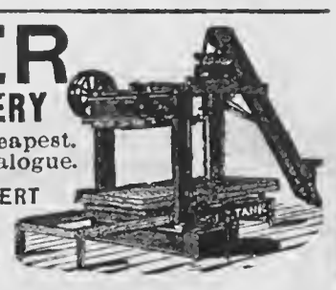
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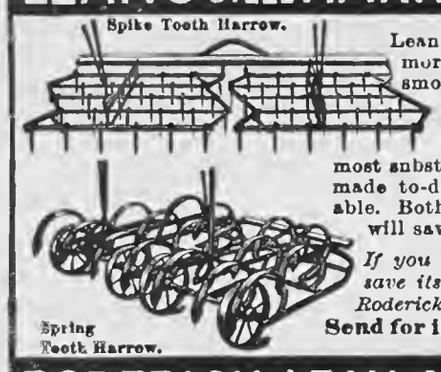
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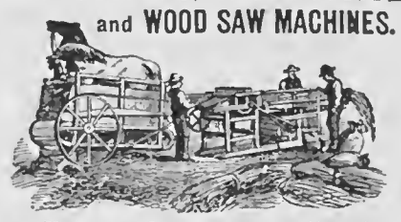
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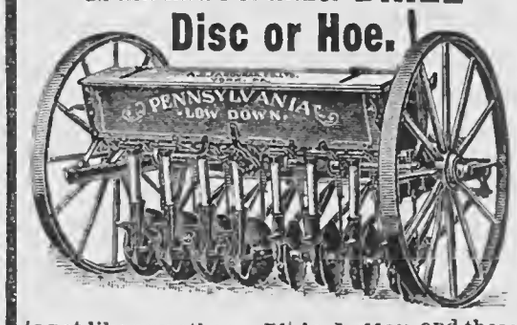

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2686. NEW YORK, JULY 20, 1901. $1 PER YEAR.

BIG PROFITS IN FARMING.

WHAT A CHICAGO CITY FARMER DOES.

Is His Plan Practical?

We have received the following note from a good friend in Canada:

"In the Saturday Evening Post of June 8, page 8, an article appeared on 'Big Profits of Twentieth Century Farmers.' So bright a view of what is coming, if not indeed actually available now by good management, might serve to dispel the gloom resulting from such long continued rain and absence of sunshine. The contrast between that article and Hope Farm Notes is very striking. There must be some mistake on the one side or the other. According to one farming is as easy as turning your hand over, if you will but adopt and stick to a simple rule or two, while the other would have you believe that you will meet lions on the path at every turn, so that you never can tell where you are going to come out. There is all the difference between the two that there is between a fancy picture and the plain homely reality of everyday life, or between prose and poetry." W. O. E.

The article in question was written by S. W. Allerton, who operates farms by telegraph, mail and telephone from the city. He says he has over 40,000 acres in careful cultivation, and about the same area in grass. There are over 70 different farms, each managed by a foreman and reached by long-distance telephone. Mr. Allerton says he has one farm of 3,600 acres which cost him $70 per acre, and which paid $37,000 profit in one year. A fair statement of what the author claims may be found in the following quotation:

"Here is my allotment for a farm of 160 acres: Ten acres for buildings, garden patch and a field of mangel-wurzel beets; 60 acres for pasture; 60 acres for corn; 30 acres for oats. In the second year these crops should be shifted, pasture and grass lands being turned over for cereals. The beets should be fed to sheep and hogs, and as much will be realized from the sale of wool, lambs and hogs, under this system, as would otherwise be secured from the entire product of the farm. The showing made by an intelligent following of this plan should be fully as good as this: From sale of wool, $100; lambs, $500; hogs, $500; corn, $900; oats, $200; total, $2,200.

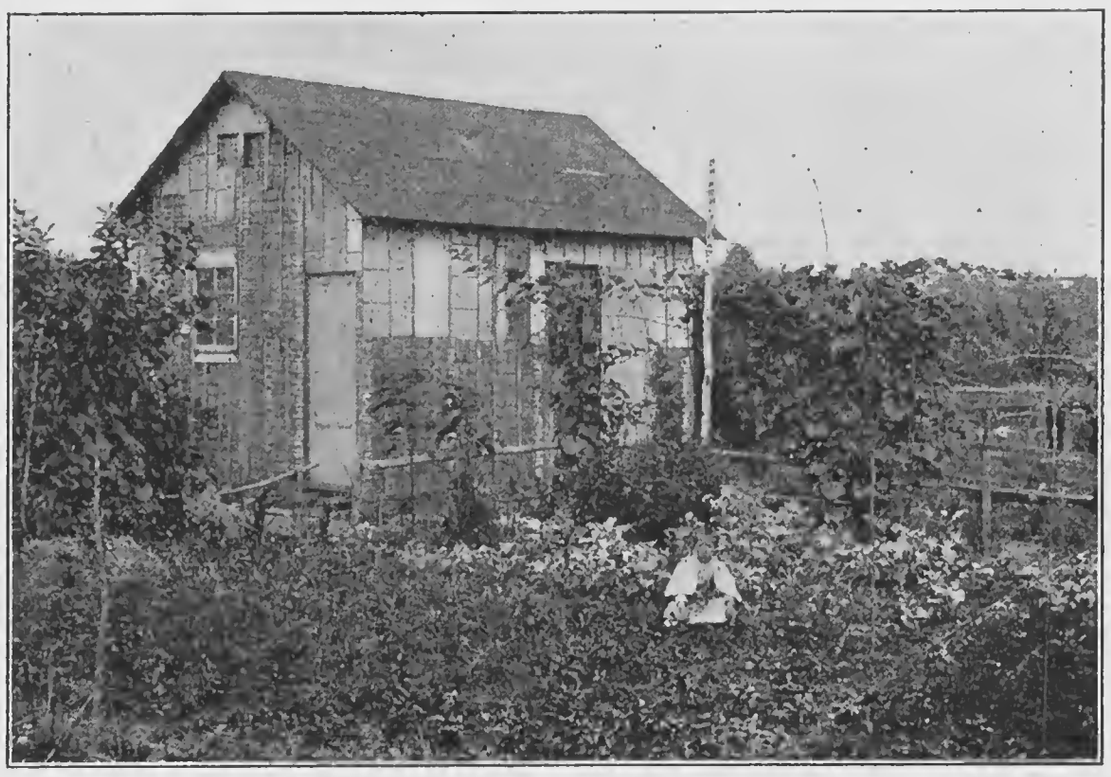
"This allows for feeding 1,500 bushels of corn out of a crop of 4,500 bushels; the corn being figured at 30 cents a bushel, and the yield at 75 bushels an acre. The number of lambs in this estimate is 100, and hogs 50. Placing the farmer's outlay for expenses at $700, this leaves him $1,500 clear. I believe this to be a very conservative estimate of what any good farm may be made to pay, for I have generally exceeded this figure in the net results of my farming."

Mr. Allerton talks as though this ought to be done on any farm. Of course, he is referring to the Middle West and, we presume, to level land of good quality. No doubt the Hope Farm man will have his say later regarding this rosy-cheeked view of agriculture. We have asked for the views of some thoughtful eastern men who have had experience at farming, and a good chance to observe actual conditions. We print letters this week from two of them. We consider it wise to get down close to the actual condition of farming as a business that we may hunt for the influences, if there be any, that operate against the farmer.

PENNSYLVANIA COMMENTS.—It is always well to have in mind the possibilities which well-directed effort along any particular line of work may reach, yet these same possibilities should be kept entirely distinct, and considered entirely separate from the probable returns which will accrue from well-directed efforts of any considerable number of men who are recognized in a sense as leaders in their respective vocations. It must be admitted that the conditions under which Mr. Allerton is enabled to conduct his farming operations are entirely different from those confronting the average farmer of the Middle and New England States, and that his operations may be carried on under the conditions with which he has to deal in a much more satisfactory manner from a financial standpoint than would be possible on the uneven land of the Eastern States. It should be remembered that Mr. Allerton's profits are in no small degree secured from the business of a middleman. By virtue of his position he is enabled to save the profits which the most successful middleman would make in handling like products purchased from farmers While Mr. Allerton's estimate of $1,500 as the net profits of a 160-acre farm may be well within the range of possibilities, yet if he had given the actual returns from a farm of this size for a number of consecutive years the figures would undoubtedly have carried much more weight. It is undoubtedly true that there are many farms in nearly every State that produce annually from 160 acres an amount that exceeds the prediction of Mr. Allerton, yet these farms are managed by men who are specialists, and cannot be said to belong to the great rank of average farmers who practice mixed husbandry. There are specialists in various lines of farm work who are undoubtedly receiving greater income from fewer acres than those stated by Mr. Allerton. These undoubtedly show the possibility of intensive agriculture, yet they should not be placed before the average farmer in a way to mislead him. The average farmer of Pennsylvania and New York who is now practicing mixed husbandry will undoubtedly accept Mr. Allerton's estimate with a good deal of hesitation.

[Prof.] G. C. WATSON.

Penn. Exp. Station.



A PIONEER FARMHOUSE IN NEW JERSEY. FIG. 210.

BARN AND SHED ON A MARSH FARM. FIG. 211.

THE CONDITION IN MAINE.—Mr. Allerton's article in the Saturday Evening Post is based upon agriculture in the West and not in the East, and I do not pretend to be familiar with the situation there, but at this distance the article seems to be largely "buncombe." In his argument for an Illinois farm of 160 acres, he claims sales from wool, lambs, hogs, corn and oats to the amount of $2,200, and aside from his own personal labor he only claims a cost of $700 to cover interest on investment, taxes, machinery, equipment, blacksmith bills, hired help, etc. It is doubtful whether the high farming which he claims to carry on, by which he produces 75 to 100 bushels of corn per acre, is equaled on the best farms in Illinois one year with another. While he says he is talking of ordinary land of Nebraska and Illinois, he is not talking of ordinary land, but of the very best, and I am sure that such land has a high selling value there. Is it not true that farm land in Illinois that is capable of yielding the crops he indicates has a selling value of $100 an acre? One hundred and sixty acres of land at this price would bring $16,000, and four or five per cent on such a farm would alone mean as much as this $700 which he sets aside for total expenses. He speaks of Summer fallowing as an important part in his scheme. But he must know, if he is in touch with modern agriculture, that while Summer fallowing was once the most popular article in the creed of the theoretical and practical farmer, this practice has gone by, and that land is no longer kept in fallow, but is kept covered with some green crop as much of the time as possible.

Aroostook County, in this State, is the only part of New England which has conditions at all analogous to the West, where farming is carried on with a few kinds of crops and on a large scale. While I know of some farmers whose cash sales from 200 to 300 acres

will in favorable years amount to $3,000 or $4,000, I know of a great many more who are not doing anything like this. In talking with practical men, both farmers and business men in Aroostook County this last week, the consensus seems to be that to every farmer who is receiving $1,200 or more in net cash from 200 acres of land, there are 25 who are receiving much less. Of course, in this, I am neglecting, as Mr. Allerton did, the value of the living which the farmers are so largely getting out of their farms. While agriculture is a safe business, and while there is an opportunity for the *average* farmer to make a comfortable living, and an opportunity for the man who is above the average to make more than a good living and lay up some money, the farm is not the place, in my opinion, in which a man should look for wealth. Men who get wealthy in the modern sense are exceedingly few in any calling, and they are not, to my knowledge, found in legitimate practical agriculture. [Prof.] CHAS. D. WOODS.

Maine Experiment Station.

FIVE ACRES ENOUGH! FOR WHOM?

A short time since we printed a note from a reader who argued that five acres of land is ample space on which to support an average family. There are few five-acre tracts about our own farm that would provide all that the average American family deems necessary for life and comfort. The pictures shown at Figs. 210 and 211 show how foreigners attempt to make a living on a small lot of land. These buildings were to be found in Bergen Co., N. J., within 10 miles of New York. The great Hackensack marsh extends for miles inland. On the upper part of this marsh, where the hills rise abruptly to the higher land there are little settlements of foreigners—chiefly Italians and Poles. These people seem to be more or less immune to malaria or mosquitoes—at least they live in this damp, swampy region and are able to work hard. The hut shown in our picture was built by an Italian—the other building contained part of his corn crop, a pig, a goat, a number of hens and various tools. The material was mostly obtained from old buildings—the sides of the shed being formed from old steel and tin from a discarded roof. In this humble dwelling the man, his wife and several children started. To their credit be it said that they have since then built a substantial house with high brick walls, while the old dwelling house now shelters a cow and a small horse.

This sour and soggy soil formed a most uninviting spot out of which to try to dig a living. We do not know a single American farmer who would have attempted it. Some of them might have gone West, away from old friends and associations, and tried the swamp rather than the poorhouse, but we do not know of one who would have gone down from the higher ground in New Jersey to work after the manner of this Italian. Probably few Americans with several generations behind them on this side of the water could have done what these European peasants had long been accustomed to do. Rain or shine, early and late, through bleaching sun or soaking fog man and woman were at work. They were true beasts of burden. They used no horse tools at first, but chopped up the tough sod with heavy hoes, such as the negro laborers at the South use in the cotton. They ditched and dug and planted and hoed until they conquered their little piece of ground and made it produce wonderful crops of onions, cabbage and celery, which they carried on their backs to market, carrying back, if need be, any form of filth that would add fertility to the soil. They bought stale rye bread by the barrel. This, with coffee, onions and other vegetables provided most of their food. A glass of beer on Sunday and visits with friends provided their recreation. That is the way in which the soil was saved and the home was made. It was pioneer life in New Jersey. Perhaps some of our readers who, years ago, went out into the western wilderness could match this record of dull, weary toil, with stories of their own lives in sod house or log cabin. We doubt, however, whether the children of either the western pioneer or the foreign drudge can ever be induced to do as their parents have done. In other words, while this Italian family has prospered on a very small area, it is not likely that the children, when they come to face the serious problems of life, will be satisfied to remain within the narrow limits of the little farm. This might have been possible in France, Italy or parts of Germany, but the very things which lead our people to glorify the superior intelligence and ambition of Americans will prevent the foreigner's son from being satisfied with that form of a living!

THE best horse forage we can plant now is fodder corn. The flint varieties will give an immense yield before frost. When cut or shredded such fodder is as good as hay.

CHEMICALS, CLOVER, COWS AND LIME.

Some Methods and Results Analyzed.

PART III.

CORN.—This is one of the most important crops in Mr. Lewis's rotation. In making the statement of farm sales on page 450, a mistake was made in the item of "cows, $251.76." This should have been *corn*, and the amount given indicates the cash sales of this grain after feeding what the stock required, and the stalks. The sales of wheat were $282.57. The sales of corn from a much smaller acreage were only $30 less, and besides this the cornfield grained the stock and filled the silo. This gives a good idea of the comparative values of corn and wheat in such farming. In former years the wheat made a better comparative showing, because less attention was given to utilizing the cornstalks. As has been stated, all the farm manure is spread on the two-year-old sod for corn. The ground is handled in the usual way—the corn being planted in hills. The corn for the silo is grown in the regular cornfield—the only difference being that on the part intended for grain two or three good stalks are left in the hill, while five stalks are left in the silo crop. Some farmers say that they want their silo corn grown just like that intended for grain, as they want plenty of ears in the silo. Others reason that the silo is the place for *stalk*—that it pays better to raise more stalk on a smaller area, and buy bran, cotton-seed meal or linseed to feed with it. Within the last few years Mr. Lewis has practiced sowing Crimson clover in the corn at the last cultivation. In the seasons when it makes a good start this clover provides good Fall pasture for the cows, and in any event, makes a better fitting for the potato crop—which follows the corn.

WHEAT.—It would not be possible to follow this rotation exactly as far north as central New York. In that section potatoes are planted late, and late varieties are used, so that they could not be dug and

APPLYING PARIS-GREEN ON POTATOES. FIG. 212.

the land cleared in time for wheat seeding. Early or medium varieties are grown at Cranbury, so that they may be all dug and shipped usually before September. As a rule, potatoes in this section are not stored, but the general practice is to sell directly from the field as fast as they are dug. One season with another this probably pays better than to try to hold the crop for a higher price. Thus the ground is quickly and readily fitted for wheat. It cannot be said that wheat is a very profitable crop. The wheat field returned $282.57 and the straw, while about the same sized field in potatoes gave $829.54, and about twice the area in grass gave $831.81. Yet these farmers continue wheat as a part of their rotation. They say that they need the straw, they prefer to seed to grass in the grain, and after all there is less chance of failure and loss where the risk is divided among four crops rather than three. I have met farmers in south Jersey who have dropped the wheat out of this rotation, and grow potatoes, grass and corn—seeding to grass alone. They claim to make a saving by this change. They depend more on clover and usually have some outside crop, like asparagus or tomatoes.

GRASS.—After all this is the backbone of farming—chemical or stock. Mr. Lewis has good grass—some fields averaging three tons per acre of well-cured hay. Since he began to use lime the prospects are good for better clover. I think the clover will respond quicker to lime than either Timothy or wheat. Since the herd of cows was increased some changes in farming have become necessary. For example, part of each potato field is given to oats and peas. While this crop is maturing, grass is cut for green feeding right out of the clover field, and thrown over the fence into the barnyard for the cows. As I have stated, the silo has so increased the feeding value and availability of the cornstalk crop that little if any hay is required for the cows. It is nearly all sold. This practice is opposed to what many farmers call the first principles of agriculture, for they hold that stock food should never be sold from the farm, but consumed at home, and the manure put on the ground. This is sound doctrine in many cases, but not in all. Where a farmer can sell a ton of hay, so that he can buy all the fertility it contains in bags and have a profit left over, it often pays to do so. I will not say *always*, because practical people know that there is no cast-iron rule in farming. Mr. Lewis believes that it pays to sell the hay and use part of the money to buy fertilizer for use on the potatoes. It would not pay to sell the stalks, for they would not bring money enough to purchase the fertility which they contain. We like to discuss this system of farming and rotation because there are no special crops like truck or fruit. It is plain farming—the production of staple crops in an orderly and scientific manner. It seems easy, but let no man deceive himself into thinking that brains and skill of a high order are unnecessary to conduct such a farm. H. W. C.

THE AGRICULTURAL EXPERIMENT STATIONS

We are often asked to print a list of the American experiment stations. We therefore reprint from an official bulletin a map showing where the stations are located and a list of addresses:

Alabama, Auburn, Uniontown. Arizona, Tucson. Arkansas, Fayetteville. California, Berkeley. Colorado, Fort Collins. Connecticut, New Haven; Storrs. Delaware, Newark. Florida, Lake City. Georgia, Experiment. Idaho, Moscow. Illinois, Urbana. Indiana, Lafayette. Iowa, Ames. Kansas, Manhattan. Kentucky, Lexington. Louisiana, Audubon Park; New Orleans; Baton Rouge; Calhoun. Maine, Orono. Maryland, College Park. Massachusetts, Amherst. Michigan, Agricultural College. Minnesota, St. Anthony Park. Mississippi, Agricultural College. Missouri, Columbia. Montana, Bozeman. Nebraska, Lincoln. Nevada, Reno. New Hampshire, Durham. New Jersey, New Brunswick. New Mexico, Mesilla Park. New York, Geneva; Ithaca. North Carolina, Raleigh. North Dakota, Fargo. Ohio, Wooster. Oklahoma, Stillwater. Oregon, Corvallis. Pennsylvania, State College. Rhode Island, Kingston. South Carolina, Clemson College. South Dakota, Brookings. Tennessee, Knoxville. Texas, College Station. Utah, Logan. Vermont, Burlington. Virginia, Blacksburg. Washington, Pullman. West Virginia, Morgantown. Wisconsin, Madison. Wyoming, Laramie.

It will be seen that several States have more than one station. There are in all nearly 700 persons employed at these stations and at least four bulletins are issued during the year from each one. Most of them issue a dozen or more. The work done by the station workers is quite varied—much of it being devoted to the investigation of local problems. For example, the stations in Ohio, Maine or Wyoming will be most likely to study the peculiar problems which affect the farmers of those particular States. As a rule, it is possible for anyone to obtain bulletins. As we shall not be able to repeat this list soon we advise interested readers to keep a copy of it.

HORSE SHOE FARM NOTES.

SEEDING WITH BUCKWHEAT.—Buckwheat is, on good ground, a rank grower, and shades the ground so completely that grass and weeds have but little chance to make any growth. It is called a good crop to clean land with on this account. The grass seed has to be sown out of season, too late for Spring rains and too early for the natural time in which Timothy usually sheds its seed. Where considerable care is taken to prepare the soil the seed is covered with a smoothing harrow, and the surface firmed with a roller, the grass seed will germinate well; but if it survives the dry weather and dense shade of the buckwheat it will be very small and tender when Winter comes. By Spring many of the plants will be killed and thrown out by the frost. It is the exception, and not the rule, to obtain good results from seeding with buckwheat in this section. The chances are much greater if the buckwheat is sown very thin, but this reduces the yield and leaves no profit. Not more than one-third to one-half bushel per acre should be used. Use a grain drill, sowing with only half the teeth, making the rows 14 inches apart. On rich land which will force a good growth of the grass after the buckwheat is drawn off, and where there will be little danger of heaving out by frost in the Spring, there is a fair chance of success. On poor land, dry hard clay or land hastily prepared, the failure is quite sure. The yield of buckwheat will, if not ruined by frost, be disappointing if the sowing is delayed much longer. The early sown of late years has given much the best yield.

"NATURE'S" CARE.—The notice in THE R. N.-Y. to "Stop planting and care for what you have in the ground," applies to late-sown buckwheat, except when Nature wishes to upset our theories. Mr. Collins, page 457, thinks "Nature plants only twice the thickness of the seed. If deep the plumule is slender and weak." Nature, it seems to me, is very slack in her planting, and has no rule. Not one seed in a hundred, planted by Nature, grows. She blows a little dust over them, they drop into a deep crack, water carries them into deep mud, and here and there one escapes destruction. I do not know where he got the rule given, and think it is man's, not Nature's. Anyway, it will not hold good for all seeds. Potatoes planted deep, four times their diameter, will show a thicker, stronger stalk, and give a larger yield, than shallow planted. Bulletin No. 191, Cornell, just out, gives many results on the question of deep vs. shallow planting, which should interest potato growers. The results obtained by Mr. Stone's efforts are very instructive, and from long acquaintance with him I know they are *actual results* to be depended upon, not fixed up, as is sometimes done, to make a big showing. Send for it and study it. Beet seed sown by this rule would under very favorable circumstances germinate, but for best results should be an inch deep, and if very dry deeper yet.

C. E. CHAPMAN.

MODERN CRANBERRY CULTURE.

ESSENTIAL PRINCIPLES OF THE BUSINESS.

How to Start a Bog.

PART III.

SUMMER WORK.—The first Summer after a bog is set out it should be gone over once every week, and all weeds and bushes pulled up and carried off. For a month after setting the water should be kept as high as possible in the ditches. If the vines are slow in starting a teaspoonful of fertilizer should be dropped upon each hill. Keep the weeds and brush mowed around the bog, and if possible have a road around it.

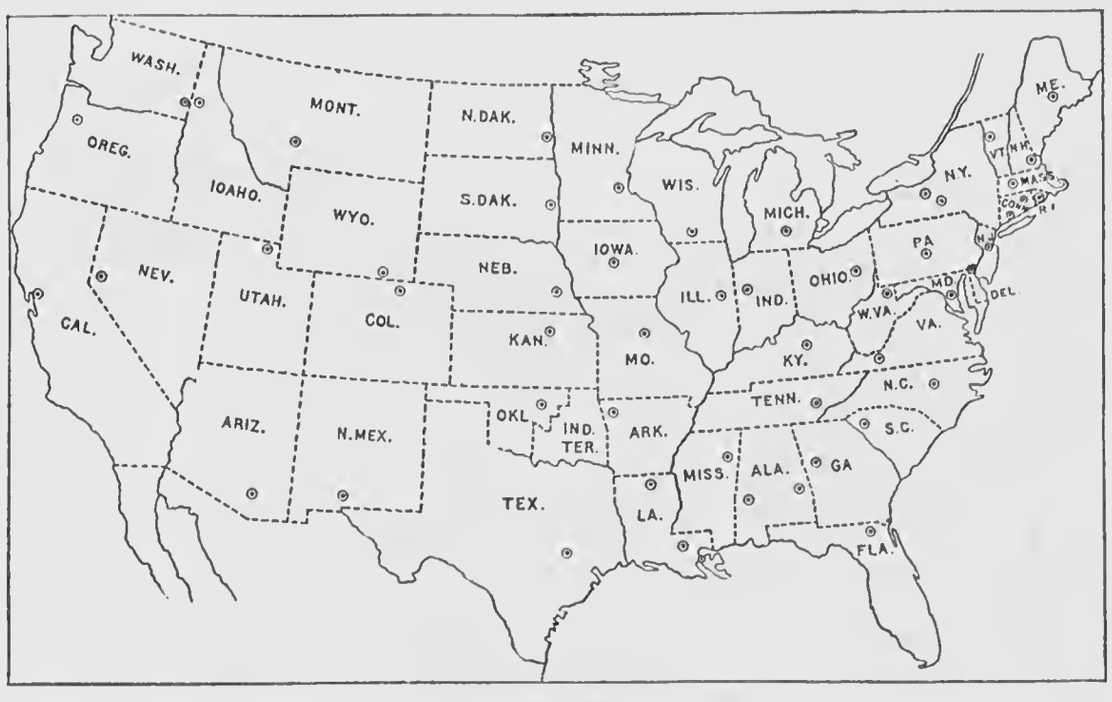
INSECTS seldom trouble a bog until it is fully vined over and not always then. The insects that do the most damage are the fire worm and the fruit worm. The fire worm, (so called because the vines destroyed by it look as if they were burned) eats the roots of the vine, causing the tops to turn red and die. It is no use to try to kill this insect by spraying with poisons, because the poison will not reach it. It is eating away under the sand, safe from all liquids but one, and that is water. Nothing but flowing will put an end to the fire worm, and the water should stay on all Winter. Fortunately, the worms are slow workers, and they generally confine themselves to a small portion of the bog. They do not get on every bog, and a grower might be in the cranberry business 20 years and never be troubled with them. In a region where there are but few bogs they are seldom, if ever, seen. The fruit worm gets into the flower and grows with the fruit. A good spraying with Paris-green, hellebore or tobacco just before the flower opens, will prevent it from doing any damage. However, as insects do not trouble young vines, a beginner in cranberry culture need not trouble himself about them.

THE SECOND YEAR the vines ought to spread considerably, and in the Fall there should be on each acre a few barrels of very handsome berries that will bring, if properly packed, the top market price. Where the crop is small, it is a good plan to ship in crates, each one holding a bushel, and to ship as soon as picked. The work of screening and packing can be done out of doors, and at night the fruit is covered with a canvas. It is well to build a cranberry house the third Summer, and its size should depend on the number of acres of bog. Where the crop is likely to be a thousand barrels a house that is 20x30 feet, with 14-foot posts and a square pitch roof is large enough. There should be plenty of windows in it for ventilation, and it should be set on a piece of ground high enough so that water will run away from the house. A building of this size can be built cheaply and by anyone who is at all skilled in the use of carpenter's tools. A good way to do it is to lay two sills (4x6 is large enough) lengthwise and then put on 2x6 floor stringers 16 inches apart on centers. Floor this all over, and then set posts and studs on top of floor. Where the windows are going to be, leave room enough between the studs for the sashes. In this way it saves the expense of window frames. The doors should be sliding ones, and hung on the outside, one on the front end and one on each side. There should be a sliding door on the front end of the upper story, so that empty barrels and boxes can be put up there from the outside. The steps from the lower to the upper story should be in one corner, and hinged at the upper end, so that they can be hung up out of the way when not in use. As there are likely to be from 30 to 50 barrels of berries per acre the third Fall, it is necessary to make some definite arrangements for screening and packing.

MACHINERY.—Of course nearly all growers use a separator, which is a machine fan and dropping arrangement inside that will throw out dirt, stones and rotten berries. This machine works with a crank, and is turned by hand. If the berries are dry—and by the way, berries should not be picked when they are wet with dew or rain—a man can run through 30 or 40 barrels a day, which is enough to keep two screens going. When we speak of a screen, we mean one that is large enough for five women to sit around and look over the berries. This means one screener at the mouth of the screen, who is called the runner, and two other screeners on each side. Most growers build their own screens, and they are easily made of narrow strips of pine nailed one-fourth of an inch apart on the bottom of a three-sided frame that is six inches high, tapering from four feet wide at the top to eight inches wide at the lower end, and 10 feet long. This is set up on horses with the lower end just a little higher than a barrel, and the upper and wider end about eight inches higher still.

PICKING AND SHIPPING.—Many growers ship their berries in ventilated barrels, and where early shipments are made this is a good idea, but if berries are to be held for late shipment they should be put by the pickers into bushel boxes and piled up, dirt and all, in the cranberry house, and left untouched until ready to screen for immediate shipment. They should have plenty of air and, unless it is freezing, doors and windows should be left open.

It is better not to harvest with a scoop until the bog is fully covered by the vines, which it ought to be by the fourth year. The first year a scoop is used many berries will be dropped on account of long runners which will pull up and tangle in the teeth of the scoop. But the berries can be picked up and after the harvesting is over the runners can be raked up, cut off and carried to the upland. Don't be afraid of injuring the vines, for such a pruning does them good. The next Fall there will be plenty of new shoots that have grown, and they will be all uprights. By raking out the runners each Fall after harvesting, a grower will soon have nothing but upright vines on it, and he will have good crops that can be easily scooped. Cranberries will not grow on runners, and a scoop will not work in them, hence, it is best to get rid of them as soon as possible. There are many objections to the scoop on the prineiple that it injures the vines. Of course a seoop will pull up runners, but runners are the deadheads of a cranberry bog. They will not bear fruit, and they cover fruit from the sun, so that it is likely to root before ripening, and if there is anything that will pull them up it is a good thing. Heavy vines will not bear heavy crops, but thin vines, if all uprights, will bear large berries and plenty of them. What is more, the sun has a chance to shine down among them, and ripen the fruit early and evenly.



MAP SHOWING THE LOCATION OF EXPERIMENT STATIONS. FIG. 213.

ODD POINTS.—When intending to keep cranberries a few weeks before shipping, it is well to pick them a little green. They will ripen in the boxes, and will keep much better. Handle them as little as possible, and never screen them until ready to ship. Where the bog can be flowed in Winter, it is a good plan to flow as early as the middle of November, and keep the water on until the first of April. When vines are seven or eight years old, sprinkle about half an inch of sand among them in the Fall after harvesting, and spray with the juice of tobacco stems in the following Spring. To get rid of old vines and start a new variety, it is best to burn them off, resand and then set out the new kind. If the vines are old and do not bear fruit, and it is desirable to continue the same variety, mow them off like grass, and in two years the bog will be covered with new shoots. There is much more that might be written about cranberry culture, but I have done all I intended, and that was to give a description of practical methods now in vogue among growers, for the use of beginners. A little experience will teach a grower more than one could tell him, and I hope that these articles will give him a start in the right direction.

F. A. MAKEPEACE.

HARD CONDITIONS AND COWHORN TURNIPS

A Short Sermon from Two Rival Texts.

The account of successful reclaiming of hopelessly poor soil by means of the Cowhorn turnip (R. N.-Y., April 20, page 286) will prompt many readers to experiment with that unusual crop. The conditions of our New England farming allow of no particular staple crop, unless it be the grass crop. With $20 hay the past two seasons, what an incentive, could the farmer have had timely foresight, and been prepared to sell hay! Still, the hay must be kept and fed out if fertility is to be kept up. The problem is, how both to keep the stock and still sell the hay, and the solution is to double the yield of grass, producing the former amount from half the area, and keeping the other half in such a rotation of tilled crops as will support the stock. Each successive Spring we read the same lesson from the published crop outlook: "Grass light except in fields newly laid down." The average mowing land is yielding but about one-third of a full crop, according to our newer knowledge of grass culture. To sell the hay from one-half the arable land and Winter-feed the usual number of stock from the other half, would transform many a hopelessly encumbered farm to a condition of prosperity, bring back the owner's courage where it is now on the wane, and make a sweeping change for the good in the history of families.

Quoting my other text from the Brevities in the same issue, "The best work most of us do is squeezed out of us by the pressure of hard conditions." Now, the hard conditions of New England farming have brought about the abandonment of many worthy farms, it is true, but have not materially injured those who stuck manfully by the farms. Easy prosperity has been the rock upon which so many wrecks have foundered. I live just out of a town which a dozen years ago was reveling in "prosperity," so-called; the results of unwarranted profits in the manufacture of cheap shoes. Of course consumers were paying too high a price for these goods; and can that be called a true prosperity which cast a blight upon neighboring rural life? Neither the farmer's sons nor the new comer from country districts could be coaxed to remain upon the farm. The high wages induced extravagant living, resulting in corrupted morals and a large death rate among the young men. The population became unfitted for the hard conditions which speedily followed a readjustment of wages, often to one-third the former rate.

New England farming has suffered by the contrast presented by overpaid industries in other lines, rendering the farmer dissatisfied and robbing the farm of its most energetic blood in many cases. But I cannot see how making the farmer's conditions harder can minister to his good. The farmer's prosperity is true prosperity. The dollar he takes is a clean dollar, while the overpaid factory worker's wage both defrauded the buyer of poor goods and wrought his ruin through town vices. Enlarge the farmer's opportunity to create new wealth, and we have a prosperity which prospers both himself and others. The average farmer is living with his eyes closed as to his true status, both as to the intrinsic honesty of his true wealth-creating labor and the degree of prosperity which attends his work. His children will be respected, both on and off the farm, to a degree in wide contrast with the town dweller, the average course of whom is downward, not always morally, but at least physically. The hope of the nation is the farm's prosperity. How to conserve fertility is the ever-present problem. To haul manure is arduous, and its expense may counteract all gains. The forces of nature work without wages, and they will create fertility if properly directed. What seeds to plant in order to allow Nature to enrich the soil is apparently the most pertinent farm problem. Will the Cowhorn turnip prove to be the efficient renovator of barren soils? If not, some other plant will, and its discoverer become a public benefactor.

F. W. PROCTOR.

APPLYING PARIS-GREEN TO POTATOES.

Seemingly in our efforts to destroy Potato beetles we have tried everything within the range of poisons, together with a great variety of methods of applying them, varying from a dusting box to a spray pump. Last season we hit on a little device that proved singularly simple and very satisfactory on the whole. Two pieces of heavy coarse burlap cloth, each about two feet square, are used, the edges being gathered up in the hand, as is shown in Fig. 212. A piece of this burlap taken in each hand, and carried over each row of potatoes, will readily enable one to cover a small patch with plaster and Paris-green in a comparatively short time. Last season we used the prepared plaster and Paris-green, such as is sold commercially, with very satisfactory results. If one wish to prepare his own plaster, it can be readily done, and used just as satisfactorily as the commercial stuff. In using dry plaster it is commonly best to put on early in the morning, when the vines are damp with dew. It will thus stick better, and commonly proves more effectual in destroying the beetles. In case of rain directly after applying, I do not know that it will wash off any more readily than Paris-green applied in any other manner. We like to apply the poison just about the time the young are ready to put in their best work. Save in uncommon seasons we have succeeded in exterminating Potato bugs quite effectually at one plastering.

Shiawassee Co., Mich. C. P. REYNOLDS.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Raspberry Root Gall.

R., Degolia, Pa.—Can you tell me what is the matter with my red raspberries? They are not doing well, and have large lumps on the roots. Is there any cure? Give a full description of the disease if familiar.

ANS.—It is almost sure that root-gall is the disease which is preying upon the raspberry plants mentioned. It comes from spores which are in the soil where the berry bushes are grown. When the soil is so infested the roots are almost sure to become knotty from the galls which grow on them. There is no known remedy for the galls after they are once on the roots, except digging up and burning the bushes. No other raspberry bushes should be planted on the same ground until after several years of cultivation in other crops.

H. E. VAN DEMAN.

Driving Nails into Apple Trees.

G. L., Pittsfield, Mass.—Tell readers who are troubled with Apple tree-borers to drive a few nails in the trunk of their trees. If small trees use small nails. I discovered this several years ago, and have never published it in print. I cannot account for it, unless the rust of the nails in the sap of the tree does the business. It has worked with me in apple, cherry and plum. I discovered it by nailing a cleat on a cherry tree for my wife to put a board on for her plants. The tree was almost dead, but came to be a nice one.

ANS.—The plan of driving nails into fruit trees of various kinds, with the idea of preventing Pear blight, keeping off insects, and making them more productive, has long been tried by experimenters in a small way. There have been various statements made concerning the results of some most remarkable claims as to the efficiency of the work. Everything has a reason, and when we get down to the bottom of this particular matter we find that the rust from the nails has no chemical effect whatever upon the sap of the tree aside from that part next to it, nor does it either kill insects, such as the present correspondent supposes, destroy or prevent Pear blight, nor otherwise advantageously affect a tree or its fruit in any way, except that the injury to the tree does sometimes cause it to bear earlier or more abundantly than otherwise would be the case. Apple tree-borers are only kept out by putting some covering about the trunks near the ground, such as stiff paper, which prevents the laying of the eggs, and in the case of the cherry and the plum they do not have borers, so that the nails driven by our friend could not possibly have prevented them from getting in. There is undoubtedly some other reason for the borers not having attacked the apple trees mentioned. H. E. VAN DEMAN.

Chickens, Grass and Fruit.

J. R. F., Dayton, Tenn.—1. I would like to ask whether incubators are usually a success. What kind is best? Is it necessary to have brooders? Would one brooder be sufficient for 100 chicks hatched at once? 2. What are the best early apples and peaches for this climate? What is the best cherry for cooking? 3. The pasture I have for my cows is low land, and has become mostly wild grass. As the cattle do not like the wild grass, I have thought to put it in Blue grass. Does this thrive in low land? If so, what process will be best to get the wild grass killed and a stand of Blue grass?

ANS.—1. Yes, incubators are usually a success, I would not be without one if I expected to raise as few as 50 chickens. They are economical and very satisfactory, judging by the experience I have had with them, after bothering with sitting hens nearly all my life. There are many good incubators and very few poor ones. It is with incubators much as with sewing machines—their success lies largely with the operator. Brooders are necessary when the chicks are hatched without hens to care for them. Brooders are perhaps more difficult to manage than incubators, yet I have never had any serious trouble with them. One great benefit is that they do not give lice to the chicks as do nearly all hens. Brooders are made to hold from 50 to 500 or more chicks. A 400 size is the kind I have generally used, but the smaller sizes work just as well.

2. Among the best of the early apples are Red June, Summer Rose, Fanny, Primate, and a little later Jefferis. Of early peaches the Triumph, Sneed, Waddell and Dewey are all good. I would avoid all of the Amsden and Alexander type of peaches, because of their poor quality and proneness to rot. The best early cherry for cooking, that will succeed well in Tennessee, is Richmond, and for a late variety the English Morello, or the common Morello in case the former is not easily procured. 3. Redtop grass succeeds better on low land than most other kinds, and I think it more likely to last in the situation mentioned than Kentucky Blue grass. However, I have seen the latter doing well on moist lands in many places. The way I would proceed to reset to either of these grasses is to plow and cultivate the land for one year, and then seed in the ordinary way. I would sow about 10 pounds of each kind, and let them fight for the supremacy.

H. E. VAN DEMAN.

Using Paris-Green on Potatoes.

H. C., Connecticut.—What can you say about the best method of applying Paris-green for the Potato bug? If applied mixed with water, will it burn the foliage more than if applied dry?

S., Hilton, N. Y.—Will you tell me how to spray potatoes, and what mixture to use for bugs and blight?

ANS.—We use water spraying by means of the Eclipse pump and a set of nozzles which cover three rows at a time. This does rapid work and kills the beetles. The objection is that in showery weather the spray is easily washed off. It is hard to hit every hill or plant with any horse-power machine. We have used the Paris-green gun with pure Paris-green or with the poison mixed with flour or plaster. This work is rapid and accurate, as the gun enables one to put the green where it is wanted. The pure "green" is easily washed off by a shower, and it cannot be properly placed when the wind is blowing. The best time to use it is in the morning, when the vines are wet with dew. The dry mixtures of Paris-green in flour or plaster are most expensive and slowest to apply, but they stick better and give excellent results. With us the water mixture does not burn the vines seriously, but the "best" way for one would not be best for another.

How Much Growth for a Tree?

W. H. D., Midland, Mich.—We frequently see, both in farm papers and experiment station bulletins, a statement that organic and nitrogenous manure should not be used on fruit trees that are making a satisfactory growth, but that if the growth is not satisfactory some form of nitrogenous fertilizer should be used. Nowhere have I seen a statement of what is considered to be a proper annual growth, except in a book that was published over 50 years ago. My Japan plums made a growth of about four feet besides the laterals the year they were set out, and the year following Northern Spy apple trees made a growth of two to three feet, the Canada Red and some other slow growers did not grow more than one foot. Do these growths indicate an excess of nitrogen or a lack of it? All the trees have had all the wood ashes that it was safe to apply. How should the growth of a tree after it begins to bear compare with the growth prior to that time?

ANS.—There is a possibility of getting too much growth on fruit trees in cases where nitrogenous manures are freely used, whether they be organic or inorganic, but there is much oftener too little than too much of it used. The effect of nitrogen is to make a rapid growth of the plant or tree and to increase the size and prolong the season of growth of the fruit. But it also makes the fruit softer and more watery than is normal, and sometimes injures the flavor. I have also known an excess of nitrogen to cause the fruit to drop in its earlier stages. When a fruit tree is young it should grow much faster than when at bearing age. From three to six feet on some of the branches is none too much for the first five or six years of almost any fruit tree, but a part of this should nearly always be cut back annually in order to give proper form to the tree. In the case of the peach this pruning back is very essential, that there may be plenty of new bearing wood constantly on the tree. It is not so important with the plum, pear and apple. An apple tree that is not making an average of one foot on the terminal branches evidently needs stimulation. Good tillage and perhaps manures should be applied at once. Wood ashes make one of the very best of manures for orchards. I would think that apple trees making two or three feet of growth are not needing more nitrogen. H. E. VAN DEMAN.

Wood Acids in a Chimney.

A. N. B., Marshfield, Vt.—Who can tell us how to fix a chimney so that we shall not be troubled with creosote? Our chimneys come together in the attic, only one going out. One bricklayer tells us that the slant is the cause of the trouble, but a neighbor has a chimney which goes straight up, and he is troubled the same as we are. We must lay over our chimneys this Summer, and we are anxious to prevent the trouble if possible.

ANS.—Wood consists of some combustible matter which is filled with cells or spaces in which water is held. The sap of wood is simply this water, having organic matter of which the new growth of wood is made dissolved in it, and the sap passes from cell to cell from the roots until it reaches the top twig of the tree. Green wood, freshly cut, has more than half of its weight of water in it, and when it is well seasoned, and as we call it "dry," it still has one-sixth of its weight of water, so that when wood is burned this water is changed into steam, which goes off with the smoke into the chimney. Wood also contains a special acid known as pyroligneous, or burned-wood acid. This consists of some of the carbohydrates of the wood in solution in water. The fact is, that to a certain extent, in burning, the wood is distilled; and the smoke, with considerable steam and other vapor, in a condition of intense heat, goes up into the cold chimney. These are the facts as regards the wood. Now all vapors are condensed by cold, and changed to liquids. So the heated air going up into the cool chimney is cooled, and the vapors and gases in it are condensed. The pyroligneous acid, especially, is condensed, and along with the water in the vapor is deposited with some of the unconsumed but burned woody matter on the walls of the chimney or stove pipe, and, of course, this liquid matter—black and acrid in odor—must run down and find some way of escape, which is generally to the bottom of the chimney, where it flows out and makes trouble. Or it will escape through the joints of the stove pipe, and run down dropping to the floor, and causing trou-

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bic and indignation to the housekeeper, who is apt to blame the innocent builder of the chimney unjustly. All this being thus, what is to bc done about it? It is evident that the short straight chimney affording the easiest and quickest outlet for the smoke and hot air, with the contents of both, will be the least troubled by this deposit or condensation on the inside of the chimney, and that a bending flue, by arresting the passage of the hot air with these vapors, will be subject to most of this trouble. But the difference will be very little except in long chimneys. What is the remedy? This is simply to burn only dry wood; to have the chimney so made as to afford the strongest possible draft; a straight one is plainly the best; and if it is impossible to stop the current of this pyroligneous acid and water, have a receptacle made in the inside of the chimney like a trough, to catch it as it runs down the inside, and dispose of the accumulation at convenient intervals. There is very little if any trouble with dry wood, and to have it so it should be cut in good season and well dried before the Winter.

H. STEWART.

Diseased Lilac.

A. F., Troy, N. Y.—Will you tell me what to do with a diseased lilac bush? This Spring was the first it blossomed; now the main trunk of the little tree exudes gum, and the trunk seems split open. One of the branches seems dead. What is the trouble and what the cure?

ANS.—The lilac has few diseases, and it is not easy to assign a cause for the trouble without an examination of the diseased part. The best treatment would seem to be to cut away all dead branches and scrape out the split portion, dressing it with shellac, varnish or some quick-drying paint to keep out moisture until healing takes place. If the plant does not show signs of recovery by next year it should be rooted out.

Raising Basswood from Seed.

F. A. P., Dudley, Mass.—Give the best method of saving and planting seeds of basswood, caring for and transplanting young trees.

ANS.—Basswood or linden seeds are generally stratified in moist sand as soon as gathered, and kept until the following Spring. The box containing the seeds and sand may be kept in a moist cellar or buried a foot below ground in order that they may not dry out. The seeds and sand should be put in in alternate layers of an inch or more in depth. When the ground is fit to work next Spring the seeds should be thinly sown in drills, covering a scant half-inch in depth. The drills may be 20 inches apart if hand cultivation is used, or three feet for horse tools. Pack the soil well above the seeds with a board, or by treading on the row. When the seedlings come up they may be thinned to four or five inches apart, and kept well cultivated and free from weeds during the growing season. At the end of the second year they may be transplanted eight inches to a foot apart in similar rows. Basswoods are also grown from cuttings of soft or new wood, also from layers. Named kinds are grafted on stock grown from seeds of ordinary varieties.

Cure for Peach Curl.

Reader.—I see reference made to the fact that some peach growers in western New York will have good crops in spite of the "curl" disease. How do they account for this?

ANS.—With the cold, wet weather of last Spring it was absolutely necessary to spray and spray early in order to check the curl leaf. I never sprayed so thoroughly as last Spring. Everything was blue, the trees, the ground, the men, the horses, and the sky. Many laughed because I sprayed, as they said, in the Winter, but my advice would be to spray the first warm day in early Spring. I left 18 trees of Elberta without spraying, just to experiment, and every leaf curled and dropped, while the trees by the side of them that were sprayed are healthy and in fine condition. I think I get the best results by using six pounds of vitriol and eight pounds of lime to 50 gallons of water. In this section there are but three orchards besides mine with a prospect of a large crop, and the owners, like myself, attribute their success to early spraying. JAY E. ALLIS.

Orleans Co., N. Y.

An Apple Orchard on Rock.

J. M'C., Salem, N. Y.—I intend to begin to set out an apple orchard for commercial purposes. Will you tell me what Winter varieties you would prefer for this section? They will be on dry slaty soil with rock close to the top of ground. Is there any objection to starting the trees from seed where they are to remain? If not, what variety of apple would it be better to use for seed, and at what age should they be grafted?

ANS.—We all know that it is possible to grow to maturity healthy trees on just such land, but whether it is possible to raise an even, healthy and satisfactory orchard on such a location, is another question. If the rock is of a hard, flinty kind, and shows little sign of the weathering influences which we like to see, and besides this crops up unpleasantly near the surface, I would not advise using it as an orchard site. On the other hand, if loose and shaly (rotten stone, so-called) and I wanted an orchard badly, and had a market for the fruits, then I should plant it. The ground ought to be thoroughly torn up previous to planting. It ought to be cropped with something which would leave it in a mellow condition. Good big holes, not niggardly pockets, should be provided for each tree. If the holes cannot be made big enough with a shovel and pick, then blast them out. The point is that after trees become established on a site like this, they usually get along well. There is unquestionably quite a large amount of unaccounted-for plant food and moisture in these rocky soils. Then, what about varieties? I would not plant on land of this kind varieties that take half a generation to come into bearing. It is probable that you would not be able to give it the best cultivation. It is altogether likely that borers would take advantage of the situation, and the general outlook would be that trees would, more or less, have to get along themselves. With this thought in mind, I would plant hardy, early-bearing sorts. I should plant Wealthy because it bears well, is a vigorous grower, and is very productive. It is a Fall apple. I would plant Ontario for the same reasons; this is a Winter apple. I would also plant Ben Davis and Fameuse. I do not think I would set out Spy, Baldwin or Greening.

There is no objection to starting an orchard from seed, if one can do it, but the thing is almost practically impossible. I feel quite sure that if a man did get an orchard in this way, he would have vigorous, healthy trees, and probably the foundation of a long-lived, productive orchard. But the difficulties in the case are that a seedling apple is a tender thing, and a small plant the first year. Unless carefully tended during this period, it is likely to get "knocked out." The same thing is true of the bud or graft which is inserted or ought to be set in the seedling at the collar the second year. These young and tender things, needing special care, can best be looked after in the nursery. Here is where intensive cultivation can be given and a vigorous frame produced in a short time. I believe in a general way that these rocky lands can be utilized for fruit-growing purposes if the grower uses intelligence and judgment in planting and caring for his trees. Clover could be grown, cut and used as a mulch in lieu of cover crops and manure. Wood ashes could probably be secured in Washington County, and these could be used to supplement the nitrogen of the clover. I know of a large orchard enterprise which has been started in southwestern Quebec, not very far from the New York line, on land similar to that described above. The trees were planted five years ago, and are doing remarkably well, but they have had good care. JOHN CRAIG.

Ithaca, N. Y.

The Soap Fraud Once More.

G. S. B., Mays Mill, N. Y.—I inclose a wrapper from a bar of soap sold by an agent who has been through this town. He has samples of carpets, lace curtains and sets of dishes offered as premiums. His way was to sell a box of 100 cakes of soap for $5, promising that another agent would follow in two or three days with the premiums, but he never came. The soap is the most worthless you ever saw.

ANS.—The wrapper is a dirty, poorly printed sheet describing "Gold Medal" soap. We consider it surprising if any reader of THE R. N.-Y. has been fooled by this common fraud. We have described it again and again. The soap is usually worthless, if not injurious to clothing, and the rascals who sell it have no idea of giving carpets, curtains or any other premiums with it. They are simply after the $5, and we regret to say that they often get the money. Why farmers who are shrewd enough in dealing with friends or neighbors will permit such slick-tongued rogues to get their money away from them is one of the great mysteries of farming.

The "Deserted Farms" of New England.

E. L., Leeds, N. D.—I have read in the papers several times about deserted farms in the East, and wondered whether a farm could support an industrious family. Our boys have longed for a farm since they were babies, and so have I, but the hard Winters and the naked prairie have kept us in town. If we could get a farm where nature was more generous in beauty, I would gladly change home.

ANS.—Most of the so-called "deserted" farms are in New England. It is possible for an industrious family to make a living on such a farm, but fair capital will be required, and the members of the family must possess the ability to be satisfied with country life. These farms were "deserted" for various reasons. In most cases the old folks found it impossible to carry on the business of farming—the boys and girls having moved away. Some of the desertions date back to the Civil War, when the boys went away to serve as soldiers. They were killed at the front or moved West or South after the War, leaving the old folks alone. The soil of these farms is usually strong, but very stony. The old pastures and many former meadows have grown up with brush or small trees, and would have to be cleared once more. The buildings are usually in fair condition. The roads are fair. A few years ago some of the New England States started to advertise and sell these farms, and they succeeded so well that few are now left. Write to the following parties for information: Hon. J. W. Stockwell, Boston, Mass.; N. J. Batchelder, Concord, N. H.; Dr. G. M. Twitchell, Augusta, Me.; James F. Brown, Stonington, Conn.

SPECIAL PRICES 24 Days' Trial. Guaranteed. Double and Combination Beam. **OSGOOD** SCALE CO., 103 Central St. Catalog Free. Write now. BINGHAMTON, N.Y.

"Don't you think it some risk to send your money to Jones of Binghamton, N. Y., for a scale before you see it?" "No, sir. I came from Broome County, and know his reputation." "Well, what if the scale isn't right?" "He'll make it right, and there'll be no dodging, and Jones he pays the freight."

PAGE

ASK ANY HORSE

which fence he damages least, or least damages him when he runs into it. He will say, "PAGE."

PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

Beautiful Strawberries in 1902

We can furnish you with pot-grown Strawberry Plants that will bear a full crop of fruit next year. Celery and Cabbage Plants. Full line of Fruit and Ornamental Stock. Write at once for our Summer and Autumn catalogue. It explains all. Fruit packages of all kinds for sale at low prices. T. J. DWYER & SON, Orange County Nurseries, Box 1, Cornwall, N. Y.

Plants—Pot-grown Strawberry, Celery and Cabbage. Thousands of them. See our price-list. CALEB BOGGS & SON, Cheswold, Del.

STARK TREES SUCCEED WHERE OTHERS FAIL. Largest Nursery. *Fruit Book Free.* Result of 76 years' experience. STARK BROS., Louisiana, Mo.; Dansville, N.Y.

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Peach, Apple, Pear and Plum. Write for prices, giving quantity wanted.

HARRISON'S NURSERIES, Box 29, Berlin, Md.

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for the **October Purple Plum** and **Green Mountain Grape.** The largest New England nursery. 500 acres. Strong stock of all fruits, ornamental trees and shrubs. Catalogue free.

STEPHEN HOYT'S SONS, New Canaan, Conn.

Ginseng Stock for Sale. My own growing. Orders booked now for delivery September 1. Send stamp for catalogue. GEO. MUDGETT, Johnstown, Pa.

SEED WHEATS Description of best and poorest. Many varieties entirely ruined. Write to-day. Smith's Wheat Farm, Manchester, N. Y.

CELERY and Cabbage Plants only $1 per 1,000. 100 Strawberry Plants in pots for $1 Crimson Clover Seed of our own growing. Catalogue free. SLAYMAKER & SON, Dover, Del.

Celery and Cabbage Plants for Sale

Leading varieties, carefully packed with moss in baskets, f. o. b. here. 250 plants at 60c.; 500 for 90c.; 1,000 for $1.50. Special price on quantities over 6,000. Cash with order. Plants ready 15th to 20th of June. WOODLAND FARM, Canastota, Madison Co., N. Y.

CRIMSON CLOVER SEED—New crop; home grown. Now ready. R. S. JOHNSTON, Box 100, Stockley, Del.

Home-Grown Crimson Clover Seed.

Choice Japanese Buckwheat. Seed Wheat and Winter Oats. J. E. HOLLAND, Milford, Del.

Delaware Crimson Clover Seed

Send for sample and prices. I am not a dealer, but offer only choice seed of my own growing. R. H. VAN DYKE, Dover, Del.

PEDIGREE CRIMSON CLOVER SEED.

Eight successful years in succession. Only 60 miles south of Cleveland, Ohio. Try it. Price, $6 per bu.; $1 80 per peck. Sacks, 8c. per bushel. A HURSH, Burton City, Wayne Co., Ohio.

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CRIMSON CLOVER In sowing this valuable clover it is important that American seed is used. We supply genuine Delaware seed only. Our special circular describing uses of Crimson Clover is mailed free. **HENRY A. DREER, 714 Chestnut St., Philadelphia, Pa.**

The New Horticulture

BY H. M. STRINGFELLOW.

We do not hesitate to say that this is one of the most interesting books on horticulture that ever was printed. Most reading farmers have heard of the now famous "Stringfellow Method" of planting trees, but few understand clearly what it is. This book tells the whole story in clear-cut, forcible style, which all can understand. Not only is the theory of close root-pruning carefully explained, but the general principles of gardening and fruit-growing are discussed. Mr. Stringfellow is a practical gardener, and he gives his own experience. We commend the book to all without reserve. New Edition, paper covers, 50 cents.

THE RURAL NEW-YORKER, New York.

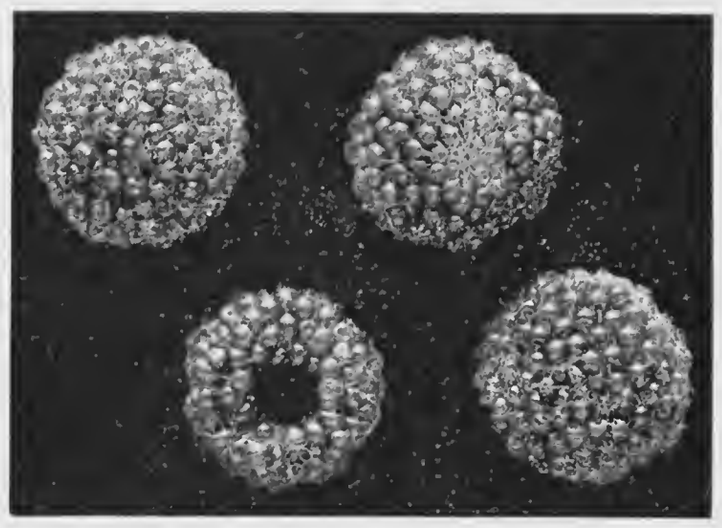
Ruralisms

NOTES FROM THE RURAL GROUNDS.

CHICKENS AND TOBACCO.—Observant readers of this column may have noted a lack of comment on the progress of the greenhouse chickens mentioned on page 212. It is not agreeable to record failure where success should be confidently expected, but an examination into the conditions will usually reveal an error or omission accounting for the lack of success. Those chickens failed to thrive after the first week. Their appetites grew less, until the daintiest food was regarded with aversion, the growth was checked, the skin became dry and harsh, and the feathers staring. They seemed to be feverish, and developed an insatiable thirst. There was generally an idiotic appearance, if such may be attributed to a chick, while the usual apathetic lassitude was varied by sudden aimless starts. A general paralysis soon followed, and deaths began to occur. As the care and conditions of temperature seemed quite ideal the case appeared rather puzzling until the similarity of the symptoms to nicotine poisoning in young victims of the cigarette habit was noted. The benches of the greenhouse were crowded with tender plants, and the dull weather had favored the extension of green-fly or aphids so that repeated night fumigations of tobacco stems were needed to hold the pests in check. While the chickens were always carefully removed during a fumigation, and not replaced as long as there was a visible trace of smoke, enough nicotine saturated the soil and air seriously to injure the chicks and keep them in a state of semi-intoxication. As soon as provision could be made elsewhere they were removed, and quickly recovered appetites and interest in life. With the exception of those manifestly too far gone before removal, all made good recoveries, but they remain stunted in growth. All who have closely noted the appearance of a youth addicted to tobacco will recognize the portrait. It has been well settled by medical authorities that tobacco is always injurious to young and undeveloped animals, human or otherwise, though it may be either indifferent or beneficial in a slight degree to the adult. The mother hens were not visibly affected in this case, though the nervous system of the chicks was disordered to the verge of paralysis. Tobacco in any form is a filthy thing, and it would be well if its consumption could be confined to its legitimate use as an insecticide. We shall try hydrocyanic gas next Winter. Its use is attended with some danger and inconvenience, but at any rate the lingering and disagreeable odor of tobacco may be avoided. During the Spring of 1900 there was less necessity for fumigation, and the broods of chickens under the benches got on splendidly, with no loss.

BUSH FRUIT PROSPECTS.—The various bush fruits bloomed well, and generally set a good crop, though the early species, such as currants, gooseberries and Elæagnus were adversely affected by the frequent rains at the flowering period. The fierce heat wave now on at this writing, July 3, has hurried the ripening of blackcap raspberries, and badly scalded exposed gooseberries. The Triumph gooseberry bush mentioned on page 498, 1900, yielded eight quarts of large and perfect berries. It has been planted four years, and is just getting into good bearing condition. Blackberries, red raspberries and dewberries all show great promise, but their ultimate performance greatly depends on the amount of rain they will get before ripening. Strawberries were sharply cut by the heat, the berries scalding in a wholesale manner. The local markets are already bare of this popular fruit, making, together with the late beginning, one of the shortest seasons on record. Jesse B. Rogers, the veteran Jersey horticulturist, who has excellent sources of information, estimates the strawberry crop of the State at a 40-per-cent yield, sold at a 60-per-cent price, which is far from a cheerful condition. In our local market fair prices for good berries were obtained all through the season, but berries of this character were scarce.

THE GOLDEN MAYBERRY.—This interesting offshoot from the Chinese Rubus cratægifolius is again bearing a moderate crop. It wintered with but little loss of wood, and bloomed profusely, but the rains evidently hindered pollination. It ripens here during strawberry time, and is naturally later this year than last from the low temperature range of the Spring months. The berries are large and handsome, bright clear yellow in color, with a sweet and sprightly flavor. The seeds are very small. Fig. 213 shows some good specimens from our plants, taken natural size. There is no doubt of the desirability of this berry if it could be grown in sufficient quantity, but as we have only known the plants to fruit twice in seven years it can be imagined they are of no practical value where Winter temperatures approaching zero may be expected. The Mayberry ought to be thoroughly tested in the South, where it may prove really useful. Prof. George B. Groff stated in a paper read at the last meeting of the Pennsylvania State Horticultural Association, that the Mayberry is the only bush fruit he heard of in a two years' residence in Porto Rico. It had been introduced locally soon after its dissemination in 1894, and was spreading with some rapidity out of the bounds of cultivation. The Porto Ricans prize it highly, and find a ready market for all the berries that can be had. It is possible that several other tender Oriental species of Rubus may prove desirable in this tropical Island, as our northern berries do not thrive under such conditions of uniform high temperature. W. V. F.



THE GOLDEN MAYBERRY. FIG. 213.

Starting and Growing Rose Cuttings.

When shall I cut and how start and care for rose cuttings? When is best time to put limbs of roses down to root to get layer plants? J. F. D.

Denmark, N. C.

Very few roses root well from cuttings made from wood grown in the open air. The everblooming varieties included in the Tea, Bourbon and China classes are most easily propagated in this way. The cuttings should be made from branches that have lately bloomed, or still in flower, and may have two or more buds or "eyes." They should be cut smoothly with a sharp knife, about half of the foliage trimmed off, and immediately inserted in wet sand. The sand should be very firmly packed and freshly watered. The hole for the cutting may be made with a small stick, the cutting inserted, leaving but one bud and leaf out, and the sand packed with the same tool. The propagating tray or bench should preferably be under glass, where it can be partially shaded and protected from drafts. The cuttings should be frequently sprayed on bright days, and the sand kept constantly moist. If all goes well the cuttings will begin to throw out roots in about six weeks, when they must be potted off singly, using pots not more than 2½ inches in diameter. Cuttings from wood grown under glass always succeed best under similar conditions. Rose branches may be pegged down to form layers at any time in Summer, but July and August are probably the best months, while branches are still growing.

Manuring Asparagus in the Fall.

The asparagus crop has been a short one in this section this Spring. I have a plantation that has not produced very heavily. How would it do to apply a good dressing of stable manure when the cutting season is over, and cultivate it in during the Summer? Would it not result in stronger shoots next year? Do you think excessive manuring might tend to increase the rust on the plants? H. C. C. M.

Milford, Conn.

It is usual to fertilize asparagus in late Winter or early Spring, spreading the manure and cultivating it in as soon as the soil may be safely worked, but on the principle of better late than never it will do immense good to fertilize immediately after cutting. Asparagus roots deeply, and it requires considerable rain to wash the soluble constituents of manure deep enough to be available, so that a late fertilization may not be as effective the first growing season as an early one, though some surplus may remain until the following year.

LONG ISLAND NOTE.—The Pea louse arrived here about the end of June this year, and the intensely hot weather further hindered its breeding work, so it did not do any harm. The best pea for quick maturing, good crop and healthy growth was the Excelsior. It matured 10 days earlier than the long-vine peas sown the same day. The weather from about the middle of June till July 2 was dry and intensely hot around here. Potatoes will feel it most, although small carrots and late beets were injured. Since the rains large areas are being planted with cabbage. Fields of tomatoes set out "on water" during the hot spell died. All about here there were dozens of people planting still on the Fourth. Early corn is looking well and promises a good crop. The only grain grown about here is a piece of rye for bedding. Some sow millet after early peas. Corn and stalks are the chief home-produced horse feed. A. C.

Nassau Co., N. Y.

SOME "CLARK" GRASS.—I went to see George M. Clark's grass field last week and was rather disappointed in not finding 16 acres of grass instead of about five or six. The grass that was across the brook on the north side of the field was very fine; in fact, it all looked well. I had a long talk with Mr. Clark in regard to his grass, and have come to the conclusion that the average farmer cannot raise as much grass as he can, and have my doubts as to whether it pays with fertilizers at $40 per ton. I tried his treatment last Fall on four acres with his kind of tools, and followed out directions as nearly as I could; bought the same kind of fertilizer as he uses, and my grass is about one-half as tall and as thick on the ground as his was. I looked at mine one day and his the next, and in one corner of the lot I sowed Canada wood ashes, and it looks much better where the ashes were sown than where soda, potash and bone were used. If anyone can tell why that is so I should be glad to know

Carmel, N. Y. T. F. K.

R. N.-Y.—The only guess we can make is that your soil needs lime. The ashes contain about one-third lime, and we do not see what else could make the difference.

For the land's sake, use Bowker's Fertilizers. They enrich the earth.—*Adv.*

EVAPORATOR "The Granger" for fruits and vegetables. $3, $5, $8. Circular EASTERN MFG. CO., 257 South 5th St., Phila., Pa.

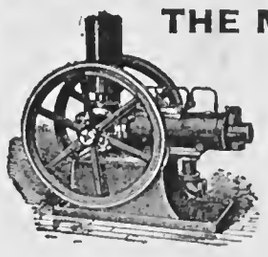
SHAFT HOLDER and ANTI-RATTLER. Patented. Keep shafts in upright position when not in use; no weight on horse's back; prevents rattling; only 6 inches long; can be put on by anyone in 10 minutes; warranted; $1.25 per pair, charges prepaid. Territory for sale Big inducements to Agents & Dealers Mention this paper when writing. Queen City Shaft Support Co., HARTWELL, OHIO.

How to Drain Land Profitably. On every farm there is probably some land that could be made more productive by underdrainage. Properly drained land can always be worked earlier, and more profitably. The ROUND TILE best and most economical way to drain is explained in the book, "Benefits of Drainage and How to Drain," which is sent *free* by JOHN H. JACKSON, 76 Third Avenue, Albany, N. Y.

BALES 15 Tons a Day HAY

The Gem Full-Circle Baler, lightest, strongest, cheapest baler. Made of wrought steel Operated by 1 or 2 horses. Bales 10 to 15 tons a day. Sold on 5 days trial. Catalogue free. Address GEO. ERTEL CO., Quincy, Ill.

OUR "HANDY MAN" GASOLINE ENGINE works a walking beam pump jack, grinds, shells, cuts feed, separates cream, churns, cuts bone, etc. Easy to disconnect and put on belt. Engine 1½ actual h. p. Easy to learn, easy to operate, most economical. Gasoline supply tank. Engine and all, on one base. Send for our Illustrated catalog. WEBSTER MANUFACTURING CO. 1097 W. 15th St., Chicago, Ill. N. Y. office 38 Dey St., N. Y. City.



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CHARTER Gasoline Engine USED Any Place By Any One For Any Purpose *Stationaries, Portables, Engines and Pumps, Hoisters* Send for Illustrated Catalogue and Testimonials. State your Power Needs. *Charter Gas Engine Co., Box 26, Sterling, Ill.*

RUBEROID THE POULTRY-HOUSE ROOFING

As a water-proof covering for Poultry-Houses, RUBEROID has no equal. Keeps the houses cool during the warm weather, and warm in Winter, and the chicks dry and comfortable. The sun cannot melt it.

THE STANDARD PAINT CO., 100 William Street, NEW YORK.

LEGGETT'S CHAMPION DRY POWDER GUN. A Dry Sprayer No Water or Plaster. *DUSTS TREE, BUSH OR VINE.* Two rows of potatoes as fast as you walk, wide or narrow planting. Agents wanted. Catalogue and spray calendar free. *Leggett & Brother,* 301 Pearl St., New York.

SLUG SHOT Kills Cabbage and Other Worms in the garden safely and cheaply. SOLD BY SEED DEALERS. For Pamphlet address B. Hammond, Fishkill-on-Hudson, New York.

Hope Farm Notes

FARM NOTES.—The first early cabbage was ready to cut June 26. As I have stated before, these cabbage plants were started outdoors in Florida on January 20. They were never covered, but were transplanted twice and shipped to us by express late in April. They were thick and stocky plants, and in a better season would have been much earlier. This cold and wet Spring has held everything back. I do not think it will pay to bring the plants from the South. The express cost is heavy, and will eat up a good share of the proceeds. The early cabbage crop with us is not usually profitable, as there is too much competition from the South. The late cabbage crop pays better, especially when it can be stored and kept well. One thing, however, is sure. This early cabbage is "as tender as a chicken." For some reason which we cannot explain our "Clark" grass fields turn out to be 70 per cent Red-top. The Timothy is very thin, yet we are sure that we put in the full quantity of Timothy seed. As they stand, these fields are quite disappointing. The Timothy may come in later, and I try to be hopeful and believe that the second crop will be heavier. It tries a fellow's philosophy, though, when your neighbor, under the old plan of plow and harrow once, sends you to grass by getting twice the yield. . . . I begin to get a little nervous about hay and fodder since the first cutting of that "Clark" grass has turned out so poorly. Our corn was planted late, and is still short, though it will come on. We must have more fodder corn in as soon as possible. I shall also try to get an acre or so of Early Amber cane in after the rye. All such fodder run through our shredder will make fine horsefeed. . . . . On July 6 we plowed a strip from which Crimson clover had been cut and broadcast Thoroughbred flint corn—covering with the Acme. It is a new thing for me to practice such broadcast seeding, and I will not advocate it for others. What with the rain and the heat we are behind, and must jump things in and let them care for themselves as much as possible.

HOT WEATHER.—The great "hot wave" of June and July, 1901, will long be remembered. It began on Saturday, and grew worse and worse with each hour. It was bad enough out here among the hills, but in the city the heat was fearful. Sunday was a scorcher. The fierce sun beat down on the hills and baked them into solid bricks. How our folks did bless the good old Dutchmen who, years ago, planted the great cherry trees in front of our house. These big fellows held out their green arms, and as the breeze blew through them, boxed with the sun and warded off its fiercest rays. The big orchard near the house also showed great cooling depths of shade. The trees are great, ungainly things, of varieties long out of date. They are too close together, with great spool grafts and twisted trunks. Yet with all their defects, we love them for their shade if for nothing else. They made life endurable during that fearful scourge of heat. The air was cooled beneath them, and then crawled down the hill past the house, keeping up a perfect little breeze. The heat rays struck our hillside like strokes from a sword, and man and beast were driven panting to the shade after a few hours of it. Monday and Tuesday were hotter yet, but on Wednesday a heavy shower cooled off the air.

THE GLORIOUS FOURTH dawned bright and smiling. We are Americans at Hope Farm, and independent enough to declare our principles when the time comes. Our folks have not yet declared their independence of the flesh pots of Egypt, and so Aunt Jennie's first proposition was "What about dinner?" Hugh and Charlie had killed and dressed a little pig. He was too big to crowd whole into the oven, so Charlie was appointed a committee of one to barbecue him. A big hole was dug out back of the shed, and shortly after breakfast a roaring fire was started in it. When this fire burned down to coals irons were put across the hole and piggy (sliced in two) was put on them. He soon began to sizzle and brown in a way to make your mouth water. Charlie turned him from time to time and kept him moist with vinegar and butter. It was necessary to build a new fire and put more coals under piggy, but after about three nours he was roasted in every scrap of his little body from snout to tail-tip. In addition to piggy, Hope Farm was able to furnish peas, lettuce, cabbage, turnips, beet greens, new potatoes, cherries, raspberries, eggs, chicken, onions and currants, but we were content with peas and potatoes. The women folks set a table outdoors under the great grapevine, and the whole 15 of us sat down and sampled Charlie's fireworks with full hearts and stomachs. We concluded that this country is a goodly place to live and work in. We feel grateful to the hard-headed old patriots who hung out for their rights and thus hung up the flag and gave us a country.

SENTIMENT AND BUSINESS.—Our country was lively territory during the Revolution. Washington's army camped for several days within three miles of our place, and all through the War this region was a fighting ground. The stone part of our house was built then, I think, but I am not able to say which room was occupied by Washington! We have a 10-pound cannon shot which was dug out of my neighbor's farm, and bullets have been frequently found. The Dutch farmers of that time were thrifty folks, and they didn't purpose to let a redcoat get the benefit of their rye and hay if a bullet would stop him! I looked at my cannon shot on July 4 and realized that this dull and rusty iron is of very little use now except to call up a sentiment. It was energy, moral force and hard-headed character that painted blue and white stripes over the red coat. We had about a ton of hay down, and an order for a crate of cherries. These goods couldn't be delivered by delivering a Fourth of July oration, so we left the rusty iron ball and went out into the sun to finish our work. That dinner didn't leave much in the stomach except a chance for repairs, so we made a light supper of bread and cheese and milk. There were a few fireworks to let off in the evening, and after the last skyrocket faded out the Hope Farmers "turned in" without a burn or a bruise, to rest for the duties of another day.

A WORLD BEATER.—Nellie Bly gave us a surprise the day before the Fourth. There was a baby horse trotting about the barnyard—a perfect picture of her mother. Every Hope Farmer except the Madame made a run for the barnyard before tasting breakfast. Charlie claims that it is a fine colt. I have never raised a colt before, and don't know what a fine one should look like, but this one seems to me all legs. I can understand that legs are necessary in order to hand down a legacy of speed, but my judgment would be that Nature has overdone the business in this case. The father of this colt is Alcyoner. He has trotted a trial mile in 2:15, and has brothers who have done their mile in 2:08. Nellie Bly is lively on her feet, and this youngster ought to be able to go for the doctor when part of a minute means the difference between life or death! Perhaps we have the coming record breaker in this colt! "But what do you want such a colt for?" says the Madame. "What good will it do? It seems like a good thing to raise a strong, faithful farm horse like old Frank, for he will do his share of the world's work—but of what use in the world's economy is a high-strung nervous trotter?" I fear the Madame is not much of a "sport." After all, there is sense in what she says, yet thousands of people have an honest desire for a horse that can "go." The "go" and nerve give greater value to a pound of horseflesh than the stout muscles and heavy bones of the worker. I am raising horseflesh to sell. Nellie and her colt market part of our hay and grain. Nellie is a worker and her daughter will be able to do something besides trot a fast milc. The colt is for sale. Its name is Maria. I wanted to name it after the Madame, but she turned the honor over to her mother.

ODD MENTION.—After celebrating the Glorious Fourth we were ready for business. Friday looked like the beginning of clear weather, and so Charlie began to cut hay. By noon the clouds began to gather in the west, and our hay weather certainly went to thundering. What a storm it was! The rain fell in floods. Saturday kept it up. Our hay and many acres more on nearby farms was well soaked. Ought to have cut it earlier—you say. Perhaps, yet our season is at least 10 days late for everything except strawberries. . . . The cherries on one large and one small tree sold for $10.58. Two other big trees had at least $15 worth of cherries on them when this thunderstorm came. In 48 hours rot had nearly finished them. I never saw $15 go quite so rapidly, and I have spent some money foolishly, too. Score another point against cherry culture. In spite of all the "rot" which nature writes about it I shall keep planting cherry trees. . . . Among the communications received lately is the following advertisement:

"Wanted, a steady man to look after a garden and milk a cow who has a good voice and is accustomed to sing in the choir."

I will say right off that I could not fill the bill. I should probably ruin the choir. H. W. C.

Some Household Notes.

SORGHUM.—I tried this last year, sown in rows about 30 inches apart, and let it grow like fodder corn. It grew to be from five to 11 feet high. Cattle and pigs were very fond of it, even the poultry would eat the pith greedily. Of course, it was frozen in Winter and became sour. If one could take it to a mill and get from it sap as we get cider from apples, we might have a cheap, pure, domestic syrup. This, I am told, is done in some of the Middle and Southern States.

[R. N.-Y.—Yes, this is a regular practice in some localities.]

A SUGGESTION.—In our family we are very fond of mushes made from the various grains. Oatmeal of different kinds we can get, and generally good cornmeal and hominy, etc., but in this country of wheat production we could not get good cracked wheat. The boasted Pettijohn's is never fresh when we get it, and costs 15 cents for two pounds. As a trial I sent to the flour mill for some clean wheat, and put it through the coffee mill—now used only for this purpose—twice or thrice according to taste. This meal cooked in boiling water 20 minutes, then set back to simmer for half an hour with an occasional stir, makes, with good milk or cream, one of the most delicious dishes which come to our table—and costs three cents for two pounds. There is both benefit to the buyer and money to the seller in grinding grain fresh as coffee is ground in the store. Here is a chance for an invention. A. C.

Nassau Co., N. Y.

SEEDING GRASS ALONE.—I have for a few years past been trying a modified form of Mr. Clark's method of grass culture with good success. I have no Cutaway harrow, but use ordinary farm implements such as plow, roller, spike-tooth and Acme harrow, fitting the ground as I would for any other crop, using from five to six quarts of seed per acre, and from 100 to 200 pounds of good fertilizer. I tried four pieces on different parts of my farm last Fall, all of which cut very heavy grass, some of which was too thick. I have had very indifferent success when seeding with wheat and rye, but have never failed when sowing grass seed alone. J. T. B.

Plainville, N. J.

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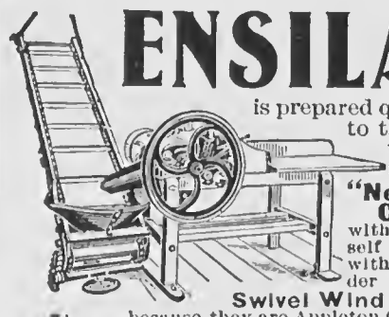
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THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, JULY 20, 1901.

THE secretary of the Five States Milk Producers' Association announces that the annual meeting will be held at Binghamton, N. Y., Tuesday, August 20, 1901. The object of meeting in August instead of October is to give the Association an opportunity to develop plans for better Fall work. The local sections are to meet August 6, and the route unions August 13.

*

THE Agricultural Department now has the power to examine and certify dairy products exported from this country. Of course anyone can export such goods without certification, but it is thought that the Government stamp or label will be an advantage. It ought to be. The Department has spent a good deal of money in learning what foreigners want in cheese and butter, and how they want it packed. Its label on the package ought to mean something—and it will.

*

NOT long ago we received a package of strawberry plants and a box containing insects from a reader. He said he had caught the bugs eating the plants, and he wanted to know right away what to do in order to kill the rascals. The insects turned out to be the common sow bug, while the plants had been injured by the white grub. Our friend saw the bugs running about the plants, and concluded that they had done the damage. It is not uncommon for men to be sure of the effect and then guess at the cause. Thus they get off the track in hunting for a remedy.

*

WE understand that dealers are still trying to tell eastern apple growers that the western apple crop is "large." We have secured what we believe to be the most reliable reports yet printed. These indicate a light crop in the sections which usually send a large surplus to the East. It now seems settled that the eastern crop will be short, and we certainly hope that growers will not give their crop away this year as some of them did last. Bear in mind another thing. The total amount of apples in sight is not the important factor. There were plenty of apples last year in some parts of the West, but they were not good enough to ship! It is the barrel of apples good enough to go away from home and make a living that affects the market!

*

S. W. ALLERTON, the author of the article discussed on the first page, makes this statement:

No man is entitled to a serious hearing on the subject of farming unless he proves his faith by his works. "Do you run a farm yourself and do you make it pay?" are the questions to be put to every man who has any advice to offer about farming. If he can't answer yes to both these questions his talk is mere theory and not worth listening to. If theorizing would raise crops we should have to go to college class-rooms instead of to the fields for grain on which to feed the world; but it won't, and there is no use in giving serious attention to any talk on this subject that is not backed up by sound results, of a broad, practical sort, which have been personally obtained by the man making the suggestions.

That is a little hard on our scientific friends, and it would bar out some of the most prolific farm writers in the country. Certainly, we believe that no man should attempt to describe practical farm matters unless he be, in some way, connected with the actual management and ownership of a farm. We also believe that the soundest agricultural advisers are those who make the farm pay. We would not limit the "pay" part of it to a matter of dollars and cents. Some of the most useful and truest things that ever came off the American farm could not be measured by silver and gold. We can conceive of a hard-working careful man so conducting his farm as to earn but a bare competence, and yet producing upon it the noblest crop for God and humanity. It may be questioned whether the small freeholder will get as much real good out of Mr. Allerton's experience as he would from the advice and suggestion of men who are "nearer his size." Few Americans will ever be called upon to manage 80,000 acres of farm land from a city office. We hope the number will always be limited for, in our judgment, the small freeholder, managing his own farm, and forcing from nature a living for his family has ever been not only the strongest character in our National history but the best and truest type of American citizen.

*

SEVERAL weeks ago we advocated a change in the system of allotting the lands to be opened to settlers in the Indian Territory. It seems that the Government has decided to try to prevent the wild grab for land which occurred when Oklahoma was opened to settlement. All would-be settlers are to make formal applications. These are to be entered on cards, and on August 6 they will be drawn at random, and the farms awarded according to the drawing. We consider this far more sensible than the plan which gives the man with the fastest horse and the best gun an advantage which does not belong to him. It is said that so-called "sooners" purpose to get in ahead, squat on the best farms, and hold them on the plea that the drawing is unconstitutional.

*

ATTENTION is called to the letter from one of Mr. Wadsworth's constituents on page 511. "Let up on him a little," says our friend. We shall be glad to "let up" when he agrees to befriend the Grout bill rather than antagonize it. Last year we began to call attention to the attitude of Congressman S. E. Payne. Mr. Payne expected to brush away such criticism as one would brush a fly out of a plate. Before long he began to hear from the dairymen of Cortland County. In the end he was glad to "square himself" by promising to vote for the Grout bill. The chairmanship of the House Agricultural Committee is a National office. Our friend on page 511 seems to think the voters in Mr. Wadsworth's own district will settle this matter. That is where he makes a mistake. We still advise farmers everywhere to write letters of protest to Speaker Henderson.

*

LAST year many farmers in northern New Jersey were horrified to find much of their wheat riddled by an unknown insect. Those who delayed thrashing until late found the grain badly damaged. The insect proved to be the Angoumois grain moth—not at all a new insect, yet like many others more dangerous in certain seasons than in others. The damage last year was heavy, and now is the time to prevent even greater damage this year. The worst trouble last year occurred in wheat held long in stack or mow before thrashing. This gave just the condition needed by the insect for development. The remedy this year is to have the wheat thrashed at once—this month if possible. After thrashing store the grain in tight bags well filled and tied up tight. Either this or put the grain in tight bins, and if it begins to heat at all use bisulphide of carbon at once.

*

LAST week the most reliable business newspaper in New York printed a dispatch from Kansas in which it was stated that Kansas farmers in Osage County held up a train containing men going to work in the harvest fields and compelled them to handle their grain! That turns out to be a regular "funny" story from Kansas. Secretary Coburn, of the Department of Agriculture, writes:

Nothing of the sort occurred in "Osage County" or anywhere else in Kansas. We haven't any more wheat than we can harvest, but, of course, properly to care for the 5,000,000 acres necessitates getting up before breakfast for a few days. "Osage County" has but 1,607 acres of wheat this year, and could harvest it in half a day, whenever ripe, without holding up any trains.

These funny men on the daily papers must make a living in some way, but it is a shame that they try to make it by telling lies about respectable people and honorable communities.

*

A CITY man went out to visit a farmer who lives among the hills—far from the centers of so-called civilization. They began to discuss public matters, and the city man was astonished to find that his country friend had strong and original thoughts and ideas about deep and living questions. He was a little careless in some of his statements of fact and figures, and Mr. Farmer caught him up at once and corrected him. This astonished the city man, but it should not have done so. The country is, as it ever has been, the place for deep and searching thought. In the city there is a constant rush and excitement. Men learn to read mechanically, rarely thinking about what they have read. Life in the city is so full of change that there is little opportunity for true thought. All this is different in the country. Life is slower and saner. Fewer thoughts are presented to the human mind, and the tendency is to analyze and search for the truth. The result is often an original view of the matter, crude and rough perhaps, but strong and enduring. Yes, the country is now as ever the place for sound and healthy thinking.

*

AN excellent law, which is being enforced to some extent in this city at present, is that which forbids spitting on the floors of street cars, ferryboats and the approaches to stations. The extreme penalty for this offence is $500 fine or one year's imprisonment, or both, but the fines usually imposed are much less, generally $5. While violators of this law still go unpunished, because people dislike to complain of offenders unless an officer be present, still enough have been fined to stop many who were making nuisances of themselves, and a marked difference is noted in the condition of cars and stations. No one could consistently object to a man's expectorating as much as he desires when in the fields or woods; but consideration for others should deter him from indulging in public places in a practice which is disgusting, and likely to spread the germs of disease.

*

THE Government crop report is more or less of a wet blanket. The wheat crop promises to be tremendous, but most other crops are short. We have never had much confidence in these reports of such crops as corn or potatoes. How can any human being look at a cornfield before the tassels appear, and tell how much grain it will make per acre? Who can look at potato tops and give more than a fair guess as to what the yield of tubers will be? We believe that the Government statisticians try to be conservative, but many people do not or will not understand just what their figures mean. Last year the official figures for the apple crop were far too high, and were used to the detriment of those who had apples to sell. This year both private and Government reporters agree that all crops except wheat are short. Now let us see if prices cannot be made long.

*

BREVITIES.

Who comes and kicks you hard and long
While you are fighting in the throng?
Who strikes you then? Your enemy;
You look for that from such as he,
You know his trick, and warned, you go,
Prepared to ward his hardest blow.
But when, in some great fight you stand,
With enemies at every hand,
And though you bravely face them all
They crush you backward and you fall,
Who kicks you then—your enemy?
No—that's the time when such as he
Can well afford to take a rest,
For others do the job with zest.
Your so-called "friends" will gather 'round,
And kick you when you strike the ground.

THE cigarette habit in chicks—page 502.

MR. B. WRIGHT is about the only man who will do right.

ADVICE to dairymen—talk for the Grout bill and eat more cheese!

HOW can you expect to make a hen lay without laying yourself out to learn her needs?

IF part of your hay must be cut late—feed that part to the horses. Early cut for cows!

YES. Too much of patting the boy on the back is the sort of son stroke that prostrates character.

WE are able to announce several strong articles on Porto Rico and the chances on the island for Americans.

HERE is a thing we've said before—it's old but good, you know, be positive with negatives and learn to answer No!

THE city of New Orleans will begin a warfare against mosquitoes by spreading crude petroleum over all stagnant wet places.

OF the nine justices of the United States Supreme Court one is white and two are colored. Nothing need be said concerning the complexion of the remaining six.

PROF. WOODS wisely says that the farm is not the place where men should look for wealth. Grant that, and yet the farm remains the best place on earth for those who love it.

THE Government statisticians are already figuring the total corn crop of the country down to odd bushels. What nonsense that is when, even now, much of the corn is barely knee high.

"How long do you work your men?" we asked of a farmer recently. "As long as the horses can keep ahead of them!" A strange way that—to measure a man's job by a horse's capacity.

OUR friend on page 500 restates the old notion that driving nails into the trunk of a tree will kill or drive away borers. It will no more do it than pulling out a hen's tail feathers will kill lice on her head.

A NEW ordinance recently passed by the council of Tarrytown, N. Y., reads: "Any owner of a dog found at large without being muzzled will be subjected to a $10 fine." This seems unfair class legislation; there are other citizens besides dog owners who ought to be muzzled at times.

CROP PROSPECTS.

JULY 4.—Apples small crop. Corn doing nicely and prospect good, although acreage is not as large as would have been with more favorable early Spring. Potatoes doing well; the usual crop planted of the late varieties. Wheat much better than last year; grass or hay medium crop. E. F. D.

Albion, Pa.

JULY 4.—Apples, poor outlook; so of most other fruit except berries. Corn excellent almost everywhere; a brisk shower this evening after an almost unprecedented hot spell, will make it jump. Potatoes, too, needed rain badly, though not seriously injured yet. The hay crop was grand, and put in the barn in fine condition. Wheat, ready for harvesting next week, is one of the best crops we have had for years. But the oats will probably be almost a failure owing to rust, which is not usual in our part of the State. W. T. S.

Chester Co., Pa.

JULY 4.—The outlook for apples in this vicinity is very promising, particularly the late Winter varieties. Until recently, apples have not been cultivated for profit in this county, except in the western part. There could be seen, however, on nearly every farm a small orchard, just large enough to supply the family with apples, but in later years several large orchards have been planted. Farmers are beginning to realize the fact that there is profit in the growing of apples, particularly the York Imperial, Stark, Ben Davis and other late varieties. In the northern end of our county can now be seen a number of very promising peach orchards. The coming crop promises to be one of the greatest ever known in this locality. Most of the owners of peach orchards have been thinning the fruit very hard to prevent the trees from breaking. I have been engaged at thinning nearly all of the month of June. The corn crop promises to be a very good one. Very much of the corn has been planted very late. I finished planting June 22. As to the potato crop, few farmers have planted more than enough for the family supply. Those that have been planted promise to yield a good crop. The hay crop here is much heavier than expected. W. A. B.

York Springs, Pa.

JULY 5.—As to this vicinity, apples will give no more bushels than there were barrels in 1900. Corn and potatoes not more than 35 per cent of our usual crop; hay, probably about 75 per cent; oats almost an entire failure; everything is nearly two weeks late. There will be some peaches; also plums. Yet, notwithstanding this dark outlook, we realize this can be changed into a fairly prosperous year.

Waymart, Pa. T. H. T.

JULY 5.—Corn and potatoes are about 10 days late in this vicinity. The rainfall has not been excessive here, but the weather being cool and cloudy has retarded these crops. They are generally quite weedy. Oats are rather short yet, and getting rusty. The hay crop promises somewhat better than last season, but the grass is patchy, and there are many more weeds than usual. Apples, pears and plums are an entire failure here. Strawberries few and inferior, but raspberries will be abundant. With a prospective decline in prices of farm products in general the average farmer will hardly be able to laugh and grow fat to any great extent, as indicated by the present outlook. G. W. S.

Wilmore, Pa.

JULY 5.—The outlook for apples is not very good. Baldwins will be a short crop, and they are the principal apples grown in this vicinity. Early apples are also a short crop. Corn is looking well so far, and the prospect for a large crop is good. Potatoes were doing well up to the last two weeks, when the Potato bugs appeared in large numbers, both the striped and the old flying gray bug. Great complaint among farmers of the destruction they are doing. The Rose bugs are also doing great damage to cherries, peaches, etc. Cherries are also rotting a good deal. Peaches a very large crop, but will not be first class, as the farmers do not thin, but prefer to prop the limbs. The wheat is the best we have had for years. Hay crop is also good. E. A. B.

Kittanning, Pa.

JULY 6.—Hay was a fair crop. Wheat is being cut and is an enormous crop, the best for years, and is entirely free from insects. Early sown oats will be an average yield, while late sown will be short, owing to the drought now existing. Corn is a good stand, well advanced, and fields are free from weeds. Potato fields are promising, although very much in need of rain. Some cow peas sown for feed, but in most cases as experiments. Apples will be a light crop, but peaches, pears, plums and quinces will be plentiful. E. R. D.

Barto, Pa.

JULY 8.—The prospect for corn and potatoes is good. Hay about an average crop. The outlook for oats is not encouraging. They are affected with a rust, blight or insect of some kind. It looks at present as though some fields will be from one-third to one-half crop. Apples a very light crop. Wheat about average. E. A.

Big Bend, Pa.

JULY 8.—The prospect for apples is not very bright; about half a crop. Peaches, plums and cherries set very full, but are falling badly. Leaf blight or rust has struck the oats in all this section on both high and low land; prospect now for a half crop or less. Potatoes and corn look well, and with favorable weather will make a full crop; hay an average crop. C. D. G.

North Point, Pa.

JULY 8.—Apples made a very poor set except a few early varieties, and during the wet cold weather in May the leaves curled and dried, the fruit grew rough, unsightly and one-sided. I think there will be very few good Winter apples. Owing to wet weather potatoes were planted late, but came up fairly well except on wet or heavy land, but the extremely hot sun the last two weeks has turned the lower leaves yellow, so that some growers have given up the hopes of a crop. During July 6 and 7 we had very heavy rain, and perhaps there is some show yet for the late ones, but none at all for early varieties, they being a complete failure. Corn, owing to wet weather, was planted far later than ever before in this section, but it came up well, and has grown fast during this hot weather. If we have a very late Fall it promises a fair yield, but if caught by an early frost as we have been some years, fully 50 per cent would be ruined. We have few silos in this section. Hay, wheat and rye have made fair yields. W. H. W.

Newtown, Pa.

JULY 6.—June's heavy storms with rains left cornfields in bad condition. Wheat cutting has already begun with the appearance of a good crop. Oat fields look well with the exception of some rust. Too much rain at planting time for potatoes; those that stood the wet spell are looking well. By all appearances we shall have a heavy hay crop. This is not much of an apple-growing vicinity, but all trees are loaded; some complain of them failing. No spraying done here. B. F. W.

Circleville, Pa.

JULY 8.—Apples promise three-fourths of an average crop; area of potatoes large, and looking fine. Considerable complaint of blight; ours are not so affected. Corn prospects very good; owing to late planting not so far advanced as usual. Watermelons and cantaloupes are looking fine. Orange watermelon and Emerald Gem cantaloupe are the only varieties grown; market is at home. This is my son's sixth year, and he has 18 acres; wonderful success; all high land, gravel with sand. Our 50 acres of peaches are fine; have been busy thinning for two weeks. Abundance plums very full; must be thinned. We are just finishing cutting our wheat, which is fine and heavy in general. Our hay crop was fine, but as a rule hay is a light crop, owing to drought last season. No clover, all burnt out last season, except old fields or those seeded the previous year. This year's Timothy and clover is very fine. We have just picked 16 bushels of Fay currants from a small plot, that are very fine; plenty of rain for all crops; excessive heat; a number of horses have died of sunstroke or heat. E. H. C.

Bowmansdale, Pa.

THE WESTERN APPLE CROP.

At present I have no definite information as to other than local conditions regarding the apple crop. The outlook here is not at all favorable. Some of the best market sorts did not bloom abundantly and some set but little fruit. The season has been very favorable for the development of scab, and we may expect much dropping of the fruit, and poor quality in that which ripens. Ben Davis, Maiden Blush and Canada Red are a total failure. Baldwin very irregular, but promise about 20 per cent; Greenings promise better than any other variety of Winter fruit. Peach growing is the principal industry in this locality. The outlook is for an abundant crop of this fruit. WM. MILLER.

Ohio State Horticultural Society.

I learn from the papers and other sources that there is about 50 per cent of a crop of Winter apples in Missouri and Illinois; I should think from 50 to 75 per cent of a crop in Indiana. However, Indiana does not cut very much of a figure in the Winter apple market, as we have few large commercial apple orchards in the State. In a recent trip east, through Ohio, Pennsylvania and western New York, I noticed the prospects for the apple crop are very poor. The frequent cold rains during the blooming period seem to have prevented fertilization; the older orchards for the most part seemed to be very much neglected, and badly damaged by the web worm and canker worm. It looks very much as though commercial apple growing would finally be carried on by the few who are willing to employ all the means that are necessary to insure regular and good crops.

Indiana. C. M. HOBBS.

My present opinion is that the apple crop in Indiana, Illinois, Missouri and Kansas will be light, but that Iowa, in the western apple section, will have a good crop. The bloom in many parts was light, and there is much complaint of insects and of fruit dropping. The Illinois product has been placed at a half crop by some, but I am satisfied that in my own section of northern Illinois (which is not a large apple growing section), the crop will not be over 25 to 30 per cent. I do not think that, as a rule, any section or orchards which bore a full crop last year will give a full one this, and many of them are almost failures. As the crop last year was called almost a record breaker, although much shortened in final results by wind, bitter rot and hot weather, it can readily be seen what this means for the crop this year, if true. L. R. BRYANT.

Princeton, Ill.

From the present conditions existing in the West, there will not be over 50 per cent of the average apple crop, and this takes into account both Fall and Winter apples. Winter apples alone are very scarce. I really do not believe that there will be over 25 per cent of an average crop of Winter apples; at least this is the present indication. Weather is very hot and dry; everything needing rain. We have had a very fair crop of small fruit, and currants and gooseberries have been extraordinarily full. Cherries have been a full crop, and at present time the shipments are very heavy from our locality to the Northwest. Varieties are Early Richmond, Wragg, Montmorency and Dyehouse. Plums promise a good crop. Grapes at least promise a full half crop. Pears and peaches, where planted, are making a great show, but with apples we are sorry to say this is an "off" year with us. M. J. WRAGG.

Iowa Hort. Society.

From my information to date, based on observation and reports from reliable sources, the apple crop will not go over one-half of a fair crop. Northern Missouri has about a half crop, and the apples are in good condition. Southern Missouri has more, perhaps 75 per cent of a crop. Kansas not over half crop, and Mr. Wellhouse, the president of the Kansas State Horticultural Society, said several days ago, that unless there was a favorable change in the weather inside of a week, the apple crop of Kansas was gone; that already they were burning and dropping from the trees. The greatest shortage in general over the West was caused by a great many Ben Davis not blooming, and it is our leading commercial apple. I have two sons who have 12,000 apple trees in commercial orchards, one-third of which is in full bearing, but they will not make one-fourth of a crop. Smaller orchards, with less Ben Davis in, show better. But I am confident that 50 per cent of a fair average crop is the outside limit for the West, and it is my opinion that it will fall below this. We never have the bitter rot in northern Missouri. N. F. MURRAY.

Pres't Mo. Horticultural Society.

I am not qualified to speak for any except this section, and even here the conditions in different localities, in different soil, with different varieties, and with orchards of different ages, are so diverse that it is difficult to give an intelligent report. The Ben Davis, which comprises a large part of the crop, set very light, and at no time has there been promise of more than a light crop of this variety. Young orchards are bearing better than old ones. The varieties which are most promising are Jonathan, Missouri Pippin, Willowtwig and Winesap. An unusual amount of twig blight developed this season. Some varieties, notably Jonathan, suffered more than others. It seems now to have run its course for this season. No more twigs are dying, and no injury to the fruit is apparent. We are suffering now from an unusually severe drought. There are rumors that farther west the apple crop is destroyed. In the Ozark region of southern Missouri and Arkansas the damage from drought and consequent dropping of apples is said to be very great. Here, I think, no great damage has yet been done to the apples by the drought, but it is a critical period for the crop, and if the drought continues much longer it is likely to prove disastrous. The fruit here is smooth and comparatively free from worms. Not much difference is apparent between orchards that were sprayed and those that were not. One things seems to be certain, however, and that is that no grower need to part with his apples for anything less than a good round price. W. D. C.

Edwardsville, Kan.

EVENTS OF THE WEEK.

DOMESTIC.—Judge Faweett, in Omaha, July 3, refused an application for an injunction against a Mexican bull-fighting exhibition, saying he was "satisfied that the bull fights will not present one-tenth of the brutality that is to be witnessed on a football field." . . . . The body of Abraham Lincoln, which has been reposing in a temporary vault at Springfield, Ill., while repairs were being made on the Lincoln monument, has been secretly replaced in the private vault within the monument. . . . . July 4, a big business building at Baltimore, Md., chiefly occupied by engravers and printers, was destroyed by fire; total loss $650,000. . . . . At McKeesport, Pa., July 4, five persons were killed by lightning, while seeking refuge under a tree. . . . . Revised reports of the recent flood in the Elkhorn Valley, W. Va., place the total loss of life at 36. . . . . Three masked men held up a train on the Great Northern Railroad at Hinsdale, Mont., July 3, broke open the express safe with dynamite, and escaped with $83,000. . . . . July 6, fire devastated the town of Versailles, O. Many people are homeless and destitute, and the loss is said to be over $500,000. . . . . A farmer near Williamsport, Pa., is under arrest, charged with sending through the mails a challenge to fight a duel. The offense is a misdemeanor in that State, punishable with $500 fine as well as three years in prison. . . . . Snow fell at Houghton and Calumet, Mich., July 6.

FARM AND GARDEN.—As a result of the drought and intense heat in central Missouri the stockmen and farmers are shipping out all of their stock which is in any way marketable. The farmers are becoming distressed and alarmed at the intensely hot and dry weather. The wheat crop, which was generally good, is all the farmers have to bank on. The oat and hay crops in most instances have been pastured and are gone, the pastures are as scorched and bare as in August, and the corn crop bids fair for a complete failure unless rain falls soon. The cornfields are well cultivated and the plant is in excellent shape to grow if it had the necessary moisture.

It is reported from Mattoon, Ill., that the Union Broom Supply Company has cornered all the broom corn crop of 1900, and raised the price to $120 a ton. Fifteen eastern manufacturers are said to be in the combination.

The Treasury Department, July 9, drew warrants aggregating $1,200,000, or $25,000 each for 45 States and two Territories, being the maximum amount provided by Congress in the act of August 30, 1890, for the endowment and maintenance of colleges for the benefit of agriculture and the mechanic arts. The money is the proceeds of the sale of public lands.

The twenty-seventh biennial session of the American Pomological Society will be held at Buffalo, N. Y., September 12 and 13, 1901. The details of the programme are being rapidly determined and promise a rare treat. Among those announced to speak are L. H. Bailey, J. H. Hale, S. D. Willard, L. A. Goodman, H. M. Dunlop, Geo. T. Powell, Wm. B. Alwood, Judge Fred Wellhouse and many other well known men. The fruit exhibit of the Society will be held in the Horticultural Building at the Exposition, and all exhibits of the Society will be eligible for exposition awards.

A severe outbreak of anthrax is reported in Bolivar County, Miss., affecting mules, horses and swine.

Government Weekly Report.

In the northern and central districts east of the Rocky Mountains, the heat continues excessive, and crops are suffering greatly. Early corn in Kansas, Missouri, Oklahoma and Texas is damaged. In Nebraska, Iowa and the Ohio Valley, some damage is reported, but conditions are not so serious. The Winter wheat harvest is practically finished in Kansas, Missouri and the lower Ohio Valley, and is in progress in the northerly sections. The coast States are having abundant rains, which have hindered harvest work. Spring wheat in the extreme north looks generally promising, although parts of Dakota are suffering from drought, causing the crop to ripen too rapidly, and large areas have been flooded in northern Minnesota. Oats in the central valleys are in bad condition. New England and New York are gathering a large crop of hay. Cotton conditions are improving, though the plant is still small and in need of cultivation. Tobacco cutting is in progress in the Carolinas. Apple reports continue unfavorable. The fruit is suffering from sunscald in Missouri and adjoining States.

Woman and Home

From Day to Day.

FINERY AND FUSS.

The women folks are fixin' for a weddin', an' the fuss
The house is in here lately's only equaled by the muss
Of bastin' thread a-lyin' on the floor an' silken scraps
A-slippin' to the carpet off the sewin'-women's laps.
The finery they're fixin for our daughter's weddin' day,
An' her wardrobe, called a trousseau, will be simply grand they say;
There wa'nt no women flyin' round as crazy as a loon
When I married Mamie's mother in the golden month o' June!

I cannot help a-thinkin', when these ruffled things I see
The women folks a-makin', which they say's a lingerie,
All pieced up with embroidery, an' tucked around with lace,
In her mother's clothes assortment them things never had a place.
Of course I like t' see 'em, an' it's satisfyin', too,
T' think our girl can have all such, like folks that's well-to-do,
But with much less we entered on a happy life's forenoon
When I married Mamie's mother in the golden month o' June!

They've been t' see the florist an' have all arrangements made
For flowers, palms an' orchids—quite a fancy price they paid.
A very stylish preacher's been engaged t' tie the knot,
An', all in all, it seems t' me that nothin's been forgot.
We didn't have no flowers, but our life's been one of bliss,
We had a plain ol' parson, whom the bride paid with a kiss,
But two lives were simply blended an' two hearts were set in tune
When I married Mamie's mother in the golden month o' June!
—Roy Farrell Greene in Brooklyn Life.

*

A FAVORITE dish just now at one of the popular New York restaurants is planked steak. The steak is covered with mushrooms, and served on a well-seasoned oak board, like planked shad, the board having a well to hold the juices.

*

BABIES' bibs are never very ornamental, but the new fichu shape is rather an improvement on the old one. It is triangular. Long muslin strips extend from two of the points; they are crossed behind, and are then brought around under the arms to the front, where they fasten at the lower point of the triangle with a bib pin.

*

EVERY day, on our way to the office, we pass a large fountain in City Hall Park, whose sparkling basin offers an irresistable temptation to the small newsboys and casual gamins these hot days. Whenever the coast is clear from intruding policemen, some of the boys begin to paddle in the tempting water, and on more than one occasion we have seen a small boy splash in, clothes and all, for a bath, his well-ventilated wardrobe, like a good Baptist, being all the better for total immersion. Of course, if a policeman turned up, he would escape from his unauthorized bath, and rush dripping across the park, pursued by the recriminations of his blue-coated enemy. During the recent hot spell one small boy decided on a really luxurious bath in the same fountain. It was about six o'clock in the evening, when the home-going crowd was thinning a little, and the boy undressed deliberately and splashed into the water with great content. The policeman was invisible, and the small law-breaker was luxuriating in fresh pink cleanliness when he climbed out of the basin and looked for his clothes. They were not there! Some envious miscreant had stolen them while while he was absorbed in his bath. The result was that a highly excited small boy rushed over to Park Row, in a classical absence of drapery which, while it would call out no remark in the tropics, was distinctly unconventional in New York. A kind-hearted workingman, noticing the boy's plight, took off his coat for a covering, and escorted the unfortunate out of sight with a promise to replace his missing garments. It seems likely that one small boy, at least, will abstain from surreptitious baths in future.

*

DURING the hot weather it is a good plan to cook the breakfast cereal the night before, turn into individual cups or molds, and serve cold the next morning, turned out of the molds, which should be moistened with cold water to prevent the cereal from sticking. A garnish of fresh fruit will often persuade a fanciful eater to take the cold molded cereal, when it would not be eaten hot. Scalded cream is very nice with it. If any cereal is left from breakfast, it may be used in gems or muffins; either wheat or oatmeal is excellent for this purpose.

3854 Tucked Skirt, 22 to 30 in. waist.

*

THERE has been an epidemic of green sun umbrellas lately; they look very well when carried with a blue gown, but when put to their legitimate use as a shade they have a most deadly effect upon the complexion. Of course they are really comforting to the eyes in a hot sun. There are some shades of gray-green, however, that are very cool and pretty, and not so trying to the complexion. It is a pity that more women do not study cool effects in their Summer wardrobes; violent shades of pink and red add to the grilling effect of the dog days. This season ox blood, a tint a few shades redder than watermelon, has been extremely popular in mercerized cotton, madras and dimity, both for waists and skirts, and its effect is decidedly heating. All shades of pink seem to have an enormous vogue.

*

LAST Summer it was the transparent shirt waist that aroused comment; this year women who like conspicuous styles for street wear are appearing in cotton gowns with low neck and elbow sleeves. The sleeve usually chosen is not puffed, but of the coat shape, ending just above the elbow, sometimes finished with a ruffle, but more often with a beading through which ribbon is run. It is quite likely that the undersleeves which have been in vogue have led up to this fashion, since nothing was easier than to discard them on the approach of warm weather. The necks are collarless, cut either square or round, very rarely V-shaped. These décolleté gowns have rather a startling effect when seen on the city streets. Two young women seen shopping recently wore gathered white muslin waists cut round at the neck, with short little sleeve puffs, the general effect being so strikingly like that of an old-fashioned cambric chemise as to cause a feeling of decided embarrassment on the part of more conventional people.

The Rural Patterns.

In the skirt shown, the tucks are laid in groups of two each and extend from the waist to within flounce depth of the edge of the skirt, where they are left free to form becoming fullness and folds and are slightly overlapped at the belt to give the perfectly snug fit. The back is simply plain, with fullness arranged in gathers. To cut this skirt for a woman of medium size, 8¼ yards of material 21 inches wide, 6¼ yards 32 inches wide, or 4¼ yards 44 inches wide will be required, with 13 yards of lace to trim as illustrated. The pattern No. 3854 is cut in sizes for a 22, 24, 26, 28 and 30-inch waist measure; price 10 cents.

The simple round yoke blouse is becoming to many figures and is one of the latest styles shown. The model shown is of pale blue louisine silk, with trimming of silver and black braid with waved edges; but the design is equally well suited to all washable materials. The round yoke is smooth and plain, while the lower portions of the waist are gathered and joined to the lower edge. The sleeves are in bishop style with narrow cuffs and the neck is finished with a curved stock collar that closes at the center back. To cut this waist for a woman of medium size, 3½ yards of material 21 inches wide, 2½ yards 32 inches wide, or two yards 44 inches wide will be required, with 12 yards of braid to trim as illustrated. The pattern No. 3858 is cut in sizes for a 32, 34, 36, 38 and 40-inch bust measure; price 10 cents. The wrapper shown also has the round yoke, and is comfortable and becoming. The pattern comes in the regular sizes, and costs 10 cents.

3858 Round Yoke Blouse. 32 to 40 in. bust.

3845 Round Yoke Wrapper, 32 to 42 in. bust.

When Phyllis Cans Peaches.

In the back yard is the big Crawford peach tree with its loaded boughs bending until they have to be propped up all round lest they break. Phyllis is canning and there she sits in her rocking chair on the back porch surrounded by eight sparkling glass fruit jars. In a saucepan—white enamel with a blue edge—she has ready a syrup made of sugar and water, the water used being only warm enough to melt the sugar, not hot enough to melt her. A willow basket full of the great crimson and yellow fruit is gathered, and she peels and packs the halves in the jars like shingles on a roof or scales on a fish's back. As each jar is finished she fills it with syrup from the blue and white saucepan. Meantime Phyllis is not getting overheated. She glances at the loaded peach tree, listens to the twittering of the birds in its upper branches and the sweet breath of the honeysuckle shading the porch adds to her pleasure, driving weariness and care far away.

When all the jars are done, she lifts the tray upon which she has placed them and vanishes into the kitchen. There she has ready the washboiler scrubbed and scalded. In it she arranges the jars and pours around them a few quarts of cool water. Of course the jars must not rest upon the bottom of the boiler or they will break. Anything may be placed beneath them so that it is not made of wood, as that flavors the fruit with the odor from its own boiling. Phyllis, as it happens, uses horseshoes, and that may account for her luck. The boiler is placed on the front of the stove and covered, after which she renews the syrup in the saucepan and places it where it will presently boil.

Half an hour, more or less, should steam the peaches soft. Phyllis pierces them with a fork to see. If done, the boiler is lifted to the floor. One by one the jars are set on the back of the stove, replacing the cover to the boiler each time, and filled with the boiling syrup, the rubber adjusted and the top screwed down. This is the only hot part of the task, and Phyllis—who hates the heat—can accomplish it in a few moments.

And Phyllis says that all the fruits she ever heard of—plums, apricots, pears, cherries, berries, can be treated exactly in this fashion, the time of steaming varying with the fruit from 15 minutes upward. The flavor is perfect. The fruit remains unbroken in the jars, and the syrup is clear and beautiful. It perfectly feasible to make sweet pickles in the same manner, the usual syrup of vinegar, sugar and spices being poured over them. If the jars when put into the boiler are cool and the water poured around them is also cool, they heat up gradually and the jars do not break. The amount of water used in the boiler need only be enough to give off steam, a depth of a few inches: Phyllis's washboiler may be replaced by any other covered vessel which permits of steaming the jars. Some of the steam cookers in the market will hold four jars at a time and do the work over a two-burner oil stove. Only remember that whatever receptacle is used, must be absolutely clean and closely covered.

Everything must be sealed with the usual care at the end, the jars kept scalding hot until the moment of putting on the hot tops, and the syrup used for filling kept at the boiling point. These precautions are necessary for any process of fruit canning, and if they are properly attended to, the steamed fruit keeps perfectly. Indeed, Phyllis learned this process from her mother, who asserts that it was the only one considered safe when the glass fruit jars came into use, and canning superseded preserving. —Table Talk.

With the Procession.

ALL one's life is music if one touches the notes rightly and in time.—Ruskin.

OUR life is always deeper than we know, is always diviner than it seems, and hence we are able to survive degradations and despairs which otherwise must have engulfed us.—Henry James.

LIFE, Love, Religion, these three are one. Tell me what you love supremely and I will tell you your destiny. Our philosophy and our morality must lead us at last to one thought—the idea of God.—Fichte.

YOU must love your work, and not be always looking over the edge of it, and you must not be ashamed of your work and think it would be more honorable to you to be doing something else.—George Eliot.

We mortals, men and women, devour many a disappointment between breakfast and dinner time; keep back the tears and in answer to inquiries say, "Oh, nothing!" Pride helps us; and pride is not a bad thing when it only urges us to hide our own hurts—not to hurt others.—George Eliot.

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Miss Jepson's Tedder.

The horse knew she was headed toward home, and jogged steadily along the road. It was late May, and the hills and fields were freshly green. Mrs. Jepson sighed contentedly. "How lovely it is," she said. There was a rapt expression on her pale, aristocratic face as her eyes rested on the scene before her. Miss Jepson was driving, and she too looked across the stretches of field and meadows to the hills beyond. Suddenly she stopped the horse with a jerk. She leaned forward, with parted lips and intent eyes.

"Mother," she said almost sharply, "do you see that?"

"What, dear?"

Miss Jepson pointed with one hand. "Right in this field," she said rapldly, "under that old apple tree. Don't you see? It is my tedder."

"Your tedder?"

"Yes. Don't you know, Mr. Tobey was the last one to have it, and he promised to house it for me through the Winter, and this is how he has done it." Her voice was indignant, and her eyes flashed. "I haven't been along this road since Fall. It was out there then, but he promised faithfully to put it under cover."

"Well," said Mrs. Jepson mildly, "perhaps he did, and maybe he's only just put it out here."

Miss Jepson turned back the lap-robe and handed the reins to her mother. "I can tell by looking at it," she said, and she stepped to the ground.

"Oh, don't go!" cried Mrs. Jepson. "Suppose Dolly should start?"

"You can stop her if she does," said Miss Jepson briefly, "and besides, she won't."

She let down the middle bar of the fence and crawled through. Then with a long swinging step she went across the field. One glance at the tedder was enough to show that it had been out all Winter. The tires were rusty, as were all the unpainted metal parts, and where the paint had been bright it was now dull and weatherbeaten. Miss Jepson regarded it intently. She was a person who made decisions quickly. She stepped between the shafts, stooped and lifted them, and then pulled. It started hard, but the field sloped ever so gently to the road, so it went along quite easily after the first few rods. When she came to the fence she had to stop and take down the bars, then she pulled the tedder through and it went down the little dip to the road with a bump and clatter.

"Oh, Mattie!" wailed Mrs. Jepson. "What will people think? What are you going to do? What will Mr. Tobey say?"

Miss Jepson made no answer. She was somewhat out of breath, and besides was busy putting up the bars. When that was done she wheeled the tedder to the back of the buggy and rested the shafts on the hind axle. "Pass me the hitch-rope, Mother," she cried in a matter-of-fact tone.

"You're not going to take it home?" Mrs. Jepson cried, as she weakly passed out the rope. Her face was anxious and careworn. "Everybody will see us, and they'll think we are crazy."

"There!" said Miss Jepson quietly, "I think that will hold till we get home." She got into the buggy, took the reins from her mother's hands, and spoke to the horse. Dolly had grown tired of waiting, so she started off briskly. The tedder followed with a tremendous clatter. The little projections on the wheels, as they passed over the hard road, shook the whole clattering structure. Mrs. Jepson tried to speak, but the noise drowned her words. At length a hill was reached and Dolly settled into a walk. This reduced the clattering so that Mrs. Jepson could protest feebly. "Why couldn't you have sent somebody for it," she said. "And why couldn't you let it stay? Mr. Tobey will want it this Summer."

"He never will have it," Miss Jepson cried hotly. "He's lied to me, and he sha'n't have it. I won't lend it to anybody. I'll have it in the front hall for a hatrack first."

They were passing a farmhouse now, and Mrs. Jepson shrank back into the farthest corner of the buggy. "I shall dle of mortification," she moaned.

"Don't be silly, Mother," said Miss Jepson. "It's milking time, so the men won't see you, and the women are getting supper!"

They reached home at length, and Mrs. Jepson was so worn out with nervousness that she had to lie down awhile before she could eat supper.

A day or two later Miss Jepson came into the house laughing. "Oh, Mother!" she said, "it is so funny. Mr. Tobey was going by and he stopped and offered me $15 for my tedder. I didn't see what he was driving at and refused. Then he confessed very abjectly that he had left it out all Winter and that now it had been stolen. He felt pretty badly about it, but when I told him that I was the one who had stolen it and that I was not going to let it any more, he was very much astonished and went off in a rage. It is strange that no one who saw us should have told him of it."

"I think you are foolish to refuse to let the machine," said Mrs. Jepson. "We are not exactly wealthy, and the money is quite useful; besides, the machine does you no good out in the barn there."

"I know it," said Miss Jepson soberly, "but I have said it." Suddenly she leaned forward and an eager, excited look came on her face. "Why, Mother!" she cried, "why couldn't I run the tedder myself? I know I could do it, and I'd love to, and Dolly doesn't have enough to do."

Mrs. Jepson looked at her daughter almost sternly. "You are not serious, Mattie," she sald. "I don't like to hear you speak of such preposterous things."

"But I am serious," Miss Jepson said earnestly. "Why shouldn't I do it? There would be no impropriety in it. We have a reputation for eccentricity; why not live up to it?"

"I am sick of the way we live," she went on vehemently. "Here I am, strong and well and able to do all kinds of hard work, and you won't let me. We have a girl to do the housework, because it is the proper thing, and I spend my time reading, and writing letters, and making calls, and sewing. I hate it all. I want to do something different. The only bit of liberty I have is in taking care of Dolly. You let me do that because both you and Margaret are afraid of her. I suppose you think that all there is to taking care of her is the feeding and watering. Did it ever occur to you to wonder what makes Dolly's coat shine so? It is because I spend so much time brushing her. You didn't know your daughter had such depraved tastes, did you? But the pleasantest hour of my day is when I am out working over the horse. Now I mean to go a step farther and take Dolly and the tedder and turn people's hay for them."

"Mattie!"

"Oh, Mother, dear!" cried Miss Jepson, with a sudden change of manner, "don't look at me so. If that is the way you feel about it, I'll never do it in the world. Forgive me. I didn't think you'd take it so."

"I never could hold up my head again," said Mrs. Jepson, with a little sob.

The June days came, and soon it was haying time and the clatter of the mowing machine was heard in the land. And then one morning Mr. Lang—the Jepsons' nearest neighbor—drove into the yard and made a call on Mrs. Jepson. Half an hour went by, and then Mrs. Jepson sent for her daughter.

Miss Jepson came into the room looking tired and discontented. Mr. Lang rose to meet her and shook her hand cordially. He was a handsome, elderly man, with a kindly, sympathetic manner.

"Miss Mattie," he began, when they were seated, "I came this morning to talk with your mother on a matter of business, but she has referred me to you. You see two of my hired men have left me, and there I have several acres of grass down and no one to turn it. I thought I might hire your tedder, but your mother tells me you have refused to let it any more. So I proposed that you might do me a great favor by taking Dolly and riding the tedder yourself. Of course I ought to have one of my own, and if you refuse to help me out, why, I shall have to go to the expense of getting a new one, I suppose. Your mother thinks perhaps you can be induced to do me the favor, so I want to see if I can soften your hard heart."

Miss Jepson was looking at her mother with dilated eyes. "Are you willing, Mother?" she asked.

Mrs. Jepson did not look up. "Certainly," she said with emphasis, while a slight color tinged her cheeks. "Mr. Lang has been too kind to us in times past for you to refuse to do a little thing like that for him."

Miss Jepson stood for a moment in speechless surprise, then her face lighted with interest. "I'll be over at your house in half an hour. I must put on my bicycle skirt first, and I think the tedder will need some oiling."

When she went out to the barn, Mr. Lang's horse was still in the yard. She looked at it quizzically, then a puzzled expression came into her face.

"I wonder how he did it?" she asked, as she reached for the oil-can. "Was it hypnotism, or something else? I don't believe it was hypnotism; Mother has too strong a will for that. No, it must have been the other. Well, why not? It is romantic, of course, and eccentric, perhaps, but what of it? I'm sure he is a dear, and she is too."

And so Miss Jepson smiled a kindly and indulgent smile as she harnessed Dolly into her tedder.

SUSAN BROWN ROBBINS.

Suggestions in Jelly Making.

"How do you get your jelly from the preserving pan to the tumblers?"

"For ordinary tumblers I use a china coffee cup with a good handle, which holds more than the quantity required for each tumbler, but which if dipped deep enough in the preserve pan to get filled to within an inch of the top will pour easily into the glass without waste. You can get exactly the measure after one tumbler is filled. A saucer or small plate held in the left hand and moved with and under the cup will catch all drops. In case you do not fill a tumbler full from the first dip add the requisite quantity immediately afterward, so that all will stiffen together, otherwise there may be a separation in the contents of the tumbler when it is turned out."

"What is your general rule for making fruit jellies?"

"Of course there are exceptions, but you will find the following a good rule: Wash and drain the fruit, put it into a stone crock or fresh enameled or granite ware pan; cover it with a large china plate. Set this vessel in another larger one of hot water; let it come to a boil and cook until the fruit in the inner vessel becomes tender. Do not let the boiling water get into the fruit. When it is tender enough it will begin to break. Now it is ready to pour into a freshly scalded flannel bag, which should be supported by tape loops at the top over a stick laid across two chairs and hung directly over a large china bowl or good enameled pan. The chairs may be lifted to a large table if more convenient; they may be reversed and the rungs used to support the stick instead of the seat or back, thus varying the height. It is usually more convenient to place the bag near the stove, so the fruit can be dipped out without moving the preserve pan or kettle. When all the juice has run through that will come willingly the pulp may be squeezed into another dish. If you arrange to leave the juice dripping all night you will find in the morning that there will be nothing to squeeze, but sometimes it is more convenient to hurry it up. Measure the drained juice, and to each pint allow a pint of white sugar and one-half of the beaten white of one egg. Mix together; put to boil rapidly; skim, but do not stir, as stirring will break the continuity and spoil the jelly. After 20 minutes try a spoonful in cold water; if it jellies it is ready to put into tumblers. Or try a spoonful on a cold saucer set on ice for a few moments. If it is boiled too long or too slowly it will be ropy; if too much sugar is used the jelly will be grainy. Ripe grapes jellied according to this recipe will require three-fourths of a pound of sugar to a pint of juice; so will apples and black currants. Fruit should never be used for preserving or jellying when gathered directly after a rain. It should be selected when just ripe and firm for the best results."

"Sometimes my jelly boils so fast it rises in the kettle, and I have to draw it back a little. Do you think it is hurt by moving it?"

"Not if you watch it and keep it boiling. Of course the fire should be looked after and a good and steady heat arranged for before putting the juice to boil. If the coals are high in the grate it will probably be necessary to set the kettle on the lid, possibly removing it toward the finish. The juice should be watched, and when one reflects that 20 minutes under ordinary circumstances is all the time necessary for the boiling it does not seem too much to devote to close inspection. The time is counted from the moment the bubbling begins. Sometimes you will find when fruit is very rich in juices that it will jelly in 15 minutes. I have often made currant jelly and found it to thicken as soon as the sugar dissolved and it came to a boil. There is no cause for alarm if fresh jelly does not become hard in a few hours. The jelly-maker has the greatest success who seizes the first jellying moment and saves thereby to her family two or three tumblers that would otherwise be lost in evaporation. Tumblers should be filled to the brim; there is always a slight subsequent shrinkage."—Chicago Record-Herald.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

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MARKETS

The Week's Quotations

WHOLESALE PRICES.

NEW YORK, JULY 13, 1901.

GRAIN.—Wheat and oats up two to three cents. Corn eight cents higher than last week, because of great damage by drought in the West.

Wheat, No. 2, red	—	@	76½
No. 1, Northern Chicago	—	@	75¾
No. 1, Northern New York	—	@	76
Corn, No. 2, mixed	—	@	57⅜
Oats, No. 2, white	—	@	37
Rye, No. 2, W'n, c. i. f., Buf	—	@	53
Barley, feeding	—	@	48
Malting, new crop	58	@	62

BEANS.

Marrow, choice, per bu	2 50	@	2 55
Fair to good	2 20	@	2 45
Pea, bbls., choice	2 10	@	2 12½
Red kidney, choice	—	@	2 25
White kidney, choice	2 10	@	2 20

FEED.

Spring bran, coarse	15 00	@	16 00
Spring bran, coarse	—	@	15 00
Winter bran	16 00	@	17 00
Red Dog	18 00	@	18 75
No grade flour	—	@	20 00
Linseed meal, ton	—	@	26 50
Cottonseed meal, ton	—	@	22 00

HAY AND STRAW.

Hay, No. 1	80	@	82½
No. 2	72½	@	75
No. 3	70	@	72½
Clover	50	@	60
Clover, mixed	65	@	70
Straw, rye, long	—	@	90

SEEDS.

Clover, per lb	9½	@	10½
Timothy, per bu	1 90	@	2 50
Flaxseed, whole, per bu	6 50	@	7 00
Millet, per lb	2	@	2⅛
Rape, German, per lb	3¼	@	3½
Sunflower, per lb	2¼	@	2½

MILK.

New York Exchange price at stations $1.21 per 40-quart can. This is the gross price, and from it must be taken cost of transportation and fees at receiving stations where such charges are made.

BUTTER.—Buying, both for speculative and home trade, is moderate, but receipts are light, and the market is in a healthy state.

Creamery, extra, per lb	—	@	19½
Firsts	18	@	19
Seconds	17	@	17½
Lower grades	15	@	16
State dairy, tubs, fancy	—	@	18½
Tubs, firsts	17½	@	18
Tubs, seconds	16	@	17
Tubs, thirds	14	@	15
Tins, etc	14	@	17½
W'n imitation creamery, fcy	16	@	17
Firsts	15	@	15½
Lower grades	14	@	14½
Western factory, fancy	—	@	15
Firsts	14½	@	14¾
Fair to prime	14	@	14¼
Lower grades	13	@	13½
Renovated butter, fancy	16½	@	17
Common to choice	13½	@	16
Packing stock	13	@	14

CHEESE.

Full cream, colored, small, fcy.	9⅛	@	9¼
White, small, fancy	—	@	9⅛
Small, fair to choice	8½	@	9
Colored, large, fancy	—	@	9
Col'rd, large, fair to choice	8½	@	8¾
White, large, fancy	—	@	9
White, large, fair to choice	8½	@	8¾
Common	7	@	8
Light skims, small, choice	7¾	@	8
Large, choice	7¼	@	7½
Part skims, prime	5½	@	6
Fair to good	4½	@	5
Common	3	@	4
Full skims	2	@	2½

EGGS.—The market continues badly upset. High-grade goods free from heat damage are scarce, and many dealers have been obliged to go to the refrigerators for supplies for the better class of trade.

QUOTATIONS LOSS OFF.

State & Pa., avge. prime, doz.	15½	@	16
Mich., N. Ohio and N. Indiana, regular packings	—	@	15
Other W'n, Northerly sect'ns, regular packings	14½	@	15

QUOTATIONS AT MARK.

Nearby, State & Pa., fresh-gath'rd, fancy selected, doz.	15½	@	16
Nearby, State & Pa., fresh-gathered, average prime	14	@	15
W'n, N'th'ly sections, candled, selected, choice to fancy	13	@	15
Regular packings, N'n sec's.	9	@	12½
Graded, Southerly sections	10	@	11
Reg. packings, S'th'ly sec's	8½	@	10
Very inferior, per case	1 00	@	2 40
W'n, fresh-gathered, dirties	7	@	9
Checks	6	@	7
Inferior culls, per case	1 00	@	1 50

LIVE STOCK.

Steers	4 85	@	6 00
Oxen	3 55	@	4 00
Cows	2 10	@	3 75
Veal calves	4 75	@	7 00
Buttermilks	3 00	@	4 00
Sheep	3 00	@	4 30
Lambs	6 50	@	7 75

COUNTRY-DRESSED MEATS.

Calves, veal, prime, per lb	—	@	9
Fair to good, per lb	8	@	8½
Common to medium, per lb	6	@	7

LIVE POULTRY.—Receipts are moderate, but there is no scarcity in anything except fowls, which advanced one-half cent.

Spring chickens, 4-lb. avge. to pair, per lb	17	@	18
Under 4-lb. avge. to pair, lb	15	@	16
Fowls, per lb	—	@	11½
Roosters, per lb	—	@	6½
Turkeys, per lb	—	@	8
Ducks, avge. W'n, per pair	70	@	75
Average Southern, per pair	50	@	55
Geese, avge. W'n, per pair	1 00	@	1 12
Average Southern, per pair	90	@	1 00
Pigeons, per pair	15	@	20

DRESSED POULTRY.—Western large Spring chickens are very scarce. Sales of ducks are fair, but the supply is excessive.

FRESH PACKED—ICED.

Turkeys, W'n, hens, small	7	@	8½
Western, toms	—	@	7
Broilers, Phila., over 4 lbs. to pair, per lb	25	@	26
Phila., mixed sizes, per lb	20	@	24
Penn., fair to good, per lb	20	@	23
Western, dry-picked, per lb	19	@	20
Western, scalded, per lb	18	@	19
Small, dry-picked or scalded, per lb	16	@	17
Fowls, W'n, dry-picked, prime	—	@	10½
Western, scalded, prime	—	@	10½
Western, poor to good	7	@	10
Southwestern, prime	—	@	10½
Old roosters, per lb	—	@	6
Ducks, Spring, L. I. and other nearby, per lb	—	@	12
Western	7	@	9
Geese, Spring, Eastern	—	@	20
Squabs, choice, large, dark	—	@	2 25
Mixed, per doz	1 75	@	2 00
Dark, per doz	1 25	@	1 50
Culls, per doz	50	@	1 00

FROZEN.

Turkeys, young hens, No. 1	11	@	11½
Mixed young hens and toms, No. 1	10½	@	11
Young toms, No. 1	—	@	10½
No. 2	7	@	9
Broilers, dry-picked, fancy	18	@	20
Scalded, fancy	—	@	14
Chickens, fancy, soft-meated	12	@	13
Average, No. 1	—	@	10
No. 2	7	@	9
Fowls, dry-picked, No. 1	—	@	9½
Capons, fancy, large	15	@	16
Medium sizes	13	@	14
Ducks, fancy	12	@	12½
Geese, fancy	9½	@	10

DRIED FRUITS.

Apples, evaporated, fancy, lb	—	@	7½
Evaporated, choice, per lb	7¼	@	7½
Evaporated, prime, per lb	6¾	@	7
Evaporated, com. to good, lb	4½	@	6
Sun-dried, State and Western, qrs., per lb	3½	@	4½
Sun-dried, S'th'wn, coarse cut	3¼	@	4
Sun-dried, S'th'n, coarse cut	3	@	3½
Chops, per 100 lbs	1 00	@	1 85
Cores and skins, per 100 lbs	65	@	1 35
Raspberries, evap., 1900, per lb	—	@	20
Blackberries, 1900, per lb	5	@	5½
Cherries, 1900, per lb	—	@	12

FRESH FRUITS.

Pears, Le Conte, S'n, bbl	3 50	@	5 00
Peaches, Ga., per carrier	1 00	@	2 50
South Carolina, carrier	1 25	@	2 50
North Carolina, carrier	1 00	@	2 00
Plums, Ga., Botan, carrier	1 00	@	2 00
Cherries, black, common to good, 8-lb. basket	40	@	50
Black, fancy, large, lb	7	@	9
White, common to good, 8-lb. basket	30	@	45
Wh. and red, fcy, large, lb	7	@	8
Small or soft, sweet, lb	3	@	5
Small, sweet, 8-lb. bskt	20	@	30
Sour, per 8-lb. basket	25	@	40
Currants, fancy, per qt	4	@	5
Poor to fair, per qt	3	@	3½
Strawberries, W'n N. Y., Atlantic, per qt	6	@	10
W'n N. Y., other kinds, qt.	5	@	7
Huckleberries, N. C., blue, per qt	8	@	10
N. C., ordinary, per qt	5	@	7
Maryland, blue, per qt	7	@	9
Maryland, black, per qt	6	@	7
Jersey, per qt	7	@	9
Pa. & State, Mountain, qt.	10	@	12
Raspberries, Md. and Del., red, per pint	3	@	4
Jersey, red, per pint	4	@	5
Up-river, red, per pint	4	@	6
Up-river, black cap, pint.	3	@	4
Md. & Del., black cap, pt.	2	@	4
Blackberries, Md., cultivated, large, per qt	4	@	7
Md., Harvest, per qt	4	@	5
South Jersey, per qt	6	@	9
Gooseberries, small, green, per qt	—	@	3
Medium, green, per qt	4	@	5
Watermelons, Fla., per 100	15 00	@	25 00
Per carload	175 00	@	250 00
Muskmelons, Fla., fancy, per bushel package	1 50	@	2 25
Poor to fair	75	@	1 25
Ga., prime to fancy, crate	2 25	@	4 00

VEGETABLES.

Potatoes, S'n, Rose, extra, bbl	3 12	@	3 25
S'n, Rose, fair to prime	2 50	@	3 00
Southern, Chili, white, fair to prime	2 50	@	3 00
S'n, Chili, red, fair to prime	2 50	@	2 75
Southern, No. 2, per bbl	1 25	@	1 50
Beets, Jersey & L. I., 100 bchs	1 50	@	2 00
Celery, Mich., small, doz. roots	20	@	25
Carrots, L. I., 100 small bchs	75	@	1 00
Corn, N. C., per 100	50	@	1 50
Jersey, per 100	75	@	1 75
Cabbages, L. I., per 100	—	@	3 00
Long Island, per bbl	—	@	90
Cauliflowers, nearby, per bbl	1 50	@	2 00
Cucumbers, Norfolk, bu. bskt.	75	@	1 25
Baltimore, per basket	1 50	@	1 75
Southern, per bbl	2 00	@	3 50
Eggplants, Fla., per box	1 50	@	2 50
Green peas, L. I., per bag	—	@	1 00
Western N. Y., per bag	50	@	75
Lettuce, Western N. Y., doz	30	@	50
Onions, Md. & Del., Potato, bk.	1 00	@	1 12
Eastern shore, Potato, baskt.	75	@	1 00
Eastern shore, white, bskt	75	@	1 00
Jersey, white, per basket	1 00	@	1 25
Kentucky, per bbl	2 00	@	2 25
Peppers, Jersey, per crate	1 50	@	2 50
Southern, per carrier	1 00	@	2 00
Squash, Southern, yellow, bbl	75	@	1 25
Southern, white, per bbl	50	@	1 00
Southern, Marrow, per bbl	1 00	@	1 50
String beans, L. I., per bag	75	@	1 50
Jersey, wax, per basket	75	@	1 00
Maryland, wax, per bskt	75	@	1 00
Baltimore, per basket	60	@	1 00
Spinach, L. I., per bbl	—	@	1 00
Turnips, Jersey, white, 100 bchs	1 50	@	2 50
Jersey, Russia, per bbl	1 25	@	1 75
Tomatoes, Fla., choice, carrier	—	@	1 25
Florida, poor to good	75	@	1 00
Mississippi, per 4-till case	—	@	75
Jersey, per bushel box	1 25	@	2 50
Maryland, per carrier	75	@	1 50
Norfolk, round, smooth, p. c'r.	1 50	@	1 75
Norfolk, Grant, per carrier	1 00	@	1 25

Never let a little child's cold "run on." There is sure danger and perhaps death at the end of it. The infantile organs are always helped by Dr. D. Jayne's Expectorant, and the little ones like it.—*Adv.*

BUSINESS BITS.

Elmore Station, Ala., June 13, 1901.
Dr. B. J. Kendall Co.,
Enosburg Falls, Vt.
Dear Sirs:—

After using your Kendall's Spavin Cure and Kendall's Blister we find them the best we have ever used. We have cured spavin with it when all other remedies failed. It is good for all you claim and more. We keep it on hand, and wish every suffering man and beast had the opportunity of using it. We believe it is a blessing to all that use it.

Respectfully,
C. E. King and J. E. Bailey.

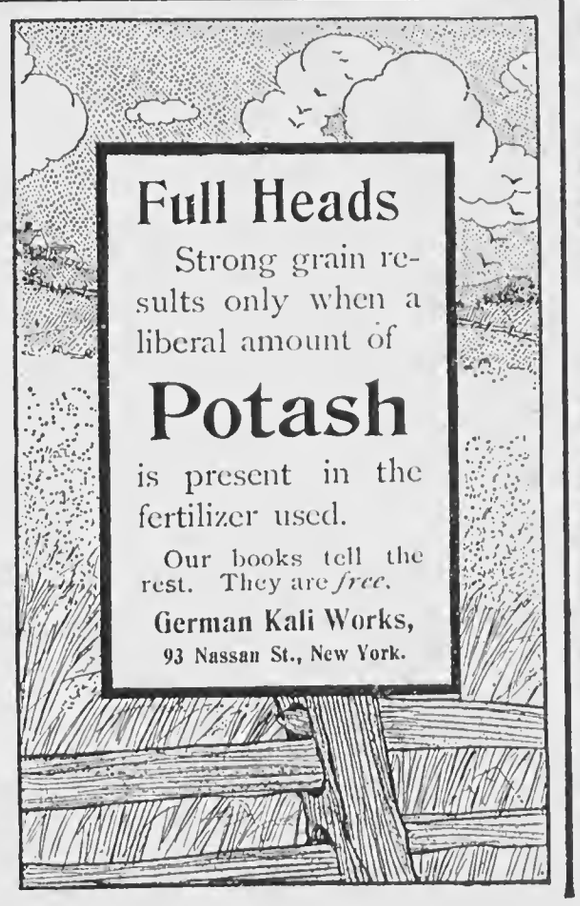
THE Osgood Scale Co., of Binghamton, N. Y. has always had so much faith in their own goods that they were willing to send scales on trial anywhere in the U. S. They never had scales returned on their offer. They are constructed so simply that any good farmer with common sense can erect them himself. They have a large white beam box, heavy brass beams, double or compound, steel-lined, forged-iron loops, heavy castings, every part interchangeable, no repairs, and many advantages over others. Write for catalogue and special price. No advance in price on account of trusts. Do you know of any neighbor who ought to have one? Can you interest him? It will pay you.

WE call the attention of our readers to the advertisement of Notre Dame University, one of the great educational institutions of the West. Those of our readers who may have occasion to look up a college for their sons during the coming year would do well to correspond with the president, who will send them a catalogue free of charge, as well as all particulars regarding terms, courses of studies, etc. There is a thorough preparatory school in connection with the University, in which students of all grades will have every opportunity of preparing themselves for higher studies. The commercial course intended for young men preparing for business, may be finished in one or two years according to the ability of the student. Fifty-seven years of active work in the cause of education have made this institution famous all over the country.

OWING to inadequate equipment, the Arctic explorers heretofore have had to face many perils and discomforts that do not now confront Evelyn B. Baldwin, the leader of the Baldwin-Ziegler Expedition, who has just sailed for Dundee, thence to proceed to San Joseph's Land, whence the complete expedition starts for the Arctic regions. Everything that money can buy or experience suggest to ensure safety and comfort, has been procured, and the explorers leave on their long trip with a magnificent equipment; taking with them supplies for over three years. The cargo of their ship, "America," which has been especially fitted up for the voyage, includes a large quantity of Ruberoid Roofing, manufactured by the Standard Paint Company, New York and Chicago, and a large amount of galvanized wire netting. This Ruberoid is to be used as a housing or inclosure for the ship when the ice stops its further progress, and as a covering for the huts or shelters erected along the route for the 40 men, the hundreds of dogs and other animals, and the supplies. The galvanized iron wire will be used as a framework or support, for the Ruberoid, which will be laid over it.

The Leading Crops.

Reports to the Department of Agriculture indicate the largest wheat crop this country has ever known. The indications are for 705,000,000 bushels. The greatest crop now on record was 675,000,000 bushels in 1898. The indications now are that the corn crop will be short. Still, it is too early now to make any accurate statement. Rye and barley will be much the same as last year, while oats are less promising than one year ago. Potatoes show a decreased area, and the crop is also poorer than last year. The chances are therefore for a smaller crop. The condition of sweet potatoes is unpromising, and the hay crop is proving a disappointment, as it was found that meadows were thin, and that while the grass was tall enough there was little body to it.



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WANTED—A man. Also, 800 chicks, April or May-hatched pullets. W. Wyandottes or Leghorns preferred; must be strong, vigorous stock. Man must be careful, trustworthy and well recommended, with some knowledge or a desire to learn the care of Poultry and Fruit trees. A pleasant and permanent home for the right man. FRUIT AND POULTRY FARM, Columbus, N. J.

WANTED—We need good live hustlers as general agents for the fastest-selling article ever invented. Position requires ability, integrity, and is permanent. HANAFOURDE MFG CO., Great Northern Building, Chicago.

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VIRGINIA FARM—Stocked and equipped for $5,000. 231 acres, near fine town and depot; smooth fertile land; handsome new 8-room residence; good barns; well fenced and watered; large orchards; superb mountain views; very healthy. Implements, horses, cattle, crops; house furniture included. Very attractive. Send for details. Box 282, Lynchburg, Va.

The BEST Cattle Fastening. SMITH'S Self-Adjusting Swing Stanchion. The only *Practical* swing stanchion invented. Thousands in use. Illust'd Circular free. GLENORA MFG. CO., Glenora, Yates County, N. Y. Infringements will be prosecuted.

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of all sizes, positively the **Best**, and Carriers to match. For full information about these, also best Horse-power, Thresher, Clover-huller, Dog-power, Rye Thresher and Binder, Fanning mill, Saw-machine (circular and drag), Land-roller, Steam-engine, Root-cutter, Corn-sheller and Round-silo, Address
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SHIP your Berries, Cherries, Butter, Southern Truck and all Fruit to the best market Samuel Whitton, Com. M'ch't, Utica, N. Y. Our market is good on Fruit at all times. Ref. furnished.

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Refer to Irving National Bank.

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FRUITS, VEGETABLES, HOTHOUSE PRODUCTS, FANCY EGGS, POULTRY, Etc. We solicit your consignments, and can secure highest prices for prime goods. Write us for shipping instructions, stating what you have for sale.
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Free for a Club of Four.

Here are 44 first-class tools for repairing shoes, rubber, harness and tinware. We are going to give no arguments why you should have them. The reasons and uses are apparent to every one. There is nothing like mending a hole, putting in a stitch, or driving a nail in time. It

always saves time and money. It often saves lives. The price is $2 alone, but it need cost you only $1. Send us one new subscription with $1, and $1 extra—($2 in all) and we will send you the outfit complete, or we will send it to you free for a club of four yearly subscriptions at $1 each.

BOOK BULLETIN

For Sale by The Rural New-Yorker

FITTING Sheep for Show Ring and Market. The price of this book is $1.50 instead of $1, as quoted recently in this column.

ALFALFA, by F. D. Coburn; 161 pages. Practical information on the history, production, qualities, value and uses of this plant. Extensive reports of the results of trials in various States. Price, postpaid, 50 cents.

PLUMS and Plum Culture, by F. A. Waugh; 371 pages, 117 illustrations. History of the plum; descriptions of varieties; propagation and orchard management; diseases and remedies; blossoming charts; geography and climatology. Price, postpaid, $1.50.

THE RURAL NEW-YORKER,
409 Pearl St., New York.

Market Briefs

PICKED UP HERE AND THERE

LIGHT RECEIPTS.—During the recent hot weather the receipts of fruits and vegetables at New York were unusually light for this season of the year. This was fortunate, as otherwise there might have been serious loss all around. In such severe weather people do as little buying as possible, and dealers must do extra hustling to get rid of the stuff, or it will spoil on their hands. No doubt the reason for this falling off in receipts was the fact that the hot wave covered nearly all of the producing district, and shippers felt the general languor, handling only what was absolutely necessary. This evened up matters, and the market came through in very good condition.

AN AGGRESSIVE GROCER.—He recently commenced business in an up-town section of New York where grocery stores are, if anything, more numerous than saloons. It did not look as though there was any chance for him to work up a trade, but he did it in short order by cutting the prices on some goods and advertising this fact in a striking and original manner. Sandwich men, that is, men carrying two signs fastened together with ropes and hung over the neck, reaching below the knees, are a common sight for advertising purposes. This man fixed up six sets of these signs, painted with gorgeous lettering of white and red. Then he hired six men who marched in "Indian file" about four feet apart slowly along the streets. This odd procession attracted great attention, and, when last seen, the new grocer was doing a good business.

FRUIT NOTES.—A continued improvement is noted in the quality of southern peaches arriving, and the market is firm on the better grades. The Californias seen thus far are the same as in former years, quite fair in appearance, but worthless as compared with the eastern fruit. The supply of cherries is light. Most that are seen are the late sour varieties, which are in good condition and wholesale at 25 to 40 cents per eight-pound basket. There are a few strawberries in the market. The best that I saw were Oswego fruit, each basket wrapped in waxed paper. I do not remember having before seen so many fine currants on the street at one time, yet they go slowly, some of the best retailing at eight cents per quart. Southern apples are quite plentiful, although there is but little call for them so long as there is so much other better fruit to be had. Early apples strike this market about the same time as good peaches, and have to take a back seat. The same is true of the southern pears now arriving. The watermelon demand is heavy, but prices have dropped owing to excessive receipts. Muskmelon conditions are improving, and high prices are obtained for the better Georgia stock. So many worthless muskmelons are sent in early in the season that buyers become afraid of them, and some time is required to work up a trade after the better grades arrive. A great many are served in restaurants, where they are cut in two, and 10 cents is charged for half of a fair-sized one. It is needless to say that none but those of good quality can be used satisfactorily for this purpose.

W. W. H.

THE output of coal from this country for the year 1900 was the largest on record, being 267,540,000 tons. This was five per cent more than the previous year, and 15,000,000 tons above Great Britain's greatest record.

A COMPANY has been incorporated at Albany, N. Y., for the manufacture of machines to polish shoes by electricity. This would do away with much hard hand labor, but it is doubtful whether it will supplant the old-fashioned, elbow-grease method, for some time at least.

PAN-AMERICAN EXPOSITION NOTES.

The Mines Building was one of the very first to have its exhibits completed and ready for visitors. It is connected with the Horticulture Building by one of the conservatories. Not all of the mineral exhibits are found in this building, as several of the Central and South American republics have separate buildings in which a large part of their exhibits of different kinds are placed; hence the Mines Building proper contains only the displays from the United States and Canada. Among the most interesting of these exhibits is a collection of precious stones in the rough and cut into jewels ready for setting. It might be interesting to many readers to mention some of these gems in a descriptive way, and, while I make no pretensions to being a mineralogist, the information I may give is upon good authority.

The diamond, of course, is the most valuable of all gems, and is a crystal which was formed, so mineralogists suppose, under the most intense heat in the natural fires of by-gone ages. A perfectly pure diamond is clear white or translucent, and without any coloring whatever except the prismatic colors which come from the reflection of the sun's rays; but there are various colors found among the diamonds, some of them being blue, green and also of a yellowish tint, which colors come from certain foreign substances that were incorporated at the time of the formation of the crystals. These may be seen in the collection of both cut and uncut stones, and in the Manufactures Building diamond cutters are at work cutting the rough stones into finished diamonds. Of the cheaper and more common gems, silica is the basis of about all of them. This is the principal ingredient of our common glass, and is found in the earth in large quantities mixed in with rocks and other earthy matter. Aluminum is another of the principal ingredients of these stones. As most of us now know, it is mixed with some other metals and forms an alloy which is worked into many kinds of cooking utensils and various articles of common use. It is very light, weighing only about the same as ordinary oak wood. In several glass cases in the Mines Building visitors will notice large blocks of mineral which are crusted with pointed or pyramidal stones of a pinkish tint. These are amethysts, and when cut into proper shape for setting they have a very brilliant lustre and are highly prized. This coloring comes from a mixture of oxide of iron and manganese, and the varying colors which are from light pink to dark purple are owing to the different proportions of these oxides. The more manganese the darker is the color. The emerald gets its beautiful green color from small particles of glucina, which is another metallic substance, but the most beautiful of the green gems is the hiddenite, which gets its color from chromium. The topaz, which is a very common gem, varies in color from yellow in different shades to a dark smoky or almost black color which is from a slight mixture of fluorine. The garnet gets its rich red coloring from iron, aluminum and chromium, the shades varying according to their different proportions. We have all admired the beautiful blue turquoise stones which are used so much in jewelry, and it may be a surprise to some to know that they are simply composed of phosphate of aluminum colored by copper. Sometimes the turquoise shades into a green, although this is rare. Opals, which vary from a translucent milky color through yellow, blue, green and red, are mixed and intermingled sometimes in the most charming way, and yet these colors all come from these metallic oxides that I have just mentioned in describing the other gems, imbedded in silica and with a little water added. It may seem strange that water is found in these charming stones; but such is the case, and sometimes there is as much a five per cent of it. By heating the water can be driven off and the colors of the opal materially lessened in brilliancy.

One large case is devoted entirely to the natural carbonates of copper, and there is no exhibit in the mineral building which is more striking or beautiful to look at. There are pieces of malachite, which are green in color, and look almost like frozen bubbles of the most beautiful tints and shades. A slight additional proportion of copper makes azurite, which is blue and exceedingly brilliant, almost like indigo in richness. These formations are found about the copper mines, especially in Arizona, Montana and Michigan. Nature has sometimes deposited the malachite formation and then a layer of azurite, one over the other, and when these layers are cut or ground down they make lovely settings for pins and other jewelry. There is an asbestos exhibit, which shows everything from the crude material to the finished product. It might almost be called mineral hair, wool, cotton, or something of that kind, because it can be ground up or beaten into a fiber which can be spun or woven. As it is indestructible by fire it makes excellent fire-proof clothing for firemen and for covering steam boilers and pipes and many other such uses. The natural substance is a mixture of silica, magnesia and alumina.

In the Ontario exhibit is a fine display of graphite, there being blocks of it fully three feet square in its natural condition. This is the material from which lead pencils are made. We also use it in stove polish, little thinking that when we are using lead pencils and stove blacking, we are, perhaps, drawing upon the same mine for our material. A whole day might well be spent in this Mines Building, but I only mention these few things to give our readers a glimpse of what there is there to see, and I hope they will not fail to go there and learn many things that will be at once useful and entertaining. A farmer needs to know something besides how to cultivate corn and grow good fruit. In fact, he ought to be an all-'round man.

There is one thing which I wish to suggest further to those who may visit the Exposition, and that is, that if possible at all, they do not fail to stay during the evening as late as nine o'clock at least, in order to see the illumination. I have mentioned the electric lighting before, but I will venture to say further that the lighting of the buildings and grounds is, perhaps, the most remarkable feature of the entire exhibition. One should take a position somewhere in the large open space which is called the Esplanade, about eight o'clock, and while listening to the music, wait for the lights to be turned on. This is first a very slight glow as the band begins to play the "Star Spangled Banner," and this increases in power, but very gradually, indeed, until the whole scene is a perfect glory of light with the Electric Tower as the central figure. This scene will be remembered as long as one lives and is worth a long trip to behold.

H. E. VAN DEMAN.

CROP PROSPECTS.

JULY 8.—About half of the apple orchards will have full crop. We are 40 miles north of Pittsburg. I have heard that the apple crop is better south of us. The corn is likely to make as good a crop as last year; the last 20 days have been favorable. Potato acreage is more than double last year within a mile of where I live. Potato bugs are very plentiful this year; last year there were no bugs. Wheat better than usual; rye not so good; oats better stand than last year. Meadows fairly good.

H. O.

Portersville, Pa.

JULY 8.—There is no wheat sown here. The crops are corn, oats, some rye, hay and milk. My own crops are late potatoes for retailing here in Crown Point, and seven acres of asparagus for shipping to Chicago. I have been raising Lima beans, but think this Summer's crop of beans will be the last. They do not pay, and it is difficult to get poles here. We expected to have eight acres of cow peas this Summer, but the beet sugar folks came in and persuaded us to sow beets instead of peas. We had two acres of Crimson clover that stood the Winter fairly well, but it does not seem to start up again since cutting. I don't think we will bother with it again; cow peas and rye for Winter cover are more satisfactory.

L. C. B.

Crown Point, Ind.

JULY 8.—In general among farmers within a radius of from five to eight miles from Progress the apple crop will be poor. Smokehouse seems to be about the only variety that gives promise of a fair crop. Baldwins hang very thin on the trees and other late varieties are but little better. Early potatoes that were planted in time to mature before the dry spell, which began about three weeks ago, are a fairly good crop. Present prospects for late potatoes are very poor indeed. The excessive heat of the past two weeks has caused even the quite late potatoes to begin to die before the potatoes have had chance to form. The crop of field corn is not yet seriously injured by the heat and dry weather, but the crop will depend largely upon the rainfall of the next week or two. Early sweet corn is already suffering, and an extremely light crop is feared. Hay and wheat are ordinary crops in our vicinity. The heat and dry weather are interfering sadly with the setting out of late vegetables, such as cabbage, tomatoes, celery, etc. Our salvation for late crops depends upon a speedy rain, the indications of which are very scanty at present.

Progress, Pa. J. G.

JULY 9.—Apples will be about one-half crop. Some orchards, where the trees are set close together blossomed freely, but set scarcely any fruit. Corn was finished planting June 6 and is looking well, considering the length of time planted, but cool weather and rains are retarding its growth. Potatoes are looking fine but are beginning to show signs of blight. Hay will be a big crop. Oats are yellow with rust, and are beginning to head. Too many rains of late have hurt most crops except buckwheat, which is fairly jumping.

Carter Camp, Pa. O. S.

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Live Stock and Dairy

HOW TO MAKE BUTTER.

I am making butter from two cows, and use a separator into which equal parts of milk and water are poured. We use a barrel churn. How should I keep the cream in the cellar? (No ice). If so, should it be brought to warm place to ripen this time of year? How long before churning should this be done, if at all? Is it necessary to add sour cream at this season? How am I to know when it is "ripe?" What temperature should it be before churning? How long ought it to take to churn? When butter comes, but will not gather, I have put in soda and it separated at once. What was wrong with it, anyway?

Buttermaking is an art, and the butter maker has to deal with so many different conditions that it is not easy to set down exact rules or temperatures. The following notes by one who has made butter in farmhouse, dairy and creamery may, however, be helpful. They are written with those in mind who keep a few cows and make up their own product, rather than the creameryman who handles the milk from many farms:

FEEDING.—The problem of making good butter begins with the feeding and care of the cows, but this is in itself such a broad subject that it can hardly be treated here. Suffice it to say that the food and water should be pure and wholesome, the food free from molds and taints, and that plants with a strong odor as onions, wild garlic, or noxious weeds should be kept out of reach of milch cows. Cows should be fed regularly.

MILKING.—Cows should be milked regularly in a clean stable, with clean hands, into a clean pail. Brush the udders, bellies, and flanks of the cows before the pails are brought to the stable. The milker should have a suit of overalls to be worn only at milking time, and they should be clean and free from dust. It is at this time that the greatest contamination of the milk occurs, and such troubles as gassy curds and tainted butter have their origin. You cannot be too particular as to cleanliness at this point.

SEPARATION OF CREAM.—If you can afford a centrifugal separator, it is undoubtedly the best and most economical way to get the butter fat out of the milk. It certainly skims cleaner, 365 days in the year, than any other method, and gives sweet skim-milk for feeding to farm animals. As to the kind of separator to buy—get the one that you think will be the easiest to keep clean, and with it require a written guarantee that the machine will skim to one-tenth of one per cent. That is, there shall be no more than that amount of fat left in the skim-milk. Next in order of excellence to the centrifugal separator, come the various deep-setting systems, Cooley, Stoddard, etc. If a plentiful supply of cold running spring water is available the deep setting system will give very good results. In the absence of running cold water, ice may be used, but this increases the labor considerably. Nevertheless, of the deep-setting creamers in use, there are probably not 10 per cent supplied with water cool enough so that ice can be dispensed with through the Summer months. If the milk, as soon as drawn, is cooled to 40 degrees and kept at that temperature for 24 hours, not more than two-tenths of one per cent of fat will ordinarily be left in the skimmed milk by the deep-setting systems. Other means of separation are the dilution separators, so called, and the old-fashioned shallow pans. The name separator, applied to a can in which milk may be diluted, is a misnomer, and should be discountenanced by all intelligent dairymen. The practice of diluting milk ostensibly to reduce the viscosity of the milk serum, and thus help the fat, which is the lightest constituent, to rise to the surface, is of doubtful utility. The matter is concisely stated in the following quotation from Bulletin 151 of the Cornell University Agricultural Experiment Station:

"Combining the results of this Station with the results at the Vermont Station, we have the following average percentages of fat in the skimmed milk under the different systems: Diluted, set at 60 degrees (39 trials), .77 per cent; undiluted, set at 60 degrees (30 trials), 1.00 per cent; undiluted, set at 40 degrees (26 trials), .29 per cent. It would seem therefore, that while when milk is set at 60 degrees or thereabouts, there is considerable advantage, so far as the efficiency of creaming is concerned, in diluting it with 25 per cent of warm water, this dilution cannot be regarded as a substitute for setting without dilution in ice water, and it has the further disadvantage of requiring increased tank capacity, and producing a rapidly souring cream. It might be added that the diluted skim-milk is very materially lessened in value for feeding purposes." The shallow pan system is, in the opinion of all practical dairymen, obsolete. For best results a uniform temperature of 60 degrees should be maintained, and the surroundings should be clean, sweet, and free from odors or taints, as of vegetables or human foods. This precaution applies to all systems and methods of handling milk and cream.

CARE OF CREAM.—The cream should be kept in a cool clean place at a temperature below 50 degrees. This retards the action of the lactic acid germs until enough cream for churning has been collected. As each additional skimming is added to the cream pail the whole should be well stirred. This is in order that the whole mass may be kept as uniform as possible. Cream should not be kept more than three days before churning. From 12 to 24 hours before churning, the cream should be brought to a temperature between 60 and 70 degrees, the time and temperature both depending upon the time of year and the conditions under which the cream has been kept. This gives favorable conditions for the formation of lactic acid, upon which a good deal of the flavor of butter depends. In small dairies it is seldom necessary to add a starter, but if for any reason the cream does not sour readily the lactic acid germ may be supplied by adding a little buttermilk or cream from previous churnings, a little sour skim-milk, or one of the artificial starters as Hansen's or Douglas's lactic ferment. The cream should be thoroughly stirred several times during the ripening process. This is to insure a uniform degree of ripeness of the whole mass. It will be readily understood that if there are clots or portions of the cream not as ripe as most of it, these portions will not churn as quickly as the rest, and consequently will remain as cream and be drawn off with the buttermilk and lost. Or if some portions of the mass are too acid, the casein may be so firmly coagulated that it will not pass off in the buttermilk, but will be found as little white specks in the finished product, and making an excellent place for the germination of putrefactive bacteria which cause rancidity. The smooth velvety appearance of well-ripened cream is not easily described, but once learned will not be forgotten. Until thoroughly familiar with the work the amount of acid or sourness may be determined by the use of Farrington's alkaline tablets. The acidity or sourness of the ripened cream should not exceed .58 per cent as indicated by the use of these tablets. They are not expensive, and may be obtained, with directions for their use, from any dealer in creamery supplies. In order to make butter of firm solid texture, that will as we say "stand up" in warm weather, it seems to be essential that at some time before the ripening process is completed, the cream shall have been subjected to a temperature below 50 degrees for at least six or eight hours. In the deep setting systems this has already been accomplished when the cream is skimmed, but in the centrifugal and shallow-pan systems of creaming this fact needs to be remembered.

CHURNING.—Box or barrel churns without inside fixings are the best. In churns in which the agitation is brought about by means of paddles, the grain of the first particles of butter formed is very likely to be spoiled, and the finished product injured to that extent. The box or barrel churn should be rotated, so as to obtain the maximum amount of concussion of the particles of cream upon one another, and not fast enough to cause the cream to take up the same rotary motion as the churn itself. That is, it should dash from end to end at each rotation of the churn. Churn at least twice a week, and better three or more times. No exact temperature can be given at which to churn. The cream should be churned at such a temperature that the butter will "break" or "come" in from 35 to 45 minutes. Churning should be continued until the buttermilk has a thin bluish appearance; this should occur, however, while the butter is still in the granular form.

WASHING AND WORKING.—After drawing off the buttermilk wash twice, or until the wash water runs off clear. Then work in salt to suit the taste of your trade, and set away for three or four hours. Then rework and pack or stamp. The interval between salting and stamping allows the salt thoroughly to permeate the whole mass, and the second working also insures a uniform mixing of the salt as well as working out any excess of water. Never work butter when it is warm enough to be salvy. There are two watchwords for the buttermaker, they are *cleanliness* and *uniformity*, and are worth remembering if you are looking for trade and reputation.

The action of several common alkalies upon cream was studied by Soxhlet, a German investigator, some years ago, but is not, even now, thoroughly understood. We say that they decrease viscosity and thus aid the separation of the butter fat from the casein. It is quite likely that a handful of salt would have given the same results. Your cream was probably not properly ripened.

J. A. F.

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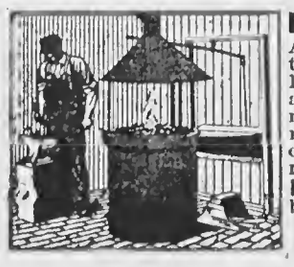

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OUTWITTING A COW.

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I have read a whole lot of ways to keep a cow from kicking, but I can tell the Hope Farm man how to make a nice gentle cow of Julia. Put her in stanchions or tie her short and, if tied, put a pole beside her as high as her flank, to keep her from turning around on to you. Get a few sticks like the butt of a cart whip, about four feet long, and lay them carefully within reach. Take one of them and tickle Julia's leg with it. When she resents this familiarity and kicks, let the stick come back on her leg below the hock sharply. If Julia is as brainy a cow as we hear of, and as high-tempered, she will lose her temper at the first sharp blow, and the fun will begin. Don't lose your temper; keep cool, but let the stick go back sharply on the leg every time she kicks. If she is a quitter, or foxy, she may, from motives of policy, stop kicking before she is cured, in which case it will be necessary to take along the sticks and lay them down where she can see them when you go to milk, and, as she will now know just what it means if she does kick, make her promise not to do so any more. When a cow bellows it is her signal that she will be good, and a cow rarely breaks her promise. The Hope Farm man may think Julia will get mad and hold up her milk, or do some other ornery thing, but there is no danger. When Julia says she will be good, she will not chase the children or do any other of the many things a bright cow can think of while she considers herself the boss.

I trust none of your readers will think I spend my time pounding cows. I allow a calf to kick at me till it is three days old. After that, if it is to be raised, I quietly teach it that kicking is naughty. During the first Winter, while I am the biggest, the little ones are all tied long enough to get them used to it, and I go around them, smooth them, pat them, and get them accustomed to being handled. Most of my cows, all born on the place, were never struck a blow in their lives, but if a youngster shows a disposition to kick it is stopped at once. We use oxen on the farm for part of the work, buying them as steers "broken." I don't remember of having bought more than three pairs in 40 years that had not some mean trick. Sometimes I had to think awhile, but never failed of curing in one lesson, and think I was never more than half an hour giving that lesson. Man is no match in brute strength for a full-grown cow, ox or horse, but unless he can outwit any of these he ought to study for a profession and not try to be a farmer.

Connecticut. R. S. HINMAN.

CONGRESSMAN WADSWORTH AND THE GROUT BILL.

I noticed a letter on page 440 from M. J. U., and your comments. It seems to me, in view of the fact that Mr. Wadsworth was returned to Congress last year by an increased majority, after all the abuse heaped upon him by you and others, that you would begin to think you were cutting very little ice. Mr. Wadsworth is known personally by a large portion of his constituents (of whom I am proud to say I am one) and they all know him to be a man who never could be influenced by the oleo crowd to do what he thought was not right, neither will he be influenced by the anti crowd to do it, either. And he is thought far more of by men who favor the Grout bill for standing up like a man in opposition than if he gave it a half-hearted support like some. You must know that his return from a strictly agricultural district, honestly and heartily indorsed, will be likely to go much further with Speaker Henderson than all the letters from York State men who ask who this man Wadsworth is, and who appoints him. You may print this letter if you wish and abuse me as much as you like, as I am a working farmer and interested in the cow, and am seeking no political favors of Mr. Wadsworth or anyone else. But please let up on him a little, although he can stand it. He feels, with his friends, that it is entirely uncalled for. R. J. RAY.

Livingston Co., N. Y.

R. N.-Y.—Mr. Wadsworth represents the Thirtieth District of New York State, which includes the counties of Niagara, Livingston, Wyoming, Genesee and Orleans. Last year his majority over the Democratic candidate was 8,172. True, this was larger than the majority of two years before, but it was in a Presidential year. It was a smaller majority than Mr. Wadsworth received in 1896. Last year, in these counties, McKinley's majority over Bryan was 9,418. Mr. Wadsworth therefore ran nearly 1,300 votes behind his ticket. He held his own along the canal, but lost in parts of his district where dairying or stock growing are features. The amount of "ice" we can cut in that district has little to do with the final outcome. By his opposition to the Grout bill Mr. Wadsworth has become a figure of National importance. He may be the best of neighbors and the most popular man at home, but by his course in Congress he has placed himself in opposition to thousands of farmers who will never see him or hear of him personally. There are dairymen all the way from Maine to California who thoroughly believe that if there had been a true friend of honest butter at the head of the Agricultural Committee last Winter the Grout bill would have passed both Houses of Congress and received the signature of the President. These men cannot go into Mr. Wadsworth's district and vote against him, but they can go up higher and protest against his reappointment. We seldom have an issue made so clear and plain as this one is. Mr. Wadsworth says openly that he is opposed to the vital principle of the Grout bill. There is no use attempting to convert him—if he be reappointed chairman of that committee we all know that he will do his best to hold up the bill a second time. That being the case the farmers of this country who desire the legislation suggested in the Grout bill have a perfect right to demand that some man more favorable to their interests be put on guard. In fact, the only thing they can do is to bring the strongest possible pressure to bear upon Speaker Henderson, and to their credit be it said that they are coming into the fight by the thousand!

Clean the Milk Cans.

The milk producers can have no quarrel with the city consumers. These two classes should be on the most friendly terms, for their interests lie close together. The consumer needs education regarding New York's milk supply, and he is getting it rapidly. Just now there is a discussion in the daily papers over clean milk. The following letter in the Morning Journal touches a vital question:

"One phase of the matter seems to have been overlooked—viz., the horribly filthy condition in which some of the milk cans are returned from the city. These empty cans stand around, and before they get back to the country the milk is thoroughly dried on to the sides and in the corners of the can. It is about impossible thoroughly to wash such cans with the facilities within reach of most farmers. Live steam is the only stuff that will do this job as it ought to be done, and the time to do it is before the milk gets dried on. Laws compelling city milk receivers to turn a jet of live steam into every can before returning it would be a material help in securing clean milk, and would work no greater hardship on milk receivers here than many other laws that are enforced in the interest of pure food. Connection with live steam might be had without great expense at most of the receiving stations.

"Another wrong is the putting of garbage into milk cans. I have seen cans received from this city, standing on the platform at country milk stations, containing quantities of pumpkin pie and other restaurant refuse in such a state of decomposition that a self-respecting hog might well decline to have anything to do with it. Our scientific friends who are chasing up microbes with microscopes will find a good field for investigation in the average milk can as it is returned to the farmer."

Pigs in a Peach Orchard.

J. S. Woodward told us in THE R. N.-Y. some time past, how he pastures his hogs in an orchard. My hogs and pigs chew the bark off the young peach and plum trees, unless protected. Would you advise sowing a five-year-old peach orchard to grass and clover, for a hog pasture? The land is rich and good; trees large and in bearing. They would make fine shade. Other land is not available for the purpose. For Summer I have a field of rape.

Jackson, Mich. P. E. L.

From the pig standpoint, the idea is a most excellent one. There is no question but what the pigs will be greatly benefited by the shade of the orchard, while if it is in bearing they will clean up undesirable peaches that drop to the ground, and so assist in reducing insect pests, decayed peaches or sprouts which might follow volunteer seeding. I know of no experiments that have been conducted to determine the value of pigs thus pastured, only it is well established that clover is a superior Summer pasture for pigs, and if in a shaded lot, so much the better. From the orchard standpoint I do not think the pasturing the best thing. The best orchards that I have seen are cultivated over. Still, if the orchard is a year or so in clover, and the stubble is then plowed under, the trees should be much benefited.

In regard to the pigs gnawing the bark, this need not necessarily always follow. With plenty of good food I should not expect the bark injured, but some pigs occasionally develop rather abnormal appetites, in which event they may bark the trees. Personally, I should protect the trees, if the necessity arose, by placing about them for a height of two feet up from the ground, a one-layer band of tin or wire, bent about the tree snugly, yet not fastened together to prevent the expansion of the tree trunk. Such a protection need not be very costly, in view of the fact that second-hand tin or wire will do very well for this purpose. C. S. PLUMB.

KICKING COWS.—I must tell you our remedy for kicking cows. We keep a herd of 19 milch cows, and have used this remedy very satisfactorily for 10 years. It consists of a strap made from harness leather, this strap to be 40 inches long, 1¼ inch wide with a buckle sewn on the end. About 2½ inches from the buckle is another buckle (minus the tongue), riveted on the strap with a piece of leather and two copper rivets. At the other end of strap the last 10 inches have holes made every inch and a half or so to buckle into. Put this strap around Julia's left hind leg just above gambrel joint, put end through the false buckle and draw up tight, then put it around right hind leg the same, and now through buckle. Draw up tight and buckle, which fastens legs securely together, and if they try to kick they will throw themselves, but they usually give up. E. M.

Big Bend, Wis.

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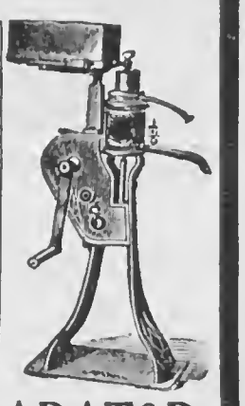

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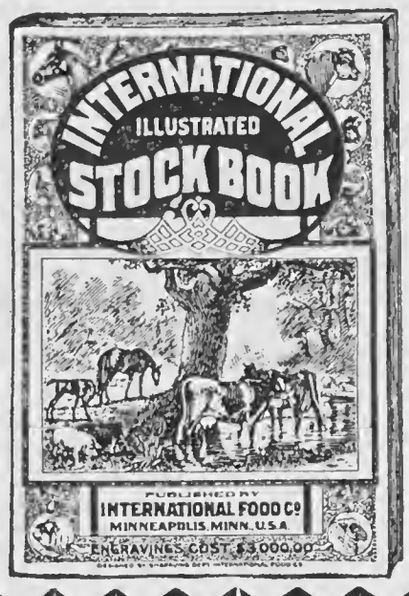

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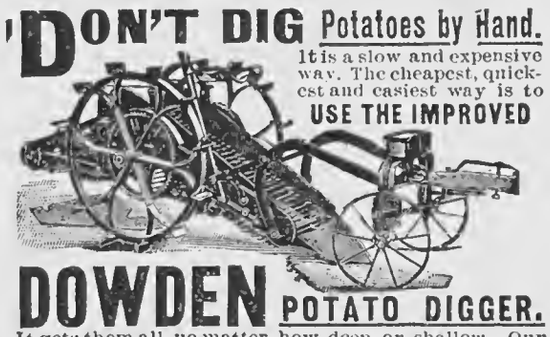
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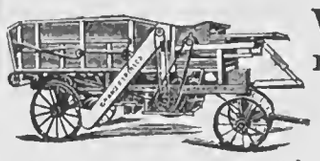
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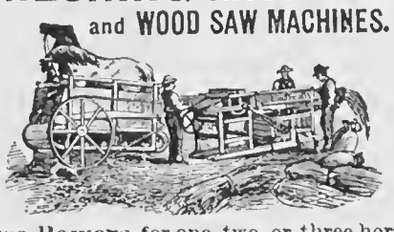
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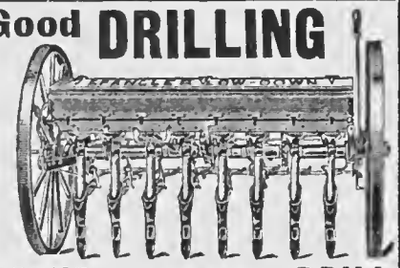
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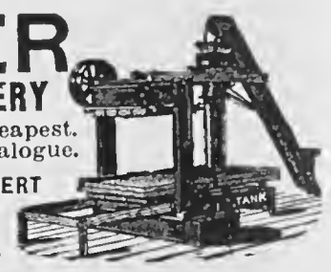

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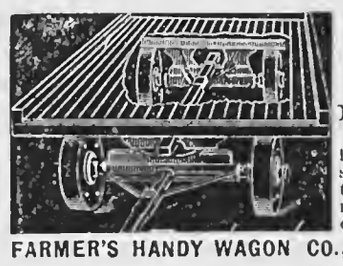
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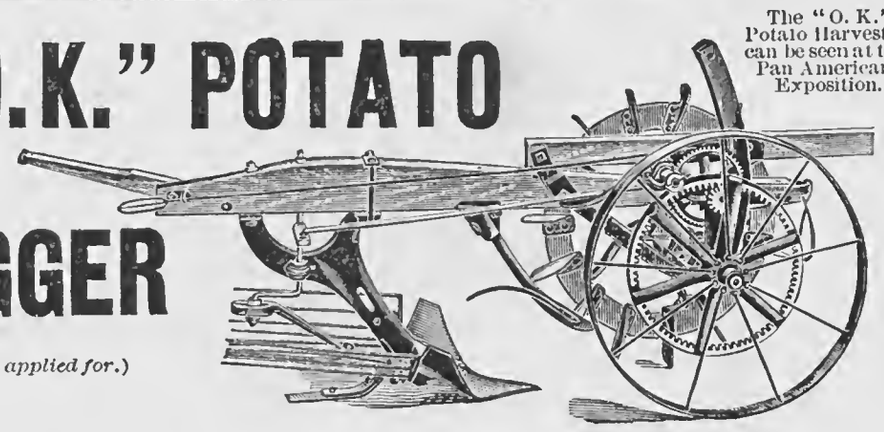
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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2687. NEW YORK, JULY 27, 1901. $1 PER YEAR

FARMING WITH CHEMICALS AND WATER.

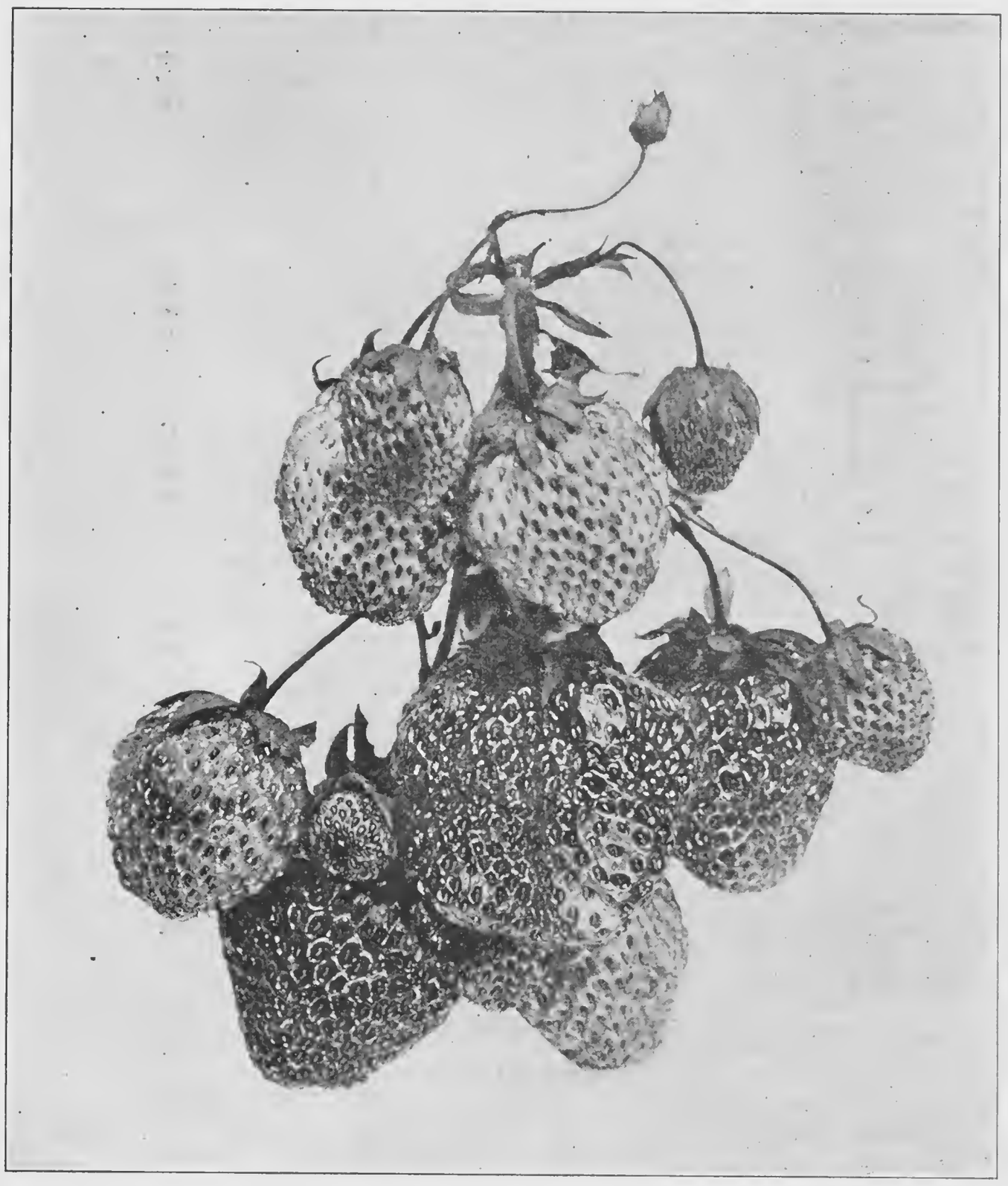
UTILIZING THE LOWER LANDS.

Good Culture for Onions and Strawberries.

On page 466 we spoke of the farm of Thomas R. Hunt, of Lambertville, N. J., whose plan of intensive farming presents a sharp contrast to that followed by D. C. Lewis. The country around Lambertville is rough and hilly, with many springs and wet places, while at Cranbury it is level and easily worked. Mr. Hunt took a poor farm—so poor that for many years it yielded no profit, and by hard work and wise planning has been able to make the farm pay well.

He may be called a fertilizer and water farmer—using the Stockbridge fertilizers and pumping water from a small pond for irrigating purposes. On a level farm like that of Mr. Lewis at Cranbury a well-ordered rotation of a few staple crops is possible, but on a farm like Mr. Hunt's—rough and uneven—a different plan must be followed. Such farming, to be successful, must be divided into two distinct classes. On the hills grass and grain may be grown in short rotation, or the hillsides may be planted with fruit trees. The lower lands in the valley may be smoothed and given to such crops as vegetables and small fruits. Mr. Hunt has followed this plan with success. There was a field of good wheat on the highest hill—"a fruit grower must have straw"—as the farmer says, and several good fields of grass. The money crops, and where they are the heart of the farm will be found, are grown on the lower lands. On this farm the money crops are onions and strawberries. These crops are grown together. The strawberry plants are set in rows five feet apart, with several rows of onions planted between. Both berries and onions receive the best of care, being well fed and thoroughly weeded. After the onions are pulled, transplants from the strawberry rows are put where the onions grew, and thus the ground is filled. This is not a new way of growing strawberries, but Mr. Hunt has been very successful with it. He also has a plan for keeping old strawberry beds in bearing which is well adapted to a piece of ground suited to this fruit. After fruiting, the middles of the matted rows are cut out. The outer plants send runners into what was this year's cultivated space, so that the heart of this year's matted row becomes the space for the next season's cultivating. Thus we have each season new plants on new ground—this year producing fruit on the ground which was under the cultivator last year.

A dam built across a little brook at the lower part of the farm has made a small pond for irrigating purposes. Mr. Hunt uses a small gasoline engine for pumping. This engine can be mounted on a truck and carried about from one part of the farm to another wherever work is required. This is not a traction engine, but a small stationary affair which is light enough to be picked up and carried from place to place. The water is run through hose and wooden troughs, the latter having little metal gates or openings through which the delivery of the water may be regulated. As we have already said, the early part of this season was so wet that he made no use at all of his irrigating plant. Still, even in this unusual season, there was a week or 10 days when the strawberries fairly curled up with the heat. Mr. Hunt says that probably his best returns from irrigation have been made on the celery crop. In some very dry seasons, when it would be impossible to start celery in the usual way, he has been able to flood the ground, and thus give the plants a fine start to carry them through. I have heard people tell great stories about the benefits of irrigation, but few of them will claim that flooding the ground is as beneficial as a warm, gentle rain. Here it has been found necessary to under-drain most of the soil that is used for irrigating. Both tile and stones have been used. Heavy soil, when flooded with water, becomes pasty and cold, unless there is ample space for drainage. Without tile or stones it would be like a flower pot with no hole in the bottom for drainage.



THE NETTIE STRAWBERRY. FIG. 217. SEE RURALISMS, PAGE 518.

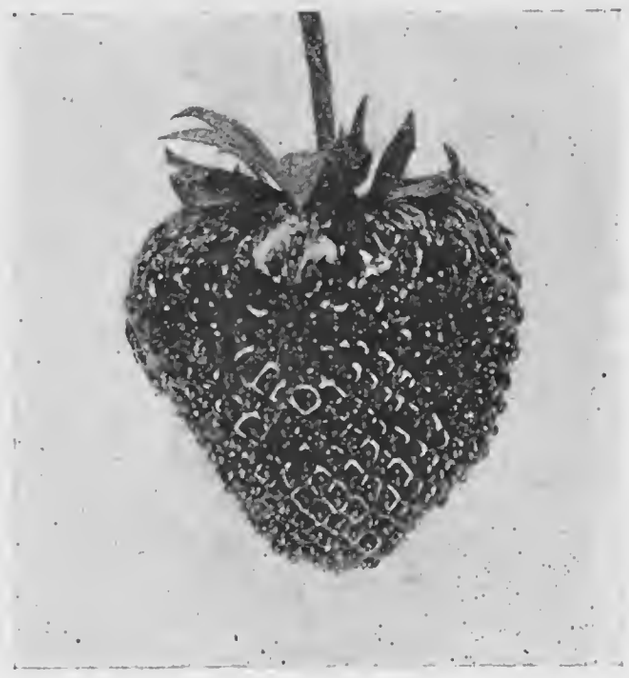
Mr. Hunt raises enormous crops of hay. He gave, on page 466, the figures of one crop of clover which I saw while being cut. He says that this grass followed onions and strawberries, without special preparation of the ground or heavy seeding. The ground was simply plowed and harrowed once. The Timothy had been blown down and smothered out, so that the crop was nearly pure clover. Had the Timothy grown I think the yield would have been fully equal to any that I have seen in Mr. Clark's fields. Yet this does not prove that Mr. Clark's system of constant and thorough tillage is not necessary. This grass of Mr. Hunt's was grown after onions and berries, both crops receiving the most careful tillage for years. All this working and handling of the soil in previous years helped the grass crop. Thus it is that the results of careful work on the soil often appear a year or two later in some subsequent crop.

The land that produces these great crops of onions, strawberries and grass was once covered with rocks and stones. The fields were like the stony old pastures one sees in riding about most hilly sections. The stones have been picked and pulled, and the fields made level and smooth for the irrigator with infinite patience. Formerly a few cows nibbled among the rocks, and the brook ran idly to the river. Now the brook has been held up and forced to do its share, and the rough fields have been smoothed and trained for the highest service of man. This sort of farming is always interesting. There is probably nothing in agriculture requiring quite so much skill as this work of giving character and value to the most unpromising parts of the farm. What a satisfaction a man like Mr. Hunt must feel to realize that he has turned these rough fields into the most productive land in the neighborhood!

To refer again to the fine new strawberry President it should be said that there are no plants for sale yet. In a recent letter the originator says:

"Three years ago, when it first fruited, the plot was probably four feet long by two feet wide, and growing in a row with a number of other seedlings. It was moved and distributed along 15 or 20 feet of row immediately after the fruiting season, and did quite well that Summer. Last Summer, after producing a fine crop, the plants were again served the same way, and had to endure the terrible heat and drought of last July and August, so that last Fall they did not look as though they could possibly produce any crop at all. Those set out last Spring are the only ones that have had a good chance, and they are doing finely, having put out a great many runners. In another fruiting season I expect them to eclipse all former efforts, and if I am disappointed I can stand it better than the public, as I am used to it. Last year, while the yield was very fine, they were not so prolific as this year."

H. W. C.



HOWARD'S SEEDLING No. 4. Fig. 218.
See Ruralisms, Page 518.

EVERYBODY'S GARDEN.

AN EXPERIMENT STATION.—Every gardener knows or should know his own needs best as to what his soil requires; the demands of his particular trade, varieties that will best satisfy those demands, etc. Then why wait for some one else to develop what will meet his requirements where the other fellow knows nothing of them, or of his surroundings? Why not, as circumstances permit, work out these problems one's self? No work in the garden will prove more satisfactory, or perhaps more profitable in the outcome than the improvement of vegetables; these improvements may become apparent in many particulars as form, size, color, quality, productiveness, early maturity, etc. These may all be brought about by careful selection of seed stock from year to year.

EARLINESS.—In nearly every variety of vegetables sown or planted there will always be discovered one or more plants with a marked degree of advanced development, which brings them to maturity several days in advance of the general crop. Carefully mark these plants, and from the very finest specimens save the seed for next year's planting. The idea prevails that plants produced from seed saved from fruits or vegetables only partially ripe, will ripen their fruits much earlier than those from seed fully ripened; this is quite noticeable in the tomato. Extended experiments clearly demonstrate this fact, but they also indicate that the extended use from year to year of this immature seed will greatly impair vitality. The restricted use of unripe seed is therefore necessary; and while helpful at first in establishing early maturity, it should be discarded as soon as the quality becomes fixed, and fully matured seed from earliest specimens be used for future work.

SIZE AND PRODUCTIVENESS.—The same general principles carried out as to size and yield will insure very desirable changes in these features. A very interesting case is cited in the Year Book of Agriculture, 1898, of seed corn of the white dent, red cob variety. Previous to harvesting the main crop, the field was carefully gone over and only short stocky stalks bearing two ears each were selected for the following year's seed. By a careful four year's selection, the yield was increased 25 per cent. The same is doubtless true of nearly all vegetables, and as to the ultimate profits in this work there is no room for doubt.

UNIFORMITY IN MATURING.—With many vegetables this is almost an indispensable quality; for example, peas grown for market where the ground is required for other crops. So few people know how properly to pick peas. Especially have we found this true with hired help, whose sole object is to get through with the job, regardless of consequences; the vines are lifted bodily out of the ground, or so loosened that they wither up with whatever peas are left. Immature pods are stripped off with the good ones, and it often happens, especially in hot, dry weather, that the first picking is practically the end of the crop. Hence the desirability of uniform maturity. For the small home garden, where it is desired to prolong the season, we should try to develop a continuous-bearing strain. In lettuce culture in the forcing house, where the profits of the work are dependent upon one crop following another in quick succession, or where the lettuce crop is followed by cucumbers, uniformity in growth and maturity is the great essential. This feature has been so carefully worked up by the growers that they are able to cut the entire crop in one day. It is almost needless to add that these gardeners are obliged to grow their own seed and can depend upon no other source of supply.

QUALITY.—Improvement in this respect is a desirable basis of experiment and can be attained in nearly all varieties of fruits and vegetables. The tomato and melon families are very susceptible to work along this line, and we also find them as ready to "run out" or become inferior, if attention to these details shall relax. To establish a particular type will involve more time and labor perhaps than some of the features above mentioned, but patience and painstaking efforts have accomplished wonders. Many striking illustrations might be given as verifying this particular thought, and later on a history of the development of some well known varieties may be of interest.

ADAPTABILITY OF THE WORK.—While the field of development in all its detail would be legitimate and feasible only for the scientist there is much that is entirely practicable for the farmer and gardener either in small or large operations. The importance of the work may be better understood when we remember that it is to these very lines of experiment we are indebted for all our best varieties of grains, fruits, flowers and vegetables.

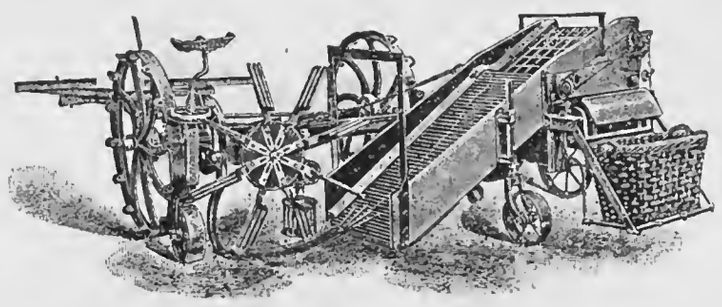
FIXED PURPOSE.—Prof. Tracy, a high authority on the subject, says: "My success in seed-breeding has always been in direct proportion to the clearness of my conception of the ideal I was striving to produce, and the persistency with which I adhered to that ideal in my annual selection of breeding stock." Get the idea of the particular point which you wish to develop clearly fixed in your mind; work for that one thing and stick to it. If other desirable features develop, use them as side issues, but work them separately; do not try to combine them with what you are already developing, as these "frills" might only appear as a passing freak, and then disappear. Work steadily for the one desired object, not allowing new features to draw you aside from the one definite plan.

Michigan. J. E. MORSE.

PASTURING THE ORCHARD.

Sheep the Apple Grower's Partners.

Since my article touching on the above subject appeared in The R. N.-Y. I have been flooded with letters asking for more definite information on the subject, and a few have been criticising me for, as they say, misleading the orchardist. Now, if there is anything which I would not do, it is to mislead any tiller



AN ENGLISH POTATO HARVESTER. Fig. 219.

of the soil. But I am very sure I am right in advising the pasturing of apple orchards with hogs and sheep. If people will only read what I write carefully, and follow my advice to the letter, I am sure they will find how to raise high-colored, fine-grained and well-flavored fruit, freest from insects, that will keep longest and in best condition, and to raise it at least expense. But they must not misunderstand me. I do not advise seeding an orchard nor keeping it in sod. Simply stop cultivating, put in the sheep, feed them and let the grass come in naturally, if it comes at all. Don't think that 10 sheep are enough for a 10-acre orchard, but put 10 or 15 sheep to the acre. overstock so heavily as to compel you to feed, and then feed enough to keep the sheep thriving and feed with a view of feeding the orchard through the sheep.

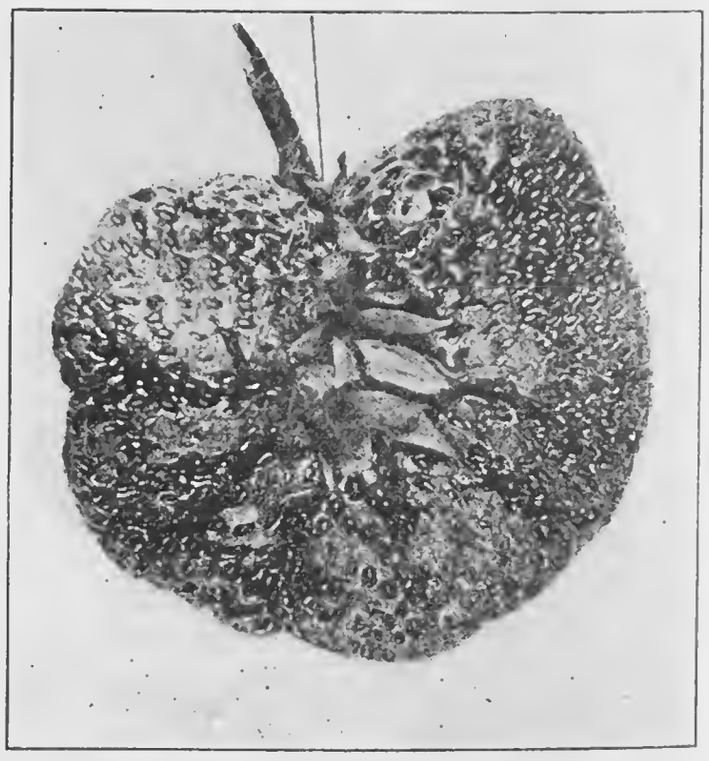
To convince himself that I am right, let any man fence off an acre of orchard and put 15 sheep into it, providing plenty of fresh clean water for them at all times, and feed them 15 pounds wheat bran a day. Keep the sheep there until the apples are fit for market, no matter if they do eat a few fallen ones, and all they can reach from the lower part of the trees; there will be just as many when it comes picking time. Just watch and see how soon the trees will take on a cloak of green color, thick and vigorous, and how hard and stocky the wood will become; how firm and highly colored the fruit will be, far beyond the part kept in constant cultivation. While this amount of bran will make the sheep thrive better than in any pasture, however good it may be, they will eat the grass to the very roots, eat all sprouts from about the roots, and take every fallen apple long before the contained Codling moth or maggot can escape, and their constant tramping under the trees will break up the surface and in a great measure conserve the moisture for the use of the trees.

If 15 sheep be kept on an acre, and they be fed 15 pounds of wheat bran a day for seven months, the length of time they may be kept in the orchard before and after the crop is picked, they will be fed 3,150 pounds of bran, which will contain 51 pounds potash, 102 pounds phosphoric acid and 83 pounds of nitrogen. If the sheep are mature very nearly all this will be scattered under the trees, which will be far more than will be taken in the largest crop of apples, and the soils will grow better instead of poorer. For the information of many who have asked how to prevent the sheep from lying all the time in some particular part of the orchard let me say that sheep are quite prone to lie about in the vicinity where fed, and by changing the location of feeding troughs once or twice a week they may be made to scatter the manure very evenly over the whole orchard. In constructing the troughs in which to feed the bran it is much better to make them with a wide flat bottom than V-shaped, as they then will not be likely to "scoop" out the feed and waste it. It is also well to make them double so that by turning over each time a clean trough will be had. The best trough will be made as follows: Use three boards eight inches wide and one inch thick, of sound timber. The only drawback to pasturing orchards with sheep is that the ordinary orchardist does not have a place in which to put his sheep at such times as he is picking his apples, and during Winter, but it will be to the advantage of every apple grower to try as indicated a part of his orchard, and I think the result will be so satisfactory that he will make an extra effort to provide some way to care for them when picking his apples, and by Winter feeding he cannot only find profitable employment for the Winter months, but make a little money and lots of manure for use in the orchards or on the farm. J. S. WOODWARD.

HORSE SHOE FARM NOTES.

CUD AND KICK.—The Hope Farm man has a peculiar faculty of looking at a subject from the off side, and makes a good point out of chewing the cud, as far as men are concerned, but that won't apply to a cow. As far as I am concerned, chewing the cud of reflection is disagreeable, and the taste bitter; with the cow it's a pleasure, a sweet morsel, and not indulged in when she is in a fighting mood, or nervous. A. L. S. is a student observing, and was right when he said: "When a cow chews her cud there is no kick in her heart." Watch her close her eyes, and chew the "grass hash"; contentment and pleasure combined are very perceptible. The perfect milker will so perform the operation of milking that this calm mood is not broken. A cow becomes accustomed to a certain milker or manner, and for best results in manners and milk should be milked the same way each time. I do not think it makes any difference whether Cook's slow uniform man or Manchester's quick, rapid milker performs the task, provided the same manner is employed every time.

ALFALFA HAY.—Many experiment plots of Alfalfa have been sown in this section, and owing to continued wet weather a complete stand has been secured. Alfalfa hay, where it has been tried, gave very satisfactory results, and the buyers tried to get more. I do not believe there will be many farmers that will *want* to sell that hay. It seems strange that the cured hay would cause bloating, and I would like to know whether there are any cases of loss known, from feeding well-cured Alfalfa hay. For best results it should be cut the first time before many blossoms appear. The late cutting of the first crop seems to injure the plant, more than at any other time. The second cutting will be smaller, and may be the only one if the plants are allowed to become mature, while early cutting invigorates the plants. The great value of Alfalfa is in the protein, and the largest per cent is found before there are many blossoms. The leaves contain three times as much protein as the stems, and the directions for saving them on page 449 are valuable. C. E. CHAPMAN.



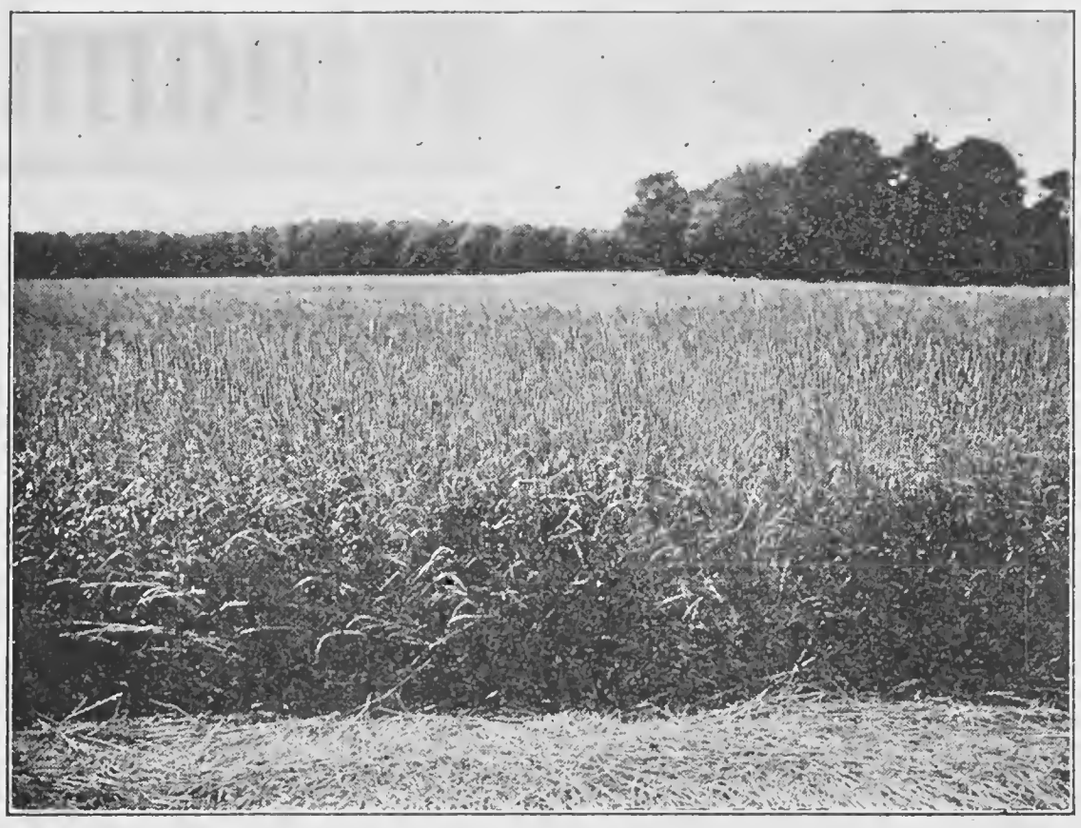
HOWARD STRAWBERRY (BLACK'S). Fig. 220.
See Ruralisms, Page 518.

FORAGE CROPS IN NEW JERSEY.

Barn Pasture for Cows.

Fig. 221 shows a picture of the grass field at the New Jersey Experiment Station. This grass was seeded alone on September 20, 1900. One object of the experiment was to observe the difference between manure and chemical fertilizers. An experiment is being conducted at the station with two kinds of manure. One is from a lot of cows which are fed what is called a "wide" ration—that is, a ration in which there is a large proportion of carbonaceous or fat and starch-producing foods. Another lot of cows is fed a "narrow" ration—that is, one in which the proportion of muscle-making foods is greater. The manure resulting from the feeding of these two rations is kept separate and tested side by side. In this grass experiment the "wide ration" manure produced 2.91 tons of hay per acre, the narrow ration 2.97 tons, and the chemical fertilizers 3.11 tons. The grass was of fine quality. This shows what can be done with a modification of the "Clark" method of seeding grass. We do not understand that the ground was worked as thoroughly as Mr. Clark advocates, and less seed was used. To those who have tried this method of seeding grass, and failed to obtain heavy yields it must be said that the soil at the station is good grass land. It has been well cropped and heavily fed for a number of years. It has been well "trained" for a big grass crop. Some of the fields on which the Clark plan was tried were not fitted by nature or by culture for the work. We must remember that great results in grass, or in any of the products of grass—man included—are possible only when natural conditions are right, or after long culture.

We have had much to say about some of the green forage crops at the New Jersey Station. Here is the order in which they have been fed this year: Rye, yield per acre, 9.60 tons; wheat, per acre, 5.23 tons; Alfalfa (first cutting) per acre, 11.14 tons; Crimson clover, per acre, 7.13 tons; mixed grasses, per acre, 8.30 tons; oats and peas, per acre, 6.20 tons. This means green food cut in the field and hauled at once to the barn for feeding. The oats and peas were partly dry when cut—thus the yield was lighter than usual. Since our last report the following crops have been planted so as to make a full succession. White flint corn, May 4; Evergreen sweet corn, May 16; cow peas and Soy beans, June 10; Barnyard millet, June 19. There will be a succession of green crops right through the season, with some of each to be cut and cured for hay.



THE GRASS FIELD AT THE NEW JERSEY EX. STATION. FIG. 221.

BLUE VITRIOL CLEANS A DRAIN.

I have a cider cellar from which led an old stone drain which has been in use for a number of years. It, however, began to run less freely than was necessary, so that last year I decided to put in a new tile drain which I thought I would flush out and keep clean, as during cider making time there is considerable thick settlings of pomace from the bottoms of the casks to be got rid of. I accordingly put in a three-inch porous tile and ran it in a new ditch most of the way. It worked all right all the Fall and Winter, although the fall was very slight where it left the cellar. This Spring we had lots of rain, and a good deal of water ran in the ditch over the tile, and when it began to clog back and fill the cellar I supposed it was due to silt working in the joints and settling where the current was checked, thus clogging the pipe, so I dug up the pipe just out from the cellar where I thought the choke might be, and much to my surprise I found it completely filled with a substance somewhat like vinegar mother. To clear it I had to take out a length of tile every 25 feet and run in a length of hose, and so finally got it clear. In about three weeks, very much to my disgust, the cellar began to fill again and I had to do something. I thought of copper sulphate, but could not see much hopes of using it successfully where there was so much water. About this time Mr. Huested, a State tree inspector, happened here, and he also suggested the blue stone, so being in a great hurry I took a handful of the vitriol crystals and put them in the end of the tile where it left the cellar, and forgot all about it until the following Monday (it was put in Saturday), when I happened to notice a lot of ropes of stuff in the brook where the drain emptied. I then thought of the vitriol and looked at the drain, and sure enough it was clear. After a time it clogged again, and I put in more vitriol. In a day or two Prof. Stewart, of Geneva Experiment Station, happened along, and I told him of my experience. He was quite interested, and expressed a wish to see the fungus and get a sample, which was easy, as it had again discharged about one-half barrel of ropes of the growth, which was at that time unknown to the Professor, but he afterward told me that it was very rare, I believe only two or three instances being noted where drains had been clogged by it. He said the name of it was Septomitus lectens. Now the question is, why did not this form in the old stone drain as well as in the tile? The other conditions were all exactly the same, except that the tile was porous and the stones not so much so. The vitriol seems an efficient and cheap remedy. I used about one-fourth pound of the crystals, which are excellent in any sort of drain or waste pipe. H. H. H.

Milton, N. Y.

PRAISE FOR THE STATION BULLETINS.

Much has been said in the last few years about the mystery surrounding the station bulletins, and much criticism has been hurled at our station officials. My own opinion is, that if the farmers were as near right as the bulletins we should not hear so much about "farming don't pay." I do not think that the bulletins should be made so plain that any farmer could read and understand them as readily as he could a daily paper; if he could he would forget their contents just as soon. Let him *study*, search out this mystery, as he calls it, and he will be able to carry its teachings into his daily work, and receive the benefit of what has cost some one perhaps years of study. I think the more I see of the New England farmer that what he lacks most is adaptability. He goes to the institute year after year, and it is very seldom that he adopts any of its teachings. He reads the bulletins, but he does not profit even by that which he *does* understand. If he is troubled in his field or orchard with insects or fungi, the station bulletin points out the remedy, and through the same channel he is taught to control, to a large extent, climatic and soil conditions. In my Grange work as lecturer of a large and prosperous Pomona Grange and Master of a Subordinate Grange, the bulletins which I receive from several stations have been a great help to me; I meet with a large number of farmers who have been benefited by the noble work that our stations are doing, and I hear but very little complaint about the station work except from new members, and those who do not belong to the Grange. Let the dissatisfied join a good working Grange, become an active working member, read the station bulletins, and he will soon become a satisfied, progressive and prosperous farmer. Long may the stations live, and all hail to the noble work which they are doing!

Massachusetts. S. R. WALKER.

A NEW POTATO HARVESTER.

For a long time those who produce large quantities of potatoes have felt the need of a machine that would do away with the hard and slow method of hand digging and picking. Fig. 219 shows the Battersby potato harvester, an implement which is used to some extent in England, and is said to work satisfactorily. This machine digs, cleans, sorts and delivers the potatoes into baskets. The separator part works on the same principle as the ordinary grain thrasher, so that those who use it may properly speak of thrashing their potato crop. There is, apparently, nothing to prevent small stones or hard lumps of dirt from getting in with the tubers, and the natural conclusion is that the machine is intended only for use on soil that is free from stones, and not wet or lumpy. It ought to work to perfection on the prairie lands of the Central West; and, if it should come into general use, the probabilities are that the bulk of the potatoes could be grown on these smooth lands on a large scale, at a figure which could not possibly be met by the small grower in the East, who must depend largely on hand labor.

VALUES OF FARM PROPERTY.

The Back Fields of Connecticut.

In regard to the two farms that I rent, years ago one of them was considered worth $10,000. At the time of the death of the owner, some 12 years ago, it was appraised at $5,500. The other farm, the party that I rent them both of, paid $5,500 cash for. He offered me this farm, after a good deal of repairing that I rent them both of paid $5,500 cash for. He them both. They contain about 300 acres. I rent them both with teams (five horses) and tools of every kind for $30 per month. There are two good houses; outbuildings need repairing; good creamery with boiler, engine and separator, and everything to make first-class butter. I own the stock, average over 50 head, from 30 to 35 cows, the rest in young cattle of my own raising. We are making now about 600 pounds of butter a month, which I send to Derby, Conn., at 22 cents for last month. It will go up now every month until I get 28 cents, where it will stand for the Winter. I used to print my butter, but now send it in tubs, the buyers paying the freight. I have to go to the depot but once a week. There are two farms adjoining these that I rent, one on the east and one on the south. About 20 years ago one of the farms was bought for $5,500, and a new barn was built. A year ago last March a young man bought it for $1,000, and in 10 months paid all his expenses promptly and $400 on the principal. He told me the other day that he could pay for it all this year, but he wanted to build a silo and repair the house, as he thought he could while owing so little. This farm contains 160 acres. The other farm was bought for $6,500 25 years ago—it contains 280 acres. A year ago last April it was sold for $1,800, and only $100 paid down. I know of three farms that were sold at auction this last Spring that did not bring much over one-third of their original cost. In Warren, a town south of us, property has decreased in value more yet. A place known all over as a very desirable one, and containing 200 acres, was sold for $600—a large well-kept house and good barns. The reason for all this, I suppose, is that, in this back country, there is little to attract the young people. They all go away to larger places. The old people, all very well off, are left alone to the mercy of hired help, and, when they pass away, the farm is sold at just what they are offered. Another thing, there used to be a great demand for charcoal, and all these old hills have been cut over several times. In every town from here to the Massachusetts line were furnaces for making charcoal pig iron, which made a good market for all the wood the farmer had, and brought a great many in town. This business is all gone and the furnaces with all their property are idle and going to decay. This iron company less than a year ago closed up the business in this district, and sold good wood land for 50 cents an acre. In regard to the markets, selling milk to the New York Coöperative Milk & Cream Company is the principal business. Some 20 years ago milk sold in New York brought from $1.20 to $1.40 per can of 40 quarts. Now they get from 50 cents to $1.15. I think last month it sold for 60 cents. This company owns creameries at nearly every station on the Housatonic road, and great quantities of milk are produced, about 200 cans (40 quarts) going from this station daily. This is a beautiful country, and nowhere is it healthier. The land is somewhat rough and rocky, but very strong and capable of producing enormous crops, and we on this place are nearly as early as some a good deal farther south. Although we had a wet Spring my corn was planted May 8, and is now six feet tall on a level.

Litchfield Co., Conn. S. M.

VANCOUVER, B. C., merchants have taken a unique plan for getting even with the dead beats in that town. They got together and made a list of all who did not pay their bills. Then they hired a collector who, dressed in scarlet uniform, called on these delinquents with demands for payment. It is said that in three months most of them had either settled up or left town.

FIGHTING SQUASH BUGS.—While sowing turnip or radish seed may or may not be of value in discouraging the real Simon Pure squash bug, the practice this year does not seem to interfere with the appetite of the firefly. The nights so far being too cool for much flying they just "lay low" and eat all night. Much of the seed was drowned out, and what came up is now being devoured. I am trying, with some promise of success, dusting with air-slaked lime or plaster, stirring in a peck of lime or plaster a tablespoonful of crude carbolic acid, and dusting lightly when the dew is on, and repeating the dose if necessary. J. Y. P.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Ripe Rot of Apples.

J. C., Lynchburg, Va.—What can I do with my apple orchard? Last year the apples specked very badly on the trees, just as they had completed their growth, so that when they were gathered in October to put away for Winter a great many of them were worthless, and this year, though the trees were full to about September, when gathering time came, there was not one to gather.

ANS.—The disease which has been the cause of the trouble mentioned is in all probability what is known as ripe rot. It is a disease which lingers from year to year in the orchards, the germs being in the rotten fruit and elsewhere about the trees. The destruction of all decayed fruit would help to lessen the means of infection the next year, and so would spraying the branches and the entire tree with copper sulphate. This should be done early in the Spring, and then two or three times after the fruit is growing. The State Experiment Station at Blacksburg, Va., should be consulted for details, and it may be that an expert will visit the orchard and personally inquire into the trouble, and doubtless give much good advice.

H. E. V. D.

Short Talk on Cherries.

G. C. W., New York.—Name good varieties of large sweet white and black cherries suitable for an orchard in northern Saratoga County, N. Y. Why is it that growers do not raise larger quantities of white and black sweet cherries? Is there no demand for these fruits, or is it because the fruit is more difficult to raise than sour cherries?

ANS.—Governor Wood is one of the good cherries that is yellow with a red cheek. Napoleon is also a good light colored, sweet cherry. Tartarian is one of the best of the early, black sweet cherries and Windsor about the best of the late ones. One of the reasons why more light-colored cherries are not grown is that they show bruises very quickly and do not sell well. The red and black sweet cherries sell well but cannot be grown in all sections.

H. E. V. D.

Persian Walnut and Other Nuts.

L. W., Lutherville, Ark.—1. Where can I get seeds of the Persian walnut called Kaghazi in the Fall, from some one who grows them? 2. Where can I get a tree or two of the pistachio to plant?

ANS.—1. There are very few who grow the Kaghazi walnut, and they are nearly all in California. It would be well to look over the advertisements in the rural papers from that State, and send to those who have that variety. 2. It would be useless to try to grow the pistachio nut anywhere in Arkansas, for it is too tender. Moreover, this is a dicecious tree, that is, its male flowers are on one tree and the female ones on another, which makes it necessary to have one of each in order to get fruit.

H. E. V. D.

Diseased Pear Tree; Worms in Lilies.

A. W., Buffalo, N. Y.—1. What is the matter with a young pear tree when its leaves are covered with small growths the size of a pin-head? 2. What can I do for garden lilies when the centers of their stems are wormy, causing them to grow small and be very brittle?

ANS.—1. The red growths are probably caused by the irritation of some minute insect. It is not likely that much damage will be caused. The treatment most available would be thoroughly to spray the foliage with whale-oil soap solution, four to six ounces soap to one gallon of water, taking care to hit the under surfaces of the leaves forcibly. 2. We know of no cure for worms in lily stalks except to cut and burn all affected stems in order to limit the spread of the pest.

A Fertilizer for Strawberries.

E. A. W., Deruyter, N. Y.—What fertilizer would you apply to ground in fitting for strawberry culture? I have tried barnyard manure, but often find many foul seeds get a start in that way.

ANS.—The regular fruit mixtures made by the best fertilizer manufacturers will answer. If you desire to make a home mixture, the following will give good results: One part by weight of nitrate of soda, one part muriate of potash, one part fine ground bone and two parts dissolved or acid rock. This is an easy mixture to make and is very useful for all fruits.

Name for a Farm.

L. S. H., Moorestown, N. J.—Will you give me what you consider an appropriate name for an 100-acre farm, mostly in fruit, especially strawberries, of which there have been 6,000 quarts picked in one day?

ANS.—We would hardly like to suggest a name for a farm without knowing all about it. Such a name ought to suggest some striking feature about the place, or some sentiment or ambition connected with it. Some farms are named after individuals—the name may be a combination of different personal names—or it may indicate some special feature of the place, as "Pine Tree," "Cherry Lawn," "Lakeside," "Hill Top," etc. We think that every farm should have a name, but the farmer or his family should select the name themselves. The more true sentiment and poetry you can get into such a name the better.

Capital in Farming.

A. W., Buffalo, N. Y.—What, in your opinion, is the smallest sum of money one could start farming with? Wouldn't it be better for a beginner to take a small productive farm rather than one run down?

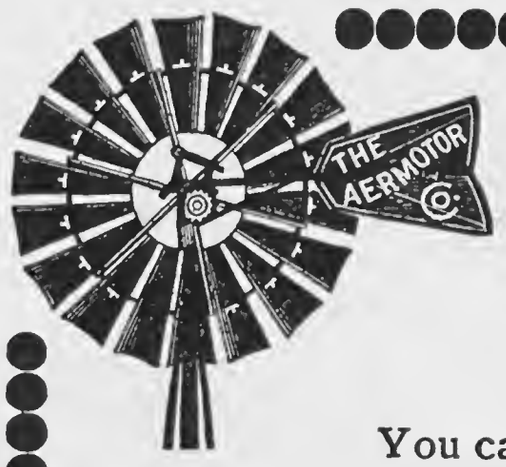
ANS.—If you were to ask us to name "the length of a piece of string" we could answer about as well as we can this question. What sort of "farming" do you mean? Do you intend to grow strawberries and other small fruits, or do you mean to try poultry or other stock? You can easily see that what is called intensive farming requires more capital for stock, fertilizers and help than the culture of such crops as potatoes, grain and hay. We would make no general estimate of needed capital without knowing what you intend to do. A man going into the grocery business will need more capital than a baker or a real estate man, for his stock will cost more, and he cannot turn it over so rapidly. A small productive farm near a good market will enable a man who knows how to raise large crops. Some men, however, will make more on the rundown land. It will cost less, and if they succeed in restoring it at fair cost the chances are that the value will increase. A man new to farming ought to have spare capital enough to carry his entire family one whole year at least.

Cherry on Marianna Plum Stock.

D. S. C., Milford, Del.—I noticed a short time ago, that you said you had heard that Early Richmond cherry will do well budded on Marianna plum stocks. Is it your opinion that other general varieties of cherry will do well on Marianna stocks?

ANS.—I have never tried budding cherry upon plum stocks of any kind. I have no experience to guide me in making an answer to this question, but have heard several persons say that different varieties of the cherry will succeed fairly well on the Marianna plum stocks. However, I should not like more than to make a trial of it. As all of the sour cherries do very well on Mahaleb stocks, I do not see any very good reason for trying the Marianna plum stock, but perhaps the latter will do well in soil that does not suit the former.

H. E. V. D.



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BORDEAUX MIXTURE AND POTATOES.

Do you find that it pays to use Bordeaux Mixture on potatoes? How often do you use it, and would you advise the average farmer to spray?

We believe in spraying potatoes with Bordeaux, and have practiced it considerably in former years. This year we regret to confess we have neglected it. Work has never pressed us harder, as planting, hoeing and haying have all come in a heap. Help that is good has not been overabundant and we have been compelled to take some chances. We always plant only the early varieties, which are usually matured before blight strikes our section, which is generally not earlier than August 1. If we can have two more weeks of good growing weather our potatoes will probably come out all right. H. G. MANCHESTER.

Connecticut.

In answer to your spraying query, I have not sprayed my potatoes for several years. Previous to that I sprayed for three years in succession with Bordeaux Mixture, and came to the conclusion that it did not pay me. To do any good all are agreed that one must begin early and keep it up well through the season, spraying from three to five times. This is not only costly but interferes with the other farm work. Two of the three seasons that I sprayed the potatoes which were not sprayed lived as long and yielded as well as those which were sprayed four times. I perhaps may be pardoned for discontinuing spraying after this experience even though some experiment stations recommend it.

Ohio. C. G. WILLIAMS.

We find it advisable not to spray potatoes with the Bordeaux Mixture for blight, till the vines are about two-thirds grown (others differ as to size); consequently, we have not sprayed any yet this season. However, now, July 12, we are about to spray our experimental plot of 308 named varieties and as many seedlings. With this plot, we are to make a thorough test along the line of blight and its treatment with the Bordeaux Mixture, a report of which we would be glad to furnish you later in the season. In this section this dread disease is not so disastrous as in others. Fortunately for us, we have been nearly exempt from this misfortune since 1896. We shall not treat our main crop, this season, and from our experience, we should not advise the average farmer to go to the expense of spraying his potato vines as a preventive of the blight and rot. Were it a cure, and to be applied after the disease appeared, our advice would be otherwise. At this date, potatoes are looking very promising, though cultivation is backward, due to abundant rain.

Prattsburg, N. Y. HILER BROS.

We have three acres of potatoes planted first week in June; have sprayed them but once with Bordeaux, one pound copper and one pound new-process lime to 10 gallons water. I like the new-process lime much better than the old way of slaking it. As to your question whether I find it necessary to spray, I am entirely unable to answer it. Have sprayed for several years, and my neighbors do not. I have better potatoes than some, and some have better than I. I have neglected to leave rows through the field without spraying to test, but my private opinion is that as the Paris-green can be put in the Bordeaux and both applied at once, it pays to use the copper. I also spray strawberry and tomato plants, and think I can see good results in bright healthy foliage, and certainly it drives away many of the smaller insects that prey upon the different kinds of plants. I shall continue to use the copper unless it finally gets in a "trust" and the price goes too high. Potatoes came up poorly on account of our inability to work the ground before planting so as to make a proper seed bed, but where they did get a stand they are making a good growth. The bugs are simply fearful, with no symptoms of dyspepsia, and think they are more able to digest Paris-green than ever before. Many pieces will be badly damaged. I think the present crop will cost to raise and harvest it every cent we can hope to get for it.

La Plume, Pa. GEO. SISSON.

There is considerable conflicting testimony in regard to the efficacy of spraying with Bordeaux Mixture for blight, and I have never yet found an average potato grower who *knew* he had made the practice to pay. The recommendations come mainly from experiment stations and close observers who are able to detect a small difference in yield. These yields are from small plots and may be misleading, as a difference of 10 to 50 bushels per actual acre may be due to many causes, and actually occurs every year on every farm. I have no doubt that the effect of Paris-green, hot weather and flea beetle on the foliage is often called blight, and that the spraying would then be of no avail. The blight, if it comes at all, does not show with us until some time in August, and spraying before August 1 would do no good. I do not think any effect is seen from the different blights, except the late blight, which kills all foliage in two or three days, until the potato foliage begins to mature; or, in other words, the blight has a season of growth, and requires certain conditions of foliage (its seed bed) before it will germinate. As long as the present hot, dry weather continues, there will be no genuine blight. Potatoes are so late this year that they should, with favorable weather, be exempt from it. If one knew just when a wet, muggy spell was coming on, and could cover thoroughly every spot with the copper, and it did not wash off, there would be a benefit; but the job is usually only half done, and there are so many ifs that the average potato grower will not be the gainer. I use as strong a solution of the copper water as I can make without lime in my hand sprayers when putting on Paris-green, and shall not use anything else this season for blight. The blight germ is not killed except it comes in contact with the copper, before it germinates on the outside of the leaf, and, if a small part of the plant is left uncoated with copper, the remedy fails. From the difficulty of hitting all parts of the foliage and the careless methods employed in putting on the copper, leaving out the washing off and cost, I do not think it any use for the majority of potato growers to spray. Potatoes in this section are looking well. The foliage is dark green and healthy and there is no apparent disease at this date.

C. E. CHAPMAN.

FARMERS AND THE GRAIN MOTH.

New Jersey Alive With It.

What are New Jersey farmers planning to do in order to save the wheat from the Angoumois grain moth?

Many of the farmers read the article published in THE R. N.-Y. last Winter and are expecting to act in accordance with advice given, viz., early thrashing and storing in bins, using sulphide of carbon if necessary. The recent wet weather has damaged the wheat badly, preventing harvesting and developing rust. In fact, Jersey farmers are having a bad time with the elements this year so far. D. E. R.

Keyport, N. J.

So far as I have been able to learn it will be very bad. I have lots of it in my wheat, and have arranged to thrash it out as soon as possible. Many farmers expected to thrash it in the field, but the weather is so wet that they cannot. My experience has been that it is wise to thrash it as soon as possible. That seems to check it in a great measure. I have not used the entomologists' remedy but think I will try it. Apple crop in this county is not more than 25 per cent average, pears 60 per cent. I have a very fair crop of Kieffer pears, but that is unusual. D. D. D.

Monmouth Co., N. J.

We were troubled seriously with the Grain moth last year. As far as understood, our farmers will thrash during August and sell at once, or put in bags and hold as may be advisable, as we learned last year by experience, wheat thrashed about September 1 was not injured by being kept in the bags, no matter how long it remained in them. All wheat either in stack or buildings thrashed after October was seriously injured. D. C. L.

Middlesex Co., N. J.

Thrashing Grain in the South.

There must be a change in the system of thrashing grain in this section. Labor is so very scarce that we can't get enough hands together to wait on the machines that thrash as much as 400 or 500 bushels a day. What we want is a machine that will do good work with not over four horses, and eight men and boys to do everything, and thrash 150 bushels per day. Where can we get such? My idea is that a gasoline engine would be the thing to furnish the power if we could get one not too heavy to haul over our bad roads. The old tread powers that were introduced here 15 or 20 years ago were no good. R. M'A.

Saxon, N. C.

R. N.-Y.—This talk about a scarcity of farm labor comes from all over the country—South as well as North. A prominent southern paper is even advocating the repeal of the Chinese Exclusion act, so that the Chinese may be brought in large numbers into the Southern States! The St. Albans Foundry Co., St. Albans, Vt., makes all sizes of thrashing machines, from a small foot power machine to the largest. Doubtless other separator manufacturers can supply what is needed. Tread powers have been greatly improved in recent years. The exhibits at the fairs indicate that this power is becoming popular once more. The gasoline engines are being used extensively. They are lighter and smaller than steam engines.

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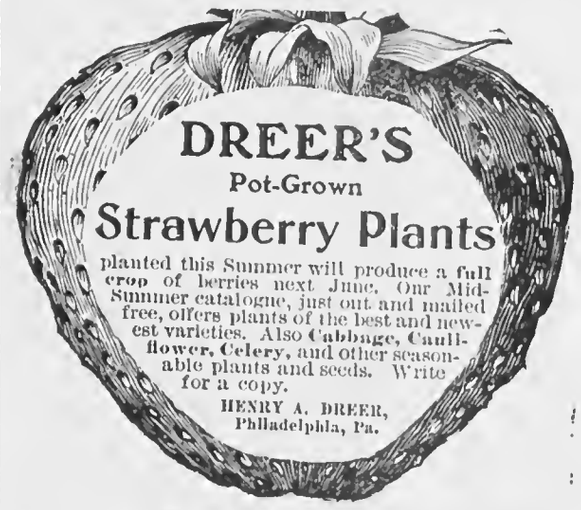

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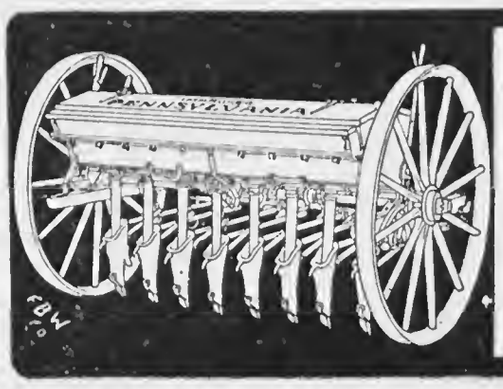

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Ruralisms

NOTES FROM THE RURAL GROUNDS.

Strawberry Report 1901

The following strawberries were planted, as received, from April to June, 1900, on a sloping plot of sandy loam of very moderate fertility, with a low humus content, as it had been cultivated for many years without manure or soiling crops. Very good sweet corn was grown the preceding year by the aid of raw fish applied at the rate of two tons to the acre. Good cultivation was given the strawberry plants during the season, and the runners were layered in a triple row during August, keeping off all that were not wanted. An application of high-grade chemical fertilizer at the estimated rate of 600 pounds to the acre was made soon after the layers rooted, and worked in about the plants. A close mulch of salt hay and Gladiolus stems was put on after the first sharp freeze in December, and parted sufficiently to allow the new growth to come through in early April. The fruiting season, with its record of excessive moisture during the blooming period, and burning heat at the latter part of the fruiting, is too recent to need further comment than to say that the later berries were in nearly every instance cooked on the plants. The first 19 varieties were received from Joseph H. Black, Son & Co., Hightstown, N. J. Several have been tried in previous years, and were favorably reported by THE R. N.-Y., and it is noteworthy that another season's test confirms our previous estimate of their good qualities. Staminate or perfect flowering varieties are marked (S), and those with imperfect blooms (P):

JIM (P).—Very vigorous in growth, broad, dark-green foliage, berries large, heart-shaped, deep scarlet; firm, rather acid, borne on long stiff peduncles. Early and productive. The dense foliage shades the berries so that they ripen up well.

LEON (P).—Strong stocky plants. Early and fairly productive; light green foliage. Berries large, light scarlet, roundish; flesh white, colors well all over, pleasant acid flavor.

PROF. FISHER (S).—Late, coming in with Gandy. Vigorous plants, tall, broad foliage; berries large, sometimes cockscombed, smooth and firm, bright scarlet; quality fair. A great producer of fine showy market berries.

REBA (P).—Late, vigorous, with large healthy foliage. Greatly resembles Prof. Fisher as grown here, but three or four days later. A very satisfactory berry.

ROBBIE (S).—Late. Strong stocky plant with broad dark foliage. Very productive of large, conical, brightly-colored berries. Quality very good, less acid than most late kinds. The berries hold up well in size throughout the season. A worthy late variety, exceeding Gandy in value as grown here.

CLARENCE (S).—Plant of moderate vigor, foliage good, and resists rust well. First berries very large, but fall off later. Immensely productive. Firm, not very sweet, but of good flavor; bright red in color. Midseason.

HAZEL (P).—Strong plants with heavy dark foliage like Jim; less productive than that variety. Berries large, firm and brightly colored, good table quality. Midseason.

CARRIE SILVERS (P).—Large plant with rather light green foliage. Berries bright scarlet, round shape, carried on a short, stiff peduncle. Quality agreeable. A productive and worthy variety. Midseason.

MINA (S).—Poor grower as compared with others. Foliage inclined to rust. Berries round, well colored and of good quality, borne on short stiff stems. Midseason.

HAM (S).—Vigorous, with broad, very dark foliage. Productive in a high degree of large, long berries, very dark in color, smooth and solid. Flesh deep red. Excellent quality. Appearance and quality better than Marshall as grown here, and much more productive. Early, but keeps up well throughout entire season. An excellent table and home berry.

ALMAN (P).—Late, vigorous and fairly productive; berries large and bright red color, but of indifferent flavor.

IRENE (P).—Midseason. Heavy green foliage. Appears productive at first, but does not fill out later berries; rather sour and watery.

OLIVE (S).—Vigorous, with thick dark foliage. Long peduncles; berries good size, dark scarlet; colors well and of fair flavor, but is irregular in ripening.

HOWARD (S).—Late, strong, productive plant; berries carried on thick peduncles. Foliage tough and resistant. Very large berries, often cockscombed, firm and well colored. Quality fair, better than Gandy. A very promising market sort, shown in Fig. 220, page 514.

MRS. FISHER (P).—Late, vigorous; a good plant-maker and bearer of fine berries. Fruit held up well on long peduncles, bright scarlet in color; fairly firm and acceptable quality. Seems to be adapted for near markets.

JOE (S).—Late. A large rugged plant, immensely productive of enormous berries which have been illustrated in previous issues of THE R. N.-Y. Firm; deep red in color, often cockscombed. Quality good for so large a berry. Evidently a valuable market variety. Ripens just before Gandy, but holds up well.

NETTIE (P).—Very late; comes after Gandy. Tremendous cropper in comparison with most standard varieties. Berries large and somewhat irregular in form; rather soft and sour. Color pale scarlet. Most of our berries were scalded by the great heat. Fig. 217, on first page, fairly represents a cluster of this distinct berry. Needs a better flavor and more firmness to render it valuable.

SUCCESS (S).—Early, vigorous and a profuse cropper, light in color but firm and handsome. Holds size well. A valuable market variety.

GLADSTONE (P).—Late. Large plant with tall light foliage. Set many large berries, which did not come to perfection. Greatly resembles Sharpless, and is no improvement under our conditions. Quality sweet, but rather insipid.

NEW YORK (S).—W. F. Allen, Salisbury, Md. Strong grower, makes many plants. Good dark foliage. Large dark red conical berries of excellent quality; productive. Did not hold up as well as some, but undoubtedly a fine berry.

KANSAS (P).—W. F. Allen. Vigorous; makes many runners. Bears a large crop of moderately large, bright red, conical berries on short peduncles; firm and sour in taste. Good for shipping; late midseason.

SEEDLING No. 4.—A. B. Howard, Belchertown, Mass. Very late. Fine vigorous plant, resistant foliage. Large berries, first in cluster, often cockscombed. Firm and bright in color. Quality very good. Productive, holding out to the last picking in size. See Fig. 218, page 514.

SEEDLING No. 103.—A. B. Howard. Vigorous low-growing plant, not inclined to make runners. Profuse crops of medium round, bright scarlet berries. They are bright and attractive, but too sour to be agreeable. Would make a neat variety for hill culture for home use.

SEEDLING (S).—Rhea Stayton, Bowling Green, Ky. Early. A low-growing productive plant. Berries smooth and well colored, but of poor quality and quite soft.

Standard and new varieties such as Greenville, Tennessee, Gandy, Marshall and William Belt bore fair crops of good berries under similar conditions.

W. V. F.

Twig Blight and Peach Budding.

S., Woodlawn, Va., speaks of the ends of the limbs or twigs dying on apple trees. I think this is due to the Twig blight and not canker worms as Mr. Van Deman suggests. It often attacks the young twigs or ends of the limbs and kills them back a few inches outright. If they die with full foliage this is the cause, and while it injures the trees somewhat it is not serious on the apple. It attacks certain varieties more than others. York Imperial, Smith Cider, Fall Pippin and a few others are very liable to the attacks of Twig blight. In regard to budding, I have had a very large experience with it in the past 40 years, especially with the peach. New Jersey grows large quantities of peach trees and has many experienced and expert budders. We have many men who can bud from 3,000 to 5,000 peach trees in a day of 10 hours. The work is nearly all done by the 1,000 by those who do this work alone, and the present price is from $1 to $1.25 per 1,000, according to quantity and condition of stock. We think a man who cannot set over 1,500 to 2,000 peach buds is not expert enough to do it well. CHAS. BLACK.

Hightstown, N. J.

ACCORDING to an Australian contemporary, the San José scale has been practically stamped out in the Colony of Victoria, but it has appeared simultaneously in many localities in Tasmania, where extensive warfare against it must be instituted.

THE "CLARK" GRASS.—"All who have tried Mr. Clark's method of grass culture, please stand up and report."—R. N.-Y., July 6.

I tried Mr. Clark's method to the letter, with two exceptions. I did not sow mixed seed and I did not use any fertilizer; but sowed pure Timothy on land that would grow 80 bushels of shelled corn per acre. We have had a very fine season for grass, and that grass will not make over a ton per acre. It did not freeze out and is extremely thick, yet it is very poor. Why? I believe had I sown a peek to the acre it would have made four tons per acre; judging from other fields. L. S. S.

Tolono, Ill.

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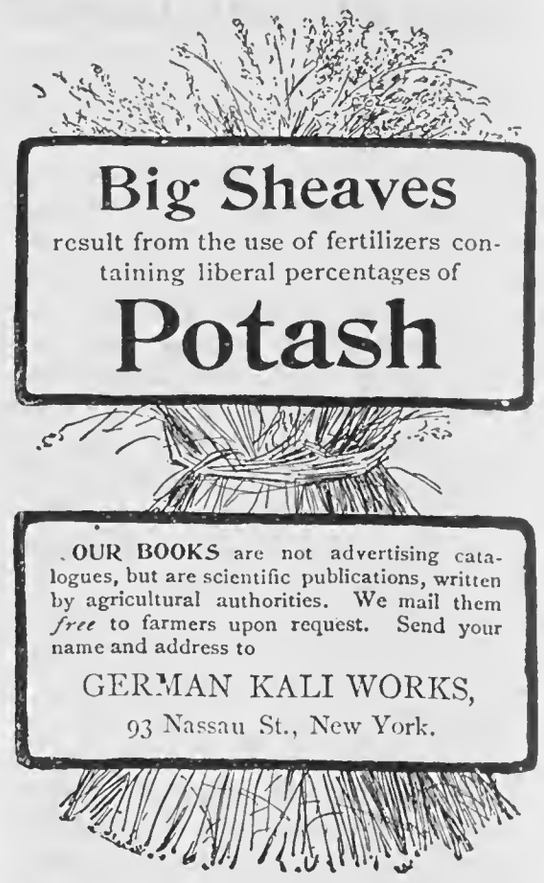

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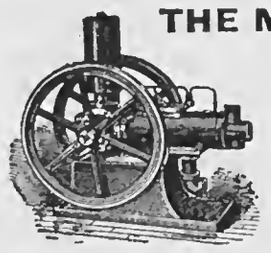

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Hope Farm Notes

I will try this week to answer a few of the questions which have been asked of late.

Why do you grow rye?

I did not intend to have a kernel of rye on the farm. The crop is what I call a weather accident.

What do you mean by that?

The rye was all seeded last Fall after some other crop. I meant that it should cover the ground during the Winter. This Spring I meant to cut it for the cows as long as it was soft enough and then make hay of the rest.

Why did you not do this?

We did feed it green as long as the cows would eat it. As most farmers know, rye soon becomes tough and hard. When it should have been cut for hay, the air was like a great dishrag. As it was impossible to cure the rye for hay, I let it go to straw and grain, though I was sorry to do it.

Why?

Because the land, near the buildings, would have paid much better in other crops. For example, we could have grown early potatoes, with drilled corn fodder following, and seeded to rye again in the corn. It is true that we can still set late cabbage or drill yellow turnips after the rye, but I do not think these crops will be very profitable this year?

Why not?

The cold, late season has prevented farmers from planting some of their usual crops, and they will now stick in lots of cabbage, in an effort to get some returns from the land. I think it will be much the same with yellow turnips, though some will be used in place of potatoes.

Have your own plans been interfered with in this way?

Seriously. We put one field into oats because it could be worked early, and we, of course, figured that the rest of the farm could be plowed and fitted. Had I known of the steady rains that were ahead of us, I would never have sown oats in that field, but would have reserved it for potatoes or corn. Another field, where we had cow peas last year, has not been plowed yet, so that we have lost for this season the value of that fertility.

Do oats pay?

I doubt if they do with us. I do not raise them for the grain, but cut them for hay. When well cured, they suit us as well as the best of hay.

Are they hard to cure?

I used to say no—but that was before I tried to cure them in a season like this one. We shall lose part of the crop this year, in spite of all we can do. In fact, barely 10 per cent of our hay this season has had a good chance to cure. At least three-fourths of all our fodder has been soaked at least once.

Shall you sow much rye this Fall?

I think not. I believe wheat will pay better.

Why do you think so?

The grain of wheat is more useful for our farming, though rye and corn ground together make good horse feed. The rye straw is salable at fair figures, but wheat will make much better fodder. It can be cut, even when the grain becomes hard, and make good hay for stock. I am so short on fodder that I shall sow wheat, so as to cut it early if need be. I may sow rye late—it has some advantages over wheat.

What are they?

It will give fair growth and yield on poor ground. Wheat needs better soil or more fertilizer. Wheat with us must be sown comparatively early. Rye will stand late seeding—in fact, we have a good piece of rye that was sown last November. We can clear off a late crop and sow rye for a Winter cover.

Shall you sow wheat alone?

No—we expect to seed to Timothy with clover added next Spring.

Then you are going to drop the famous "Clark" method of grass seeding?

No, not entirely, but I am pretty well convinced that in order to make that system pay its best one must have the best condition of soil to start with. My fields are all more or less rough and hilly. I may, in time, be able to grade and drain them, so that the Clark method will have a fairer chance. My experience this year seems to show that, until our lands are made smoother, at considerable expense, the old plan of seeding with grain is more profitable.

Do you not believe in Mr. Clark's advice to seed heavily?

I will not answer that positively until I see how my hayfields behave next year. The grass on them now is as thick as a lawn. The Timothy has hardly appeared, and the Red-top is quite short. I believe that future crops will be thinner and higher, and that the Timothy will make a satisfactory appearance later. I will not, therefore, condemn the grass yet, though it falls far short of filling the place in the barn that I blocked out for it. To a man who has strong soil, smooth and well drained, I would certainly advise the Clark method—provided he was willing to spend some money and time on the crop.

We judge that the season has not been very satisfactory to you.

On the whole, no. It has been difficult to do any work right. The nearest approach to it with us was the setting of the Stringfellow peach orchard. Our corn is backward, while the potatoes are fair. Hay is disappointing, but our apples promise to make up the loss. The farm has been greatly damaged by washing. The cows have done well, we have not lost a single pig out of 25, and the mare and her colt are in excellent health. July finds Hope Farm in much the condition of some men of middle age. From earliest boyhood they have worked under a shadow. Poverty, affliction, natural depression of spirits, physical defects and strange and little-understood burdens have been heaped upon them. At middle life they see that the best of youth has gone, and through it all they have not been able to develop any one of their loved ambitions in their own way! Such men will carry a life-long sorrow in their hearts yet, without knowing it, the habit of work and thought tempered by these very trials may still carry them on to nobler achievements than they ever dreamed of. We realize that we are 75 days from an average frost yet! Many things may be done in that time—that is, provided we have decent weather!

Are your potatoes satisfactory?

I suppose a farmer should never feel fully satisfied with his crop, but the potatoes promise well. They are in hills and have been well tilled. During the fearful heat they wilted, and did not have a good color. I thought they needed more fertilizer.

Can you put it on so late and get returns?

We have put nitrate of soda on potatoes in early July and increased the crop—but that was in a very dry season. This year we mixed equal parts nitrate of soda and sulphate of potash.

Why did you not use some form of phosphoric acid also?

We did not have any on hand, and I did not consider it so necessary for potatoes. On a crop like grain, which must mature seed, the phosphoric acid would be necessary, but for potatoes I think not, when used so late in the season.

How did you put it on?

Hugh and Philip dropped it by hand—scattering a handful around each hill—not touching the vines, but in a circle about six inches out. This meant about 275 pounds per acre. They covered about half the field by July 9—then rain drove them out. It was July 16 before they could work in it again, and I felt that it was too late to do much good. The moist weather had helped the plants and they had taken on a better color. I finally agreed to let the boys put fertilizer on half the field and the remainder on half of one of the Clark grass fields. The other halves will be left as they are, and we shall see if the fertilizer pays so late in the season.

But what is your opinion about it?

I think more of my opinions than I used to, and therefore keep them more to myself! My former experience was on light sandy soil, quite level and in a dry season. I have now heavy hillside soil with a very wet season, when drenching showers may be expected. I expect to see the nitrate and the potash color the plants, make them better able to stand the blight, increase the size of the tubers, and also delay their ripening for a week or 10 days. That was the result on the light soil, but the heavy soil may not respond in this way and, on the hillside, there is constant danger that the fertilizer may be washed out. If the fertilizer is put on too late, it is apt to cause prongy potatoes. A naturally wet season will, on ground with fair drainage, cause a heavy growth of top; but, unless there is a fair amount of sun, the tubers do not form well. When people look at potato tops in a wet season and guess at the yield of tubers, they are likely to put it too high.

What about corn and late fertilizing?

We shall put the regular corn fertilizer on each of our 10 acres of corn. The stalks do not have the right color. The corn was planted on last year's potato field without manure. At any time up to the formation of the ear, the fertilizer will make itself felt. We scatter it around the hill. If put on when the stalks are about waist high it will, I believe, do more good than if it were put in the hill at planting.

On January 1 you gave a statement of the value of live stock and hay. Have you ever considered the plan of making two estimates—one in January and another in July?

Yes, it is not a bad plan. Our account this year would stand about as follows:

	January.	July.
Horses:		
Frank	$150.00	$150.00
Dan	125.00	125.00
Major	15.00	15.00
Nellie Bly	125.00	125.00
Peter	40.00	40.00
Maria S.	.....	50.00
Cows:		
Jersey	25.00	25.00
Julia	.....	45.00
Genevieve	.....	40.00
Heifers:		
Blossom	30.00	35.00
Daisy	15.00	20.00
6 pigs @ $7	42.00	.....
4 Berkshires @ $20	.....	80.00
3 grade sows @ $12	.....	36.00
17 pigs @ $2.50	.....	42.50
1 porker	.....	10.00
70 hens @ 40 cents	28.00	.....
50 hens @ 35 cents	.....	17.50
196 chickens @ 20 cents	.....	39.20

Really the horses are worth more than they were in January. They would all sell for more and sell more readily. The colt, Maria, I put at $50, though she is worth more than that. It is not possible to give a fair estimate of the value of fodder and hay, because this year's crop has not been housed. H. W. C.

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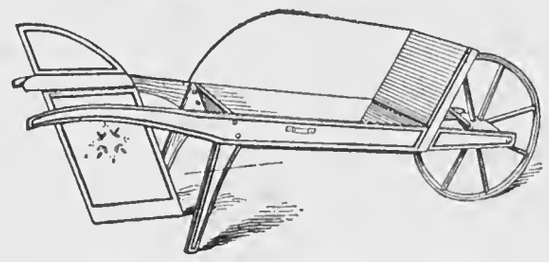

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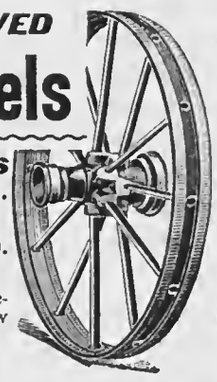

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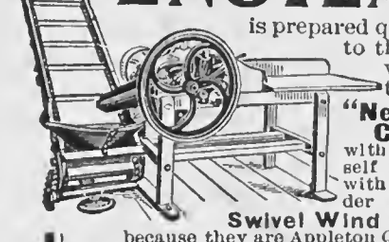

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The Rural New-Yorker

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THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, JULY 27, 1901.

ALL applications for the Ruby Queen rose received since July 1 have been filed, and the plants will be mailed next Spring, as soon as a new lot can be propagated. The season is now too far advanced for the successful planting of young roses.

*

DURING the past few years many legal papers were signed but not stamped as the law required. It has become a custom to put the stamps on when the money or other obligation was required. Now that the law no longer requires these stamps on money contracts it was hoped that these old papers would escape the tax. The Treasury Department decides that the date of the paper is the date of delivery. In other words, all such contracts made during the years when the tax was in force must be stamped before payment can be enforced.

*

WE have a letter from a reader in Pennsylvania who expects to visit the Pan-American Exposition. He purposed to load up before starting. He is a fruit grower and he wants the names of some of the best fruit men in Niagara County, so that he can go and look at their farms. We call that business. Some people would not care to look at a tree while away from the farm, but this man wants to learn all he can. He will find some useful teachers among the trees and men of Niagara County. If he could only attend one of the meetings of the Niagara County Farmers' Club he would have the educational trip of a lifetime.

*

WE begin the discussion of the question of farm values this week. We try to obtain reports free from prejudice. We are after a fair statement of true farm values as compared with former years. Thus far a majority of the reports seem to show that farm values have declined, and that it is much harder than formerly to sell farm lands. We have also reports of increase in such values. In some localities it is certainly true that the earning capacity of the land has been increased, so that its value for the business of farming has risen. In some cases this is due to the production of special crops, like apples, while in others it is due to the general improvement of the soil, or to a new town population caused by greater outputs of oil or coal. We wish to learn about these things, so that it may be made clear why such farm values rise or fall.

*

SOME remarkable predictions have lately been published, attributed to Secretary of Agriculture Wilson, to the effect that within a few years the United States will raise and produce everything it needs without recourse to foreign importations. Tea will be grown in immense quantities in the South, and rubber, coffee, spices and other tropical products in the various islands recently added to our political territory. Sugar is to be turned out in such incredible quantities by the beet sugar factories that the Secretary says, in his opinion, the sugar trust will vanish, as it now depends on the refining of imported brown sugar for its profits, while the beet factories turn out the finished product. We all hope that the Secretary's glowing prophecies will materialize, but only a child-like and sanguine temperament can expect the effacement of the sugar trust by the increase of home production. The steel, oil and the countless other monopolies, covering almost every commodity in general use, certainly do not depend on the importation of raw material for their profits, but on their absolute power to control the output and fix the selling price on one hand and the cost of production on the other. If refined sugar could be made at home by every farmer who grows the beets, just as maple sugar is produced, there might be some hope of worrying the trust, but it is well known that the beet sugar process requires the investment of great capital to construct and operate an effective plant. It does not need a very expansive intellect to foresee the rounding up of all the beet sugar factories in a grand trust, possibly by the very capital now used by the present sugar trust in refining imported sugar. It is no more rational to wait for the trust problem to solve itself than to wait for an epidemic of yellow fever to burn itself out without taking all known precautions to restrict the plague. A cure for predatory trusts will come in due time, but hardly in the manner outlined by our imaginative Secretary of Agriculture.

*

THE French have developed the automobile so that it has become a really serviceable machine for common use. There was recently a road race from Paris to Berlin in which remarkable speed was made. Part of this success is due to the fine country roads which now cover France and Germany. Our country roads are not yet ready for the auto—but it will come. It is not too much to expect that the coming farmer will own a machine which will hustle his crops or his family over the road, and if required stand on three wheels and hold up one to turn machinery or pump water.

*

WE desire to call attention to Mr. Morse's article on page 514. It may be said that the practical gardener cannot afford to bother with seed growing. It ought to be evident that he can well afford to plant improved varieties or strains of vegetables. We do not believe he can depend on the seedsmen entirely for improved strains any more than the dairyman can depend on the breeder of purebred stock. Both must do more or less breeding and selecting in barn and garden in order to secure the individuals that are exactly suited to their farm. Mr. Morse explains this matter well. Another thing which he does not refer to is the fact that such study and observation will prove the most interesting work that an intelligent gardener can take up. If one can interest the boys and girls in such study the farm will have stronger attractions for them and they will make better farmers and better citizens.

*

THE wheat crop of the country seems assured. All reports indicate that it will be the largest crop ever produced in America. The corn crop seems to be in danger. Much of it was planted late, and the frightful hot weather of the past two weeks has been very destructive in the great corn-growing States. Our own reports show that corn is likely to make a fair crop after all. The late planted fields are now growing fast, and the plant has wonderful vitality and will often recover and make a fair yield after it appears to be ruined. A season like this brings out the vast importance of the corn crop. It does not rank in export value with wheat. Last year the total exports of corn and cornmeal were valued at $87,354,810, as compared with $140,997,966 worth of wheat and flour. That was largely because Europeans do not yet know a good thing when they see it. The total value of last year's corn crop was $751,220,034, against $323,525,177 as the value of the wheat. No wonder people are worrying about the corn crop. Its loss will be a National calamity.

*

THE following letter from a reader of THE R. N.-Y. is worth more than passing attention:

I believe that THE R. N.-Y. is meant for people who do not know it all, and who want to know more. The questions I have to ask will seem very simple doubtless to the one who answers them, but are very important to me. I am just beginning, and the things I don't know are legion. If you have an expert at your disposal, and can spare the space will you have the questions answered? I do not care for the opinions of the average readers. I can get all sorts of advice at home, but want something scientific and authoritative.

Our friend is right in supposing that THE R. N.-Y. is chiefly for those "who do not know it all, and who want to know more." We do not feel competent to satisfy the "know-it-all" folks, and shall not try to do so. We welcome questions, no matter how simple they may be, provided those who ask them are sincere in their desire for information. We think we are safe in saying that no agricultural paper in the world has a wider range of correspondents, or a more thorough acquaintance with agricultural experts and authorities. While we try to make all answers clear and easily understood, in case the meaning is not made plain we are always willing to try again and make the information more soluble. There is a great demand for advice from practical people. Our friend has had an overwhelming supply of home advice, and now wishes to test it at the cooking stove of science. We shall try to start the fire.

BENEFITS from organizations among farmers are not always evident at once. The surest and most enduring growth is slowest, and sometimes months or years must pass by before definite results are to be seen. In some cases, too, the benefit, if any, does not come in the way that was expected, but indirectly—through some unexpected means. An illustration of this is found, in the history of the Five States Milk Producers' Association. This organization started out to sell and deliver enough milk to control the supply in this great city. The job was too big, and the plan failed, at various times. Then the Association began quietly and steadily to encourage the building of coöperative creameries and cheese factories. In this way they are providing the true outlet for the surplus milk, and if the plan can be fully worked out the producers will finally control the market. Several years ago the farmers through the South and West made a tremendous effort to better their condition. They organized the Farmers' Alliance and Populist parties. While most of their political plans failed, they did, without starting to do so, organize some social and industrial reforms that could not have been started otherwise. In old times the farmers dealt and competed with individuals. Now, from carrier to final seller his products are mostly handled by organizations. There is therefore more reason than ever before why farmers should join their forces.

*

BREVITIES.

Beside a southern river years ago,
Over which he rowed his ferry to and fro,
A shrewd old negro with a wrinkled face
Sat nodding in his shady resting place.
When the horn blew upon the other side
Old Uncle John his stiffened joints untied,
And slowly rowed until his shortened sight
Revealed his passenger—a raw "poor white,"
With skin, hair, clothes, shoes, teeth the same dull hue.
The captain of the ferryboat well knew
The breed—he made his bargain while afloat
"It cost free cents to ride in this here boat,"
With whining voice the fellow made reply,
"I ain't got no three cents—ner no one nigh
Ter lend me none"—
—"Well, sar, ef any man
Can't raise three cents an' hasn't got no plan
Ner nothin' else it surely 'pears ter me
Ez fur ez I am competent ter see,
It don't make no great odds fer loss or gain,
Which side de ribber no such man remain!"

NO rum on the fair grounds!

OAT and pea fodder is a perfect cow ration.

OH, how the clover is starting after the grain!

THE hay crop seems, on the whole, disappointing.

NO! NO! You can't irrigate a dry field from the eyes.

HARD to find—a hired man who will feed grain to the stock economically.

WE do not care for guesses at truth unless they are plainly marked as such.

THE most destructive battery that you can turn on some good folks is flattery.

AT Hartford, Conn., the kerosene remedy for mosquitoes has been tried with success.

THE Coddling moth gets into the heart of many a parent and ruins the spirit of the child.

WISE was that man, he may make farming pay, who hoed or cultivated when he could not hay.

THE practical men are divided on the question of spraying potatoes with Bordeaux Mixture.

Is it safe to fumigate seeds with the fumes of hydrocyanic acid gas? Not when they are damp.

Do you know that it pays to spray potatoes with Bordeaux Mixture, or do you just think so?

IT is reported that during the fearful heat in the West prices offered for eggs went down to three cents per dozen!

WHY have the experiment stations suddenly stopped issuing bulletins on tuberculosis? They surely have not "stamped out" the disease!

WING HUNG ON & Co. is the name of a Chinese firm in New York. If they have as much hustle and hang on as the name indicates, they deserve to succeed.

"WHAT can you farmers find to do in Winter?" We once asked that question while riding through northern Vermont. Here is the answer: "We have a town library of 10,000 volumes!"

WE hear of a man who sprayed potato vines with Bordeaux Mixture. The Potato stalk-borer killed many of the vines. Now the man says he always knew Bordeaux Mixture would not prevent blight!

IT is reported that the First Regiment of N. Y. Volunteers at their State camp consumed 970 quarts of milk at one supper! That is a sort of *can* teen performance which the country can easily stand. By all means encourage the milk can in the army. If we must have a standing army we can find a profitable job for the soldiers in the wise assimilation of milk, cheese, apples and other products of the farms.

THE experts say that when new, damp hay is housed the barn should be tightly closed. Many farmers say that the doors should all be opened so as to let the air freely circulate. The objection to this is that the moisture, if to leave the hay at all, must do so by evaporation. In the hot barn this moisture will slowly make its way out. In the open barn the cooler air from outside will condense the moisture and send it back to the hay.

Events of the Week.

DOMESTIC.—Nineteen persons were killed, several probably fatally injured and a large number wounded, as the result of a head-end collision between passenger and stock trains on the Chicago and Alton Railroad, near Norton, Mo., July 10. . . . . The American fishing schooner Wynonia, of Gloucester, Mass., has been run down off the Grand Banks, N. F., by an unknown steamer; 18 lives lost. . . . . A workmen's train was precipitated 87 feet by the collapse of a trestle on Crooked Creek, Springfield, Pa., July 12, and out of 18 men who were carried down in the crash nine were killed, five fatally injured and four severely hurt. . . . . A fire at Enid, O. T., July 14, caused $100,000 damage. . . . . Six persons were drowned while bathing in the surf near Savannah, Ga., July 14, five of the bodies being swept out to sea. . . . . Joseph Bartley, former State treasurer of Nebraska, who embezzled nearly $100,000, has been released, after serving 49 months of his 20 years' sentence. . . . . An excursion boat on the Susquehanna River blew up at its dock at Sunbury, Pa., July 13, killing three persons and injuring several others. . . . . Colorado, which abolished capital punishment four years ago, has reëstabliished the death penalty for murder. . . . . Fire destroyed the packing house of Jacob Doid & Sons, at Wichita, Kan., July 16; 7,000,000 pounds of meat were destroyed, and the total loss was $1,000,000. . . . . July 15, Gov. Dockery, of Missouri, issued a proclamation setting apart July 21 as a day of prayer that the drought might be broken. Little rain had fallen since April 27.

PORTO RICO.—The Porto Rican Assembly, July 4, unanimously passed the resolution declaring that the Island's revenues are now self-sustaining, and requesting the President to proclaim free trade between Porto Rico and the United States. . . . . The Secretary of the Treasury has requested of the Attorney-General an opinion as to whether he has a right to refund to importers the amounts of duties collected on merchandise brought into this country from Porto Rico between the date of the ratification of the Treaty of Paris and the date of the approval of the Foraker act, and, if so, under what authority and from what appropriation.

GENERAL FOREIGN NEWS.—The Turkish government has paid to the American Minister at Constantinople $95,000 in settlement of various pending claims for indemnity by American citizens against Turkey. The State Department will make the distribution among the claimants. . . . . San Domingo suffered most severely from the recent storms which swept over the southern part of the island. All the crops are damaged. . . . . Intense heat prevailed all over Europe during the second week in July, accompanied by severe storms. Crops were damaged by hail in France, Germany and Switzerland.

FARM AND GARDEN.—The worst drought ever experienced in Texas was broken by a heavy storm July 14. The rain came in time to save the cotton crop. It will also benefit fruit and lowland corn.

A meeting of the Nebraska State Horticultural Society was held at Kearney, Neb., July 17 and 18. Among those present were Gifford Pinchot, forester of the United States Department of Agriculture; William Hall, superintendent of the forestry survey of Nebraska, and F. H. Newell, hydrographer of the United States geological survey. Governor Savage and J. Sterling Morton were also present during the session.

A severe hailstorm seven miles north of Muscogee, I. T., July 16, killed some stock and destroyed crops for a considerable distance over a strip a mile wide. Heavy rains fell over the Creek and Cherokee Nations, generally saving crops.

The annual picnic of the Niagara County (N. Y.) Farmers' Club, will be held at Lake Island Park, Wilson, N. Y., Saturday, July 27.

Secretary Coburn, of the Kansas State Agricultural Bureau, does not believe the damage to Kansas corn has been so great as claimed. There are 900,000 acres of Kaffir corn not materially affected, and 40,000,000 bushels old corn in farmers' hands, nearly one-quarter of a full crop.

Rain fell over an area of 80 miles around Kansas City, Mo., July 16. At Lawrence, Kan., it was the first moisture in 26 days. Ottawa, Wellsville and Toronto, Kan., and Camden Point, Mo., also report good rains. Although some fields are reported too far gone to be saved, it is believed late corn will be greatly revived. In the three Missouri counties east of Kansas City the crop is reported in prime condition. Generous rains fell July 17 over the larger part of the corn belt of the Southwest. The good that will result to late corn and to pastures will undoubtedly be great. Scattering showers fell over the Southwest July 17 and 18, but in most places continued accounts of intense heat were reported. Reports from many counties assert that this rain, following what little had fallen within the previous forty-eight hours, will insure at least half a crop of corn and makes pastures sure.

The New York State Department of Agriculture placed a nursery inspector at Rochester, one at Geneva and one at New York as soon as the shipping season began in 1901 to look after the shipments of nursery stock arriving in the State at those principal points. As a result, several lots of stock were detained and found slightly infested with the San José scale. The infested stock was destroyed, the accompanying stock was fumigated, and notice of the discoveries was sent to the consignees. About June 1 seven inspectors were assigned to the divisions of the State, and commenced the inspection of orchards. Up to July 6 the reports show that 326 orchards, embracing 4,776 acres and containing over 456,000 trees, most of which are of bearing age, were examined. Less than 50 of these orchards show an infestation of San José scale, some of them very slight. Badly infested trees have been destroyed, and many trees have been sprayed with kerosene mixtures with the expectation of keeping the scales from spreading. The "Maple worm" or Forest caterpillar has appeared in great numbers in the apple and plum orchards of the State, and in some sections the canker worm has done much damage. The Department is having a large number of experiments made in various parts of the State in an effort to ascertain the best Summer treatment for San José scale on bearing trees. Small trees, even if badly crusted with this scale, can be saved by fumigation when the trees are dormant. The inspection of the nurseries of the State has been commenced, as it must be finished before the Fall shipping season begins.

L. T. Yeomans, president of the New York Fruit Growers' Association, writes that the meeting of the Wayne County Fruit Growers' Association is to be held August 17, instead of August 19, as noted in THE R. N.-Y. Wayne County will not have 10 per cent of a full crop of Winter apples, instead of 25 per cent, as given by one correspondent.

The Connecticut Pomological Society will hold its second field meeting of the season on July 30 at West Haven, visiting the 25-acre peach orchard of President N. S. Platt. Waverly Grove, on the Sound shore, will be headquarters for the day, and a shore dinner will be served at noon. Visitors should take electric cars to the Grove, whence they will be conveyed by teams to the orchard.

CROP PROSPECTS.

The apple crop is poor, hardly half crop. Potatoes fair, peaches full crop; 100,000 baskets in this vicinity. Corn backward, but promising; hay good; wheat good in straw, with some rust. W. S. A.
Bendersville, Pa.

Iowa is not such an apple-growing State as will interfere largely with the general market. A late report from the secretary of our State Horticultural Society, based upon replies to inquiries previously mailed to fruit growers throughout the State, shows the prospects for apples at 52 per cent, while other fruits range from 60 to 82 per cent. It is rather early to give reliable information about the apple crop, because things happen after this period profoundly to modify the final result.
Pres't Am. Pomological Society. C. L. WATROUS.

Prospects for a fruit crop early in the Summer were excellent, but the dry weather for the past two months has cut down the prospects very materially. The report 60 days ago was an average for the State of about 75 per cent; to-day it is not more than one-half of that, and if the dry weather continues much longer it will be still lower. In some localities in the State there have been good showers, but these are only a small part. The young orchards are seemingly holding their fruit very well indeed. We are still in hopes of being able to supply the buyers from the East, but from the outlook now before us we are sure the prices will be very good.
Kansas City, Mo. L. A. GOODMAN.

The wheat and rye crop is very good. I sowed Harvest King wheat last Fall and never had a better crop. Oats are short and rusty, on account of too much rain and cold in Spring. Corn crop is not so very good on account of late planting, although some fields look quite promising. The potato crop is not very good; early potatoes poor and small. Late potatoes may yet be a good crop if we get repeated rains. On account of late planting and dry weather some are just coming up, while those that are up are loaded down with bugs. Quite a lot of late cabbage was planted last week. Most of the early cabbage failed to grow, the ground being too dry for it to take root. Hay is not very good; rain came too late to benefit it. It may be called about two-thirds of a crop. We had a nice rain recently, the first we had since the fore part of June. We had some very hot days, the rays of the sun being almost unbearable; too hot to work in the fields. J. S.
Drums, Pa.

JULY 10.—We are having the longest and most ruinous Spring drought and season of extreme heat this section has ever experienced. Beginning with early Spring, it has been continuous and progressive, until yesterday and to-day the temperature was and is 112 degrees on the north porch of my house. Most of the strawberries and all the bush fruits dried up as they stood in the fields, and gardens are gone. Plums, peaches, grapes, everything shriveling and drying up. Pastures and meadows dry as tinder; early corn ruined, oats a failure. Meadows and hay crop very light. All the conditions of the most extreme August drought of other years are now with us, and have been for nearly two months without change. The most complete all-'round failure of crops ever known here is the result.
Clinton, Mo. J. R. G.

JULY 11.—The apple crop will not be 50 per cent, on account of the dry weather, and the fruit is dropping very badly. Corn looks well, but needs rain; the potato crop will be poor on account of the drought, but there are plenty of Potato bugs. Wheat and rye good; hay a fair crop; oats poor on account of rust and drought.
Newlin, Pa. A. B. W.

JULY 15.—I am casting longing eyes towards that stone house at Hope Farm these days. For the last six days our registered thermometer indicates from 99 to 103 degrees. Uncut hay is curing as it stands. Oats and Spring wheat are ripening too fast and should all be cut this week. Corn does not seem to be suffering materially. All crops were about 10 days later than usual, but made it up last week. J. S.
Corning, Iowa.

JULY 15.—Owing to rain, harvesting and making hay has been very much delayed the past week or 10 days. The wheat crop is fair; some fields are bugged badly in our section. In an adjoining county the crop is mostly destroyed. The peach crop promises to be a good one if nothing happens to it. Apples are scarce. Hay crop good, hay selling out of the field for $10 a load. Oats looked very bad about the first of July, but since the rains (which continue right along) came, they have grown to make up for lost time, and will be good size yet. Corn and potatoes look fine. Farmers are behind with their work. Lots of buckwheat to be sown yet, and quite some corn to plow. Some will not get plowed the last time if the rain continues. It being so dry the early part of the Summer the pasture fields got very short, which caused a great shrinkage in the quantity of milk. The farmers in this section are not in the milk business to any great extent, keeping only from six to 10 cows, as it is impossible to get any help. J. W. F.
Hunterdon Co., N. J.

JULY 15.—Farmers here have been considerably discouraged, but oats, corn and potatoes promise much better at this time. Wheat is now being mowed, as the Hessian fly has made it impossible to reap it. There was a large acreage of onions this year, but the heavy rains damaged them at least 70 per cent. Many fields were plowed up and set with cabbage, which looks well. Many acres of sugar beets were abandoned on account of weeds. Farmers were obliged to reduce the acreage of beans on account of wet weather. Apples are not one-fourth of last year's crop, and Baldwins are "not in it." Peach orchards that have been well cared for will produce a fair crop. The orchard of Addison Weed is a notable example. Men are now thinning the fruit. Pears promise fairly well. Several hundred acres are devoted to raspberries, and they promise an extra yield. The Ohio and Columbian varieties prevail, and they will nearly all be evaporated. Picking began July 15. Timely rains since the floods have been to our advantage. We have had good hay weather, and the crop has been nearly all secured. No hot weather since July 4. E. A. G.
North Rose, N. Y.

MICHIGAN APPLE CROP.—Regarding the apple crop in Michigan I can only express an opinion. I believe we are going to have not far from 40 or 50 per cent of a crop in the State. In some localities there are almost no apples, and in others quite a full crop. There was some dropping during the excessive heat of a few days ago. There have been more than the usual number of exigencies during this season. Floods, winds, heat and frost have all done their part to shorten the crop. The Grand Rapids market is planning to handle a pretty large peach crop, and as usual we expect to do it in such a way as to be profitable to the grower. Our system here, it seems to me, is a very profitable one. All of the peach interest tributary to Grand Rapids has nothing to do with commission men. Buyers center here from the outside and purchase directly on the market—having the fruit delivered to some packing station, and paying for it at once. This simplifies the marketing for the grower very much, and is very satisfactory.
Michigan. CHAS. W. GARFIELD.

NEW HAMPSHIRE NOTES.—July 15.—Since July 4 the weather here in southern New Hampshire has been ideal—and yet we are never quite satisfied, for it has been what old farmers call "catching," and therefore not ideal from the haymaker's point of view. Showery conditions have prevailed during this period, and, as the weather would clear with fine prospects, farmers would keep the machines humming, only to get a lot more hay wet. The showers here this Summer have been peculiar in cloud formation and in duration. Instead of a mass of black clouds rolling up and giving us a smart shower with a fine electrical exhibit, and then clearing away in a short time, we get a "sea-turn," which comes in very quickly and it rains easily and with scarcely any wind and not much thunder. July 11 we had such a shower and the rain fell heavily for seven hours. This rain caught nearly every farmer with hay all open and much of it ready for drawing in. Where fields have been mowed for a week, grass has sprung up with surprising rapidity, and this gives a beautiful lawn-like appearance. There is a diversity of opinion in regard to the hay crop here. Many declare the yield to be no better than in 1900. Others say a third more. Speaking for myself, I know it is much better both as regards quality and quantity than last year. Potato patches are well worth looking at now. Likewise the cornfields. This is not a grain section, but some rye is raised, and Winter rye is now ready for harvest and will yield well. Those who raise oats to any extent complain of smut. This is an apple section, and, while I have not been able to see some of the large growers in the Rockingham County belt, it is safe to say that the crop will be pretty near a total failure. I should say it would not be up to 10 per cent. This is a milk-producing section, and sometime I want to tell THE R. N.-Y. about the methods in vogue here. There is not a great deal of pasture land here, and the herds of cows are like locusts, inasmuch as they consume every green thing except the blinds on the farmer's house. Besides, "brewery grain" or malt is fed heavily, and many farmers buy tons and tons of hay. Is it good farming? D. L. P.
Dover Point, N. H.

Government Weekly Report.

From the Rockies to the central valleys the intense heat continues, with but little relief from local showers. The late corn has been standing the drought remarkably well; but the early crop in the Central West has been practically ruined. On the Atlantic coast rains have been abundant, and harvesting interfered with to some extent on this account. The northern Pacific coast continues unseasonably cool, frost being reported in Washington, July 12. Wheat is ripening prematurely in the southern part of the Spring wheat region. In the extreme northerly sections the outlook is more favorable. Oat harvesting in the north is in progress. The crop has been badly cut by heat and drought. The cotton prospect in Georgia is at present below the average. In the Carolinas it is making too much stalk, on account of the heavy rains, which have also hindered cultivation. In Texas early cotton is being picked. Extensive heat damage to apples is reported in the West.

The Kansas hay crop is nearly a failure, on account of drought, but there is plenty of wheat straw, and this will be used in its place. This makes a boom in straw, which is now worth from $5 to $8, while in years of a full hay crop it sometimes goes for $1 a ton.

Several provinces in the Volga region of Russia are in a bad state, owing to drought. For nearly two months the temperature has ranged from 120 to 140 degrees. The streams have dried up and nearly all crops ruined.

ROOMS AT BUFFALO.—There is an erroneous impression abroad regarding the cost of accommodations to Pan-American visitors in Buffalo. While it is true that many of the hotels are taking advantage of the rush and charging exorbitant prices for accommodations, it is equally true that better accommodations can be secured in private families for less than one-third the price charged by hotels. The New York State Grange alone has an option on over 5,000 rooms located in the best resident sections of the city. By writing Mrs. B. B. Lord, Grange Building, Exposition Grounds, Buffalo, N. Y., accommodations can be secured in these rooms for $1.00 per day for each person. There are more rooms to let in Buffalo than can possibly be filled, so no one need stay away from this greatest of expositions on account of lack of accommodations. J. H. DURKEE.

Woman and Home

From Day to Day.

MR. JABEZ HALL ON RELIGIOUS UNREST.

"They're huntin' fer a new belief to take
the old one's place;
The doctors and professors ain't quite
satisfied no more,
And it seems to sort of got to be a kind
of mild disgrace
Fer folks to keep believin' as their parents did before.
They say it shows you're ignorant to think
that God's up there
A-guidin' this old world along and
watchin' day and night;
They say the Bible's only a historical
affair;
And they're fixin' up new doctrines fer
to keep things goin' right—
But with all their talk and tinkerin' they
hain't arranged it so
That folks can quite afford to not be
decent here below.

"I don't pretend to know it all, and mebby
there's a way
That's better than the one our mothers
wanted us to take;
They may find a fairer doctrine or arrange
a creed some day
That'll not have enny flaws in and'll
neither bend nor break;
But with all their college learnin' and their
searchin' high and low,
And their great philosophizin' there is
one thing they forget—
They can take the creeds and smash 'em
and bring out their proofs to show
That the old religion's foolish, but there
ain't none of 'em yet
Found a way that they can fix it so we
needn't try nor care
To be righteous or be decent and still
keep a-gettin' there.

"The ones that keep a-kickin' at the old
religions most
Ain't worried over whether Moses really
talked with God,
And I guess they'd find it easy to accept
the Holy Ghost,
If in doin' so there wasn't a straight
pathway to be trod—
What we want's a new religion that'll let
us all be free
To give our inclinations a loose rein and
let 'em go;
But none of these here creeds they're get-
tin' up, it seems to me,
Is helpin' out a speek, and what's the
use, I'd like to know?
If the ones that turn and get the new re-
ligions they arrange
Must still keep bein' good, why, what's
the use of enny change?"

—Chicago Record-Herald.

*

ONE of our friends writes that green tomatoes and onions, sliced and fried together, just as onions would be done alone, make an excellent combination.

*

PROF. Minnie A. Stoner, dean of the woman's department and professor of domestic science in the Kansas Agricultural College, has been appointed professor of domestic science in the Ohio State University.

*

FARMERS' Bulletin No. 128, issued by the United States Department of Agriculture, is devoted to eggs and their uses as food. It will be found very interesting either to the housekeeper or poultry fancier, and may be obtained on application to the Superintendent of Documents, Union Building, Washington, D. C.

*

HAVE any of THE R. N.-Y. housekeepers tried canning fruit by what is called the California cold-water process? A correspondent writes of it as follows in a daily paper:

For years my mother and I have canned pieplant, butter beans, corn, etc., by a simple process. I wash pieplant and cut into pieces about three inches long (not peeled), pack closely in Mason jars, and fill the jars to overflowing with cold water, making sure there are no air bubbles left in the jar. Screw the tops on the same, as in canning fruit, and put in a cool, dark place. When opened, I have been told by visitors that you would think I had just picked the vegetables. I have never used this recipe on small fruit, but have canned pears, apples and quinces this way, as well as vegetables.

A FRIEND asks us how to make a species of root beer with essence of spruce and oil of wintergreen. Probably the following recipe is the one meant: Nine quarts warm water, one yeast cake dissolved in warm water, two pounds sugar, five drops essence of spruce, 10 drops oil of wintergreen, 15 drops oil of sassafras. Stir until the sugar is dissolved, bottle, cork tight, keep eight hours in a warm place, then put where it will keep cool. It will be ready to drink in three days.

*

COLD roast bacon will often fill an emergency in the Summer bill of fare. Select a square piece weighing three or

3876 Infant's Kimona, one size.

four pounds, soak it over night. The next morning put it on to boil, allowing it to simmer very gently three-quarters of an hour to the pound; then let it go cool in the water in which it was cooked. When cold drain, remove the skin, rub the fat well with sugar, pour over it some cider vinegar, and roast in the oven until brown. When cold cut into thin slices; it should be tender and delicate in flavor.

*

MERCERIZED gingham petticoats have a pretty luster, and wash very nicely. They are pink or blue, and cost 75 cents each. Shirt-waist suits of this mercerized material are pretty and inexpensive. The shirt-waist suit and the shirt waist buttoning down the back are the two most striking developments of the present Summer. Women are wondering why they never before thought of making skirts to match their shirt waists. The waist buttoning down the back is the natural development of the present unbroken styles of trimming. It is not always becoming, and it is not at all easy to get into such a garment unassisted. To see a woman frantically endeavoring to fasten small pearl buttons in the immediate vicinity of her shoulder blades, one might imagine her trying to emulate the acrobatic feats of a circus contortionist. Probably it is very good exercise for a person of sedentary occupation.

*

IN one of the private schools in a town there is a small boy who is always cheerfully miles behind everybody else, says The Household. He is not a dull boy, but learning does not appeal to him as being a thing especially to be desired. Recently the teacher told the class in composition that on the next day she would expect each of them to be able to write a short anecdote. She explained with great care the meaning of the word anecdote, and next day, when she called the class up to write, all but the laggard went at once to work. "Why don't you write an anecdote, Rob?" asked the teacher. "I forget what an anecdote is," said Rob, undisturbed. "I explained it yesterday, Rob; and you ought to remember," said the teacher, a bit out of patience. "An anecdote is a tale. Now write." Rob bent over his slate, and with much twisting of brow and writhing of lip, ground out his task. When the slates were collected, his was at the very top of the heap. The teacher picked it up, and this is what she read: "Yesterday we had soup made from the anecdote of an ox."

*

THERE is a small girl in a Pennsylvania public school who finds a good deal of difficulty in comprehending the mysteries of arithmetic. One day when the teacher was examining the class all answered their questions quickly and correctly until the foot of the class was reached. "Sallie, what is eight minus six?" Sallie could not answer, which was nothing unusual. Whereupon the teacher, thinking it might aid her by stating it less abstractly, said: "Now, Sallie, if your mamma went to the barn and found eight eggs and used six of them to bake a cake, what would she have left?" With a smile of contempt, Sallie answered, "Why, shells!"

The Rural Patterns.

One of the prettiest new ideas in infants' wardrobes is the little kimona shown. The little garment is made with the regulation kimona yoke and full skirt portions that are gathered at the upper edge. The sleeves are large and full and the neck is finished with a roll-over facing that is extended to form bands for the fronts. When desired, the kimona can be cut off at the line indicated in the pattern and made short as shown in the smaller sketches. To cut this kimona, four yards of material 21 inches wide, or 2¾ yards 32 inches wide, with 2¼ yards of contrasting color for yoke and bands, will be required for full length; 1⅛ yard 21 inches wide, or ⅞ yard 32 inches wide, with 1⅜ yard for yoke and bands when cut short. The

3864 Blouse and Knicker's, 4, 6, 8 yrs.

pattern No. 3876 is cut in one size only. Price 10 cents from this office.

Blouse and knickerbockers form one of the most satisfactory suits for small boys. The blouse is cut on the simplest possible lines. Both fronts and back are plain and smooth across the shoulders and are arranged on a draw string at the loose edge. The sleeves are comfortably loose while sufficiently well fitted for correct style, and the neck is finished by means of a square sailor collar that is held by a ribbon tie. The knickerbockers are shapely and snug about the hips and at the waist, and are drawn up by means of elastic below the knees. To cut this suit for a boy six years of age, 3⅝ yards of material 27 inches wide, 3¼ yards 32 inches wide, or two yards 44 inches wide, will be required; to cut the blouse, 2¼ yards 27 inches wide, or two yards 32 inches wide; to cut the knickerbockers, 1⅛ yard 32 inches wide, or ⅝ yard 44 or 50 inches wide. The pattern No. 3864 is cut in sizes for boys 4, 6 and 8 years of age; price 10 cents from this office.

Concerning Those Household Expenses.

I shall have to send a supplement to our report on page 442, for Jay's criticism has roused our New England "dander," as perhaps you know it might. Of course I didn't send everything in my account, for I didn't understand that *everything* was wanted. What I did report was merely the expenses of *living*, exclusive of *luxury*. Butter was included in the grocery bill, but for Jay's further information I will say that we used 73 pounds of butter in the year 1900. Jay need not "alas," until he knows that we *don't* enjoy life. We *do* live in a nice neighborhood. Our nearest neighbors are a railroad treasurer, the teachers in world-famous Phillips Academy, professors in Andover Seminary, and equally famous Abbott. We *do* take three monthly magazines, and eight weeklies and semi-monthlies. Our own library is over 600 volumes; Andover has a most excellent public library, and we have access to the seminary libraries. Our son was graduated from Harvard College; one daughter went to Abbott. Both daughters and myself were graduated from Chautauqua. We own a pew in church, and *occupy* it. Do you suppose we should go there looking like "way-back?" My husband is an old-fashioned man, and *will not* wear any tailor-made clothing, but I really think you would know which way his "breeches are looking!" Our taxes last year were $96. We *have* traveled some, though we haven't been to Europe. Our own country has a good many things worth seeing. We are not behind hand in charity either, though I do not think that is to be counted in *living* expenses. We don't care to let our left hand always know what our right hand is doing. Could we do all this and *not* be careful and economical? None of us has a right to criticise where we don't and can't know everything. Our reasons are not and cannot be another person's reasons.

MRS. A. C.

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A Woman's Rose Bed.

GOOD VARIETIES IN NORTHERN OHIO.

A rose bed is an endless chain of delight. Beginning with the owner, it may be extended to her friends, her friends' friends and to the stranger that passeth by. If I were going to spend a Summer on a desert isle I would like to take along with my 10 favorite books, 10 good roses—and then I know I'd be tempted to smuggle some pansies and heliotrope into the package, with carnations, Cannas, Coleus and maybe a few bachelor's buttons, just to see, you know, how they would do! My rose bed is about eight years old, and of the original 12 everblooming roses set out there are four left, Hermosa, Queen's Scarlet, Meteor and Antoine Verdier. Antoine Verdier is a grand rose of a bright silvery pink, a prolific bloomer from June until November. The flowers are borne, usually, in clusters. I cut a cluster of four roses the other day, all nearly full bloom, that were perfect beauties. The buds are lovely, while a full-blown rose will often measure 4½ inches in diameter. The foliage is dark and glossy. It is the most sturdy and satisfactory grower in the bed, but it has not the exquisite fragrance of some of its more delicate sisters. The Meteor is also a strong grower with rich, dark red velvety blossoms—the color is perfect; unfortunately the buds will often blight before opening, so that the yield of perfect full-blown Meteors is apt to be scarce; still, it is too handsome in color to think of discarding it. The Hermosa and Queen's Scarlet are cheerful little bloomers. I have four of the former and two of the latter. "Old-fashioned roses—there ain't no style about 'em," as James Whitcomb Riley says, but they are faithful, and require no coaxing.

Kalserin Augusta Victoria occupies the center of the bed, and is five or six years old. A very lovely, large, cream-white rose of exquisite fragrance and rich, dark foliage, but it has never been the "robust grower and profuse bloomer" advertised in the catalogues. The blooms are perfect in bud and in full flower, retaining their freshness several days after being cut. It is quite up to its aristocratic name, bearing itself always with great dignity. I always cut my roses for callers, and take the finest that are out when I intend stopping to see a friend; they are a joy to me, and I know they give genuine pleasure to others. The Kaiserin Augusta Victoria has been the most admired of any of my roses. A close rival of the Kaiserin is a three-year-old Whlte La France (Augustine Guinoiseau). It is a more prolific bearer than her royal highness, and a trifle more delicate and graceful in appearance. The buds at the center are a lovely shell pink, while the full-blown roses are white, very large and fragrant, and retain their beauty well. I have had a cluster of three with four or five crimson Meteors on my desk for two days, and they are a study worthy of an artist's brush. Next in my list I must place a lovely canary-colored rose with superb buds borne on long stems. I believe it is a Mme. Hoste. Unfortunately the buds never open, which is singular. They grow to be full-sized buds and there they stay—when not cut they dry up. It blooms constantly throughout the season, and is a strong grower. Next La France, a beautiful pink rose that has thus far been a very shy bearer, but the plant was only set out last year, and perhaps has not been petted enough. Then Germaine Trochon, a very lovely salmon rose, tinged on the edge of petals with pink, clean, bright foliage of bronze green. It was set out at the same time as La France and has shown the same inclination not to be seen too often.

In replacing roses I have been careful of late to select the Hybrid Teas, as I have had so many of the Tea roses proper charm me for a season or two and then die out. Among these roses Papa Gontier, Perle des Jardins, Bride, Safrano, Marie Guillot and Marie Van Houtte, the last-named being a favorite. My rose bed has not the best location in the world, being on the west side of the house and too near a large crab apple tree. It does not get any sun until about nine o'clock in the morning and then not a bit of shade for the rest of the day. It is near the kitchen and gets occasional doses of dishwater and lots of wash water. I would like to give my roses, pansies and Chrysanthemums manure water twice a week, but I am sometimes late about getting a keg packed with the material requisite, and sometimes neglectful, but I know that they love it and ought to have it. My roses have been sprayed with the Bordeaux Mixture several times, and with kerosene emulsion once, the latter for the little green aphis, and it is death to those in sight, but they will come again. The foliage has also been thoroughly dusted several times with wood ashes and also with soot for slugs. Eternal vigilance, of course; without practicing that we would have to limit our experiments in floriculture to hollyhocks and sunflowers.

The Hybrids may be successfully propagated by means of layers, put down exactly as pragevines are layered, and cut away from the main stock when they have made a good growth. Two-year-old plants are most satisfactory. Roses love water with good drainage, and will amply repay us for all the drenchings we can give them. In regard to Winter protection they are lightly covered with straw after the first good freeze in the Fall; the ground should be frozen hard, and then any old boxes that come handy are turned over them—sometimes covering two plants and sometimes three with one box. The boxes are taken off quite early in April, and the straw removed gradually. Some people have a box made purposely to fit their rose bed, but it ought not to be airtight.

DOCIA DYKENS.

Preparation of Grape Juice.

Each year, as the grape season approaches, we are asked how to put up grape juice for family use. Several readers have given their methods, but it seems well to repeat former instructions, thus summed up in Green's Fruit Grower:

In proceeding, use only clean, well-ripened grapes. I prefer expressing the juice in an ordinary hand cider mill (same as making cider) by grinding the grapes. The advantage is, you get the juice at once, and that which is expressed by grinding is clear and retains so little foreign matter or pomace. It may, by careful strainlng through double thickness light flannel, be immediately bottled, while that obtained from pressing the skins, pulp, seeds, etc., will require beside straining a llttle time to precipitate a sediment resulting from pressing. I sometimes filter through a few inches of clean, washed river or creek sand. The sooner, however, it can be bottled and corked the less fermentation and the more of the peculiar grape aroma may be retained. Whereas, if the grapes are crushed in a tub or barrel I find it difficult or impossible to express the juice until fermentation dissolves the pulp, thereby losing much of the grape flavor, but the fermentation cuts no figure in the keeping qualities, as I sometimes, for variety, let some ferment to a certain flavor, when I heat and seal it with the assurance that when opened in the months or years following the same flavor will prevail.

I use the ordinary wine and beer bottles—carefully wash and drain them, fill to within about three inches of the top. Set an ordinary wash boiler on the stove; put an inch of sand on the bottom or fit a thin board over the bottom to prevent the bottom of bottles overheating to break or give the juice a cooked flavor; fill the boiler with bottles as close as they will stand without crowding, and fill the boiler with cold water within about four inches of the top of the bottles. Lay on the lid and start the fire; bring the water slowly to a distinct simmer, but in no instance allow it to come to a boil, as this, too, will cook the juice. Have your corks steaming. I use a one-quart fruit can; fill half full of water and put in the corks, lay on the cap, set alongside the boiler to heat and steam whlle bottles are heating. As soon as the juice gets pretty well heated the air will be thrown off in a volume of minute bubbles rising to the surface, which eventually brings to the top a thick scum or pomace in proportion to the amount of impuritles in the juice; this scum increases and pours over the tops of the bottles, which suggests the air is sufficiently driven off to proceed with corking. Lift out a bottle, place on a low table, blow off this pomace, pour off any surplus juice in excess of to fill to two inches of top of bottle, else the cork will not go down; insert a cork, giving it a twisting pressure with the fingers, pushing it down a little below the mouth of the bottle or can, use a cork driver to be had at any hardware store. Wipe the bottles with a damp cloth and set aside; proceed till all are corked; in refilling the boilers take out part of the water and fill with cold to a tepid temperature; fill up as before and resume the fire, then proceed to seal those already corked. I use the ordinary canning wax or cement. When melted add a teaspoonful of linseed oil to each stick of cement, which renders it more adhesive; it should then be well stirred and applied quite hot. I experience no difficulty in the juice keeping with the bottles in any position, but if upright if any sediment has precipitated the juice will pour off clear of the sediment. I keep the bottles in my cellar, which is cool, dry and frost proof. Seldom, indeed, that a bottle burst and then only by defective sealing. I do not put hot juice in the bottles nor bottles in hot water; have never used a thermometer to test the temperature of the water, but had I one would not let the water exceed a temperature of 190 to 200 degrees Fahrenheit, as water boils at 212 degrees. The same treatment applies to apple juice or cider.

BELIEVE me, every heart has its sorrows, which the world knows not; and oftentimes we call a man cold when he is only sad.—Longfellow.

THERE is a love that begins in the head and goes down to the heart, and grows slowly; but it lasts till death, and asks less than it gives.—Olive Schreiner.

THERE is a great deal of religion In this world that is like a life preserver, only put on at the moment of extreme danger, and then half the time put on hind-side-before.—Josh Billings.

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MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

MARKETS

THE WEEK'S QUOTATIONS.

WHOLESALE PRICES.

NEW YORK, JULY 20, 1901.

GRAIN.—Prices on wheat and corn are down one to two cents on reported rains in the corn belt. The most contradictory reports are being circulated regarding the damage done.

Wheat, No. 2. red	—	@	75¾
No. 1, Northern Chicago'	—	@	75¼
No. 1, Northern New York	—	@	74½
Corn, No. 2, mixed	—	@	55
Oats, No. 2, white	—	@	39
Rye, No. 2, W'n, c. i. f., Buf	—	@	53
Barley, feeding	—	@	48
Malting, new crop'	58	@	62

BEANS.

Marrow, choice, per bu	—	@2	55
Fair to good	2 25	@2	50
Pea, bbls., choice	—	@2	10
Red kidney, choice	—	@2	25
White kidney, choice	2 10	@2	20

FEED.

Spring bran, coarse	15 00	@16	00
Winter bran	16 00	@17	00
Red Dog	18 00	@18	65
No grade flour	—	@19	38
Linseed meal, ton	—	@27	00
Cottonseed meal, ton	—	@22	00

HAY AND STRAW.

Hay, No. 1	82½@		85
No. 2	72½@		75
No. 3	65	@	70
Clover	50	@	60
Clover, mixed	60	@	65
Straw, rye, long	—	@	90

SEEDS.

Clover, per lb	9½@		10½
Timothy, per bu	1 90	@2	50
Flaxseed, whole, per bu	6 50	@7	00
Millet, per lb	2	@	2⅛
Rape, German, per lb	3¼@		3½
Sunflower, per lb	2¼@		2½

MILK.

New York Exchange price at stations $1.21 per 40-quart can. This is the gross price, and from it must be taken cost of transportation and fees at receiving stations where such charges are made.

BUTTER.—Demand is only moderate. All grades are dragging, and there is some accumulation of everything but strictly fancy.

Creamery, extra, per lb	—	@	19½
Firsts	18	@	19
Seconds	17	@	17½
Lower grades	15	@	16
State dairy, tubs, fancy	18	@	18½
Tubs, firsts	17	@	17½
Tubs, seconds	16	@	16½
Tubs, thirds	14	@	15
Tins, etc	14	@	17½
W'n imitation creamery, fancy	16	@	17
Firsts	15	@	15½
Lower grades	14	@	14½
Western factory, fancy	—	@	15
Firsts	—	@	14½
Fair to prime	14	@	14¼
Lower grades	13	@	13½
Renovated butter, fancy	16½@		17
Common to choice	13½@		16
Packing stock	13	@	14

CHEESE.

NEW.

Full cream, col'rd, small, fancy	—	@	9¼
White, small, fancy	—	@	9¼
Small, fair to choice	8¾@		9
Colored, large, fancy	—	@	9
Col'rd, large, fair to choice	8½@		8¾
White, large, fancy	—	@	9
White, large, fair to choice	8½@		8¾
Common	7	@	8
Light skims, small, choice	7¾@		8
Large, choice	7¼@		7½
Part skims, prime	5½@		6
Fair to good	4½@		5
Common	3	@	4
Full skims	2	@	2½

EGGS.—There is no improvement in market or quality of goods arriving. To get supplies satisfactory for the better class of trade dealers are obliged to go to the refrigerators.

QUOTATIONS LOSS OFF.

State & Pa., avge. prime, doz	15½@		16
W'n, fresh-gathered, ch., doz	—	@	16
Average best	15	@	15½

QUOTATIONS AT MARK.

Nearby, State and Pa., fresh-gathered, fancy selected, dz.	17	@	18
Average prime	15	@	16
W'n, refrigerator, per doz	15	@	16
Fresh-gathered, N'th'ly sections, sandled, selected	13	@	15
Regular packing, N'th'n sec's	8	@	13
Graded, Southerly sections	10	@	11
Reg. packings, S'th'ly sec's	8	@	10
Very inferior, per case	1 80	@2	10
Fresh-gathered, dirties	5	@	8
Checks	—	@	5
Inferior culls, per case	1 00	@1	25

LIVE STOCK.

Steers	4 60	@5	80
Bulls	2 75	@4	40
Cows	2 25	@4	10
Veal calves	5 00	@7	25
Buttermilks	3 50	@4	25
Sheep	3 25	@4	50
Lambs	5 00	@6	75

LIVE POULTRY.—Receipts are heavy and market weak and lower.

Spring chickens, 4-lb. avge. to pair, per lb	—	@	15
Under 4-lb. avge. to pair, lb	—	@	14
Fowls, per lb	—	@	10½
Roosters, per lb	—	@	7
Turkeys, per lb	—	@	8
Ducks, avge. West'n, per pair	60	@	75
Average Southern, per pair	50	@	55
Geese, avge. West'n, per pair	1 00	@1	12
Average Southern, per pair	90	@1	00
Pigeons, per pair	15	@	20

DRESSED POULTRY.—The receipts of chickens are larger and prices down one cent.

FRESH PACKED—ICED.

Turkeys, W'n, hens, small	7	@	8½
Western, toms	—	@	7
Broilers, Phila., over 4 lbs. to pair, per lb	24	@	25
Phila., mixed sizes, per lb	20	@	23
Penn., fair to good, per lb	20	@	22
Western, dry-picked, per lb	18	@	20
Western, scalded, per lb	—	@	18
Small, dry-picked or scalded, per lb	15	@	17
Fowls, W'n, dry-picked, prime	11	@	11½
Western, scalded, prime	11	@	11½
Western, poor to good	8	@	10½
Southwestern, prime	11	@	11½
Old roosters, per lb	6	@	6½
Ducks, Spring, L. I. and other nearby, per lb	12	@	12½
Western	7	@	9
Geese, Spring, Eastern	—	@	18
Squabs, choice, large, dark	—	@2	25
Mixed, per doz	1 75	@2	00
Dark, per doz	1 25	@1	50
Culls, per doz	50	@1	00

FROZEN.

Turkeys, young hens, No. 1	11	@	11½
Mixed young hens and toms, No. 1	10½@		11
Young toms, No. 1	—	@	10½
No. 2	7	@	9
Broilers, dry-picked, fancy	18	@	20
Scalded, fancy	—	@	14
Chickens, fancy, soft-meated	12	@	13
Average, No. 1	—	@	10
No. 2	7	@	9
Fowls, dry-picked, No. 1	—	@	10½
Plain	9	@	10
Capons, fancy, large	15	@	16
Medium sizes	13	@	14
Ducks, fancy	12	@	12½
Geese, fancy	9½@		10

COUNTRY-DRESSED MEATS.

Calves, veal, prime, per lb	9½@		10
Fair to good, per lb	8	@	9
Common to medium, per lb	6	@	7

DRIED FRUITS.—Demand for evaporated apples is fair. Contracts for delivery in October and November are attracting considerable interest.

Apples, evaporated fancy lb	8	@	8¼
Evaporated choice per lb	7½@		7¾
Evaporated, prime, per lb	7	@	7¼
Evaporated, com. to good, lb	4½@		6½
Sun-dried, State & W'n, qrs., per lb	4	@	4½
Sun-dried, S'th'wn, coarse cut	3½@		4
Sun-dried, S'th'n, coarse cut	3	@	3½
Chops, per 100 lbs	1 00	@1	85
Cores and skins, per 100 lbs	75	@1	35
Raspberries, evaporated, 1900, per lb	—	@	20
Cherries, 1900, per lb	—	@	12

FRENCH FRUITS.—Peaches plentiful and prices lower; supply of cherries light; currant sales improving. Offerings of muskmelons large and much of the stock miserably poor.

Apples, Va., per bbl	2 00	@	3 25
Md. & Del., per bu. crate	50	@	1 00
Md. & Del., per basket	40	@	75
Washington, per basket	40	@	90
Pears, Le Conte, S'n, bbl	3 00	@	4 50
Peaches, Ga., per carrier	1 00	@	2 25
South Carolina, carrier	1 25	@	2 25
North Carolina, carrier	1 00	@	2 00
Plums, Ga., Botan, carrier	1 00	@	2 00
Grapes, Fla., Niagara, cr'er	2 00	@	3 00
Cherries, black, common to good, 8-lb. basket	40	@	60
Black, fancy, large, lb	7	@	9
White, common to good, 8-lb. basket	30	@	50
White & red, fcy, large, lb	7	@	8
Small or soft, sweet, lb	3	@	5
Small, sweet, 8-lb. bskt	20	@	30
Sour, per 8-lb. basket	30	@	45
Currants, fancy, per qt	4	@	5
Poor to fair, per qt	2½@		3½
Huckleberries, N. C. blue, per qt	—	@	8
N. C., ordinary, per qt	5	@	7
Md., blue, per qt	7	@	8
Md., black, per qt	5	@	7
Jersey, per qt	7	@	10
Pa. & State, Mountain, qt	8	@	11
Raspberries, Md. and Del., red, per pint	3	@	5
Jersey, red, per pint	4	@	6
Up-river, red, per pint	5	@	8
Up-river, black cap, pint	3	@	4
Md. & Del., black cap, pt	2	@	3½
Jersey, black cap, pint	2	@	4
Blackberries, Md., cultivated, large, per qt	5	@	8
Md., Harvest, per qt	4	@	6
South Jersey, per qt	7	@	9
Gooseberries, small, green, per quart	5	@	6
Medium, green, per qt	6	@	7
Watermelons, Fla., per 100	15 00	@	30 00
Per car-load	150 00	@	350 00
Muskmelons, S'th'n, fancy, per crate	2 50	@	3 00
Poor to fair, per crate	1 00	@	2 00
Baltimore, per bu. basket	1 25	@	1 75

VEGETABLES.

Potatoes, Southern Rose, fair to fancy, per bbl	1 50	@2	50
Southern, Chili, white, fair to prime	1 50	@2	25
S'n, Chili, red, fair to prime	1 50	@2	12
Southern, No. 2, per bbl	75	@1	25
Beets, Jersey & L. I., 100 bchs	1 00	@1	50
Celery, Mich., small, doz. roots	10	@	25
Carrots, L. I., 100 small bchs	75	@1	00
Corn, N. C., per 100	75	@1	25
Jersey, per 100	75	@1	50
Cabbages, L. I., small, per 100	2 00	@2	50
Long Island, per bbl	—	@	75
L. I., Flat Dutch, per 100	4 00	@5	00
Cauliflowers, nearby, per bbl	1 50	@2	00
Cucumbers, Norfolk, bu. bskt	75	@1	25
Baltimore, per basket	1 25	@1	50
Southern, per bbl	2 00	@3	50
Hothouse, per doz	30	@	50
Eggplants, Fla., per box	1 50	@2	00
Jersey, per bushel-box	1 50	@2	00
Green peas, L. I., per bag	75	@1	25
Western N. Y., per bag	75	@1	25
Lettuce, Western N. Y., doz	20	@	60
Boston, per case	1 25	@1	50
Onions, Md. & Del., Potato, bk.	90	@1	00
Eastern shore, Potato, bskt	75	@	90
Eastern shore, white, bskt	75	@1	00
Orange Co., red, per bag	75	@1	25
Jersey, red, per bbl	2 00	@2	25
Jersey, white, per basket	85	@1	00
Kentucky, per bbl	2 00	@2	25
Peppers, Jersey, per crate	1 75	@2	00
Southern, per carrier	1 00	@1	75
Squash, S'n, yellow, per bbl	75	@1	25
Southern, white, per bbl	1 00	@1	50
Southern, Marrow, per bbl	—	@1	25
L. I., white, per bbl	2 25	@2	50
String beans, L. I., per bag	1 50	@2	25
Western N. Y., green, bu	1 75	@2	00
Western, N. Y., wax, bushel	1 25	@1	50
Boston, green, per bu. box	1 25	@1	50
Boston, wax, per bu. box	1 00	@1	25
Spinach, L. I., per bbl	—	@1	00
Turnips, Jersey, white, 100 bchs	1 50	@2	50
Jersey, Russia, per bbl	1 25	@1	50
Tomatoes, Jersey, per bu box	1 50	@3	00
Maryland, per carrier	75	@1	50
Norfolk, per large carrier	1 00	@2	50
Norfolk, per small carrier	75	@1	75
Balt. & Wash., small basket	1 00	@1	25

BUSINESS BITS.

ANOTHER of the good preparations to prevent flies from pestering horses and cows is offered by H. W. Doughton, Moorestown, N. J. Write for booklet and prices.

NOW is the time to prepare for your next year's strawberry supply. The potted plants set out anytime next month will bear next season. Write to T. J. Dwyer & Son, Cornwall, N. Y., for Summer catalogue.

THERE are many good thrashing outfits on the market, but if you want to keep your rye and wheat straw straight, you would better write to Grant-Ferris Co., Troy, N. Y. Their machines thrash oats and other grains like ordinary machines.

WHERE farmers do their own thrashing a one or two-horse outfit will often do the work. It may take a little longer, but will be cheaper than buying a large machine. Ellis Keystone Agr'l Works, Pottstown, Pa., manufacture such horse power thrashers, cleaners, wood saws, etc. F. L. Maine, Willet, N. Y., is agent.

IT is highly probable that no small steam engine yields the power claimed for it; even fewer "horse powers" do. From the effort of the animal, heavy mechanism has heretofore subtracted a great portion of the power, and it has remained for a Vermont firm to produce an ideal horse power. This power is known as A. W. Gray's Sons' horse power. It is manufactured at Middletown Springs, Vt. It is not a new thing, but its later improvements are all new and all very valuable—insuring lightness, with strength; ease of operation, with great durability; thoroughly good construction, with low price. Anyone contemplating a purchase of power or machine may have catalogue free by addressing A. W. Gray's Sons, Middletown Springs, Vt.

THE members of the Frost Wire Fence Company have been identified with the iron and steel industry, as well as the manufacture of wire fencing, for the past 12 to 15 years. The company was incorporated on May 27, 1896, at that time locating at Columbus, O. Owing to the fact that Cleveland possessed many advantages over Columbus for the manufacture of wire fencing, they removed their plant in June, 1897, to Cleveland. Their new two-story building will be completed and ready for occupancy not later than August 15, 1901, giving them a capacity for producing 60 miles of fencing per day, and they will still have room to increase their capacity threefold, if needed in the future. They are now prepared to fill all orders for the Frost fence, coiled spring wire, and steel gates, on short notice. The officers of the company desire to extend a personal invitation to every one visiting the city of Cleveland, to pay them a visit at their new factory, located on Lake Street, near Marquette.

THE man who knows most about windmills has written a book. It is a 40-page book, with more than 100 pictures. Every page of the book is interesting to a man who wants a windmill. Not a word will he skip. And when he is done, he will know all that anybody knows about windmills and what they should do. He cannot be fooled; but the man who buys a windmill without reading this book will regret it. Simply send your address, and the book will be mailed to you free. The writer of this book is president of the Aermotor Company. But the book is not biased, nor unfair. It is a book of information, written by the man who knows more than any other man about windmills. The writer of this book started in 12 years ago to make aermotors. The field was overcrowded. Makers with millions of capital, and tens of thousands of agents, controlled all the trade there was. The Aermotor Co. had little capital, no trade, no agents, no reputation. 'Twas a pigmy among giants. That was 12 years ago. To-day the whole earth is dotted with aermotors, and more aermotors are sold than of all other windmills together. That is a record with scarcely a parallel in the history of invention. The book will tell you how it was done. Write Aermotor Co., 1206 Twelfth St., Chicago.

WHEAT and corn are the principal market crops; but little other grains grown except for home use, and most of the corn is fed either to cattle or hogs within the county. We have in Sanborn County one cheese factory, five creameries and several skimming stations, all well patronized, so that our dairying is a source of considerable wealth to the farmers. Potatoes are looking extra fine; only about one-half of last year's acreage planted. We have had no bugs to fight for several years; have not seen a Potato bug this year.

Letcher, S. D. W. H. H.

Numbers of prominent people too honest to impose upon others, and too sagacious to be imposed upon themselves, use and recommend Dr. D. Jayne's Expectorant for Coughs and Colds.—*Adv.*

Wants, For Sale or Exchange

Farm Managers, Gardeners, Buttermakers, etc., always on hand. No charges to employers. Write us Rural Science Agency, Durham, N. H.

For Sale—120 acres of fine fruit land at less than half price in Colorado For particulars address C. B., care The Rural New-Yorker

100 OHIO FARMS FOR SALE.
New Descriptive List quoting prices, FREE.
E. H. KISTLER, Farm Broker, Warren, O.

Cash For Your Farm
Residence or Business Property may be obtained through me. No matter where located. Send description and selling price, and learn my successful plan.
W. M. OSTRANDER, 1215 Filbert St., Phila., Pa.

VIRGINIA FARM—Stocked and equipped for $5,000. 231 acres, near fine town and depot; smooth fertile land; handsome new 8-room residence; good barns; well fenced and watered; large orchards; superb mountain views; very healthy. Implements, horses, cattle, crops; house furniture included. Very attractive. Send for details. Box 282, Lynchburg, Va.

SHIP your Berries, Cherries, Butter, Southern Truck and all Fruit to the best market Samuel Whitton, Com. M'ch't, Utica, N. Y. Our market is good on Fruit at all times. Ref. furnished.

The Old Reliable Commission House.
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APPLES and PEARS.
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GEO. P. HAMMOND & CO.,
Commission Merchants and Dealers In all kinds of **COUNTRY PRODUCE**, Apples, Peaches, Berries, Butter, Eggs, Cheese, Poultry. Mushrooms and Hothouse Products a Specialty. Consignments solicited.
34 & 36 Little 12th St., New York.

THE FEARLESS.

Easiest running and greatest grain-saving Threshing Machine Slowest travel of horses. "Best Ever Made." For full information, also best Rye Thresher and Binder Clover-huller, Fanning-mill, Feed-mill, Saw-machine (circular and drag), Land-roller, Dog-power, Steam-engine, Sweep-power, Ensilage fodder-cutter, Round-silo. Address, **Geo. D. Harder,** Cobleskill, N. Y.
☞ Please tell what you wish to purchase.

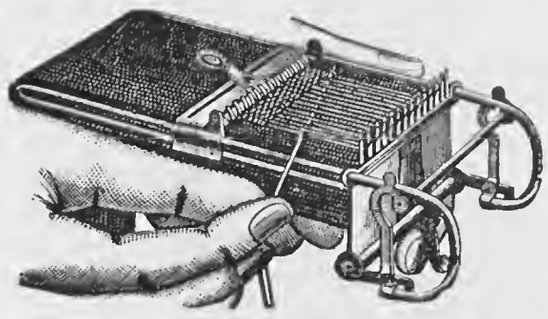
RHEUMATIC CURE
Perfected after 12 years' special study. Relieves quickly; cures permanently; removes cause of rheumatism and rheumatic fever. Formula free with convincing testimonials. Write
TURNER MED. CO., Dept. G, Boston, Mass.

Gold-Shell Rings.

Most people like a nice ring. We show three styles. These are made by drawing a shell of gold over a rod of composition metal. They are better and will wear longer than solid gold rings of a low carat. The retail price would be from 75 cents to $1. We will send one of these rings postpaid as a reward for sending one new subscription at $1. Cut a slip of paper the size of finger and send for size.

A Darning Machine.

This is the only successful darning machine we ever saw. We have tried others that were absolutely of no value. This one is little short of perfect. It enables you to mend underwear, stockings, curtains, table linens, clothing, and does an endless variety of art and fancy weaving better, easier and quicker than



by any other way. Full directions accompany each machine. When a lady has once used this little machine, she would not do without it for any consideration. We will send it postpaid for $1, or for two new yearly subscriptions at $1 each. All money returned if not satisfied.

BOOK BULLETIN

FOR SALE BY THE RURAL NEW-YORKER

EVERYBODY'S PAINT BOOK, by F. B. Gardner. Instructions for preparing and applying stains, paints and colors; care of brushes, etc. Price, postpaid, $1.

FARM POULTRY, by Prof. Geo. C. Watson; 340 pages illustrated. Descriptions of breeds; feeding for fattening and egg production; diseases; poultry houses; care of little chicks; marketing; and egg preservation. Price, postpaid, $1.25.

CUT-PRICE BOOKS. Any of these 20-cent pamphlets sent postpaid for 10 cents:

My Handkerchief Garden.
How to Plant a Place.
Country Roads.
Fruit Packages.
Memory Training.

MARKET NOTES

INFERIOR CULLS.—This is a grade of eggs seldom given, as the need for such a quotation occurs only in times like the present, when, on account of excessive heat, stock is badly damaged in transit. These "inferior culls" wholesale at $1 to $1.25 per 30-dozen case. Just what they are used for is a question, but the thought is enough to cause one to refrain from indulging in restaurant scrambled eggs and omelets for a time.

SWEET CORN.—This has been coming from the South for several weeks, but quite a quantity of the south Jersey product is now seen in the markets. It comes in heavy sacks holding from 200 to 300 ears. Of course, the husk is left on, and thus the corn will keep in fair condition for a time, although no one expects that it will be equal to corn cooked an hour after it is picked from the stalk. This is true of nearly all vegetables, except onions, potatoes and other tubers. The freshness and delicate flavor are quickly lost if they are allowed to stand around in the sun for any length of time before being used. However, a great share of those who eat this corn in the city think it is all right, as they have never had anything different. There is a wide range of price, as it wholesales at from 75 cents to $1.75 per 100.

POTATOES.—Large quantities are arriving. The receipts for the week ending July 13 were nearly 110,000 barrels, mostly Maryland and southern stock, although the Long Island truck farmers are bringing in some of their early crop. Most of the tubers that I have seen in going about the potato sections of the markets, have been of good size and smooth. Of course, dealers usually display this kind rather than the inferior ones, but apparently those that are offered at present will average high as to quality. Maryland Rose is bringing the highest price, $2.50 per barrel, a 25-cent drop from previous prices. A good many farmers in New York and neighboring States, who raise medium-late varieties, have found a fair market in this city at digging time. At such times it may happen that the bulk of the earlies is out of the way, and the late ones are not yet on the move. This makes things a little slack, and those who are fortunate enough to dispose of their crop then are likely to make a hit. This is no cut-and-dried rule, however, as conditions are different every year. Those who keep in closest touch with their regular selling agents, and are prepared to act quickly, usually come out best.

WHO CAN MAKE BEST SALES?—A reader in Florida writes as follows:

"In shipping fruits would you consign to a general commission merchant, or one who handled fruits exclusively? Who keeps the neatest and best arranged store —— or ——? I shipped —— about $800 worth of strawberries last season. Their sales were not quite so good as those of another merchant situated on —— street. I believe them to be thoroughly honest, yet I can't account for this discrepancy. These berries were shipped in refrigerator cars, and sold on the same days."

There is not much difference in the appearance of the two stores mentioned, so far as neatness and arrangement are concerned. One has a little more room than the other, but that is no sign that he does a larger business or can get better prices. On general principles it is probably safe to advise shipping to dealers who make a specialty of the line of goods shipped. Still, there are exceptions. One of the best firms to sell fancy fruits that I know of does a general commission business; but they have been at it for more than 30 years, have the benefit of all this experience, and try to do the best they can for every shipper. It depends largely on the man. There are some who are so careless and lacking in judgment that they could not make successful fruit men if they worked at it for a thousand years. They sling crates of fruit around in a most reckless way, and give one an idea that they are better adapted to handling rocks or cord wood. Just why two lots of berries of equally good quality should sell for different prices on the same day, is a hard matter to explain, and can scarcely be understood by one who has not observed the constantly unsettled condition of a great market on goods that must be handled quickly. It would take a whole volume to explain these things, and after that the reader would not know much more about it than before, unless he came and spent days in going about seeing for himself. While the causes may not be seen in every case, it is nothing unusual for the same grade of fruit to sell at two or three different prices on the same day. Also, cases have been known where one fruit man, in order to get the trade of a shipper who had something particularly desirable, would make returns for the first lot or two at a premium, paying the increase out of his own pocket, but getting even by making short returns later. The case our correspondent speaks of was probably not one of this type. The reason that the second man got a better price for the fruit was doubtless that he had some special customer who was willing at that time to pay a slight advance. W. W. H.

Milk and Creamery Notes.

Since the condensery was built in Deposit there have been some improvements in the care and handling of milk. As soon as it is drawn from the cow it is cooled to a temperature of from 50 to 60 degrees by means of setting in a vat of cold water, and frequent stirring; but few milk coolers are in use in this section. S. C. S.

China, N.Y.

A majority of the stations about here pay within one-half cent of Exchange. No milk is being held back by farmers except at Baldwin's Station, where only about four or five patrons are hauling. The rest withdrew April 1 and send their milk to factories, because the company required the producers to sign a contract for one year. The flow of milk has been exceptionally good, but is shrinking quite rapidly now. Pastures are looking good for this time of year. Haying just barely under way; will be a good crop. Oats have been looking very rusty, especially early sown, but for the last week are heading nicely and color much improved. They promise an average crop. Potatoes and corn somewhat backward, but of late are making rapid strides for a plentiful harvest. W. I. F.

Sherburne, N. Y.

Our creamery at Lounsberry is not a coöperative; it is run by the Standard Butter Company of Owego. The milk is made into butter, the skim-milk into sizing. The farmers get the curd and buttermilk back, which make a good feed for hogs. They paid 70 cents per 100 through June. July 1 they raised to 76 cents per 100. Cows are doing very well. The supply of milk dropped off some during the hot weather last week. Grass is a fair crop, better than farmers thought before they began haying. Corn is looking well for being planted so late, growing very fast. Oats look better than they were a week ago; they are taking on a better color. The fly is working in the wheat some. Pastures are good, heavy rain July 5 washed fields and roads badly. Potatoes are looking well, with lots of bugs. F. L.

Lounsberry, N. Y.

Spencer Creamery situated in this village was consumed by fire June 9. People here firmly believe it was the work of an incendiary.

Skimming station three miles east has secured 8,000 to 9,000 pounds of milk daily. Price paid for May 62 to 77 cents per 100 pounds; in addition the producer receives his skim-milk, which is valued at 15 cents a hundred-weight, and by some more for feeding purposes. The variation in above prices is due to the per cent of butter fat. June prices at skimming station were better on average than May, as butter ruled during June one-half cent a pound better. Milk shipping station for June received 100 to 125 in 40-quart cans daily. Spencer is in the 32-cent freight zone, and producers receive 54 cents the 40-quart can net at station. Producers here having milk rich in butter fat prefer butter factory or skimming station; those with low per cent butter fat milk shipping station. Milk supply since June 15 has been gradually decreasing.

Cows are looking fine; good fresh cows and those which will be fresh by September are held firm at $40. Pastures generally good; some badly damaged by drought last year have not recovered. Haying commenced by July 1; meadows not drought-killed from last year have a fine stand of grass. Hay crop above average.

Spencer, N. Y. M. D. WATKINS.

WHEN you write advertisers mention THE R. N.-Y. and you will get a quick reply and "a square deal." See our guarantee 8th page.

A Western Town.

All western Missouri is passing through the worst drought ever known. For nearly two months no rain has fallen except one short shower. Day after day for four weeks the thermometer registered from 95 to 104 degrees with hot winds occasionally. The oldest inhabitants say, "Never saw the like in old Missouri before." Corn is ruined; potatoes ditto, except where planted very early; gardens are dried and burned up, and pastures look as bare and brown as wheat stubble. The great promise of an abundant fruit crop early in the season has not been realized, although berries were not as high as we expected—$1.25 to $1.50 per crate for blackberries, and $1.50 to $1.75 for black raspberries. Peaches and apples are dropping badly. The town of Independence is 10 miles from Kansas City, connected by electric road and four lines of railway. It is a most beautiful town, embowered in such great lovely trees of so many varieties. It is Kansas City's most rich and aristocratic suburb. Many who do business in the city have their homes here, and such beautiful ones. It is also a church and educational center—three colleges and 18 churches for a town of some 7,000 or 8,000 inhabitants. The Mormons have the largest and richest church here. This is their old stamping ground, and I hear they expect to find a temple built of gold and precious stones all ready for occupancy some morning when they awake. They own some of the best property in town, and are considered good citizens. Independence was also a hot-bed of treason in war times. Here Quantrell gathered his men to raid Lawrence, and the bullet holes can be seen now on the hotel here where he tried to get Gen. Buel out by bombarding, and, not succeeding, smoked him out with sulphur. But times have changed, and the Fourth was celebrated with all enthusiasm, and the Stars and Stripes were everywhere. F. C. J.

Notes from Pennsylvania.

July 13.—York County farmers have about finished housing the best wheat harvest they have had in many years. No fly in any fields sown after October 1, but some wheat sown earlier in the season was destroyed by the pest. Farmers are realizing the fact that late seeding in a very great measure protects their wheat crops against the Hessian fly. I have observed the stand of wheat to be thin in fields that were sown with commercial fertilizers when the ground was hot, dry and dusty. I think it pays farmers to wait with their wheat seeding until after October 1, and then sow only if the ground is sufficiently moist. I take it to be a mistake to sow wheat and fertilizers into the same row at the same time, as I believe that the tender wheat germ is destroyed where it comes into direct contact with the chemicals, particularly so in hot dry weather. We will sow ours separately this Fall. In this section of Pennsylvania the hay crop was generally very poor. Clover was all killed by the prolonged drought last Summer. This Spring the weather was cold and wet, so that what Timothy there was failed to grow until after June 1. Pastures are now very short and dry. Oats that were sown with fertilizers are very good and about ripe, while fields that received no fertilizer are very poor, short and still grass green. No crop responds better to good commercial fertilizer than oats. It pays to use it. Corn was never better at this date than now. Our corn was yellow early, but now nearly all corn is as tall as the fences and of a beautiful dark green color. There is a large field close to my home that has the color of the blue Atlantic Ocean, and, as it waves to and fro by the gentle wind, it reminds me very much of the ocean. It is a beautiful sight. Of course, the best fields of corn have been manured from the barnyards, and this leads me to say that our best farmers put their manure on corn land. The first week of July was a record breaker for heat. It was extremely hot both day and night. Temperature in the shade 100 and over, while in the sun it was too hot and high to be read. Many valuable working animals were lost by the farmers from overwork and heat. G. A. R.

Wrightsville, Pa.

A NEW ZEALANDER'S OPINION.—I think your system of questions answered by practical men of experience is admirable; also the wonderful patience shown in answering questions put by those knowing so little. I have often thought of the business educative power a paper might have that laid itself out as yours is doing to meet the want of its subscribers, and come into direct touch with them. So many farming publications fall into a chronic routine, and are composed of so large an amount of effete and useless matter, and irresponsible and sometimes dangerous misleading matter, unqualified by any editorial remark. J. DUDGEON.

New Zealand.

Just The Blues.

Many a woman dresses to go out, feels irresolute, sits down, and falls into a fit of despondent musing. Ask her what's the matter, and she'll probably answer "Just the blues." And what are the blues? Only another name, in general, for a disordered liver and a diseased stomach. Cleanse the liver, heal the stomach, purify the blood, and there'll be no more blues. It can be done by the use of Dr. Pierce's Golden Medical Discovery. This medicine puts the diseased organs of digestion and nutrition into a condition of sound health. It eliminates from the blood all impure and poisonous substances, and cleanses the clogged liver. It contains neither alcohol nor narcotics.

"I had liver complaint for the past fifteen years, complicated with dyspepsia and gall stones," writes Mrs. N. Bernier, of 461 Elm St., Oshkosh, Wis. "I doctored with seven of our prominent doctors, and not one or all of them have done me the good, nor begun to do what your medicines have. I have used three bottles of Dr. Pierce's Golden Medical Discovery, one vial of his 'Pleasant Pellets,' and one bottle of Dr. Pierce's Favorite Prescription, and have gained about eighteen pounds since I first began to take these remedies."

Dr. Pierce's Pellets cure biliousness.

MIXED WIRE NAILS

Each Keg contains 100 lbs. of new mixed wire nails from about 3 to 40 penny size. Order a Sample Keg. Write for Free Catalogue No. 57 on building material and supplies.

$1.75 per 100 lbs

CHICAGO HOUSE WRECKING CO.
West Thirty-Fifth and Iron Streets, CHICAGO.

Don't Be Taken In!

The dealer who tells you he has something just as good as

Veterinary Pixine

is mistaken! He does not know. Trials and tests prove it the most marvelous Healing remedy made. Absolutely Sure, it penetrates, absorbs, soothes and heals—antiseptic—contains no mineral or poisonous substance. Will positively cure old sores, scratches, grease heel, hopple chafes, hoof rot, mange and all skin diseases, when veterinarians and all known remedies fail. Sold under an absolute guarantee. At all druggists and dealers or sent postpaid.

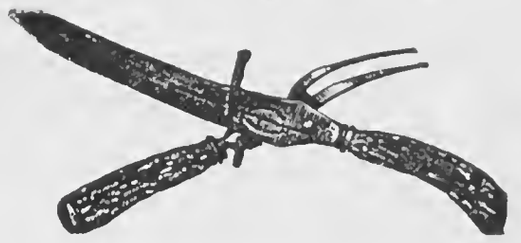
At all druggists and dealers or sent prepaid.

2 oz., 25c.; 8 oz., 50c.; 5-lb. pkge., $4.

TROY CHEMICAL CO., TROY, N. Y.

A Carving Set.

Every family needs a carving set three times a day. This set consists of a Sheffield carver with eight-inch handmade



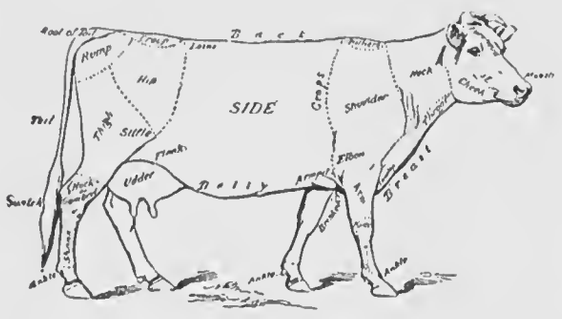
steel blade, buckhorn handle, fork and steel. Price, $1.90; or we will send it for a club of two new subscriptions at $1 each and $1.25 extra money, or free for a club of six at $1 each.

Live Stock and Dairy

SELECTING A DAIRY COW.

What to Look For! Where?

TWO CLASSES.—A most essential feature of a breeding female of any sort of animal, is the capacity to produce milk and suckle the young in a generous manner. The breeder of farm animals, no matter what class it may be, deeply appreciates this fact. Of all the various classes of stock, however, only one is expected to yield a copious measure of milk beyond the needs of its offspring—that is, the dairy cow. Originally, all classes of cattle had much in common, it is supposed, but with the growth of civilization men developed cattle according to their needs, and as a result two great groups of this stock became gradually established, viz., the beef type and the dairy type. The latter was created as a result of the needs of men for milk and butter rather than for calf consumption. To-day, the calf in a well managed dairy herd is removed from its dam within 24 hours of birth under ordinary conditions, and thereafter is entirely deprived of the great comfort of sucking its dam, while the beef calf may suckle for six or nine months, as the case may be. The modern dairy cow has evolved into a great milking machine, with a capacity to produce that is truly marvelous. Careful study by men interested in dairy cattle, seems to demonstrate that there is a type of this class. Not all good milkers represent this type, but undoubtedly to a more or less degree many of them do. The fact that an occasional animal that widely differs from the type produces milk in abundance, should not affect the importance and truth of the statement, that the type really does exist, and has a significance. What is this dairy type? While many may be familiar with it, the writer will take the liberty of discussing the subject for the benefit of others.

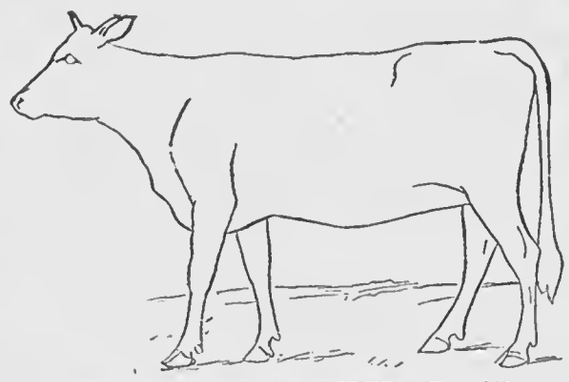


SHAPE OF A DAIRY COW. FIG. 224.

CONSTITUTION.—I have before this said something about constitution, that all important feature of life. With the beef type a square, full chest is sought for, while the dairy type is of less diameter through the shoulders or between the legs at base of the chest. The front legs should not be close together, so that the knees almost meet, but the legs should drop rather straight to the ground, with considerable space between them. Then the chest should appear rather deep, and be well sprung out behind the shoulders at the point marked "crops" on Fig. 224. On dairy cattle this point usually is more depressed than on beef cattle, but it is none the less desirable to have a well-sprung body here, for this part covers the vital organs, and so requires plenty of chest room. Consequently, from the withers on top to the brisket below should be depth, with ample diameter between.

THE WEDGE SHAPE.—Instead of putting her food into flesh, the typical dairy cow converts what she does not require to sustain life, into milk. And so, if of the right sort, she will be more lean, muscular and angular of outline than the butcher most enjoys. She should not look emaciated, but her muscles must be visible, and her ribs just slightly so. A cow thus lean, of the dairy type, presents a general conformation rather peculiar to herself, which modern dairymen have taken to terming "wedge-shaped." If one views such a cow from one side, he will notice that there is a greater depth from over the hips to the under side of the udder, than from the withers to the body between the front legs, thus indicating a tendency to wedge shape. If one stands in front and views such a cow, it will be noted that she widens out from front to hind quarters, giving the wedge form from this point of view. Again, if one stands over this type, and looks down, he will note that the back is narrow at the withers, and gradually widens out in wedge form for half the depth of the body in front. Consequently, the reader can see this wedge form, as it were, by viewing the best type of dairy cow from various points. Fig. 224 shows something of this wedge form, while Fig. 225 does not. Young animals, however, do not have this development to any such extent as do mature ones. With age and pregnancy the body changes form, and this wedge form becomes more pronounced. Fig.225 more represents the form of the yearling heifer.

SHAPE OF UDDER.—Many may think the udder and its accessories the most important part of a dairy cow, this being the "business end," but the constitution and general outline or form, I think, should have precedence, just as much as the foundation and general form of a building are of greater importance than the specific use it is to be put to. The udder of the dairy cow, however, largely measures up the value of an animal, and so great emphasis must be given to this point. A cow of the best dairy capacity will be a large producer, and so she should be gifted with strong constitution to endure the strain. In my opinion, the best type of udder, when viewed from one side, should be well developed in front along the belly, and carried up behind with a full curve, so that the entire outline of the udder will extend outside rather than inside the curve of a circle. To illustrate this, the front of the udder shown at Fig. 226 is carried straight along against the belly, with the two sets of teats nearly on the same level. This represents a very high class front udder, a



TYPE OF YEARLING HEIFER. FIG. 225.

part of this organ which is very generally defective. Fig. 227 represents a too-common form, where the front udder is abbreviated, so that the front teats are suspended or hung considerably above the hind ones. This is a very inferior form. As the reader can see, the front udder in Fig. 226 passes outside the line of a circle, while that of Fig. 227 is well within the line. The front udder is the more generally defective part, and so most score cards of dairy cattle attach a greater number of points to the front than to the hind part, owing to its natural weakness. When a cow is standing in a natural position, and she is not too far advanced in lactation, and her udder is fairly well filled with milk, then the outline of the hind part should curve up perceptibly beyond the leg towards the vulva, and the higher up the better.

WHAT IT IS.—The udder consists of two glands lying side by side, held to the belly by a suspending muscle as it were, passing down between them. These glands lie here like two big beans side by side. Each gland, however, is separated into two halves, forming the two quarters on each side. If one places his hand under the udder he will note a groove between these two glands, passing lengthwise of the animal. Now a well formed udder will not have a very deep groove, but the two glands will combine to form a thick udder, which will always be thicker in front than behind. Just before being milked the udder should be graceful in side outline, thick through, and of good depth.

In its interior composition the udder is like a sponge, filled with holes in which milk is deposited and held. After the cow is milked this udder should shrink and become somewhat "wizzled up," losing its most graceful form. If it does not do this, then it is what is termed a "meaty" or "fleshy" udder, and will be found lacking in capacity to yield milk in proportion to its size. The teats should be placed well apart, so as to permit milking with ease, and a length of 2½ to three inches is to be desired, as representing the most convenient size for handling. Associated with the udder will always be found at least two or three so-called "milk veins." These extend from the front of the udder, one on each side on the belly, and pass forward with more or less twisted movement perhaps for one-third or half way to the front legs, where they disappear through a small aperture known as the "milk well," into the abdomen. The length, size and twist of these veins differ. One may at rare intervals see a milk vein extending the entire length of belly, and disappearing at the arm pits. Again, these veins may be very small and with few curves, or they may be large and well twisted and most noticeable. Young cows have less conspicuous veins than do more mature ones, the same as the veins on the hands of young people are less conspicuous than those of persons of age and maturity. A large, long, twisted milk vein is considered an indication of good milking capacity. If this vein passes into the abdomen through a large milk well, it is more to be desired than entering through a small aperture. Between these two large veins, which pass along the under side of the belly, as one might say, at the margins, will often be found a third and shorter milk vein. Sometimes the space in front of the udder for a short distance, and between the two large milk veins, is covered with a network of veins. This is rarely found, however, and then, as I believe, only on cows of great milking capacity. Besides this, veins will be occasionally seen on the exterior of the udder.

C. S. PLUMB.

Leg and Body Wash.

Race horses often become sore and stiff from continued strain on the hard tracks. Nothing takes out this stiffness and soreness like a wash compounded of diluted

Tuttle's Elixir

apply to the legs and put on light bandages. Sponge the body and put on light blanket. Guaranteed to produce desired results or money back.

Readville Trotting Park, Mass., March 23, 1900.

Dr. S. A. Tuttle, V. S.

Dear Sir:—I have used your Elixir for the past ten years, in the diluted form for a leg and body wash. I consider it the best wash for keeping horses from soring up. Horses done up with this wash are much less liable to take cold than when done up with witch hazel or any other wash I ever used. J. H. NAY.

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Best Gall Cure on Earth

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Cattle Stanchion

The most practical and humane Fastener ever invented. Gives perfect freedom of the head. Illustrated Circular and Price free on application. Manufactured by O. H. ROBERTSON, Forestville, Conn.

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—being an improvement over Smith's. Lightest, strongest, quickest, safest swing stanchion made. Has steel latch and automatic lock. Becomes stationary when open. Animal cannot turn it in backing out. Made of best seasoned hard wood. Pins for fastening with every stanchion. Send for testimonials.

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Kills Flies and Lice on Cattle and Horses.

Gives Cows Comfort, hence more milk.
Keeps Flies off Horses, hence more work.
Purifies the Stable, hence health and safety
One gallon can $1, and Keystone Sprayer $1, both sent express prepaid for $1.50, to introduce it. Five-gallon can, freight prepaid, $4 00.

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Wanted—Horses, Cattle and Sheep.
I want two registered Black Percheron Stallions and six mares or fillies; one German Coach Stallion and six mares or fillies; one Jack; two registered Polled Angus Bulls and 10 Heifers; one registered Jersey Bull and 10 Heifers and 50 Shropshire Sheep, in exchange for farm lands, at prices ranging from $10 to $20 per acre. This is a chance for stock raisers to get a farm for "the boys." Address WILLIAM HERRICK, care of Morgan & Wright, Chicago, Ill.

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100 finely-bred Lord Britain and Fashoda Does, at following prices: Does scoring 90 to 92 points, $3: Does scoring 92 to 94 points, $4; Does scoring 94 points or better, $5—laid down at your door, express paid. A few very choice bucks at very low prices. All stock scored by P. E Crabtree or by one of his graduates.
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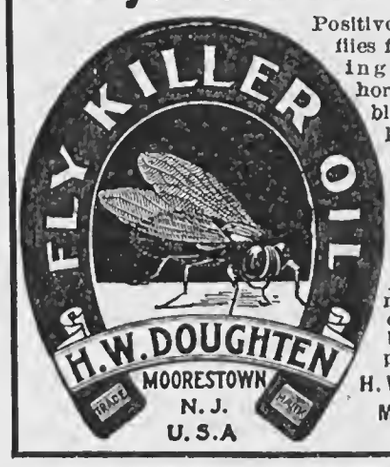
ZENOLEUM Kills Lice, Ticks, Mites, Fleas, Etc., on all kinds of animals and poultry. Given internally it drives out worms. Cures all cuts, wounds, sores, etc. Non-poisonous. Endorsed by leading veterinarians. "Veterinary Adviser" free. Zenner Disinfectant Co. 100 Bates St. Detroit, Mich.

SHOO-FLY The Animal's Friend
Kills every fly it strikes; keeps off the rest. Harmless to man or beast. ½ cent's worth saves 3 qts. milk and much flesh. Send $1.00 for Improved Sprayer and enough Shoo-Fly to protect 100 cows, or 25 cents for liquid alone. Guaranteed
SHOO-FLY MFG. CO., 1005 Fairmount Ave., Philadelphia, Pa.

Make your Cow Comfortable



Positively prevents flies from annoying cows or horses; rids stable of flies, keeps stock good tempered and in fine condition. A boon to every stock owner. Apply to your nearest dealer or write for booklet and prices.
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THE FULL MILK PAIL
attests the value and is the sure result of the use of our
NEW CENTURY FLY KILLER OIL.
There is no "fly time" where it is used. Absolutely safe—harms neither man nor beast and will not taint milk. It is most evenly and cheaply applied with our Special Sprayer. Calves and young stock can't thrive and grow if continually fighting flies. It's equally valuable for horses. Prevents "fly nervousness" and has saved many a "run off" and "smash-up." Ask your dealer for it. If not there, send $1.00 to us for Sprayer and enough Killer to protect 150 cows or other animals. We are the sole manufacturers and want agents everywhere.
D. B. SMITH & CO., UTICA, N. Y.

FARM AND DAIRY NOTES.

A GOOD SILO.—Without boasting we have the best round stave silo it has been my privilege to see. I described it in THE R. N.-Y. last Winter. The special features were thick staves to prevent freezing, hooped with steel wire rope, ½-inch, and the doors hung on the outside, swinging out instead of in. The thickness, 2¾-inch, quite prevented freezing, and it is pretty cold in Lewis County. The wire cable resisted the extreme cold without breaking, and the silage was just as good next to the doors as it was anywhere. The doors swing on heavy hinges fastened with an ice-box fastener or clamp. No one has disagreed with me who has seen this silo.

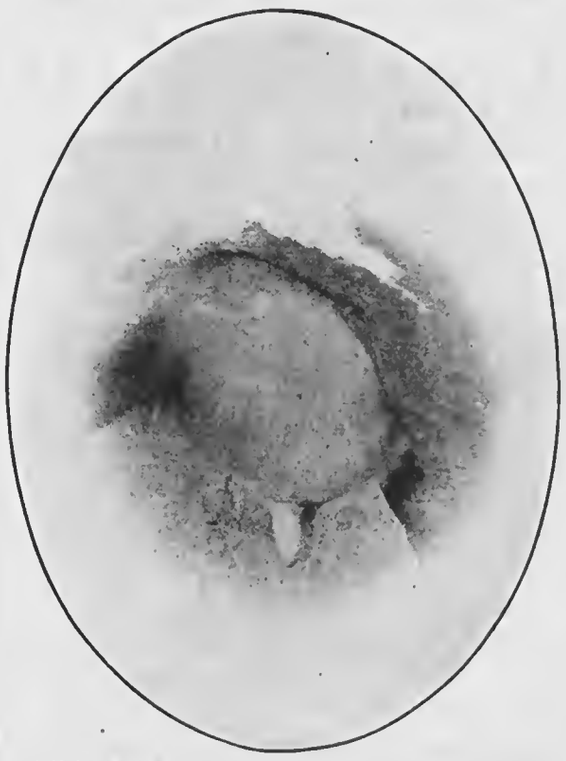
USE MORE MILK.—It is a prevailing custom among farmers in my observation to be very careful in the consump-

SQUARE AND LEVEL UDDER. FIG. 226.

tion of their money crop. The milk farmer is very sparing in the use of milk. The producer of cheese eats comparatively a small amount. In the butter dairies the same rule is adhered to. The fact, is, we need education in food values. I have many times lessened the amount of milk my wife asked me to get for the day's use—just a little you know. It lessened the day's record at the weigh can. Now I think how foolish. Prof. Atwater found it required .28 pound of protein and 1¾ pound carbohydrates for a working man each day. I had not come to realize a great economic law—that our milk was sold at wholesale, and everything purchased was bought at retail, or at the best a semi-wholesale price. Compare a dressed beef with milk, which contains 14.7 per cent refuse and 51.2 per cent water; total 65.9 per cent, leaving 34.1 per cent solid matter. Probably nine cents would be a fair retail price for a whole beef in city, town and country. This price would make the solids in 100 pounds worth 26.4 cents per pound. The average price of milk would not exceed five cents a quart, or on a basis of 100 pounds we should have 13 pounds of solids, or 46 quarts, selling for $2.30, or 17.7 cents for a pound of solids, a saving in favor of milk of 8.7 cents per pound dry matter. In other words, milk would be as cheap at seven cents a quart as an entire beef animal at nine cents a pound. We must supply the .28 pound of protein and 1¾ pound carbohydrates from some source. Why sell milk at two cents a quart, an average wholesale price to the farmer in crude milk and manufactured products, and buy beef at nine cents? Let us reverse our figures. Milk at two cents a quart is equivalent to beef at 2.28 cents a pound for an entire carcass. We have not considered the greater digestibility of milk. The average consumption of milk is less than one-half pint per capita. Why not use more milk?

FINANCIAL PROBLEMS.—When one has an ambition to do, and finds himself handicapped by inability to adjust and arrange the finances of the business, what is he to do? In my own case there are three elements that have to be curbed or spurred to keep them working. They are ambition, the actual necessities of the case, and funds to operate with. I wonder whether any of THE R. N.-Y. readers are ever thus abridged, and have to call a halt to take latitude and longitude. It is just as necessary on the farm as on the ocean; to keep a proper equilibrium is no easy matter. To illustrate: For several years the gray matter of improvement has been in the ascendency; new buildings, repairing, painting, cleaning up old hedgerows and work of that nature, that did not add very materially to the producing power of the business. Over a mile of stone wall along fences has been cleaned up, bushes pulled out and the land cultivated, until what formerly was of no value is now producing crops. The income may not be large, but it looks better. A man may be fed through the eyes as well as through the mouth, as is proven by the rapid increase in the growth and sale of flowers in this country. In 1800 there were three commercial florists; 1850, 300; 1880, 2,000; 1890, 5,500, and last year $20,000,000 was expended for flowers. A bouquet of flowers on the table will aid digestion. These improvements have had the same effect.

TO-MORROW'S RESULTS.—It is right here that the secret of success is found. The results of to-day are not the means of yesterday. The profitable dairy cow was bred five years ago. If she is unprofitable it is then too late to change the cause. Don't you think farmers do not do as well as they would if results could be seen immediately following the cause? The thorough protracted cultivation of a field shows perhaps more on the succeeding crop than upon the one just planted. Another thing not generally considered or practiced, if known, is that the same labor spent harrowing a piece of land over a period of two weeks will be more effective than if put on in a single week. The old Summer fallow abundantly proved the advantage of protracted cultivation. Nitrification, and the dissolving of plant food from the minerals of the soil could not take place



FRONT OF UDDER DEFECTIVE. FIG. 227.

in a moment. Everyone knows the action of air and moisture on vegetative matter, bringing on rapid decay. Stirring the soil does the same for the humus it contains, and the value of a soil after all depends upon its humus content. It has been interesting to note the condition of soils in different sections. The soils of northern New York, as a rule, are not deficient in humus. It is a dairy section, which means that most of the vegetation is fed upon the farm. The long Winters, with snow and frost, have their advantage, unlike the New Jersey soils lying exposed a greater portion of the year, subject to heat and rains. The New Jersey farmer who does not supply a cover crop is losing money. I was interested last Winter in the repeated question why the oats did not do well. Prof. Voorhees finally came to the rescue, saying that their soils had been exposed so long that the readily available nitrogen needed by the early growing oat plant had been lost during the Winter, and there was not time for heat and moisture to create more of this necessary ingredient until it was too late for the oats. Cultivation is the great want in snowy, frosty sections, and cover crops where land is open. It is my observation that this distinction has not been made either by the institute workers or the agricultural writers. H. E. COOK.

INCREASED PENALTIES.—Last Spring THE R. N.-Y. referred to the penalties for violating the agricultural law in New York. Too many cases were being quietly settled by lawyers in the civil courts. The following from the New York Produce Review is encouraging:

Just before the end of the last session of the New York Legislature a change in the penalties for violation of the State agricultural law was quietly made—so quietly that few people knew anything about it until the amendment had become effective as a part of our statutes. Formerly the minimum penalty for violation was $25 fine for both civil and criminal cases, and the officers of the Agricultural Department were hampered somewhat in the prosecution of oleo cases by the smallness of the fines often imposed. It was through their efforts that the law was amended so as to enforce a greater penalty and make the breaking of the law a more serious matter. In criminal cases for the sale of oleomargarine colored to imitate butter, the minimum penalty for first offense is now $50 and the maximum $200, while for the second offense the minimum penalty is now six months' imprisonment. In civil cases the minimum fine is now $50 for the first and $100 for the second offense. Most of the actions against oleo sellers are brought in the criminal courts, and the increase of minimum penalties will doubtless be of assistance to the authorities in discouraging violations.

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THE LEADING
CREAM SEPARATOR
CATALOGUE FREE
U.S. BUTTER EXTRACTOR CO., BLOOMFIELD, N.J.
WESTERN OFFICE FISHER BLDG. CHICAGO.

U S U S
The Improved
U. S. Separator
HAS LED in the past,
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because of its
Clean Skimming
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VT. FARM MACHINE CO., BELLOWS FALLS, VT

Sharples "Tubular"
Dairy Separators
the latest product of the world's leading Cream Separator manufactory.
HIGHEST PRIZE (KNIGHT'S DECORATION) AWARDED AT PARIS.
No disks to bother with and wash. Are very easy turners.
Guaranteed to produce enough more butter than the best competing separator to pay 6% on whole first cost of machine each year. Five sizes—$50 to $200 each.
Valuable book on "Business Dairying" and Catalogue No. 153 free.
Sharples Co., Chicago, Ill. P. M. Sharples, West Chester, Pa.

Save $10 per Cow
EVERY YEAR OF USE.
De Laval Cream Separators
Prices, $50 to $800.
"Alpha" and "Baby" styles. Send for Catalogue
THE DE LAVAL SEPARATOR CO.,
Randolph and Canal Streets, CHICAGO. | 74 Cortlandt Street, NEW YORK.

CHILDS'
SO-BOS-SO
KILFLY
COWS Will GIVE FROM 15% TO 25% MORE MILK
and Better Milk if Protected from Flies by the use of CHILD'S SO-BOS-SO KILFLY.

It is a thorough fly killer and germicide, it destroys all bacterial germs, insures health, greater strength and vigor to the animals and by the absolute relief afforded to them increases the amount of milk $8.00 to $10.00 per cow during the season you will find it the best investment you ever made.

It allays nervousness in horses as well as cows and keeps both in better general condition. As an antiseptic and for scours in calves, hog cholera, swine plague and foul in cattles' feet it is unequaled and may be used either in the stable, cow shed, chicken house or pig pen.

It is easily and rapidly applied with Childs' Electric Sprayer, and a herd of 30 to 50 cows can be sprayed in a few moments. SO-BOS-SO is absolutely harmless to man and beast.

Abortion in cows, which is caused by a germ—propagated by unsanitary conditions—can be prevented by the use of SO-BOS-SO KILFLY.

Sold only in gallon cans. Ask your dealer or send $2.00 for one gallon can and Electric Sprayer complete, securely packed and express paid to any point east of the Mississippi River except State of Maine.

The Sprayer can also be used for spraying potato vines, bushes, trees, etc. Beware of imitations.

CONVENIENT. CHEAP. PRACTICAL.

Thousands are in use in America, Canada and Mexico. Shipments have begun to Cuba, the Philippines, South America and Australia.

LENOX, Mass., April 21st, 1900.
I have used So-Bos-So Kilfly with good results. It is a comfort to both man and beast at the milking time. JACOB STEIBEL,
Supt. to the Hon. John E. Parsons.

PHILADELPHIA, PA., May 2, 1900.
Last July the daily quantity of milk produced by my Chester County Dairy fell off very considerably, which I attributed to the annoyance which the cattle received from the flies. About half the time the herd was standing in a stream switching instead of grazing. I ordered a sample of So-Bos-So Kilfly and by having it applied every second morning, greatly relieved the herd and increased the milk product from 15 to 25 per cent, and I have continued to use So-Bos-So Kilfly during hot weather ever since that time. Our herd of about twenty head could be sprayed in the stable in less time than it would require to milk a single cow, and I consider that I saved many times the cost of the So-Bos-So Kilfly used in addition to affording comfort to the herd. G. S. W. BRUBAKER.

LENOX, Mass., April 23, 1900.
We used So-Bos-So Kilfly last summer, on cows and horses with excellent results, it being much more satisfactory than anything else of the kind we have ever tried.
A. H. WINGETT, Supt. Allen Winden Farm.

CHAS. H. CHILDS & CO., Sole Mfrs., 12 LaFayette St., UTICA, N. Y.

LESS Than DEALERS PAY

Our Price to You is $7.25

This is a sample of our Furniture prices. Here is a Couch which the factory sells to your dealer at about $8.00. Your dealer will charge you not less than $10.00 or $12.00 for a couch of equal grade.

Order No. R41.

Price, $7.25

State color of plush preferred.

An unusually large, luxurious couch, made of selected oak, or, if preferred, in mahogany finish, handsomely carved throughout and supported by massive carved claw feet. It has six rows of deep hand-made tufts, fastened with the celebrated steel tufting buttons which cannot pull off or pull through the cover

It is well filled and contains the best grade of steel springs turned from special high-carbon wire, over which is placed heavy duck canvas instead of the burlap commonly used, the best grade of figured velour plush in all the staple colors being used for upholstering.

From a sanitary point of view the open bottom presents a special feature. It allows good ventilation and a free circulation of air, which is disastrous to moths and germs.

The frame is massive and substantial, the workmanship first class, the appearance neat and artistic—a good, serviceable couch at the lowest price ever offered. Size 30 inches wide, 78 inches long. Weight 100 pounds.

We do not care to ship goods unless freight charges are guaranteed. If you do not wish to send the full amount, $7.25, send us $1.00 to show good faith, and we will do the rest. If you really think that you ought not to take even this risk, write us and say that you prefer to have the couch shipped C.O.D. and that you will pay the full amount upon arrival and examination.

We want to be reasonable from every point of view. It may be returned at our expense if not satisfactory. Send us your order now; do not wait. Order *No. R41.*

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TORNADO Ensilage Machinery

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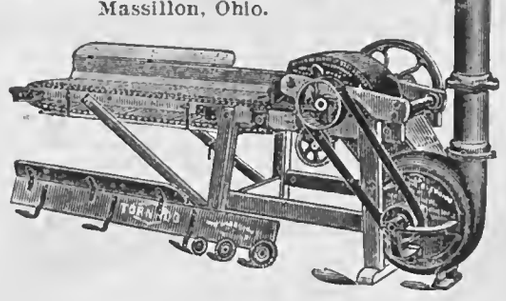


Humorous.

It may be hard to save your tin,
But there is this about it—
It's easier to live within
Your income than without it.
—Philadelphia Press.

MARKETMAN: "Oh, yes, mum, them's young onions." Mrs. Buyzem: "But they have the odor of old ones." Marketman: "Yes'm. They're strong for their age."—Baltimore American.

WIGG: "She is very susceptible to flattery." Wagg: "I should say so. I once told her she was as sweet as honey, and, would you believe it, the very next day she had hives."—Philadelphia Record.

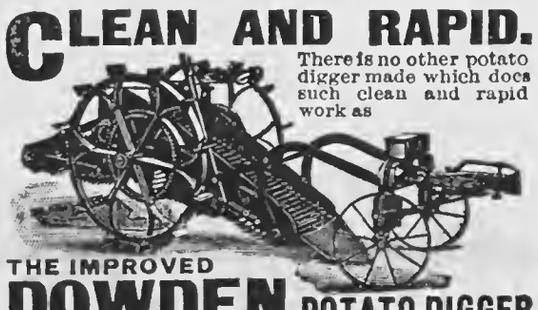
FARMER HONK: "Your niece, that's just graduated from the academy, does fancy-work most of the time, don't she?" Farmer Flintrock: "Yes; an' she don't fancy work none of the time."—Puck.

"WHAT kind of a monument do you wish for your husband?" "Well," replied the widow, "I don't want nuthin' too expensive—just somethin' solid, that'll hold him down!"—Atlanta Constitution.

"CAN'T I sell you something to keep the hair from coming out?" asked the barber. "No," answered the customer with the polished pate. "What I want is something to coax it along and keep it from staying inside."—Washington Star.

"How many zones have we, Willie?" asked the teacher of a pupil in the junior class. "Four," was the reply. "Well, then, name the four," said the teacher. "The frigerated, the horrid, the temperance and the intemperance," answered the little fellow.—Christian Register.

CLEAN AND RAPID.



There is no other potato digger made which does such clean and rapid work as

THE IMPROVED **DOWDEN POTATO DIGGER**

Our book explains the principle, so that you can see for yourself its superiority. Fully Guaranteed. Book free.
DOWDEN MFG. CO. Box 22 Prairie City, Iowa.

Why Not

Preserve Wheat and Rye Straw Straight Bound in Bundles?

Please your customers by saving barn room and saving labor in handling straw. Our Combined Straw-Preserving and Spike-Tooth Thrasher we guarantee to thrash Wheat or Rye perfectly clean and not bruise or break the straw, and bind the straw again in perfect bundles. The same machine can be changed in 15 minutes to a Spike-Tooth Oat, Wheat, Buckwheat, Barley and Corn Thrasher with Stacker attached. Will thrash and clean more grain with less power than any machine built. Send for catalogue B.
GRANT-FERRIS COMPANY, Troy, N. Y.

QUICK CORN CUTTING

which saves the crop at its best, saves it from the frost, saves all the ears, saves time, saves labor and hence saves money.

THE SCIENTIFIC CORN HARVESTER

does all these things. Cuts any desired height. Safety shafts protect horse. Safety seats protect men. So low in price every farmer can afford to own one. Send for free catalogue, R
THE FOOS MANFG. CO., Springfield, Ohio.

WELL DRILLING Machines

Over 70 sizes and styles, for drilling either deep or shallow wells in any kind of soil or rock. Mounted on wheels or on sills. With engines or horse powers. Strong, simple and durable. Any mechanic can operate them easily. Send for catalog.
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Best and cheapest. Send for catalogue.

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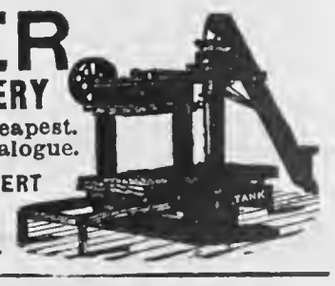

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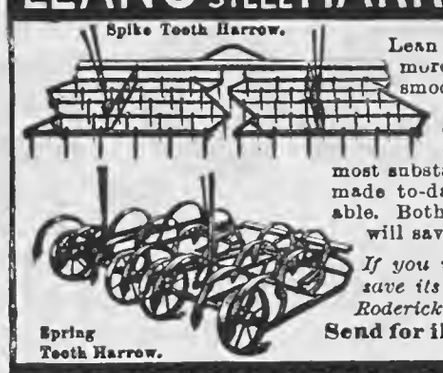
Sizes 2 to 8 feet wide or more for horse or steam power. TRASH CUTTER, perfect turner, light draft, strong, durable and cheap. *Made Only by*

THE CUTAWAY HARROW CO., Higganum, Ct.

Send for Circulars.

LEAN'S ALL STEEL HARROWS AND LAND ROLLERS.



Lean harrows make fat harvests. They do more work and do it more efficiently than any other harrow. They tear up the ground, smooth it for sowing, harrow in the seed, kill the weeds after the crop comes up. The teeth are adjusted to suit any condition of the soil. By a touch of a lever they are instantly cleared of trash without stopping the team. The most substantial and finest finished farm implements made to-day. Made entirely of steel, light and durable. Both the spiked tooth and spring tooth harrow will save enough in a year to pay for itself.

If you want a Land Roller that will save its price in a single season, get a Roderick Lean Steel Land Roller.

Send for illustrated catalogue to-day.

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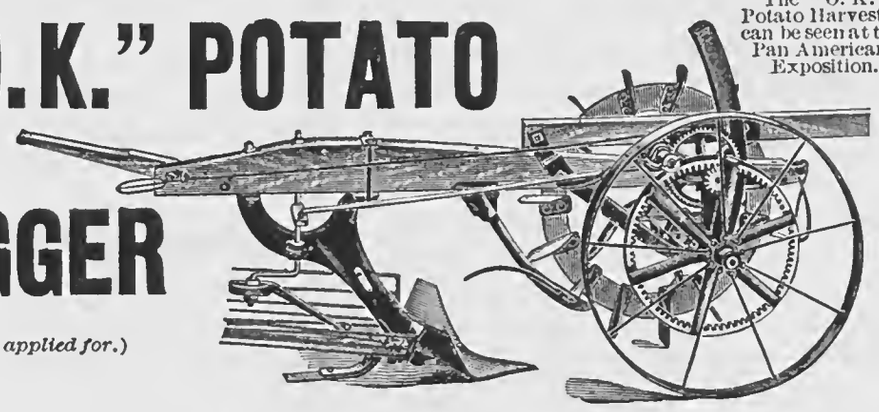
"O.K." POTATO DIGGER

(Patent applied for.)



The "O. K." Potato Harvester can be seen at the Pan American Exposition.

Sent on trial. Test it in your own field. If it does the work, pay for it. If it fails, reject it.

We want a good, live, hustling man in each township in potato section to take orders. One who has a good team and can and will spend time enough between now and digging time to call on every farmer in the township who grows five acres or more. **We Pay Liberal Cash Commission.**

D. Y. HALLOCK & SONS, Box D 805, YORK, PA.
Please mention box number.

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2688. NEW YORK, AUGUST 3, 1901. $1 PER YEAR.

SELECTING A DAIRY COW.

What to Look For! Where?

PART II.

While it does not always indicate a fine dairy cow, still a mellow, thin skin, elastic and unctuous to the touch, and covered with fine hair, is usually an indication of quality. The best dairy cows must possess quality, and the skin and fine bone show these features in a fairly accurate manner. Long, coarse hair, and thick, stiff hide are most undesirable. One should be able to grasp the skin in the hand along the front of the body near the shoulders, and pull it easily from the body, and almost wrap the hand in it, if of the mellow sort desired. If it hangs tight to the body, it may show lack of condition, or will indicate poor quality. This applies to the skin over the udder as well as to the rest of the body. People sometimes ask for indications as to quality of milk. Most dairy students desire a yellow pigment to the skin, which is most readily seen by examining the interior of the ears, or is perhaps seen in the lower part of the horns. This is not always a correct indication, for I have seen a Holstein with good color producing a very low grade of milk.

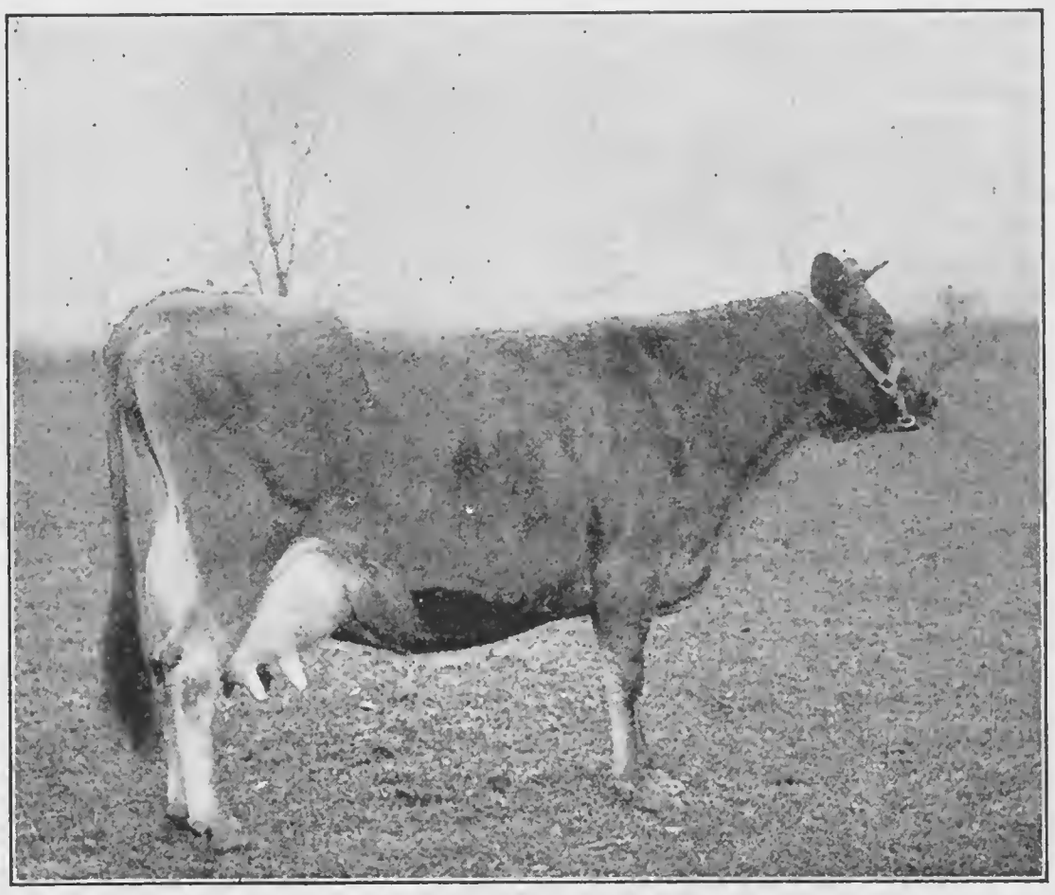
As one stands behind a well developed dairy cow, the hind legs should come to the ground in good position, with considerable space between the hocks. A cow of say 1,000 pounds weight would do well to carry her hocks six inches apart at the least. The purpose of this is to allow ample room for the suspension of the udder between the legs. If the animal is what is called "cow-hocked," then the hocks come together and the toes turn out, and a cramped, ungainly rear part results. The thighs of this dairy cow should also be thin and not fleshy, thereby permitting a width of the udder in its upper part that is highly desired. Legginess is also undesirable in the cow. The appearance which we admire in her should always be indicative of her fitness for the work we expect on her part.

There are other features in the dairy cow that might be touched upon, but already the writer has covered these in other articles. There is always the desirability of the broad, level back and splendid spring and depth of rib, with large body capable of great feeding capacity. The dairy cow is somewhat longer bodied than the beef type, and has more space between the ribs, and greater space from hip to rib than the beef cow. She also has a longer, thinner neck and leaner head. She, however, does not materially differ from her sister in the need for broad, full forehead, bright, placid eye, broad, strong muzzle and full cheek. Of recent years considerable emphasis has been placed on the "nervous temperament" of the dairy cow. All animals of a lean character are naturally more nervous than those of a fleshy type. The Leghorn hen is more nervous than the Brahma, the Merino sheep than the Shropshire, the Yorkshire pig than the Poland China, or the Jersey cow than the Short-horn. But nervous type need not mean uncontrollable or excitable. If intelligently handled, a dairy cow will be placid and quiet, although it does require nervous force to produce such immense quantities of milk as a good animal may. And so a strong, prominent spinal column or backbone, indicating great nervous force, should not be looked on with disfavor. In any event it will usually be found with the high-class dairy cow.

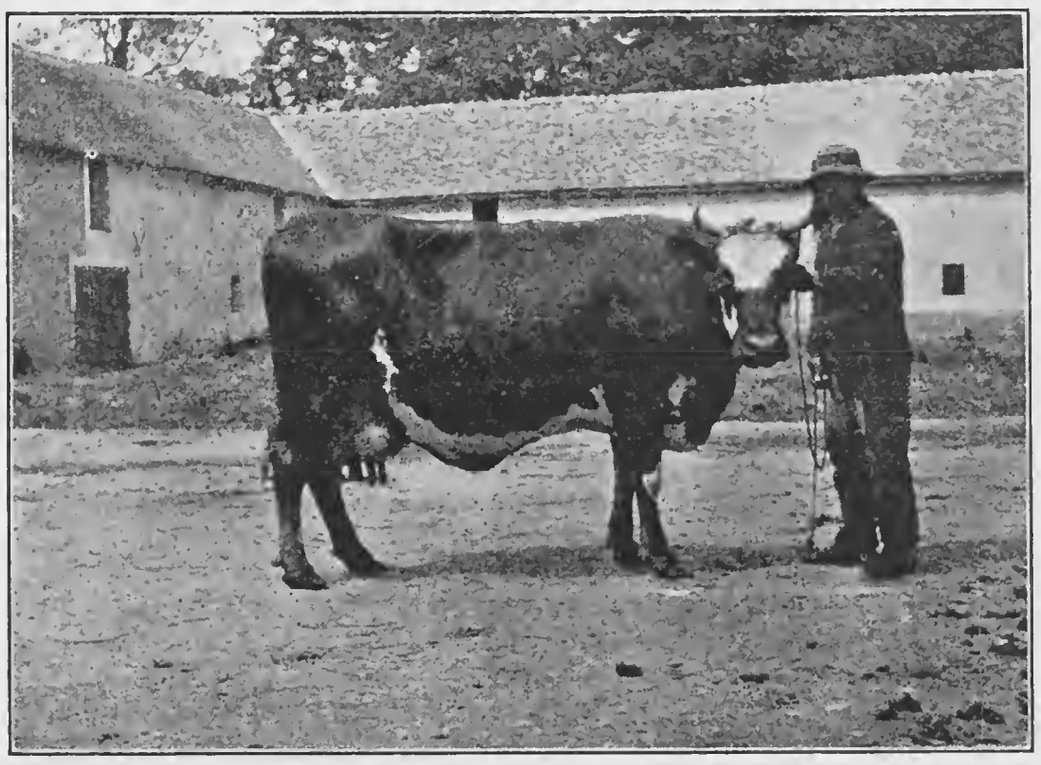
How much ought a good dairy cow to produce? I should qualify that by age and breed. Animals of the smaller class, such as Jersey, should yield after the first calf at least 4,000 pounds of milk of five-per-cent quality, and after that at least 5,000 pounds. This within 12 months' time. Cows of the Holstein-Friesian type should make at least 6,000 pounds of 3½ per cent milk, with 8,000 pounds in mature form. Ordinarily, the more milk a cow gives the poorer it is in fat-producing quality, to a certain extent.

In connection with this article I submit two pictures of cows that I have had the pleasure of handling, that represent very striking specimens of dairy animals. Fig. 228 is of the Jersey cow Silver Sheen 26210, who in the hands of Col. A. T. Dempsey, of Columbus, Ohio, became well known as a very beautiful show cow. She had great quality, her form was of a rare sort, while she carried an udder of the kind that at once caught the eye for its superior form. The front of this might have been improved by being carried forward somewhat, but it is none the less a good one. The picture shows the prominent veins on the udder and abdomen. Last year, when visiting M. Victor Gilbert at Wideville, France, I came on a Normandy cow in his stable, among numerous others, that to me was a remarkable specimen. She is shown in Fig. 229. This cow represents an animal with a wonderful body capacity. The picture does not bring out her great back and spring of rib and body as I wish it did. She had a large udder, that I judge was of much capacity, with very prominent milk veins. I think I have never seen quite so striking a dairy cow in America in the large proportion of body and udder, to the small proportion of legs and neck. Victor Gilbert is perhaps as great a breeder of Rambouillet Merino sheep as France affords, but he certainly knows a good dairy cow. Perhaps these suggestions may be of service to some of the uninitiated, who desire more information concerning dairy cattle. I at least trust so.

C. S. PLUMB.



JERSEY COW SILVER SHEEN 26210. FIG. 228.

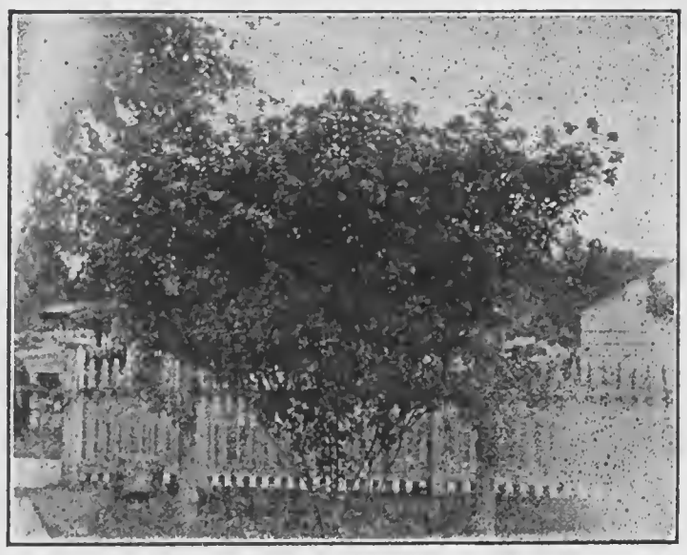


A NORMANDY COW. PHOTOGRAPHED IN FRANCE. FIG. 229.

"GUARANTEED EGGS."

The Monmouth Guaranteed Egg Company, a New Jersey enterprise for the production of fancy eggs of guaranteed freshness, is building an elaborate plant for its operations near Manasquan, Monmouth County. A prospectus issued early in the year stated that $50,000 would be expended in equipment, and when in full operation 2,000 eggs a day would be delivered in New York, guaranteed to be not over eight hours old. A representative of THE R. N.-Y. visited the plant recently, and found a fertile and well-tilled 87-acre farm lying a mile west of the pleasant old village of Manasquan, and within 15 minutes drive of the surf of the Atlantic Ocean. It is a prosperous locality, with an excellent train service to New York and Philadelphia, the former being reached in less than two hours by several express trains every day. The greater part of the farm is now in grass and pasture. A brooder house 24x150 feet with incubator room 22x30 feet, has just been completed, and is evidently well designed and thoroughly constructed. By using a special legless pattern it is thought 50 incubators may be operated at once by placing them in several tiers about the room. Long ranges of laying sheds are staked out through the fields. A considerable number are finished, and the framework of many more is under way. An old apple orchard on the place will furnish shade for the chicks, and a young plum orchard is to be planted for an increased run. An elaborate system of yards isolates the laying houses, which are built for the accommodation of 25 hens each. Water will be supplied by windmills, and later steam pump. Intensive feeding for egg production only is the central idea, as only the cockerels and old hens will be sold from the place. One of the chief promoters of the enterprise is an architect as well as a successful chicken fancier, and it is plain the constructive work has been intelligently planned.

No fowls are yet on the place, though purchases are now being made of young stock. Only Brown Leghorns and Black Minorcas will be kept, the plan being to cross these breeds for the production of uni-



A CRIMSON RAMBLER ROSE IN ILLINOIS. Fig. 230.

form large white eggs. There is every reason to believe that an earnest attempt is being made to solve the problem of wholesale egg production, and THE R. N.-Y. will watch the outcome with much interest. So many big egg projects have failed that chicken men are naturally sceptical, but it is within the range of possibility that the managers of the Guaranteed Egg Company may solve the problem. There is no doubt that they can dispose of a vast number of such eggs as they plan to produce at rates above market quotations, as they have been tendered contracts by some of the largest hotels in New York, but the gist of the matter is whether they can keep so many hens healthy and happy through a profitable laying age. There is no evidence to show it has yet been accomplished on a really large scale. The immense proportion of eggs sold are produced by hens that run at large under almost natural conditions, and the writer has long thought that poultry products are too low in price, and scarcely pay cost of production if labor and materials are estimated at their real value. The fact that in thousands of small flocks running practically at large the hen rustles for most of her food, which would otherwise remain ungathered, and performs the major share of her own work, accounts for the supposed profit attributed to poultry keeping. THE R. N.-Y. will keep its readers advised of the results of the new egg enterprise. W. V. F.

AN EXPERIENCE WITH GRASS SEEDING.

On September 19, 1900, I put a lot, 200 feet square, into grass by the Clark method, at a total cost of $30.03 for the plowing, cultivating, fertilizers, seed and seeding. We sowed 14 quarts Timothy, 14 quarts Red-top and four quarts Medium clover on the 40,000 square feet of ground. This is not quite one acre, as you know. The lot is good limestone soil and naturally grass land. In 1899 we raised 2,051 pounds tobacco leaf, that we sold for $153.82, and in 1900 we raised 1,903 pounds that we sold for $152.24, on this piece of ground. I mention these tobacco facts to give you an idea of the condition of this lot. The grass crop was put in very carefully. The cultivation was so thorough that the lot was as fine and even as it was possible to make it. The ground was plowed and rolled, when rather dry, about September 10, and 90 bushels of air-slaked lime spread evenly over it. We then waited for rain that came in soaking showers on Saturday, September 15. By the Monday morning following the ground was in first-class condition for the spring harrow and land roller. We went over it alternately so frequently with these implements that the lot looked like a big garden. Then we further fertilized it with a mixture of 480 pounds fine-ground animal bone, 160 pounds nitrate of soda and 160 pounds muriate of potash. After the cultivating and fertilizing was so thoroughly done that I was sure Mr. Clark himself could not exceed it, the seed was sown. The sower started early in the morning of September 19 and finished about 6 P. M., after working at it faithfully the entire day. No man in the State could have cast that seed more evenly and regularly. In due time the seed sprouted and the grass came up beautifully, and continued to grow nicely and evenly until the ground froze.

In the Spring the grass made an early start to grow; but I soon saw that the clover and Red-top were being crowded out by the Timothy. During May we had wet, cold weather, and the grass commenced to go down in spots. By June 24, when we cut it, it was all lodged and damaged, by being down too long, and not drying on the ground. The grass stood much too thick on the ground to give a good yield of first-class hay. We took off 6,310 pounds of hay that I sold for 50 cents per hundredweight, yielding me gross $31.52, or net on the cost of putting the seed into the ground $1.52. I expect to mow the lot once more this season, as the grass is sprouting out nicely now. I may report any further yields. I think that for our soil I used too much Timothy seed. I believe that seven quarts of Timothy seed with the Red clover and Red-top, sown last Fall would have made me more and better hay. There was nothing to cut but Timothy, and it stood so thick that its stalks could not develop. It was down in all directions from sheer weakness of the stalk. When the Timothy went down it ceased growing, and thus did not average more than 24 inches in length. If this grass had stood less thick on the ground it might have averaged 48 inches in length. It then might have yielded five or six tons of prime hay. I believe that Mr. Clark raises the quantity of hay per acre he claims, but I also believe that if he had my land and would understand it as well as he does his own, he would sow less Timothy seed to the acre than he recommends. In the future I would consider seven quarts Timothy an ample sufficiency for an acre of our land. I think a novice would better not put out too much grass by the Clark method, until he has tested his ground thoroughly. G. A. R.

Wrightsville, Pa.

CONDITIONS IN THE SHENANDOAH VALLEY.

In reply to your inquiry as to value of land here compared with 20 years ago, I do not think that it will be unsafe to say that it is lower now. There is so little land changing hands—almost none except compulsory sales, and it is noticeable that farms thus sold have to be put up at the court house door two or three different times before they are allowed to go. Men used to rent here for years, and then would be able, from the profits of their toil on the farm, to buy a farm and, in a few years more, buy another and so on; but nothing of that kind is seen now. Most of the farms are sold to town men who have money which

PLACING THE BLAME. Fig. 231.

Bossy (to the Baby): "No, there wasn't a bit of anything bad in that milk when it went to town; nothing but what was good for little children. If it wasn't up to grade, you'll have to get your father to watch the city dealers."—Chicago Record-Herald.

they must put somewhere, and while investment in farms does not give any six per cent return yet it is safe and under their eyes. We are in the northern end of Shenandoah Valley—good land; staples, corn and wheat. These have been too low of late years to pay. Wheat has started now at 60 cents, though drought in the West may make better prices here. I am not a farmer originally. I spent my active life in the Presbyterian ministry—broke down 20 years ago in my voice, and had to go out of doors. Got my father's old homestead, have nearly 200 acres, and set out (15 years ago) a good-sized apple orchard and have since put greater part of the entire tract in same. Two years ago I was offered more than double what I paid. This will answer your question about cause of increased value of any land here. A great deal had been set in orchards, but there is only a portion of the country here that is adapted to apples especially. Lands are down here. Had your question been as to value compared to 40 years ago, or rather before the war, when values were staple, I could easily have told you there has been a tremendous slump; from two-fifths to one-half less now than then.

The farming interests are the great interests—the source of our welfare—occupying the attention of probably more of our toiling people than any or all others; and this state of things—the impoverishing of the agricultural people through the shrinkage of farm values extends over a period of the alleged greatest prosperity the world has ever seen. A few families and corporations, certain lines of business favored by the Government that claims to treat all alike, have grown rich beyond belief; but their wealth has been sucked from the farming people very largely, as seen in the shrinkage of value of farms which once made the farmer an independent man and his occupation one that young men sought after. Today all want to go to the cities and get rich fast.

Gerraldstown, W. Va. S. H. M'K.

CRIMSON RAMBLERS; YARD TRIMMING.

One of the prettiest things in the season of pretty things is a well-trained Crimson Rambler rose. I send a picture, seen in Fig. 230, of one in the yard of A. M. Leslie, Christian Co., Ill. When the picture was taken the plant was a mass of brilliant crimson bloom, actually thousands of roses on it. It is four years old, and is trained on a strong trellis about eight feet high and 10 feet long, and the picture shows how it was covered. It truly was a vision of loveliness. This plant shows what a little—a very little—time and attention will do in the way of ornamenting a yard or lawn. After the trellis was built Mr. Leslie probably did not spend over two hours in a year on the training of this rose. He merely attended to it at odd moments, when it needed a little attention. He is one of those men who have a knack, not natural but acquired, of getting the most out of everything he plants. This knack consists of nothing more nor less than doing everything at the right time—attending to a thing when a minute counts for more than an hour later. And that really is the whole secret of success with anything, especially anything that grows. Many a farmer thinks he cannot have a pretty lawn or "door yard" because he cannot afford the time he thinks is necessary to attend to it, when in fact all that is needed is a few minutes each day. A snip here, a bit of string there, a tack, a hack, a wrap and a pinch after supper or before breakfast, and a hard, unsightly place is transformed into a bower. One can have these things if he wants them. The main question is, Does he want them?

Illinois. FRED GRUNDY.

PIGS IN THE PEACH ORCHARD.

If P. E. S., in THE R. N.-Y. of July 20, page 511, read my advice to pasture hogs in an orchard with both eyes open, he must have seen that I only advised pasturing an apple orchard. Under no circumstances would I allow a peach or plum orchard to be seeded for pasture at any age. In my experience and observation one may just as well pull out and destroy either a peach or plum orchard, especially the peach, as to neglect the cultivation even for a single year. Peaches and plums are both gross feeders, and in order to have them bear regularly and produce fine fruit they must be not only fed liberally, but *must* be cultivated. I cannot endorse Prof. Plumb's advice when he says: "Still if the orchard is a year or so in clover and the stubble plowed under the trees should be much benefited." A worse thing could not be done than to sow a peach or plum orchard to clover and leave it for even a single Summer, unless it be to leave it two Summers, but one will be enough to ruin it.

By all means keep the orchard under cultivation. It is all right to give the hogs the run of the orchard, and while ordinarily they will not bark the trees, provided they have plenty to eat and plenty of water to drink, they will sometimes, even when well fed, get a taste of the bark, and then soon ruin the orchard, so the only safe way is to protect the trees, especially if small. But it is not safe to put tin or any other thing that excludes the light, about the bodies; the shade is sure to injure the bark, and may cause the death of the trees. Use wire netting, chicken wire with a two-inch mesh, and be sure to have it three feet high. They will eat above a two-foot wire. Put it loosely about the tree and twist the ends of a few wires together and it will stay until the tree outgrows it, which it will do very soon if well fed. The only admissible way of seeding a peach or plum orchard is to sow clover or Winter vetch in August and plow it in the next Spring.

J. S. WOODWARD.

THE Department of Agriculture is making arrangements with European governments to secure monthly telegraphic reports of crop conditions. These statistics will make a valuable addition to the regular monthly bulletin issued by that Department.

SHROPSHIRE EWES ON A RAPE FIELD. Fig. 232.

SUMMER CARE OF SHEEP.

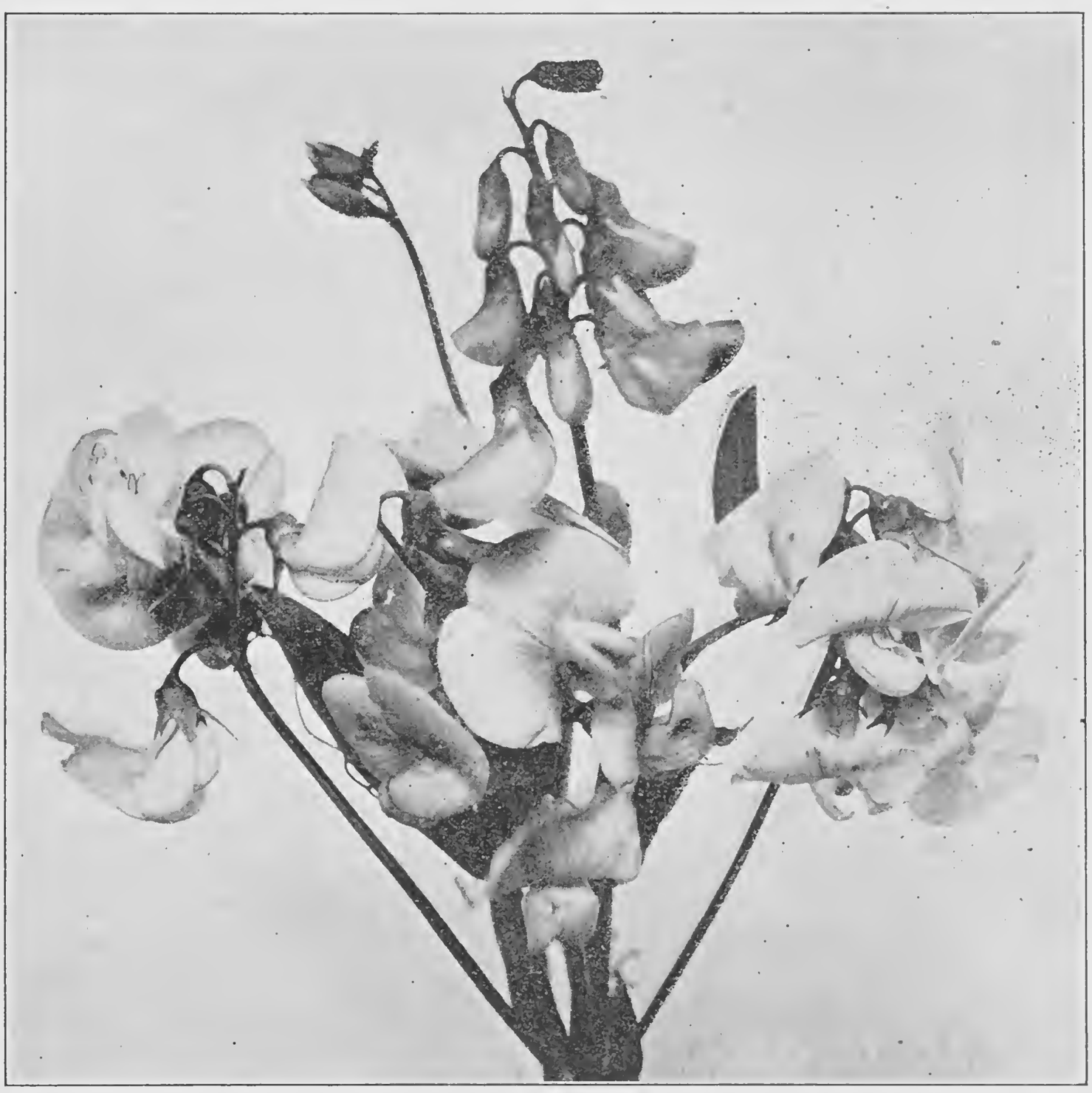
Successful Soiling on Oats and Peas.

Ideas concerning the Summer management of sheep are changing in a great many respects. That the sheep will do well as compared with other stock on closer picking is generally admitted. There is an old saying in describing a poor farm which ends "so poor that it won't grow white beans." After several years of experience and observation, I have come to the conclusion that it requires about as good soil to grow beans as any other crop. It is pretty nearly as true with the flock. The farmer can scrimp and starve his sheep if he wants to, and they'll respond to it with carcasses and products just as scrawny and starved as has been their attention. It is a rule that will hold through every State, and I believe in every clime, that the farmer with a choice paying flock treats them to the best his farm will grow. The best sheep farmers are growing a special crop for their sheep; and they are finding, too, that it pays. There is another very foolish idea that is happily fast passing away; that is, that the flock does not necessarily require water being supplied to them naturally or otherwise; that the flock can readily secure all the water they need from the moisture deposited on the grass at night. Possibly this might have been true to a limited extent with the old Merino fine-wool or grade back 30 years ago, but if it was true, times and conditions have changed wonderfully during the past few years, and especially since the modern mutton-wool sheep has become so popular. We have found that our heavy Shropshire ewes are just as anxious to get water during all seasons of the year as any other stock we have. We are certain that our sheep suffer nearly if not fully as much without water as any of our stock. Consequently, during all seasons, and especially during the hot weather, if there are no natural means of securing water, we see that they are supplied artificially.

Soiling for cattle is becoming more or less popular. With sheep many farmers, unless they have unlimited pasturage, sow a special crop. For this purpose there is nothing that compares with the rape plant. In this latitude the sheepman will rear the lambs on rape, and the ewes and lambs will summer on it, and in the Fall almost fatten on it; seemingly rape will do almost everything for the sheep but winter it. As a quick grower it is simply unsurpassed by anything. I have actually seen rape standing 18 measured inches six weeks from date of sowing. This is exceptional, but it shows what the rape can do. We sow more or less rape for sheep every year. Fig. 232 is a very good illustration of a few of our Shropshires feeding down a portion of a field of rape. It can be noted how closely the stems are trimmed, and how anxious the ewes and lambs are to get more. Rape should not be allowed to get too large before the sheep have access to it. I have noticed that the sheep will invariably take the younger and more tender plants in preference to the older and larger ones. The flock will take to the patches that are small and gradually work into the larger. At first the rape plant must be fed with some moderation or the effect will be the same as with clover. Rape may be made the main portion of the sheep pasture, but it is best to allow the flock to have access to other pasture on account of the extreme succulence of the rape.

We have been soiling a few sheep on fair pasture with sown oats and peas given once or twice a day this Summer. I am satisfied from results that sheep could be successfully soiled. We find that peas and oats are consumed almost greedily. There is only one trouble, and this is that on account of the extreme succulence green oats and peas are very loosening, and if fed too freely trouble will follow. We fed a little too liberally at first this season, and got some of the lambs to scouring rather badly; but from the fact that one yearling ram, which has been fed the mixture all the season, has had no trouble from excessive looseness, I conclude that with a little caution in the beginning one would have no trouble at all in feeding a mixed crop like this to sheep. Rape is apt to have the same effect until the flock has become used to it, then there is no difficulty. As is shown in Fig. 232, our ewes keep in good condition on good pasture without any grain whatever; but we do like to supply the lambs with about all they will consume. We find it quite necessary to push the young stock for about all they are worth, and find grain is a very great help. At present we are feeding a mixture of oats and cornmeal, two parts oats to one of corn. A mixture of bran we have also found to be excellent. The handiest and neatest way of graining lambs while yet running with the ewes is to provide a "creep" into which the lambs can go through a suitable opening, but yet too small for the ewes to pass through. Barring a flesh and bone-forming feed for the lambs, I have found no mutton breeds that required grain during the Summer months save possibly in suckling lambs, and few even then.

Shiawassee Co., Mich. C. P. REYNOLDS.



ROSE AND WHITE PERENNIAL PEAS, LATHYRUS LATIFOLIUS. Fig. 233. See Page 534.

GRASS SEEDED WITHOUT GRAIN.

The "Clark" System of Grass Culture.

Here is a note from a new subscriber: "What do you mean by the 'Clark' system of seeding to grass? Who is 'Clark'? Where does he live? Does he know what he is talking about? What is his so-called 'system' as compared with the usual plan of sowing grass seed with small grain?"

For the past five years we have been writing about George M. Clark, of Higganum, Conn., and his field of grass. It seems necessary to tell the story anew each year. Instead of reprinting the old articles we try to get in the growth of the matter. It is quite evident that in a country as wide as America is any plan of farming must be modified and changed as it goes away from home.

But thousands of farmers raise good grass—why do you speak of "Clark's system"? Is he the inventor of it?

No, yet we do not know of anyone who has carried out his definite plan as carefully as he has.

Does he get more grass than anybody else?

So far as we have been informed he does.

What did he cut this year?

He had seven acres in grass and cut from them 79,490 pounds of well-dried hay. This is an average of 11,355 pounds per acre. Last year the crop on the same seven acres was 70,750 pounds.

Do you believe any such story?

Yes, I have been in this hayfield several times, and have reason to believe that each load of hay is accurately weighed as it comes from the field.

How many years had this grass been seeded?

Three and one-half acres were seeded last November. This year they averaged 10,118 pounds per acre. Another field of 1½ acre averaged 11,890 pounds, while another of seven-eighths of an acre 12 years old gave 12,210 pounds, and another of five-eighths of an acre gave 9,700 pounds, or at the rate of nearly eight tons per acre! There will also be another later crop.

What sort of grass was it?

Timothy and Red-top. Some of it contained a small amount of clover.

What is Mr. Clark's secret?

He has none. He simply knows what grass needs, and has been able to supply the needed conditions.

What are these conditions?

First, natural grass land, well drained, smooth, and with a perfect grade. Grass likes a stone two feet under ground, but not on the surface. There must be no dishes or knobs on the surface, which should be as level as the cement floor of a stable, so that it will gently drain water. Second, the upper four inches of the soil must be as fine as an ash heap that has not been packed by rain. The weeds and foul grass must be killed out. Third, there must be an abundance of soluble plant food. Mr. Clark uses chemical fertilizers, and says they are much better than manure. Fourth, Mr. Clark seeds his grass without any grain crop, and uses about twice as much seed as is usually sown.

That sounds easy—can anybody do it?

I have not been able to do it myself yet.

What caused your own failure?

My field was too rough. We did not get all the stones out, and the heavy floods of this wet season did too much washing. I think also that we did not use enough fertilizer.

Why do you advocate for others what you admit you have not done yourself?

I do not advocate anything beyond the careful preparation, heavy fertilizing and fair seeding. No man can expect to take rough land, full of stones and not well drained, scratch it over and say that he knows Clark's method is a failure. I advocate as close an imitation of Clark's plan of fitting the ground as a farmer can give. I know that many farmers with only one team and a dozen jobs pressing at one time cannot do it all. I am sure, however, that every extra working of the soil before seeding will pay.

How does Mr. Clark fit the soil? Tell the whole story.

It cannot all be told at once—being too long. I will describe the method next week. If you have a piece of clear land that you wish to seed down in this way begin at once to prepare it. Mr. Clark does not plow land, but uses various forms of the Cutaway harrow. Instead of turning the furrow over these tools lift and toss the soil, shaking it up to the sun and wind. The object is thoroughly to air the soil, and thus sweeten it and kill out all weeds and foul stuff. It must be said, however, that excellent work may be done with such a tool as the spring-tooth harrow. H. W. C.

PAN-AMERICAN.—In the Horticulture Building the cherry display is getting to be interesting. Idaho is receiving shipments of this fruit every few days, and Oregon has begun showing her immense cherries, for they are really so large that I have heard people ask if they were crab apples. The most conspicuous variety has been the Bing, which is black, but Napoleon, which is a sort of rosy red mixed with yellow, is more brilliant and attractive. Such cherries can scarcely be grown in any of the Eastern States. We have a promise from some of the New York growers that they will equal the western cherry exhibits, and we are waiting to see them do it. H. E. VAN DEMAN.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Budding Peach Trees.

J. C., Vineland, N. J.—I have bought a farm with about 10,000 peach seedlings on it. These were planted last Spring, and are now about three feet in height. When should they be budded? What does a professional generally charge for such work when the farmer furnishes all material?

ANS.—The peach seedlings mentioned should be budded about the middle of August or possibly a little sooner. If the service of a good budder is secured he should receive about $2.50 per day and board. It is hard stooping work, and requires much skill as well.

H. E. VAN DEMAN.

Tree Protectors; Stayman Apple.

W. W. W., Tyrone, Pa.—1. Would it be feasible in a young apple orchard to build a wire protection around each tree, and pasture with sheep? I could make it so that it would not hinder spraying, examining at the collar, or hoeing around each tree. When the trees should become large the wire would not be needed. 2. Is Stayman the best of the Winesap seedlings? Do you think it would be as profitable as York Imperial here? Would Sutton and Grimes keep here till April in a good fruit cellar if picked at the right time? Do you know of any market variety as good as, or better than any one of these four?

ANS.—1. Wire netting is sometimes used with good effect as a protection about apple trees where sheep or pigs are allowed to run in the orchard. It does not hurt them in any way, and it is only a matter of whether or not the cost of protection is greater than the benefit to the stock, that is, in case the trees would not do better under a state of tillage than used as pasture. 2. The Stayman apple seems to be the best of all the Winesap seedlings. I think it would be about as profitable as York Imperial in the region of Tyrone, Pa. I think it doubtful whether Sutton and Grimes would keep in that section until April in an ordinary fruit cellar, but they might do so. I think these four varieties just mentioned would be about the best that could be planted there for Winter use, either at home or for market.

H. E. V. D.

Questions About Apples.

J. T., Petersburg, Va.—I have a lot of land that is very light and sandy and is too thirsty for vegetables. I wish to set in late Winter apples. What kind would you advise setting? How far apart, and how prepare the soil? Is a water sprout as good to graft with as other parts of trees? Should trees be bought near location? Is the Le Conte pear the freest from blight that I can get? I have one planted on same soil as described, and it has made four feet of growth this year.

ANS.—In the vicinity of Petersburg, Va., I would advise the setting of such Winter apples as Winesap, Stayman, York Imperial, Ben Davis and Rome Beauty. These will all do well in that section. Apple trees should not be planted nearer than 30 feet in that soil and climate, and I think that 40 feet would be better, but in the latter case I would plant them 20 feet apart north and south, with the expectation of cutting out half the trees when they become large enough to crowd each other. The soil should be thoroughly plowed, just as if one were going to plant some farm crop, and where the rows are going to be I should make the dead furrows, plowing just as deep as possible in the bottom of each, and after the trees were planted I would use one horse to fill up these dead furrows with the plow, making at least two or three rounds. Water sprouts are not very good to use as scions, although I have grown a few scions for the purpose of testing the matter. The best scions are those which have large and well-developed buds, and that are one foot or more in length. It is always desirable to procure trees for planting as near home as possible if good ones are to be obtained, but if not, there is no good reason why they may not be transported some hundreds of miles and planted without any serious consequences. But, wherever a good nursery is at hand, I would advise going there with a wagon after the trees, or sending an order in writing to the nurseryman and have them shipped. The Le Conte pear is by no means free from blight. It was at one time thought to be so, but experience has proven this to be a great mistake. The Kieffer pear rarely has the blight, and is a much more profitable variety to grow.

H. E. V. D.

Pecans and Chestnuts in Ohio.

G. W. G., Columbus, O.—1. I noticed in THE R. N.-Y. that the pecan can be grafted on to the hickory, and wish to know whether the pecan will ripen in the northern part of Ohio. 2. Several years since, seeing some nice young chestnuts on my Athens County farm, I sent 1,000 to my Hardin County farm; many of them lived for a year, and all died within three years. The change from a carboniferous formation to the soils or clays of the limestone decomposition was too much for them. Will the Spanish, Italian or Japan chestnut thrive in the soils of the limestone formation, and mature in the central and northern part of Ohio?

ANS.—1. Some varieties of the pecan will ripen in the northern part of Ohio, but there are very few varieties that will do so. It is not at all likely that any great success will follow any experiment in this line, especially in grafting on the native hickories in the section mentioned. 2. In regard to growing chestnuts on limestone land, I would say that it rarely succeeds with either the native American species, or with those from Japan or Europe. There is something quite uncongenial in such soil to all of the chestnut family.

H. E. V. D.

Seedling Fruit Trees.

J. S. H., Worcester, Mass.—Is it really necessary that peach, plum and cherry stones should be planted in the Fall, that they may freeze in the Winter to make them grow? How many years from planting will it be before they bear? Will pear trees grow well if grafted on to apple, or can't it be done? The Sheldon is the variety referred to.

ANS.—It is a very common opinion that peach, plum and cherry seeds require freezing before they will sprout and grow, but this is a great mistake. It is, however, quite necessary that they should be kept moist, at least from Fall until Spring, and I like to keep them moist from the time they are gathered in the Fall until the next Spring. My plan has been to lay them on the ground spread out, not in a pile, lest they ferment and heat, and upon the approach of cold weather mark out rows and plant them where they are to grow in the nursery. When we think of the fact that peaches are grown in Florida and some other places where the ground rarely, if ever freezes, we can readily see that freezing is not an essential. Peach trees usually bear about the third year from seed, and plums and cherries two or three years later. The pear does not succeed well when grafted upon the apple, because the union is quite imperfect. Grafts will usually grow when properly set, but the wood of the one does not seem to be congenial with that of the other, and an ugly knot is usually formed, and before many years' bearing the graft will be blown off by the wind.

H. E. V. D.

Dodder on Raspberry Plants.

F. H. F., Andover, Mass.—I send a parasite which attacks and runs on my raspberries. It troubled me to some extent last year, and has just broken out again. I suppose the remedy is destruction of both parasite and host.

ANS.—The parasite attached to the raspberry stalk proved to be the plant known as dodder. This plant originally starts into growth from the ground, but as it runs up and finds some other plant to which it can attach itself, it then gets its sustenance from the other plant, and its ground roots usually die. The dodder then reaches out from plant to plant and attaches itself to the plants, living upon them. If the infested raspberry stalks can be isolated from the remainder of the patch not yet infested by a few feet of open space, so that the dodder cannot reach across, it will soon run itself out. I know of no method of killing the dodder already attached to the plant without injuring the plant, unless the parasite can be pulled off from the plants.

M. V. SLINGERLAND.

Killing the Cucumber Bug.

J. S. B., Syosset, N. Y.—I have a field of pickles which I spray regularly, but that does not seem to check a small striped bug, called here June bug. I have thought of using whale-oil soap on them but do not know how. What should I use and how, in order to exterminate this little pest?

ANS.—The small striped bug is the well-known striped Cucumber beetle, which this year is proving a very destructive pest, not only in its adult or beetle form, but its grubs are also doing much damage by boring into the stems of the same plants. The latest recommendation for fighting the pest is to plant some early squash along one side of the field before the melons or cucumbers are planted. The beetles will take the squash vines in preference to the others, and then by keeping the melons or cucumber vines well sprayed with Bordeaux Mixture and applying Paris-green to the squash plants one can keep the beetles off the cucumber vines. Some report good results by using liberal quantities of tobacco dust on the infested plants, while others claim to drive away the beetles by the use of air-slaked lime in which a little turpentine or kerosene has been mixed. Of course, early in the season one can cover the plants with frames having a cloth top and then keep out the beetles until the plants begin to run. It is also well to put in a liberal amount of seed, so that there will be plants enough for the bugs and to give a good setting of vines. The large beetle sent with the striped beetles is the only kind of "lady bug" which is not beneficial. Instead of feeding upon plant-lice and other small insects as do the rest of its family, it feeds upon plants and sometimes does considerable damage. It is called the Boreal lady bug (Epilachna borealis). It succumbs to the same treatment as the striped beetle.

M. V. SLINGERLAND.

The Use of Lime.

D. O. S., Myerstown, W. Va.—In liming would you recommend a large quantity of lime to acre, or not so much and oftener, applied on land that is worked down? Can lime and fertilizers be mixed together and sown with wheat? If so, how much to the acre?

ANS.—Most farmers that we have talked with prefer to use lime every four or five years—20 to 25 bushels per acre. As a rule, they put the lime on the wheat and grass. This practice conforms to the advice of the scientific men. The best plan seems to be to broadcast the lime after plowing and harrow it well into the ground. We would not mix the lime with the fertilizer. Grain fertilizers usually contain dissolved phosphate rock or other soluble phosphoric acid. The lime will cause this to revert and thus become less available as plant food.

Winter Oats in the North.

F. E. G., Tyngsboro, Mass.—Are Winter oats adapted to this climate, and where can the seed be purchased?

ANS.—No, the Winter oats cannot be recommended for grain north of Philadelphia. They make a heavy growth in the Fall, thus providing good pasture, but with us they die out in March. They make a good cover crop for Fall and Winter, as they die out before time for plowing.

Blood Clots in Eggs.

A. L. D., Southampton, L. I.—We occasionally find the yolk of a fresh-laid egg bloodshot. Can THE R. N.-Y. tell me the cause and a remedy?

ANS.—The blood clots in the egg are usually the result of ruptured blood vessels in or near the oviduct of the hen. The trouble is worst in fat and lazy hens. The best remedies are change of feed, less food or exercise. Anything that will make the hen work off her fat or put her in better condition will help.

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THE RURAL NEW-YORKER, New York.

Rye and Clover for Green Manure.

W. L. M., Searsburg, N. Y.—I have a seven-acre field that is badly covered with Canada thistles. How shall I treat it to eradicate the thistles and at the same time add humus, and if possible realize something of a crop next year? I think of plowing now and sowing soon to rye. Can I sow Crimson clover in rye and plow all under next May or early June, and plant to potatoes? There is a heavy growth of thistles to turn under. Soil, clay loam. Would it be best to plow early next Spring, turning under wheat, rye and clover, sow peas, and treat as described by K. S. Wing?

ANS.—If we had that field in our own farm in New Jersey we would plow it as soon as possible and try to work it over at least twice with a Cutaway or spring-tooth harrow. During the first week in August we would sow one bushel of rye and a peck of Crimson clover per acre. This would make a good growth. In September, if the field were well fenced, we would turn in pigs and let them eat down the crop—taking them out early enough to give a fair growth before the ground freezes. In the Spring we would plow the rye and clover under when the rye is a little over knee high, if it were possible to do so. When rye gets much larger than this we find that it decays slowly, and does not add much fertility to the crop that follows it. The plan of sowing peas to grow between rye and potatoes seems reasonable, but we have never tried it.

When Grain Heats in the Bin.

C. N. R., Canton, Pa.—On page 504 of THE R. N.-Y. I notice advice in speaking of thrashing wheat, to store in tight bins, and if it heats to use bisulphide of carbon at once. I cannot understand how this would save wheat from heating. I once lost a lot of wheat and rye from early thrashing because of heating. I now have about 300 bushels of rye in shock, which I would like to thrash early but am afraid to because of heating. I had thought of handling from bin after three or four days of storing. Can you make me any suggestions?

ANS.—We referred to the heating caused by the Angoumois moth or the grain weevil. One indication of the presence of these insects is the heating of the grain. When the hand thrust down into the grain feels hot, or quite warm, it is a good indication that the insects are at work. Then the bisulphide of carbon should be put on top of the grain. Pour it into a deep dish and cover the top of the bin. If the grain is not dry enough when thrashed it may be stored in bags. This is done in New Jersey, where the Angoumois moth is found. The bags should be well filled and tied up tight, so that when the moths emerge from the grain they cannot get out, and die before starting another brood. The bagged grain can be put in a dry airy place, so that it will not heat.

HOW MUCH FOR THE MANAGER?

Two men in West Virginia intend to set 50 acres in apples and peaches. One man wants the other to take entire charge of the planting, cultivating, pruning, etc. What would be a fair money allowance for the man who does this work for say five years, while the trees are coming into bearing?

I think a fair remuneration $600 per year for the first five years, with one-half of the net profits. After the third year, if well cared for, the peaches should yield quite a handsome income.

Owensboro, Ky. J. H. H.

From a New England Standpoint.

Conditions in Virginia and New England are so much different that estimating the value of such services in one place would be very much out of place in the other. I have a letter from a large fruit grower in North Carolina stating that he can hire the *best* of help for 80 cents per day. That class of help in this part of New England would cost $1.75 per day of 10 hours. If conditions are the same in Virginia, it would readily be seen that to supervise an orchard of 50 acres would cost only about one-half what it would cost in New England. A person of sufficient qualifications properly to oversee an orchard of 50 acres for the first five years after setting, could command a salary of from $700 to $900 per year in New England. Fruit growers everywhere, I think, will agree that the first five years of an orchard's life are the most critical in its history. To prepare land, fertilize, set trees, cultivate, prune, spray and leave the orchard in what a thorough orchardist would call first-class condition at the end of five years, requires a man of far more than ordinary ability. As it would take only three months per year of the overseer's time for the first three years, I should estimate $175 per year for the first three years a fair compensation. As the peach trees would come into bearing, the fourth and fifth year would require more time, and as good judgment as would the growing of the trees. I think that $350 per year for the last two years would be a fair compensation, the company to pay traveling and incidental expenses. If an equal owner in the company should assume these duties he would receive only one-half of this amount, as the other one-half would be his own. S. R. WALKER.

Massachusetts.

What a Virginian Says.

I will make a few suggestions to those contemplating planting orchards. Consider suitability of soil and adaptability of variety planted. In this there have been many failures. Observe care in preparation of the land, which should be plowed very deep, when the land is soft if possible (not wet); say in November and December. The Winter frost will almost prepare it for the Spring planting. As soon as the Spring opens put the land in thorough order, and if the variety is of large growth plant 40 feet apart; no variety closer than 32 feet apart. Peach trees can be alternated one way between the apple trees, and they will not materially affect the apples before they will die out. To do this the land should be good; otherwise it would affect the growth of the apple trees.

Now if the manager or overseer named will take hold of the work and apply himself closely and labor as well as direct the work, the time needed for the first three years (until the peach crop comes in) will be comparatively little, beginning March 1 and closing by August 1. After that time there should be very little to do in the way of cultivation, say five months, and here with us I would have no difficulty in getting an experienced man at $1.25 to $1.50 per day, without board, or in other words say $40 per month. As this is to be a partnership matter of course the manager or overseer, who is a partner, should be paid by his partner $20 per month for his services. A. WAYLAND.

Virginia.

EVERYBODY'S GARDEN.

THE BLACK SQUASH BUG.—The ravages of this pest are so widespread that various remedies gathered from widely different sources may not be amiss, as if one preventive is not at hand, another may be, or be easily accessible. In general, the best preventive is thorough culture and high fertilizing, in order if possible to make the growth of vines so rapid and vigorous that the bugs will be practically harmless. Spraying with any of the insecticides will be of no avail, as these bugs are not leaf-eaters, but sap-suckers. However, gas tar, about five gallons to the barrel of water, sprinkled or sprayed on, is a remedy long in use and said to be effective. Hunting out and destroying is a sure way, but somewhat tedious in large areas. If this plan is followed, the better way is to place shingles or boards near the hills late in the afternoon. The bugs will gather under these at night and may be easily gathered and destroyed in the early morning while they are yet sluggish. They are sly workers, and nearly always work on the under side of the vine near the main stem, so that often much damage is done before their presence is discovered. Kerosene oil and wood ashes, a tablespoonful of the former to two quarts of the latter, sprinkled around the hills, will generally keep them off, and sprinkled over the vines when damp is also a good remedy for the striped beetle.

SQUASH VINE BORER.—This is a very troublesome pest in many localities, but usually comes later than the black bug. The fly usually comes late in July, and the borer begins its work early in August. Sometimes they appear earlier, but early or late, as soon as they are discovered even in a single vine, it is high time to apply the remedies. Tobacco dust liberally applied around the hill is a remedy against the borer, and a good fertilizer as well. On vines where they have already started their work, two or three leaf joints of each vine should be covered with moist earth. If well done the vines will take new roots at the covered joints, and the plants may be saved even if the main root dies. Doubtless the most effective remedy is bisulphide of carbon. Make a hole an inch deep in the soil of the hill, and about three inches from the main stem, drop a few drops of the liquid in the hole and cover it immediately. The fumes will work upward through the vines, and not only destroy the moth and eggs, but the odors will effectually keep the fly away. Great care must be taken in handling it or carrying it not to inhale the fumes, as it is very poisonous, and it must by no means ever be brought in contact with fire, as it is highly explosive.

CELERY RUST.—Extended experiments at some of the experiment stations have demonstrated that thoroughly spraying with the Bordeaux Mixture at intervals of say, two weeks, during the season, will effectually prevent the rust. When there is danger of the trouble, it should certainly be thoroughly tried, for the rust is a troublesome factor in successful celery growing.

THE ASPARAGUS BED.—The bed should receive extra care from now on, and all seed stalks should be cut out. The ripening of the seed severely taxes the vitality of the roots, which is entirely needless. The plants growing up from the scattered seed become a nuisance; fully as much so as weeds, and the less seed ripening that is allowed the better. An application of salt will be beneficial, and while a difference of opinion exists regarding its usefulness, there is no doubt but that it will retard the weed growth, which of itself is an object.

Michigan. J. E. MORSE.

ENGLAND is having the most severe drought that has been known in 11 years. The water supply of Manchester is becoming so scanty that it is shut off from eight at night to five in the morning, and street sprinkling has been given up.

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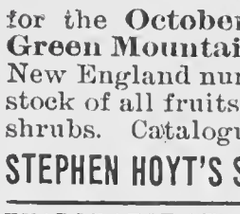

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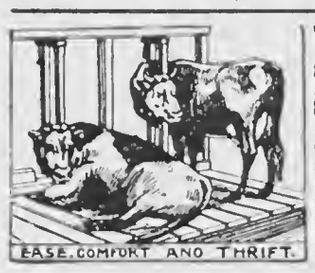

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Ruralisms

NOTES FROM THE RURAL GROUNDS.

PERENNIAL FLOWERING PEAS.—One does not often see perennial or "everlasting" peas about country homes, though there are few reliably hardy plants better deserving general culture. It takes a year or two to grow blooming plants, but once established they gain in vigor and beauty for an indefinite period. Their long tough roots resemble thongs of buckskin more than most plant roots, and greatly resent removal, though seedlings may be easily transplanted when they have made their first six inches of growth. The seeds are hard, and germinate very slowly unless well soaked before planting. It is best to put the seeds in water in a warm place, and examine them two or three times a week, picking out and planting all seeds as they swell up. As it may take a month to soften all the seeds it is scarcely necessary to say that the water should be frequently changed. The seeds of many leguminous plants have this peculiarity of resisting the absorption of moisture for a considerable time. If a number of seeds of any of the common clovers are soaked in water it will be noticed that some will swell in a few hours, while others of the same lot will require as many days before a change is noticed. The softened pea seeds may be planted in a box or pot for future transplanting, or at once where they are to bloom, but in the latter case they require careful weeding and cultivation, as the young plants are very weak and slender for a considerable time. They make splendid trellis plants, and are very useful for covering rough places, scrambling over bushes and rocks in strong competition with native growths. They are too rampant for planting in the border, and should be confined to situations in the background, where they will reward the planter year after year with their fresh and pretty flowers, as useful for cutting as decorative on the plant. We have been thus particular to note the difficulties of germinating the seeds, as ordinary planting of the hard seeds in the manner of the sweet-scented or annual flowering peas is usually attended with failure and disappointment. It takes them so long to come up that they are forgotten, and the tender seedlings are overgrown and perish from drought or neglect.

The best varieties come from the species Lathyrus latifolius, a native of the forests of Europe. The common type produces large rose-colored flowers in clusters of four to seven. The variety L. latifolius albus is similar, but milk white in color. An improved form, L. latifolius splendens, is sometimes planted, but does not come very true from seeds. The colors are dark purple and bright rose red. Fig. 233 shows the rose and white blooms in natural size. Besides L. latifolius there is L. grandiflorus from southern Europe, which makes a thicker but less rugged vine, and produces large purple blooms in clusters of two or three, and L. rotundifolius from Russia and the Orient, with rose-colored flowers in larger clusters. It prefers a rather cool and shady place, and is likely to die out in three or four years. L. splendens, the "Pride of California," is claimed to be the best of all. It is found on the dry hills of the coast mountain ranges of California. Although often advertised by seedsmen the seeds of the Splendens variety of L. latifolius are generally sent out instead. The true Splendens is rather shrubby, and bears large clusters or peduncles of bloom, often containing as many as 12 large rose or violet flowers. It is not hardy in the greater portion of the eastern United States, but can be grown under glass, where it remains very dwarf, seldom getting more than a foot or two high. We have also grown L. Magellanicus, sometimes known as Lord Anson's Blue pea. It flowered sparingly the first season, and perished during the Winter. The flowers were small and clear, dark blue. There is also a white variety. The foliage was retained until a hard freeze killed the plants. We would like to see a more extended use of the best perennial peas, as they will repay through a long series of years the slight difficulties attending their early development.

THE RUBY QUEEN ABROAD.—A correspondent in The Garden, the foremost British horticultural journal, says of our Ruby Queen rose: "The delightful blending of color is so pretty, the ruby-red predominating over the white eye and the edges of petals, and the contrast reminds one much of the Zonale Pelargonium, Mme. Jules Chretien. It is a distinct and charming hybrid of Rosa Wichuraiana."

BLACK SOLUBLE INSECTICIDE SOAP.—This promising new insecticide is first offered this season by V. Casazza & Bro., 190 Prince Street, New York. We have made several trials of it on aphids and other soft-bodied insects, and find it very effective. It quickly rids the plants, and adheres well, leaving a white deposit on the foliage, which persists after heavy rains. We are not informed as to its ingredients, but infer that it is not poisonous to higher animals in the quantities used. In the solution recommended, one part of soap to 20 of water, it injures tender vegetation to some extent, but in a strength of one to 30 it seems harmless, and is equally effectual against the insect pests. The soap solution is easy to prepare, and develops no unpleasant odor, which is more than can be said of some horticultural soaps.

W. V. F.

ASPARAGUS BUGS AND POTATO BUGS

ASPARAGUS.—For years we have had an asparagus bed in the house garden. that has been annually cut until our first peas were grown, and very little rust ever appeared on it. Last year there were many weeds in the bed, and, as I had set out a new and larger bed three years ago in our farm garden, I risked cutting the bed clean with a scythe the last of July, and digging it over thoroughly. The asparagus came up fresh and nice, and, until the frost killed it, was green and healthy. The farm garden patch was quite different. Bugs came on it in June, and long before frost it was brown and apparently dead. In fact, some plants did die, as I found this Spring. This season we cut the farm garden patch for the first time, leaving the weaker stalks to grow. The latter part of June I found the stalks left with bugs on and apparently rusting. In doubt as to whether I had bought the rust with the plants, as I had never seen it in the house garden, I mowed it over, burned the tops, and ran a cultivator over the ground. The bug and rust season seems to have passed on, and there is a splendid growth of healthy looking plants. It may be a little late now, but, if I had a patch of rusty asparagus, I should cut it clean, burn the tops, and cultivate now, as it seems to be a dead sure thing if the rusty tops are left on the roots.

PARIS-GREEN AND WATER.—I see that the Hope Farm man has a formula for sprinkling potato vines. One of my neighbors has a $10 outfit for sprinkling, and he read in a Government report that 5 1-3 ounces of Paris-green was the correct amount for a certain number of gallons of water. He measured the water, and weighed the Paris-green down to the third of an ounce. He has kept his potatoes and the bugs sprinkled up to date, and, like the Hope Farm man, he has the stalks left—the bugs have stripped the leaves. It is a rare occasion when I have a chance to brag, but I am credited with having the best looking two acres of potatoes in this section. We planted Maine-grown seed early, using $25 worth of commercial fertilizer on the hills after planting. They grew so fast that we only got a chance to cultivate and hoe twice, and they have been dusted with Paris-green once. My son and I did that ourselves using what, as it has no special name, I call a fanning mill. I bought 10 pounds of "farmer's" Paris-green in boxes for the two acres, but we have half a pound left. My neighbors felt sure that we had killed everything in the lot, but all we miss is the bugs. The weather was hot and dry for a week after we applied the poison, and, at the end of that time, I failed to find a single old shell-back, and only an occasional slug. I assume that the stuff I bought was nine-tenths some harmless mixture, but it was the same that my neighbor weighed so carefully and put into his watering cart; and I assume that, instead of 5 1-3 ounces, he actually got less than a third of an ounce of poison to his barrel of water, and consequently might as well have squirted it in front of his house to keep down the dust.

Stevenson, Conn. R. S. H.

R. N.-Y.—The Hope Farm man killed the bugs. Some of the vines were badly eaten before he could get at them.

Experience with Strawberries.

In the Fall of 1899 I planted about 1,500 feet of land to strawberries. Wishing to find the best berry for my environment, I planted Gandy, Wm. Belt, Glen Mary, Marshall, Henry (sic), Chas. Downing, Carrie, Star, Nic Ohmer, Parker Earle Jr., Margaret, Mary, Tennessee Prolific, Michigan and Ridgeway. Last year, in single plants, Wm. Belt, Glen Mary, Ridgeway and Gandy all did well. This year, in matted rows, there was only one berry—Gandy—the others were nowhere. I don't think a plot of 30x6 feet of Nic Ohmer produced two boxes of large fruit. Parker Earle Jr. was a small imperfect Wm. Belt. Ridgeway last year was fine, but this year no good. If I did not have a plant trade I should grow nothing but Gandy, but, unfortunately, the Gandy does not thrive in light soil. My land is heavy reclaimed swamp. Gandy grows not only large and handsome, but the most prolific of any plant I have tried. Carrie is so small and sour that I wonder at the good word it gets now and then from THE R. N.-Y. Star seems to be a very poor Sharpless. Margaret is a poor grower and shy yielder of indifferent fruit. It is fair to say that all these plants were grown in land (new) that never had any manure, and no fertilizer except 100 pounds nitrate of soda last year. I harvested 400 boxes good fruit, but I got most from Gandy per plant. Wm. Belt last year produced some immense berries, but in matted row they were almost too small and poor to pick. I believe this experimenting with many varieties is the only way to find out what fruit is best adapted to a person's land.

Massachusetts. G. L. C.

KILLING CHINCH BUGS.—Prof. J. M. Stedman, of the Mo. Exp. Station, says in a recent bulletin:

By plowing for a space of 10 feet around the cornfield, harrowing and dragging brush after the harrow, so as to make as much dust as possible, it will be found that when the young bugs begin to migrate from the wheat to the corn, they will not, as a rule, be able to cross this 10 feet of dust. When the insects develop wings, they may fly over the plowed space (this will happen about once in 10 times) and, if they alight upon the first few rows of corn, the second method may be used for destroying them. When the insects collect, as they frequently do, upon the first few rows of corn, the best way to kill them and prevent their spreading through the field is to spray immediately with kerosene emulsion. This will not injure the corn, and will kill the bugs readily. Kerosene emulsion is made as follows: Dissolve one-half pound of hard soap in one gallon of soft boiling water; add two gallons of kerosene or coal oil, and then by means of the force pump with the spray nozzle removed, churn this mixture for 10 minutes by pumping it back into itself. Then add to this emulsion 19 gallons of water, stir thoroughly, and use as a spray. This spray kills only by contact, and hence one must actually touch the bugs with the spray in order to kill them.

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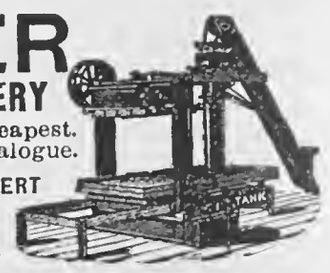

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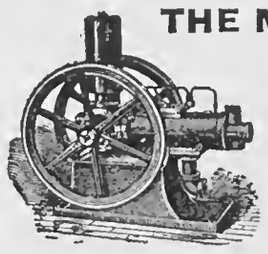

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Hope Farm Notes

PIGS AND POULTRY.—I have told how we arrange our garden. Last Winter and until the middle of April the hens ran in a large enclosure back of the barn. They were fed in different parts of this large yard, so as to scatter them about. When time for plowing came we put a netted wire fence around a large adjoining space. This included part of a rye field. The houses are built on the dividing line of these two large yards. We closed the doors leading into the first place and plowed it for a garden. The hens made it strong and fertile. The hens and large chickens are now running in the other place. The rye grew into grain, and as all Jerseymen know, with the first of July comes a great crop of ragweed, plantain, chickweed and others too numerous to mention and too few to kill each other off. We were a little crowded in the pighouse and so we turned five little shotes in with the hens.

EARNING THEIR LIVING.—These little children of ham are having a great time. They eat the apples that fall from the overhanging trees, "hog down" the rye—grain and stalk—clean out the chicken trough before it can sour, eat chickweed and grass until their stomachs ache and then they cure it by stuffing on ragweed.

Don't they kill the chickens?

No, they are not large enough yet. They seem to be on good terms with the poultry. I thought they would chase the old hens and hurry up their moulting a little. I rather think such exercise ought to start a hen's feathers. This scheme is working so well that we hope to make at once a number of portable pens that can be easily moved about. With a pair of little pigs in each we can thoroughly pig all land that cannot be plowed. My friend the pig doesn't want to be a loafer. He will work for his living if you will only let him. That's more than you can say of some humans who deride the pig.

THE CORN CROP.—For nearly three weeks we were unable to get into the corn properly. There was more or less rain every day, and every energy was needed to try to save the hay. At last there came a hot windy day—actually without a drop of rain. Then the horses began their march up and down the corn rows, with the heavy blade at the back of the cultivator and the side shovels on, so as to throw some soil up to the hill. Some of our farmers took plows during the wet season and threw double furrows up to the rows. I don't believe in that, but in a wet season like the present I am quite sure that it pays to hill up a little. The side wings on the cultivator do this about right. Since we are putting on fertilizer late I think this slight hilling is more necessary, for I want that fertilizer well covered with soil. Some of our corn was so badly in need of tillage that it was turning yellow. Some of the hills on our richest ground were as pale as straw, yet within 48 hours after a deep cultivation they turned green again. I have had people tell me that this shows that the cultivator brings fertility to the soil. I feel sure that tillage does make the soil more productive, but in the case of my corn the trouble was that the wet soil had packed so close around the roots that no air could get to them. Air is necessary to the roots of plants. When we ripped up that hard soil with the cultivators we let the air in. In New York last week a man was locked into a big safe by mistake. They remembered and opened the door just in time to save him. The cultivation of that packed soil meant, to my corn, about what the open safe door meant to that man.

STRAWBERRIES.—This fruit is picked in June, but it is saved in July and August. I have a fine plot of Gibson and Marshall, as well as other newer varieties. What a job it is to keep this fruit as clean as it should be. It is horse and cultivator, hoe and fingers again and again through these hot, boiling days. The beds must be kept clean now, or the grass and weeds will surely take possession. On our soil we can get the weeds all out and do a little honest bragging about it. In four days you take some friend out to show him how it ought to be done, and you find half your weeds come to life, and new ones starting everywhere. Our weeds are such hogs that we have to bring true hogs in as a therapeutic agent. It is said that in nature every living thing generates its own poison. When a weed becomes a hog the hog cure is the only thing for it. Pull it up, put it in basket or wagon and carry it to the hoghouse. As it turns into pork its evil days are numbered. It is a puttering job to try to putty up the escape holes of a weed in this way, but I shall keep at it. The Marshalls are immense. If each plant sets two good runners I shall be well satisfied. The other runners will do to transplant.

FARM NOTES.—We drilled in yellow turnips on July 20. They followed rye, which was cut a week before. The ground was plowed as soon as the rye could be taken off, and well harrowed down. We put the seed in with a hand drill. I have never obtained good results from broadcasting yellow turnips. It is quite late for sowing this crop—but everything is late this year. . . . I have bought some seed of Cowhorn turnips and shall sow them in the corn—mixed with Crimson clover. I think this is a fair experiment to make, though no one should expect extravagant results from turnips. . . . The "Clark" grass has finally been cut, and we were all surprised at the outcome. We have no platform scales, so I cannot give the exact yield, but it was the heaviest grass we have yet cut on the field. One strip of nearly half an acre cut, I am sure, nearly 1½ ton. The whole field was a great surprise. The grass was so short that it did not seem possible to get the weight. It was so thick, though, that the bulk and weight appeared. After Charlie cut it the field lay so thick with grass that he went right out and borrowed a tedder. No one could cure such grass as that without a big shaking up. That experience gave us an idea of the value of a tedder that we never had before. . . . It was a shame to see that beautiful grass lying knee deep on the field and a black cloud mustering its army in the northwest. We were three days getting that hay under cover. The morning would dawn clear with good sun. All hands would shake the hay out and watch it like hawks. Three times the wagon got to the field, to be driven back to the barn by a furious and sudden burst of rain and hail, which soaked the hay, flattened the corn and knocked the precious apples from the trees. Then the sun would dart out again and the hay would stew away through the afternoon and night. The boys stayed by it as best they could and finally got it to the barn. The color has been bleached out of it, but the stock will eat it. The oat hay was so badly stewed that we will feed it out at once. I usually keep it for March feeding. . . . The sowed corn has come up well. In 14 days after sowing the first lot the plants were five inches high. Under ordinary circumstances I call it bad farming to sow corn broadcast. It should be drilled and cultivated by rights. This is not an ordinary season by any means, and we are forced to resort to makeshifts. As it looks now I think that sowed corn will give us as much and as good fodder as millet, sorghum or drilled corn.

HAVE A CIGAR?—The Hope Farm man has spent some time of late pondering over what may seem to many a strange problem. A man who is hard of hearing has usually a soft job at finding themes for reflection! Strange things sometimes creep into the mind of a deaf man, and the discussion is narrowed down to the personal point of view. I have been, for some time past, turning this question over in mind:

"Shall I begin to smoke tobacco?"

Some of my good friends will start up in great indignation and say there isn't any possible chance for a debate on such a question. I have seen so many sides of human life, and so many unfortunate results of a refusal to reason out the truth of such matters, that I believe in giving all sides a hearing. But what can be said in favor of the filthy habit of smoking? It does not seem to be regarded as filthy by those who practice it. Why, some men are even led to *chew* tobacco without understanding how perfectly disgusting that is to others!

A skilled doctor goes so far as to tell me that the use of tobacco would help my nose, throat and ears. He gives what seem to me sound reasons for this, and points out a minister of the Gospel who was helped in this way by moderate smoking. I know, however, that anything like excessive use of tobacco interferes with the action of the heart, and thus stimulates a craving for liquor. There can be no doubt that the cigar or pipe is a good social friend. Sometimes as I sit alone, after a long days' work, busy with problems that will not go to sleep with the sun, I must confess that I envy the man with the cigar, for his care seems to puff away with the tobacco smoke. It seems as though tobacco in moderate quantities is the special friend of the deaf man. Yet, here I have, all my life, protested against its use. I have seen its ill effects. I know that its tendency is to make a man selfish, lazy and slow. I would not have my children touch it The breath and the clothes of the tobacco man are offensive—there can be no getting around these things. I know them well. Would it not be a clear case of moral backdown if now, at middle age, I turn tail and use the stuff which I have always denounced, and with sound arguments? As an end to my mental debate there usually arises before my mind a picture of the Madame as I first saw her—a girl of 19 years! I made a promise concerning tobacco then that has not yet been broken. Gray hairs and wrinkles have accumulated since then, and so has her objection to tobacco.

Will I have a cigar?

No, thank you, gentlemen—your tobacco is good to spray on trees or to put in a hen's nest, and you may think you get some comfort out of it—but I don't care for any! H. W. C.

DELAWARE NOTES.—The Crimson clover thrashing is about over; the hot dry weather has been splendid for bright, clean seed. Crop not much above average, as many farmers now seed it with wheat in September and cut both for hay. The former practice was to seed it with rye, but the rye matured too early for the clover, while wheat is just right. The talk of the hay bailing in horses is all bosh, as far as my experience goes; and I have fed good horses on it once and twice a day for months. It should not be used exclusively. One or two feeds a day should be something different. Wheat is a good crop, and roller-process mills are multiplying. Spring oats are injured by the drought; so are potatoes. Corn is clean and in good shape for growing, now that the rains have come. We are having our first rain for three weeks—gardens and truck patches looked pitiful after the extremely hot weather of last week. Cow peas just up on sandy land were killed by the heat. One farmer will lose 18 bushels of sowing. J. C. E.

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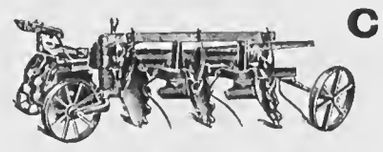

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409 Pearl Street, New York.

SATURDAY, AUGUST 3, 1901.

EVERY day of the hot, dry weather lessens the chances for the corn and the apple crops. Winter fruit will undoubtedly be short. If there are any localities where, for some local reasons, apples are in sight, growers will do well to let the fact be known, for there will be a rush of buyers and sharp competition for the fruit.

*

IN Mexico, corn forms a large part of the food of the people. Speculators have got hold of the supply, and are forcing the price up to such an extent that it is said that the government may take off the import duty on corn from the United States. This would upset the calculations of the speculators in short order, and in our opinion, is one good way to treat all those who attempt to monopolize the production or sale of necessities.

*

SOME of the most valuable space in the agricultural exhibits at the Pan-American Exposition is occupied by displays of whisky, rum and other alcoholic products made from cereals. Why should such exhibits be put in the Agriculture Building? The present abuse of intoxicating liquors has done more than any other one thing to injure the farmer, by displacing legitimate farm products. It would be about as consistent to exhibit a mad dog in the live stock show because the dog is a product of meat! We believe this is the first time such a disgraceful classification was ever made!

*

THE artist who drew the picture printed on page 530 probably never saw a cow in his life. It was perhaps his misfortune to be born and raised in a town. That is about the worst start in life that an American citizen can have. He was "off" as regards the shape of the cow, but he sized up her feelings properly. The cow and her milker off in the country are the best friends of the city baby. The milk as it leaves the farm is pure and sweet—life-giving and nourishing. Some of it is fit to serve as an embalming fluid before it reaches the baby's bottle. It is drugged and poisoned by the dealer, and not by the farmer.

*

THE famous Prof. Koch, of Berlin, the discoverer of the bacillus or germ of tuberculosis, announced last week at the London Tuberculosis Congress, that, in his opinion, based on long-continued and indisputable experiments, bovine tuberculosis or cow consumption is not transmissible to human beings, and the dreaded human ailment also is harmless to animals. Prof. Koch, in view of his great attainments and exhaustive studies of all aspects of consumption, may be considered a supreme authority, yet his conclusions will doubtless be attacked by many of less experience. There is no denying that the evidence of the transmissibility of bovine tuberculosis to humans is of the most flimsy character, and has never warranted the extremely harsh measures of inspection and destruction of valuable animals advocated by some medical authorities, and it is probable that sufficient reaction has now set in to call a halt in the matter. We want all reasonable precautions to keep our dairy and beef animals free from disease, but we should be sure we are on the right track before going ahead at such destructive speed. Prof. Koch claims that human tuberculosis is disseminated almost wholly by the sputum and excretions of consumptives, and that the dread disease is practically curable in its earlier stages. The early recognition of the affection and the isolation of tuberculous persons in sanatoriums equipped by public and private means is the most promising method to reduce and finally stamp out the disease. Something of the same character must be done with tuberculous cattle where the value is great enough.

*

Now is the time for the careful farmer to estimate his Winter's supply of fodder. There will be many hungry mouths at the barn next Winter, and there are many long days before next April. The hay crop has not been exceptionally large in spite of the wet season. In many sections the corn is backward, and in many more the feeding value of the cornstalk is largely thrown away. It is not yet too late to sow fodder corn or to plant sweet corn for fodder. We shall continue to plant corn up to the middle of August on the higher points of the farm. The use of the shredder and other machines for tearing and crushing the dry stalk has changed the whole plan of horse feeding on many farms. Shredded dry fodder is quite equal to hay as Winter feed for horses. With a fair-sized field of Alfalfa a farmer can feed his stalks, sell his hay, or cut down his acreage in meadows.

*

Now and then we receive a statement like the following:

> I followed the advice given in your paper some time ago, how to prevent stinkbugs from eating squash hills. I lost 350 hills of squash by trying it. The advice I refer to was to put radish seed in each hill. The three rows were teetotally destroyed by striped and black stinkbugs. The nine rows that had no radish seed had no stinkbugs and very few striped bugs, and I managed to save them all. I have been a market gardener for 20 years, and I think I have had experience enough to take nobody's advice hereafter. A. M. J.
> Akron, O.

On page 387 a correspondent said he tried this plan in a small way, and asked for reports from others. He did not urge anyone to try it, neither did he claim that the radish drove the bugs away. He just wanted to know about it, and was very careful to make this point clear. We are surprised that any man with 20 years' experience in gardening, should change a mild suggestion into positive advice. If 50 men had each tried seven hills of squashes with radish seed in them, and reported results, it would have made a good experiment. We should all have learned something from it. For one man to try 350 hills was too much of a risk. Is he justified in blaming anyone for the loss of the squashes? Do any of us fully realize the responsibility we assume when we make statements in print about new or untried things?

*

THE corned-beef-and-cabbage and houses-and-lands views of life will, if allowed to have their own way, crowd out the finer elements of one's nature. It is possible for a man to be so intensely practical as to become dead to the poetry, beauty and music all about him in nature. All that he sees in a field of wheat are the grain and straw, the hard work needed to handle them, and the money they will bring. In the great oak standing alone on the hill, he sees only shade for the cattle, and a sawlog and lot of fuel when it is finally cut down. The brook rippling over the stones is only a place to drink. In the grass-covered fields he sees only hay and pasture. The beauty of the waving grass and grain and the tree standing in outline against the evening sky, the music of the brook and the muttering of the leaves in the wind do not appeal to him. Yet these things are meant to smooth off the rough edges of toil and help a man to keep from being cold and hard and bitter. Any great amount of contemplation of nature may be out of place in the life of a busy man. Yet all with eyes and ears have time to take two or three doses of it a day; and no one ever committed suicide or went out to do some terrible crime as the result of taking such medicine.

*

ONE form of nature study, which should surely be taught in every country school, is a knowledge of our common poisonous plants. A recent report from Pennsylvania tells of the death of three boys, who ate the berries of the Canada moonseed (Menispermum Canadense). This is a native climbing plant, found from Manitoba to Georgia and Arkansas, though nowhere, we think, is it very common. It produces clusters of shining bluish black fruit, which, to the childish eye, strongly resemble frost grapes. The leaves are somewhat like English ivy, but smaller and not so leathery; the vine slender, growing six to 12 feet long. The poisonous property of the fruit is similar in effect to strychnine. The children whose poisoning is referred to met with the moonseed while hunting for wintergreen; ate the berries under the impression that they were grapes, and died within a short time, in spite of medical aid. Moonseed, False hellebore, Water and Poison hemlock, poison oak and ivy, and the deadly Amanita, which is usually responsible for the cases of mushroom poisoning reported each year, should all be familiar to every country dweller, yet we know many who never even learn to distinguish between the five-fingered Virginia creeper and the three-leaved poison ivy. An excellent bulletin entitled "Thirty Poisonous Plants of the United States," has been published by the Department of Agriculture; this does not, however, include the moonseed.

*

No one need suppose that any of us know all that need be known about silage and the silo. The Winter barn pasture is a settled thing on many dairy farms, but no wise man will say that he has yet produced the finest quality of silage that can be made. It was once thought that the chemical action inside the silo was much like that in a jar of preserved fruit. Prof. King says that the two processes are quite different. When fruit is canned the cells of the fruit are killed at once, so that their action is stopped. When corn is cut into the silo the living cells are not destroyed. Their vital action goes on for some time, and this complicates the process of preserving the silage. It is quite likely that a thorough study of the matter may give us an entirely new method of building and regulating the silo.

*

A SINGULAR spectacle was presented on a neighbor's farm the other day. It was at the close of a long hot afternoon. Clouds were gathering in the north and there was a grumble of thunder. The farmer had already done more than a good day's work, but the hay was on the ground, so he dragged himself out with the weary team to save his crop. While he was sweating at the barn two other men were playing tennis in the front yard. They were city men—boarding at the farm. As they played their lazy game the farmer's wife was in the hot kitchen cooking their supper. Strange as it may seem, these men are in the commission business. They handle and sell the products of the farm. There they were, the handlers, playing in the front yard while the farmer toiled at the barn and his wife boiled in the kitchen. It was strange to see the handler play, while the producer worked. We do not mean to say that these players are idle or lazy men. No—they work hard at their business and put in long hours. They would probably say that if the farmer would hustle as they do, and show as good judgment, he would make more money. Perhaps, and yet it was a strange thing to see the handler play while the producer toiled.

*

BREVITIES.

Oh, the practical man he tells us how,
And the scientist tells us why,
And the farmer wipes the sweat from his brow,
And he wonders if help is nigh.
For somehow or other the how won't work
Just when the why says that it should,
Or else the why stops and begins to shirk
And won't do the job that he could.
For half of your labor is thrown away
With why roaming off in a dream,
And how just plodding along till he's gray—
Oh, why can't they work in a team?

BAKED apple time has come!

SOFT drinks after hard thinks.

THE best boss gets along without bossing.

How about the mainspring in your headpiece?

THE Red Astrachan apple is too thin-skinned.

THE cow seems to be having her innings this season.

THE sheep doesn't give the cow a fair show in the pasture.

LEAF gall—some men show it when they turn over a new one.

THERE is one doctor in this country for every 655 inhabitants.

THE hard head needs soft thinking and the soft head hard thinking.

"STRIKE while the iron is hot!" but the present strike turns the iron cold.

GREAT interest has been shown in the recent articles on cranberry culture by Mr. Makepeace.

WHAT crop to sow in the corn for Winter cover? On our own farm we are sure of rye and Crimson clover. Clover and Cowhorn turnips mean an experiment.

REPORTS from the West show great damage to the corn crop. That should make you give your own corn a little better culture or even lead you to sow more fodder!

THE following decision of a New York justice will interest some married people: "No woman has a right to go through her husband's pockets, nor has a husband the right to go through his wife's pockets."

JUST ride about the country in any section where farmers own their homes, and see what a blessing the climbing roses have proved. They are everywhere carrying beauty and sentiment in their teeth as they climb the porch.

QUACK or Witch grass spreads by means of underground stems or roots. To kill it these roots must be exposed to sun and air. A tool that jerks or tosses up the ground is better for this purpose than one that packs it down. A good spring-tooth harrow is excellent.

Is it safe to go down into an airtight silo, or into an old well? The old-fashioned test of lowering a lighted lantern is a good one. If the light continues to burn at the bottom of the silo or at the top of the water man may safely follow. If the lantern goes out—keep out!

Events of the Week.

DOMESTIC.—A prairie fire which started eight miles north of Larned, Kan., July 16, burned over a large extent of country and destroyed over 40,000 bushels of wheat in the stack. Frank Lunod, from whose thrashing engine the fire started, in his endeavor to put it out, inhaled the flames and was dangerously hurt. The residences and barns were destroyed with their contents. Some stock and many tons of prairie hay were also burned. . . . . All records were broken at El Reno, O. T., July 16, by the registration clerks, when 10,967 people were given papers entitling them to numbers in the great drawing for Indian lands, which began July 29. This makes a total registration of 31,015 at El Reno. At Lawton there were 7,800 persons registered in the four days ending July 13. . . . . Manuel Armenta has been convicted at Casper, Wyo., of stealing sheep. He has been tried 14 times in three counties for larceny. In these trials he has cost the State $100,000. He and his followers are said to have driven the range cattle business out of that section. He is a half-breed Mexican and makes his home just south of the Hole in the Wall country. . . . : A boatload of nitro-glycerine exploded in midriver about a mile below Toronto, Canada, July 18. The owner of the boat had just returned to it when the explosion occurred, leaving no trace of the boat or man. The cargo of 240 quarts of nitro-glycerine was going from some upriver point to the oil fields below. The detonation was plainly heard 12 miles distant. . . . . At Sharon, Pa., July 19, two men were killed and three badly injured by lightning, which struck a chimney and passed down it into a room where the men were sitting. . . . . Five employees of the Harlan & Hollingsworth Company, of Wilmington, Del., were terribly scalded July 22 by the bursting of a boiler tube in the torpedo boat Stringham, as it was preparing for a speed test in Narragansett Bay. . . . . At Pittsburg, Pa., July 22, Mrs. Sophie Ratza poured coal oil from a can on to the embers in her stove, to hurry the fire. A terrific explosion followed, and Mrs. Ratza and her three children, aged eight, four and two, were burned to death. Francis Ratza, the husband, suffered severe burns in trying to rescue the unfortunates, but will recover. . . . . Mattoon, Ill., has suffered within a month from 18 fires of incendiary origin, resulting in losses aggregating $2,400,000. The authorities have been very active in destroying gambling outfits, and they believe that the fires are a retaliatory measure.

ADMINISTRATION.—Retaliatory legislation may be enacted by Congress if the German government yields to the demands of the agrarians and imposes the proposed increased duties on farm products. Representations may be made to Germany through Ambassador White, protesting in diplomatic language against the proposed increases of duty, but the President can go no further. There can be no retaliation without action by Congress, as there is nothing in the present law authorizing the Executive Department to adopt such measures, except to a very limited extent.

PHILIPPINES.—Investigation into the case of Capt. Andrew S. Rowan, of the Nineteenth Infantry, charged with burning a town on the Island of Bohol, failed to prove Capt. Rowan had ordered the town to be burned. . . . . The Islands of Cebu and Bohol and the Province of Batangas, Luzon, after three months' trial of civil government, are to be returned to military rule, owing to their incomplete pacification. . . . . According to Manila advices the conferences between Adjutant-General Corbin and General Chaffee will probably result in radical economical and administrative reforms in the army of occupation. The present force is to be reduced to between 20,000 and 30,000 men.

GENERAL FOREIGN NEWS.—The weather throughout Germany continues excessively hot, and numerous sections have suffered severely from hail, wind and lightning. Berlin had a cloudburst July 22, with hail and a whirlwind. Many trees were uprooted and houses damaged. Violent thunderstorms have occurred in the Hartz Mountains. An entire street was burned in consequence of an electric bolt in Stiege. In the Valley of the Fulda hail storms have done great havoc among crops. Some sections report deaths from lightning. . . . . Intense heat prevails in most parts of Austria. The temperature in Vienna rose, July 22, to 99 degrees. Numerous cases of apoplexy and sunstroke were reported. . . . . The two hottest days ever recorded in Christiania, Norway, were July 20, when the temperature reached 94 degrees in the shade, and July 21, when it reached 95. . . . . Mrs. Paul Kruger died at Pretoria, South Africa, July 20, of pneumonia.

FARM AND GARDEN.—Missouri has been highly honored by the jury of awards in the dairy division at the Pan-American Exposition, that State securing eight diplomas, surpassing every State in the West and coming within one-fourth of a point of equaling the best butter made in New York and New Hampshire. The Missouri commissioners are greatly pleased over their success, especially in view of the extreme drought which prevailed over their State while the butter was being made. The highest score, 97¼ points, out of a possible 100, was won by H. C. Goodrich, of Calhoun, Henry County, Mo. The next highest for Missouri were as follows: Holden Creamery Company, regular make, 96; unsalted, 94; East Lynne branch, 95¼; Magnolia branch, 94½; Garden City Creamery Company, 94½; Crosby Creamery Company, 94½; L. E. Shattuc, Stanberry, Mo., dairy class, 96¾.

J. H. Durkee, president of the State Association of County Fairs, says arrangements will be made with all of the county fairs to send collections of first prizes of fruits and vegetables to the Pan-American Exposition during the months of September and October. It is expected that an unusually large and fine collection will be secured in this way.

The Western Association of Nurserymen met at the Centropolis Hotel, Kansas City, Mo., July 9. About 20 members from Missouri, Kansas, Nebraska, Oklahoma, Iowa and Arkansas attended the meeting. The officers of the Association are: A. L. Brooks, Topeka, president; R. H. Blair, Lee's Summit, vice-president; E. J. Holman, Leavenworth, secretary.

Wilton E. Britton, who has for seven years been horticulturist at the Connecticut Agricultural Experiment Station, has received the appointment of State entomologist in accordance with the new law which went into effect on July 1, relative to insect pests. The work to which Mr. Britton is assigned is under the new law transferred to the Experiment Station, and is to be conducted there under the appropriation made by the State. The law provides for the inspection of all nurseries in the State, and stock brought into the State from elsewhere must bear a certificate of inspection under the new law. Mr. Britton begins his new duties at once. He will remain at the experiment station.

The wheat crop of the Canadian west is very large this season. It is thought well within the mark to estimate that Manitoba and the Territories together will have 55,000,000 bushels of wheat this year, or, deducting 10,000 bushels for food and seed, about 45,000,000 bushels for export. The largest crop on record was that of 1895, when 32,000,000 bushels of wheat were reaped in Manitoba, and 3,500,000 in the Territories, but the area was only about half of what it is to-day. Putting wheat, oats and barley together, there will be an aggregate yield in Manitoba of 80,000,000 bushels at least, since the oat crop is certain to amount to at least 25,000,000 bushels, while barley will exceed 7,000,000. In short, taking it all around, this is by far the fattest year ever experienced in the Canadian Northwest.

CROP PROSPECTS.

JULY 18.—Making hay and cutting oats will be finished this week, both about one-half crop; potatoes one-third crop; pasture short. Corn is remarkably clean and will make a good crop but is needing rain now; had a good rain July 4, but ground is so dry that we need another badly. Potatoes are 80 cents; oats, 30; corn, 45 cents per bushel; apples a small crop; have dropped badly; worth 50 cents per bushel. Blackberries are a large crop, worth $1 for 24-quart case at station. Fine prospect for peaches and pears. Strawberries a good crop and good prices.

Farina, Ill. B. D. C.

JULY 19.—In this section corn will be a very light crop; poor stand on account of worms. Much of it was planted late. If the present dry hot weather continues potatoes will be a light crop. It cannot be more than medium at best. Apples are very light, and will be poor quality, from present indications. The hay crop is heavy and is being well secured. Oats generally good. We have had quite fair success with Fall seeding of Timothy, without foster crop the present year. The greatest trouble we have in getting a stand with Fall seeding is with grasshoppers. They sometimes destroy it completely wherever it joins meadow land. We have some seeded last September that will cut nearly two tons to the acre. L. G.

Beaver Center, Pa.

JULY 20.—Late planted crops need rain badly; many pieces of corn and potatoes cannot be more than half a crop, and they need more cultivation, as the planting and haying were so close together and help so scarce that many pieces of corn have not been worked more than twice. Clover has given a greater bloom than for many years; some was cut early in hope of a crop of seed, but the present dry weather is against that. Yet those who cut clover early, also mixed hay, have secured some fine hay, very bright and nice, while the late ones have had to put up with hay that looks as if it had been rained on, while not a drop of rain touched it. Wheat was badly infested with fly. On my own farm one piece sown after silage corn was cut off was about half ruined. At present it looks as though the acreage will be greatly reduced this Fall, and there will be a call for red wheat of a stiff strawed variety. Barley and oats will hardly be a full crop. Many pieces of oats are too short to bind. Corn, one of the most valuable crops to the farmer, will be greatly deficient, yet some very fine crops are noted, especially silage and common field varieties. Sweet corn did not come well, and is very much spotted. Potatoes are the most varied crop, from a good stand to very poor. Pastures have been very good in a few places, especially on the milk dairy farms; they are short on account of the great growth early in the season. Less acreage was given the cows and more hay cut. Where oats and peas have been substituted or silage fed the milk flow has been kept up. One milk seller is at present feeding heavily on grain and buying the milk of 19 cows once a day of his neighbors to keep up his supply, he himself milking nearly 40 cows and drawing the refuse from a canning factory for feed. I note he has the foundation for two silos. Fruit, especially berries, has been plentiful. No cherries except a few sour ones. Apples are scarce, except King, Greening and early ones, such as Red Astrachan, Maiden Blush, etc. A. D. B.

Aurelius, N. Y.

JULY 22.—Corn, although planted very late on account of the wet Spring, is looking well and growing rapidly. Feed in pastures is unusually good for this season of the year, the frequent rains having kept them fresh and green. Prospects now are that farmers will not have as large feed bills the coming Winter as they did during the last. Cows have given a good flow of milk and are holding out fairly well. The Chenango Valley Dairy Company is receiving at its coöperative creamery 200 cans of milk per day. All this cream is now sold in Philadelphia and Buffalo. The skim-milk is made into curd. The Empire State Dairy Company is getting considerable milk, but gets it at quite a distance from the station, the hot weather making such a demand for milk that the company is buying from cheese factories to increase the supply. The price since July 1 has been 64 cents per can; for June, 54 cents per can. The Chenango Valley Dairy Company paid for June 65½ cents per can. E. C. J.

Greene, N. Y.

JULY 22.—The central and northern part of this county is feeling the effects of the hot and dry weather. Plenty of rain in southern part. With the exception of a few fields here of Dawson's Golden Chaff the wheat crop is the nearest to an utter failure I ever knew; too many Hessian fly. Oats have a wonderful growth. Haying is about done; crop heavy. Beans are looking fine; planting fully as large as usual. I am inclined to think that the acreage to cabbages is about 20 per cent greater than last year. Cabbage is looking fine for this time of season. Cherries are nearly a failure. I don't see or hear very good reports of pear crop; apparently, considerably less than last year. Of apples we have hardly enough to talk about. If there is a barrel now growing, where 10 grew last year, I am unable to see or hear of it. I was talking recently with seven or eight apple growers, who raised last year from 700 to 4,000 barrels each; they were asked their opinion of the signs of the crop, taking 10 years for an average. Answers ranged from 10 to 25 per cent; the man estimating 10 per cent is owner of a large cold storage plant, and has had a wide range of sight-seeing among the orchards. Peaches from light to fair. H.

Albion, N. Y.

The Bean Crop in Western New York.

At the present time I think the prospects are favorable for a fair crop of beans. How much damage will be done by a maggot that is now eating the beanstalk off I cannot tell. Already a few fields have been plowed up in this locality. The acreage is rather large. I have noticed no blight on beans. J. B. COLLAMER.

Hilton.

I have been riding several days, and think the acreage of beans is larger this year than for some time, but do not think there will be a large yield, as so much wet weather has packed the surface, and now the ground is baking. We should have rain soon or beans will not turn out much better than last year. It is too early to give more than a guess, but do not think there is any blight or rust yet. The weevil or fly took some pieces quite badly, but pieces that had a good application of phosphate got out of the ground before the bug got in his work. C. A.

Orleans Co.

Owing to the late, cold, wet Spring, the usual amount of barley and oats was not sown. This, together with continued high prices of beans, stimulated farmers to plant a much larger acreage than at any time since 1895; I think 75 per cent more than in either of the last two seasons. The soil and weather conditions were very unfavorable for early planting, but later, farmers were enabled to complete bean planting. On many pieces beans were destroyed by grubs, before and just after they were up, but in most cases they were replanted. In other instances, the damage to the crop by the grub was so slight that replanting was unnecessary. It is too early for blight of any kind, and if injury comes from this source it will be later. On the whole, the prospect is favorable for a large crop of beans, but drought or blight may change the present outlook. Few beans of any kind have been planted except Medium and Pea, the latter predominating. S. C. BOWEN.

Medina.

At present beans are doing exceptionally well. The farmers experienced great difficulty in getting the seed into the ground on account of the heavy rainfall which occurred during the latter half of May and first part of June. However, the seed was all finally got into the ground, and made a very quick germination on account of the warm and moist condition of the soil. We have had frequent showers and warm weather, which has materially aided the development of the young plants, and should these conditions continue throughout the season we will have a very large crop. However, it is as yet altogether too early to make any estimate of probable yields, as the vines are simply making growth, none as yet even being budded. It is too early for the blight to make its appearance. We have heard of a few instances in which the cutworms have seriously injured the young plants. We think the acreage this year is fully up to that of last season, if not a little in excess. The crop will mature later this year than usual on account of the late planting. N. B. KEENEY & SON.

Le Roy.

Wheat and Hessian Fly.

The fly is practically unknown in this locality. I never hear it spoken of except by eastern men. Nothing but Spring wheat is raised here. The chinch bug is taking hundreds of acres of grain this year. When the small grain is ripe the chinch bugs take the corn and grass. A. R. T.

Hampton, Minn.

There is not as much trouble from the fly as was expected in the early Spring. The wheat crop is very good in this locality, 20 to 25 bushels per acre; some more, some less. The varieties grown here are Fultz and Pool; some are raising the Democrat; not many. I do not think any one variety more liable to damage from the fly than the other. W. P.

Windsor, O.

My experience with the Hessian fly is rather limited, but I am inclined to believe that the location of wheat-field has more to do with the ravages of the fly than the variety. Last year at least 90 per cent of wheat crop was destroyed by the fly, in this section, and I believe that only the sand knolls had enough on to pay for cutting, though the whole of the fields were sown to the same variety. Elevation of field or character of soil seemed to cut more of a figure than did variety. M. J. P.

Clyde, O.

Crop and Weather Report.

The intense heat continues throughout the central valleys and the section east of the Rocky Mountains, with only slight relief from local showers. On the Pacific coast the weather continues unseasonably cool, and there has been a decided drop in temperature in the North Atlantic States. In the Southeast there has been an excess of rain. The most critical conditions are now seen in the Central West. In Kansas, Nebraska and Missouri early corn is practically ruined. Rains would give the late-planted a chance to make at least half a yield. Spring wheat harvest has begun in the southern portion of the belt, where the excessive heat has caused premature ripening. The conditions are more promising in the extreme north. The outlook for grain of all kinds in Washington is very favorable, and it is thought that the yield of wheat will beat all previous records. Oats and wheat in shock in the Middle States have been somewhat damaged by rains. Haying throughout the entire country is finished, good crops having been secured in the Ohio Valley, Lake region, North Dakota, Minnesota, and parts of the East. Cotton conditions in Mississippi, Alabama, Georgia and Florida have improved. In the Carolinas it is suffering from lack of cultivation. The prospects for apples both east and west are still further reduced.

Woman and Home

From Day to Day.

THE FISHIN' FEVER.

'Long about this time o' year, I sort o' git a wish
I c'd jis' cut loose a spell an' fish an' fish an' fish;
Gittin' all-fired weary of th' stuffy, sweaty town,
Want to go where I can hear the water trieklin' down
Thru a medder summers an' in underneath a tree,
Where th' ol' sun kind o' peeks an' shimmers down at me,
Set there by a pool an' smoke an' think an' fish. Why, sir,
'Long about this time o' year that's wuth a livin' fer.

One day saw a little gal a dabblin' of her feet
In a gutter stream that made a puddle in the street,
Sittin' there upon the eurb an' keepin' mighty still,
Had a bent pin on a line an' fishin' fit to kill.
I stood there a aehin' fer to hug that kid an' say,
You're all right, an' this ol' man is feelin' jis' that way.
'Long about this time o' year fer workin' I ain't fit;
Got the fishin' fever on an' eain't git over it.

Want to git out all aione an' set a dreamin' dreams,
Want to smell the pine trees an' to hear th' mountain streams;
Want to git on top th' range an' waller in th' snow,
Then look down an' see the world a mile er two below;
There is somethin' magie in a breath o' mountain air,
Makes a feller feel somehow that God Himself is there.
'Long about this time o' year, w'y, don't you understand?
Want to go to Nature an' to grab her by the hand. —Denver News.

*

LONG, narrow bows of tulle, either black or white, are one of the newest hair ornaments sold, taking the place of the velvet Alsatian bows. The bows are about 1½ inch wide and four or five inches long, drawn out straight and square. They are worn in front of the coil when that is put up on the top of the head.

*

THE Household tells about a small boy whose piety was stronger than his memory. His Aunt Jane, hearing a little noise at her door, opened it to find little Willie kneeling there. "What in the world are you doing on my doorsteps, Willie?" "Oh, Aunt Jane, I was only saying my prayers. I forgot to say them this morning. I happened to remember as I was going to school, so thought this would be a good place to do it. Do you care, Aunt Jane?"

*

WE were buying shoes, recently, in a famous New York store, and near us sat a well-dressed woman, surrounded by a barricade of shoes and slippers of all sizes. A patient salesman tried on shoe after shoe—kid, patent leather, calfskin and canvas—square-heeled Priscillas, with high tongue and broad buckle, spindle-heeled Louis XV. slippers, and sensible Oxfords, without making a sale Finally the woman rustled away without purchasing. Another salesman asked the man who had waited upon her some question about the dissatisfied woman. "Oh, she wasn't a customer," he responded, "just another of those boarders." It is a fact that there are many women boarding to avoid the cares of housekeeping, too vacant-minded to interest themselves in rational pursuits, who spend a great part of their time in going about the stores, not only pricing things, but also trying on garments they never intend to buy, merely for the sake of passing away the time. The leisure that many a hardworked woman longs for is to them merely an encumbrance. Apart from the actual uselessness of such lives, they add much to the burden of others by their senseless demands upon the time of busy people.

*

THE price of glass has been advancing in all lines, and it seems that fruit jars are to feel the increase strongly. Buyers and dealers predict that there will be less fruit put up by housewives in consequence, and the price of canned goods, which has been soaring skyward for some time, can be depended upon to continue going up. The glass trust is of course the leader in this advance, but the few independent makers of glass jars appear to be increasing prices also. One trade journal says that if the manufacturers of glass fruit jars are wise, they will flee from the wrath to come. Trusts may trifle with men and double the prices of everything from chewing tobacco to armor plate, but when they invade the realm of woman and fool around with the prices of things she cannot do without, it is time to set the alarm clock for war.

*

NEW ideas in lamps show shapes not quite so squatty as they have been, nor so tall as the banquet lamps. Green bronze, such as we see in antique lamps, is especially fashionable, a vase-shaped oil reservoir of this material being very handsome. Antique styles in brass, copper or terra cotta, modeled after Roman, Grecian or Egyptian lamps, enjoy special favor. Highly decorated porcelain seems less cared for. Very beautiful shades are seen in novel effects of iridescent glass. The Empress shades of delicate wall paper or glazed French chintz, finished at top and bottom with a close ruche, retain favor, especially in delicate shades of green, pink or yellow, with white. The globe shades always remain in fashion, but they are rather more subdued in coloring, and not quite so large as with the low squatty lamps.

*

GOATS are credited with very unusual tastes in food, but we have only once heard of a goat which ate a school composition. The Youth's Companion tells this experience of a bright little eight-year-old school girl. The class, for the first time, had been asked to write a composition at home, and bring it for criticism the next day. A moment after the school-bell had rung little Amy, panting and red-eyed, stumbled to her desk and dropped her face on her arms, her shoulders shaking with sobs. The teacher went to her and tried sympathetically to find out what was the trouble. Amid piteous sniffs and gasps she thought she caught the word "composition."

"Didn't you get your work done, Amy?" she asked, kindly.

"Oh, yes!" sobbed Amy, in a burst of indignant grief. "I g-got it d-done, Miss Brown, but B-b-billy Smith's horrid g-g-g-goat chased me and ate it up!"

Common Sense, M. D.

"What ridiculous nonsense one sees in the papers," I remarked, throwing aside the one I had been reading, as my friend joined me on the veranda.

"For instance?" she said.

"I was thinking especially of the hints on health. A doctor told me once that if I did all the things that were recommended in the papers I would not do anything else—and not that for long. They are so contradictory. Really, if credulous people should read the papers carefully and follow all the advice, even if they were perfectly well to begin with, I believe they would be seriously ill in less than a month."

A REMODELED CLOSET. FIG. 234.

"There is once in a while a good suggestion, in fact, I think most of them are good for some people and perhaps some of them good for all people."

"But how is one to judge?"

"Do the way a friend of mine does. She reads everything of the kind and then refers all the ideas to her family physician."

"Rather expensive," I suggested.

"Oh, no! Her physician is called Dr. Common Sense, and he is the only one she has had for more than three years. She maintains that in treating her own case she has the advantage over the best doctor in that she knows just exactly how she feels. And as she has no organic disease, she thinks she can be her own doctor. It certainly has worked well so far, as she says she never felt better in her life than she has the past three years.

"She reads a great many of the articles in the papers about health, as she is interested in the subject, but she adopts few of the hints, and those she tries cautiously. At the first she gave up drinking hot drink and cold water with her meals. She eats very little meat, and every night, before going to bed, she drinks half a cup or so of hot water. She eats plain coarse food, drinks milk, has plenty of fresh air night and day, takes a daily sponge bath and has a proper amount of exercise and sleep.

"Now this way of doing might not work well with another person, but you see she understands her own needs. She maintains that different people require different treatment, and that it is one's duty to study one's self and find out how to keep in the best possible condition. When away from home it is well to conform to the ways of those one is with, otherwise one may be called cranky, notional and old-maidish. I think it pays to be a crank, that is if crankiness consists in keeping one's self in good health, and for my part I mean to keep right on."

"Ah, I thought you were talking of your own case," I said quietly.

"There, I did not mean to let you know!" and she laughed at herself, a little vexed. S. B. R.

An Abbreviated Bed.

This idea, says a writer in Trained Motherhood, may be of service to other women with children who have outgrown their cribs, and who must be provided with large sleeping quarters. I shortened the side pieces of an inexpensive white iron bed, so that when put up, it measured four feet eleven inches. A country blacksmith did the work, and charged me but 40 cents. He cut the sides in the middle, lopped them to the required length and fastened them together with iron bolts, two on each side, so the bed is as strong and steady as before. It was not an hour's work to shorten the mattress, and I managed to cut the wire spring at home also, but the assistance of a man was necessary for that operation.

The bed described above is long enough to accommodate a child comfortably, until he is nine or 10 years old, and one feels well repaid for the slight labor and expense, when the cunning proportions of the result are seen. I have found that to have things for their *very own*, gives children real happiness, and any child will be delighted with the change from a long, narrow, unattractive bed to this little affair, which, besides, takes up so much less space, and adapts itself so readily to the shape of almost any room. When buying the iron beds, one can order the sides to be made any length desired, and the mattress and springs are then bought to fit, but with me it was necessary to utilize the material which was on hand.

The result of the single bed was so very satisfactory that I shortened also the sides of a double brass bedstead, making the length to correspond with the larger portion of the mattress, using slats instead of the springs. This makes a child's pretty double bed, and, of course, allows much more space in the bedroom, and when five or six years have added that much more length to the four little legs which, until then, can comfortably occupy it, it may easily be returned to its original size by the addition of another piece of iron, held in place with several bolts, while the hanging spread will completely cover any rough appearance of the patching.

A Remodeled Closet.

In THE R. N.-Y. for March 17, 1900, an illustration was given of a remodeled closet, turned into a bookcase and writing desk. One of our readers followed the suggestion there given, and the result, shown at Fig. 234, is much more attractive than the original picture. It is a great convenience, and takes up less space than an ordinary bookcase. A shallow closet is more useful in this form than in its first estate, and the same plan may be followed with a disused doorway between two rooms.

"AFTER much meditation and experience I have divined that it takes as much sense and refinement to cook a dinner, wash and wipe a dish, make a bed as it should be made, dust a room as it should be dusted, as goes to writing a novel or shining in high society."

A Reading Course for Farmers' Wives.

The Cornell Farmers' Reading Course has awakened so much interest in New York State that a similar course was suggested for women, and a circular letter sent out, asking for opinions on the matter. The suggestions and opinions received in response to this resulted in the publication of two bulletins known as reading lesson supplements, the first being devoted to saving steps, and the second to home sanitation. Here are some ideas from farm housekeepers, suggested in the first bulletin:

"As a rule, we farmers' wives do our own washing, ironing, taking care of the milk, meat, chickens, which women of other callings do not do. If you can make us understand that it is just as necessary to rest the body by using the mind a little to read—if the floor doesn't get scrubbed so often—you will do much good.

"Before beginning to get a meal, stop and think how many things one will need from the cellar, and bring up as many as possible at one time, and not climb the stairs as many times as there are articles needed."

"I think that many of the unnecessary steps I take are caused by forgetfulness; another cause of extra steps is putting up things that some one else has left out of place. I find a great saving in having the stove near the sink and cupboards."

"When we visit a neighbor and she gives us about three times as many kinds of food as we need, what is there left for us to do when she visits us?"

"I tried to count my steps while getting breakfast this morning. I traveled about two miles while preparing this meal, doing the dishes, preparing chicken feed, pig feed, and waiting on the children, for I have five small ones."

"What housekeeping needs is just what farming has needed—the application of thorough scientific knowledge and methods."

"My kitchen is off from the main part of the house about seven feet, and there are two steps for me to go up and down. I often wondered just how many times I went back and forth in a day. One morning I counted 20 times."

"It is wealth to the farmer whose wife's steps are made few, and everything about the house as convenient as possible, securing her health in order that she may be the helpmeet of her husband."

"Build the sink and tables high to avoid stooping. A high stool should stand in every kitchen, upon which the mistress can sit while compounding foods, washing dishes, and cleaning vegetables."

The editor, Miss Van Rensselaer, in reviewing these letters, gives some wise hints. For the housekeeper who now has to carry waste water to an outside door, down a flight of steps and to a safe distance from the house before throwing it on the ground, a tiled drain should be constructed. Tile can be had for four cents a foot; the drain should be laid according to the situation of the well. If the work is done by the farm help, the actual cost will be about $6.25 for a permanent means of carrying off the waste water used in the kitchen.

An ice-box should be constructed and this can be homemade. The provision saved in one season by the use of a refrigerator more than pays the expense of one, and saves the housekeeper many trips to the cellar. A large ice house at the creamery may answer for a community, and the patrons who bring the milk may carry away the ice needed for their own homes. A window cupboard in dining room or pantry saves many steps. In a small kitchen a drop shelf is an advantage, and zinc-covered tables are helpful.

Miss Van Rensselaer states that nearly 6,000 women in the State of New York are enrolled in this Women's Reading Course. The old farmhouse as it was is described in the bulletin on sanitation. A brook flowing through the farm acres may bring dangers from above or acquire them here and transmit poison to the lands below. At the side door for many a year a woman has appeared several times a day to fling the contents of a dishpan as far from her as possible. Here, too, the water from washing clothes, hands, and milk cans, joins to make a soil rich in bacteria, and in similar cases this too often is near the well. Other wrong conditions discussed by this bulletin are the unused parlor and spare room, the clothes-line at an exposed corner of the house, and the cellar which is not properly drained. Many

3869 Girl's Dress, 4 to 12 yrs.

improvements with small outlay of money or labor are suggested, such as good drains, a drilled well, a cement floor in the cellar. Sanitation usually appeals more strongly to women than to men, and much depends on them, although in many cases it seems impossible to overcome the difficulties.

The Rural Patterns.

Dainty frocks with many tucks are as much in style for little girls as for their elders. The charming little model illustrated is suited to many materials and has the merit of being childish and simple at the same time that it is effective in the extreme. The original is of fine, sheer mull with Valenciennes lace threaded with narrow black velvet ribbon; but lawn, batiste and all the long list of white and colored washable fabrics might be substituted, or any one of the simple silks and wools. The waist is tucked to yoke depth and falls in folds below, and the novel sleeves show tucked caps. The skirt is simply straight, gathered at the waist, and can be made with the flounce or plain as preferred. The trimming of lace insertion is applied to form vandyke points and to cross the yoke in becoming fashion. To cut this dress for a girl eight years of age, 8¼ yards of material 21 inches wide, 5¼ yards 27 inches wide, 4½ yards 32 inches wide, or 3¾ yards 44 inches wide, will be required, with 17 yards of insertion and two pieces of velvet ribbon to trim as illustrated. The pattern No. 3869 is cut in sizes for girls 4, 6, 8, 10 and 12 years of age; price 10 cents from this office.

The very complete assortment of stocks and belts here given includes the soft bow, four-in-hand and butterfly ties, plain, draped and bodice belts, and will enable any deft needlewoman to make half a dozen for the cost of one ready-made. The materials for the originals are dotted silk, louisine silk, white mull and white piqué; but almost anything and everything is used, and there is ample opportunity offered for individuality in the choice both of materials and color. The foundation for all the stocks is the same. The plain one in the center is shown with the butterfly tie that appears separately just below. The four-in-hand model is trimmed with stitched bands and has the tie joined to the back edges, where it crosses and passes round to the front. The bow includes turn-over portions, but is the same familiar friend. The belts are well fitted and curve to the figure to give a graceful outline. The plain and the draped ones are eminently simple, but are stylish as well. The laced bodice is cut in sections and fits to a nicety, and can be closed at back or front as preferred, made pointed or cutaway as illustrated. To cut the stocks with ties in the different styles, ⅞ yard of material 32 inches wide will be required. To cut the belts, one yard 21 inches wide will be required. The pattern No. 3861 is cut in one size (medium) only; price 10 cents from this office.

3861 Stocks and Belts, Medium Size.

Rural Recipes

Pineapple Short Cake.—Make the cake with a short baking powder biscuit dough; peel and grate the pineapple and add a cup of granulated sugar (more may be added if it is very acid); let it stand two or three hours before needed; when the cake is done (it should be baked in two parts, with softened butter between the cakes) separate the cakes, butter and spread each layer with the prepared fruit; for the top layer make a meringue with the whites of two eggs beaten stiff with two tablespoonfuls of pulverized sugar added; brown lightly in the oven with door open. Serve hot.

Pickled Cherries.—Five pounds of cherries, stoned or not, as preferred; one quart of vinegar, two pounds of sugar, one-half ounce of cinnamon, one-half ounce of cloves, same amount of mace, all ground. Boil the sugar, vinegar and spices (tie the latter in a bag) together, and pour hot over the cherries.

Gillespie Relish.—One peck ripe tomatoes, two cupfuls celery, six large onions, seven red peppers. Run the peeled tomatoes and the onions through a meat grinder. Chop the celery and the peppers fine. Add two ounces of mustard seed and ground cinnamon, one-half cupful of salt, three pints cider vinegar and two pounds of light brown sugar. Mix and seal. Do not cook. It is claimed that this will keep perfectly for five years, and it is very appetizing and universally liked.

Pepper Hash.—Wash and dry five large green peppers and one red one, remove seeds and chop shells quite firm; chop fine a good-sized cabbage, and place with the peppers in a bowl, mixing well. Add two tablespoonfuls of brown mustard seed, three tablespoonfuls of salt and enough good cider vinegar to cover the whole. Stir well together and put into pickle bottles. Ready for use in two days, or will keep for Winter use.

Egg-plant Rissoles.—Wash and cook a large eggplant in boiling water for half an hour; cut in halves. Scoop out the inside, mix it with two beaten eggs, one cupful bread crumbs, a teaspoonful of salt and two dashes of paprika. Form into small oblong rolls and fry to a delicate brown.

Baked Egg Plant.—Select one that is firm and fresh, peel it and cut it into quarters. Let it lie half an hour in salted water. Put it into boiling water with a teaspoonful of salt. Cook until it can be easily pierced with a fork. While the plant is cooking cut one medium-sized onion into small pieces and cover it with salt water. In 10 minutes pour off the water and put the chopped onion into a hot pan, with a tablespoonful of butter. Cook until it is thoroughly tender and brown. Drain the egg plant in a colander, put into a bowl, stir with a silver fork until it is broken up, but not mashed. Mix with it an equal quantity of rolled bread crumbs, add the browned onion and one well-beaten egg. Season with a dash of salt, two dashes of pepper, and add a dessertspoonful of butter. Put the mixture into a well-buttered earthen dish, bake just long enough to be nicely browned. Serve hot in the dish in which it is baked.

Stuffed Tomatoes.—Cut the tops from six large tomatoes and remove the inside pulp. Mix two tablespoonfuls bread crumbs, one of chopped parsley, one-quarter pound of finely minced ham, one-half tablespoonful butter, juice of half a lemon, a dash of cayenne, the well-beaten white of one egg and the pulp of the tomatoes. Stuff the tomatoes with this mixture, replace the tops, lay them in a well-buttered baking dish and bake one-half hour. Lay each one on a slice of toast well buttered and garnish with parsley. Serve very hot.

Hot Chicken Loaf.—Mince fine two cupfuls of cold cooked chicken, one pound of lean veal and one-fourth pound of fat salt pork. Work in these three beaten eggs, a cupful of seasoned and strained tomato sauce, one teaspoonful of grated lemon peel, one teaspoonful of salt, one-fourth teaspoonful of paprika and enough cracker crumbs to mold with the hands. Press firmly into a large wet bowl, invert carefully into a buttered baking pan, removing bowl. Add one cupful of water and one tablespoonful of butter to the pan. Sift buttered crumbs lightly over the loaf and cover the top and sides with carefully peeled and sliced lemons. Bake 1½ hour in a moderate oven, browning it nicely before serving. Baste frequently with the liquor. Serve garnished with lemon slices and parsley.

LIFE is a long chaplet of little miseries, which the philosopher shakes with a laugh.—Dumas.

THE offender's sorrow brings but small relief to him who wears the strong offence's cross.—Shakespeare.

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MARKETS

THE WEEK'S QUOTATIONS.

WHOLESALE PRICES.

NEW YORK, JULY 27, 1901.

GRAIN.—All grains except barley are two to four cents higher than at last report. Corn has made a jump of nine cents in three weeks.

Wheat, No. 2, red	—	@	79
No. 1, northern Chicago	—	@	78¾
No. 1, Northern New York	—	@	78¾
Corn, No. 2, mixed	—	@	58
Oats, No. 2, white	—	@	44
Rye, No. 2, W n, c. i. f., N. Y.	—	@	57¾
Barley, feeding	—	@	48
Malting, new crop	58	@	62

BEANS.

Marrow, choice, per bu	2 60	@	2 65
Fair to good	2 50	@	2 55
Pea, bbls., choice	2 10	@	2 15
Red kidney, choice	—	@	2 25
White kidney, choice	2 10	@	2 20

FEED.

Spring bran, coarse	16 75	@	17 00
Winter bran	18 00	@	20 00
Red Dog	19 50	@	20 00
No grade flour	—	@	20 50
Linseed meal, ton	—	@	27 50
Cottonseed meal, ton	—	@	22 00

HAY AND STRAW.

Hay, No. 1	—	@	87½
No. 2	80	@	85
No. 3	70	@	75
Clover	55	@	65
Clover, mixed	65	@	70
Straw, rye, long	90	@	95

SEEDS.

Clover, per lb	9½	@	10½
Timothy, per bu	1 90	@	2 50
Flaxseed, whole, per bu	6 50	@	7 00
Millet, per lb	2¾	@	3
Rape, German, per lb	3¼	@	3½
Sunflower, per lb	2¼	@	2½

MILK.

New York Exchange price at stations $1.21 per 40-quart can. This is the gross price, and from it must be taken cost of transportation and fees at receiving stations where such charges are made.

BUTTER.—A decided firmness has developed, and extras are one cent higher than at last report. Under this advance buyers are very particular, and lots that have previously passed as extra are graded firsts.

Creamery, extra, per lb	—	@	20½
Firsts	19	@	20
Seconds	17½	@	18½
Lower grades	15½	@	16½
State dairy, tubs, fancy	18½	@	19
Tubs, firsts	17	@	18
Tubs, seconds	16	@	16½
Tubs, thirds	14	@	15
Tins, etc	14	@	14½
W'n imitation creamery, fancy	16	@	17
Firsts	15	@	15½
Lower grades	14	@	14½
Western factory, fancy	—	@	15
Firsts	—	@	14½
Fair to prime	14	@	14¼
Lower grades	13	@	13½
Renovated butter, fancy	16½	@	17
Common to choice	13½	@	16
Packing stock	13	@	14

CHEESE.

NEW.

Full cream, colored, small, fcy.	—	@	9½
White, small, fancy	—	@	9¼
Small, fair to choice	8¾	@	9⅛
Colored, large, fancy	—	@	9¼
Col'rd, large, fair to choice	8¾	@	9⅛
White, large, fancy	—	@	9⅛
White, large, fair to choice	8¾	@	9
Common	7	@	8
Light skims, small, choice	8	@	8¼
Large, choice	8	@	8¼
Large, choice	7½	@	7¾
Part skims, prime	6	@	6½
Fair to good	4½	@	5½
Common	3	@	4
Full skims	2	@	2½

EGGS.—Market conditions have greatly improved, the surplus of low grades being well cleared out.

QUOTATIONS LOSS OFF.

State and Pa., avge. prime, doz.	—	@	17
W'n, fresh-gathered, ch'ce, doz.	—	@	17
Average best	16	@	16½

QUOTATIONS AT MARK.

Nearby, State and Pa., fresh-gathered, fancy selected, doz.	—	@	18
Average prime	16	@	17
W'n, refrigerator, per doz	14	@	16½
Fresh-gathered, Northerly sections, candled, selected	14	@	16½
Regular packings, N'th'n secs.	9	@	14
Graded, Southerly sections	11	@	12½
Regular packings, S'th'ly sec.	8	@	11
Very inferior, per case	1 50	@	2 10
Fresh-gathered, dirties	6	@	10
Cheeks	5	@	6
Inferior culls, per case	1 00	@	1 25

LIVE STOCK.

Steers	4 30	@	5 40
Bulls	3 00	@	3 90
Cows	2 00	@	4 15
Veal calves	4 50	@	7 00
Buttermilks	3 00	@	3 50
Sheep	3 00	@	4 25
Lambs	3 25	@	5 35

COUNTRY-DRESSED MEATS.

Calves, veal, prime, per lb	9	@	9½
Fair to good, per lb	8	@	8½
Common to medium, per lb	6	@	7

LIVE POULTRY.—Demand has been very moderate, and there is a heavy accumulation of fowls and chickens.

Spring chickens, W'n, per lb	12	@	13
Southern & Southwestern, lb.	—	@	12
Fowls, per lb	—	@	9½
Roosters, per lb	—	@	5½
Turkeys, per lb	—	@	8
Ducks, avge. W'n, per pair	50	@	75
Average Southern, per pair	40	@	50
Geese, avge. W'n, per pair	1 00	@	1 12
Average Southern, per pair	80	@	90
Pigeons, per pair	15	@	20

DRESSED POULTRY.—Supplies are somewhat increased, and considerable hot-weather damage is noted in the stock now arriving.

FRESH PACKED—ICED.

Turkeys, W'n, hens, small	7	@	8½
Western, toms	—	@	7
Broilers, Phila., over 4 lbs. to pair, per lb	19	@	20
Phila., mixed sizes, per lb	16	@	18
Penn., fair to good, per lb	15	@	17
Western, dry-picked, per lb	—	@	14
Western, scalded per lb	—	@	13
Small, dry-picked or scalded, per lb	10	@	12
Fowls, W'n, dry-picked, prime	10	@	10½
Western, scalded, prime	—	@	10
Western, poor to good	8	@	9½
Southwestern, prime	—	@	10
Old roosters, per lb	5½	@	6
Ducks, Spring, L. I. and other nearby, per lb	—	@	12½
Western	7	@	9
Geese, Spring, Eastern	—	@	18
Squabs, choice, large, dark	—	@	2 25
Mixed, per doz	1 75	@	1 87
Dark, per doz	1 25	@	1 50
Culls, per doz	50	@	1 00

FROZEN.

Turkeys, young hens, No 1	11	@	11½
Mixed young hens and toms, No. 1	10½	@	11
Young toms, No. 1	—	@	10½
No. 2	7	@	9
Broilers, dry-picked, fancy	18	@	20
Scalded, fancy	—	@	14
Chickens, fancy, soft-meated	12	@	13
Average, No. 1	—	@	10
No. 2	7	@	9
Fowls, dry-picked, No. 1	—	@	10
Capons, fancy, large	15	@	16
Medium sizes	13	@	14
Ducks, fancy	12	@	12½
Geese, fancy	9½	@	10

DRIED FRUITS.

Apples, evaporated, fancy, lb	8¼	@	8½
Evaporated, choice, per lb	7¾	@	8
Evaporated, prime, per lb	7¼	@	7½
Evaporated, com. to good, lb.	4½	@	7
Sun-dried, State and Western, qrs., per lb	4	@	5
Sun-dried, S'th'wn, coarse cut.	3½	@	4
Sun-dried, S'th'n, coarse cut	3	@	3½
Chops, per 100 lbs	1 00	@	1 85
Cores and skins, per 100 lbs	75	@	1 35
Raspberries, evaporated, 1900, per lb	—	@	20
Blackberries, 1900, per lb	5	@	5½
Cherries, 1900, per lb	—	@	12

FRESH FRUITS.

Apples, up-river, hand-pckd, per bbl	1 75	@	3 00
Jersey, hand-picked, bbl	1 50	@	2 50
Up-river and Jersey, windfalls, per bbl	1 00	@	1 37
Md. & Del., per bu. crate	50	@	1 00
Md. & Del., per basket	40	@	75
Balt. & Wash., per basket	50	@	1 00
Pears, Le Conte, S'n, bbl	2 00	@	3 50
Peaches, Ga., per carrier	1 00	@	1 75
Mo., per flat case	—	@	60
Plums, Southern, carrier	1 00	@	2 25
Grapes, Fla., Niagara, car'r.	2 00	@	3 00
S. C., Moore's Early, car r.	1 25	@	1 50
Cherries, sour, 8-lb. basket	25	@	45
Currants, prime, per qt	4	@	6
Poor to fair, per qt	2½	@	3½
Huckleberries, N. C., per qt.	3	@	7
Maryland, per qt	3	@	7
Jersey, per qt	4	@	8
Pa. & State, Mountain, qt.	5	@	10
Raspberries, Md. & Del., pt.	3	@	5
Jersey, red, per pint	4	@	6
Up-river, red, per pint	5	@	8
Up-river, black cap, pint	3	@	4
Md. & Del., black cap, pt.	2½	@	3½
Jersey, black cap, pint	3	@	4
Blackberries, up-river, cultivated, large, per qt	8	@	12
Jersey, large, per qt	7	@	11
Up-river & J'y, small, qt.	5	@	8
Gooseberries, green, per qt.	5	@	8
Watermelons, per carload	150 00	@	350 00
Muskmelons, S'n, fcy, crate.	1 75	@	2 50
Poor to fair, per crate	75	@	1 50
Baltimore, per bu. basket.	1 00	@	1 25
Norfolk, per bbl	75	@	1 50

VEGETABLES.

Potatoes, L. I., per bbl	2 00	@	4 00
Jersey, per bbl	2 00	@	3 00
Southern, prime, per bbl	3 00	@	4 00
Southern, seconds, per bbl	1 50	@	2 50
Beets, Jersey & L. I., 100 bchs.	2 00	@	3 00
Celery, Mich., small, doz. roots.	10	@	25
Carrots, L. I., 100 small bchs	75	@	1 00
Corn, N. C., per 100	75	@	1 00
Jersey, per 100	75	@	1 25
Cabbages, L. I., small, 100	2 00	@	2 50
L. I., Flat Dutch, per 100	3 00	@	3 50
Cauliflowers, nearby, per bbl	1 50	@	2 00
Cucumbers, Jersey, per box	40	@	75
Baltimore, per basket	60	@	65
Norfolk, per bbl	75	@	1 25
Eggplants, Jersey, per bskt	1 50	@	2 00
Jersey, per bushel box	1 25	@	1 50
Green peas, West. N. Y., bag.	75	@	1 50
Western N. Y., per basket	50	@	1 25
Lettuce, West. N. Y., per doz.	20	@	60
Boston, per doz	20	@	40
Onions, S'th'n, Potato, bskt	50	@	75
Southern, white, per bskt	75	@	1 00
Conn. & Eastern, red, bbl	1 50	@	2 00
Orange Co., red, per bag	1 00	@	1 37
Jersey & L. I., red, per bbl	1 50	@	2 25
Jersey & L. I., yellow, bbl	1 50	@	2 25
Jersey & L. I., white, basket	1 00	@	1 25
Kentucky, per bbl	—	@	2 00
Peppers, Jersey, per crate	75	@	1 00
Squash, yellow per bbl	75	@	1 25
White, per bbl	1 00	@	1 25
Marrow, per bbl	1 00	@	1 25
String beans, Western N. Y., green, per bag	1 50	@	2 25
W'n N. Y., wax, per bag	1 00	@	1 50
Boston, green, per bu. box	1 00	@	2 00
Boston, wax, per bu. box	1 00	@	1 25
Spinach, L. I., per bbl	—	@	1 00
Turnips, Jersey, Russia, bbl	75	@	1 00
Tomatoes, upper Jersey, box	1 00	@	1 50
South Jersey, Acme, per box	1 25	@	2 00
South Jersey, Stone, box	75	@	1 25
South Jersey, Grant, box	30	@	60
Southern, per carrier	25	@	75
Balt. & Wash., small bskt	50	@	60

ROUND SILOS

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WE call attention in this article to one of the many styles of Champion hay presses manufactured by the Famous Mfg. Co., of Chicago. This machine is what is known to the hay press world as the Champion steel belt press, with side and end moving wall condensing hopper. A card to the Famous Mfg. Co., Chicago, Ill., will bring their latest catalogue, with full description of their entire line.

WE call the attention of our readers to St. Mary's Academy, Notre Dame, Ind. We do not need to expatiate upon the scholastic advantages of St. Mary's, for the catalogue of the school shows the scope of work included in its curriculum, which is of the same high standard as that of Vassar and Bryn Mawr, and is carried out faithfully in the class rooms. Catalogue will be mailed to all applicants.

WE are in receipt of an encyclopedia issued by the American Well Works, Aurora, Ill. This is a book of 176 pages. It contains illustrations, descriptions and prices of machinery demonstrated to be the most practical, including well sinking, prospecting, pumping, irrigating and hoisting machinery; water hoists, Chapman's air water-lifting systems, gasoline, gas and steam engines, boilers, etc., all of their own manufacture. It is a valuable work for anyone intending to engage in any way in the well-drilling business.

A New Cure for Hay Fever.

Dr. H. H. Curtis, of New York, gives in the Medical Record some interesting facts about a proposed new cure for hay fever. Several years ago he found a case of a woman who was unable to endure the perfume of flowers. A bunch of flowers brought into her room would drive her into a severe attack of hay fever. An experiment was made to see whether the watery extract of certain flowers and their pollen would not remedy the trouble. The sterilized infusion of roses was first given, both internally and hypodermically. After two weeks it was found that the patient could tolerate the rose in her bedroom, and the use of the extract of violet and lily-of-the-valley was also successful. After becoming immune to these three flowers, it was found that she could endure the perfume of others. A number of similar cases suggested a cure for ordinary hay fever which is usually caused by the pollen of ragweed. An extract of the flowers and pollen of ragweed was made, and last year it was tested by about 100 afflicted persons. Dr. Curtis concludes that about 60 per cent of such cases may be cured by use of the extract. Those who suffer with this distressing and painful disease will be glad to know of anything promising relief. Those who suffer from ragweed on our farms will be glad to learn that the pest really possesses virtues. We have observed how hogs and sheep, when closely confined, are eager for this weed.

Not one half the patients supposed to be suffering from Consumption really have that distressing disease—though ofttimes the symptoms from which they are suffering lead to it. Nearly every case of this kind Dr. D. Jayne's Expectorant would cure.—*Adv.*

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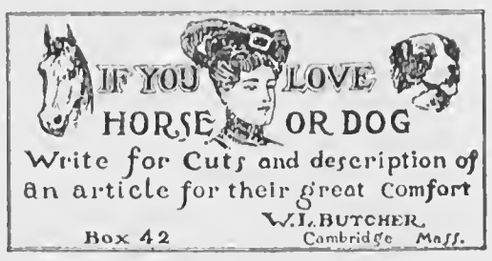

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MARKET NOTES

MELONS.—The hot weather has made an active demand, and watermelon prices continue high. There is more than the usual complaint of small sizes. Muskmelons are very irregular in quality. Anything that can be classed as fancy brings high figures.

TOMATOES.—Large quantities of the Jersey crop are now on hand, and the few remaining receipts from the South are selling at a discount. The highest price noted is $2 per bushel box for Jersey Acme. This is excessive, and $1 to $1.50 will cover the bulk of the sales.

BUTTER EXPORTS.—Shipments to Europe during the month of June exceeded 2,300,000 pounds. This was about double the amount for the same month last year, and was a much larger business than had been looked for by the trade. This increase is partly accounted for by drought in Continental butter-producing districts. The price for extra creamery—19 to 19½ cents—was the highest that has been realized throughout June for six years.

CALIFORNIA BARTLETTS.—With the exception of the orange there is no fruit from the Far West that sells better in this market than the California Bartlett pears. They are now seen on the fruit stands and pushcarts throughout the city. The price for the best is never low, seldom under three for 10 cents, and they sometimes sell for five cents each. Many are larger than any eastern Bartletts I have seen; and, while of no better quality, they strike the market much earlier, at a time when there are no other prime pears to be had. It is very doubtful whether they could be sold at such prices a little later in the season, after nearby pears begin to arrive in barrel lots. It is quite probable that, if eastern growers would sort and pack a little more carefully, keeping the small and worthless stuff for hog feed, the better fruit might, under those conditions, sell for more than is received for both good and poor at present. It may be said that this would deprive many poor people of the fruit which they get at low prices, but it is not unlikely that this might prove a good thing, as knotty or half-decayed stuff that they get at such low prices is worse than worthless. W. W. H.

THE BEET-SUGAR EXHIBIT AT THE PAN-AMERICAN EXPOSITION.

In one of the galleries of the Agriculture Building may be found, in a prominent place, the exhibit of the beet sugar industry of the United States. It is under the personal charge of M. E. Gilmore, of Nebraska, who is prepared to answer almost any question that may be asked him by farmers and others who are interested in this subject. Almost everything pertaining to the growing of the beets, extracting the saccharine matter, the crude and refined sugars, the syrups and other by-products is shown. There is an exhibit of candies made from beet sugar. There is also a model of one of the beet sugar factories, and a practical working model of Henry Vallez's triple osmose process for extracting the sugar from the residuum molasses. Near the Government Building a plot of ground is occupied with beets in the growing state, the seed having been planted by Mr. Gilmore, and the work done under his direction or with his own hand, thus illustrating to visitors just how the beets are grown.

As much as has been said on the subject of beet sugar and its production, it may not be generally known that at least half of the sugar consumed by the people of the United States is made from beets. It is also, perhaps, new to many, that there is no difference whatever between beet sugar and that made from the cane which is in the tropics, or from sorghum, either chemically or from any other standpoint. On the contrary, it is the opinion of many that beet sugar is not of the same composition as cane sugar and is not so economical to use, and the sooner this mistake is dispelled from the minds of our people the better. Three-fifths of the sugar made in the entire world is made from beets, a large proportion of which is made in Europe. We import annually over $100,000,000 worth of sugar; in other words, we spend three-fourths of the equal of our corn crop in this way; and this is done in the face of the fact that we could grow all of this at home, and thus become exporters. The area available for beet culture in the United States is fully 20 times greater than that upon which the tropical cane can be grown from which sugar is commonly made, sorghum now having been discarded for the production of sugar, owing to its cost.

Putting it in another way; we pay for our foreign sugars $1.35 annually for every man, woman and child in the United States. Home production is one of the economic principles which we should study, and when we can produce at home more cheaply, or even as cheaply, any article, we ought to produce it rather than send our money to foreign countries to enrich them. This will provide our own people with labor, about which we are constantly crying. The farmers can make good use of their land, and thus get a profitable return from it. The salaries of experts and wages paid to laborers working in the factories also help to keep business alive. The average production of cane sugar per acre is 1.75 tons, while an acre of beets will average 1.07 tons. This is raw or unrefined sugar. A ton of cane yields on the average 150 pounds of sugar, and a ton of beets 200 pounds of the same. Taking the average production of cane sugar in the world, it costs $62 per ton, while a ton of beet sugar, taking the world into consideration, averages $53.50 per ton, which is a net saving of $8.50 per ton in cost of production. The by-products of the beets, that is, the tops and the pulp which is left after extracting the sugar, are both valuable as stock feed or for manure, while the refuse from the cane mills is of little or no value, except as fuel in some rare cases. The time has doubtless come when beet sugar will be very extensively produced within the United States, and it is quite time that our people should become enlightened upon this subject. Secretary Wilson says: "We have no more need to import sugar than to import wheat."

H. E. VAN DEMAN.

Western Water Mining.

Water mining is a new and profitable business in the Far West. While the surface of these plains is too dry to produce ordinary farm vegetation there is a large supply of underground water. The water-bearing rocks come reasonably close to the surface in some localities, and the object of "water mining" is to find just where these rocks are, so that they may be tapped. N. H. Darton, of the U. S. Geological Survey, has located most of these water-bearing rocks in the Dakotas, and is now at work in Wyoming. When these rocks are fully located wells can be drilled into them and windmills used to pump up the water for irrigation. This will change the character of thousands of acres of at present desert land. This water mining is of more true importance to the western deserts than the mining of silver or gold.

At Outlook Farm.

This morning, July 15, the binder starts in on 14 acres of wheat while your humble servant takes the mower for a field of six acres more, down on the east line. We may get our seed and some hay, but didn't the agricultural papers tell us last Fall to beware of the fly, and to fit the ground well, so that the plant would be able to withstand his attacks? This piece we fitted in fine shape and seeded at time of sowing the wheat pretty thickly with Orchard grass, Timothy and Kentucky Blue grass. The redeeming point is that the Orchard grass shows up nicely and we expect a good sheep pasture there for several years. We no longer let the sheep run with the cows; don't think the cows have a fair show. These hot days the sheep come up from their field about 6 A. M. and stay in a darkened basement till 4 P. M., when they go back. If feed gets short I give grain in their hay racks, that have a tight bottom, with loose cover 14 inches up, to keep the lambs from soiling food.

As we were greening potatoes about 10 o'clock July 16, and there is a lot of it to do this year, a whirring sound, resembling the passage of a trolley car was heard, when just above our heads went a swarm of bees pushing for some hollow tree; a loss of $5 to some neighbor not up to the times in queen wing clipping. What might well be called agricultural murder, as I look at it, is planting potatoes in land so wet that they die in the vain endeavor to get to the sunlight. If the above is a fable the obvious moral would be, "drain it!" Finished the Red clover haying July 2, and are now in the second cutting of Alfalfa (better than the first), before some have secured their clover and Timothy. Long may it wave, and we hope that the Hope Farm man will in due time be converted. P. W. C.

Onondaga Co., N. Y.

R. N.-Y.—The Hope Farm man wishes he had some good Alfalfa soil.

Wood Acids in a Chimney.

H. Stewart answers the question how to "fix a chimney troubled with creosote" in issue of July 20. It reads well, but our experience proves to us that he has not given us a remedy. We use dry wood; creosote forms, not in the chimney, but in the pipe, running out through the joints, besmearing everything with the oily liquid. In another chimney in which coal is burned, creosote forms in the chimney. We shall build the chimneys over. How shall we build to prevent this trouble? The chimneys at present are built from the garret floor up. We thought possibly building the chimney down on to the second floor would help, shortening the distance between the stove and chimney. What is the trouble? We don't know. H. E. M.

Penn Yan, N. Y.

Come to Florida.

You can say to E. L., Leeds, N. D., page 501, that the place for him and his boys is in the South. He can make a good living here with less labor than any other place in the United States. Besides making his own bread and meat, at less cost, he can add a goodly amount of the luxuries in fruits and vegetables, and if he will attend the State Fair at Jacksonville about November 20 next he will see ample manifestations of this fact, and nowhere will he find nature more generous in either beauty or bounty than here, with neither the naked prairie nor the bleak winds of the North and East, nor the hot winds of the West. So far this Summer we have had the most comfortable climate of any State. He will not find the land deserted, but very low in price. S. H. G.

McIntosh, Fla.

SCRAPS.

IT is said that sparrows have become such a nuisance in Utah that Salt Lake County has this year paid a bounty of five cents per dozen on 42,000 sparrow eggs.

IT was an old Scotchman who silenced a chronic grumbler by saying: "The crow is always looking for carrion, and he finds it, while the humming-bird is always looking for something sweet, and he finds it."

THE Argentine government has become alarmed over the spread of foot-and- mouth disease, and has issued a decree prohibiting the importation of cattle and sheep from countries where this disease is known to exist, except under certain conditions. These are the most rigid official inspection, and a quarantine of 40 days after the animals are admitted into the country.

THE Health Officer of the Port of New York is about to make war on the Staten Island mosquitoes, which, for persistence and ferocity, are thought by many people to take the lead of their Jersey relatives. A careful examination of their breeding grounds in the vicinity of Quarantine Station will be made, and mosquitoes and their larvæ taken from these places and examined in the laboratory for the presence of germs of malaria. Kerosene will be the principal agent used in doctoring the breeding places.

OILED ROADS.—It is not generally known that crude petroleum is used in some sections for settling the dust on roads. In parts of California and in other States this plan has been followed with fair success. Kerr's Reports states that "Oil is applied at about 200 degrees temperature. The road is got in proper form and compact condition. It must be well settled and dried. A harrow is run over it until the surface is thoroughly pulverized for a slight depth. Then oil is drilled in and allowed to cool and settle. If it is traveled too quickly afterwards or too much oil is put in, or rainy weather and heavy traffic follows, ruin results. After an oiled road has become settled and is made under the best conditions it is preserved from washouts, dust, ruts and inequalities. It will become the best road that is made. There are several perfect oiled roads in California, they are clean, durable and the cost of repairing is much less than the cost of sprinkling to settle the dust."

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DAIRY NOTES.

LATE HAYING.—On July 15 haying was in progress, with the outlook that the crop in our immediate locality (perhaps I might include this northern New York section) will be a very satisfactory growth. Every spear, however, that stands later than July 4 has been steadily losing value. We need a revolution in our notions of haying. When we discuss feeding we place especial stress on the concentrates; what kinds to feed, how much to feed, what to buy and how and when to buy, when the hay really is the most important item, that is; where hay constitutes the bulk of the coarse food. Every observing feeder has noticed how quickly the cows responded at the pail when a change was made, either by accident or design, from poor hay to good hay, and yet we go on year after year, waiting for the grass to get "some substance" before cutting. We ought not to need the chemist to help us out. Our flow of milk always keeps up until about June 20 to 25 in this latitude, provided always that food is in abundance. The shrinkage, if it comes, does so not from lack of "substance," but from lack of pounds.

LATE CUT GRASS.—At about the time this so-called "substance" begins to show up, if the milk flow is kept at anywhere near a normal one, the concentrates must be poured in, and quite liberally, too. We have not reached perfection yet on our farms, having to cut after July 15 to finish, but the extremely late wet Spring pushed everything away from us. We made a commencement June 23, and had six days in succession without a drop of rain, perfect hay weather. We secured 75 tons of as nice clover hay as a man could wish on one farm. It won't require 10 or 12 pounds of protein food next Winter to get milk with such hay, fed with corn silage. The protein question which we have so frequently alluded to as a burning dairy problem, may be partially solved at least by a more determined effort to cut grass and not hay. It is not done by simply writing or reading about it. With the increased corn acreage over former years, and the labor involved in caring for it during the month of June every year, and this year two weeks more must be added, before the cultivators can be laid aside, there are two avenues of escape; more labor or less corn! Corn we must have.

THE LABOR PROBLEM is not always solved so easily. If the dairy farmer who buys feed will stop with his load and figure with a one-cent pencil he will soon surprise himself by finding out that a ton of bran, costing $18, and feeding 30 cows 10 days, will hire a man in haying for 10 days, or a much better plan, hire him for nearly three weeks before haying, and get other work out of the way, permitting the regular farm labor to do this haying job, which always costs more per day than other farm labor. We are therefore prepared to get in from 40 to 50 tons of early-cut hay that may lack "substance," but cows fed upon it will not only make milk, but keep in condition as well. This 40 tons of hay will, to a most obstinate farmer, be considered worth $1 a ton more, I say $2, and it can be demonstrated any time with a good dairy cow in a warm barn in midwinter. This $18 investment in labor has returned us therefore a pretty good interest.

THINK OF THIS.—The man who forgets to put in the draw-bolt never starts his load, although it is a small piece of round iron weighing not over one pound. It would be false economy to spare the money to buy this bolt under the caption of frugality. Much false economy is practiced every day on the farm, and a lack of labor at a critical time may be truly classed as one form. Some days a man can earn $1.50 if we are only wise enough to have him ready on the right day. We have never been stingy with labor; in fact, it has been a friendly neighborly criticism that we hired twice the men necessary, and if one were looking for extra men he would no doubt find them at Cook's, and sure enough I have wondered where they all got their pay, but while it has been a hard rub the machine still runs. It is too late to cut hay in June this year; I only hope that every dairy farmer who reads this will begin a careful study of hay values, and study from now until next June on how to get the farm word dovetailed, and haying for northern latitudes out of the way before we celebrate our independence. One point more. The clover stands large enough as I write to cut a small swath upon the early-cut field, and with occasional showers will again cut a fine crop in September of one ton of cured fodder to the acre, and with abundant rains must exceed this amount. Do you know of anything better in the Fall months than second-growth clover and grasses, which are always worth more on a dairy farm to feed than for manure and mulch? The ordinary pasturing of meadows as practiced is no more or less than criminal farm practice, but the feeding of a fine second growth is a good business proposition, and we practice it.

GRAIN AND GRASS.—With the heavy growth of green forage crops I was quite determined not to feed any grain feeds this Summer, feeding not only liberally but lavishly of oats and peas, but the cows could not eat enough of it. We have therefore commenced with a grain ration of four pounds a day, two pounds middlings, one pound ground oats, and one pound dried brewers' grains. This small ration seemed to fill a demand. The milk shrinkage was checked and a slight gain recorded, not quite enough to pay for the extra food. Before feeding oats and peas Alfalfa and other clover was fed for two weeks. When the change was made a noticeable shrinkage took place. The oats and peas are so very rank that it is a physical impossibility for a cow to get dry matter enough out of them. It is dry matter she must have, provided it comes in the right form. The smaller growth of Alfalfa gave more dry matter and probably a little more protein. We shall soon change back from oats and peas to the second cutting of Alfalfa. We shall then be able to give results again. Enough dry matter in an easily digestible form we must have. The short pasture grasses are concentrated goodness. The oats and peas do not contain as much easily-digested dry matter, hence the animal demands the extra grain ration.

GERM LIFE is now in its most active growth. Every source of contamination needs attention. A fruitful medium is found in the low, wet, marshy places where cows are wont to stand these hot days. Stagnant water and animal excreta combine to make a most favorable breeding ground. Every handler of milk is familiar with the barnyard flavor, so called. The germ gets on to the flanks and udders. The udder appears clean, and the milker soon has germs and milk combined. The very rapid development causes trouble the next day. This is one of the germ flavors we find so difficult to destroy with lactic acid. It will still remain in cheese after curing as pronounced as when first developed in the curd. A double furrow through the center of a swampy place, and then one furrow plowed in the subsoil, will drain out these objectionable places, and do away with the trouble, and more, the cows will not drink this stagnant water, which is detrimental to health. I do not think the effect will be noticeable in the milk to such a degree as we have been wont to believe, the trouble being an external one, by open contact.

MILK TROUBLES.—The troubles with milk occasioned by food and water are rare. The troubles arising from germ contact after milking are not rare. I know of no way from a business standpoint to deal with these problems but to put milk at a temperature where the germs will not develop. It is gratifying to note the change of sentiment from Pasteurization instead of towards it—obtaining the same or more satisfactory results by refrigeration and sanitation. We might cite the great interest and spreading activity for farm separators in the creamery sections. I believe this system is well grounded upon a right principle, viz., that of reducing at once the volume of corruptible matter and placing the comparatively small amount of cream at once under low temperatures. It seems to me that the success must depend upon this idea as a foundation principle. The great milk-shipping interests of New York fully understand the necessity of getting the milk into cold water at once after milking. I have studied the care given to milk for New York shipment, and the attention given to milk peddled in our small villages with the firm conviction, backed up by drinking milk in New York and nearly every town in our State, that New Yorkers get better milk than the small country towns and cities, although transported from 100 to nearly 400 miles. Immediate refrigeration is responsible. I am earnestly looking forward to the time when milk for cheese making will receive the same treatment accorded to milk for long shipment. This may in part answer a question from a friend in the cheese section of western New York to give some rules for care of milk for cheese making. Briefly, after milking cool the milk as rapidly as possible to 60 degrees, and keep it there until the maker gets it. If this is done, the morning's milk may go unmixed, without cooling at all. H. E. COOK.

Crimson Clover Hay for Horses.

Is Crimson clover hay a safe feed for live stock, especially horses? When is the best time to cut and cure it? H. C. C. M.

A number of cases are reported from Delaware where horses were killed by eating Crimson clover hay. This hay was too ripe before it was cut. When over-ripe the long head of Crimson is covered with hard sharp hooks or spines. In the cases mentioned, large hard balls were found in the stomachs of the horses, and it is supposed that they were formed around these over-ripe clover heads. We have fed the hay to horses without injury, but would prefer to feed it to cows. We prefer to cut the clover just before the bloom is at its best. Crimson clover is not very satisfactory as a hay crop, for it must be cut at a time when we are pretty sure to have rain.

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Magnolia, Md., Jan. 17th, 1900.
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JOS. HAAS, V. S., Indianapolis, Ind.

NOTES ON DAIRY WORK.

In dairy work there are three very important things; brushes and plenty of clean white dish and wiping towels (not rags), scalding water and sal soda. The virtue contained in a pinch of sal soda cannot be estimated. It does not take very long to run hems in towels for dairy work. There is nothing better than flour and salt sacks; they are soft and pliable, also easy to wash. Have several dishcloths; don't use one for all the dairy work; one for separator, another for the butter utensils, and still another for milk pails.

Many farmers and dairymen have not the conveniences for ripening cream properly, and therefore cannot make a first-class article, and also lose much butter fat in the buttermilk. Keep the cream sweet and frequently stirred up to 24 hours before churning; put on the stove a boiler of water as early in the morning as possible. When hot take your washtub (or tubs if you have several cans) and place cream cans in, filling around with the hot water. We used shot-gun cans for cream, and three would sit in a tub. We had a stirrer made of sheet tin, just a little smaller around than the cans, with long rod for handle, this could remain in the cans and be lifted from one to the other when stirring. A dairy thermometer is used, and constant stirring until the cream reaches from 86 to 88 degrees, when the cans are taken from the water and placed where as even a temperature as possible could be maintained. Stir frequently, and by the next morning it will be thick and velvety. Do not fill the churn too full, as often this is done to hurry matters, when it is a loss in the long run. By salting butter in the churn no mottled butter will be had. When the butter is the size of wheat kernels stop churning, draw off buttermilk, put in pail of brine, which cuts the buttermilk out, and the butter does not have to be worked to get it out. Draw off and put on clean water until no milky water appears; drain and salt, working it in the churn until in large lumps, the principal working being done in the churn. When taken on to the worker or in bowl, only work or press enough to get the water out, and get in shape for printing or packing, as the case may be. Two-thirds of the creamery butter is overworked, the grain is spoiled and it is salvy, but it is *creamery butter*. We have bought creamery butter in New York, Colorado, Nebraska and Missouri, and from noted creameries, but we find good country butter made on creamery principles is usually the best. MRS. FRED. C. JOHNSON.

Missouri.

Milk Producers are Gaining.

The problem of producing milk at a loss, and being at the mercy of the dealers, is being very satisfactorily solved by organization and coöperation. One year ago last February a meeting was called and preliminary steps taken for building a plant for manufacturing and shipping our milk, and on April 1 all the milk but that from three or four small dairies was received at the farmers' plant, built by those jointly interested by taking stock amounting to $3,000. From then till now we have manufactured but one month's milk. With this exception it has been sold for periods of six months at a time at a fixed price each month, so that we are well satisfied, and better prices have been the result. Smyrna, four miles south, constructed a plant at the same time, making two in this section, upon the same plan as the one here, and with equally as good results.

Last Winter another was built and equipped at Poolville for making cheese, which has been very successful in producing a prime article selling for top prices; still another at Lebanon, a few miles west, which commenced manufacturing the milk June 1. Another plant was bought at Sherburne Four Corners, making five plants now owned and managed by ourselves within 18 months. Both Smyrna and Earlville receive about 22,000 pounds each daily. The success attending these plants is stirring other towns around to action, and several more are to be built during the coming Winter. One object gained is that the surplus milk in the market can be controlled and turned to our profit by making up at home. The flow of milk this season has been large, and continues good; pastures supplying a good amount of feed for stock. We are now in the midst of securing our hay crop, which is considerably larger than for two years past. Wheat and oats look well. Pea picking is also in progress and yielding well. W. F. JAQUITH.

Secretary F. S. M. P. A.

Air Blast Churns.

Readers are sending us circulars of churns which are said to operate by forcing a blast of air through the cream while the churning is going on. These churns vary in construction somewhat, but the principle of blowing air into the cream is about the same, and great things are claimed for it. One of these churns was brought to the Missouri Experiment Station for test recently, and after careful trial a report containing the following was printed:

The arrangement of air pipes does without doubt force air through the cream, especially at the start, but it is not at all certain that this aids in the churning. This might help to take out bad odors if the cream contained such. But the revolving dash in the center of a stationery vessel fails to agitate all parts alike, and requires a longer time than a box or barrel churn, as shown by the above test.

The machine does not meet the true scientific requirements of the best churning apparatus, and is exorbitant in price compared with small-size barrel churns, and cannot be recommended to the farmer. While it is no doubt true, as claimed by the inventor, that butter can be churned in this machine in from one to five minutes, this fact is no less true of any ordinary box or barrel churn under the same conditions. By raising the temperature of the cream high enough, butter may be produced in this short time by almost any churn. But what kind of butter results, when using temperatures of 75 degrees, or even 80 and 90 degrees? Anyone who knows the elements of dairying is acquainted with the fact that such high temperatures will produce butter of poor quality, soft and salvy, weak-bodied and without proper grain. This one mistake of too high temperature is one of the greatest causes to-day of poor quality in butter made on the farm.

Live Stock Notes.

I have been trying, during several years, to raise turkeys. As so many died I tried to find the cause by opening them; various organs might be affected, but the liver invariably was. In the younger ones there were yellowish ulcers, and in larger ones the bile was coagulated in the liver. This caused the conjecture that the food was the cause. The turkey hen, in her wild life, must depend on insects, seeds and some kinds of green stuff. So, last Summer I penned the mother with her brood into a yard where I gave her hemp seed, millet seed, etc. By this means I raised three out of 15; one tom weighed 16½ pounds at Thanksgiving. Of a later hatching of 10 only two lived. I find one-fifth of hatched turkeys good results in raising them. How does this compare with the experience of others?

PIGS.—Some one wrote in THE R. N.-Y. about wheat bran as a feed for pigs. I have a fine sow which I was told was too fat for breeding purposes. I gave her three quarts of bran twice each day last Winter, and in March a butcher wanted her to kill for pork, but she had her family in April. Six quarts of bran weigh four pounds, which can be bought for five cents; hence, a 250-pound sow can be kept on the price of one glass of beer each day! I have generally weighed sucking pigs during the first four weeks, and find that they weigh about eight pounds when two weeks old and 14 to 16 pounds when four weeks old. These results for a litter of eight or fewer pigs, the mother being one year old. A. C.

Nassau Co., N. Y.

Water Gas Tar for Flies.

Several readers have asked H. G. Manchester to tell more about the use of water-gas tar on cattle for killing flies.

In reply to E. S. K., the material we use for a fly repellant on cows is water-gas tar, which is a by-product obtained in purifying gas that is made from water and coal, with other substances. It is unlike ordinary coal tar in that it is thin and watery, and can easily be sprayed with an atomizer sprayer. Only a very slight spraying is necessary. We should be afraid to use coal tar, as it is thick, and a great absorbent of heat. A spot of it on the hand held in strong sunlight will burn the hand quite severely. It would be apt to injure skin of cows and take off the hair. We presume the material we use can be obtained wherever water gas is made. We buy it for not over $1 per barrel, but have to return the barrel. Coal tar might work satisfactorily if it were very much reduced with water and a little kerosene. We should never apply any of the fly repellants with a swab, as too thick a coating will be used. Atomizers do satisfactory work. H. G. M.

Death in the Silo.

In THE R. N.-Y., July 6, R. H. M., Lakeville, N. Y., asks about painting a silo on the inside, and the suggestion is offered to use gas tar put on hot. I cannot give the particulars about the painting of the inside of a silo, but I can give you the *result* of one, which was a very sad one indeed. Ballard Bros., of Niles, Mich., painted their silo (and with gas tar, I think); when they began to fill it one of the sons went into the silo to tread down the fodder, and was overcome with the foul air. A second son went to his assistance, and was likewise overcome. A third man went in hastily, put a rope around the second son, and he was drawn out and revived, but the first one overcome lost his life. While there may be ways of painting with gas tar, and no evil result from its use, yet knowing what I do I should hesitate about using it. H.

R. N.-Y.—We have had several reports of death in the silo, and followed one up closely to see what caused the trouble. The silo was airtight—being built of stone and brick. Several people went down into it in the morning before the filling for the day had begun. They were overcome, and it was found that carbonic acid gas had formed during the night. This being heavier than air sank to the bottom, and was strong enough to kill a man. In the average stave silo this foul gas would have drained out. A few moments' work with the cutter in delivering more silage into the silo would have stirred up the air and gas together, so that there would have been no danger. Also, if the silo doors had been open the gas would have passed away. We do not believe the fumes of the gas tar caused the trouble in the case mentioned. No one should go down deep into an airtight silo while it is being filled without making sure that the gas has drained out. Men have been killed by this gas by going down into deep wells.

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Inside a stove to heat,
He didn't dream at all th[illegible]ght,
His sleep was calm and [illegible]t.

Some of him slept upon t[illegible]ill,
Some of him in the va[illegible]
And some beside the tw[illegible]g rill
That bubbles through [illegible]dale.
—Melb[illegible] Leader.

Cornell University Library

"De man dat allus sp[illegible] de troof," said Uncle Eben, "dese[illegible] a heap o' credit. But he wants to[illegible] kyahful not to talk any mo' dan is absolutely necessary."—Washington Star.

"Papa," asked Dicky Tredway, "what is a non-suit?" "I think," replied Mr. Tredway, "it was the kind that Adam and Eve wore the Summer before the fall."—Detroit Free Press.

"The new telephone editor is a humorist." "Well?" "He heads an account of the cannibal islanders eating the German scientist 'Trouble in Their Midst.' "—Washington Star.

"It takes Tom a day and a night to tell a story." "He'd make a good bookkeeper, I should think." "Why?" "Never short in his account."—San Francisco News Letter.

Mother: "Tommy, I'm sorry that you and your little sister quarreled about that orange, and that James had to interfere. Whose part did he take?" Tommy: "Whose part? He took the whole orange."—Credit Lost.

Mrs. Cawker: "I am so glad that my little boy went to the head of his class this morning. How did you come to do it, Tommy?" Tommy: "The rest of the fellows had guessed all the other ways of spelling the word."—Leslie's Weekly.

"Look at those two bad boys in the river," said Mr. Markley, as they crossed the bridge. "By the way, dear, that reminds me," replied his wife, "let me have a couple of dollars? I've got to get a pair of undressed kids."—Philadelphia Press.

He: "I saw your old neighbor, Mr. Skinner, to-day." She: "Did you? What is he doing now?" He: "He's interested in one of these wildcat mining companies." She: "The idea! I never knew you had to mine for wildcats."—Philadelphia Press.

"Why do you shoot a lot of fireworks to show your patriotism, instead of learning the Declaration of Independence by heart?" "For the reason," answered the man who is never at a loss for an answer, "that actions always speak louder than words."—Washington Star.

"I an trying to get some information about a friend of mine named Fox, who came out here," said the stranger from the East. "They tell me he died of some throat trouble." "I guess that's about right," replied the cowboy. "What was it—bronchitis?" "Bronkitis? That's a new one on me, but I reckon I see the connection. He stole a broncho."—Philadelphia Press.

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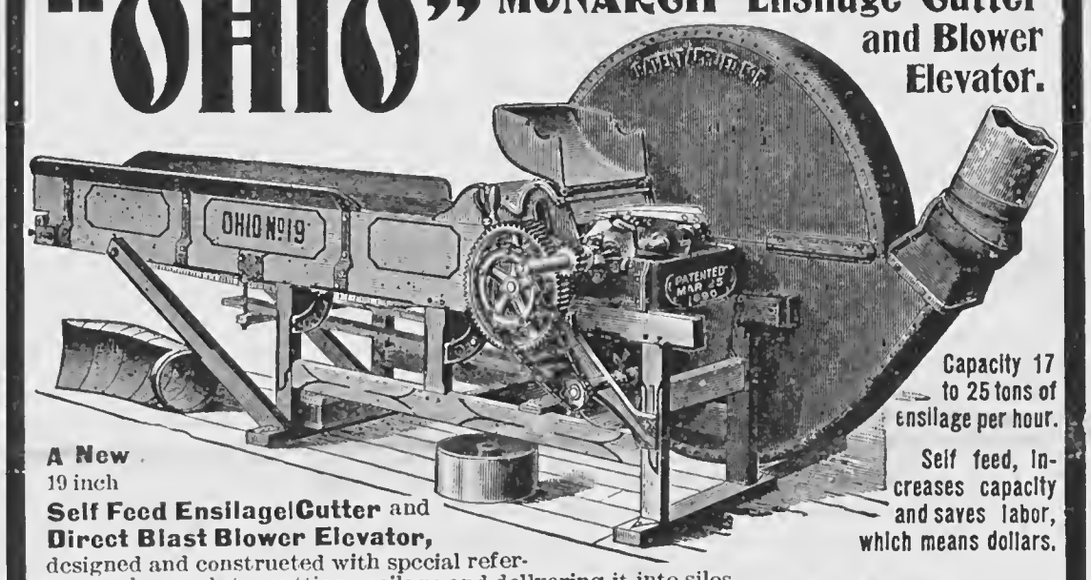

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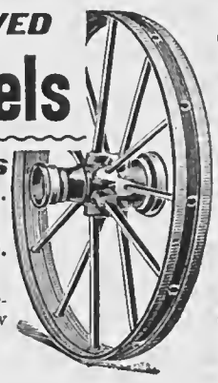
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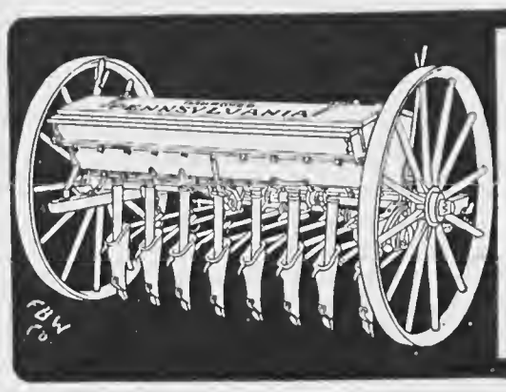

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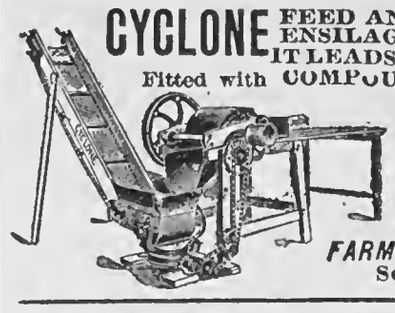
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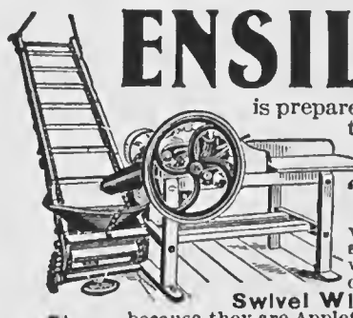
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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2689. NEW YORK, AUGUST 10, 1901. $1 PER YEAR

A YEAR FROM THE START. FIG. 237.

THE BRIARCLIFF MANOR SCHOOL.

WHAT THE STUDENTS ARE DOING.

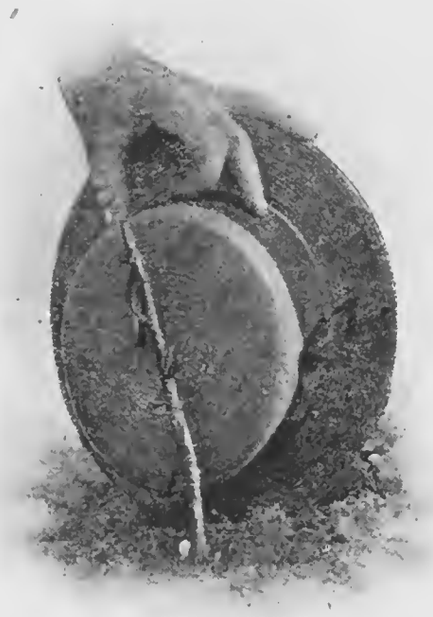
How It Differs from Other Institutions.

After phenomenal success in its unique method of teaching agriculture, the Briarcliff Manor School, situated in the central part of Westchester County, N. Y., is about to complete its first year of active work. It was founded as a private enterprise by a wealthy New Yorker, and thus far has more than come up to his expectations. There are now 27 students registered at the school, two of whom are women. The latter do practically the same work as the men, which consists of putting everything they learn to practical tests in the field. A remarkable fact in regard to the class of students at Briarcliff is that all but one are city bred, such cities as Boston, Philadelphia, Brooklyn, Pittsburg and New York being represented at the school. Students are also enrolled from the Hawaiian Islands, and Amsterdam, Holland, as well as from other distant countries. There are two general types of students at the school; those of considerable wealth who are studying agriculture with the idea of becoming competent in controlling agricultural land, and students who expect to make their livelihood from the practice of agriculture by becoming farm managers or experts in some particular line.

The school was designed with the idea of meeting the growing demand of city-bred people for rural life and rural pursuits, and of instilling into students a greater love for nature and the occupations of the more sparsely-settled country. In its methods of teaching, the school differs from Cornell and other agricultural colleges, by limiting its scope exclusively to the practical, and giving less advanced work in the sciences as well as other studies. The school endeavors to give the student the same experiences in its work that it would encounter in the outside world. During the Summer the instruction is devoted to field work, the instructors and students laboring together. The women students of necessity engage only in the lighter forms of labor, although they study the work quite as thoroughly as the men. The afternoon is spent in the class room where the fundamental sciences, such as chemistry and botany, are taught, and the practical work of the morning is discussed at length by instructors and students. Much time is also spent in the study of business methods as applied to commercial agriculture. This branch of study is recognized as one of prime importance, and one of the chief objects of the teaching is to impress the student with the need of accuracy and minute care in all his or her undertakings. It has become recognized that for success in agriculture, more than in any other commercial pursuit, great care must be taken with details.

In answer to a question as to the cause for the growing demand for women as farm managers and horticulturists, George T. Powell, the principal of the school, said: "Women are more painstaking in small details than the men, and in horticulture this is of prime importance. I think in the future horticulture will be a great field of employment for women." As an illustration of the kind of work accomplished by women, Mr. Powell pointed out work in hand cultivation in the field, which had been done by women students. The contrast between that and the work done by the men was quite marked, the former showing more painstaking effort. During the past year there has been a woman student at the school, from Honolulu. She has taken special work in flower culture with the idea of soon returning to her native country, where she intends to engage in the raising of flowers as a commercial enterprise.

Of the 65 acres making up the school grounds all are under close cultivation, the labor being done entirely by the students. The practice of tile drainage is followed quite extensively, and intensive methods are practiced in all the processes of cultivation. The soil is treated heavily with commercial fertilizers. These the students mix themselves, following formulas which have been found by experiment to be the best for the particular soil for which the fertilizer is intended. By this method the soil which had become poor from former neglect now furnishes astonishing-



THE START OF A PEACH TREE. FIG. 238.

ly large crops. A small peach orchard but two years from the bud had in many cases over 100 well-set peaches to each tree. These were nearly all removed, a large crop being anticipated for next year. Considerable space on the farm is devoted to experimental truck gardening, in which the students show great interest. About 50 varieties of potatoes are being grown in one plot, also a number of varieties of strawberries, and all the common garden vegetables are being experimented with in others.

That this educational venture will prove a success is assured; already a large enrollment of students for next year is promised. Such a school fills a need which no other institution has yet ventured to cope with. It is neither a charitable institution, nor an institution limited to a certain few, but a school where all youth interested in nature and rural pursuits may get what is wanted by going directly to the soil for knowledge. That a student should go to the Briarcliff School rather than to a State institution, where there is no tuition and consequently less expense, argues well for the success of the school.

In explanation of the pictures we would say that Fig. 238 is a peach tree as they were when planted out in May, 1900. They were cut down to from 16 to 20 inches tall. Fig. 237 shows the same trees 14 months later. They are between six and 7½ feet tall, and from four to five feet through. All of them set peaches, some of them carrying as many as 120 to 139 perfect fruits. As it is not intended to permit these to carry fruit until next year, they were thinned so that from one to three peaches are left on each tree to see if the variety is true to name. The soil is a gravelly knoll, and this part of the field was considered to be the poorest part of the farm. The whole farm has been let out on shares for several years, until no one would take it, as it was so run down. After planting the trees the land was prepared for cantaloupes and watermelons, which were grown successfully between the trees, the watermelons giving good returns. The cantaloupes were lost by blight in August, when within seven to 10 days of being ready to market. They were an exceptionally promising lot. No arrangements were made to combat the disease. We hope to pull this year's crop through all right. Crimson clover was sown in between the melons, which was left on the ground all last Winter as a cover crop, and plowed in this Spring. Varieties of peaches on trial are Studley, Niagara, Crawford's Late, Clifton Park, Fitzgerald and Champion.

Fig. 239 shows students scoring dairy cattle. In the Winter months practical work is taken in the cattle barns of Mr. Law, the students cleaning and milking the cows. In the picture a party is discussing the merits of two individual cows from a dairy standpoint, and scoring them for their points. The score cards are handed in to the professor in charge, who goes over the animals with the students, ascertaining their reasons for giving the various scores, and at the same time making criticisms.

Fig. 240 represents a party of students working in the greenhouse with violets and carnations, while Fig. 241 shows the dormitory building as it was when opened April, 1901. Since then the grounds surrounding the building have been graded and made ready for laying down as a lawn. A. F. B.

GRASS SEEDED WITHOUT GRAIN.

The "Clark" System of Grass Culture.

PART II.

How often does Mr. Clark work the ground?

From 15 to 25 times. As was stated last week, he uses a digging or lifting harrow, which tosses up and airs the soil instead of turning it over as a plow would do.

Why does he object to a plow?

Because he says it turns the soil over, leaving the top at the bottom. Subsequent tillage is at the surface. Thus the roots and seeds of weeds and foul grass are not disturbed; they are simply planted deeper. They live at the bottom of the furrow and grow again later, along with the new grass. When a Cutaway or spring-tooth is used this packing and burying cannot occur, for the soil is tossed or shaken up, and the sun and air destroy the weeds and poor grass. Many of these cannot be killed until the roots are cut off and exposed.

SCORING DAIRY CATTLE. FIG. 239.

Do you believe in this theory?

Yes, I feel quite sure that it is sound. I have tried preparing grass land with a smoothing harrow like the Acme. We used this tool again and again, until the upper surface was fine and smooth. It seemed like a perfect seed bed, yet, the first Spring after seeding, the field was well filled with weeds and coarse grass. I think the seeds and roots of this foul stuff were down below the working depth of the Acme, and thus were not destroyed. I feel sure that a Cutaway or spring-tooth would have dug them up and killed most of them.

But do not farmers obtain good grass with the ordinary methods?

Yes, I know of crops nearly equal to Mr. Clark's where the ground was merely plowed and harrowed once before seeding.

How do you account for that?

Such grass usually follows a crop like potatoes, berries or onions, where the most careful culture was given during the growing season. Thus the crop was kept free from weeds, and the soil thoroughly stirred. All this culture helped fit the soil for the grass. We must remember that Mr. Clark is talking chiefly about old meadows or stubble fields on which there are sure to be a great many weeds. He says that if we grow corn and potatoes for five years we would be obliged to work the soil six times at least each year. When we seed land down to grass for five years, and work it 25 times, we do much the same amount of cultivating that we would if the ground were to be in hoed crops. Under the Clark system the land is supposed to remain seeded down for years. Therefore he works it again and again with the Cutaway—going up and down, back and forth and around, until it has all been tossed and turned up to the air and sun. Mr. Clark also insists that the land must be level and well graded.

Do you consider this so important?

Yes, I feel sure that it pays to put reasonable time with a scraper in smoothing and filling up the holes and low places. They hold water, and in time of flood the sand and stones wash into them and kill out the grass. Mr. Clark's field is very smooth, and grades about like the cement floor in a stable, so that there is no heavy wash. On most of my own fields it would be impossible to grade the land in this way, but most mowing lands can be made smoother and more even with a little careful work. I firmly believe that most of us fail to work the grass seeding lands half as much as we should.

Did you say that Mr. Clark does not use stable manure on the grass?

He uses only chemical fertilizer.

Why?

He gives a dozen reasons for his practice. The manure, he says, brings weed seeds to the land. Weeds are more out of place in grass than in any other crop, because you can cultivate or hoe them out of the hill or drill, while there is no way of getting them out of grass without tearing it all up. Manure should go on a cultivated crop, and by its habit of growth and late season corn is best adapted to take care of the manure. A mulch on the grass is just what you do not want, and the fertility in manure is usually too slow to bring out the grass quickly. Soluble fertilizers scattered evenly over the grass will feed it well.

What fertilizer does Mr. Clark use?

This year he tells me that he used a mixture of one-third each nitrate of soda, muriate of potash and fine ground bone. This is a somewhat new combination for him, but in this wet season it gave good returns.

How much did he use?

He put on 800 pounds of the mixture per acre. This is a much heavier dressing than most of us use. I have heard farmers say that in a very wet season grass needs but little fertilizer, provided it has plenty of moisture. Mr. Clark says that if this wet season has demonstrated any one thing it is that grass needs something more than water—the things needful are sunshine and soluble plant food. I think some experiments with this Clark system have failed, because the heavy seeding gave twice as many grass plants to the acre, while no more fertilizer than usual was put on. I will try to speak of seeding next week.

H. W. C.

SPRAYING AND POISONED STOCK.—Regarding poisoning stock by spraying, I have sprayed trees for more than 50 different people, and have yet to learn of the first case of poisoning by the use of either insecticide or fungicide. Eight years ago, when I commenced to spray, people were very timid about the use of Paris-green, and refused to have trees sprayed which stood near the house, or in land where grass was to be cut. To dispel this fear I tied a four-months' calf under my apple trees within 10 minutes after spraying the trees with Paris-green, one pound to 150 gallons of water. I sprayed four times, and tied the calf under different trees each time, and I saw no bad effect whatever from so doing. People here have no more fear now of poisoning their stock from spraying their trees than they have of eating potatoes whose tops have been sprayed with Paris-green for destroying the Potato bug. S. R. W.

North Leominster, Mass.

NO RETURNS FROM SPRAYING POTATOES.

C. E. Chapman is right about spraying potatoes for blight. I only tried it one season, but have talked with careful men who have sprayed three seasons and then admitted that they did not know positively that it did any good. They were up-to-date, and experiment stations said spray, so they sprayed. I have seen a 10-acre field of potatoes sprayed six times, all except eight rows, first when plants were six inches high, and kept "whitewashed" till blight struck them about August 12. The eight rows unsprayed were just as good, yielded as well, and there was not a particle of gain from all the labor and expense for material. I don't say that no one ever got good results, but there are conditions affecting blight that no man understands. Usually blight does not attack a crop until about the time blossoms fall, and ordinarily if blight is prevalent, it does attack at about that stage of growth, whether vines have been sprayed or not.

AT WORK IN THE GREENHOUSE. Fig. 240.

The average farmer who attempts to bother with Bordeaux when haying (and this year hoeing, too) is driving will soon get enough of it. I say, prepare your ground thoroughly, and fertilize abundantly, if chemicals are used, not less than a ton per acre. Use the best of seed, plant at the right time, and rush them from start to finish. Don't let bugs or weeds get the advantage, and you won't be beaten by your neighbor because he sprays and you don't.

Massachusetts. E. D. GIBSON.

I have not yet commenced spraying potatoes for the reason that, growing for seed purposes exclusively, I plant very late (this season July 9), believing I can thus produce seed of higher vitality and vigor. I shall continue spraying for the reason that I dare not do otherwise, but of its utility I am not fully satisfied. I have more faith in the disease-resisting qualities of certain young vigorous varieties, and thus far am discarding varieties at the first hint of weakness. I am dreading the time when Carman No. 3 and Sir Walter fail me, and will give next year $100 for one bushel of a new variety that excels the former. Last season my Uncle Sam blighted in spite of spraying, while none of my other varieties seem

DORMITORY AT THE BRIARCLIFF SCHOOL. Fig. 241.

to need it. During period of active growth I think potatoes should be sprayed at least once weekly. Commence as soon as necessary to use poison for the bugs. E. A. HILL.

Greene Co., N. Y.

About here the blight or rust does not usually strike our potatoes until somewhere from August 10 to 20. I have not sprayed yet, but expect to a little later. Very few farmers use Bordeaux Mixture. I have used it for two years, and am fully convinced that it pays to do so. As the Bordeaux is a preventive rather than a cure, one does not always hit right, but one year with another it certainly pays. Last year the potatoes through this section were terribly affected with blight. I used the following mixture, and got a good crop: Four pounds lime, four pounds copper sulphate and one pound Paris-green to a barrel of water. On one piece where we made only one application of Bordeaux we worked from each outside toward the center. As we ran out of the mixture before the center was reached there was a narrow strip left. This was indeed an object lesson, the tops being completely dead two weeks or more before the others. It happened that the dividing line was near the center of the Clark's No. 1. There was so much difference in yield that I measured the product and computed for an acre. This showed a difference of 79.4 bushels per acre in favor of the sprayed plot.

Colebrook, N. H. B. A. C.

FARMING IN A WET SEASON.

Early and constant rain upset my plans, and I find all of my calculations transposed. Corn was planted before the long May rain, but did not come up until after the rain ceased. It looked so backward and yellow that I feared the silo would not be filled this Fall; but when the hot weather came on, and we gave the ground good tillage, how it did turn dark and grow! It is uneven, but I think will be ready for the silo by the middle of September.

Some of my mistakes look so large to me that I hope I shall not make them again, but of course shall make others. My worst one the past season was in not seeding all bare land to rye last Fall. Two of my best fields have no crop this season to bring income as a result of such failure. Had I seeded to rye I could have harvested 13 acres of good grain. I have one field plowed, and am seeding to Canada peas and oats to-day (July 29). I am asked whether I shall get a crop. I don't know. They may be too late to harvest, even as a fodder crop, but at 95 cents per bushel for Canada peas I think they will pay to plow under. The other field had millet after hay last season, and I put manure on it, expecting to plow and plant to late cabbage, but I believed in the advice of the Hope Farm man and took care of what we had planted rather than neglecting them and putting in more, so that manure is now forcing a rank growth of ragweeds and other weeds and grass. I shall plow this under within a few days and sow to rye. This, I think, should grow good potatoes next year. Through all of this the cows have kept right on doing their duty. Give me the cow, silo and soiling; less acres of planted crops, better manured and best of tillage. I think I shall make no mistake in this. How much better to take nature's workings, good-naturedly adapting ourselves to conditions!

Ontario Co., N. Y. C. R. WHITE.

EXPERIENCE WITH "CLARK" GRASS.

NOT A FAIR SHOW.—Last year I had about three acres of good ground that was seeded to oats in September, 1900. I looked the piece over, and came to the conclusion that there was not much of a seeding, so I went around one-half of the piece, intending to plow the whole, but it was dry and hard, and the ground plowed up in lumps, so that I did not finish. This was in August; in September I undertook to harrow the ground, but with all of the machinery I had I could not get the lumps pulverized, and had to let the piece go until the first week in October, after a rain; then I finished fitting the piece, and sowed 12 quarts of Timothy seed to acre, and 10 quarts clover, eight quarts Red and two quarts Alsike. I finished cutting the crop last week. I got three loads on the piece I left and did not plow, and one load on the part sown after the Clark plan, so you see the old way is ahead. The Clark grass seems to be thick on the ground, and if nothing happens will cut a big crop another year.

Cortland Co., N. Y. HOMER J. BROWN.

R. N.-Y.—This was hardly a fair test for the "Clark" system. The seed was put in too late and the ground was nowhere near as fine as Mr. Clark makes it. We feel sure that grass will make a better showing next year.

SUCCESS IN PENNSYLVANIA.—The grass seed which I sowed last Fall by the Clark method turned out well. It stood as thick on the ground on most of the field as a person could wish. It was stalk ground plowed down in the Spring with Crimson clover; worked it through the season to keep down the weeds. After harvest I worked it again, and drilled some good fertilizer on the piece; then sowed 12 quarts Timothy seed to acre with Cyclone seeder; covered with the weeder by going across drill marks and then rolling it down. Most of the seed came up in the drill marks where the fertilizer was put. I cut three big two-horse loads to acre, excepting along a piece of woodland. It was cut after oats and was commencing to get ripe. This is certainly the way to get fine hay. All through the season it was a dark green color and looked like wheat at a little distance. Several heavy rains put it down flat, but it was mostly standing up when cut. Part of the field on the slope was badly washed by rains before it had taken root, and some at bottom of hill was covered with mud. Where a farmer has a level field that does not wash I think this is an ideal way to get grass. Where a hillside is liable to wash in Winter I think by sowing oats it would hold the ground until Spring. I may try some that way this Fall. J. H. T.

Avondale, Pa.

WHEN TO FERTILIZE ASPARAGUS.

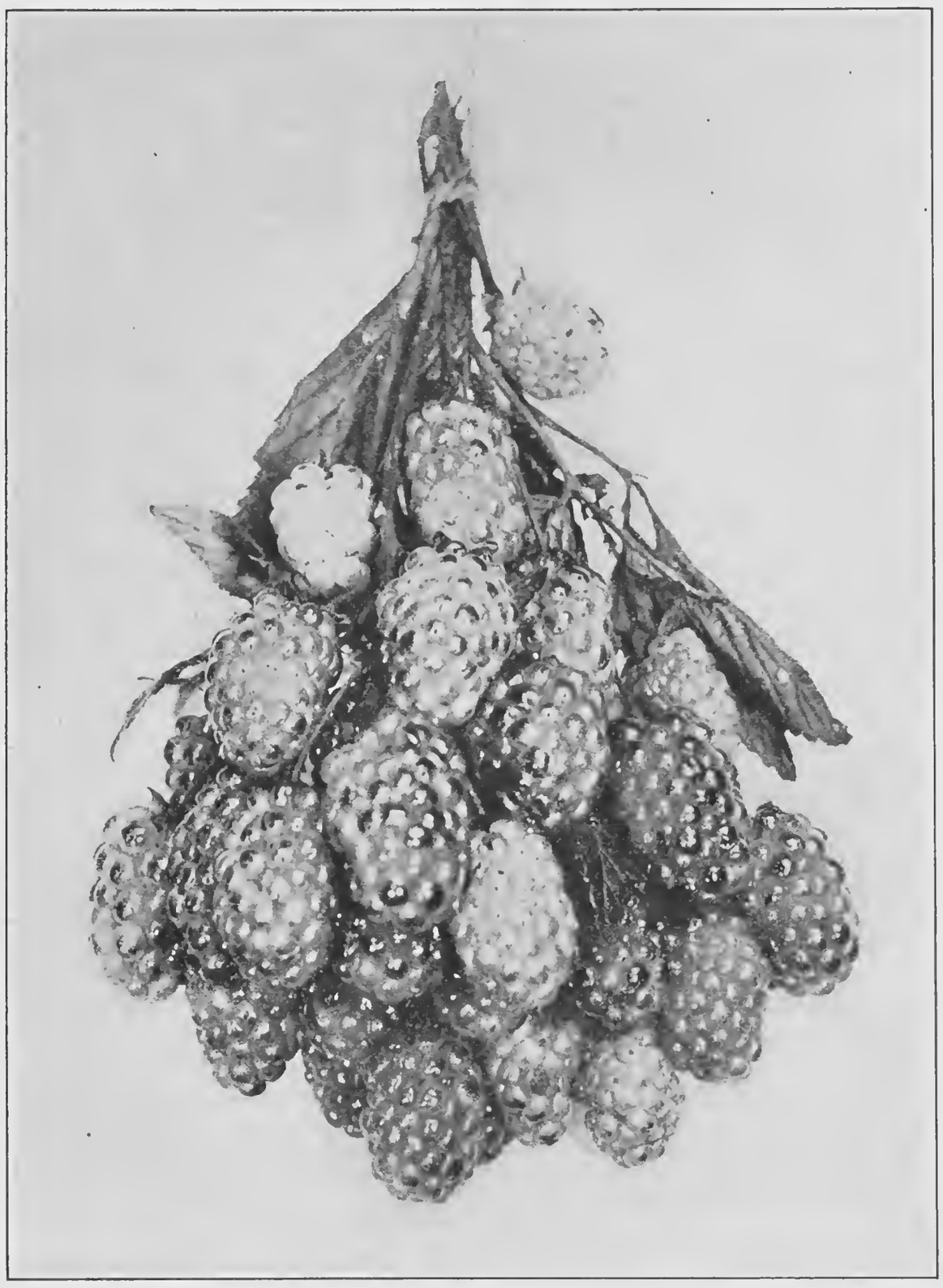
The Feeding of Deep-Rooting Plants.

On page 502 I find an inquiry from H. C. C. M. as to fertilizing asparagus in Fall, which, with the reply there printed, moves me to make some remarks. I grow asparagus in a limited way—about three-quarters of an acre—and the question of proper time to fertilize has been given considerable attention, theoretically and practically. I had supposed that plant food taken through the roots had to undergo a change—a sort of digestive or assimilative process in the leaves—before it could be utilized by the plant in making tissue. If I am correct in this, it follows that fertilizer applied to asparagus in Spring can assist growth but little so long as the young shoots are kept closely cut, as the plant carries no foliage by which to elaborate the tissue from the crude food. I think all plants other than annuals store up in roots or bulbs a supply of nourishment for producing growth the following Spring, and the first growth is made by the expenditure of this stored-up food already prepared the previous season. Watching the growth of shrubs and trees in Spring I have noticed how rapidly the young shoots push at first, but soon they come to a standstill, and after a short rest resume growth. I suppose the first growth is from stored-up food, then a pause until the new leaves prepare more food, when growth begins again. Asparagus has very large heavy roots, which hold stored, ready prepared, much material for growth. It is at the expense of this material that the asparagus harvest is produced. Reasoning thus I have applied in Spring a fertilizer containing potash and phosphoric acid, with some nitrogen; and when the cutting season is over I give a good dressing of nitrate of soda. Once in three or four years a dressing of stable manure in Autumn over the rows is used to keep up the supply of humus, and to keep the soil light. Such has been my practice, and my reasons for it, and my success has been such that no better "grass" goes into market.

In your remarks replying to H. C. C. M., you speak of asparagus being a deep-rooting plant and time being needed to get the fertilizer down to the roots. Did it ever occur to you that the great roots away down in the earth gather little if any food, but act as storehouses and coiduits for food gathered by the little feeding rootlets with their mouths near the surface? Such I think is the fact. My experience has led me to the conclusion that no plants gather much food in common soils at a depth of more than 12 inches from the surface. I have dug holes two or more feet deep, filling the bottoms with manure and compost, and set in them grapevines, and within 10 feet of them set other vines, only making a hole large enough to put the roots in, and one did no better than the other. I once plowed in a heavy dressing of manure, 10 inches or more deep, and never could see much benefit from it until it was plowed up again two or three years after. The roots of trees run sometimes many feet into the ground, but I do not think they go there for food; they go for anchorage and water. When building my present dwelling house I had occasion to excavate a dry gravelly knoll to a depth of six to seven feet. Roots of elm trees growing near spread near the surface with their fine rootlets. Occasionally I found a branch starting from the underside of a larger root and going perpendicularly downward. Those roots were straight stems, almost without branches. At one place, 70 feet from the nearest tree, I traced such a root six feet down, and at that point it was about five-eighths inch in diameter, not much less than where it left the horizontal root near surface. When cut at six feet depth water oozed from the part left, but the time was dry, and surface roots showed no such moisture. Is it not a fair inference that the function of that root was to get drink? Several years since our farmers' club assigned subjects to the different members for investigation. To one man was given the question at what depth to place fertilizer to grow sugar beets with best results. It was placed at varying depths from surface to eight or 10 inches down, and the nearer the surface the better the result. By surface I do not mean *on* the surface, but worked into it. From all my experience and observation I have concluded that plants feed only where air circulates and moisture is present, and that the supposition that deep rooting plants bring fertility to the surface from the subsoil is erroneous. Manure, to be of value to the plant, should be near the surface. M. MORSE.

Massachusetts.

R. N.-Y.—The experience of a practical man is worth any amount of theory, but it should be borne in mind that stable manure requires an appreciable interval of contact with the soil before the plant food is rendered available. If applied when cutting ceases, and prolonged dry weather should ensue, the chances are that much valuable time would be lost. While Mr. Morse's contention that plants feed chiefly by means of their surface rootlets is undoubtedly correct, the fact remains that asparagus is comparatively a deep-rooting plant, not sending its feeding roots as near the surface as most others. If soluble chemicals like nitrate of soda are used it is good judgment to make the application at the beginning of active growth, when the cutting season closes. As the cutting season for asparagus has been practically shortened one-half by the advent of the rust the matter becomes of less importance than heretofore. New Jersey growers of long experience prefer to haul their manure on the beds when the ground is frozen, as the work is easier and the beds less cut up.



NEW "WHITE" BLACKBERRY, ICEBERG. FIG. 242.

See Ruralisms, Page 550.

THE FARMERS' MUTUAL TELEPHONE.

How to Start in Business.

A RURAL SYSTEM.—We are just completing a mutual telephone system in our town and the surrounding country for five miles out. I often receive letters of inquiry as to the best method of procedure. Farmers are more self-helping than formerly. They take contracts for bridge and pike construction and other work. In telephone construction they are bothered by technicalities of legal procedure, and forms and regulations. In many places, however, they are learning to build telephone systems, and are saving a heavy amount (near 40 per cent) on their money. At the rate systems are being installed it will not be 10 years before almost every enterprising community will be using the 'phone. We have figured it out this way: If stockholders will associate together and take $20 stock each, buy their own instrument and put up and maintain the plant at cost, they will have a permanent investment of $30 or $40, which will bring them a free 'phone service. We find that our system will cost us about $100 a mile besides the cost of the instruments. In the rural lines we shall have about four to the mile, and the thicker-settled town subscribers will average it to about five to the mile of line. The line is put up of White cedar poles with a good switchboard, and the system will be as perfect as the Bell lines. Our 'phones cost $13 each and it is expected that a farmer can talk with ease to Chicago or Cincinnati.

PAYING EXPENSES.—Our sources of income are three. First, we shall charge toll of 10 cents for everyone using the line if not a subscriber, even if one's nearest neighbor. It is fair, since he is out nothing for the line or instrument. One subscriber objected, and said that if his neighbor should want to call the doctor he would go clear to town for him if necessary. We said that that was no reason why the man should not pay 10 cents for a service worth perhaps $1, and if you are so generous you can pay the 10 cents for him, or let the 'phone stand and go to town for him. We are not supposed to be interested in the friend; let him pay for the service. Second, we receive a rebate of 25 per cent on all matter going out from our switchboard to outside points over the New 'Phone Company's lines. Third, we shall charge a rent of $12 a year on all 'phones furnished to those not subscribers, and $6 a year for all non-subscribers who buy their own instruments. These three sources of income will, we think, pay all expenses and let the stockholder have a free service for his investment.

HOW TO START.—A few of us had seen something of the work elsewhere; met several times and prepared articles of association. These must contain certain conditions described in "An act concerning the organization and perpetuity of voluntary associations," which will be sent by the Secretary of State on application. These articles of association should be written on good paper, large enough to hold the names of all stockholders. A copy should be kept, since the original will be filed at the office of the Secretary of State. They must give the name of the corporation, the amount of capital stock of the same, the number of shares into which it is divided and the amount of each share, the object of the association and its plan of work, the name and address and amount of stock of each stockholder, the principal place of business, the term of life, the description of the corporate seal, the manner of election of directors and their number, together with the names of those who will manage its affairs the first year. After writing out the above articles we secured subscribers up to $1,000, and then called a stockholders' meeting and organized and proceeded to elect five directors. We also designated what lines should be built. The directors must organize within 10 days and elect a president, who may be superintendent, and a secretary and treasurer; both offices may be filled by one man. As soon as our stockholders' meeting adjourned we had the said articles acknowledged by seven stockholders before a notary, and forwarded them at once to the Secretary of State for filing.

WHY ORGANIZE.—I would not advise organization by association merely, because the advantages of incorporating are considerable. First, it gives business method and recognition and credit. Second, it relieves one of any liability for damages or debts which shall exceed twice the amount of stock. That is, if I have $20 stock I cannot be hurt more than $40 at most. We had an example in this State where farmers associated and each put up his native poles and his own wire. After a while the poles became sap-rotten and the wire came down, and the system was worthless. A wire got across the highway and jerked off a buggy top, causing a runaway. This was followed by a suit which resulted in $800 damage. Not being incorporated, each one was liable for the whole damage, with no relief. Had they been incorporated the line would not have been everybody's business, and would have been valuable and safe, and the liabilities would have been small.

The system cost a little more than we estimated, but we also used a little better material. We paid $150 for a 100-drop switchboard with 40 drops installed, when we expected at first to secure one much cheaper. E. H. COLLINS.

Central Indiana.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

The Arctic Apple.

W. F. C., Turner, Me.—Can you give me a correct description of the Arctic apple?

ANS.—The Arctic apple is of medium size, flat, dark or bright red, of fair flavor when fully ripe and keeps until late Winter in the Northern States with proper care. It is such a newly-introduced variety that little is known of it outside a few places in New York and the New England States. H. E. V. D.

Pruning Questions.

G. A. B., Germantown, Pa.—1. Is it ever proper to prune or cut back grafts? In March, 1900, I grafted a fine new pear on an Anjou. This tree is 11 years old, about 14 feet high, and 3½ inches diameter; a remarkably strong tree, but has never borne but once, and then had only two pears on it. The graft, now 16 months old, is about the thickness of a lead pencil, but is four feet 10 inches long. Should it be cut back? 2. I have two cherry trees 10 years old standing 18 feet apart. The Bigarreau is a rank grower, with leaves so dense as to exclude both sun and air. My gardener pruned it in March, cutting away one-third of the inner limbs, but it failed to bear. Entirely new growth, suckering from the limbs, has in several instances attained a length of 30 inches. Four grafts on this tree last March all grew nicely. The California cherry is a much more feeble grower, and it was loaded with cherries, but of four grafts on it, not one grew. What would you advise me to do with the Bigarreau? Would it not be advisable severely to prune the California, and if so, when?

ANS.—1. Yes, cut back this or any other graft when it does not grow properly. A graft is the same as any other part of a tree, and should be treated accordingly. It is a good plan to pinch back grafts the same year they are set, if they grow too tall and spindling, thus causing them to branch out and take better forms. 2. Cherry trees rarely need much pruning. They usually bear when they attain proper age, if conditions are favorable, and I would think these trees ought to bear at 10 years old. I would be patient with the strong growing one and enrich the other. Then if they do not bear properly I would graft the former and regraft the other.

H. E. V. D.

An Orchard on Long Island.

A. R., Brooklyn, N. Y.—Early last December I had planted at St. James, L. I., an orchard of Fall Pippin, Maiden Blush, Baldwin, Ben Davis, Bottle Greening and Tompkins King apples; Bartlett, Kieffer and Seckel pears; crab apples; Crawford Late, Elberta and Champion peaches; raspberries, blackberries, currants, Fay and Cherry, and gooseberries, Red Jacket and Chautauqua—about 1,750 in all. The soil is a sandy loam with a gravel subsoil. The trees were bought from a first-class house in Rochester, but they have not done at all well up to the present, owing to disappointment in not being able to get anyone to work in the Spring. The trees were not cut back at all. Should I leave them until next Spring, or would it do any damage to cut them back the first week of August, when I shall be able to see to it myself? They have not had any fertilizer, but I have had the ground plowed and am going to sow Crimson clover between the rows to plow in next May. We have had Peach curl, leaf rust on the apple leaves, and the buds on the cherries after opening into leaf seemed to turn brown and shrivel up. Should I sow the clover right up to the trees, or keep it a few feet away?

ANS.—It is probable that the varieties planted will do quite well on Long Island. The matters of cultivation, pruning, etc., are essential to success, and it is useless to continue keeping the farm with an idea of profit under any other conditions than the best of care will provide. In my opinion, August is a little late for pruning, but if it is not done too severely no damage is likely to result. In all probability a good fertilizer would benefit the trees greatly, and it would be well to apply it with the Crimson clover seed this Summer. It will do no harm to sow it close to the trees, if it is plowed down next Spring

H. E. V. D.

Lime or Wood Ashes for Strawberries.

What has been your experience with lime or wood ashes used on strawberries? Experiments seem to show that where the soil is quite sour, lime is helpful, but that when the soil is not sour little benefit is observed.

ANS.—I have applied wood ashes at the rate of two tons to the acre upon strawberries with the very best of results. My soil is a gravelly loam upon a clay subsoil, and in some portions of the farm what would be known as hardpan. There is more or less of acidity in this soil. I am satisfied that the lime in the ashes has particular value, and I intend to apply lime direct to the soil. I have found it of late almost impossible to plant cherry trees with any certainty of their growing beyond one year. Such varieties as Robert's Red Heart and the Elkhorn are among the most valuable of all our cherries, as also the Black Tartarian. It has been with great difficulty that I can get any of these varieties to grow of late years. I am going to plant again of all of these kinds, but shall first give a liberal application of lime before planting the trees. I shall then use wood ashes as the one form of potash to be applied, sow Crimson clover to give such nitrogen to the soil as will be needed, and get the soil in a good mechanical condition, as well as increase its ability to hold moisture. I have been exceedingly well satisfied with the effect of wood ashes, not only upon strawberries, but upon all kinds of tree fruits. There has not only been a fine growth of foliage, but the fruit has been of excellent quality, as the result of both lime and potash contained in the ashes. I believe that potash in wood ashes is in the best possible form for fruit, and where the ashes can be purchased at a reasonable price my own advice would be to use them freely. I believe there is value in wood ashes beyond the mere commercial value of the potash they contain. Good Canada hardwood ashes contain about 30 per cent of lime in the form of carbonate of lime. Soils are far more acid than they are supposed to be, and moderate applications of lime made annually are of greater value than heavy applications made once in three or four years.

GEO. T. POWELL.

What to Do With a Small Farm.

R. B. C., Easthampton, Mass.—Will you tell me what would be the best crops to raise on a 40-acre farm in New Hampshire? I am told that there is no stone on the place, and the farm is level. It is 1½ mile from the railway station. If I could obtain a market for my produce in Boston, would it be wise for me to raise small fruits and vegetables, and ship them to the city? Also, do you think that poultry for eggs and broilers would pay? I am employed in a factory at present, but have worked some on farms.

ANS.—It would be worse than guessing to try to answer these questions. Neither of us has seen the farm. We do not know what the soil is, how the roads are, how much cleared land there is, or anything definite about it. In our experience the best crops for an inexperienced man to start with are grass, corn and potatoes. All these require great care and skill, but the beginner can do better with them than with most other crops, and can thus learn something about working the soil. We would not, of course, plow up any good grass land to begin with. We would start a good flock of poultry at once, and increase it to reasonable size as fast as we could afford comfortable houses and provide food. We have found that currants pay about as well as any small fruit for the beginner. They can usually be sold in bulk, and there is less rush about picking and shipping than there is with other small fruits. We would advise you to go slow with most fruits and vegetables. Great skill is required to raise them properly, and you will need some years of hard work before you can make them pay. You will have to be satisfied with small returns until you learn how to handle your farm.

Clipping the Alfalfa.

J. F. L., Clifford, N. Y.—I sowed a small piece of ground to Alfalfa about May 20. The weeds have got the start of the Alfalfa. Will it answer to put the mowing machine on and cut as high from the ground as five or six inches, and rake the weeds and Alfalfa off? I think it would be good for the cows.

ANS.—Yes, we would by all means clip off the weeds. This is usually done by good farmers. Sometimes it is necessary to do it twice the first year. It pays—giving the Alfalfa a show and keeping down the weeds. It sometimes pays to clip off the young clover in the same way.

Spraying the Resin-Lime Mixture.

J. V. B., East Setauket, N. Y.—Last year Hope Farm Notes described means of killing the worms on cabbages. Was the resin-lime mixture used? Was there any trouble in spraying it? I used Paris-green dry on mine, but it did no good, as my crop was a total failure.

ANS.—This resin-lime mixture is thick and sticky—hard to force through the ordinary nozzle. A strong force pump is required. The cheaper class of pumps would clog and probably prove useless. Spraying this mixture is hard work. For the benefit of those who have not kept back issues of THE R. N.-Y. we repeat the formula: Five pounds of pulverized resin, one pound of concentrated lye, one pint of fish oil, five gallons of water. The oil is used to soften or dissolve the resin. Boil the oil, resin and water in an iron kettle. When the resin is softened add the lye—first dissolving it in water. Stir this well and then add four gallons more of hot water. Boil all this until you have a clear, amber-colored liquid which unites with cold water. This makes a "liquid soap" which when put with the Paris-green and water will make it stick well to leaf and stem. When you add the potash and water you must let the kettle cool slightly. If this is not done the whole mass may boil over and the oil and resin will take fire.

Disk Harrows; Brome Grass.

J. M., Grantsville, Md.—Can the disk or Cutaway harrows be used successfully on stony or rocky ground? Do you recommend the new grass (Bromus inermis) for culture in the East in preference to Timothy or other well-known grasses?

ANS.—In our experience such harrows are not at their best on soil covered with flat stones or with large rocks. The disks are chipped and broken, and cannot toss and throw the soil as they should. Where the stones are small and round these tools do better. The best harrow for stony fields is the spring-tooth. We advise only an experiment with Bromus inermis or Awnless brome grass. It appears to give good satisfaction on the dry plains of the West—being reported superior to Timothy in Nebraska or Dakota. For the more humid climate of the Eastern States we prefer our common grasses and corn.

Yields of Asparagus and Rhubarb.

W. W. W., Tyrone, Pa.—How many pounds ought an asparagus bed to yield to the acre under the highest culture? How much does dark-forced rhubarb yield compared with that grown naturally?

ANS.—The following answer to first query by a most experienced grower, Edwin Beekman, will be found of interest:

"My old bed of Conover Colossal at seven and eight years (the prime condition) cut 3,000 2½-pound bunches per acre. At that time rust was unknown. I am informed that the Palmetto, before the advent of rust, in its prime (six to nine years) would cut 2,000 bunches, 2½ pounds, per acre, but of course this would be mostly all No. 1, only a small percentage of cull shoots. Since the rust it takes a good bed of Palmetto to cut 1,000 bunches in a season, and very few here this year cut that many."

We have not been able to get authoritative yields of forced rhubarb as compared with field plants, but our own experience, extending over several seasons, implies that nearly the same weight may be cut from forced as outdoor plants, though the roots are practically destroyed in the process.

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THE RURAL NEW-YORKER, New York.

DRILLING FERTILIZER WITH WHEAT.

Has it been your experience that drilling fertilizers in with the seed has had any injurious effect on grain? We have reports that where superphosphates are used in this way, especially in very dry weather, the grain fails to sprout well.

With the ordinary amount (200 to 300 pounds per acre) of commercial fertilizers added for wheat, there is very little danger due to the application of the fertilizer in the drill at time of seeding. Wheat fertilizers do not usually contain large percentages of potash or other salts, the substances that are commonly injurious to young grain. In our own practice, we use the drill in applying fertilizers, not only for wheat, but for other drilled crops, as oats and peas, millets, Kaffir corn, cow peas, etc., and use very considerably larger amounts of superphosphate and potash than are applied by the average farmer, and have yet to find any serious difficulty. Where the purpose is to bring up poor land, and heavier applications are made, then I should recommend that part of the fertilizer be applied broadcast.

N. J. Exp. Station. E. B. VOORHEES.

I have always had a theory that a heavy application of fertilizer on grain would be better sown broadcast and harrowed in, but last Fall I had my faith in that theory shaken. With an old drill I undertook to drill about 400 pounds to the acre with the seed, but two of the spouts ran about three times as much fertilizer as they should, and I fully expected it to injure the seed, but as we could not stop it we went on that way. When the wheat came up those drills immediately grew away ahead of the others, and still showed a great advantage when the wheat started in the Spring. I think they probably lost their lead later, as the neighboring rows discovered the storehouse; at least I noticed no difference after the wheat had reached a good size. With a cheap acid phosphate I should feel shy of using it heavily in a drill, but I cannot say anything positively about it from experience, as I have never used any such.

THOMAS R. HUNT.

Hunterdon Co., N. J.

FLAX STRAW FOR CATTLE.

One of our readers in Illinois says that he sowed flaxseed with his oats this year and, on account of the dry weather, the flax did better than the oats, so that the stand was about half and half. He cut this combination and made hay of it, and is feeding it out to his cows. The increase in milk is satisfactory, but some of his neighbors say that the flax will cause abortion in the cows. Is it not safe to feed flax hay or straw in this way, or is it likely to cause trouble with the cows?

The question as to results will hinge on the proportions of the flax and straw, and on the amount of the same fed daily. Also on the degree of the advancement in ripeness when the crop was cut. If the quantity of flaxseed fed is excessive it will eventually cloy the appetites of the cows and may tend to produce butter overmuch oily. If the proportion of the flax straw fed is large, and if, moreover, it was pretty ripe when cut, then there may be some danger that the fiber of the same will impact in the stomach and cause trouble. If the crop was cut a little underripe, and if fed in moderation, the presence of the flax should be altogether helpful. I see no reason why feeding flax should cause abortion any further than through some derangement of the system brought about by feeding it excessively or improperly.

[Prof.] THOS. SHAW.

St. Anthony Park, Minn.

It is true that the opinion that flaxseed will produce abortion in cows or other farm stock is quite prevalent. Some cases of this kind have been attributed to the use of flax straw containing only a small amount of the seed. It is probable, however, that much of this fear is not well grounded. A feeding experiment was conducted at this Station to determine first, the relative nutritive value of flaxseed and oil meal, and second, the effect of using a liberal allowance of ground flaxseed. Ten cows were used in the experiment. Five of them were fed ground flaxseed in addition to corn and corn fodder. They were put on to the ration gradually, and the flaxseed increased until at the end of about 60 days they were getting eight pounds per head daily. No injurious results whatever could be attributed to the flaxseed. The flaxseed was ground. Whether or not the results would be the same on unground flaxseed I cannot say. It is not likely that digestion would be as complete with the unground seed. I know of no data concerning the use of the kind of product mentioned in the inquiry, but judging from the results of the experiment referred to, I would not anticipate any injury provided it is fed in moderate quantities, and cows are put on to it very gradually. C. F. CURTISS.

Iowa Exp. Station.

EVERYBODY'S GARDEN.

THINGS TO REMEMBER.—It requires as much soil fertility to grow a worse than useless crop of weeds as it does to grow a useful crop of vegetables. The weeds that are growing here and there, either in the crops or elsewhere, are robbers, simply robbing the soil, and heaping up wrath for the gardener in the future. It is far easier to destroy one weed this year than a thousand of its offspring next year.

COVER CROPS.—As in most localities, but few crops will be put in during August, it is a convenient time to look ahead to the work of the Winter and early Spring. Of necessity much of the ground will not carry any crop of vegetables at least, through the Winter, and it is wise so to arrange that the ground may be provided with cover crops. The cost of the seed is but a small item, and the condition of the land will be so much bettered by the protection of a cover crop through the Winter that it is very poor economy to leave the ground uncovered. The cost of seed for oats, rye, turnips or rape would not exceed $1 per acre, and will be returned many times in the destruction of weeds, gathering of nitrogen, and preventing the wash and exposure of the ground during the Winter. It is, of course, argued by many that Fall plowing of the ground is advantageous in destroying the worms and insects, but I prefer the cover crops, trusting to the lime, ashes and salt for the insects. There is nothing which will so effectually hold the chickweed in check as a heavy cover or smother crop. That is a Winter growing weed, and will be very little affected by Fall plowing unless done very late in the season. While any or all of the above-mentioned crops are good used as cover crops, circumstances will, of course, have to determine which is most available. Oats will do well on the earlier vacated ground, but, of course, should be sown so as to give the largest possible growth before killed by the heavy frosts. Rye may follow the late sweet corn or any other crop which will permit working the seed thoroughly into the ground. Turnips may be advantageously sown any time during August right in the standing corn, and many will mature sufficiently before danger of freezing to sell or feed to the stock. Rape will make growth until late in the Fall, and may be drilled in among almost all the late crops. The benefits from these crops will amply justify the small expense of labor and seed, and the small garden will be benefited in the same proportion as larger areas.

PROFIT IN THE TOP.—By this I mean that the profit in any crop is whatever is left over and above the actual expense of producing it, and it follows that the heavier the top above the cost line, the larger will be the profit. In these days of unmerciful competition it is useless to expect or look for success in mediocrity, either in quantity or quality. The profits are always found in the maximum, and not in the average or minimum crop. The only hope then is to strive for the very best results both in quality and quantity. Fancy vegetables tastily put up, will always sell even in the face of an oversupply. True, some dealers as well as many private customers are unwilling to pay the price of painstaking on the part of the producer, but there are plenty who are willing to do so, and those are the customers to hunt up and stay by when found. I have found it not at all difficult to sell to certain classes of grocers and private customers also, at double the prices my neighbors were realizing in the open market. Of course, the stock had to be gilt-edge, but one can afford to make it that for double prices. Excellence then, in quantity, quality and prices obtained are the essentials to profitable returns for labor bestowed.

DARK FORCED RHUBARB.—In "A Winter Job," page 419, the profits of Winter rhubarb were to some extent discussed. This, however, was from the commercial standpoint, and in no sense was adapting the work to the everyday wants of the family. Now briefly, let us see what it is from the standpoint of a home supply. If the general reports of the fruit outlook are at all reliable then the apple supply, especially of Winter sorts, will be very short, and high prices will inevitably rule. No Winter-grown vegetable yet produced will so nearly supply the place of apples as will the dark-forced rhubarb. I make the distinction "dark-forced" for the reason that rhubarb grown under glass can from no point of view ever compare with that grown in the dark. Growing it under glass will, everything considered, be more costly than forcing it in the dark. It can be so easily and cheaply grown, either in large or small quantities that in the home the shortage of apples may be largely compensated for, and growing for the market will be all the more remunerative if high prices rule the apple market. From now on, give the rhubarb plants thorough cultivation and a liberal supply of manure to invigorate the plants as much as possible. Late in the Fall dig out the roots and leave them until thoroughly frozen. Exposure will not injure them, so they may be safely left as turned out until they freeze entirely through, when they may be set into the forcing place and grown fast or slow, just according to the degree of heat supplied. Any place will answer for forcing in small quantities. A corner of the cellar, a vacant storeroom or shed, or even a large box may be utilized. If the soil adheres well to the roots when brought in, they may be set close together with no soil placed below them or between the clumps. If well loaded with soil when set in they will grow nicely with little or no watering. I mention this fact for the reason that many might not have available room other than a storeroom or a large box placed in the kitchen even, and in this case watering to any great extent might be objectionable. As before remarked, it will grow in any place where the light is excluded and sufficient heat supplied to cause growth. This so simplifies the work that every family may be supplied the entire Winter through, as a very few roots will furnish a constant supply for an ordinary family. It is believed that trying in a small way will induce many to go into larger operations and ere long find profitable Winter work. J. E. MORSE.

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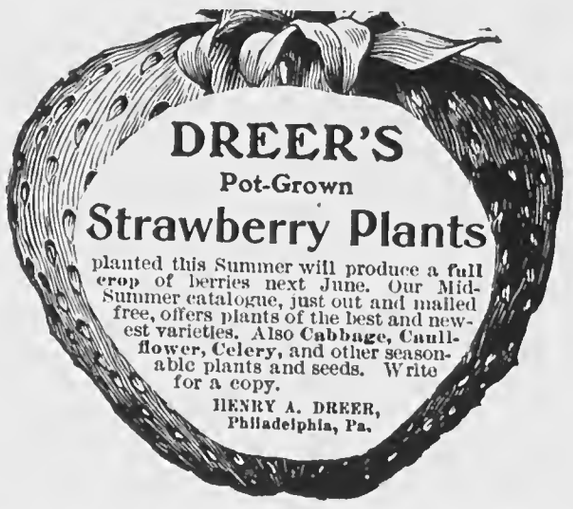

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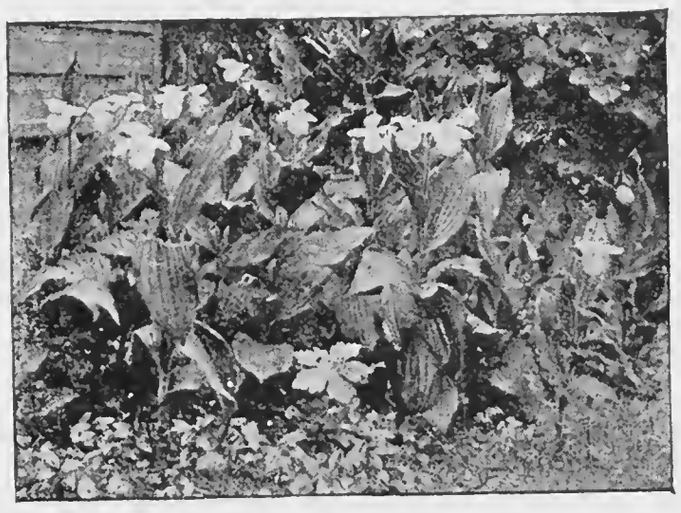

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Ruralisms

NOTES FROM THE RURAL GROUNDS.

SOME NEW BERRIES.—Fig. 242, on page 547, is a fair representation of Burbank's leeberg blackberry as fruiting on the Rural Grounds. The plants were set last year, and naturally cannot produce a full crop this season, but the density of the clusters, of which two are shown in the cut, indicate it to be very prolific. The berries are of good size and of a very attractive translucent amber tint, so light as to justify the name of white. The flavor is not particularly pleasant, however, though it is the best of its type. There is some mawkish astringency even in well-ripened specimens. One can imagine these handsome berries sought after for garnishing and decoration, but not for their table quality. They are firm and handle well, but a bruise is soon followed by a brownish discoloration which mars their transparency. Iceberg is said to result from a cross of Lawton with the well-known old Crystal White, and is certainly an immense improvement on that variety in size and productiveness. Many white and light-colored blackberries have been introduced from time to time, but none has been found valuable except as curiosities, though there seems to be a place for Iceberg. The canes are vigorous and came through the past severe Winter without harm. The white blackberries, according to Profs. Bailey and Card, form a distinct variety of the common wild long-cluster blackberry of the East, Rubus nigrobaccus, and are found sparingly growing in mountain regions. A fine type of this class, bearing coral red berries, was found by the writer in Tennessee and transferred to cultivation. It is a beautiful fruit with a particularly agreeable sweet flavor,but is not sufficiently hardy in the North.

SOME CULTIVATED DEWBERRIES.—Everybody knows the common creeping blackberries of pastures and waste lands. The fruiting varieties are quite generally known as dewberries, while the sterile or pistillate forms are often called catbriers from their scratching propensities, and locally, in the expressive language of the bare-legged boy, as "rip-shins." The berries are generally liked even better than those of the high-bush sorts, and coming earlier, are heartily welcomed when enough can be had. The fruiting plants, however, usually are found in small proportion to the barren ones, which spring up in great profusion in the most unpromising places. Several species are described by botanists, those found in the West and South being quite distinct from the eastern forms. All are procumbent or trailing in habit, and root so freely from the tips that there is little need to produce fruits with their accompanying seeds to insure propagation. However, an occasional plant is found with perfect inflorescence, bearing profuse crops of fine berries. A number of such superior varieties have been transferred to cultivation, and have proven more or less successful. A few are still in commerce and are known to most horticulturists. Lucretia, which was found in West Virginia during the Civil War, and Mayes or Austin, which was found in Texas about 1880, are undoubtedly the best examples. Plants of these varieties received last season from Wm. F. Allen, Salisbury, Md., made a fine growth, and fruited heavily this year. They both belong to the common eastern species, Rubus villosus, and there is much resemblance in growth and appearance of plant. Lucretia produced the largest and best-flavored berries and Mayes the firmest and most perfect specimens, while it was by far the most productive. Lucretia is about a week earlier, and the more rampant grower. It evidently does not pollinate its blooms as well as Mayes, as a much larger percentage of imperfect berries was found. Of the excellent table quality of these native berries there is little difference of opinion. Everyone seems to like them, and they can be put to all uses of which a blackberry is capable. They come in with the red raspberries, and fill a useful chink between currants and bush blackberries. It is some trouble to handle the viciously thorny canes, but it looks as though the result would warrant the trouble. Notwithstanding the long time Lucretia has been before the public it has made little headway in popular esteem; mainly, we think, because plants of ordinary pistillate varieties were sent out in place of the true one. Unless care is taken to root tips from actual bearing plants it is easy to get hold of common wild ones, which are sure to spring up under cover of the cultivated plants.

MANATEE, from Reasoner Bros., Oneco, Fla., winterkilled badly, and only produced a few imperfect berries of good flavor. It belongs to the southern species, R. trivialis, and is a selected strain from the Florida woods.

CALIFORNIA MAMMOTH, from James Waters, Watsonville, Cal., is a supposed cross between Rubus vitifolius, the western dewberry, a most unproductive plant in its natural state, and a bush blackberry from Texas. It originated with Judge J. H. Logan about the same time as the Loganberry, which had the same dewberry for the seed plant, but was pollinated with an European red raspberry. Mammoth endured the Winter perfectly, the unprotected plants coming through rather better than the covered ones. They bloomed profusely and ripened a considerable crop of long, well-flavored berries, which, however, did not reach the great size figured in California specimens. It is a handsome plant with broad leaves like the Loganberry, but a more erect habit. The canes trail and root freely at their tips. We think this distinct variety will do better another season, and will have more to say about it in the future.

THE RATHBUN is again the best bush blackberry we have under trial, excelling all others in size, productiveness, color, firmness, and when thoroughly ripe, in flavor. It is entirely hardy here, and has not yielded to the Orange rust or other disease during a four years' trial. Mersereau is an improved Snyder, larger, more productive and holds color better, but does not come up to Rathbun for real utility. The older blackberries do not succeed well in this immediate locality, though they were much planted in former years.

CUMBERLAND and Kansas blackcap raspberries take the lead among their type, with a preference for the former as larger and more vigorous.

MILLER RED and Cuthbert are the preferred red varieties. Cardinal, A. H. Griesa, Lawrence, Kas., is disappointing in size and color as fruited this season. The berries are firmer than Shaffer or even Columbian, and are very freely produced, but they are much smaller in size, about like Cumberland, and rather dull purple when ripe. There is not much cardinal color about them when ready for the table, though the red tint is bright enough just before they are ready to pick. The flavor is acid, but of the usual agreeable quality of the purple-cane type, now considered to be made up of natural hybrids between species producing red and blackcap berries. Many intentional crosses have been made between black and red-fruited raspberries, and something like the purple-cane type generally results, but none has proven of value. Cardinal makes a splendid plant of strong upright growth, and roots easily from the tips. Shaffer is too tender, though the great size and excellent quality of the berries make it a favorite in many gardens. Columbian is hardy enough, but entirely too dull in color for market purposes, though it is liked for drying. We have trouble on the Rural Grounds owing to exposed location, with the young canes of purple and blackcap varieties twisting off with the wind. Columbian is usually badly wrecked before the new growths harden by easterly storms, but our Cardinal plants are of such sturdy, erect habit as not to be affected. They passed last Winter without harm from cold.

W. V. F.

Stringfellow's Method of Planting.

A. C. Worth, of Bergen Co., N. J., says that he has tried the Stringfellow plan of cutting roots of transplanted fruit trees back to a mere stub, and that the experiment has been highly successful. When asked whether he followed Mr. Stringfellow's plan of avoiding culture entirely, he said:

"I must admit that I did not carry out Mr. Stringfellow's method, except as to cutting away all the roots and cutting back the top of both trees and plants to a stick not over two-thirds of the former length. I have cultivated all trees, just as though they were corn, and kept shrubs well worked with hoe and rake. In one case, where I received a lot of plum trees in May, in full leaf, I cut back both roots and tops, and every tree lived and made a fine growth this, the second season. The more I study the matter the plainer it is to me that the new root growth, by this method, is far better than the old way of saving as many roots as possible, especially in the case of trees which have to be transported any distance. I shall try some peach trees this Fall, set in holes made with a crowbar, and will only cultivate to keep down the weeds and grass."

EARLY VEGETABLES.—How is this for a late season? New potatoes ,June 9; peas, June 6; strawberries, June 4; beets, June 9; carrots, June 9; cauliflower, very fine, May 16. Tomatoes are now turning red;will pick next week, and lots of nice early Wakefield cabbage. I forgot to say we picked new beans July 2, Marvel of Paris. Refugee was planted two weeks earlier, and only now coming in.

F. R. T.

Long Island.

THE MANAGER'S SHARE.—As to the wages due the fruit manager on page 533, a person capable of properly superintending the planting of 2,500 apple and 2,500 peach trees, on 50 acres of land, and managing the work of caring for them for the first five years, ought to be worth $1.50 per day without board. If really expert in managing men and caring for trees he would be worth more than that. I don't see how one could make an intelligent estimate of the amount of time it would be necessary for him to put in at it, especially as nothing is said of the nature of the land or the methods of planting and culture. I think a manager should have at least $100 and perhaps double that amount. If they have good crops of peaches to market (as they should have) it would be no small job to attend to that. It seems to me that the business-like way is for them to agree on the value of the manager's time, and his partner pay him one-half of said value, for every day he puts in attending to their mutual interest.

A. R. L.

Barboursville, Va.

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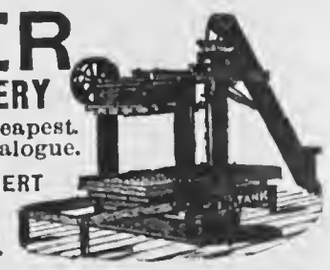

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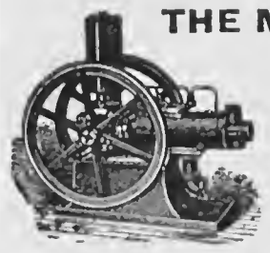

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Hope Farm Notes

CROP OUTLOOK.—The first of August finds a farmer pretty well in sight of his Summer's crop. While August may settle the corn and the apples for good or bad most of us know by this time about what we can expect. It is a good time to view the situation and see how we stand. It is hard sometimes to be quite fair with our own crops and property. We can view our neighbor's farm with a critic's eye, but it is hard to be quite so just with our own.

FODDER.—We are going to have a fair supply. One of the "Clark" grass fields was much better than we expected, and is greening up for a good second growth. Mr. Clark writes me that he does not think the Timothy will come in later unless we sow more seed. He says he is trying a new tool for doing this. It is a large cylinder with 72 sharp saw-like teeth on it to rip and turn up the sod. After this has been run over the ground he thinks we can sow Timothy and roll with a fair chance of getting a "catch" and still leaving enough Red-top. . . . Our oats were rather better than oats usually are in this country. There was no smut where the formalin was used. They were all cut for hay. I have told of one field at the back of the farm where last year we had corn with corn fertilizer broadcast. We put oats there this year with no fertilizer and had a fair crop. . . . I am much pleased with the looks of the clover and Orchard grass which we put in with oats last Spring. There is every appearance now of a good late crop—mostly clover. While most of our hay was wet more or less it is all suitable for fodder, but not for sale.

CORN.—Our crop was planted late, and the long wet season has held it back, but it is jumping hard just now. The color on part of the field is too light to suit us. We have put on fertilizer and shall keep working it as long as we can get through it without injury. On the whole, I do not think our chances are good for a heavy crop of grain. With us the stalk is nearly as important as the ear. We are still planting sweet corn on the hill tops, and should the frost hold off as late as it did last season we shall have ears on it. The sowed corn fodder looks well—and it will all be needed.

POTATOES.—I have never known a season when it was so hard to make a fair estimate of the potato crop. The tops may be all right, but when you come to pull up some big, fat fellow you find that he is all top—with few suitable tubers. I figure on a light crop, though the vines are still growing. Where we put on the nitrate of soda and sulphate of potash the vines certainly "show their oats" in the way they spread and climb. The Junior Pride is ahead of everything else in our field for earliness. June Eating must take a back seat for earliness, though I am not yet convinced that the Junior is a more profitable potato, when all points are considered. Most of the Juniors could have been dug and sold by August 1, but I believe this year it will pay to let our potatoes stay in the ground until they are fully grown. Some years it pays to dig when the tubers are two-thirds grown, and thus get the dollar-a-bushel price. This year I shall wait for full size. If we were to judge from the appearance of the vines alone the second-crop seed of both Junior Pride and June Eating is better than the late northern-grown. From the start the second-crop seed vines have been more vigorous. From the way they have grown I quite expect to find more large potatoes in their hills, but digging only will determine. Last year at digging many of our potatoes were alive with weeds. It is a fact that we had to go in with the mower and cut many weeds down. This year there is hardly a weed to be found. We planted in hills and worked both ways with the cultivator, and the children took the job of hand pulling when the weeds were small.

APPLES.—Our Greenings are well laden with fine fruit. They really ought to be thinned. The early apples looked well, but are dropping badly. Within a few days the ground was nearly covered with fine apples—not quite ready to pick. There will be a fair crop left, however. We are utilizing the fallen fruit better than in former years, since we have more pigs and better facilities for feeding. One of our neighbors, a Salvation Army officer, has a great crowd of "fresh-air" or slum children on his farm. Hugh says these young folks are like sheep in an orchard, ready to catch an apple before it strikes the ground. We are glad to have them fill up on all the windfalls they can pick. We may be responsible for a great harvest of stomach ache, but that is soon over with the young. Old Frank got more than his share of apples the other day, and enjoyed a good case of colic. It does hurt my feelings to see so many of those windfall apples going to the pigs—or worse—while poor folks in town and city are unable to buy apples even for cooking. Last year I tried to sell windfalls, but there were too many in the market. They may do better this year.

POULTRY.—The first run of the incubator was a dead failure. Later runs did better, and the sitting hens helped out, so that we have 196 chickens. We have eaten some of the old hens, and shall devour others later. As soon as the young roosters are large enough they get right into the frying pan. There is no use in keeping them longer. People argue about the most profitable time for egg production. Right now in our country would be the best time. The county is full of Summer boarders and fresh eggs will bring three cents each. As we all know, there is no time in the year when the natural egg food, such as insects and green crops, are more abundant than in August. Yet the hens demand a vacation, and want to do the bulk of their work in March and April! We hope to make them lay in August and September this year—not eggs but celery! Philip is a good celery grower, and we will give him a chance to show his skill. He has put the year's accumulation of chicken manure in the bottoms of his trenches. Thus the hens will lay celery during the lazy months.

ODD CROPS.—Our rye went to the barn in good condition. We shall have it thrashed late in August. The bundles of straw will be carefully tied, and I expect to sell it all. Can a farmer afford to bed his stock with $18 rye straw when he can buy planer shaving at $1 a load? I do not think so, and I shall sell all the rye straw I can. I would also sell Timothy hay at the usual selling price in our locality and buy bright corn-stalks at the price which farmers charge for them. I could run the stalks through my shredder and make it nearly equal, ton for ton, the higher-priced hay. . . . . Turnips are making a fine growth this year. We have usually had 200 or more bushels of small potatoes to feed to the stock each season, but I believe such potatoes will sell this year for more than the hogs will pay. We are sowing turnips and rape at intervals whenever we get a piece of land clear. The yellow turnips are up and doing well. Now is a good time to sow the Cowhorn turnips. . . . The cabbage did well, though later than usual. The price is low. As for late cabbage the country seems to be full of it, and if the weather is at all favorable I do not see how the price can help being low. It is true that when the potato crop is short all such crops as turnips, cabbage and beets are likely to be used as substitutes, but I thought so poorly of the cabbage outlook that I set out less than 3,000, against 12,000 last year.

LIVE STOCK.—The pigs have paid us well. We have sold $30 worth thus far, with more to go. At present the cost of feeding the pigs is very little. They have all the apples, turnips, cabbage and weeds they will eat, and have little room left for grain. Of all grain to be fed with so much green stuff I prefer corn. The little pigs that run with the chickens will pick up cracked corn as easily as a bird. I know farmers who use cornmeal as a medicine when the cows get to the orchard and eat too many apples. What a mistake it is to keep the pigs, and especially the idle sows, penned up at this season, and fed chiefly on expensive grain. It seems to me that the chief profit in the pig business on our eastern farms is to be found in turning what we cannot sell in the market into pork. . . . Our lively colt is growing fast. Charlie has already put a halter on her, and we purpose to have her grow up with the idea that halter and harness are as much a part of her as head and tail. I begin to think I would like to keep that colt for my own driving some day, but I hope she will grow into something a little too nervy and stylish for a plain farmer! It used to make me smile to hear farmers tell about their fine stock, and unwind a yard or more of pedigree. Now I catch the same smile on the faces of others when I get started on the relatives of our black Berkshire lady and Maria, the colt. Well, after all, it is a good thing for a farmer to show his confidence in his stock or farm—provided he doesn't blow his horn too hard.

H. W. C.

New Use for Fair-Ground Buildings.

The fresh-air camp is located on the fair grounds near where I live. The children occupy the big halls, and a right good place it makes for them, too. The great city of Cleveland pours out a vast swarm of its poorer class of children every Summer to enjoy the country air and scenery, and they appreciate the opportunity to its fullest extent. The children brought out at one time are allowed to stay two weeks, when they are returned to the city and a fresh supply of eager ones take their places. Church societies take turns in supplying food for them for one week at a time. Recently one of my neighbors passed among the children. He was dressed in overalls and work clothes. One of the girls, as soon as she spied him, cried out, "Oh! here's a farmer, here's a farmer! Oh, how I wish I was a farmer, for then I'd have all the fresh eggs, and milk, and butter that I wanted to eat." How much that meant, none can know except those who are deprived of these good things of life. Fresh eggs, good milk, and sweet, wholesome butter! There's meat and drink for you of the very best kind, and crowned with a luxury that none may know, who eat the counterfeit oleo. A. R. PHILLIPS.

Chagrin Falls, O.

NOISE IN WATER PIPES.—Your Hope Farm man, some time back, mentioned in his Notes that the Madame is quite annoyed by the pounding and racket caused by the pipe connection from his windmill with his range in the kitchen. I have not noticed anyone giving him a remedy. What is wanted is a deadening expansion joint. A piece of piping is taken out anywhere along the line; if a foot long only it will do, or it might be four to five feet. Then a piece of rubber hose is slipped over the piping on each side from which the joint has been removed, this is then tightened with clamps and the whole business is done.

Texas. J. W. S.

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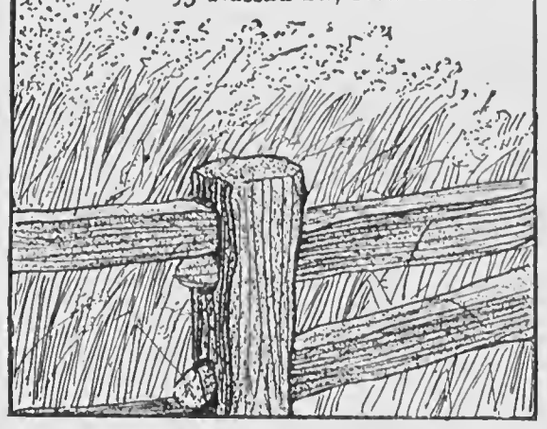

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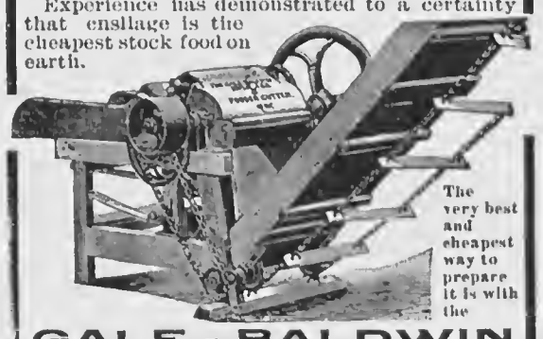

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*

THE New York State Fair, to be held at Syracuse, September 9-14, promises to be one of the best ever held. It was feared at one time that there might be some conflict with the Pan-American Exposition over the exhibits of live stock. The matter has now been fully arranged, and a fine show is guaranteed. With ample funds to back them the commissioners have made abundant arrangements for entertaining a great crowd, and it is to be hoped that the grounds will be crowded.

*

A FIELD meeting of the New York State Fruit Growers' Association will be held at Olcott, Niagara Co., on August 14. The principal address will be made by Hon. W. H. Blodgett, of Worcester, Mass., on "Fruit Packing and Marketing." This will be a good meeting. All farmers who can do so should attend. It pays to rub elbows with your fellows. Coöperation ought to fatten on "elbow-grease," and now as never before do New York State farmers need a strong organization.

*

THE fearful heat which swept over the West blasted the meadows and pastures as by fire. In some cases it is reported that Timothy and similar grasses have been destroyed, root and stem, so that reseeding will be necessary. Here and there, green amid these dead meadows, are patches of Alfalfa still alive and ready to grow at the first fair rain. This wonderful plant needs just such a trying time properly to advertise itself. It sends its long roots deep into the soil, following the water level as it retreats before the sun, and keeps on pumping water, while the shallow-rooted plants are dying. Great is Alfalfa—where the soil suits it.

*

THE Borough of Brooklyn, City of New York, obtains a good share of its water from wells driven in various nearby parts of Long Island. Water is pumped from these wells, and so much is taken that the farms have been sucked dry, and crops are ruined. Farmers have brought suit against the city for damages and have usually won. The principle is clear that an outsider cannot deprive a farmer of the surface water that runs over his farm. The underground water is of even more importance. A farmer owning a farm worth $6,500 recently claimed damages for $75,000. Justice Marean, of the State Supreme Court, says that no farm land on Long Island, with or without water, is worth for its annual use, more than five per cent of its sale value! What nonsense that is when we reflect that the farm represents the farmer's capital, which is to give him a job, pay his bills, provide for his family and give him any possible profit. A merchant with $10,000 may be forced to do a trade of six or seven times that amount in a year in order to pay his expenses and develop his business. The loss of the water ruins the farm, throws the farmer out of a job and destroys his earning capacity on that spot.

*

No sooner was the drought broken in Kansas and Missouri than the farmers hurried to town and began buying seeds for forage crops. Turnips, sorghum and rye will be largely planted. They have ceased to sell off their stock, and in spite of all the pessimistic reports we have received, the drought-stricken States are very far from agricultural ruin. One of the most encouraging features is the attitude of the farmers themselves. They do not sit down to lament the hardships of the season, but take hold willingly to fill up the gaps in their ordinary farm practice. This year will see a good many very practical experiments in fall forage crops.

*

WE should judge that the Summer boarder crop is growing well this year. On the farms within 30 miles of New York and many other cities, the business of fattening a city family pays better than putting flesh on the ribs of a middleman. These people with brick and stone in their pedigree may not know much about farming, but they usually have remarkably healthy appetities. They make good customers for milk, chickens, fruits and vegetables, and if a farmer knew how to handle them he can make the crop pay. It is a job, though. The man who taketh a city is said to be great, but he is a dwarf beside the man who can take a reef in his patience in the face of the questions of the city man and the pranks of his children!

*

ON one of the tables of the fruit exhibit of the State of Washington at Buffalo we found the following written notice conspicuously displayed:

As the children of Lebanon passed through the land on that day, they saw the fruit, but according to the law of the land they ate it not.

And the Lord said unto Moses: Thou mayst behold the land, but thou shalt not enter therein, nor shalt thou eat the fruit thereof.

The last quotation does not strike us as a very strong immigration document, but it is a good hint to the people who seem to consider the fruit on an exhibition table and in a farmer's orchard as common property. Why not try one of these texts on a board as an orchard sign?

*

WE are having quite a little discussion over the wisdom of spraying potatoes with Bordeaux Mixture. Thus far the discussion has been confined to the practical men. After all, such questions must finally be settled to suit the conditions of the man with only one team and one pair of hands. In our own experience we have found that the use of copper on the vines will pay, provided you can get it on at the right time. The trouble is to apply it just when it is needed. We can see how a field or a plot at an experiment station can be kept "copper-plated." Where a man is growing potatoes as a great special crop, with few others to interfere, he ought to be able to use the Bordeaux in time. The average farmer often has too much on his hands, with hay or corn or grain all demanding immediate attention.

*

LAST week we referred to the statements made by Dr. Koch, the great German scientist. He says that bovine tuberculosis is not transmissible to humans. Dairymen are hailing this statement with great joy, for they have long felt that much of the warfare made against the cow by inspectors and radical scientists was unjust. While this statement by Dr. Koch will probably do much to stop the so-called testing and "stamping out," there is another side to the matter that should be remembered. This quotation from the New York Journal gives the opinions of many consumers:

The theory of Professor Koch that consumption cannot be transmitted from animals to human beings is cheering, but its publication at this time is perhaps a little indiscreet. Even Professor Koch is not infallible. Lord Lister and other distinguished experts disagree with him. His views do not meet with favor from the majority of the members of the Congress of Tuberculosis. But his name is quite sufficient to confirm unscrupulous dairymen in working off diseased milk upon the public. Such conscience as they may have would be put to sleep very readily by his authority. And he will naturally secure disciples among health officials, who will accordingly relax the rigor of their inspection. If, after all that, it should turn out that Dr. Koch was wrong—as many distinguished specialists vehemently assert he is—what irreparable damage might be done! And how painful the situation would be for Dr. Koch!

Such city people fear that in some way the milk will be more dangerous, and that sanitary inspection will be relaxed. Nothing of the sort will happen. Farmers understand that the city's consumption of milk ought to be doubled, but that it cannot be until city people are convinced that it is pure and healthy. There will be no backward step in consequence of this new argument in favor of the cow as our great National wet nurse. It will, in time, save the dairyman much trouble and annoyance, but there will be a rapid and steady improvement in the methods of making and handling milk. The middleman does far more damage to the milk than the old cow ever did.

*

MUCH is said about getting down to the common people in speaking and writing, and some seem to think that this means to talk or write about only the most simple or childish things. Just the reverse is true. A man not versed in Latin or Greek does not enjoy a discussion peppered with words of this class, but no mystery of nature is too deep for him to enjoy if presented in understandable language. Those who talk to audiences of children sometimes make the fatal mistake of thinking that they must be childish in their talk. A look of disgust may be seen on the faces of the bright small boys, when they are obliged to listen to wishy-washy baby talk indulged in by the speaker under the impression that he must do this to interest the children. He ought rather to pick out some topic big enough to appeal to grown people, and talk about it, leaving out unnecessarily big words. Then both old and young would be interested.

*

THERE has been a long contest in New York State over the right to transfer to a second or third party the unused part of a railroad ticket. Laws were passed prohibiting the sale of such tickets, but the Court of Appeals has declared the last law unconstitutional. Here is the pith of it:

It is evident that whatever may be the nature of the arrangement which is evidenced by the ticket, whether it be a token or prima facie evidence of a contract, when the ticket is sold it belongs to the person who buys it, and unless its use is in some way limited it has the same quality as every other kind of property.

In other words, suppose I buy a ticket which entitles me to a ride from New York to Syracuse and return. When I reach Syracuse for some reason I do not wish to return. I have paid for the return ride and unless I have made some special agreement I have a perfect right to sell or give away that ticket. It seems to us that this decision may be regarded as good law and good sense.

*

BREVITIES.

Just take your good old mother, boy, and put her side by side
With neighbor Johnson's daughter, whom you hope to make your bride.
The work-worn, faded mother and the girl all fresh and bright—
No doubt the younger woman is more comely to your sight.
We wouldn't have it otherwise—yet here's a thought, young man;
Old neighbor Johnson's daughter never did and never can
Do for you what your mother did long years and years ago;
A note is written on your heart that you will always owe.
Of course, a man should give first place and honor to his wife;
That's right, my son, make that resolve the rudder of your life.
But give the good old mother, too, a corner in your heart;
Your wife will never miss the space for mother set apart.

LET the potatoes ripen this year!

YOUR lot is not the hardest in the world!

IN April the hen lays often—in August she lays off.

WHAT shall we do for Winter apples? Force rhubarb.

BURN wood, and as little of it as possible this hot weather.

GOES without saying—the fellow who minds his own business.

THEORY is a thing that should not be purebred. Cross it with practice.

IT is not likely that a growing season will follow the growing season this year!

THE way to get favors is to give them to others. "He that humbleth himself shall be exalted."

WHEN does life become not worth the living? When there is nothing that you are willing to toil and deny yourself for.

How many farmers who do not like the experiment station bulletins have ever written the directors telling what they want?

DR. BORDEAUX MIXTURE does not pretend that he can cure sick plants. He can prevent disease if you let him get ahead of it.

THERE seems to be some controversy about the merits of the various moth traps on the market. We would like to have readers who have tried them tell us what insects they catch, and whether they are worth buying.

ACCORDING to the census returns of Alabama, the colored voters of that State have gained 7.3 per cent in educational progress, while the whites have advanced only 2.1 per cent. This speaks well for the influence of Tuskegee Institute.

FARM laborers seem to be learning how to strike. On an Indiana melon farm the pickers and haulers struck for fair wages. The county was scoured for other workmen without avail, and the strikers got their price. Suppose the farmers of the land were to strike for a year!

Events of the Week.

DOMESTIC.—A Hindoo stoker on the German steamer Hohenfels, which arrived at New York July 22, developed bubonic plague. The ship was quarantined and thoroughly disinfected. . . . . July 25, a fire at Davenport, Iowa, caused damage amounting to $700,000. An area equal to 20 city blocks was burned over, destroying residences and factories. Long drought had made the buildings as dry as tinder, and the intense heat caused many prostrations. At least 100 families were rendered homeless. . . . . A flood which left destruction in its wake coursed over 50 miles of territory in Colorado, July 27, starting at the head of West Four Mile Creek by a cloudburst and extending through the valley to a point below Canyon City. The damage will reach over $40,000, including the loss to ranches, stock, growing crops and country roads in Fremont, Park and Teller counties. Many ranches are entirely swept away and a number of people are reported to be homeless. Heavy rains made worse by a cloudburst are the cause of the flood. No fatalities have been reported. . . . . The Federal Government has begun suits in New York and New Jersey looking to the recovery of a part of the $2,250,000 alleged to have been embezzled by Oberlin M. Carter, late captain of the Engineer Corps, United States Army. Receivers have been appointed for property in both States held by Carter's uncle and brother for the benefit of Carter while he is serving out his sentence in prison. . . . . George H. Phillips, of the Chicago Board of Trade, reported to the postal authorities, July 30, his discovery that the country had been flooded with circulars emanating from New York asking for subscriptions to a $2,000,000 fictitious pool for a deal in September corn.

CUBA.—The government has offered a reward of $1,000 for the capture, dead or alive, of Lino Lima, a bandit, who has been operating in the Matanzas and Havana provinces. There has been for the last three months a standing reward of $500 for Lima's head. July 26, the bandit sent word to the authorities that he would surrender for $500, provided he were allowed to leave the Island. Upon receipt of this offer the authorities doubled the reward and sent urgent instructions to General Rodriguez of the Rural Guard to capture Lima.

GENERAL FOREIGN NEWS.—An explosion of petroleum on the American schooner Louise Adelaide, Captain Orr, which left Philadelphia April 24 for Stockholm, which occurred in the harbor there July 23, resulted in the deaths of Captain Orr, 10 members of the schooner's crew and four Swedish customs officials. Only two of the crew were saved. The explosion set the schooner afire, and the blazing petroleum enveloped the vessel and those on board. . . . . The new German tariff, if enforced, would be found particularly severe on Russia, Austria and the United States, but it is thought at Berlin, according to a special cablegram, that the Bundesrath will not confirm it. . . . . George Kennan, the American author and journalist, has been expelled from Russia. This was due to his severe criticism, several years ago, of the Siberian exile system.

FARM AND GARDEN.—The Pennsylvania State Forestry Commission has purchased land at Carlisle for the purpose of establishing a college of forestry.

The Denver National Live Stock Association has issued a warning against hasty acceptance of the Koch tuberculosis theory.

Arrangements have been perfected whereby a large exhibit of wool will be made at the Pan-American Exposition during the time of the sheep show, from September 23 to October 5. The classification will be a purely commercial one for clothing, combing and carpet wools, and the jury will make the awards on the standard known to the trade. Entry blanks will be furnished upon application to F. A. Converse, Superintendent of Live Stock, Agricultural Building, Pan-American Exposition.

The special Summer meeting of the American Forestry Association for this year will be held at Denver, Col., August 27-29, in affiliation with the American Association for the Advancement of Science. This meeting will be a distinctively western one. It will deal with the forest problems before the Western States—fires, grazing, relation of forests to water supply, etc. The Federal Government, more than 10 years ago, recognized the importance of the preservation of the forests in protecting the timber resources and conserving the water supply, and there have now been established in the States and Territories west of the Mississippi 40 forest reserves, containing nearly 47,000,000 acres.

The twenty-fifth annual session and exhibition of the Georgia State Horticultural Society was held at Milledgeville, August 7 and 8. P. J. Berckmans is president and L. A. Berckmans treasurer.

The Canadian tariff imposes a duty of three cents on each budded or improved fruit or shade tree imported, and an ad valorem duty of 20 per cent on shrubbery from the United States; but seedling stocks for grafting and florists' stock in general are admitted free of duty.

Two of the largest hogs ever shipped to this country were received at the United States Cattle Quarantine, Garfield, N. J., July 26. They are consigned to George W. Vanderbilt, at Biltmore, N. C. One weighs 800 and the other 740 pounds. After a 15 days' quarantine they will be sent to Biltmore.

Up to July 20 the four bee inspectors of the New York State Board of Agriculture examined 416 apiaries, embracing 13,393 colonies. Of this number 229 apiaries were found more or less infected with black or foul brood, and 1,834 colonies were condemned to destruction, or to be treated with such remedies as have been effective. The Department has prepared a small bulletin on bee diseases, which gives approved methods of treatment, a copy of which will be sent to applicants. It is a source of gratification that those apiarists who followed the instructions given by the inspectors have been very successful in the care of their apiaries.

Immediately after the rain, which fell in Kansas July 27, farmers began to buy seed for forage crops. Heavy purchases of sorghum, turnip and rye seed were made. Farmers in the Leavenworth section will sow large fields in turnips. They make good pastures until late in the season, and then the turnips can be used for stock during the Winter. Some farmers report there will be considerable late corn and the rain will make fodder. Farmers will make no further efforts to sell their stock. Several varieties of vegetables will be replanted. The rain was timely for apples and pears. The wind blew a little fruit from the trees, but the damage was light.

The first Summer meeting of the Wayne County (N. Y.) Fruit Growers' Association will be held at the Case fruit farm, Sodus, N. Y., on Saturday, August 17. The speakers will be Prof. M. V. Slingerland, of Cornell University, and H. W. Collingwood.

WHEAT AND HESSIAN FLY.

The Hessian fly has not bothered this locality any this season. The wheat is an extra good crop here this year. The fly took all the wheat here last season. The only variety that withstood its attack at all was the Mealy, and that partly succumbed to it, but the other varieties were a total failure. The variety you mention, Dawson's Golden Chaff, has never been raised here to my knowledge. H. G. H.

Delightful, O.

The wheat crop is unusually good this season. The fly has done practically no damage. Farmers sow after September 15 to avoid the fly, and a great deal more Golden Chaff wheat is grown now than before. We do not know why it does better than other kinds; probably it is less susceptible. The different varieties are known by local names, generally named after the man who first introduced it into a certain locality. D. D. B.

Ringtown, Pa.

There has been but little damage done by the Hessian fly, and that was last Fall. All varieties met about the same fate. As to some kinds doing better than others, such is the case, but that is attributed to soil and locality. The Dawson's Golden Chaff is comparatively new here, and not tested enough to determine its merits. The varieties raised are Fultz, Pool and Michigan Amber. The yield has been from 18 to 30 bushels per acre, and the quality very good, some weighing 62 pounds per bushel.

Rockville, Ind. H. B. B.

Two of my neighbors have one 20, the other 10 acres adjoining, of what is known as Democrat, a bearded very white straw red wheat. This looks as though it would yield 30 bushels per acre, with very little effect of the fly. One man has a field of another variety that will not yield five bushels per acre. The only good wheat in this neighborhood is Democrat which, I think, is generally fair. Many fields will not return their seed. My wheat, known as Bullion, will not yield 10 bushels, scarcely enough to pay for harvesting. Hay is a good crop, but not much that will be salable; too much rain during the harvest. Corn backward; barley and oats good except on low land. J. E. D.

Junius, N. Y.

CROP PROSPECTS.

JULY 22.—Potatoes are not sprayed with the Bordeaux Mixture in this vicinity. In my own case I have tried to ward off the blight by selecting my seed at digging time from hills with healthy strong vines that remained green until frost. In this way I have been able to grow healthy plants. The present outlook for potatoes is not very encouraging, especially late planted. The weather is scorchingly hot, and potatoes are suffering from the heat. Wheat, oats and barley are good, though the hot weather is pushing them along too fast. Corn is doing well. L. N. N.

Laney, Wis.

JULY 25.—As to early vegetables, we had none in this section except asparagus, the others didn't get planted in season on account of rain. Peas were fit to pick about the same length of time after planting as usual, but very poor in quality, as is all fruit picked up to this time. Apples are very scarce and inferior. Potatoes are not as large as hen's eggs, even those planted reasonably early. A. D. G.

Arlington, N. Y.

JULY 23.—I am sure nearly all vegetables here ripened about one week later than other years; tomatoes about two or three weeks later. They are scarce yet and worth about two for five cents. Yesterday was the hottest day known around here; it was 111 degrees in the shade. Everything is suffering from heat and drought. It has not rained here for a month. The market gardeners around here practice mixed farming; they raise their own feed for horses and cows, raise garden truck and onion sets from their own seed, and some have onion seed for sale. The dry weather has not injured the onion crop. Large onions are ripe, early sets ready to dig next week. I have four acres of nice yellow seed ready to cut the end of this week. The onion crop is quite as early as in other years. J. P. D.

Madison, Ind.

JULY 27.—It is almost impossible to give you any reliable data on the apple crop at this time. The weather is very dry and hot throughout the apple section, and if it remains so long will have a disastrous effect. It already affects size of Summer fruit; some of the latter is actually cooked upon the tree before it matures. Temperature 110 degrees in the shade. Some of the older trees (20 years of age and upwards), are loaded with fruit; young orchards as a rule have but little, and they comprise the larger acreage. Orchards of 10 to 15 years of age are a mixed proposition. Some have no fruit at all, while others have a sprinkling of fruit throughout. In other orchards some of the trees are loaded while others have little or no fruit. On the whole, I would say about 40 per cent of a good crop would be a generous estimate under present conditions; Ben Davis light.

Savoy, Ill. H. M. D.

JULY 29.—I think we never have a reason when *all* crops are good. Something is a complete or partial failure every year. This year the hay and wheat crop were phenomenally large. The prospect for peaches was never better. Corn is not over three-fourths of a crop. Many farmers will be disappointed at silo-filling time. Oats are hardly up to the average, and late potatoes are very late, with only a small acreage. We are looking for high prices next Winter and Spring. He who has, will doubtless do well to hold. Apples are not over one-fourth crop, and the best Winter varieties are scarcest of all. Rains are plentiful, pastures and meadows are green and fresh. We have had no drought this Summer, and no temperature above 98 degrees at my home. Oat harvest has just begun (last of July), and we are having a catching time of it, owing to the frequency of the blessed rains. A. R. P.

Chagrin Falls, O.

JULY 27.—A very small crop of apples in Maine this year. In spite of continuous rainy weather at blossoming time apple trees that bear cider apples and some others set fairly well. Hay in this section more than doubled that of last year; throughout the State it will average about 50 per cent more. My own fields cut three times more than in 1900. Some old fields in this section cut no more. There is an increase in the number of acres of silage corn each year, and although late it is now of good color and growing well. We have thought the Leaming best suited to our climate, but have experimented this year with three other varieties. J. H. R.

Portland, Me.

JULY 30.—We have had an unusually wet season. Nearly all crops have suffered from the cold wet Spring. Wheat is nearly a failure and the crop has been largely abandoned. Potatoes were planted late and largely in compact wet soil, and they will require most favorable conditions if an average crop is secured. Many were not planted till late in June. Our late planted potatoes we usually spray two or three times, beginning when the vines are suitable size. Our early potatoes are a very encouraging sight at this writing, fast closing up the rows, full of health and vigor. We gave them an application of 800 pounds per acre of nitrate of soda, acid phosphate and muriate of potash. C. W. B.

Phelps, N. Y.

Crop and Weather Report.

Conditions in Kansas and Nebraska have improved, rains having come in time to help the late corn. The drought is still serious in the Ohio Valley, where corn is in a most critical condition. Winter wheat harvest is in progress in Washington, and the yield is fully equal to expectations. Spring wheat is being cut in the Red River Valley. Both quality and yield are below the average on account of excessively early ripening. The last of the oats in the extreme North are being harvested. The crop in the North Atlantic States is generally light. The cotton prospect has improved, clean fields and good growth being reported over a large part of the belt. In the Ohio Valley and Tennessee the tobacco plant is suffering from the dry weather. In New England and the Middle Atlantic States it is making a fine growth. There is no improvement in the apple outlook. Secretary of Agriculture Wilson is making a personal investigation of the drought damage in the West.

The Potato Crop.

In central northern Ohio potatoes will be short. Early potatoes do best planted about April 15, but this year they are no better than those planted in May. The cause is a very wet Spring followed by very hot weather. From June 24 to July 17 inclusive we had 15 days with mercury at 90 or above. Of course, this extremely hot weather was too much for the early potatoes, and early-planted late potatoes are not doing well. Owing to help being hard to get the Potato bugs have done much damage. Our late potatoes do best planted about the middle of June, and it is too early to tell much about the crop, only that most farmers got a poor stand, seed rotting very badly. Only those who planted small tubers whole have a good stand. W. W.

Cut and Shredded.

It is reported that 3,000 cases of California dried peaches which were shipped to Seattle, Wash., were condemned by the fruit inspector there as wormy and unfit for use.

The English wheat harvest began the third week in July. This was earlier than usual, having been hastened by the hot weather. Mark Lane Express says that on five per cent of the area sown the quality and quantity of the grain will be fine; 25 per cent will be a fair average, and 70 per cent below average. The straw crop will be the shortest in eight years.

The Pacific coast lumbermen have submitted to the western railroads their estimate of the number of cars they will need to handle their output for the next four months as follows: Lumber, 10,400 cars; shingles, 10,600. The heavy wheat crop in the Northwest will tax the carrying capacity of the roads greatly for the next few months, and they are getting extra equipment as rapidly as possible.

GRANGE FIRE INSURANCE.—Having been a director for 20 years in the Farmers' Reliance Fire Insurance Company of West Jersey, I thought some of your readers would be interested to know how we are getting along. Our company was organized over 21 years ago, composed wholly of those who belong to the Grange, comprising several counties, each county having two directors. We insure for one-half of one per cent, it being perpetual as long as the assessments are paid. The assessments for 21 years amount to two cents and three mills on a dollar, and we now have $12,000 in the treasury. We have over $5,000,000 worth of property insured against fire or lightning. We have no bills to pay for advertising; being a benevolent institution we are not taxed as other insurance companies are; no salaries except the treasurer, who gets $25 a year; no costly insurance offices; the directors have $1 for taking risks; the secretary 50 cents for making out the certificate of insurance. Grangers are the better class of farmers, and having a company of their own they are more careful of fire than people in general. If farmers do not hang together they will hang separately, as Franklin said at the time of the formation of our Government.

Vineland, N. J. J. W.

Woman and Home

From Day to Day.

HOSS-HAIR SNAKES.

Sile sez it's so, an' Sile he knows;
  Fer he knows ev'ry thing.
Why Sile he growed th' apple-tree
  Down where us fellers swing!
He sez he 'members jes' ez well,
  More'n twenty year ago
He dug a hole an' put it in,
  An' he jes' *knowed* 'twould grow.

An' Sile sez 'at he knows it's true;
  His gran'pap tol' him so;
He's seen it, too, jes' heaps o' times—
  Onct not long ago.
Th' hoss-hairs must be long an' white
  Ter make th' bestes' ones.
Y'u put 'em in th' bar'l where
  Th' rainin' water runs.

An' shore ez fate, Sile sez it's true,
  Nine days is all it takes
A-soakin' in that bar'l thar
  Ter make them hoss-hairs *snakes!*
Sile sez thar's lots o' crank idees;
  He's hearn folks tell jes' loads;
But two things shore is hoss-hair snakes
  An' gittin' warts from toads.
—Frank Leslie's Popular Monthly.

*

A FRIEND asks us what is gumbo fillet powder, used by Creole cooks in certain soups and stews. It is a powder made from the young leaves of the sassafras, which are dried in a cool, shady place, rubbed to a fine powder, passed through a hair sieve, and then stored away where the powder will keep dry.

*

ONE of the most satisfactory inexpensive covers for the dining table is made from plain art denim in any dark shade. Two breadths are required, which should be seamed together on the sewing machine, and pressed smooth. A deep hem is turned up on the outside, and this may be worked with white rope linen floss, if desired.

*

WE are asked how to pickle corn. We have never seen corn pickled alone, but it is mixed with cabbage as follows: Cut the kernels from 12 large ears of corn, add as much chopped cabbage as there is cut corn, one large sweet pepper freed from seeds and chopped, one cupful of brown sugar, two tablespoonfuls of salt, one-half tablespoonful of ground mustard and one quart of vinegar. Bring all to a boil and then can.

*

WE often hear of fathers whose experience, after educating their sons, is rather like that of the old man who thus described his troubles:

"It's a queer world when you come to look it over," said the old man. "You know I eddicated Jim fer a lawyer."

"Yes."

"An' Bill fer a preacher."

"Exactly."

"An' Tom fer one of them literary fellers."

"Yes."

"An' Dick fer a doctor."

"Yes."

"Well, now, what do you reckon I'm a doin' of?"

"Can't say."

"Well, sir, you might not believe it, but I'm a-supportin' of Jim an' Bill an' Tom an' Dick, an' it keeps me a-goin' from daylight to dark."

*

MISS Eleanor A. Ormerod, the distinguished English entomologist, botanist and meterologist, died after a short illness July 19. Miss Ormerod began, in 1868, to make a special study of agricultural and horticultural entomology. She was the consulting entomologist of the Royal Agricultural Society, and a member of the Royal Meterological Society. She was one of the highest authorities in her special branch of science, and was the only woman upon whom the University of Edinburgh has ever bestowed the honorary degree of LL.D. Miss Ormerod devoted herself to entomology from pure love of science, and it is gratifying to note that full recognition of her talents was given during her lifetime.

THE most comfortable collar to wear with a shirt waist is the stock tie, made from a strip of white nainsook or dimity, 1½ yard long and four inches wide. The center should be rounded slightly, using a good collar opening at the back for pattern, this being for the purpose of fitting at the front of the neck. With a bias strip of colored lawn one inch wide bind the entire tie, sewing one edge of the strip to the edge of tie, folding it in the center, and stitching down the other edge over the first seam. Bindings of light blue, rose

3860 Seven Gored Skirt, 22 to 32 waist.

or black are very pretty. These ties are worn without any other collar, being put around the neck, crossed in the back, and tied in the front with either a butterfly bow or four-in-hand. The crush stocks are made of two thicknesses of white piqué, stitched along the edges, with the addition of a colored tie, either a small bow or four-in-hand, but very often the crush stock is so very crushy in effect as to look distinctly untidy. The misguided men who have taken to crush stocks this Summer, as a correct finish to their shirt waists are a solemn warning against them. The first of these seen were plain white piqué stocks encircled by a colored tie, and were quite unobjectionable, though it was evident that many of the wearers had not acquired the art of pinning them down securely in the back. These were followed by large stock ties of colored cheviot or madras, which are crossed in the back, the ends being brought forward to form a large Ascot. The thick swathing of colored material, rising above a man's coat, is not attractive, and it brings back visions of the worsted comforter which the old-fashioned boy used to wind about his neck in wintry weather. On the whole, we think the Summer man would do well to stick to collars.

The Rural Patterns.

The seven-gored skirt has certain distinct advantages over every other skirt. Its numerous seams provide vertical lines that give an effect of height. It is fitted without hip darts. Withal it is economical, as it requires less material than the models which include wider gores. The excellent model shown is cut on the latest lines and has the advantage of including the popular band flounce, that can be used or omitted as desired. As illustrated, the material is light-weight cheviot, in soft tan color, but any wool or silk material is appropriate, as the narrow gores lend themselves to narrow fabrics with singular effect. The skirt fits with perfect smoothness over the hips, and is laid in an inverted pleat at the back, but widens toward the bottom. To cut this skirt for a woman of medium size, 9¼ yards of material 21 inches wide, 5½ yards 27 inches wide, 5¼ yards 32 inches wide, or 5 yards 44 inches wide, will be required without the flounce; 12¾ yards 21 inches wide, 8⅜ yards 27 inches wide, 8¼ yards 32 inches wide, or 6⅝ yards 44 inches wide, when the flounce is used. The pattern No. 3860 is cut in sizes for a 22, 24, 26, 28, 30 and 32-inch waist measure; price 10 cents from this office.

The simple sailor waist, with contrasting shield and stock, is a marked favorite of the season, and possesses the merit of suiting many styles and materials. As shown, it is of ox blood mercerized chambray, with stitched bands of a darker shade, collar and shield of white all-over tucked lawn, and is designed for wear with odd skirts; but the model is admirable for the popular shirt waist suits of chambray, linen and the like, and all shirting materials are suitable for the separate waist. The back is smooth across the shoulders and is drawn down in gathers at the waist line. The fronts are plain at the upper portion, but full at the waist, where they blouse slightly, and the neck is finished with the sailor collar that terminates in points. The shield of white is joined to the stock, then stitched to the right front, beneath the collar, and hooked or buttoned into place on the left. A sailor knot of the material adds a finishing touch. The sleeves are in bishop style with straight cuffs. To make this waist for a woman of medium size, four yards of material 21 inches wide, 3¼ yards 27 inches wide, 2⅝ yards 32 inches wide, or two yards 44 inches wide will be required. The pattern No. 3872 is cut in sizes for a 32, 34, 36, 38 and 40-inch bust measure; price 10 cents.

Fruit Juices.

At this season, when fruit is cheap and plenty, it seems a pity that more country housekeepers do not realize the value of fruit juices. In the average rural kitchen there is wasted every year the finest part of the fruit from lack of time or knowledge of the value of the delicious juices left from canning. Many and many a time have I seen busy women who pride themselves on being economical throw away quarts of juice, all unconscious of the wastefulness of it. Never throw away a bottle large or small, but as soon as the medicine or extract is all gone, carefully clean and store in a dry place in the pantry, where they can be made ready by a few minutes' soaking in hot water for the syrup. Of course no one would think of using bottles that had held poison or dangerous strong medicines, but only those that have held harmless liquids.

3872 Shirt Waist, 32 to 40 bust.

It takes only a minute or two after the cans are filled to strain the surplus juice through a jelly bag and put it back in the kettle with about half its weight in sugar. Tastes differ, and only practice will teach you how sweet or sour your family like the syrup, though half the weight in sugar is a good safe rule. Boil down about one-third, fill the bottles, and seal the small cavity after the cork is pushed well down with paraffin. When paraffin comes more generally into use as a sealing wax, the burdens of the housekeeper will be lightened very much. It is cheap, clean and convenient, can be used again and again, and effectually keeps out the air.

The uses of these homemade fruit syrups are so many and varied that it seems impossible to name them. Three or four tablespoonfuls of it added to pudding sauce flavors and enriches it as no extract can, or the plain syrup is often used for sauce for almost every kind of pudding. In making ice cream it is invaluable, and does away with the danger of poisonous adulterated extracts. One large cupful strawberry, grape, currant, cherry or blackberry juice added to a gallon of ice cream gives it a delicious flavor and delicate color. Compare ice cream made in this way with that colored with drug-store coloring and see whether you do not prefer the former for your children. In hot weather one of the best drinks, as well as one of the wholesomest, is made by adding one tablespoonful of fruit syrup to ordinary lemonade, omitting the sugar. The best way is to fill the glasses and then add the spoonful of juice to each tumbler, stirring well. The same amount of juice added to pure cold, not ice, water is delicious, and is liked by many better than if the lemon is used.

No family where there are little children can afford to be without blackberry syrup during the Summer months, and even the older people will find it helpful in cases of cholera morbus. Its prompt use will check Summer complaint and it will be relished by the little ones when medicine is despised. Pure grape juice is also of great medicinal value and is strictly temperance because not fermented. These are but a few ways in which the syrups may be used, and every housekeeper could find dozens more if her pantry shelves held a good supply of the clear bright juices. In sickness a few spoonfuls of whipped cream flavored with fruit juice will tempt the invalid, and help win back the fickle appetite better than anything else.

The sour fruits make the best syrup, though any kind may be used with satisfactory results. Small inferior fruits, especially berries, may be profitably cooked and strained to obtain the juice, but be sure that it is perfectly ripe and sound. In making quince syrup, which has a very fine flavor, use half sour apples, and a better quality of juice will be obtained. It is a good plan to have a large stone jar that can stand out of the way on the back part of the stove or in the oven, as slow boiling is better than rapid. If you are sceptical as to the merits of fruit juices try a few bottles at least and see whether next year does not find you planning for a large supply. HILDA RICHMOND.

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WHEN you get me a good man made out of arguments, I will get you a good dinner with reading you the cook book. —George Eliot.

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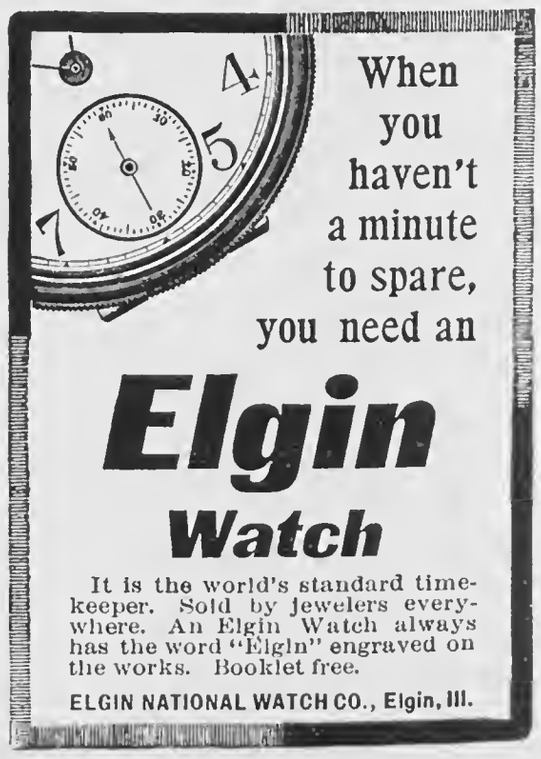

Stackpole's Stump Fence.

"I don't see but what you will have to submit, Cyrus," said Colonel Bowker. "The law seems to be pretty clear on the subject. When the State grants a railroad a charter and a town grants it the right of way the railroad company can take, at a fair appraised value, any property lying in the line of its survey, provided the owner refuses to sell at an agreed price. That covers the facts in this case. You refuse to sell the company a strip on the south side of your orchard. The State says to the company, 'We give you the right to appropriate that land at our appraisal.' It's no use for the owner to protest. The law can do nothing for him. If there was a ghost of a chance to fight, Cyrus, I'd be glad to do what I could for you. But a lawyer can't do anything when there's no law on his side."

Colonel Bowker tipped his chair back and threw one leg over the corner of his littered table. An old man, trembling with impotent rage, sat in a rickety armchair on the other side of the table. His chin quivered and his thin lips kept opening and shutting as the senior village lawyer spoke.

"Then, ef the law can't do anything for me, I'll do it for myself!" cried the old man, bringing his withered fist down on the arm of the chair. "I'll see ef a man kin be robbed of what's be'n his'n for 50 year, and be'n in the family for more'n a hundred!"

"I hope you won't do anything rash, Cyrus," said the Colonel, blandly. "It's a case where the welfare of the many overrides the welfare of the individual, you see. The law provides no recourse for the individual in such a case."

"I got done with the law, I tell ye!" shouted the old man, fiercely. "I'm dependin' on myself now. I said, ef the law couldn't help me, I'd help myself. I'll see ef they kin run their consarned trains through my orchard without my permission. A man's proputty's his own. Th' ain't no law that kin knock that fact out o' the Ten Commandments."

Colonel Bowker accompanied his irate client to the door. "Better be cautious, Cyrus," he said, as the old man plunged down the steps. "Don't do anything in a hurry. Take time to think it over. And remember that I am always ready to advise you on any point that may come up."

Cyrus Stackpole drove home in a blind rage. He was one of those old men who are as set as the everlasting hills, and the fact that everything seemed to be arrayed against his will in this instance only served to make his resolve the stronger. He was bound and determined that the new railroad should not pass through his orchard. There was no particular reason why it should be denied this right of way, except that Cyrus had taken a notion not to allow it. The trees in the orchard had been set out by his father's father, and their knotted and wrinkled trunks and limbs had long since passed the age of fruit bearing. They only served to cumber the ground. But Cyrus would not cut them down and plant new ones. They were a part of the old order of things, and Cyrus was a conservative of the conservatives. A peck of bitter, worm-eaten windfalls from the old trees was more to his liking than a bushel of sound and toothsome fruit from a younger and more vigorous stock. That the pert modern railroad should desecrate his venerable orchard was not to be endured. It went against the old man's grain, and that grain was exceedingly tough.

As it happened, however, Cyrus Stackpole fell into the clutches of a severe attack of inflammatory rheumatism soon after his visit to Colonel Bowker's law office and about the time when the railroad men came to grade and prepare the roadbed across his orchard. The work was all done while the old man was groaning and fuming in bed; and by the time he got about again the ties and rails were laid through his orchard. Then the first train came along roaring triumphantly, and vomiting black smoke over what remained of the ancient apple trees.

Upon this Cyrus bestirred himself, though physical exertion still sent excruciating pains through his joints. The regular passenger train schedule had been in operation just a day, when he began to do for himself what the law could not, or would not, do for him. At 3 o'clock on a Tuesday afternoon, his wife having driven to the village, Cyrus hitched up a yoke of oxen and began to drag stumps from the stump fence on the north side of the orchard to the railroad bed. He chose the largest and soundest and toughest stumps he could find, and by 6 o'clock had a formidable fence built across the railroad on the exact boundary of his orchard. The roots of the stumps bristled in the direction from which the next train would approach—the train from Wilmington—due to pass at 8 o'clock in the evening. Should the locomotive strike those formidable roots the butt of the stump would only be driven firmer into the ground. Something would have to stop, or smash, and Cyrus felt confident that it would not be the stump.

It was several minutes past 6 when the horn blew for supper. Cyrus was glad of the extra time and glad that his field of operations was hidden from the house by a rise of land. When he came slowly up from the orchard with the tired oxen his wife met him at the back door.

"Here's a letter for you," she said. "Supper's a little mite late, but the old mare limps so I couldn't git home as soon as I planned. Better read the letter 'fore ye set down to eat, hadn't ye?"

"No," answered Cyrus, limping to the barn with the oxen. "It'll keep until after I've had a cup o' tea, I reckon."

Cyrus Stackpole ate his supper deliberately and then sank into the old padded rocker by the window and opened his letter. Hardly had he commenced to read it when, with a startling cry, he sprang to his feet again and ran stumbling to the barn. Her husband's cry and sudden leap caused Mrs. Stackpole to drop a lot of plates she was carrying to the sink; but not even the terrific crash of broken crockery elicited the slightest attention from Cyrus. The letter had fluttered from the old man's hand to the floor as he can and Mrs. Stackpole stooped and picked it up with shaking fingers. Something in that letter, she knew, had caused her husband's sudden dismay.

She turned first to the signature. It was from Frank—their own dear boy, from whom they had not heard for two years and whom they had about given up for dead since he disappeared in the Alaskan gold fields.

"Dear Father and Mother," he wrote, "I am coming home at last—a rich man! Have been out of the world, practically, since I wrote you last—living in a hut, 200 miles beyond civilization. Will tell you all when I see you. Look for me next Tuesday evening. I learn that you have a new railroad now and I can reach you by train the same evening I get to Wilmington, God bless you both! Lovingly, FRANK."

What was there in that blessed letter that could have caused her husband such distress? Mrs. Stackpole wiped the tears of joy rfom her eyes and sped out to the barn.

"Cyrus!" she cried. "What on airth air you doing?"

Cyrus was hurriedly replacing the yoke on the necks of the weary oxen. His hands trembled. His face was overspread with an ashen gray pallor.

"Git out of the way!" he shouted, as he lashed the oxen from the barn, the long chain that dangled from the yoke clattering behind. He caught a lantern from a nail and hurried after the startled and bewildered beasts.

"Where *air* you going, Cyrus?" demanded his wife, following the distracted old man, as he led the oxen over the crest of the hill to the orchard bars. Cyrus made no reply, and his wife followed him. Then she saw the bristling stump fence across the railroad, and the whole dreadful truth flashed upon her. Cyrus had built a fence to stop or wreck the next train, and that was the very train that Frank had written he should take from Wilmington!

The village station was a mile beyond the Stackpole farm. The train would not have even begun to slow down when it passed through the orchard. It was already getting dusk. It would be pitch dark by the time the train came along—in just an hour.

Cyrus Stackpole never looked at his wife, but worked with feverish haste; and she did not interrupt him, for she knew that every moment was precious. The oxen strained mightily at the great stumps, but they were so crowded together and interlocked that it was hard to get them off the track. Cyrus had performed his defiant task unfortunately well.

"Light the lantern!" cried the panting old man at last. His wife took the match he flung her and kindled the slight flame in the dusty globe. Cyrus bent and adjusted the chain anew by the candle's feeble light. Then the oxen strained together once more, but the biggest stump of all would not move. The long, tough roots were wedged between and under the rails.

"God!" groaned the old man. It was the shortest of prayers, but it was a prayer and not an impreeation.

"Hark!" cried the trembling old wife. From far off through the darkness came a faint rumbling sound. It was the evening train from Wilmington!

"Cyrus!" exclaimed the woman. "Red light'll stop 'em—I've heard so. Hain't we got anything to make a red light with? Quick!"

Cyrus disgorged the contents of all his pockets at one sweep. Among them was an old-fashioned red bandanna handkerchief. His wife seized it with a cry of joy, and, catching up the lantern, hastened down the track toward the approaching train. She turned up the wick of the lantern until it smoked furiously. Then she wrapped the red handkerchief around the globe held the lantern up in both hands and slowly swayed it to and fro.

The train was almost upon her before the engineer saw the faint red signal. But the air-brakes did their magic work, and the engine stopped within 20 feet of the last huge bristling stump of Cyrus Stackpole's fence across the railroad. Frank Stackpole was one of the first passengers to leap from the intercepted train.

"What in thunder—why! Father's old orchard!" he exclaimed. "And here—mother!" He caught a tottering gray-haired figure in his strong arms. Mrs. Stackpole like all heroines, had first accomplished her deed, and then fainted away!

The railroad company did not enter a complaint against Cyrus Stackpole. His big, black-haired, healthy son may have had something to do with that, and he may not. Very likely, the unrestricted and undisputed right of way through the old man's orchard was an inducement. At any rate, the matter was dropped, and Cyrus Stackpole proved to be so subdued in spirit that, only two days after his stump fence disappeared from the track, he rode through his own orchard on one of the detested trains, on his way to Wilmington with his son, to buy a brand-new suit of clothes and "see the sights."—James Buckham, in the New York Evening Post.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

Kitchen Mathematics.

In following recipes "an egg" or "a cupful" are terms used easily, without thinking that the size of eggs and of cups differs. The Chef, of Chicago, gives this valuable table of weights:

Ten common-sized eggs weigh one pound.

Soft butter, the size of an egg, weighs one ounce.

One pint of coffee and sugar weighs 12 ounces.

One quart of sifted flour (well heaped) weighs one pound.

One pint of best brown sugar weighs 12 ounces.

Two teacupfuls (well heaped) of coffee and sugar weigh one pound.

Two teacupfuls (level) of granulated sugar weigh one pound.

Two teacupfuls soft butter (well packed) weigh one pound.

One and one-third pints of powdered sugar weigh one pound.

Two tablespoonfuls of powdered sugar or flour weigh one ounce.

One tablespoonful (well rounded) of soft butter weighs one ounce.

One pint (heaped) of granulated sugar weighs 14 ounces.

Four teaspoonfuls are equal to one tablespoonful.

Two and one-half teacupfuls (level) of the best brown sugar weigh one pound.

Two and three-fourths teacupfuls (level) of powdered sugar weigh one pound.

One tablespoonful (well heaped) of granulated or best brown sugar equals one ounce.

One generous pint of liquid, or one pint of finely chopped meat, packed solidly, weighs one pound.

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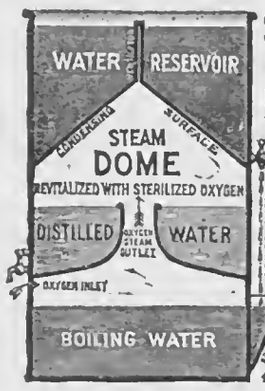

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MARKETS

THE WEEK'S QUOTATIONS.

WHOLESALE PRICES.

NEW YORK, AUGUST 3, 1901.

GRAIN.—Trade in wheat has been less active, and prices down one to two cents. Corn continues to rise, now being 4½ cents above last week.

Wheat, No. 2, red	—	@	76⅜
No. 1, Northern Chicago	—	@	77⅛
No. 1, Northern, New York	—	@	77⅛
Corn, No. 2, mixed	—	@	62½
Oats, No. 2, white	—	@	42
Rye, No. 2, W'n, f. o. b., afloat	—	@	59½
Barley, feeding	—	@	52
Malting, new crop	60	@	65

BEANS.—All grades up 10 to 20 cents per bushel.

Marrow, choice, per bu	2 85	@2 90
Pea, bbls., choice	2 35	@2 40
Red kidney, choice	2 40	@2 45
White kidney, choice	2 15	@2 25

FEED.

Spring bran, coarse	17 75	@18 00
Winter bran	18 00	@20 00
Red Dog	19 50	@20 00
No grade flour	—	@20 50
Linseed meal, ton	—	@27 50
Cottonseed meal, ton	—	@22 00

HAY AND STRAW.

Hay, No. 1	87½	@	90
No. 2	80	@	85
No. 3	70	@	75
Clover	55	@	65
Clover, mixed	65	@	70
Straw, rye, long	90	@	95

SEEDS.

Clover, per lb	9½	@	10½
Timothy, per bu	1 90	@2	50
Flaxseed, whole, per bu	6 50	@7	00
Millet, per lb	2¾	@	3
Rape, German, per lb	3¼	@	3½
Sunflower, per lb	2¼	@	2½

MILK.

New York Exchange price at stations $1.21 per 40-quart can. This is the gross price, and from it must be taken cost of transportation and fees at receiving stations where such charges are made.

BUTTER.—Extras are one-half cent higher than at last report. Factory butter is firm, but there is no warrant for any higher quotation than 15 cents.

Creamery, extras, per lb	20½	@	21
Firsts	19	@	20
Seconds	18	@	18½
Thirds	16	@	17
State dairy, tubs, fancy	18½	@	19
Firsts	17½	@	18
Seconds	16	@	17
Thirds	14	@	15
W'n, imitation, creamery, fcy.	16½	@	17½
Firsts	15	@	16
Lower grades	14	@	14½
Western factory, fancy	—	@	15
Firsts	—	@	14½
Fair to good	—	@	14
Lower grades	13	@	13½
Renovated butter, fancy	17	@	17½
Common to choice	14	@	16½
Packing stock	13	@	14

EGGS.—The market is again dull and demoralized owing to heat damage in many receipts.

QUOTATIONS AT MARK.

State & Penn., avge. prime	16	@	18
W'n, northerly sections, candled, choice to fancy	15½	@	16½
Packing, good to prime	12	@	15
Fair to good	9	@	12
W'n, s'th'ly sections, selected	10	@	12
Regular packings	8	@	11
W'n, refrigerator, April packed, fancy	16½	@	17½
Later packings, choice to fcy.	15½	@	16½
Western, inferior, per case	1 00	@2	10
Candled, dirties	8	@	10
Uncandled, dirties	6	@	8
Fresh-gathered, checks	5	@	6
Dirties or checks, poor, case	1 00	@1	25

QUOTATIONS LOSS OFF.

State and Pa., fresh-gathered, average best	17	@	18
W'n, s'th'n sections, firsts	—	@	17

LIVE STOCK.

Steers	4 50	@5 30
Bulls	2 35	@3 30
Cows	1 75	@3 25
Veal calves	4 50	@6 75
Buttermilks	3 00	@3 50
Sheep	2 50	@4 00
Lambs	4 00	@6 25

COUNTRY-DRESSED MEATS.

Calves, average, prime	9	@	9½
Fair to good	8	@	8½
Common to medium	6	@	7

LIVE POULTRY.

Spring chickens, Ohio, Indiana, etc., per lb	—	@	13
Spring chickens, W'n, S'th'n & Southwestern, per lb	—	@	12
Fowls, per lb	—	@	9
Old roosters	—	@	5
Turkeys, per lb	—	@	8
Ducks, Western, per pair	50	@	75
Geese, average, W'n, pair	1 00	@1	25
Pigeons, per pair	15	@	20

DRESSED POULTRY.

FRESH PACKED—ICED.

Turkeys, hens	7	@	8½
Toms	—	@	7
Broilers, Phila., large, per lb	19	@	20
Phila., mixed weights	16	@	18
Pennsylvania	15	@	16
Western, dry-picked	13	@	15
Western, scalded	12	@	12½
Southern, scalded	10	@	11
Fowls, W'n, dry-picked, small	8	@	10
Western, scalded, small	9½	@	10
Southwestern, small	—	@	9½
Heavy	9	@	9½
Poor to good	8	@	9
Old roosters, per lb	—	@	5½
Ducks, L. I., and other nearby, per lb	—	@	13½
Spring, Western, per lb	7	@	9
Geese, Spring, per lb	—	@	18
Squabs, choice, large, wh., doz.	—	@2	25
Mixed, per doz	1 75	@1	87
Dark, per doz	1 25	@1	50

FROZEN.

Turkeys, young hens, No. 1	11	@	11½
Young toms, No. 1	—	@	10½
Broilers, dry-picked, fancy	18	@	20
Scalded, fancy	—	@	14
Chickens, fancy, soft-meated	12	@	13
Average, No. 1	9	@	10
Fowls, dry-picked, No. 1	—	@	10
Plain	9	@	9½
Ducks, fancy	12	@	12½
Geese, fancy	9½	@	10

DRIED FRUITS.

Apples, fancy	8½	@	9
Choice	8	@	8¼
Prime	7½	@	7¾
Chops	1 00	@1	85
Waste	1 25	@1	30
Raspberries, per lb	20	@	21
Blackberries, per lb	5	@	5½
Cherries	10	@	12
Apricots, boxes, per lb	8½	@	13
Peaches, Cal., unpeeled, boxes	6½	@	9½
Bags	5½	@	8½
Peeled, per lb	10	@	16
Pears, California, per lb	5	@	10

FRESH FRUITS.

Peaches, Georgia, carrier	1 00	@	1 50
North Carolina, carrier	75	@	1 25
Pears, Le Conte, S'th'n, bbl.	1 50	@	3 00
Plums, Ga., Botan, carrier	1 50	@	2 00
Currants, fancy, quart	4	@	6
Poor to fair, qt	2½	@	3½
Huckleberries, N. C., blue, per quart	5	@	7
N. C., ordinary, quart	4	@	6
Md., blue, quart	5	@	7
Md., black, quart	4	@	6
Jersey, quart	5	@	8
Pa., Mt., quart	6	@	10
Raspberries, Md. & Del., red, per pint	3	@	5
Jersey, red, pint	4	@	6
Upriver, red, pint	5	@	7
Upriver, black cap, pint	3	@	4
Md. & Del., black cap, pt.	2	@	3½
Jersey, black cap, pint	2	@	4
Blackberries, Md., quart	5	@	8
South Jersey, quart	7	@	9
Watermelons, Fla., 100	10 00	@	20 00
Per car	100 00	@	175 00
Muskmelons, South, fancy, per bushel	1 50	@	2 50
Poor to fair	1 00	@	2 00
Baltimore, bushel	1 25	@	1 75
Apples, Va., bbl	1 25	@	2 25
Md. and Del., bushel	50	@	1 00
Md. and Del., basket	40	@	75
Washington, basket	40	@	90

VEGETABLES.

Potatoes, L. I., fair to prime, per bbl	3 00	@	4 00
Jersey, fair to prime, bbl	2 75	@	4 00
Southern, prime	3 00	@	4 25
Common, per bbl	1 50	@	2 50
Sweet potatoes, N. C., red, prime, per bbl	3 00	@	4 00
Onions, Md. and Del., Potato, per basket	50	@	75
Jersey, white, basket	1 00	@	1 25
Eastern Shore, white, bskt	75	@	1 00
Kentucky, per bbl	—	@	2 00
String beans, L. I., bag	50	@	75
Boston, wax, bushel	50	@	1 25
Turnips, Jersey, Russia, bbl	1 25	@	1 50
Jersey, white, 100 bchs	1 50	@	2 50
Peppers, Jersey, crate	1 75	@	2 00
Green peas, L. I., bag	1 00	@	2 50
W. N. Y., bag	1 00	@	2 50
Spinach, L. I., bbl	—	@	1 00
Cabbage, L. I., per 100	2 00	@	5 00
Long Island, per bbl	—	@	75
Tomatoes, Jersey, box	50	@	1 75
Maryland, carrier	50	@	1 00
Norfolk, carrier	50	@	1 00
Beets, Jersey & L. I., 100 bchs	1 00	@	1 50
Cucumbers, Southern, bbl	1 00	@	1 25
Eggplant, Florida, box	1 50	@	2 00
Jersey, per bushel	1 50	@	2 00
Carrots, L. I., 100 bunches	75	@	1 00
Corn, N. C., 100	60	@	1 25
Jersey, per 100	60	@	1 25
Cauliflower, nearby, bbl	1 50	@	2 00
Celery, Mich., per doz	10	@	25

BUSINESS BITS.

EVERYBODY likes strawberries and more families would have a nice bed of them if they only knew how easily they are grown. Any ground that will grow corn or potatoes will do. Write Henry A. Dreer, Philadelphia, Pa., about potted plants.

THE white form of the moccasin flower or lady-slipper orchid, Cypripedium spectabile, is as beautiful as it is rare, and makes a splendid companion with the purple flowered type. Harlan P. Kelsey, Tremont Building, Boston, Mass., has worked up a fine stock of this most desirable hardy plant, and offers them for Fall shipment.

FARMERS interested in making good roads, and in giving comfort to workmen and teams, should note the valuable improvement in the metal wheels manufactured by the Havana Metal Wheel Co., Havana, Ill. It is a patented grooved tire for metal wheels, and they make the wheels to fit any sized skein. This groove protects the ends of the spokes from wear and guards against ever wearing out. They make also a complete farm truck wagon, besides 10 styles of other truck wagons. It will pay our readers to write them for circulars of their full line, including feed grinders, shoveling-boards, steel wheelbarrows, etc.

ALFALFA ON MUCK.—As an experiment this Spring five acres of muck were seeded to Alfalfa. For a long time it seemed a question as to whether it was a success or a failure, as it rained and repeated so often that the soil was afloat most of the time, but as soon as the weather began to warm up and the sun did a few days' work the Alfalfa began to "look up," so to speak, and we soon harvested eight tons of good feed. I am somewhat skeptical as to the wintering of the roots, but am of the opinion, and decidedly so, that it will more than pay for a Spring crop each season, and let it winterkill if it wishes. Time will tell. W. E. IMES.

Michigan.

Notes on the Season.

Picked our sweet corn July 25. First string beans July 2—a little young, but as we had planted freely and expected a long yield we wished to begin early. A dry spell following, the rest (several varieties), became leathery in a day or two; as cherry picking and haying were upon us we could not stop to lug water. First peas July 2. All the rest, mostly wrinkled varieties, too hard in a few days. Beets ready for bunching, July 20. No locally-grown early potatoes to be had July 25; promise of average crop. Bugs gone and no blight. Late potatoes looking well. Our soil is clay and packs quickly, and is not early. New potatoes, southern grown, are being reshipped daily from this point to surrounding villages, and prices have advanced greatly. One year, by propagation under glass from top cuttings, we succeeded in getting some ripe tomatoes June 25. This year we grew the plants in pots till they were in blossom, and planted in rich hills without breaking sods, but it now looks as though we would not get a ripe tomato before the middle of August. Our Dahlia garden, owing to the moist Spring, began to bloom about July 4, but needs moisture now properly to develop the flowers. We had good hay weather, and the barns are full of fine hay.

Columbia Co., N. Y. J. Y. P.

I TELL you the meadows about here this year all looked as though we had followed Mr. Clark's methods of grass culture. In all my experience as a farmer I think I never cut such big grass, and so few weeds mixed in it. It makes a fellow have a sort of a comfortable feeling when he thinks about feeding his stock next Winter and Spring. A. R. P.

Ohio.

LICE ON APPLE TREES.—I see you recommend spraying for lice on apple trees; I tried that without much effect, as the curled leaf protected so many of them. I told my trouble to C. B. Wood (the venerable and successful fruit grower of Rappahannock County). He told me to try dipping the affected twigs in a bucket partly filled with tobacco water. I did so, and found it very satisfactory indeed.

Barboursville, Va. A. R. L.

A FARMER'S PICNIC.—The joint picnic of the Niagara and Orleans Farmers' Clubs at Wilson, N. Y., on July 27 was a great success. From early in the morning the roads were black with carriages, and the trains brought hundreds of people from distant points. It is impossible to make a fair estimate of the size of such a crowd, scattered as it was over a large field, but there seemed to be at least 12,000 persons present. They were all interested in farming in one way or another, and seldom can one find such a clean-looking, prosperous, happy and keen body of people. There were thousands of lunch baskets to be emptied, baseball and other sports for those who enjoy them, and speaking for those who prefer that form of entertainment. Speeches were made by H. W. Collingwood and Prof. Mills, of the Guelph (Ontario) Agricultural College. The picnic was a great success in every way. The farmers of western New York are alive. They know how to get together for business. They do not stay apart and grumble about their wrongs, but they get together and learn from one another what is wrong. Farmers seem to be generally cheerful this year, though the apple crop is short, while wheat is nearly a failure. Corn is backward. It was quite surprising to a Jerseyman with a farm as wet as a sponge from the constant rains to find such a dry country, where crops were dying from thirst.

"Stick to the bridge that carries you safe over." For more than sixty-two years Dr. D. Jayne's Expectorant has done that for thousands of sufferers from Lung and Throat troubles.—*Adv.*

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FOR SALE—One Hoover Potato Digger in good condition. Latest improvements. Price, $40. OLIVER SMITH, Chateaugay, N. Y.

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New Descriptive List quoting prices, FREE.
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A square means 100 square ft. Write for Free Catalogue No. 57 on General Merchandise. Chicago House Wrecking Co., West 35th and Iron Sts., Chicago, Ill.

A Carving Set.

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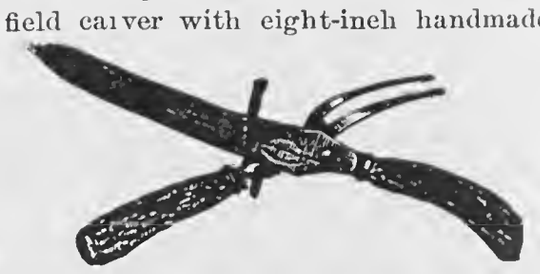
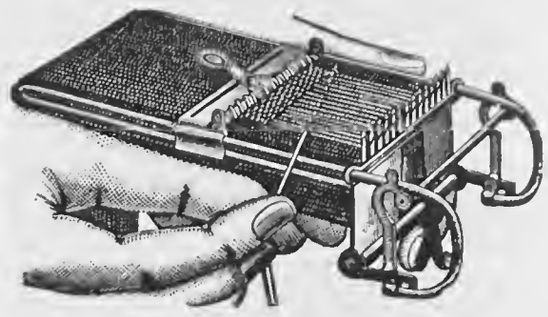


steel blade, buckhorn handle, fork and steel. Price, $1.90; or we will send it for a club of two new subscriptions at $1 each and $1.25 extra money, or free for a club of six at $1 each.

A Darning Machine.

This is the only successful darning machine we ever saw. We have tried others that were absolutely of no value. This one is little short of perfect. It enables you to mend underwear, stockings, curtains, table linens, clothing, and does an endless variety of art and fancy weaving better, easier and quicker than



by any other way. Full directions accompany each machine. When a lady has once used this little machine, she would not do without it for any consideration. We will send it postpaid for $1, or for two new yearly subscriptions at $1 each. All money returned if not satisfied.

BOOK BULLETIN

FOR SALE BY THE RURAL NEW-YORKER

MILK AND ITS PRODUCTS, by H. H. Wing. A treatise upon the nature and qualities of dairy milk, and the manufacture of butter and cheese. Price, postpaid, $1.

THE PRINCIPLES OF FRUIT GROWING, by L. H. Bailey; 514 pages, 120 illustrations. The location of orchards, planting, fertilization, tillage, handling, enemies, and harvesting and marketing fruit. Price, postpaid, $1.25.

CUT-PRICE BOOKS. Any of these 20-cent pamphlets named below sent postpaid for 10 cents:

Country Roads.
How to Plant a Place.
Fertilizers and Fruit.
My Handkerchief Garden.
Memory Training.
Accidents and Emergencies.
Canning and Preserving.

MARKET NOTES

NEW BRAND OF STRIKE.—The fruit commission merchants of San Francisco have had trouble on their hands in the shape of a strike of the teamsters handling their produce. About 800 wagon drivers quit work, and the wharves and sidewalks in front of the stores soon were piled high with fruits and vegetables. Some of the merchants and their clerks got out and drove their own teams, relieving the situation a little, but a large quantity of stuff spoiled because it could not be handled, and had to be thrown away.

BROOM CORN MATTERS.—The corn trust has obtained control of the market to such an extent that they can again absolutely dictate prices. Several weeks ago they reduced the price to such an extent that growers who were holding sold out at a low figure, and, of course, the trust quickly took all that was offered. Owing to the drought in the West, it is estimated that the shortage in the 1901 crop will be 20,000 tons, and it is not improbable that the price will go up to $200 per ton before the season closes.

DROUGHT AND LIVE STOCK.—When weather conditions in the cattle districts are such that food and water become scarce, the markets immediately feel the effects in increased receipts of live stock, for cattle men have no resort except to sell the stock that they cannot take care of. This is quite a reliable test, almost like a thermometer, for the worse the conditions the more animals are shipped. On July 10 the receipts at the Chicago cattle yards exceeded all previous records. Kansas City, however, being so much nearer the district where the drought was worst, received many more cattle proportionately than Chicago. The following figures show the amount of live stock received at Chicago, Kansas City, Omaha and St. Louis for the month ending July 20: Cattle, 510,000; hogs, 1,204,600; sheep, 466,100.

FRUIT NOTES.—Large quantities of excellent peaches are arriving. Prices at present are 25 cents per carrier above last year. The highest figure given is $1.75, but now and then an extra choice lot sells at a premium. Pears of fair size, but miserable quality, are plentiful. I saw a peddler with a wagon-load of this worthless fruit which he was selling for five cents a quart as "choice Bartletts." Doubtless he found enough people who did not know the difference to take all that he had. There is a fair supply of early apples, though but few good ones are seen. Most of them are small, and it is a wonder why they sell at all while there are so many peaches and other high-quality fruits to be had. A Summer apple at its best is but a poor substitute for its Winter relative. Watermelons are selling moderately well; also muskmelons, when of reasonably fair quality. However, there has been and is now a big surplus of muskmelons that are not good for anything, and everyone of this sort that is sold is an injury to the trade. The only way to keep the market for this product in fair shape is to ship only good fruit, and get it to the consumer as quickly as possible.

PRODUCE FOR THE WEST.—One effect of the unusually hot weather in the West is seen in the great call for vegetables and fruits, particularly lemons. It is said that during the past 15 days Philadelphia has sent over 100 cars of produce to western points, one concern having shipped 10 cars of lemons during the last week. Similar reports come from Baltimore, from which large quantities of potatoes, cabbage and tomatoes have been shipped. Cabbage in Baltimore has advanced 25 cents per crate, and potatoes 75 cents to $1 a barrel. The indications are that the potato crop in many States is light, and that higher prices than last year will prevail. However, a short crop does not necessarily cause extravagant prices, as the bulk of the potato consumers substitute something else, buying fewer potatoes when prices get above a certain limit. The hot weather has also caused a big boom in ice in Chicago. The chief call has come from southern cities, where the capacity of the artificial ice plants was not sufficient to supply the increased demand. W. W. H.

SOUTHERN CANNING FACTORIES.

CANNERIES AND COTTON GINS.—Canned goods go with civilization. They sustain great armies on their march across deserts and over distant islands of the seas. Tin cans mark the farthest adventures of man towards the North Pole. They may also be found "upon the bosom of the mighty deep." Canned goods may tide a nation over a distressing famine. They are not only indispensable in great emergencies, but we find them a most valuable luxury in our every-day life. The tin can brings to our tables, every month in the year, the fine fruits and vegetables of Spring and the harvest season. When one part of a country suffers from a loss of these excellent things, due to drought, insects or other calamities. the tin can brings them in abundance from more favored sections. When a State or nation begins to make much progress in industrial development, canning factories must follow. They are coming rapidly in Texas. Wherever there is a canning factory it develops horticultural industries. It saves the loss in horticultural crops. When the price of products in the markets goes below the cost of production, the factory comes in to great advantage, and saves the crop at a profit. It gives employment to men who might otherwise be idle. It keeps the money in the town that would go out for canned goods. Instead of the boiler and house of cotton gins lying idle all the year, except during the cotton season, small canneries could be connected with them and be used during the canning season to advantage. This would greatly encourage diversified farming in cotton communities. There would not be so much fear of cotton insects, such as the boll weevil.

COST OF SMALL CANNERIES.—The boiler and house are two of the most costly items in canning outfits. These things are already found at the cotton gins. Hence, what I shall say about cost does not include the cost of the boiler and house. A cannery for 500 cans per day will cost about $150; and will employ about five hands; for 2,000 cans per day, the cost will be about $250, and will employ about 20 hands; for 5,000 cans per day, the cost will be about $600. Our small cannery cost us as completed now nearly $400. While the capacity is estimated at 5,000 cans per day, we have never tested it at its full extent. We could easily add more machinery and increase its capacity at any time. Of course, wherever good fresh water is not found it will cost something to get it. A great deal of water is needed at a canning factory, and while almost any kind can be used for washing and processing, pure water must be used to go inside of the cans.

CANNING.—Nearly all firms that sell canning machinery give full instructions for canning that go with the machinery. However, we find that we cannot follow entirely, the recommendations for canning in the North. Our products vary in sugar, water, starch and acid content, and our Summers are longer and hotter than they are in the North. Consequently, we have to process longer here. Some southern factories have had much loss by following closely instructions for the North. Then, again, some southern factories do not possess some secrets used by factories of the North. They have had trouble in putting up a white grade of corn that would compete in the markets with the northern product, though the flavor was fully as good. Sometimes salicylic acid and cream of tartar have been used to bleach the corn. Recently we have tested a method of cooling the cans in water just after processing, and have found that this method greatly improves the color and flavor of corn by stopping the cooking suddenly. It improves fruits very much in the same way. The products must be kept fresh, and be put into the cans and processed before they are discolored. This is one of the main secrets. Sometimes we hear complaints of canned goods injuring those who eat them. In nearly all cases this is due to the products having soured before they are canned up. There is no harm that can result in using canned goods that are put up in a fresh condition, and do not have any acid in them.

BY-PRODUCTS.—In canning corn and peas there is a great deal of valuable food left in the shucks and cobs of corn and the hulls and vines of peas. These materials make valuable food for stock. At Greenwood, Ind., they have been put into the silo as they came from the cannery, and they made excellent silage. The fodder from sweet corn makes excellent forage. We have found that the peach peeling makes a most excellent jelly. A large amount of coloring matter and sugar are found in the peach peeling. When the peaches are peeled by hand we have found that the peelings from one bushel of peaches make three quarts of fine jelly. It takes about 25 cents worth of sugar and five cents worth of vinegar to make this amount. These three quarts of jelly are worth about 90 cents. The peach stones are worth about 75 cents per bushel to the nurseryman. This enables one to see that there is nothing about the peach that should go to waste. Small tomatoes may be made into valuable ketchup. In fact, all the by-products about a canning factory may be used advantageously.

THE PROFITS IN CANNING.—Of course, the profit will depend upon the amount of goods canned, the cost of the raw material, the kind and quality of goods put up, and the business management of the factory. In a general way, I may state that the profits are usually very satisfactory. Last year we put up nearly 9,000 cans, and when these goods were estimated at the prevailing wholesale prices at the time, we found that we had cleared enough to pay for our entire factory, and had left $121 besides. Students, mostly, were employed, and we paid them 12½ cents per hour, which was very high. In nearly all factories, labor is paid for by the piece, which is much more satisfactory. Frequently women and children do the most satisfactory work in the cannery, and this labor usually does not cost so much. In concluding, I will state that I can see no reason why small canning factories cannot be made a success in connection with cotton gins, wherever horticultural crops can be successfully grown. On large cotton farms there is usually a number of people who might be profitably employed in a canning factory. A part of the canned goods might be sold to the laborers for work in the cannery. I am frequently asked whether it is necessary to have an expert to do the processing. I might state that it is not advisable for anyone to start running a factory without some experience. Anyone who has the capacity to learn, and is willing to do so, we can teach in our factory in four weeks. R. H. PRICE.

College Station, Texas.

Mosquitoes and Malaria.

The New York Board of Health is out against the mosquito, and has issued a circular to doctors from which we take the following:

"The organism causing malarial fever (the Plasmodium malariae) is probably a true parasite and, so far as we know at present, finds the conditions necessary for its existence only in the living human body, and in this genus of mosquito, the latter becoming infected by sucking the blood from an infected human being. The malarial organism having thus entered the stomach of the mosquito, passes through certain changes in the body of the infected insect and at the end of about 10 days reaches the poison gland. After this time, if the mosquito bites another human being the malarial organism is introduced into the circulation of the latter, and malarial fever follows. So far as we know certain localities are 'malarious' only because they furnish favorable conditions for breeding this mosquito. Malarial fever would not occur in any malarious district, unless some infected human being were in it, or came into it and infected the mosquitoes, which in turn infected other human beings."

The following sensible suggestions are made to city people:

"First, proper screening of the house to prevent the entrance of the mosquitoes, and screening of the bed at night. The chief danger of infection is at night, inasmuch as the Anopheles bite mostly at this time.

"Second, the confinement and continuous screening of persons in malarial districts who are suffering from malarial fever, so that mosquitoes may not bite them and thus become infected.

"Third, the administration of quinine in full doses to malarial patients to destroy the malarial organisms in the blood, and persistence in the use of the remedy even for a few weeks after apparent recovery.

"Fourth, the removal of the breeding places of the mosquitoes through drainage, filling up of holes and surface pools, and emptying of tubs, pails, etc., which contain stagnant water. These mosquitoes particularly breed in surface rain pools and surface stagnant water, where there are no fish; also exceptionally in pails, tubs, barrels and tanks of standing water, though they seem mostly to prefer natural accumulations.

"Fifth, in pools which cannot be drained or filled the destruction of the mosquito larvæ by the use of petroleum thrown upon the surface, by the introduction of minnows and other small fish which eat the larvæ, or by both methods."

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"Oiling Up."

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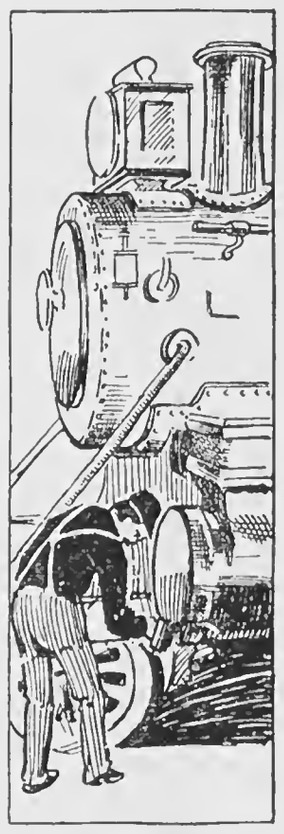

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Mr. Chas. Hunwick, of Lenox, Macomb Co., Mich., writes: "I have never felt better in my life than I do now. I have taken Dr. Pierce's Golden Medical Discovery right along. I can now walk quite well with a cane, and hope to throw even that away before long, and as I have had to use crutches for nearly two years, I think I am doing fine. I do not cough now and I can sleep like a school boy. You must know that I have been treated in two hospitals and by three doctors besides, and received no benefit; so I think your medicine the only medicine for me."

Dr. Pierce's Medical Adviser in paper cover, is sent free on receipt of 21 one-cent stamps to pay expense of mailing *only*. Address Dr. R. V Pierce, Buffalo, N. Y.

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TROY, N. Y.

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RAISING DAIRY CALVES IN WINTER.

Everyone concedes that the manner in which a calf is raised, whether it be a bull or heifer, has much to do with its value when it reaches maturity. A calf that is tied in a dark corner of a dark stable, allowed little or no exercise, fed irregularly and without care, cannot be expected to develop into the kind of cow we want in our barns. And, as a matter of fact, calves so treated, or rather maltreated, seldom if ever prove satisfactory either as milkers or sires. While all are agreed upon this, not all raise their calves after the same method, there being almost as many ways of feeding and caring for them, as there are farmers who do it. The writer does not claim that the method outlined below is the only way to raise calves successfully, or even that it is the best way, but that it has some merit is evidenced by the fact that we have been uniformly successful when employing it.

We like to start the calves some time during early Winter, so that they may pass the first few months in the barn. At this season we have more time to attend to them; they are not annoyed by flies, and seem to do much better than when started in the Spring. The calf is taken from its dam as soon after birth as possible, and put into a pen in a separate building. Calves thus removed before they have become well acquainted with their mothers are very readily taught to drink. They usually accept milk the first time it is offered, but sometimes one will be obstinate, in which case a 12-hour period of fasting and meditation usually brings about the desired result. For the first week we feed whole milk twice a day, from three pints to two quarts at a time. Some small calves are fed three times during the day, but the total quantity of milk is not increased. At the beginning of the second week half skim-milk is substituted for half of the whole milk. At the same time one-half tablespoonful of linseed meal is scalded and added to the milk for each calf. The oil meal is fed as long as the calf receives milk, the amount being gradually increased until each calf receives one-half pound daily. The proportion of skim-milk to the whole milk is gradually increased until at the end of from a week to 10 days the transition has been completed. We did not have a calf scour or get off its feed last Winter. At any time before the calf is 10 days old it is well to kill the embryo horns by applying caustic potash. This has been so often advised and described in the agricultural press that it seems hardly necessary to repeat the directions here. It is very simple, and seems to us much better than to let the horn grow, only to cut it off with a pair of clippers.

Until three months of age our calves have the run of a large basement, and here they grow and develop as calves kept tied up, or in small pens, do not. Now they are stanchioned the same as the cows and on pleasant days they have the run of a yard and large shed. We believe plenty of exercise to be an important factor in raising healthy calves. From the first, hay is kept before them, and in a short time they learn to eat a good deal of it. Bran is also fed as soon as they can be induced to eat it. Now, with the addition of milk, they are being fed much as are the cows, silage and bran night and morning, hay at noon. It is astonishing what an amount of silage and hay they eat, and what big stomachs they are developing. Some of the essentials to success in raising calves for the dairy it seems to me may be stated in the following order: Regular and careful feeding, being careful not to overfeed at any time, changing gradually from whole to skim-milk, keeping pails and troughs clean at all times; allowing them plenty of exercise and sunlight, and, in addition to the milk and grain, inducing them to eat plenty of coarse forage.

Connecticut. R. W. R.

SKIM-MILK CALVES FOR BEEF.

Prof. H. M. Cottrell, of the Kansas Experiment Station, is doing very practical work with dairy and beef cattle. Kansas feeders have thought that the average skim-milk calf will not make good gains when fed for beef. The calf that has run with the cow often sells for so much more than the skim-milk that there is more in calf suckling than in dairying. To settle this matter the Kansas Experiment Station fed 10 calves that had been hand-raised on skim-milk against 10 that had run with their dams at pasture. The result was that the skim-milk calves made an average gain of 440 pounds, while the sucklings gained 435, and consumed more hay and grain per 100 pounds of gain. Prof. Cottrell says:

We attribute the good showing made by the skim-milk calves to the fact that at weaning time they were already on grain feed; they did not worry at loss of their dams as did the other calves, and they were perfectly tame. The skim-milk calves were fed until weaning on sterilized skim-milk with a grain ration composed of equal parts of corn and Kaffir corn, with all the Alfalfa hay they would eat. They were fed in this way 22 weeks, and made an average daily gain of 1½ pound per calf. The feed to raise these calves to weaning cost $5.27 per head. As the results show, they were in good condition for feeding when weaned, and the experiment shows strongly the good feeding qualities of the skim-milk calf and the profits that can be made from it, when the calf is properly handled from birth to weaning and then pushed for baby beef. The College herd of scrub cows, bought without regard to their value for the dairy, produced in a year, at creamery prices, milk worth $37.75 per cow. The skim-milk calves which were fattened in this experiment were of mixed breeding, and were selected without regard to their value for the production of baby beef. They brought an average of $40 each when marketed at about a year old. This shows a gross income in a year from a scrub cow and a scrub calf of $77.75, when both cow and calf are pushed, the cow's milk sold, and the calf raised on skim-milk.

How Koumiss is Made.

Will you inform me how koumiss is made? I have stomach trouble and have to diet, and I thought I would try that.

South Colton, N. Y. O. H.

Koumiss was first prepared by a very old Asiatic tribe, the Kumanen, from whom it no doubt takes its name. This tribe was mentioned by Xenophon and Pliny. The Kumanen made koumiss from mare's milk, and in Russia and Asia this practice is still followed, but in this country skimmed cow's milk, to which sugar has been added, is usually used. Koumiss differs from buttermilk in having undergone alcoholic fermentation, from one to 1½ per cent of alcohol being found by the chemist in that made from cow's milk. The dietetic value of koumiss seems to be due not to the alcohol which it contains, however, but to the peptonized condition of the casein, which is thus more easily digested. The casein is in the form of a very fine floating curd.

To make koumiss take 25 pounds separator skim-milk, 10 pounds water, seven ounces granulated sugar, three ounces milk sugar and about 1½ ounce good yeast. Stir all together thoroughly and allow it to stand at a temperature of 100 degrees Fahrenheit for about 30 hours, stirring meantime at intervals of five hours. At the end of this time decant carefully into bottles, cork or stopper securely, and put into a cellar at a temperature of 55 degrees. It sours rather quickly, hence should be used within six days after making. J. A. F.

Gray Head Lice and Poultry.

The article on incubator chicks on page 366 contains some good advice, and some I disapprove of. Near the bottom of the page is a reference to the large gray louse I consider incorrect. P. H. Jacobs had gray louse on the brain years ago, but he never gave it credit for being a boring machine. I don't believe the large gray louse injures chickens in any way, provided the chick is all right to start with. I have read, raised and studied chicks for 30 years. C. W. KING.

Regarding the work of the gray head louse on ducks, a reliable poultry paper states: "If attacked by the large gray vermin in the head, though appearing well, they will turn over on their backs and die." Another paper made the same statement recently, describing in detail the operation as I gave it in THE R. N.-Y. Sister Mary told me this Spring that her little ducks mothered by hens at the Gabriel's Hennery, were greatly injured by big gray lice in the head. Personally, I have had no experience with these pests on my ducks, but after reading the articles above referred to, thought perhaps a few cases of sudden and unexplained deaths in my flock were thus accounted for. While Mr. King may be correct in his assertion that my insect is a myth I'm very confident that the leading poultrymen in the country will object to his statement that this pest "does not injure chickens in any way, provided the chicks are all right to start with." Robert H. Essex, of the Reliable Poultry Journal, writes me:

"The fact that P. H. Jacobs had gray louse on the brain years ago, is undoubtedly something in favor of Mr. Jacobs, although not so intended by Mr. King. There are two things that cause the death of the majority of poultry in this country (aside from those killed for market) and those are lice and overfeeding, and it is probable that the former are responsible for the most slaughter. Mr. King's belief that the large gray louse does not injure chickens in any way provided the chicken is all right to start with has no foundation in fact. Where a hen and chicks have range they rid themselves of lice sufficiently to make a very fair show in the struggle for life, but where they are minus the range and cooped in the fancier's yard they certainly must be attended to, or many of the chicks will doubtless go to the 'happy beyond.'"

In view of the experience of our best workers among fowls and their united verdict regarding the injury and mischief of lice it would appear that a little too much care and credulity is safer than too little.

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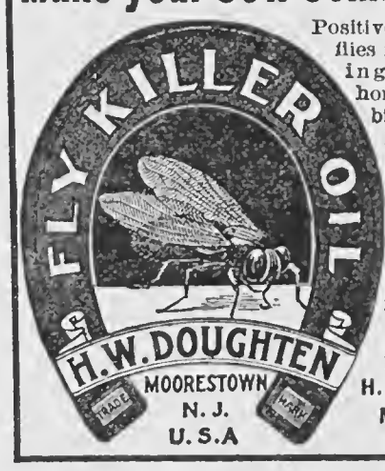

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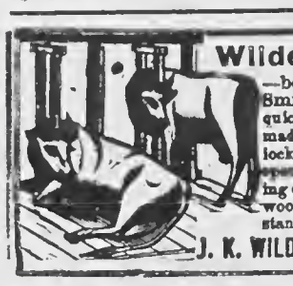

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DAIRY AND FARM NOTES.

Labor Problem on the Farm.

LABOR WELL PAID.—The difficulties attending the labor problem account in great measure for the division and subdivision of farms, enabling the owner or occupant to perform, often with the assistance of his family, nearly or quite all of the work, doing away with much perplexity and acquiring at the same time a feeling of independence. I am willing to subscribe to the truth of this statement. I am not willing to indorse it as a necessity. One of the anomalies of American industrial life is the aggregation of interests in manufacture and a division in agriculture. After all, the causes are not deeply hidden. The impetus given to manufacture by a protective tariff gave it an opportunity to pay extravagant wages when compared with the wage schedule of the older countries. I am thankful that labor is well paid. The laboring class, it would seem from their frequent disturbance, do not appreciate it. When a farm laborer without long training or special fitness is able to earn a sack of flour daily it would seem that the purchasing power of a dollar had about reached its limit. The large salaries and immense profits realized by so very few appear to have a demoralizing effect upon the masses. Cheap reading has given the laboring man an equal chance with his more opulent neighbor; an opportunity to know all that occurs from the Gulf to the Great Lakes, and from Gotham to the Golden Gate.

WHY FARMERS FAIL.—Is it true, from careful analysis, that agrieulture has suffered from high wages paid in other industries? I do not think so. The most lavish and reckless buyers of our commodities are these same men, when working daily at a good wage. Then why are we unable fully to meet the competition, and pay wages and employ sufficient labor fully to meet our demands? They are not met, if my observation is correct, on one farm in 100. We are unable to use machinery to the same extent, and thus the producing power of a man on the farm has not kept pace with the shop. Labor is not concentrated in a small area, making a close and careful supervision more difficult, and there is also the opening up of immense tracts of the most fertile land in the Middle and Far West, with its boundless readily available fertility. I am not condemning it, however, because the scheme has made possible our great National wealth, and we are on the eve of a full appreciation of the wisdom of the scheme. The eastern farmer has suffered financially for 20 years and does not take kindly to this broad acceptance. But in the meantime he has found out the boundless mineral plant-food resources of his own farm, which, coupled with increased demand as compared with production will soon plaee him in a position of forgetfulness of the past, and success for the future. A lack of working capital is often a cause of insufficient labor. In a nutshell, which we might as well admit first as last, one lack is ability to make the labor produce a little more than its cost, which I am firmly convinced is one fault and not attributable to Government or general conditions.

LACK OF MANAGEMENT.—This last statement is not a popular one to make; farmers rarely if ever subscribe to it. Building air castles and theorizing will not make a dairy cow profitable, or cheapen and increase crop growth. Still, there lingers in my mind the possibility of application of skill and ability over larger fields and farm enterprises. It has been successfully worked out in cheese and butter making. The return to individual effort in manufaeture and sale would at once result disastrously. Do you not think that among the patrons of a well-managed creamery or milk receiving institution a man with as much skill and experience in stock feeding and handling as the butter maker has in his field of labor would result in immediate profit over cost? Even though high, $50 a month would mean $1 a patron per month, or $12 a year. Don't you think he could earn it, and don't you think that if a man had 25 cows with the conditions found in most dairy sections he could earn through that man more than quadruple his cost, in food combinations, care and breeding? I am sure of it. I would like to be a party to such a scheme, and would willingly take my chances of getting cost out of him. We have a vein of self-sufficiency running through us that presents a mighty barrier to profitable light and knowledge.

WHO SHOULD ADVISE?—Mr. Allerton says a man is not qualified to write who has not been successful. Very well; who is to be the judge? We have had years of experience in handling labor, and if years of service count for anything it has been with some degree of success. If the reader will accept my version of success it seems the cause may be briefly stated.

Preëminently first comes the necessity of keeping men interested in the work. I have never seen a man fail of earning his wages if interested in the work and business of the farm. Some men are much more rapid than others. They are not always the best men. I suppose our Connecticut friend, H. G. M., will criticise this statement as he did a similar one regarding milkers. I must confess it is not a usual occurrence. The effectual labor is the persistent labor, steady, faithful and sufficiently balanced to see a thing or two when at work. He looks carefully that his tools are kept in condition. The simple act of cleaning a shovel or hoe after use is indicative of a careful and interested disposition. There is a certain likeness running through our work; when these acts of interest are shown state your appreciation. Partners cannot work together without reciprocal confidence. The man who performs or aids in doing the labor of the farm is a partner in the business, and with the present scarcity and high cost he becomes a very important part of the business. Counsel with him. The "hired man" may by chance have the best judgment on a piece of work. Many a time I have seen men carry out their own inferior plan simply to show the man their authority. Do you think that this man will subsequently lie awake nights, or in fact, daytime either, thinking about your welfare? Doubtful!

FARMER IS BOSS.—Don't misunderstand me; a farmer who is not capable of previously arranging the system and methods of procedure, who is not master of his business, maintaining his proper dignity towards his men, can never become a profitable employer. It is surprising how quickly men see this fatal wavering in their employer, and then lose confidence in him. I find no difficulty in maintaining this dignity. (I use it for want of a better term) and at the same time meet our farm help on a level. Farm laborers have inalienable rights; they should assert them, and others should respect them. A pure clean atmosphere should be and must be maintained about the farm. Men have greater respect for their employer if he has a good clean Christian character with him six days in a week as well as on the seventh. Near manufacturing establishments, and sometimes far removed from them, men are uneasy and difficult to keep on the farm, on account of longer hours of daily service. I am inclined to think in our own locality more frequently this fault is found than any other, and I am not sure but it is well taken. The old established custom in the earlier days was from sun to sun during the Spring, Summer and Fall months. Men now grow weary of these long days, and search out employment where they know when their day's work is done. On many farms the hour of closing is a very uncertain one. We have adopted the plan of ending the day's work at 6 P. M., and it is my judgment that as much or more is accomplished. It is a rare thing to see any shirking or "resting" during working hours; even the milking is completed at this hour. In fact, this is accomplished both night and morning. Men who work by the day, who do not milk, find their day's work done at 6 P. M. After studying very carefully all sides of the hour question I am convinced by the comparative ease in getting labor that this regularity of quitting, or the satisfaction of knowing when he gets through, has been a prime cause. I have not space or time in this article to discuss the means of boarding, whether in families or houses specially provided. Where only one man is kept he necessarily must become a member of the family. Where large numbers are employed this plan may be entirely impracticable. Get as much intelligence as possible with the wages at hand. Secure interest by good treatment and prompt payment. So arrange your business, if on a dairy farm, to give employment 12 months in the year, with an opportunity to get away two weeks during slack work. Understand your business thoroughly, so that employees may feel that they are accomplishing something, and much of the labor trouble will vanish. H. E. COOK.

To Milk a Kicking Cow.

First secure the head by placing a rope about the horns, and fastening the rope to a post. If hornless place rope about the neck; this will prevent jumping forward and backward in stall or stanchion. Have a strap to buckle about the neck, with a ring on it. Buckle a strap about the left hind leg below the fetlock joint, with a ring on it. Connect the two rings with a strap, and you can pull that leg forward clear of the floor at first, if an obstinate kicker, and gradually reduce the tension till she will be willing to stand without kicking. With this harness properly adjusted the animal cannot kick. It was used by my father for years for milking kicking cows, and he also used it in the castration of bulls while standing.

Hartford, Conn. D. K.

I feel inclined to add my word of advice about kicking cows. The most effective way I ever tried is with a good strong halter to pull the cow's head up so high that she cannot bear much weight on the fore feet. She cannot kick then, and will soon give up. The worst case I ever had was cured in about two weeks so the halter could be dispensed with. I drew the halter less and less tightly as the cow learned to stand. M. MORSE.

Massachusetts.

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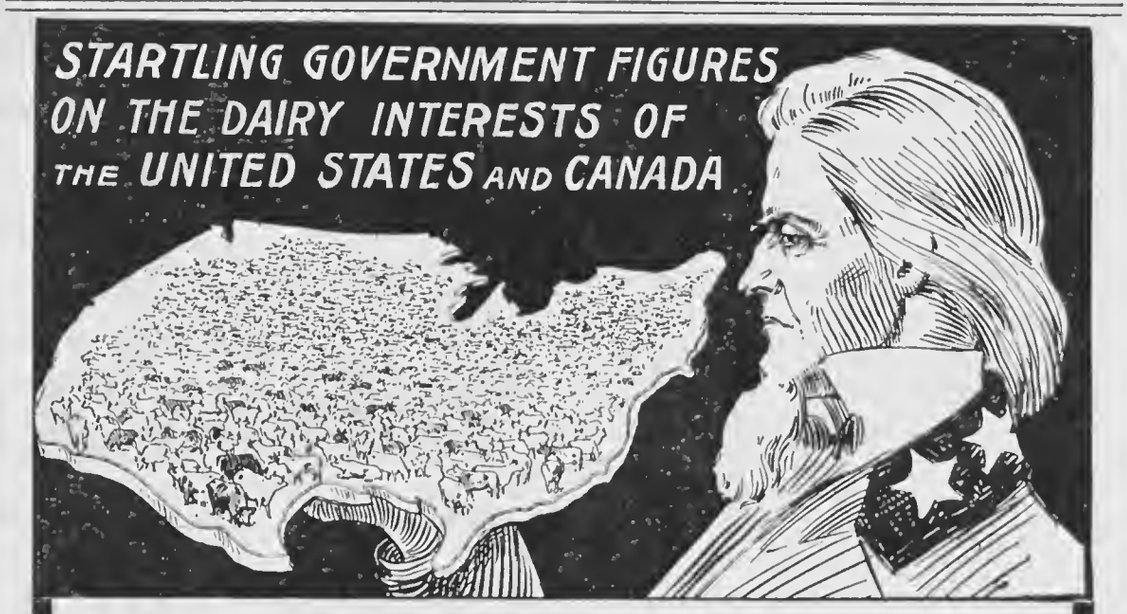

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Two billion dollars invested and an annual output of half a billion (500 million) dollars worth of milk! Think for a moment and try to realize what a tremendous investment this is, and then think what a gain of 20 per cent will make to everyone interested in the industry. By the use of

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Cows will Give from 15% to 20% More Milk

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It is a thorough fly-killer and germicide, it destroys all bacterial germs, insuring healthy growth, strength and vigor to the animals; allays their nervousness, and expedites the work of the milkman. It is easily and rapidly applied with Child's Electric Sprayer and a herd of from 30 to 50 cows can be sprayed in a few minutes. SO-BOS-SO KILFLY is absolutely harmless to man and beast. It allays nervousness in horses as well as cows and keeps both in better general condition by the comfort it gives. As an antiseptic and for scours in calves, hog cholera, swine plague and foul in cattles' feet it is unequaled and may be used either in the stable, cow shed, chicken house or pig pen. Abortion in cows, which is caused by a germ- propagated by unsanitary conditions—can be prevented by the use of SO-BOS-SO KILFLY.

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Humorous.

"Why do you talk so much?" Ma cried,
Reproving little May,
"I s'pose it's 'cause," the child replied,
"I've got so much to say."
—Catholic Standard and Times.

"JABEZ don't seem to get along, does he?" "No; but I think he could make farmin' pay if he studied it as hard as he does checkers."—Puck.

SUNDAY SCHOOL TEACHER: "Now, Tommy, you may give your conception of 'the future state.'" Tommy: "Please, ma'am, it's a Territory."—Philadelphia Record.

"THIS wireless telegraphy reminds me of a groundless quarrel." "What possible connection is there between the two?" "It's practically having words over nothing."—Tit-Bits.

FARMER STACKPOLE: "How many stops has that 'ere new organ that ye bought for your daughter got?" Farmer Hawbuck (grimly): "Three—breakfast, dinner and supper."—Puck.

"I WAS just reading here that they have discovered the grave of Hippocrates." "Who was he?" "Must be some fellow who's dead, I guess."—Cleveland Plain Dealer.

"YOUR wife is very forgetful, isn't she?" "Yes, but not nearly so forgetful as I'd like her to be. She's forever remembering that she's still wearing her last Summer's hat."—Philadelphia Press.

MR. BENEDICT: "The new cook rides a bicycle, doesn't she, my dear?" Mrs. Benedict: "What makes you think so?" Mr. Benedict: "Oh, her cooking. She seems to be an expert at scorching."—Credit Lost.

"BRIDGET, how long did you boil those eggs for my breakfast?" "Noine minutes, mum." "But I told you that I wanted my eggs boiled three minutes." "Thrue for you, mum; but there was three eggs, mum."—Albany Telegram.

MOTHER: "What! Have you been fighting again, Johnnie? Good little boys don't fight." Johnnie: "Yes, I know that. I thought he was a good little boy, but after I hit him once I found he wasn't."—Somerville Journal.

"WHAT verdict did the coroner's jury bring in?" inquired a man who had seen the lynching. "Suicide," answered Bronco Bob promptly. "He must have known perfectly well that stealin' a hoss in Crimson Gulch was bound to prove fatal."—Washington Star.

RUBE: "Yaas, Si is dead; went inter town ter get a tooth pulled; dentist feller told him he'd better take gas fust an'—" Josh: "Dentist gev him too much, eh?" "Oh, no; after the dentist feller told him that, he went back to his hotel an' took the gas hisself."—Philadelphia Press.

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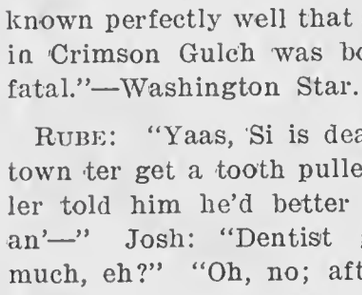

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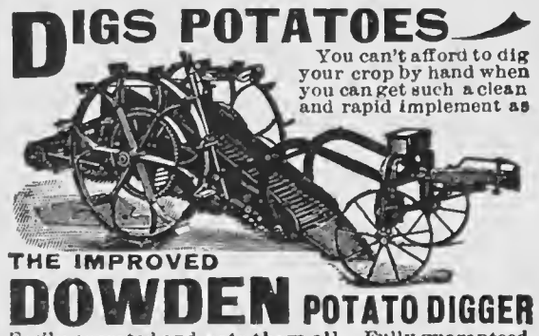
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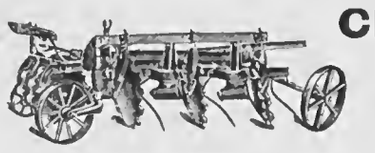
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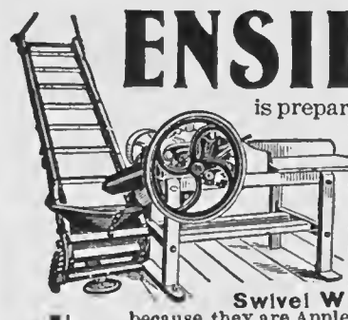
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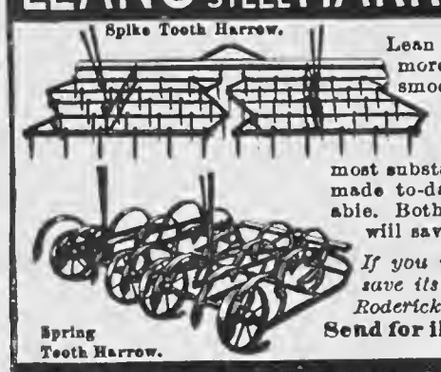
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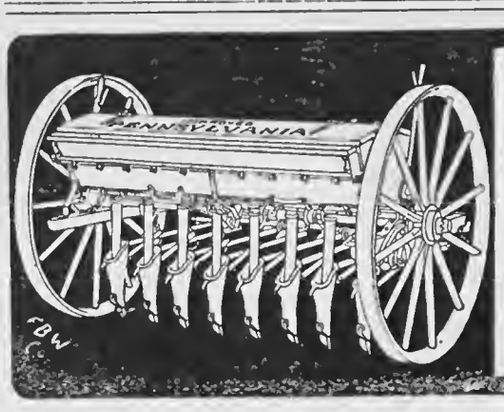

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CORNELL UNIVERSITY
AUG 16 1901

THE
RURAL NEW-YORKER
A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2690. NEW YORK, AUGUST 17, 1901. $1 PER YEAR.

RYE IN EASTERN NEW YORK.

The Need of Potash.

The farmers of Columbia Co., N. Y., grow rye in the following manner: The first crop to be taken from the soil is either corn or potatoes. The following Spring oats are sown, and as soon as the oats are harvested the soil is prepared for rye, which is sown either the last of August, or the first of September. It is grown only once on the same piece of land in this rotation. Most of us drill it in, using some of the fertilizers at the same time. In this way it gets right with the grain roots at the start, giving it a quick start and a better growth. A fair crop of grain per acre is 20 bushels, and one ton of straw. It is a good crop to seed after sowing Timothy in the Fall, and clover the following Spring. The usual amount of seed per acre is 1½ to two bushels; it depends largely on the strength of the soil. I think the reason the straw is so weak and flimsy is the lack of potash in the soil.

Last Fall I drew a number of loads of weeds, briars, bushes and old hay, spread it thin on the land, burned it before sowing the rye. This year, wherever this refuse was burned, a very large growth of stiff straw was grown, and this was on land where there would have been nothing, scarcely, only for the ashes from this refuse. This straw stood right up, and wherever there are ashes clover will grow a heavy crop. The heads of the rye were much larger and better filled on these pieces. I put this refuse in different places on purpose to see whether any good resulted from it, and I found it paid well for the labor expended. G. W. H.

Columbia Co., N. Y.

The Story of Rye Culture.

Rye in Columbia Co., N. Y., has for many years been a most important crop. It began to supersede wheat early in the nineteenth century. The abundance of rye straw in this section made a pioneer local industry, manufacturing straw paper, a success. The ready market found for the farmers' straw in those days was doubtless their main reason for growing rye so extensively at an early date in this county, and it became really *the* monied crop of the times. Here rye comes into our rotation every three, four or five years, depending upon circumstances, corn on well-manured sod ground following the next year with oats, then rye with seeding of one or two succeeding years to clover and Timothy proving most satisfactory. Some seasons, when the grass seeding fails to catch well, rye follows one or two seasons of pasture, or it may follow Timothy after mowing for hay by plowing the sod under after harvest; when this is done two crops of rye are usually taken off the land before reseeding to grass again. Best results as a whole, however, have been obtained where the rotation stated above was adhered to, and such farming seems to keep the land in prime condition. If possible, all knolls, or places where the soil is thin, should be topdressed with barnyard manure before harrowing. In addition, at times, the whole field is treated with from 100 to 200 pounds of commercial fertilizer. The amount of straw and grain produced per acre varies from 1,200 pounds of straw and 11 or 12 bushels of grain to 3,500 pounds of straw and 30 bushels of rye.

We pronounce it a poor crop when we cannot obtain an average of 2,000 pounds of straw and 18 or 20 bushels of grain per acre for a season's product. Where followed in the regular rotation after corn and oats, the corn having been well manured, rye is an excellent crop with which to seed both clover and Timothy, the latter being seeded with rye in the Fall and clover the following Spring. For many years we have tried to select our seed rye as carefully as our corn, endeavoring to secure a large, plump, white kernel. Desiring to improve either straw or grain, we should aim at perfecting the grain, as the straw will grow to a great length and stand up well where the land is just right and suited to the crop, if the grain be not too thickly sown. Rye growing to a height of six or seven feet is apt to be injured and tangled by high winds and rainstorms, often causing great loss with much added labor in harvesting. This crop as a whole stands up best when sown thinly on a fairly good soil, or on moderately poor land well fertilized. We have seen 32 spears of rye grow from one seed. Rye stools out best, other things being equal, when sown early in the Fall. We prefer to have all of our rye sown in September, and by the 15th or 16th of the month at the latest. The amount sown per acre varies; on some grounds, rich and in good order, 1½ bushel of

A FIELD OF IMPROVED RYE. FIG. 245.

seed proves sufficient if drilled in, while land that is poor requires one bushel and three pecks. Some farmers use more, and we have done so, but topdressing the land, best results were obtained with the amount named. It never pays to pasture rye in the Fall unless it is early sown, and not then unless the ground is frozen, when it may be pastured with safety to a moderate extent. JOHN D. TOMPKINS.

Columbia Co., N. Y.

R. N.-Y.—The picture at Fig. 245 shows a field of rye grown by E. L. Clarkson, of Dutchess Co., N. Y. Mr. Clarkson has for several years been trying to improve a variety or strain of rye by careful selection. As a result he has developed a grain which seems to be a distinct improvement. It gives a heavy yield of grain and produces a long stiff straw which stands up well and gives a heavy yield per acre. The straw of rye is usually more valuable than the grain, especially where it can be handled and sold in bundles without baling. In northern New Jersey rye is the favorite small grain, for while it gives a smaller average yield than wheat, the straw can be sold from the wagon to the stablemen in the larger cities, and frequently brings $20 per ton. The old Dutch farmers believed that rye heads would clean the bots from the stomach of a horse. The heads were chopped, mixed with the ground feed and moistened. The belief was that the thick spines or "horns" on the rye heads scratched away the bots as they clung to the stomach wall. Many farmers still believe this and feed these heads in February or March. The grain of rye is not considered equal to wheat for stock feeding. While poultry will eat the whole grain they do not thrive on it. In New Jersey the grain is usually ground with corn in about equal proportions and fed to horses or hogs. Some dairymen believe that rye meal makes a poor quality of butter. It is, however, excellent for hog feed. The chief value of the crop lies in the straw. Formerly thrashing was done by hand, so as to keep the straw straight and unbroken. Now the thrashing machines have a special attachment for handling rye, so that the straw is held straight and can be bound into bundles the same as when it is thrashed by hand. The invention of this machine did much to stimulate the production of rye in the East. Wheat dropped in price, while rye straw was quoted at high figures. As a result many farmers in Monmouth and Middlesex counties, N. J., dropped wheat out of their rotation and substituted rye. Most of them have now gone back to wheat, but they find their farms well seeded to rye, so that the wheat is quite badly mixed. Most farmers who have tried both grains say that rye is the better crop for seeding to grass and clover. There may not be much difference in regard to this, but popular belief favors rye. The rye is less likely to be injured by insects, and will make a fair growth on poor land, being hardier and more of a hustler than wheat. It can also be seeded quite late in the season, and still make a fair crop. We sowed rye in early November last year, which produced good crops of straw and grain this year. It is often a great convenience to delay grain sowing until late in the Fall in order to take care of other crops first. It is often difficult, in a season like the present one, to get the potatoes out of the ground in time for wheat, but it is usually possible to fit potato ground for rye. This crop is often suggested for green manuring. It answers quite well for this purpose when plowed under while quite green. If we wait until the heads are well formed, the stalks usually become so tough and woody that they decay very slowly in the ground, and are not of much value to the season's crop. Some melon and tomato growers use rye in preference to clover, as they believe that cutworms and other insects which do much damage in a clover sod will not trouble the rye. Dairymen who follow the soiling system of feeding cut green fodder to their cows depend on rye to give them the first green food of the year. This early green feed comes in ahead of wheat, and while the rye is tender supplies the cows with a profitable "bite." This early rye grows very fast, and soon becomes hard and tough, so that the stock will refuse it. We have for several years cut considerable rye for hay, but it does not make very acceptable fodder. The horses eat it quite well, but it is best fed when run through the cutter or shredder in connection with cornstalks. Wheat makes a much better hay than does rye, yet, if the latter is cut early and well cured, it may be used as a Winter feed for horses in order to save Timothy.

THERE seems to be a complete upset in the laws of supply and demand when with the biggest wheat crop on record wheat bran mounts up in price.

GRASS SEEDED WITHOUT GRAIN.

The "Clark" System of Grass Culture.

PART III.

Why not use manure for the grass?

Some farmers do, and it must be said that they raise good crops of grass when the manure is plowed or harrowed in and well mixed with the soil. Mr. Clark objects to manure for grass, and stoutly advises chemicals for this crop. He would use manure only on a cultivated crop that is to precede grass.

When does he seed?

As soon after September 1 as the ground and weather are fit. There is not much use in putting fine seed into perfectly dry dust, for it will not sprout. If possible the seed might well be sown just before a gentle rain. That would make nearly ideal conditions for grass. The best time for sowing grass seed is at the natural season—that is, when the plant, left to itself, would mature and drop its seed. With Timothy, that would be in late August or early September, so that this time is about right if we would imitate nature.

Mr. Clark, we understand, does not use small grains in seeding.

No—he believes in sowing to grass alone.

Is not that contrary to the usual practice of most farmers?

Yes, for the greater part of grass seed is put in with wheat, rye or oats. It is argued that the little grass plants need a "nurse" crop in order to protect them from the freezing of the cold Winter and the heat of the first Spring.

What arguments does Mr. Clark put up against that?

At least a dozen good ones. He says that grass is the toughest and most enduring plant in the world. It will live and thrive if you give it a chance. It does not need any "nurse"; in fact, the growing and feeding habits of small grain and grass are quite distinct, so that when put together the grain will be more likely to take advantage of the grass than to "nurse" it. The space occupied by the grain plants will represent nearly one-third of the surface of the field, and when the grain is harvested these spaces are left bare, for the grass does not spread and cover them. Thus we lose the use of a good proportion of the ground. When the grass seed is used alone as Mr. Clark uses it, every square inch of the soil is covered with grass. Thus the entire field is utilized, it is possible to produce more grass per acre, and weeds and foul trash are less likely to work in. I have noticed this in my own fields. On the fields seeded after the Clark method there are comparatively few weeds, most of those which appear being deep rooted, with life below the reach of the Acme harrow. Following the grain-seeded fields there are always more weeds, which mostly start in the bare places left when the grain is cut. Mr. Clark claims, and I think with much reason, that it will usually pay better to grow a crop of grain alone, if grain is desired. and then work up the ground again and sow grass alone. This will give a crop each of grain and grass in two years with a better chance for each.

Is that true of all situations?

I do not think so. On light and level ground, or where the farmer does not have other crops to handle, the extra plowing and fitting will probably pay. There are some situations where this extra Fall plowing would hardly be possible. On tough, hilly soil, or in the class of farming which demands a great deal of extra work in August and September, the extra plowing and harrowing might cost more than the extra grass would be worth. This wet season would not permit us to work our soil properly. I can readily see that there may be cases where the Clark method would not be practicable. I think, however, that where the ground is suitable and the farmer has time and tools with which to fit the ground, and money to spend for fertilizers, this system is the right one for producing a large crop of grass.

But it must require more seed than when grain is sown.

It does—this heavy seeding is one point on which Mr. Clark lays great stress. When sowing with grain many farmers use only six or eight quarts of Timothy seed per acre, with about the same quantity of Red clover seed in the Spring. Very few of them, I think, ever use Red-top seed with the Timothy. Mr. Clark advises the use of 14 quarts each of Timothy and Red-top seed, and he makes a feature of putting this seed on a little at a time, so as to have it scattered evenly. After it is scattered he works the ground several times in different directions, so as still further to scatter and distribute the seed. One thing that is sometimes neglected is the surface of the field before seeding. Some farmers put the seed on the rough furrows or on the little ridges left by Cutaway or spring-tooth. This is a mistake, for the seed will settle into the little hollows, and cannot be scattered evenly with any tool—as wheat, oats or rye can be. Before seeding it pays to run over the ground with weeder, fine-tooth harrow or brush drag, so as to get a level surface.

Why does Mr. Clark sow Red-top?

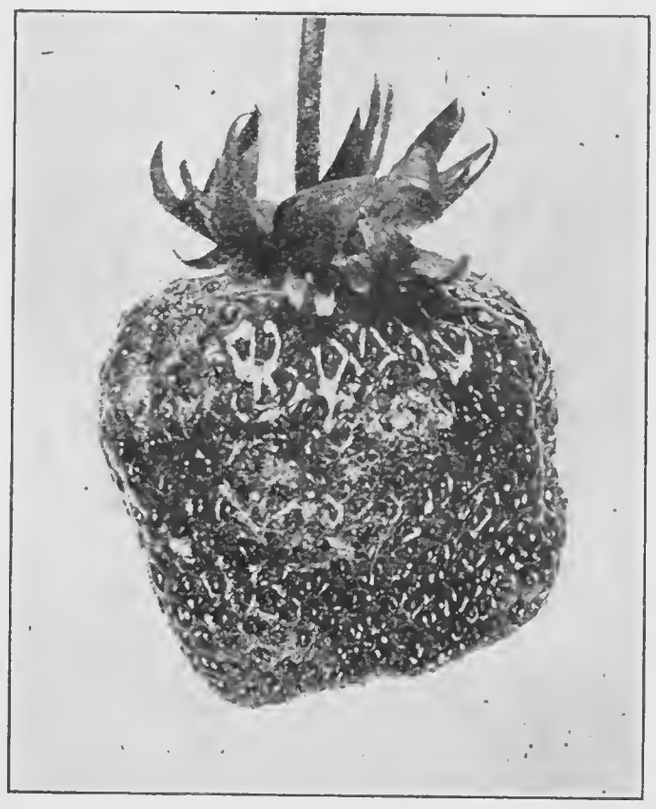
He says it will add from a ton to a ton and a half of hay per acre, which could not be obtained in any other way. The Red-top is a slender grass which will crowd in among the Timothy. It also helps out the stand as the meadow grows older. A field of pure Timothy runs out after a few years, but with a heavy seeding of Red-top the latter comes in more and more and keeps out the weeds and foul stuff. It must be remembered that this "Clark" method of seeding is intended to make a permanent meadow—that is, one that will cut good grass for a good many years—not one to serve in a rotation and be plowed in two or three seasons. H. W. C.

MORE ABOUT CRANBERRY CULTURE.

Uses of Land; Meadows.

In previous articles about cranberry culture, I have tried to describe in plain language the process of building a cranberry bog. To the prospective cranberry grower of limited means, who cannot afford to pay for the services of an expert, I would say go slowly. Read carefully the articles that have appeared in THE R. N.-Y., and then if you are not exactly sure you can grow them at a profit, experiment a little. Put in a rod or two of bog according to directions, and watch it for a season or two. If it looks promising, try some more, and by your experience you will learn something about the business. Many a good swamp has been spoiled in the making, and the owners have lost money where they should have made it.

We have read much about people converting swamp land into valuable meadow land, but in most cases it would be far more valuable if it were properly made into cranberry bog. The old way of building cranberry bogs was to get them done with as little expense as possible and then harvest the crop, if there was any, by hand. But in cranberry bogs as well as in other things, the old order changeth, and to-day bogs are made to suit the new method of harvesting. In this new method of building a bog, sand plays a most important part. The uses of sand on a bog are not fully understood by everyone, and I have been asked many questions in regard to it. It is used not only to keep down the weeds, but also to keep the vines from growing too rank. It also serves to keep the sun from drying up the moisture in the bottom, and at the same time gives a dry surface to work on. A correspondent from Maine asks the following questions about sand:



THE LINDENWALD STRAWBERRY. FIG. 246.

How far does it pay to haul sand to prepare a bog?

An acre of good bog properly cared for will produce an average yearly yield of 100 barrels of fruit; and in view of this fact it seems as though one could afford to go quite a distance. A bog of 200 acres was prepared under my supervision in Lower Canada, where the sand was hauled 20 miles on flat cars. It was not necessary to go so far to get it, but the cost of opening sand pits near the bog was greater than hauling it on cars from a cut in the railroad where the sand was of good quality and handy to load.

How can I test sand to see whether it is free from injurious substances?

Sand is liable to contain lime or "alkali," either of which is very injurious, if not fatal to cranberry vines. An expert could instantly detect the presence of either, but a simple way to test it to see whether it contains lime is to wet a small quantity and let it dry in the sun. If it cakes up there is lime in it, and it should not be used. To test for "alkali," put a tablespoonful of sand in a dipper of drinking water, stir it well, and when it settles, taste some of the water. If there is any alkali there, it can be easily detected. In the Eastern States, there is not much danger of finding anything injurious in sand except a mixture of clay or loam. Under no circumstances should clay be put on a bog.

If sand contains a trace of loam, could it not be washed and so made suitable?

For just a trace of loam, it would scarcely pay to go to the expense of washing it, as it would hardly do much damage to the bog except to promote the growth of weeds. It would be easier to pull out the weeds until the vines covered the surface of the bog than it would be to wash the sand. If the sand contains much loam it is not fit for use, for even if the weeds were kept out, the vines would grow too rank.

Describe a good arrangement for washing sand where running water from a stream is available.

If the sand was thrown through a coarse screen into running water the loam would probably be washed away, leaving the sand to settle on the bottom. It would also take out the stones in it. We are not sure, however, that it would pay to wash it for a bog of any size. It seems as though sand ought to be found in any locality entirely free from loam if one dug deep enough.

How many cords of sand does it take to sand one acre of bog?

In ordinary cases sand should be put on at least three inches deep. At this rate it would take 85 cords to sand an acre of bog. The same correspondent also asks how deep a bog should be flowed in Winter in his locality (Maine). It should be flowed deep enough so that ice cannot form among the vines. This rule will apply to any locality.

A correspondent from Connectieut asks about making swamp meadow land into cranberry bog. My experience has been that any piece of land that is well rooted with grass makes very poor bog unless the grass roots can be entirely eliminated. It will not do simply to turn the grass sods upside down and sand over them. The grass must be entirely killed out, and this is a very expensive thing to do, as anyone knows who has tried to do it. We know of swamps where wild cranberry vines were growing among the grass, and the owners thought that it would be a good place for cultivated berries, but it was not. The old grass came up through the sand, and in a year or two it was the same as before. The more wood there is on a swamp the better bog it makes. Of course it is more expensive to make it into a bog, but it pays in the end. A man from New York writes about a three-acre piece of peat bottom swamp where the peat was dug out 30 years ago, and has since filled up again. He wishes to know whether it will make good bog. If the swamp can be properly drained and has enough peat left to make a bottom with an average depth of 12 inches or more we think it would. At any rate, it would do no harm to experiment a little and see if it looks promising at the end of a year. F. A. MAKEPEACE.

Massachusetts.

WHAT THE "CORN BREEDERS" ARE DOING.

As some of our readers doubtless know, there is an organization in Illinois known as the Corn Breeders' Association. Its object is to improve the varieties of corn now in cultivation. This is to be done by selecting the best ears for seed purposes—making a standard and picking out ears as close to this as possible. The poorer plants are cut out, or the tassels are cut from them, so that only the finest specimens will be left for pollenizing. The following notes show what is being done this year:

We are more interested in the drought question than most men, having planted corn selected to a point nearly filling the revised score card of the Corn Growers' Association, and of high value as demonstrated by a chemical analysis of each and every ear, on ground especially prepared for developing a high grade of corn. We have given it thorough cultivation, and are watching the effect of this long siege of hot weather (with lack of moisture) upon it. In the meantime we are removing the tassels from all barren or inferior stalks, and are trying to agree upon some plan of seed houses in which the corn may be wintered in such a way that every grain may grow next year. Detasseling is important, because corn cannot be perfect if fertilized from pollen of barren or imperfect stalks. Fortunately, nature has provided pollen in abundance and to spare, and if one-third of all tassels are destroyed no harm will result to the crop. When all the points of breeding corn are as carefully studied and as long practiced as have been the points in stock breeding, the results will be as great. Our labor in advancing the breeding of corn may be nearly lost this year, by this drought, but be assured that the Corn Breeders will not give up beaten because of discouragements. E. E. CHESTER.

Champaign, Ill.

All of the members of our Association are engaged in the breeding of corn more or less as they can spare the ground and time. Breeding seed has been selected

by the director and chemist of the Agricultural Experiment Station, Urbana. A branch experiment station has been established on this farm, two advanced students in agriculture are in charge and have about 75 breeding plots of three varieties of corn. In addition the writer has plots of high and low protein corn and six plots of second-year breeding of Riley's Favorite yellow corn. All the plots are isolated; suckers, imperfect stalks and especially barren stalks have been pulled out. All our corn looked very fine until the recent hot and dry weather came, and now the outlook is not encouraging. Much of the corn in the fields is what is called "*fired*" (lower leaves dead and stalk turning red), and when it is at that point, later favorable conditions cannot possibly bring a good crop. In this corn belt we have had no rain since July 3, and hot sun and winds since. Corn on Fall plowing yet looks well mornings, on Spring plowing it is badly wilted, and only partially recovers nights. In examining my breeding plots I see that my second-year breeding shows a larger and stronger growth, and is less affected by drought than the one-year breeding plot on the same ground and conditions side by side. It would seem from that fact that breeding has a tendency to produce a stronger vitality.

Sibley, Ill. F. A. WARNER.

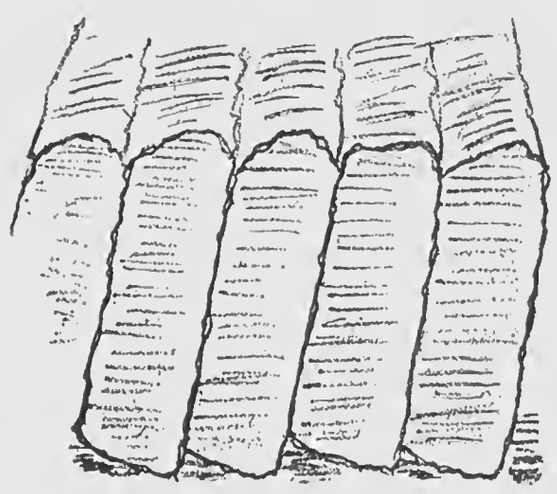
"FAIR AND SQUARE" CONNECTICUT GRASS

On page 515 we printed an article in which farm values of land in eastern Connecticut were well discussed. S. Marvin, who wrote the article, has since sent us samples of his corn and grass to show what can be done on this "abandoned" New England soil. The samples were astonishing. The corn, received July 26, stood nine feet eight inches high, with big stalks and an abundance of leaves. One sample of grass sown September 1, 1900, after a Summer fallow, without grain, contained stalks of Timothy 51 inches long, with Red-top 40 inches in length. Another sample of Timothy sown alone on October 1 measured 48 inches, and another mixture of Timothy and Red-top without grain, sown at the same time, measured 47 inches. This grass seems to be about as high as that grown by Mr. Clark, but is probably not so thick on the ground. Mr. Marvin tells his own story regarding this remarkable grass:

"The samples I send you are fair and square, as near an average as I could get. I sowed 12 acres with grass alone last Fall, ranging from the last week in August to October 1. The sample of Timothy was sown after potatoes; it came up finely, but the Winter was cold, and the ground bare of snow, and in February it turned brown and looked as though it would die out, so we gave it a heavy top dressing of stable manure which covered and protected it, and in the Spring went over it with a weeder to fine and break the lumps. It is to-day as handsome a piece of grass as you ever saw. I use the same fertilizer that Mr. Clark does, about 300 pounds per acre. I will tell you how I prepare my land for seeding to grass: We manure sod ground very heavily for corn, and are very particular not to have a weed go to seed, as potatoes follow the corn. The next Spring the corn hills are split cornerways, the corn having been planted 3½ feet square, which almost plows it. It is left for a few days to warm and dry, when it is harrowed down, and manured very heavily, no fertilizer being used on the potatoes, which are planted as soon as possible. No weeds being allowed to seed in the corn, there are very few in the potatoes, and they are easily kept clean. We dig our potatoes with a double moldboard plow, which about plows the ground and turns them nearly all out; the few remaining are easily and quickly uncovered with hooks. After the potatoes are all out every stone is picked from the field, for by so much working they are nearly all on top. The Cutaway harrow is started and with twice harrowing, the soil is as mellow as an ash heap. I sow my fertilizer, and then with a weeder mix it with and level the ground. The grass seed is sown each way, about 10 quarts each of Timothy and Red-top if sown together; if Timothy alone one-half bushel per acre. It is gone over once with a weeder to cover the seed, and bushed down level with six long straight cedars in a head about six feet long. I have no trouble in getting a splendid catch and a fine yield. In parts of the field that I send you samples of it is much larger, and is lodged and nearly flat."

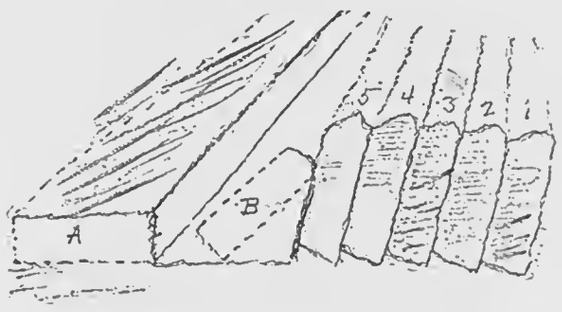
PLOWS AND PLOWING.

Much has been written from time to time as to why ground should be plowed, and how plowing should be done, to secure best results. Many sketches have been made showing the relative size, angle and lap of the average plow furrow, but these sketches seldom give a correct picture of the actual furrows, as made by the average plow. Fig. 247 is a copy I have made of a sketch of the cross section of some plow furrows, illustrated in a recent issue of an agricultural paper. This was intended to show how some plows turned a furrow at too steep an angle. In reality, no plow turns such a steep furrow, in actual use. It is impossible to turn such furrows in ordinary plowing, and the sketch is simply a monstrosity, or freak of the imagination of the writer or artist. Stiff June grass sod can be turned up to almost stand on edge, as Fig. 247 indicates, provided the plow is adjusted to cut a narrow, deep furrow. But the sketch shows a shallow, wide furrow, and no farmer ever owned a plow that could "perform" that way, and no such plowing was ever "performed." I have made Fig. 248 to show how such plowing, as shown in Fig. 247, would "work out," if any plowman attempted the feat. Granted that the first five furrows actually stand as shown in Fig. 247. The next furrow, A, of



THEORETICAL PLOWING. Fig. 247.

the same relative width and depth, is turned up and over by the plow, adjusted to cut and turn furrows of similar size. Where would it lie, or stand? The dotted line, Fig. 248, indicates its position, in cross section, and no plow, or moldboard adjustment of any plow, could possibly carry the sixth furrow, A, far enough to the right to stand it on edge beside the fifth furrow. The writer of the article is wrong in making a sketch, showing such a relative impossibil-



SUCH PLOWING IS IMPOSSIBLE. Fig. 248.

ity, and stating that "much plowing is to be seen as indicated in Fig. 247."

How does the average plow turn, or leave a furrow? I went into our cornfield a few weeks ago, when our man was plowing clover and Timothy sod for corn. The plow used was, and is, a general favorite throughout the country. It was set to plow a furrow eight inches deep and 14 inches wide. I took a spade and carefully cut out a vertical section of three fur-

PICTURE OF ACTUAL PLOWING. Fig. 248.

rows, and took a photograph, as shown herewith. It was a cloudy day, but I secured a fair picture, which shows just how a cross section of the average furrow looks. In reality, there is but a slight "lap," the furrows lying not quite flat. The furrows shown in this picture are of the model variety. The plow is a standard make for this section of country, with the proper width, height and curvature of moldboard. The furrows illustrated are similar to those turned by a great many thousand farmers who read this paper. We use a jointer to turn under grass, manure and the upper 1½ inch of surface soil, which leaves a perfectly clean furrow, as no trash can stick out. The moldboard, in lifting and turning, manipulates or agitates every cubic inch of the furrow, as the picture shows. The whole process loosens and aerates the furrows, and leaves them in fine condition for further operation thereon by means of the harrow and roller. The ideal soil for manipulation with these tools is a clay loam, with a slight admixture of sand. In another article I will take up the adjustment of the plow, from a plowman's standpoint.

Calhoun Co., Mich. J. H. BROWN.

A TALK ABOUT CHERRIES.

I notice that Mr. Van Deman, page 516, bases his objection to the white sweet cherries on their poor selling qualities, and one might infer from what he says that they are hardier than the red and black sweet cherries. White sweet cherries are very scarce here. The only ones I have ever seen, I think were said to be Yellow Spanish. They seemed superior in size and quality to any of the red or black sweet cherries I have seen . Our experiment station says that they crack and decay badly in wet weather. Windsor is the most thrifty grower I have. The trees set six years ago have bloomed twice, but the bloom has been killed each time except one fruit last year. They are more tender in bud than Gov. Wood or Downer's Late Red on my grounds. Montmorency set the same year as Windsor, and bore a full crop the Summer after the hard freeze. Gov. Wood is the most productive sweet cherry I have, but is not equal to Downer or Windsor in quality. In answer to G. H. W., I will say that I think it is easier to raise two bushels of sour cherries than one of sweet. Can THE R. N.-Y. give me any information in regard to the Choisy cherry? The Michigan Experiment Station bulletin for 1891 says: "It takes first place as the finest as well as the most beautiful of cherries of any class; its only drawback being its somewhat deficient productiveness." In other bulletins it is described as very hardy, and as productive upon sandy soils. My land is sandy with a sand and gravel subsoil, but is low, being on the second bottom of Grand River, and is exposed to northwest winds. I am extremely anxious to get information about this cherry. Is it hardy in bud? Is it moderately productive upon such soil as mine? Who grows the trees? I cannot find it in the catalogues. C. F. C.

Grand Rapids, Mich.

It was not my intention to lead anyone to think that white sweet cherries were more productive or hardier than other classes, but I do know that some of them are among the most productive in some sections. This is notably true of the Napoleon, when grown on the Pacific coast, where it is called Royal Ann. It is not a white or yellow cherry, properly speaking, but has a red cheek in the Eastern States, and in the Far West turns almost red when fully ripe. There are at this time (August 1) some very fine specimens of this variety on the tables at the Pan-American Exposition from Benzie Co., Mich. It is large and less liable to rot and crack than Yellow Spanish, and most other light-colored cherries, but it is not so sweet nor so light in color as that variety. Rockport is another good sweet cherry that is yellow with a red cheek. Governor Wood is generally liked as a yellow and red or very pale red cherry. But I fully agree with C. F. C. that it is easier to grow two bushels of sour cherries than one of any kind of sweet ones in most places east of the Rocky Mountains. However, in the foothills of the Blue Ridge there are some wonderful crops of sweet cherries grown; especially in parts of Virginia, Maryland and Pennsylvania. Choisy is rarely grown. It is not a true sweet cherry, but is somewhat tart and yet of very high quality. I hope those who can give direct answers to the questions about its hardiness of bud and productiveness on sandy land, or any other special points of interest about it will do so. H. E. VAN DEMAN.

A NEW STRAWBERRY.—Samples of a seedling strawberry were received from I. S. Palmer, of Stuyvesant, N. Y., on June 19. The berries reached us in good condition, firm and solid, with good color. The flavor was pronounced, and judging from these samples, the berry is a good one. A fair-sized specimen was engraved and is shown at Fig. 246. Mr. Palmer writes: "It is a seedling of Jessie and Bubach. I think it is the coming berry. I have named it Lindenwald."

DESTROYING THE CHERRY APHIS.—Having had a little experience in growing sour cherries, I have had experience with cherry pests, nothing, however, being so troublesome as black lice. During July, 1900, I had 125 sour cherry trees attacked by these little enemies, completely covering the underside of leaves on all the new growth. I at once sprayed them with kerosene emulsion with no satisfactory results. A second treatment failing, finally in despair, I used kerosene and water, half and half, and killed one tree, severely damaging several others. By this time cool weather and frosts, and the falling of the leaves caused the disappearance of the aphids. Again in July this year they appeared in greatly increased numbers. I tried another plan, using twice the amount of soap that the formulas usually give, and instead of applying it in form of a spray, having a large barrel pump, with extra air chamber, I kept nozzle closed and pumped up the pressure as high as I could, then applied the emulsion in form of a very vigorous stream, almost taking some of the leaves off the tree. This one application cleared my orchard of every trace of the pest, and I have yet to see any injury to trees or foliage. C. W. F.

Wayville, N. Y.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Blighted Corn Fodder.

S. D. H., Prather, Ind.—The corn in this locality has been blighted by the sun and hot winds, and will not produce grain. Will the fodder possess the same amount of feeding value as usual if harvested and shredded in good condition?

ANS.—No, the fodder will not be as useful for feeding as that which grows naturally. We consider such fodder damaged at least 25 per cent. Still, if shredded or cut, it is well worth saving.

When to Fertilize Grass.

J. T. B., Beverly, W. Va.—When is the best time to apply commercial fertilizers on meadows, soon after mowing or early in Spring?

ANS.—Probably the best way to fertilize grass would be to apply the potash and phosphoric acid during late Summer and Fall—after mowing—and the nitrogen in the form of nitrate of soda in the Spring. On level ground we would prefer Fall to Spring if all the fertilizer were to be used at once.

The Value of "Water Paints."

M. R. M., Jamestown, N. Y.—Can THE R. N.-Y. give us any reliable, unbiased opinion, based on personal experience, of the so-called "water paints?" Are they equal to the oil and lead paints for outside work? Do they preserve the boards? Are they lasting, and do they look well, or like colored kalsomine and its many successors? How is it applied? Is the cost much less than ordinary paint? We have a number of outbuildings needing paint, and we wish to have the work done as cheaply as it can be well done.

ANS.—We would like to have readers who have tried these paints give a fair statement of their experience. There is considerable call for such information.

Carolina Poplar from Seed.

E. P., Amityville, N. Y.—I wish to sow some Carolina poplar seed. When is the best time, in Fall or Spring, and how am I to treat the seeds?

ANS.—Seeds of the Carolina poplar and other varieties of poplars, cottonwood, etc., should be sown as soon as ripe, and lightly raked into the soil. The Carolina poplar is generally propagated by cuttings of ripe wood cut in the Fall or Spring, and firmly planted five or six inches apart in rows wide enough to admit horse culture. The cuttings may be made about 10 inches long and set with one or two buds out of the ground.

Lucretia Dewberry.

R. C. S., Springfield, Mass.—We have just fruited the Lucretia dewberry and are very much pleased with it. We would like full particulars, if obtainable, as to its origin.

ANS.—Reference to the origin of the Lucretia dewberry was made on page 550 last week. It is related that the original plant was found by a soldier during the Civil War near Beverly, W. Va., who afterward acquired it by marrying the owner of the plantation. Plants were later sent to Ohio, and fell into the hands of B. F. Albaugh, Covington, O., who named and introduced it to commerce. The true variety is most excellent, but there are many spurious forms of it in cultivation.

Hollow-Stemmed Celery.

J. H. P., Willimantic, Conn.—We experience much loss from celery growing with hollow stems. Is the cause in the variety or manner of cultivation?

ANS.—Hollow heart or stem in celery seems to be a defect in nutrition, and prevails more extensively on light than heavy soils. It is favored by dry weather, lack of available fertility and attacks of grubs or other causes injuring the rootlets. It is to a certain extent a hereditary defect, and plants raised from the best seeds are rarely affected. The dwarf varieties are less affected than the taller kinds. Use strong plants, set about at surface level on good soil, well enriched with old manure, and with proper cultivation the trouble should diminish.

Suitable Soils for Differing Crops.

J. C., New York.—Will you tell me whether Long Island or New Jersey soil is better suited for an assorted orchard (apple, peach, pear and plum)? What soil excels for the following products: Beets, carrots, corn, cucumbers, melons, onions and potatoes? Also compare Pennsylvania in relation to its soil.

ANS.—Soils entirely suitable for the crops named may be found in either locality, but probably Long Island and portions of New Jersey are better adapted to stone fruits, such as peaches and plums, than eastern Pennsylvania. The selection of a site for commercial fruit and vegetable garden is more a matter of convenience to market and suitability of climate than of geographical location. The soils of Long Island and the northern coast region of New Jersey average lighter in quality than those of Pennsylvania.

Killing Out Witch Grass.

R., Turner Center, Me.—I have a piece of land I intended to set to raspberries and blackberries. I seeded it to clover to plow under, but it has filled in to Witch grass. Is there any way to get rid of this so that I can set the plants in the Spring?

ANS.—It is late now to begin on this grass, but with dry weather you may destroy it. The grass spreads underground, and unless the roots are broken and brought up to the surface or cut off again and again there will surely be a new crop. Mere plowing, with the use of a shallow cultivator, will not kill out the grass. Some digging or jerking tool like a spring-tooth, disk or Cutaway harrow is needed to cut and pull the roots up to the surface. We would plow the ground as soon as possible, and keep at it constantly with one of the above-named tools. Keep the soil open and, if possible, never let the ground become green. The best time to kill out the grass is in June and July, but if August is dry you may kill it yet.

Columbian Raspberry Compared with Blackcaps

Has the Columbian raspberry demonstrated its early claims of superiority to the Shaffer, especially in points of productiveness and hardiness of cane in Winter? Is the latter yet preferred by anyone, and upon what grounds? How would either of these purple kinds compare with the Cuthbert (or any other good red variety) as to root hardiness for planting in cold black soil, over-wet most of the year, adjacent to swamp land?

I have never yet admitted that there is any difference between the Columbian and Shaffer Colossal raspberry, except that there were two distinct types of berry in the Shaffer, and that Columbian is one of these types. I have taken branches of fruit from the Columbian and Shaffer raspberry bushes, numbered them, placed them in our fruit cellar and called in three or four fruit men, practical men, too, who have grown and cultivated small fruits for a number of years. Not one of these men could separate Columbian from Shaffer. I, of course, had selected branches from the Shaffer that were of the same type as the Columbian. I might also state that these branches were taken from a block of Shaffers planted several years before Columbian was introduced. Either the Columbian or Shaffer are quite as hardy as the Cuthbert, Marlboro or Loudon. The canes are of a much more vigorous growth and will bear at least three times more fruit than any of the red varieties named. The fruit is larger, as firm, and as good a shipper as any of the reds. The color is unattractive and against the berry for market purposes. The flavor, when fully ripe, is very fine. Many of my friends prefer it to the flavor of the reds. We grow the Columbian and Shaffer in separate blocks and in a limited acreage, although we are extending our planting of these varieties for the reason that during the last two or three years, we have been unable to supply the local demand for these berries, which are used by those who know their value almost exclusively for canning purposes. They should be grown for this purpose, and for supplying the local market. With these advantages, it is the most profitable raspberry we know. We would not advise planting the Columbian or Shaffer on the soil and under the conditions named. While the Shaffer and Columbian are exceptionally hardy, they, of course, will, like other fruits, show bad results from "wet feet."

Cornwall, N. Y. T. J. DWYER.

The Columbian raspberry has generally proved superior to the Shaffer. The purple varieties will never take the place of the red, like the Cuthbert. It is more likely to take the place of the black raspberry for family use and canning, but not for evaporating. Its yield is much more than either the red or black varieties. The points superior to the Shaffer are firmness, adhering to the bush, not liable to be blown off by the winds. It is not quite as acid, is somewhat more hardy and makes a better growth of bush, not requiring an annual cutting out of stalks like the Shaffer. It freezes back sometimes, but not so badly but what it will throw out new canes near the ground and produce a paying crop. I would advise setting on none but ground free from water during the Winter. CHAS. MILLS.

Onondaga Co., N. Y.

I have grown the Columbian raspberry for a number of years with good success. This season has fully convinced me that it is a very valuable variety. As to hardiness of cane I consider it as hardy as Gregg, having grown both these varieties side by side for some time, on the same kind of soil, and under same conditions. Without Winter protection Columbian stood February 27, 1900, a temperature of 20 degrees below zero, and came through with scarcely a tip killed. In spite of productiveness I know of no other red variety that equals it grown in this section. I do not grow Shaffer, but believe that Columbian will compare favorably with Cuthbert or any other good red variety. I have grown it on different kinds of soil, varying from a light gravelly loam to heavy clay loam, also on rich garden soil. While I know a few growers who have had fairly good success, on rather heavy black moist soil, I would not advise your reader in Massachusetts to plant very extensively on such land as described. G. W. H.

Butler Co., Pa.

Apple Questions; Yield of Beans.

C. F. B., Newton, Mass.—1. What is the Bishop Pippin? 2. What is the value of Dyer, Lawver and Grimes; first for commercial purposes; second, as to quality? 3. What is an average yield of pod beans to the acre?

ANS.—1. Bishop Pippin is one of the names by which the Yellow Bellflower is known in Nova Scotia. 2. Dyer is one of our best Summer apples. It is not very attractive in color, being greenish white with rarely a blush on the sunny side, but it is tender in flesh and delicate in flavor, which make it very desirable for family use. Lawver is a very handsome apple, of fair quality and keeps very late, but it is a poor bearer and from a practical standpoint is of no value, for either amateur or commercial purposes. It has been named Delaware Red Winter, which was a blunder that has added the cost of experimenting with it a second time, and confused its nomenclature as well. Grimes is one of the best of all apples of any season in regard to quality, and it has a beautiful yellow color which makes it especially desirable where a yellow apple is wanted. The tree is hardy, healthy, of good form and bears well. I know of no variety which is more desirable for family and fancy market purposes, that will keep about as late as Hubbardston. In Massachusetts it will be a true Winter apple, but in the Central States it is only a late Fall or early Winter variety. 3. From 30 to 35 bushels per acre is about the average for ordinary field beans. H. E. V. D.

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EVERYBODY'S GARDEN.

SAVING SEED.—Generally speaking, the proper time for selecting and saving seed is just as soon as it is well matured. There are doubtless some exceptions, as in developing early strains of tomatoes, when to a certain extent, seed from unripe fruits may be used to advantage. Potatoes for seed purposes are thought by many growers to be more vigorous if dug before thoroughly ripe. Be this as it may, wherever possible the seed should be selected before the main crop is harvested, or if not gathered should be sought out and so marked that there will be no difficulty in securing it at a convenient time.

SWEET CORN may be gathered with safety as soon as thoroughly glazed, or when the inner husks begin to turn yellow. Strip the husks, leaving two or three, and tie two ears together and hang up on poles, freely exposed to the air, but secure from rain or dampness. Peas and beans are best cared for by pulling the vines at the proper time and after stripping off all inferior pods, hang up the vines with the same precautions as noted for sweet corn. When thoroughly dried, thrash out or shell and tie up securely in strong paper bags and carefully label.

TOMATO SEED.—The plan much in use of allowing the fruits to lie exposed to the sun and rain until rotted down is not at all desirable, and should be discontinued. First, if the seed by remaining in the rot and filth is not injured outright, it is at least not benefited by its surroundings, and the work of washing out the filth is in no sense a pleasant task. Second, in establishing a type of tomatoes, or holding or improving a type already established, it is not safe to trust to outside appearances alone. Tomatoes growing side by side upon the same vine, and almost identical to outward appearances, will often differ widely as to inner conditions and number of seeds. Other things being equal, the more meat and the fewer seeds we have the better, so the only safe test is the knife. Select them, the finest specimens obtainable, halve them crosswise and save only those following closest to the desired type inwardly. With a spoon scoop out the seeds into a sieve, and the pulp is easily separated by holding the sieve in water and rubbing it through, leaving the seed clean and ready for drying. The Hunter flour sifter, used by nearly every housewife, is an ideal sieve for washing the seed; held under a faucet of running water, or lacking this, held in a pail or pan of water and turning the crank the work is quickly and nicely done. The seed is easily dried by spreading on cloth or muslin and exposing to the sun and air. Do not expose to too much wind, as when dried, the seed is light, and is easily blown away. This plan is preferable to drying by heat, as it may be easily overheated and spoiled. Like nearly all other seeds, however, when thoroughly dried almost any degree of dry cold will be harmless.

SALT AND ASHES.—When the leaves of tomato, egg plant, pepper and other plants turn yellow and fail to set fruits as generously as desired, try an application of salt and ashes. A small handful of the mixture in the proportion of one part of the former to four or five parts of the latter, sprinkled around the hill will give new life and vigor to the plants.

CARE OF TOOLS.—All are not so situated that they can buy every desirable tool and labor-saving device now offered in the market, but every one is so situated that he can keep such tools as he does possess in the best possible order for easy and thorough work. I estimate that fully 25 per cent of time and labor may be saved by keeping tools in proper shape and repair, and having a place for everything, and keeping everything in its place. A rusty plow, cultivator, spade or hoe will tire out man and beast before the task is half completed, and the work be poorly done at that. When through using, the tools should be thoroughly cleaned and safely sheltered, and when finally laid aside for the season they should be painted with crude petroleum, axle grease or something of that nature to prevent rusting through the Winter. Keep the shovels, hoes and spades sharp, and for this purpose an eight-inch flat file or even larger, costing but a few cents, will save dollars in time and many a weariness during the season. Always file the tools on a true bevel from the upper side of the blade, as this gives the tool the tendency to cut more deeply and stick more closely to the work, while filing from the underside has the directly opposite effect. Some day when the mercury is soaring upward and the sun's rays are coming down by the shortest possible route, go out with your dull and rusty hoe and hoe for an hour or two in the weeds and grass; then stop and scour and file your hoe until sharp, and try it again, and you will wonder why you did not try it before beginning to hoe. If you find a tool broken or otherwise out of repair, stop then and there, if possible to do so, and make the needed repair. If not convenient or practical to do it at once make a note of it for the first possible opportunity. Often a few minutes' work done at once will save hours later on.

A HANDY TABLE.—A very cheap and convenient table for draining and tying up vegetables after being washed is made as follows: The legs are made of 2x2-inch stuff four feet long. With a three-eighths or half inch bit bore a hole through each leg 18 inches from the foot and bolt two legs together with bolt and nut. The top rails are 1x2-inch stuff, and any length desired for the table, halved into the top of legs. The lower rails are 1x1-inch and halved into the legs six inches from the foot, and secured with nails or screws. The top is made of heavy burlap which may be had of any upholsterer for 10 or 12 cents per yard. Tack this lengthwise to the upper rails, and you have a table made on the same principle as the folding cot, and when once used will not be dispensed with. When desired for use, the table may be set convenient to the washing place, and as soon as washed the vegetables may be bunched or tied and left to drain without danger of soiling with the mud and dirt. When not in use it may be folded and set aside where it will occupy but little room. Of course any height and width of table desired may be made, and this will be governed entirely by the length of legs and the distance of bolting the legs together from the feet.

J. E. MORSE.

Michigan.

USING FERTILIZER WITH WHEAT.

Shall We Drill or Broadcast?

My experience with fertilizers for wheat includes both broadcast and drilling, complete and partial manures, and in amounts not exceeding 250 pounds per acre. No appreciable difference in results, so far as stand of plants, or in the final outcome, has been noticed by either method. Last season I used dissolved rock on clay land, about 250 pounds per acre, drilling with ordinary form of fertilizing drill, and the yield was 24 bushels per acre, average, machine measure, which is the best yield reported in the neighborhood. We have used both commercial and stable manures, in large quantities, on *growing* fruit plants, applying by both methods, that of broadcasting and in trenches. The broadcast gave best results. For seeds, as wheat, where amounts are not excessive, drilling will give, on our soil, as good results as broadcasting, and is to be preferred, as being more economical of labor. If applications were heavy, say 500 pounds or more per acre, reasoning from our experience in fruits, I would rather risk broadcasting. I may say that the purpose for which fertilizer is used, by our best farmers here, is to stimulate the wheat to extra growth in the Fall, and not to supply (primarily) plant food to produce a crop of grain. The Hessian fly damages early-sown wheat so badly as to compel sowing from two to four weeks later now than formerly. The problem now is to sow late enough to avoid the fly, and at the same time to develop a growth strong enough to withstand the Winter. For this purpose fertilizing is nearly a necessity, and drilling answers every purpose.

RALPH W. MOSS.

Indiana.

Close observing farmers have long understood that it is not wise for them to make heavy applications of commercial fertilizers with wheat when the ground is too dry for good germination. It is generally believed that under such conditions a heavy application of phosphate or of complete fertilizer that contains a large amount of phosphoric acid, injures the germination to a greater or less extent. I am not aware that accurate experiments have been made to determine to what extent the germination is injured under such conditions. The extent of injury would undoubtedly depend largely upon the amount of moisture present in the soil, and upon the amount and kind of fertilizer applied. It is also held by practical agriculturists that less benefit is derived from the fertilizer if the application is made when the ground is dry than when sown under more favorable conditions as regards moisture. When the ground is dry a moderate or light application of commercial fertilizer should be made if loss of plant food is to be reduced and injury to germination avoided.

[Prof.] G. C. WATSON.

Pa. State College.

Bright Spots in Florida.

There are some parts of Florida that are not desirable for any kind of settlers to locate in, but others are good agricultural country. I can make more pork and beef from the products of an acre here than in any other State I know, and I lived in the Blue-grass section of Kentucky until I was over 30 years of age, and still own a farm of 240 acres there. This is a good farming country in spots, and the spots are good large ones, but there are no farmers here. When I came here the farmers pulled a little fodder, and their hogs fattened on mash. I can make hay here at less cost than anywhere, except on the prairies, but mine will be better hay, and we are now curing our own pork. When I first came here one of my neighbors told me, when asked about milk, that he had 24 cows, and he sometimes got as much as a quart of milk at a milking. We now have cows that give four gallons per day. There are some pretty good fruit growers and some good vegetable growers in the State, but very few farmers, and there is a splendid opening here for good ones. If you can see some one connected with the large Winter hotels here, ask him what they would pay for good chickens and eggs for their hotels. They will name a good price, but will tell you that they can't depend on Florida for their supply. Yet there is no better chicken country than this; eggs can be set in September and have broilers ready for the tourists' hotels but nobody tries it. The people who come here hear of some one who has made a big thing in vegetables or fruits, and at it they go. They want to get rich quick, and "go broke." If they would be satisfied with good living, steady but what seem to be slow gains, they would do much better.

S. H. G.

McIntosh, Fla.

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Choice Japanese Buckwheat. Seed Wheat and Winter Oats. J. E. HOLLAND, Milford, Del,

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Ruralisms

NOTES FROM THE RURAL GROUNDS.

WET WEATHER EFFECTS.—The Jersey coast region has suffered much from the intense humidity generally overlying the Eastern States. Only two decided breaks in the moist conditions have occurred since early May, though the actual rainfall has but little exceeded the average. The heat was sufficient to brown grass on exposed slopes during a 10-days' cessation from drizzling showers, but the soil has always been moist at the depth of a few inches, and at times quite saturated. This condition has its drawbacks, but is far preferable to the terrible droughts ravaging the Middle West. Coast vegetation naturally does not endure dry weather as well as that of the interior, and quickly shrivels when the surface moisture becomes attenuated, as it does not root deeply in the thin soils characteristic of the region. It is interesting to note the effect of excessive humidity on some very diverse plants. Cherries are a total failure as regards fruit, and many heretofore healthy trees have been nearly defoliated by the shot-hole fungus. Vigorous young trees of both the sweet and sour types lost most of their leaves early in June, but have continued growth with a scanty new covering. Some old trees are now almost bare, and likely to remain so until next Spring. But few cherries set on account of interference of the rain with pollination, and then generally rotted or made a poor development, though there were some local exceptions. Japan plums also show yellowness and weakness of foliage, and the crop of plums will be light. Brown rot is developing rapidly, and much loss will probably ensue. Grapevines are making a surprisingly fine growth, the great heat being much to their liking, though they would get along still better with less humidity. There is certain to be a considerable loss from rot. Apples are as near failure as we have known for many years. The foliage is imperfect in most instances, and the young fruits are developing in a very one-sided manner. Peach trees look well where proper care is taken, and promise a tolerable yield of the late varieties. Blackberries are abundant and large, though soft in quality. Potatoes are giving an indifferent yield, not at all in keeping with the luxuriant growth of top. The local hay and grain crop promised exceedingly well, but was seriously damaged almost without exception before it could be secured. The foliage of tomatoes blighted considerably early in the season, and most of the early blooms failed, but they are growing vigorously now.

The redeeming features of an otherwise trying season are the luxuriance of the corn crop and the refreshing verdure of the fields, which never were greener in midsummer, and the brillancy of some native flowers, notably Lilium superbum, the American Turk's cap lily, and the butterfly weed or orange milkweed, Asclepias tuberosa. This lily grows in moist shaded lowlands, preferably on the banks of sluggish streams, while the milkweed prefers dry hillsides. Both are benefited by showery weather and have seldom bloomed more brilliantly than at present. Thousands of lily bulbs that fail to develop buds in dry or normal seasons now open fine panicles of bloom, containing at times several ranks of flowers. Few wild plants are so entirely satisfactory and harmonious in color effect when viewed in their natural surroundings, and it would seem almost a desecration to force them into extensive cultivation as long as they can be found in quantity in waste places. They ask no odds in decorative effect from the cultivator or plant breeder.

THE SHIRO PLUM.—Fig. 250, this page, is a fair likeness of a Shiro plum grown by J. H. Black, Son & Co., Hightstown, N. J. Shiro is one of Burbank's productions, now fairly well disseminated, and beginning to fruit in the East. Shiro is said by Burbank to be the result of a triple hybridization of Robinson, Myrobalan and Wickson, and is a handsome golden green plum of fine quality, about equaling Abundance in that respect, but has the advantage of resisting the brown rot much better. Messrs. Black say that the specimen illustrated is from a graft on a Satsuma tree which has never ripened a plum on account of rot, yet the Shiro fruits have not been affected in the least in two bearing seasons. This is a very important characteristic if confirmed by extended tests. The Shiro tree on the Rural Grounds is growing vigorously, but has not attained bearing size. It seems well suited on peach wood; a bud put in a strong young seedling peach is growing so rapidly that it overtops a similar peach bud on the opposite side of the trunk. Most Japan and hybrid plums grow well on peach stocks, but are soon starved if peach sprouts are allowed to push, and it is rare, in our experience, to find plum wood keeping pace with peach on the same stock. Shiro is firm and carries well, qualities that may make it useful for market.

PLANTS of a new thornless blackcap raspberry were received from James B.

THE SHIRO PLUM. FIG. 250.

Stevens, Danbury, Conn., April 25, 1900. They were well planted and made a satisfactory growth last year. They set an abundance of good-sized berries this season, but exhibited such unmistakable symptoms of anthracnose just before ripening that the plants were destroyed to prevent further infection of others. Thornless blackberries and raspberries are generally weak growers, and have never proven satisfactory.

THE MCDONALD BERRY.—The possibilities of the blackberry are very inviting, and much progress has been made in improving our native species, which are on the whole more agreeable in flavor than many fruits that have been coddled in gardens for generations. One can imagine the blackberry of the future to be an immense, juicy and luscious fruit with a minimum number of small seeds, altogether transcending anything now grown, but we are scarcely prepared to credit the yield of 20 quarts per plant for the McDonald berry, a tree dewberry of Texas origin, now grown in California. We think two or three quarts to a plant a very good yield here in the benighted East. It is said to be nearly evergreen in character, the berries of great size, and rich sweet quality. It ripens a week earlier than even the earliest dewberries. We confess to dense ignorance of this wonderful fruit, which is described by a California correspondent. It is possible that the mammoth blackberry of California noted on page 550 is the variety meant, though the yield remains incredible. W. V. F.

Baldwin Apples in New England.

I read in THE R. N.-Y. and have seen it copied, that the leaves of the Baldwin apple drop in early Fall. The writer uses this expression concerning western New York: "You will see whole orchards which now hold their leaves until after heavy frosts." Does not this explain the difference in flavor of New England grown apples? Tastes differ, but the best experts we have at our exhibitions place the Baldwin at the head of the list of Winter apples in point of flavor. The Rhode Island Greening, when well grown, has a delicious richness peculiarly its own, but the preference soon returns to the Baldwin as the apple to set before your friends. Returning to the conditions which are conducive to the perfect ripening of this apple, with its rich subacid flavor, the writer informs us that until spraying was practiced its most essential contributors, namely its leaves, have fallen from the tree prematurely. Is this condition local or widespread? Here in New England all apple trees hold their leaves so late in the Autumn as to make us tired, being about the last tree to shed its foliage.

A very energetic man who is not over strong, said to the writer: "Good health is everything." The question arises, can any fruit be grown to perfection without healthy foliage? That it directly promotes the beauty of flowers and the quality of fruit is self-evident. Strip the leaves from a crimson rose and the blooms on such a branch will be but pale pink, while on the remaining branches they retain their full color. May we not justly infer then that when the Baldwin is grown away from its original home there are climatic reasons why its high character is called in question? J. W. ADAMS.

Massachusetts.

Lime on Strawberries.

I have had no experience with lime. Ashes show no results on our clay loam. On gravel or light land near us good results have been obtained when used in connection with barnyard manures.

Oswego, N. Y. F. J. TICE.

From a very limited experience we believe unleached wood ashes a good fertilizer for strawberries, but from economic reasons we have depended almost exclusively on stable manure for several years past. We have never applied lime to strawberry vines. Our method of fertilizing and growing strawberries will not allow us to throw any light on the benefit to be derived from the use of ashes or lime as a fertilizer for the strawberry crop.

Orange Co., N. Y. W. D. BARNS & SON.

I have never applied lime to land just previous to planting strawberries, nor would I advise it. If the land is sour, or contains too much vegetable matter, forming undesirable acid in it, I would prefer to apply lime the previous year, and grow corn or some other crop (not potatoes). Wood ashes are helpful in many soils for strawberries, the only objection to it is that with us it gives clover, especially White, too much start. The most satisfactory preparation of soil for strawberries with us is to give the soil a heavy dressing of stable manure one year previous to planting the strawberries. If the soil is clay or inclined to be stiff apply at same time 30 to 50 bushels of fine slaked lime. This will put the soil in fine condition for the plants. I would use ashes instead of lime if the soil was of a sandy or loamy nature. It is not safe to plant on land that has lain over one year in sod, it might be infested with the White grub, the larvæ of the June bug. It should be fallowed for two years at least.

Hightstown, N. J. C. BLACK.

KILLING CUCUMBER BEETLE.—Your issue of August 3 shows much loss from Squash borer and stinkbug, as well as Cucumber beetle, so I give my experience. After losing crops of each for years, though I tried tobacco, coal tar on corncobs placed in hills, etc., all proving failures, this year I used two tablespoonfuls of spirits of turpentine mixed thoroughly with one bucket of ground plaster, and with this mixture, while the dew was on plants, I sprinkled the roots, body of plants and each leaf. This I did twice. Result, magnificent growth of rich, dark green vines and bushes, and more squashes and cucumbers than in the past 10 years together. Try it, next year. A. W. SMITH.

Georgia.

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And light loads.
Good for everything that runs on wheels.
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Hope Farm Notes

Questions have been coming in at a great rate.

How did you come out selling windfall apples?

Here are the returns for a sample shipment of four barrels:

3 barrels @ $2	$6.00	
1 barrel @ $1.50	1.50	
Total	——	$7.50
Commission	.75	
Freight	.64	
Cartage	.40	
	——	$1.79
Total	——	$5.71

Three were large sugar barrels. On an average the regular-sized barrels have sold at $1.50—netting us $1.09, which we certainly consider a double windfall under the circumstances.

Did you pick them up just as they came?

No, indeed; we sent only the best. The small or badly bruised apples we left for the hogs.

Would it not pay to send the smaller ones?

No, there were many barrels of such trash on the market which could hardly be given away. I cannot see what farmers are thinking of to send such worthless stuff.

What proportion of the apples fell?

At least one-half. The wormy ones gave up their grip first, and the storms blew others. The old trees are headed too high.

What difference does that make?

As they sway in the wind the branches switch hard and throw down more fruit. The apples have farther to fall and are damaged more. I shall head my young trees down low.

How about the hand-picked fruit?

We do not ship them to New York, but sell them to men who pack in baskets and peddle in the nearby towns.

Why do you not peddle them yourself?

The fact is that we have more work on the farm than can properly be done. We cannot spare man and horse. The little boys have tried it with fair success, but peddlers are like poets in one respect—they are not made of common clay. The boys went out with apples to sell and came back reporting that "Everybody wants to *sell* apples!" A born peddler would have avoided such folks and found others who wanted to buy.

But what about the advice we hear so much of urging farmers to peddle more?

Like all other advice, it is not for general application. The man of average size and shape will look fairly well in a readymade suit of clothes. Take a man with three extra inches on his leg, or a well developed alderman's badge, and he must have his clothes made to order, or wear those designed for a larger man. There are some cases where it seems to pay to peddle farm produce, but as we are situated I doubt the wisdom of it.

You speak of work done by the children—is that a joke?

No. I claim that a child should be expected to do some useful work every day. Our children have regular jobs, and I make it a part of my business to see that they are done. It is a shame to overwork a child or to make him think that he must toil and slave simply because he is living. At the same time I know that the habit of useful labor is one of the most needful, comforting and ennobling things that have to do with human life. The child who grows up with a love for apples will drink mighty little liquor, and the child who works from habit will keep out of much mischief.

Do you mean to say that your children love to work?

No; they are as much inclined to shirk as other children, but I hope to show them that the desirable things of this life are to be obtained only through work, and that nothing but labor will give health to brain, heart or muscle. Not one of our children can expect to have any great help financially. They will have to understand from the first that Hope Farm is not a breeding place for rich people, and that all I ever can or will give them is opportunity, ambition and good habits. If I were to become suddenly rich I would not let my family know of it if the knowledge could be honestly kept from them.

Is not that a ridiculous statement?

Some people may consider it so, but it is my conviction that few things do more to dull true ambition and blunt honest self-reliance than the idea of a young man that money "comes easy." On the other hand, when a man has fought his way unaided through poverty and hardship, and has made himself comfortable, I believe the sweat on his honest dollars makes him a better citizen all around.

What have you to say about the second-crop grass?

It appears now that we are to have a good second crop on both the fields where we tried the "Clark" plan. On one field we used muriate of potash and nitrate of soda after mowing, and this has started a heavy growth. The older meadows are full of wild carrot.

Do you mean to say that you let weeds grow at Hope Farm?

Yes, though we gain on them somewhat each year. That is one thing in favor of the "Clark" method of seeding. Where we tried that last year hardly a plant of wild carrot appeared after mowing, while on the adjoining old meadows the fields were white by August 1. We clip them off with the mower and rake and burn, but I have never been able to get rid of this weed without plowing up the sod and giving thorough cultivation. We are alive with weeds this year—it has been impossible to work in some of the crops.

Is it still wet?

There is more or less rain nearly every day. Some days we think we can go through with a clear record when, late in the afternoon, almost without warning, a cloud will suddenly form and turn the hose on us. Then, when the farm is as wet as a ducked hen, the sun will come smiling out and fairly parboil all hands. This sort of thing just suits the weeds so that the corn and the old meadows are alive with them. The potatoes are quite clean. They are on last year's corn ground where the crop was hoed and weeded with great care, and the children went through and pulled all the little weeds out of the hills. Understand, though, that we hope to kill most of these weeds by September, but it will be a big job.

How does your water system work?

Well. One hydrant at the barn was clogged for a time, but otherwise there has been a full supply. We use all told about 300 gallons of water each day, besides what the cows get at the spring. In a very dry season we could dispose of 500 gallons easily. Think what that would mean if it all had to be pumped through a leaky old pump or lifted in a bucket and carried 10 rods to house or barn! Our windmill has kept us well supplied with water, except three times when we emptied the tank to clean or make repairs. As for irrigating with tank and windmill power, I do not believe it is practical.

What do you feed your hogs now?

The sows get cabbage and apples, with a small feed of wheat middlings and corn. The young stock get more grain and all the green stuff they will eat. Five young sows run with the chickens in a large yard. They eat weeds and apples, and pick up cracked corn. The children pick up large quantities of sweet apples—which are excellent for hog food. A boy will work hard at handling apples or other objects which remind him of a baseball, when pulling weeds with half the force will make his head ache.

You speak of idle land which could not be worked on account of wet weather. What will you do with it?

Part will be set in apple trees—probably this Fall. The rest will be seeded to wheat or rye with grass. There is now a heavy growth of foul grass and weeds on this land. This will be clipped off, raked and burned—early in August. Then the ground will be plowed and the stones will be picked. Up to the middle of September we shall probably sow wheat—after that rye. I hope to have a large acreage in grain this Fall.

Why?

I missed it seriously last year by having too much open land. Had I sown grain on all land under crops last year I would have had no idle fields this Spring. I could have let the grain mature. In any event I feel sure that such soil as ours dries quicker in the Spring, and may be worked earlier when there is a living crop on it. It stands to reason that the millions of little plants will help drain and pump the soil dry. Therefore there is every reason for trying to keep soil covered during the Winter with a living crop. Sometimes we cannot do this as we would like, for there are potatoes to dig, corn to cut and other work for September, which will not leave the team free for plowing. August is often a good month for such work. On light land, free from stones, the disk or Cutaway harrows can often be used in fitting land for small grain, but on our tough stony soil the plow must be used. Some farmers advocate seeding rye, wheat and even grass in the standing corn. By reason of the wet season our corn is too weedy this year to attempt that, and it is also too rough since we have been obliged to hill up more or less.

You spoke of having a horse with the colic. What did you do for him?

It was big Frank, who ate too many apples. It was not a bad attack and Charlie took him in time with a dose of cooking soda in water. We now have a case of homeopathic veterinary remedies which we find very useful. They are given through a crooked glass tube easily and quickly. H. W. C.

THE MANAGER'S SHARE.—In regard to the question on page 533, I would say that when the orchardist is a thoroughly practical and professional horticulturist, and takes complete charge of the plant, we have usually rated his services as nearly equal to the capital invested in the business. As your question covers only the first five years of the orchard's life of course a different ratio should be laid down; possibly the one side furnishing about two-thirds or three-fourths of the capital and the partner doing professional work and furnishing remaining capital. It is a hard question to give a very definite answer, and conditions are so different in different localities, but the above is about what in our experience we have found the two parts of the business relatively worth. H. W. MILLER.

W. Va.

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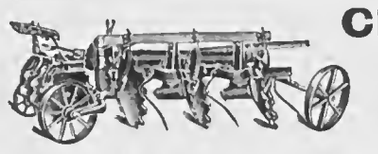

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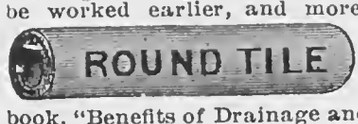

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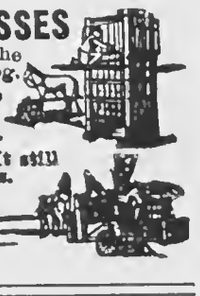

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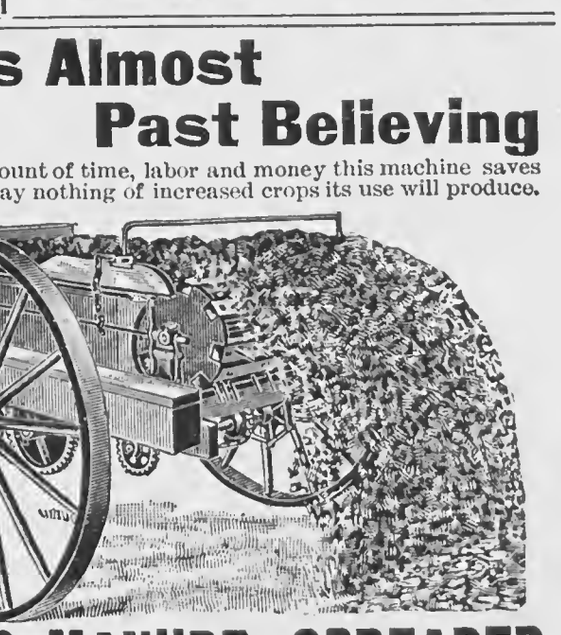

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SATURDAY, AUGUST 17, 1901.

That Little Envelope,

which you will find in this paper is intended for immediate use. It is arranged conveniently to carry back the name and address of one of your neighbors, with his remittance for subscription for the remainder of this year. There are blanks for the name and address, and you will notice a little pocket at the point of the arrow arranged for carrying coin safely, after the envelope is sealed. We hope you will at least take interest enough in the matter to hand this envelope to one of your neighbors who needs the paper, with a good word for the paper. A better way, however, would be to get his subscription and write his name and address in the blanks yourself. Then put 15 cents coin in the coin pocket of envelope, at point of arrow, put your own name and address on a slip of paper into the envelope, seal and mail under two-cent stamp. If you should get up a club of 10, you need send us only $1 with the 10 names. But be sure to send this one name anyway. The sooner you do it the more your friend will get for his money. Let yours be the first one back. We thank you in advance for the interest that we feel sure every old friend will take in this matter.

*

THE arid regions of the Southwest are held responsible for the hot winds which sear and wither farm crops in sections of Iowa, Nebraska and other parts of the West. If the desert could be made to blossom, through the aid of irrigation, these winds would be greatly lessened in intensity, if not altogether abolished. So say those who are now urging the National Government to give aid in building vast storage reservoirs for the purpose of such irrigation. The influence of vegetation upon climate is not very well understood; there is no doubt, however, that the arid regions are largely responsible for the hot winds, and future generations may live to see them a thing of the past.

*

LAST April D. R. Pease, of Tompkins Co., N. Y., gave his experience with Pear blight. We now have the following note from him:

> I would like to know how much Pear blight there has been in the State this season, and what success has been secured by those who have sprayed for it. We have had none this season, but our trees were washed once and sprayed twice. We have changed our mixture somewhat this year with good results. There is plenty of blight in our section this season where nothing has been done to prevent it.

We would like to have full and complete reports concerning this disease—its extent, treatment, and also whether some varieties are more susceptible to it than others. Knowledge is power. The only way to make reports effective is to concentrate them. Send us the facts about Pear blight. We will try to sift the information thus received.

*

NIAGARA Co., N. Y., is to have a complete system of free rural mail delivery. A few trial routes were started, and proved highly successful. Now the whole county will be served. This means that 30,000 people or 7,000 families, all living outside of cities and villages, will have daily mail service! Niagara is the fifth county in the country to have a complete system. We do not believe that this result would have been possible had it not been for the Niagara County Farmers' Club. That big and lively organization is composed of wideawake and thoughtful farmers. They come together, exchange ideas, sort out a few of the most practical things that farmers need and then call for them. They receive careful attention. The powers that be become the powers that see to it that these things are done. Would that we had just such a club in every county of New York State!

*

THERE are some varieties of wheat better able to resist the attacks of the Hessian fly than others. That is not so surprising when we remember that certain varieties of fruits or vegetables are more nearly immune than others to insects or diseases. As an illustration, THE R. N.-Y. No. 2 potato, with its thick, leathery foliage is not a favorite with Potato beetles when there are thinner-skinned varieties near by. Only a few years since we were assured by scientific men that there was little if any difference in wheat varieties in this respect. Now the evidence seems to be clear that such a difference does exist. It is just such information as this that our scientific friends ought to dig out for us. We are glad that they wait until they know before "talking for publication."

*

THIS is the season when the so-called "lucky" farmer has his innings. The weather conditions have all been against the crops on average soils. In the East rain after rain has soaked the ground, and in the West the drought has parched it. Thus it has been impossible to produce even fair crops, and, as a result, there is barely enough produce in the country to feed the people. We are selling windfall apples for more than first-class fruit will bring in seasons of plenty, and potatoes which in ordinary years would go to the pigs are eagerly called for in the market. Thus it is that a season of crop disaster is often best for the "lucky" farmer. And who is the lucky farmer? Does he really leave things to chance, or does he strive and study so to fit his ground and organize his crops and forces that each year will give him the largest possible yield? Our observation is that as a rule the men who do best in a year like this one also do well when the general conditions are favorable. In other words, those who are struck by luck are those who are always ready with the lightning rod of thorough preparation erected and in good order.

*

THE unimportant question as to whether one naval commander or another is entitled to more credit for the defeat of the Spanish war squadron off Santiago during the late war is to be fought out in an expensive court of inquiry, to the detriment of public business. Judged by the commotion this dispute has occasioned one might think the question involved was vital to the public welfare, but when it is considered that the officers concerned were trained and educated at the expense of the Government, have received a liberal compensation through a lifetime of preparation for just such a contingency, and since were both promoted to a rank that ensures ample pension on retirement, it seems nothing more can be due them. The spectacle of individuals doing fairly well their ordinary duty is not so rare that hysterics need follow. Myriads of workers in every humble walk in life do as well every day without comment or expectation of unusual reward. It would be more creditable and in keeping with modern ideas of civilization to find the public interested in a discussion whether the originator of the Concord grape, or of the Wealthy apple was deserving of the greater honor. These men fought the grimmest of all enemies, poverty and obscurity, with no hope of substantial reward, and left results of permanent National value behind them, but even the names of these unselfish benefactors are known to few who profit by them.

*

THE R. N.-Y. does not believe that Congressman J. W. Wadsworth, of New York, is a fair representative for the American farmer. The position he took on the question of taxing colored oleo is opposed to the desires of the great majority of American dairymen and general farmers. We do not think that he is the right man to head the important committee of agriculture. We have no personal feeling whatever in this matter. Our position is taken simply because the cause of honest butter, and indirectly the cause of honest agriculture, requires a friend and champion in this place of power and honor. In talking with farmers in Mr. Wadsworth's district we have been astonished to see how general the feeling against him is. Yet, surprising as it may seem, thousands of farmers who believe that his action on the Grout bill is a direct injury to their business, voted for him! Why? The answer is usually the half-hearted and despairing statement that "he was sure of such a big majority anyway that it was no use to cast a single vote against him!" He ran far enough behind his ticket to defeat a Congressman in an ordinary district, but the big party margin discouraged many of those who will usually put political friendship above business enmity. Of course the politicians can point to his big majority and call it a grand endorsement, but they know better—that is if, as they pretend, they know what the voters really feel and desire! We understand that thousands of farmers all over the country are writing to Speaker Henderson protesting against Mr. Wadsworth as chairman of the agricultural committee. We hope that there will be a tidal wave of such correspondence.

*

IT has been demonstrated that mosquitoes can convey the malaria germ from one person to another—and prick it in. It is also thought that they are able to help in spreading smallpox. Granting all this, we must still remember that mosquitoes are no more dangerous than they were before we knew so much about them. Such knowledge does not make them live longer or sting harder—it ought to make us put up a better fight against them.

*

PEOPLE hear much about the abandoned farms of New England. Now and then we are told what the soil of these farms can be made to produce. The hay crop described on page 563 is a fair sample of what the hills of western New England are capable of. This beautiful country, fair in its way as any the sun shines upon, healthful and productive, is becoming depopulated, although as a whole the population of the New England States is increasing rapidly. The movement has been away from the farms to the valleys or water powers, where city and village have grown up. Yet there are many who left the farm years ago who find themselves crowded in the busy town. They, with their children, would gladly go back to the hills if they could only take some of the conveniences of the town with them. We believe that the telephone and the trolley will in time reach up into the hills and repopulate the old farms.

*

BREVITIES.

Little Jersey cows is business,
I'll feed them and show no fear,
But the biggest no-count critter
Is the little dairy steer!
Livin' on the fame and record
That his little sister's made,
Struttin' round to claim attention,
When his board bill h'ain't ben paid.
Hoppin' lively as a cricket
Mighty little thought of beef,
Ridin' on their sister's ticket
Otherwise they'd come to grief.
Ain't you seen *men*, though, jes' like 'em?
Lazin' 'round an' crackin' jokes,
Spendin' lots o' time in settin',
Livin' on their wimmin folks?
Great fat fellers, stout an' hearty,
Fit for work; each lazy lout
Lettin' wimmin folks support him—
How I'd like ter roust 'em out,
You jest sign my name unto it;
Print it black ez it appears;
Stout men ez will live on wimmin
Ain't ser good ez dairy steers!

FAD sometimes spells fraud.

RAPE can be sown as late as September 1.

WANTED—Asparagus with an oxhide—to resist the rust.

YES, it often pays to sit down judiciously on the rising son.

THIS country imported 17 bushels of potatoes from Peru last year.

WE advance the suggestion that you take a backward step from temptation.

THE Baldwin apple is at its best in New England. Is any apple really better?

"POTATO pomace" is the residue left in the manufacture of starch from potatoes.

THE man who has to take the gold cure may well suffer from a consciousness of inward gilt.

HAY caps this year indicate that a farmer is getting some of the hayseed out of his hair.

THERE's another hard knot in the world's tough plan, when a woman says "Yes!" to a drinking man.

WE have a subscriber in New Hampshire who keeps 7,000 hens, and is now marketing 2,000 eggs per day.

THE articles on page 574 seem to dispose of the "tramp creamery" story. Very pretty in theory but not practical.

A GOOD thing to do with cow peas this year is to plow them under about September 1, fit the soil well, and seed to grass.

WHAT becomes of the fat in the milk when the cow is worried or uncomfortable? The chances are that it never was there.

"Do more harm than good!" "Catch more friends than enemies!" That is what the entomologists say about moth traps.

WE find this a hard season for fitting the ground for the Clark plan of grass seeding. It is impossible to get into the field with horse and tools.

"CORN on Fall plowing yet looks well mornings; on Spring plowing it is badly wilted, and only partially recovers nights," says Mr. Warner on page 563.

ONE great cause for debilitated poultry is undue confinement at night. By "undue" we mean that they should be, to all practical purposes, the same as if out doors, from early Spring till late Fall. Plenty of air; but no damp floors. A slight draft, when fowls have been overfed and forced, frequently results in colds.

Events of the Week.

DOMESTIC.—Fifty cases of smallpox among Indians are under quarantine at the Flathead Agency in Montana. The disease exists also among the Turtle Mountain Indians, and at some of the Sioux agencies, particularly in the Dakotas, but outside of Flathead the attack is diminishing. Smallpox has again attacked the Winnebago Indians on the reservation near Black River Falls, in Wisconsin, and scattered on private farms between there and Lacrosse, and the extinction of the tribe is threatened. . . . . Governor Davis, of Arkansas, has announced that he will recommend the repeal of the act which permits the public to witness hangings. It is estimated that 10,000 persons attended the execution of a negro at Little Rock, July 26, and there were exhibitions of the side show variety on the ground. Young Lemoyne Jayne, who had seen the hanging, gave an imitation of it, and fatally injured himself. Because of this and the scenes at the execution, Governor Davis has decided to obtain the repeal of the law. . . . . Hundreds of homeseekers at El Reno, O. T., who failed to draw claims in the new Kiowa-Comanche country, are selling their tents, horses and wagons at a sacrifice in order to reach their homes. Many others, who have camped on the borders of the land for months, expecting that it would be opened by a "run," are destitute and already suffering is apparent. Hundreds are drifting south toward the projected towns of Anadarko, Hobart and Lawton, hoping that something may turn up. Many merchants and professional men drew claims, while hundreds of needy have found themselves without either the hoped-for land or money sufficient to purchase necessities. . . . . The Exposition Building at Kansas City, Mo., was destroyed by fire August 5. Ringling's circus was in full swing in the grounds adjoining. The firemen had to drench the main tent, and the sideshow tent was struck to save it after several big holes had been burned in it. Fully 10,000 persons were in the tents and about them, and a panic was narrowly averted. The Exposition Building was built in 1888 and cost over $200,000. It was an enormous affair, built after the Philadelphia Centennial style with a steel and glass roof. It was the largest show building in the West. It was sold and was to have been torn down, so that the actual loss is not very great. There was no insurance. . . . . A gasoline explosion in a grocery store at Philadelphia, Pa., August 5, killed eight persons and injured 40 others. A great deal of damage was done to adjacent buildings. . . . . The vault at the Selby smelter, at Vallejo, Cal., was robbed of gold to the value of $280,000, August 5, by thieves who tunneled under the building and broke in from below. . . . A terrific explosion of nitroglycerin occurred at Bowling Green, O., August 6; one man was blown to atoms, several persons injured, and much property damaged. The explosion was caused by the jolting of a wagon, in which 800 quarts of the stuff were being carried, when crossing a railroad track. . . . . True bills were found by the grand jury, of Bucks Co., Pa., charging John Kinney, manager of the Penn Valley Stock Farm, with the larceny by bailee of 180 horses, valued at $180,000, and the embezziement as agent of $22,000, the property of Sarah D. Cox. . . . . At Scranton, Pa., August 6, the proprietor of an underwear factory was fined $27 for swearing at his employees, and also compelled to apologize to the young women whom he had thus offended.

ADMINISTRATION.—The American consuls in the sections in Central and South America affected by the revolution in Colombia and the war preparations in Venezuela send alarming messages to the State Department. Consul Hezekiah Gudger, at Panama, advised the Department that the state of affairs warranted the dispatch of a war vessel to guard American interests. Owing to the fact that the President expressed displeasure when the State Department sent war vessels to La Guayra during the critical part of the negotiations incident to the war of the asphalt companies, the State Department requires very positive evidence that vessels are needed, before they are sent. The President is opposed to shows of force. The Machias was ordered to Colon August 7.

PHILIPPINES.—A proclamation purporting to come from Malvar, the successor of Aguinaldo, has been issued, giving assurance to the Filipinos of the continuation of active war. American officials at Manila believe it was really written at Hong Kong by Agoncillo. . . . . Secretary Root's order cutting off the use of commissary supplies by civilian employees is causing consternation among the minor clerks, whose expenses are thus doubled. Many of them claim they had an absolute understanding, before leaving the United States, that they would be entitled to use commissary stores. The order became effective August 1. Unless the salaries of the junior employees are raised many resignations are likely to be tendered.

HAWAII.—The constitution of the United States preceded the flag in Hawaii, according to a decision rendered by Circuit Court Judge Gear of the first circuit. He has already released on habeas corpus petitions three prisoners sentenced for infamous crimes after the resolution of annexation was passed by Congress, and was signed by President McKinley, on the ground that they were not convicted by a unanimous verdict of 12 jurors. A wholesale jail delivery of murderers, burglars, larcenists and other criminals is threatened, under the decision, and Honolulu is greatly disturbed over the prospect.

FARM AND GARDEN.—Fifteen carloads of Russian hard wheat arrived in Kansas City, Mo., July 29. Four more carloads are yet to come. There are 14,446 bushels of wheat in the consignment, and it is to be distributed for seed purposes in Kansas and Oklahoma. It is the greatest shipment of hard seed wheat ever brought to this country.

The Dairy and Food Bureau of the Pennsylvania State Department of Agriculture will institute proceedings against oleo manufacturers to obtain a court interpretation of the new law governing the making and sale of the substitute for butter.

The establishment of the Union Provision Company, of Somerset, Pa., was seized by United States officials, August 1. The company was chartered for the purpose of conducting a butter renovating establishment, and is capitalized at $15,000. It is alleged that the concern has been engaged in the illegal manufacture of oleomargarine, samples of the product having been analyzed by the Government officials at Washington.

Anthrax is reported among the cattle in several counties of South Dakota.

The forty-seventh annual fair of the Pennsylvania State Agricultural Society will be held in joint exhibition with the Lancaster County Agricultural Association at Lancaster, Pa., October 1—4; secretary, J. P. Nissley, Hummelstown, Dauphin Co., Pa.

C. O. Townsend and H. P. Gould, who have made enviable records as State pathologist and entomologist respectively in Maryland, are now connected with the United States Department of Agriculture. They are succeeded in Maryland by G. L. Stewart and A. L. Qualntance.

After a thorough inspection of western Nebraska, Gifford Pinchot, chief of the Bureau of Forestry, U. S. Department of Agriculture, and W. L. Hall, expert superintendent of the tree-planting division of the same bureau, believe that the sand hills and prairie can be converted into another such pine woods as northern Michigan. The forestry experts will bespeak the aid of western Congressmen to this end.

As a result of pressure brought to bear on him by the nurserymen of the State, Governor Stanley, of Kansas, may remove E. A. Popenoe, whom he recently appointed State inspector of nurseries. The nurserymen declare that there is no good reason for the appointment of such an official, as no such office existed prior to the time Governor Stanley named the inspector. A. L. Brooke and other Topeka nurserymen called on the Governor July 22 and asked him to remove the inspector. The Governor promised to settle the matter satisfactorily.

The Southern Nurserymen's Association met recently at Asheville, N. C., and elected the following officers: President, J. Van Lindley, Pomona; vice-president, Henry Chase, Huntsville, Ala.; secretary and treasurer, W. L. Wilson, New Chester, Tenn.

The annual convention of the Society of American Florists opened at Buffalo, N. Y., August 6.

CROP PROSPECTS.

The apple crop is very light here, but we will have a nice light crop of our own, which was sprayed fairly well considering the season, and buyers are after them at good figures. We expect to pack in barrels again this year to suit the wholesale men, believing we can do about as well this time selling at picking time. We are hopeful of 1,000 barrels of nice fruit. We have had no dropping since May. We have a good peach crop, too, but the dry weather is hurting it very much. Peach yellows is making a raid on us this year. Several good rains have passed around in sight, but it is dry on the farm. It was wet enough on the road to market.

Bradrick, O. U. T. C.

JULY 29.—The worst drought and hot weather ever known in Illinois was ended in this section yesterday by a fine rain, and we now have prospect of more, which will be thankfully received. Mercury reached 100 degrees and above for a week or more at a stretch. Last Spring some of the best farms sold for $60 to $65 per acre here, which was an advance of about $10 per acre in 10 years. The corn cannot possibly make over half an average crop this year, which will no doubt check the advance in values of lands. Many cash renters will be left in debt. The average yield of butter from 100 pounds of milk has been but 3.6 to 3.7. No Jersey cows. I have paid 15 cents per pound for butter fat, which made the milk from 50 to 60 cents per hundred. Drought cut down milk receipts, so there is nothing in it for anyone. W. S. S.

Pleasant Valley, Ill.

JULY 29.—We have had a wet season here since June 1. Haying weather was very "catchy" before July 4; since then we have had two weeks of good hay weather. Oat harvest has been very bad; it has rained every night for the past week. Hay was a fair crop; wheat very uneven, some pieces being nearly ruined by the Hessian fly, while others near by were not injured at all. Oats are a fair crop. Corn fair on high land, but badly drowned out on low land. Potatoes are not very good on account of too much wet. Bugs have been very bad this year. The apple crop in this part of Michigan is almost a total failure, not enough for home consumption. I was talking with a traveling fruit buyer the other day, and he told me that there were no apples to speak of in western Michigan. Peaches and plums are generally a good crop. Milch cows are doing well; pastures have been good all the season in this locality. The second crop of clover is just booming now.

Ottawa Co., Mich. H. L. W.

JULY 29.—We have had all kinds of weather this season. It was cold and dry until June 15, then we had some light rains with a turn to warmer, but no more rain until July 4, when we had a fairly good shower. Since then dry and hot. Corn was badly rolled; it was the warmest weather I can ever remember here, the thermometer reaching 100 to 109 degrees right along until to-day, when we had a heavy rain. It is almost impossible to work a binder on low land at the present time. Corn made such a poor growth that I nearly gave up having any, but the hot weather set it booming; it is tasseling out and setting for ears in fine shape, and promises a big crop. Potatoes will yield a good crop where the bugs have not eaten them up, but they have ruined a large part of the acreage. They did not come out of the ground until the late potatoes were up, and then the air was full of them; the hot weather was a picnic for them. We have never had bugs so thick before; one week would hatch and grow a full-sized slug, and we have not done with them yet. Cultivating, haying and harvesting all came at once. Wheat is a fair crop, the best we have had in three years, and is nearly all in the stack. Rye a good crop, all cut, but is in the shock yet and sprouting some, with no signs of a chance to draw it. Hay was about one-third of a crop, generally secured in good condition. Oats are the poorest in years; so short that it is impossible to cut some of them. I see Mr. Garfield in THE R. N.-Y. estimates the apple crop of Michigan at about one-half an average, and I think he is putting it far too high. No section I have been in has nearly a half crop, and a good part of the country has none at all. They are scarce here, Harvest apples selling for 75 cents per bushel, and they are mighty small. Early potatoes are rotting badly since the rains commenced. W. B.

Mecosta Co., Mich.

JULY 31.—The outlook for apples is poor. Hay a good crop; corn looking well. Early potatoes poor; late ones give a fair showing for a good yield. Oats very poor; grasshoppers are eating the heads off. Some pieces of buckwheat are entirely destroyed. Wheat is a fair crop; it has been very hot here, but we have had plenty of rain lately. Most farmers have done haying. A great deal of rye has been harvested here this year.

Gillett, Pa.

AUGUST 1.—The apple crop in this section of the State will not average more than from 10 to 25 per cent of an average crop. Some orchards are almost entirely destitute of fruit, while others only give promise of a very moderate crop. Tent caterpillars did but little damage in this vicinity, but canker worms have done some damage where no spraying was done. The hay crop has been nearly all gathered in, and a full crop has been harvested. Barns are well filled as compared with the past two years. Grain is fairly good, while corn is growing finely. A fine rain July 28 and July 30 came as a benediction to the farmer whose crops were getting a little dry. There is some complaint that the potato yield will be light hereabouts. T. D. S.

Madison, Me.

AUGUST 6.—This is not a very good section of country for wheat. Most of the wheat raised here is Fultz, some white wheat, or the Red Chaff Mediterranean. The early seeded wheat suffered from the fly most, while the late seeded was practically free from it. No difference noticed in the varieties of wheat. E. T.

Elkins, W. Va.

AUGUST 5.—Since you published my report of June conditions have changed the prospect for a fair apple crop greatly. Insects and scab have got in their work, with the drought following. I now believe one-third will be a good estimate of the crop here. East and northeast of here 30 to 40 miles will be even less. Peaches set a very heavy crop, but will be poor; as very few growers thin, rot and premature ripening have set in Most varieties of plums are rotting very badly on the trees. Japans are a good crop, Abundance is ripening. Hay and wheat have been stored; cutting oats is in order. There will be a light crop. With a little rain corn will be a fair crop. Potatoes looking very poor.

Ogle, Pa. G. W. H.

Government Weekly Report.

Lower temperature and good rains in the Missouri Valley have materially improved conditions, yet the drought is only partly broken in the section east of the Mississippi and north of the Ohio River. Texas is also badly in need of rain. New England, the Middle Atlantic States and the Pacific coast have had a generally favorable week. In the corn belt late corn looks decidedly better, and reports would indicate that more than usual was planted late this season. In the Middle Atlantic States a fine corn crop is promised. In the Spring wheat section weather has been favorable for harvesting, and the work is completed in all except the extreme northern districts. The oat harvest is nearly finished, and the yield generally unsatisfactory. The prospect for apples is slim. In sections where a fair quantity of fruit set, it has been damaged by the extreme heat. Fall plowing is in progress in the Missouri Valley and Atlantic States.

Facts About the Hessian Fly.

Bulletin 194, just issued from Cornell University (Ithaca, N. Y.) gives a careful statement of the situation as regards the Hessian fly in wheat. It is said that for the past five years the average wheat crop in New York State has exceeded 7,000,000 bushels, while this year the fly has caused a loss of more than half of this amount, or a loss of $3,000,000! Experiments at Cornell and on other farms in various parts of the State show that the variety known as Dawson's Golden Chaff has usually produced a full crop in spite of the ravages of the fly. The Dawson is a strong, vigorous variety with stiff, heavy straw. "It is a white-chaff, bald wheat. The grain is so light an amber that it is sometimes classed as white. Heads rather short, but very compact, and it yields beyond its appearance when standing." Five other wheats appear to be able to resist the attacks of the fly. These are called Prosperity, "No. 8," Democrat, Red Russian and White Chaff Mediterranean, but none of them is equal to the Dawson. Reports from Canada, where the Dawson originated, indicate that the fly attacked it seriously, but in New York State it was nearly or quite insect proof. No one can tell just why this variety was able to resist the insects, though its vigorous growth was probably the chief reason. Prof. Roberts suggests a trial of these varieties, and he wants the names of farmers who are willing to receive a peck or half bushel from the Station. The life history of the insect has now been well studied. The dry Augusts of the past few years have favored its development. Should there be a fair amount of rainfall in August this year it is quite likely that the late-sown wheat will escape. While it is not possible to set any date for seeding to wheat in New York it is thought that the best results will be obtained by waiting until after September 20 or 25. Rich ground which will stimulate a quick and strong growth is desirable, and many farmers begin to argue that a fair dressing of fertilizer at the time of seeding will help. The fertilizer does not directly kill the fly, as some farmers seem to believe, but it stimulates the wheat plant so that it makes a quick, vigorous growth. It will pay farmers to send for this interesting bulletin and study it carefully.

PAPER FRUIT BASKETS.—We used the paper strawberry baskets more or less for several years, but have discarded them now. Though they were good in some respects they were inferior in others. It took time to set them up; and some of the pickers would tear them in putting together. They could not be nested, so were inconvenient to carry under shelter at night, or when showers came up. Though they were "gift baskets" some would return them, and the pickers found they were stretched, so it took more berries to fill them. They were not stiff as wooden baskets, so bothered the pickers in getting from the stands (when full of berries) to crates. We now get the wooden gift baskets.

Cavendish, N. Y. L. A. K.

Woman and Home

From Day to Day.

Takin' things easy—that's the trick
That's hardest of all to learn;
This world keeps steppin' along so quick
An' dodgin' at every turn
That we close our ears to the lazy song
That Summer is singin' the whole day long,
An' we get to thinkin' it's wholly wrong
To be takin' things easy.

Takin' things easy, with duty done,
An' never a thought of fear
When the shadows close at the set of sun
An' the moon an' the stars draw near—
The real reward that man kin claim
In the search fer wisdom an' wealth an' fame
Is the chance, some time, without risk of blame,
To be takin' things easy.
—Washington Star.

*

CHEAP little whisk brooms are very useful about the kitchen. One should always be kept for no other use than sprinkling clothes; others for cleaning. There is nothing better than the whisk broom to clean a horseradish grater. The useful chain dishcloth is now much improved from its first estate, being mounted upon a firm handle, which enables it to be used with greater ease. As a pot scraper, however, nothing else equals the humble clam shell.

*

A USEFUL undergarment at all seasons, but especially in early Fall, when sudden chilly days come, is a woven underwaist which comes in cotton, thread or wool. It has a high neck and long sleeves, fits like a glove, has but little bulk, and is a very useful extra garment, when additional warmth is required. Many women wear the woven underwaist in place of an ordinary muslin corset cover, during the Winter.

*

BARLEY water, which in our youthful mind was usually associated with measles, hard colds, and similar afflictions, is now frequently served as a luncheon drink, though it is more popular in England than here. Very thin, well iced, and flavored with lemon, it is decidedly refreshing. To make it, put a heaping tablespoonful of barley into an earthen bowl, and cover with two or three quarts of boiling water; allow it to stand until cold, drain off, and add lemon juice and sugar to taste. Grated nutmeg is also used by some. Currant water is another refreshing drink that is easily prepared. Simmer a pint of the fruit in a quart of water sweetened with a tablespoonful of powdered sugar. Cool and strain, and serve with cracked ice, a slice of lemon, and a few fresh currants.

*

MASCULINE critics often assert that many a woman conspicuous for great virtues obscures them all by the small faults that do much to create friction in family and social life. She will work herself to a shadow for those she loves, and then turn her well-cooked meal to apples of Sodom by her complaining tongue. She will deny herself some longed-for pleasure for the sake of her church, and then quarrel with a well-meaning sister because of a fancied lack of recognition at the sewing society. It is a spirit which makes misery in the home and carping unfriendliness abroad; which turns love's duty into bondage, and renders friendship an irksome burden. We all know such women—women whose virtues are all qualified with one little "if." If such a woman could only realize that she owes, both to her own household and to the stranger within her gates, not merely the work of her hands, but also that most excellent gift of charity, which includes all the finer graces of mind and heart! If sweet serenity and cheerful patience seem foreign to her nature, she may at least assume these virtues, though she has them not. A martyr is not a very cheerful companion unless, like Saint Perpetua, she can wreath her martyrdom with roses.

*

A NEW JERSEY reader asks us to repeat the recipe for canning small cucumber pickles, given in THE R. N.-Y. last year. She says that she tested this recipe and can vouch for its excellence. It is as follows: Wash the little cucumbers, rubbing off the prickly points. Cut the stem when gathering; do not pull out, as that is likely to break a piece out of the fruit. Leave the stem about

Infant's Coat and Cap.
3885 one size

half an inch long. Pack the cucumbers into a two-quart glass jar, put a large spoonful of salt on top, shake it down, fill the jar with cold water, screw on the cover, and set away for 24 hours. Then pour off the brine, fill the jar with cold vinegar, screw the top on tight and put away in the cellar. In October or November, if the vinegar looks white at the top, pour a little off and replace with fresh.

*

AT this season grass stains are a frequent annoyance on the children's clothes, being often unaffected by ordinary washing. They will dissolve in alcohol, however, and, if used immediately, ammonia and water will often wash them out. Where the color of the fabric may be affected, it is said that molasses, or a paste made of soap and cooking soda, may be spread over the stain, and left for several hours, or the stain may be kept moist in the sunshine until it begins to turn brown, and then washed out. Fruit stains, which are among the Summer trials of the housekeeper, should always be treated while fresh, or they may become indelible. An old method is still the best one for their removal; stretch the stained part over an earthen dish, and pour boiling water upon the stain until it disappears. When the stain is old and set, acid or Javelle water may be needed to stir it.

The Rural Patterns.

In spite of fashion's changes, an infant's wardrobe remains much the same, the long cloak and cap being essential. The pretty little models given are adapted to all seasons and to a variety of materials. In the original the coat is of cream Bedford cord with silk embroidered frill, the cap of white India silk with bands of embroidery worked on the same material, but cashmere, China silk, ribbed silk and poplin can all be used for the coat; and the cap can be made of swiss, batiste or any similar material, with embroidery or lace as preferred. The coat is made with a yoke body, from which falls the full long skirt, and bishop sleeves with straight bands at the wrists. As shown, it includes both the deep cape and hood and is finished with a turn-over collar, but the hood can be omitted if desired. The cap includes a small round crown and head portion and is trimmed with quillings and held by means of ribbon ties. To cut this coat, 2⅝ yards of material 44 inches wide will be required, with or without hood, 5⅝ yards 21 inches wide with hood, 5½ yards without; to cut the cap, ¼ yard in any width with 1½ yard of ruffling. The pattern No. 3885 is cut in one size only; price 10 cents from this office.

The graduated circular flounce gains in popularity as the season advances, and has the merit of being singularly graceful as well as smart. The admirable skirt shown is shaped with five gores and fits with perfect smoothness over the hips, while it flares freely at the lower portion. The two flounces include just the amount of fullness required by fashion. The original is made of embroidered pongee, but all the season's materials are suitable. Thin goods, such as mohair swiss, dotted swiss and grass linen are charming when so made and hung over a separate foundation, while both silks and wool are well adapted to the style. The skirt is cut full length and can be used plain or with a single flounce when desired. To cut this skirt for a woman of medium size, 10⅝ yards of material 21 inches wide, 10¼ yards 27 inches wide, 9¼ yards 32 inches wide, or six yards 44 inches wide, will be required. The pattern No. 3881 is cut in sizes for a 22, 24, 26, 28 and 30-inch waist measure; price 10 cents from this office.

Warm Weather Comfort.

The two things that add most to our comfort at this season are shade trees and ice; and yet comparatively few farm homes are well supplied with both. The lack of these things is perhaps felt most keenly by the busy housewife, much of whose time is spent in the heated kitchen, and whose afternoon nap (should she find time for such a luxury) is taken in a darkened bedroom. What wonder that under such conditions, the farmer's wife grows nervous and irritable, and shudders at the thought of such a life for her daughters? The farmer lives in the open air, according to nature's laws; and too often his wife's life is quite the reverse. This is both wrong and unnecessary. With plenty of shade, much of the so-called housework may be done in the open air; and ice cream and sherbet may take the

3881 Woman's Five-gored Skirt
22 to 32 waist.

place of puddings and pies, greatly to the enjoyment of the entire family. Every farmer's wife should insist upon having these things for her comfort, and her husband will thank her for it. Often the things that require most persuasion before the head of the house attends to them, are the very things he takes most pride in, once they are done.

We have found that a shed on the north side of a building, boarded high enough to prevent the sun shining in, but allowing a free circulation of air beneath the roof, makes an excellent ice house, also that snow between the blocks is preferable to sawdust. When we built our new house a few years ago, we were cautioned not to set shade trees too thickly, lest in a short time the lawn should present a cluttered appearance, but from our own experience, we have decided that the better way is to set plenty of trees, and whenever one is noted a nuisance, cut it down. It is easy to decide now, where shade trees are most needed, and quite as easy to forget all about it, when the time for planting arrives. It is not so much from lack of time as lack of thought that these things are so often neglected, for do we not find time for National holidays, excursions, fairs and so forth? I do not think I am lacking in patriotism when I suggest that decorating our grounds with native American trees, shrubs and vines would be a pleasant and profitable way of observing Decoration Day, and that gathering up unsightly rubbish for a big bonfire would be a commendable manner of celebrating the Glorious Fourth. The birthdays of the Father of his Country and the Great Emancipator both occur at just the proper time for packing ice, and if thus employed, we should eat and drink to their memory oftener than we ever have done. We all wish our children to feel that "there's no place like home," and the best way we have ever found for impressing this upon their minds is to have some truth in it. Too many grown people, as well as children, seem to think that good times are not to be had at home; and that to celebrate any holiday, one must necessarily go somewhere, and indeed many homes present such a cheerless aspect that we do not wonder that this feeling prevails.

On a certain country road are two homesteads, which no one can pass without being struck by the contrast between them. The first has a large, handsome, modern house that would do credit to a city street, but the grounds surrounding it are rough, uneven and overrun with weeds. The blinds are closed, and a stranger might imagine the place uninhabited. This, however, is not the case. There are no shade trees or vines to subdue the burning heat of the Summer sun; and as the front rooms are seldom used, naturally the blinds are very rarely opened. To see this beautiful house, surrounded by nature's waste, is a sight to make an angel weep. I am told that the owner went beyond his means in building, and has been "hard up" ever since. The next house is small and plain, but has broad vine-covered piazzas, and is surrounded by beautiful shade trees and a well-kept lawn. The piazzas are furnished with homemade lounges, with plenty of plain cotton-covered pillows, wall pockets for newspapers and magazines, and small inexpensive stands. In shady places on the lawn are comfortable seats, and a plain table with white oilcloth-covered top. Under the trees hang hammocks and swing chairs, made of smooth painted barrel staves. These are very comfortable, and almost indestructible. With a gasoline range on the back porch, this family practically lives out of doors during the hot weather; thereby saving much scrubbing, sweeping and dusting. I always think of this place as an ideal home, and such a home is within the reach of every farmer's family; but shade trees are not grown in a single year; therefore the sooner they are set the better.

MARION LAWRENCE.

SCHOOLS, gymnasia, bathing-houses, recreation-piers, libraries, model tenements, better food, ventilation, improved sanitary conditions, and the like, are all of value in their place; but that which makes men and women for God and humanity, and the better service of their land and age, is first of all the personal touch of some strong and tender hand in the home. "God setteth the solitary in families," wrote the Psalmist long ago. Let us respect His order and follow His way. "Home, Sweet Home" is said to have been written by a lifelong wanderer who never had one. It is an immortal witness to the deep and inextinguishable hunger of the human heart.—Bishop Potter.

Aunt Belle's Vacation School.

"The children are coming for the Summer," said Mrs. Burke, without opening the three letters her daughter threw in her lap. "Grandchildren are dear little things, but somehow I should enjoy one Summer without them. I suppose I am getting old, but they are so noisy and troublesome. They are just turned loose from school, and have plenty of time to hunt up mischief."

"I'll take care of the infants this Summer," said Belle, her youngest daughter. "I was away during two of their visits, so it is only fair that I should relieve the rest of you this time."

"I feel sorry for the children, but maybe they will be worn out by Fall, and their parents can't send them another year. Belle always has a lot of theories to try on some one, so this time the boys and girls will get the benefit of them," said Belle's sister Mary.

Bright and early the following Tuesday, seven boys and girls, ranging from seven to 10 years old, the children of two absent brothers and one sister, arrived at the farm laden with baggage and instructions. True to her word, Aunt Belle, who was a charming young woman, with, as her sister expressed it, a head full of theories, took charge at once, and soon had her flock busy. She allowed several days for a general inspection of the premises, and the calves, pigs and colts that had arrived since last Summer, and then gathered them under the big elm tree for her vacation school. The sessions of this unique little school lasted from eight till 10 in the morning and from four in the afternoon till six. The novelty of it pleased the youngsters, who never knew what was coming, nor where school would be held, though Friday was always "letter day," and most of the time the school was under the elm tree. There were lessons in sewing and cooking for the little girls, while the boys made clay figures wonderful to see; lessons in nature study with the help of a small microscope, and lessons in everything else a bright girl could think of. The children were no trouble to anyone but Belle, and they were so much improved in every way simply because kept busy, that they suffered less from heat and bad temper than ever before. The letters to their parents and little friends on letter day were filled with glowing accounts of school, fishing, picnics and haying, but the children never suspected when Aunt Belle advised and corrected that they were having valuable lessons in composition and punctuation. While they sewed and whittled, Aunt Belle read fairy stories, Indian legends and stirring historical tales to them.

To their intense delight several squirrels became tame enough to come under the tree for nuts, and many a happy hour was spent studying their habits. Not a single bird's nest was robbed, though many were discovered and looked into. A little intelligent teaching convinced the children that life and liberty belonged to every creature, unless destructive and dangerous. In former years eternal vigilance on the part of the grown-up people was all that saved the birds and rabbits from destruction. Aunt Belle displayed her scholars on all occasions with pardonable pride, and three of a neighbor's children were added to the flock before the Summer was half over. The parents came to spend a few weeks before taking the children home in the Fall, and under the big elm tree Aunt Belle and her pupils gave an exhibition of work. It was a charming picture, for the little ones, in pretty Summer clothes, told about the collection of pressed wild flowers, the butterfly stories, the sand maps and the cocoons. The little girls had a table with dainty hemstitched handkerchiefs, pin cushions, table mats and doll clothes all made in the simplest possible manner, but showing neat little stitches. The boys displayed tops, pin wheels and doll furniture which would have done credit to older fingers. All these things the children proudly said were to be given to a city hospital for the benefit of the little patients at Christmas.

"Belle, you are a genius," said her brother-in-law. "I would advise you to take up kindergarten work."

"I have been thinking of it," answered that young lady. "Billy Morris, the cashier at the bank, says he never had a kindergarten education and is anxious for me to begin on him. I think his term will start next June."

HILDA RICHMOND.

Okra and Its Cooking.

A great many northern cooks know nothing of okra or gumbo. The liking for it is usually an acquired taste, for it is rather suggestive, to the uninitiated, of green baize stewed in mucilage. However, it is okra that gives the delicious flavor to Brunswick stew, and it always seems to combine well with tomatoes. The dried okra is obtainable during Winter. It is sliced in rings and evaporated like apples. The very small, tender pods may be canned whole. When dried it must soak in water for an hour before cooking and then boil in salted water until tender, which will require about 20 minutes. Okra may be dried at home with very little trouble. Cut the pods in rings, string these on cords and hang them where they will dry quickly.

Stewed Okra.—Take young and tender pods, cut off each end and wash them thoroughly, boil them in salted water until tender (about three-quarters of an hour), then drain off the water; season with salt, pepper and butter and serve in a covered vegetable dish.

Brunswick Stew.—Stew a large fowl until the meat leaves the bone; remove skin, gristle and bones and chop the meat in coarse pieces. Return to the liquor; add a pint of corn scraped from the ears, a pint of young Lima beans, three cupfuls of tomato, a good sized onion, minced fine, a pint of young okras, a small red pepper, minced, a little celery seed, two tablespoonfuls of butter and salt, pepper and Worcestershire sauce to taste. Simmer until okra is tender and then serve. The addition of a little paprika just before the stew is taken up improves it greatly.

Okra Gumbo Soup.—Cut two quarts of okra into rings and add two quarts of tomatoes and three quarts of water; put over the fire and let it boil; take a young tender chicken, joint it and fry a nice brown; put it into the okra and tomatoes; make a brown sauce with the fat remaining in the pan and add to the soup. Add three small onions, chopped fine, a cupful of corn and cupful of Lima beans, and salt and pepper to taste. Let it simmer gently for several hours. When this soup is served a tablespoonful of boiled rice and a tablespoonful of sweet green pepper, cut fine, is put into each soup plate. The Creole cook usually adds gumbo fillet powder, made from dried sassafras leaves.

Okra and Tomato.—Trim the tender pods same as for stewing; cover one quart with salted water, add a slice of bacon and cook until nearly tender. Then drain and add one cupful of tomato and one cupful of brown sauce; salt and pepper to taste and simmer until okra is done.

Okra with Rice.—Prepare one quart of okra as for stewing; put in a saucepan with a pint of tomato pulp, half a pound of ham or lean bacon cut into cubes, a small onion and a red pepper chopped fine and a pint of good broth or stock. Simmer gently for half an hour. Just before serving add a tablespoonful of gumbo fillet powder; let it boil up once and serve with boiled rice. The rice may be heaped in the center of the dish.

Okra, Creole Style.—Wash, trim and cut into slices a quart of young, tender okra; place in a granite saucepan two teaspoonfuls of butter, a medium-sized onion, a medium-sized green pepper, both minced fine; stir over the fire until a golden brown, then add three large tomatoes peeled and cut into pieces, three tablespoonfuls of Spanish or some hot pepper sauce and salt to taste, and the okra. Cover the saucepan and simmer gently for half an hour. Turn out on a hot dish and sprinkle over with a teaspoonful of minced parsley and serve.

Rejuvenated Bread.

My better three-quarters reminds me that I have several times threatened to tell THE R. N.-Y. folks about her rejuvenated bread. This is stale bread—the last of the baking—made palatable again and as good as new, or even better than new, by wetting the old loaf with cold water, putting in the pan and rebaking it in the oven 20 to 45 minutes. It will, if originally good, come out moist and fit to set before a queen. An old black Fanny, a cook from Virginia, gave us this information years ago, and we think it possible that this way of making left overs go down acceptably may not be as well known as it should.

The Hope Farm man, always interesting on all topics, touches lightly on pork and potatoes, the mainstay of the farmers as all-year-'round provender. Well, I just wish I had a big chunk of sweet cornfed country-raised and country-cured boiled pork this blessed minute, with at least five fair-sized potatoes, freshly dug and cooked in their jackets. I could stow them away without discomfort, and finish off with a quarter of a fat cherry pie drowned in Julia's or any other cow's cream or milk, or a big saucer of berries smothered in powdered sugar and milk. Not much dyspepsia, as yet, you see, clings to this robust child of 50 Summers! By the way, we discover that milk and fruit do not fight when eaten together with plenty of sugar; when frequently the fruit (strawberries noticeably so) when eaten without "the trimmings" causes distressing skin irritation, sometimes amounting to hives. We farmers should have on our tables the best of everything; all sorts of vegetables in profusion, including asparagus, rhubarb, etc., and all the fruits that we can grow. Fruit too long has been a luxury enjoyed more exclusively by the rich. Trees and small fruit plants are cheap enough. Let us plant them and eat the fruit thereof, and in the abundance that shall bless us we shall be richer than the millionaire. J. Y. P.

With the Procession.

Knowledge dwells
In heads replete with thoughts of other men;
Wisdom in minds attentive to their own.
Knowledge, a rude unprofitable mass,
The mere material with which wisdom builds,
Till smoothed and squared, and fitted to its place,
Does but encumber where it seems to enrich.
Knowledge is proud that he has learned so much;
Wisdom is humble that he knows no more.
—William Cowper.

PATIENCE is the key of content.—Mohammed.

KINDNESS gives birth to kindness, and love to love.—Mme. Necker.

INCREDULITY robs us of many pleasures, and gives us nothing in return.—J R. Lowell.

GREATNESS is to take the common things of life and walk truly among them.—Olive Schreiner.

BEAR your own burdens first; after that try to help carry those of other people.—George Washington.

IT is almost as presumptuous to think you can do nothing as to think you can do everything.—Phillips Brooks.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

WHAT an absurd thing it is to pass over all the valuable parts of a man, and fix all our attention on his infirmities!—Addison.

I HAVE come to the conclusion that it is good to work hard; it makes one enjoy food and play and sleep so keenly. George Du Maurier.

THINK of your own faults the first part of the night, when you are awake, and of the faults of others the latter part of the night, when you are asleep. —Chinese proverb.

WHAT is meant by our neighbor we cannot doubt; it is every one with whom we are brought into contact, whosoever it be, whom we have any means of helping.—Dean Stanley.

LEARN to laugh. A good laugh is better than medicine. Learn to tell a story. A well-told story is as welcome as a sunbeam in a sick room. Learn to keep your own troubles to yourself. The world is too busy to care for your ills and sorrows. Learn to do something for others. Even if you are a bedridden invalid there is always something that you can do to make others happier, and that is the surest way to attain happiness for yourself.—Boston Beacon.

"I say to thee, do thou repeat,
To the first man thou mayest meet
In field or lane or open street,
That he, and we, and all men move
Under a canopy of love
As broad as the blue sky above.

"And ere thou leave him, say thou this
Yet one word more, They only miss
The winning of that final bliss
Who will not count it true that love,
Blessing, not cursing, rules above,
And that in it we all live and move."

"A smile, a word, a touch,
And each is easily given;
Yet either may win
A soul from sin,
Or smooth the way to heaven.
A smile may lighten the failing heart,
A word may soften pain's keenest smart,
A touch may lead us from sin apart—
How easily either is given!"

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Canning made easy and sure by using my Standard Patent Self-Melting, Self-Sealing Wax Strings. Very economical and easy to apply. Valuable fruit information, and 100 Strings by mail, for 45 cents in stamps. C. C. FOUTZ, Middletown, Ohio.

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MARKETS

THE WEEK'S QUOTATIONS.

WHOLESALE PRICES.

NEW YORK, AUGUST 10, 1901.

GRAIN.—Market is active and all grains higher in sympathy with corn.

Wheat, No. 2, red	—	@	77½
No. 1, Northern Duluth	—	@	78¾
No. 1, Northern New York	—	@	78⅝
Corn, No. 2, mixed, elevator	—	@	51⅜
Oats, No. 2, white	—	@	43
Rye, No. 2, W'n, f. o. b. afloat	—	@	59½
Barley, feeding	—	@	52
Malting, new crop	58	@	63

BEANS AND PEAS.

Beans, Marrow, choice, per bu.	—	@3	00
Marrow, fair to good	2 50	@2	95
Medium, choice	—	@2	40
Pea, bbls., choice	2 50	@2	55
Pea, bags, choice	2 47½	@2	50
Red kidney, choice	—	@2	50
Red kidney, common to good	2 00	@2	45
White kidney, choice	2 20	@2	25
Black turtle soup, choice	1 90	@2	00
Lima, California	4 35	@4	40
Imported Giants, prime	2 70	@2	75
Italian, medium	2 20	@2	25
Other foreign, medium, good to prime	2 00	@2	10
Imported, medium, common to fair	1 80	@1	95
Peas, bbls., per bu	—	@1	30
Bags	1 25	@1	27½
Scotch, bbls., per bu	—	@1	40
Scotch, bags	—	@1	40

FEED.

Spring bran, coarse	16 75	@17	00
Winter bran	17 00	@18	00
Red Dog	19 50	@20	40
No grade flour	—	@20	50
Linseed meal, ton	—	@29	50
Cottonseed meal, ton	—	@24	60

HAY AND STRAW.

Hay, No. 1	90	@	92½
No. 2	82½	@	87½
No. 3	75	@	80
Clover	55	@	65
Clover, mixed	65	@	70
Straw, rye, long	70	@	85

SEEDS.

Clover, per 100 lbs	10 00	@11	25
Timothy, per 100 lbs	5 00	@ 5	50
Flaxseed, whole, per bu	6 50	@ 7	00
Millet, per lb	2	@	2⅛
Rape, German, per lb	3¼	@	3½
Sunflower, per lb	2¼	@	2½

MILK.

New York Exchange price at stations $1.21 per 40-quart can. This is the gross price, and from it must be taken cost of transportation and fees at receiving stations where such charges are made.

BUTTER.—Market is down one cent. Demand is slack and no speculative trade worth mentioning.

Creamery, extra, per lb	—	@	20½
Firsts	19	@	20
Seconds	17½	@	18½
Lower grades	16	@	17
State dairy, tubs, fancy	18½	@	19
Tubs, seconds	16	@	16½
Tubs, thirds	14	@	15
Tins, etc	14	@	18
W'n imitation creamery, fancy	16½	@	17½
Firsts	15	@	16
Lower grades	14	@	14½
W'n factory, June, finest	15	@	15½
Current packed, best	14¼	@	14½
Fair to good	13¾	@	14
Lower grades	12½	@	13½
Renovated butter, fancy	17	@	17½
Common to choice	14	@	16½
Packing stock	12	@	14

CHEESE.

NEW.

Full cream, col'rd, small, fcy.	—	@	9¾
Colored, small, good to choice	9½	@	9⅝
White, small, fancy	9½	@	9⅝
Small, white, good to choice	9⅛	@	9⅜
Colored, large, fancy	—	@	9½
Col'rd, large, good to choice	9¼	@	9⅜
White, large, fancy	—	@	9¼
White, large, good to choice	9	@	9⅛
Common	7	@	8
Light skims, small, choice	8¼	@	8½
Large, choice	—	@	8
Part skims, fair to good	4½	@	6
Part skims, common	3	@	4
Full skims	2	@	2½

EGGS.—Only the choicest grades are selling at all well, as for some time past receipts contain worthless stock which has to be thrown away.

QUOTATIONS LOSS OFF.

State & Pa., avge. prime, doz.	17	@	18
W'n, fresh-gathered, ch'ce, doz.	—	@	17

QUOTATIONS AT MARK.

Nearby, State & Pa., fresh-gathered, fancy selected, doz.	—	@	19
Average prime	16	@	18
W'n, refrigerator, per doz	14	@	17½
W'n, fresh-gathered, Northerly sections, candled, selected	12	@	16½
Reg. packings, N'th'n sect's.	10	@	14
Graded, S'th'ly sections	10	@	12
Reg. packings, S'ly sect's	8	@	11
Very inferior, per case	1 00	@2	10
Dirties	6	@	15
Checks	5	@	6
Inferior culls, per case	1 00	@1	25

LIVE STOCK.

Steers	4 60	@5	80
Bulls	2 50	@3	50
Cows	1 75	@3	40
Veal calves	4 50	@7	50
Buttermilks	2 75	@3	75
Sheep	2 50	@4	00
Lambs	4 00	@6	00

LIVE POULTRY.—Large chickens in fair demand. There is a surplus of fowls, which sell slowly.

Spring chickens, W'n, 4 lbs. and over to pair, per lb	—	@	13
Far W'n, Southern & Southwestern, per lb	—	@	11
Fowls, per lb	—	@	9
Roosters, per lb	—	@	5
Turkeys, per lb	—	@	8
Ducks, average W'n, per pair	50	@	75
Average Southern, per pair	40	@	50
Geese, average W'n, per pair	1 00	@1	12
Average Southern, per pair	80	@	90
Pigeons, per pair	15	@	20

DRESSED POULTRY.—The receipts of fowls are heavy and market badly upset, as the stock is in poor condition and not suitable to go to the freezers.

FRESH PACKED—ICED.

Turkeys, W'n, hens, small	/	@	8½
Western, toms	—	@	7
Broilers, Phila., over 4 lbs. to pair, per lb	18	@	20
Phila., mixed sizes, per lb	16	@	17
Penn., fair to good, per lb	11	@	15
Western, dry-picked, per lb	13	@	14
Western, scalded, per lb	—	@	12
Small, dry-picked or sealded, per lb	10	@	11
Fowls, W'n, dry-picked, prime	—	@	9
Western, sealded, prime	8½	@	9
Western, poor to good	6	@	8
Southwestern, prime	8½	@	9
Old roosters, per lb	—	@	5
Ducks, Spring, L. I. and other nearby, per lb	—	@	14
Western	7	@	9
Geese, Spring, Eastern	13	@	17
Squabs, choice, large, dark	—	@2	25
Mixed, per doz	1 75	@1	87
Dark, per doz	1 25	@1	50
Culls, per doz	50	@1	00

FROZEN.

Turkeys, young hens, No. 1	11	@	11½
Mixed young hens and toms, No. 1	10½	@	11
Young toms, No. 1	—	@	10½
No. 2	7	@	9
Broilers, dry-picked, fancy	18	@	20
Scalded, fancy	—	@	14
Chickens, fancy, soft-meated	12	@	13
Average, No. 1	—	@	10
No. 2	7	@	9
Fowls, dry-picked, No. 1	—	@	10
Capons, fancy, large	15	@	16
Medium sizes	13	@	14

HOPS.

N. Y. State, choice, per lb	16	@	17
Prime, 1900	15	@	15½
Medium, 1900	13	@	14½
Crop, 1899	10	@	13
Olds	2	@	6

DRIED FRUITS.

Apples, evaporated, fancy, lb	—	@	9
Evaporated, choice, per lb	—	@	8½
Evaporated, prime, per lb	7¾	@	8
Evaporated, com. to good, lb.	5	@	7
Sun-dried, State and Western, qrs., per lb	4	@	5
Sun-dried, S'th'wn, coarse cut	3½	@	4½
Sun-dried, S'th'n, coarse cut	3	@	4
Chops, per 100 lbs	1 25	@2	00
Cores and skins, per 100 lbs	1 00	@1	35
Raspberries, evap'rd, 1901, lb	18	@	20
Sun-dried, 1901, per lb	—	@	16
Blackberries, 1901, per lb	5	@	5½
Cherries, 1901, per lb	10	@	11
1900, per lb	—	@	12

FRESH FRUITS.

Apples, Red Astrachan, h'd-picked, double-head bbl.	2 00	@	3 00
Nyack Pippin, h-pkd, bbl.	2 00	@	3 50
Sour Bough, h-picked, bbl.	2 00	@	3 00
Sweet Bough, h-pkd, bbl.	2 00	@	2 75
Hand-pkd, open-head, bbl.	1 50	@	2 75
Windfalls, per bbl	75	@	1 25
Pears, Le Conte, S'n, bbl	1 00	@	3 50
Bell, per bbl	2 00	@	3 00
Clapp's Favorite, bbl	2 00	@	2 75
Duchess, per bbl	2 00	@	2 25
Nearby, common, per bbl.	1 50	@	2 00
Peaches, Ga., per carrier	1 00	@	2 25
Md. & Del., per carrier	50	@	1 50
Md. & Del., per basket	25	@	1 00
Jersey, per basket	25	@	75
Plums, S'n, 8-lb. basket	20	@	25
Grapes, S'n, Niagara, car'r.	75	@	1 75
S'th'n Del., per carrier	1 00	@	2 00
S'n, Moore's Early, car'r.	75	@	1 50
Currants, prime, per qt	4	@	6
Poor to fair, per qt	2	@	3
Huckleberries, N. C., per qt.	3	@	7
Maryland, per qt	3	@	7
Jersey, per qt	4	@	8
Pa. & State, Mountain, qt.	5	@	10
Raspberries, J'sy, red, pint.	4	@	9
Up-river, red, per pint	5	@	10
W'n N. Y., red, per pint	5	@	9
Blackberries, up-river, cultivated, large, per qt	7	@	12
Jersey, large, per qt	6	@	11
Up-river, & J sy, small, qt.	4	@	8
Watermelons, per earload	100 00	@200	00
Norfolk, per 100	13 00	@ 18	00
Muskmelons, far S'n, crate	50	@ 1	00
Maryland, per carrier	50	@ 2	00
Maryland, half-bbl. bskt	50	@ 1	50
Baltimore, per bu. bskt	50	@ 1	00
Baltimore, per crate	1 00	@ 2	50
Norfolk, per crate	50	@ 1	25
Jersey, per half-bbl. box	75	@ 1	25
Jersey, per bushel box	50	@ 1	00

VEGETABLES.

Potatoes, L. I., per bbl	3 00	@4	00
Jersey, per bbl	3 00	@4	00
Southern, prime, per bbl	3 00	@4	00
Common, per bbl	1 50	@2	50
Sweet potatoes, yellow, bbl	3 00	@4	50
Red, per bbl	2 50	@3	50
Beets, Jersey & L. I., 100 bchs.	1 00	@2	00
Celery, Mich, small, doz. roots.	10	@	25
Carrots, L. I., 100 small bchs	75	@1	00
Corn, Jersey, per 100	50	@1	25
Cabbages, L. I., small, 100	2 00	@2	50
L. I., Flat Dutch, per 100	3 00	@4	00
Cucumbers, Jersey, per box	25	@	35
Pickles, per 1,000	1 00	@1	50
Eggplants, Jersey, per bskt	1 00	@1	50
Jersey, per bushel box	75	@1	00
Green peas, W'n, N. Y., bskt.	1 50	@2	25
Lettuce, W'n N. Y., per case	1 50	@3	50
Boston, per case	1 50	@3	00
Onions, S'n, Potato, bskt	75	@1	00
Southern, white, per bskt	1 00	@1	25
Conn. & Eastern, red, bbl	1 50	@2	00
Orange Co., red, per bag	1 00	@1	50
Jersey & L. I., red, per bbl	1 50	@2	25
Jersey & L. I., yellow, bbl	1 50	@2	00
Jersey & L. I., white, bskt	1 00	@1	25
Kentucky, per bbl	—	@2	00
Peppers, Jersey, per crate	75	@1	00
Squash, yellow, per bbl	75	@1	25
White, per bbl	75	@1	00
Marrow, per bbl	1 00	@1	25
String beans, Western N. Y., green, per bag	50	@1	00
W'n N. Y., wax, per bag	25	@	75
Boston, green, per bu. box	50	@	75
Boston, wax, per bu. box	40	@	60
Turnips, Jersey, Russia, box	—	@1	00
Tomatoes, upper Jersey, box	75	@2	00
South Jersey, Acme, box	1 25	@1	75
South Jersey, Stone, box	1 00	@1	25
South Jersey, Grant, box	40	@	75

The most serious symptoms of Lung and Throat affections can be relieved, and in the great majority of cases, the disease can be cured with Dr. D. Jayne's Expectorant.—*Adv.*

MEETINGS OF NEW YORK MILK PRODUCERS.

The meeting of Cobleskill Local Section No. 41, F. S. M. P. A., was held August 7. Officers chosen for the ensuing year are: President, Sothenese Lawyer; secretary and treasurer, Warner J. Walker.

W. J. W.

At the annual meeting of the Big Flats section of the F. S. M. P. A., J. E. Farr was elected president, H. M. Fox, secretary and treasurer, for the ensuing year, and Judson Goff delegate to the route union. Members expressed themselves in favor of maintaining and perfecting the organization, and were satisfied they had already derived much benefit from it.

H. M. FOX, Secretary.

A few of the members of the Wysox local F. S. M. P. A. met at Grange Hall August 5. Louis Piollet was chosen as delegate to the route union meeting at Sayre, August 13, with Robert Brown as alternate. Collection of dues and election of officers was postponed as there were so few out. Though not instructed, our delegate will oppose the reëlection of the old executive committee. Most of our members have no confidence in them, and will not work under them. E. G. OWEN, Secretary.

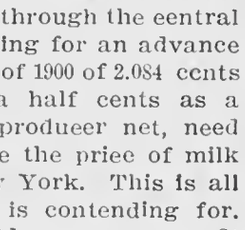
The Deposit section of the F. S. M. P. A. held its annual meeting August 6, and elected the following officers: President, E. S. Smith; secretary, S. C. Sliter; treasurer, E. C. Briggs. Executive committee: D. W. Axtell, D. C. Freeman, S. H. Axtell. As delegates to the route union, S. C. Sliter and D. W. Axtell. The meeting was not largely attended, but those present were quite enthusiastic over the plan of co-operative creameries. A committee was appointed to investigate the situation and report. REPORTER.

The annual meeting of the Holland Patent Local Section, F. S. M. P. A., was called to order by President F. H. Thomson, who made a fine address on opening. A large number were present and enthusiasm was shown throughout, many discussing the milk problem, and everyone agreed to stand by the officers of the F. S. M. P. A. The farmers in this locality stand shoulder to shoulder on this question and will fight to the end. The result of election of officers was as follows: President, F. H. Thomson; secretary, Frank Fear; treasurer, S. F. Kane. Route union delegate, F. H. Thomson. Executive committee: F. H. Thomson, Frank Fear, C. E. Alvord, George Chassell, A. Holland. Finance committee: C. F. Hamlin, George Hutchinson, J. B. Fuller.

FRANK FEAR, Secretary.

The annual meeting of Marshall Station Union, F. S. M. P. A., met at the residence of R. W. Evans, August 7. A full attendance was secured. A more earnest or better attended meeting has not been witnessed since our organization. If the milk producers of all local unions could but be convinced of the necessity of thorough organization and a strong, united effort on our part to support the officers of the central association, they would be more successful. Milk producers through the central association are not fighting for an advance over the yearly average of 1900 of 2.084 cents per quart. Two and a half cents as a yearly average to the producer net, need not of necessity advance the price of milk to the consumer in New York. This is all the central association is contending for. This small advance would mean some profit and not loss to the producer. After the election of R. W. Evans for president and J. E. Head as secretary and treasurer for the coming year the following resolutions were passed: That the patrons of Marshall Station, as members of the F. S. M. P. A., appoint a committee of one to confer with all producers not present at this meeting, and ask them to join in taking care of, or withholding milk should the central association so order. That a committee of two be appointed to confer with the patrons of the milk station at Green's Crossing, to ask them to join in opening the cheese factory at Tompkin's Crossing, or otherwise to take care of the milk, and not sell the same to be shipped to New York dealers, should we be asked by the central association to withhold the same. In view of the fact that all feed stuffs the coming Winter will doubtless be from $20 to $25 per ton, the central association was asked to fix a price for milk that shall not be less than 2½ cents per quart as a yearly average. The resolutions were unanimously adopted. J. E. Head was chosen as a delegate to the route union to be held at Binghamton, August 13. J. E. HEAD, Secretary.

CUTTERS AND SHREDDERS



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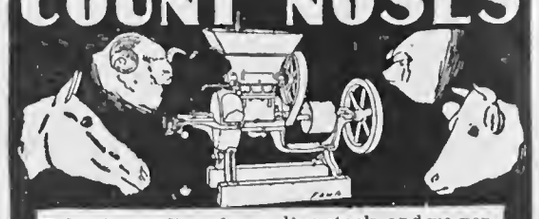

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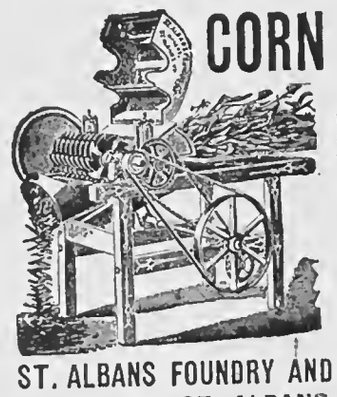

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BOOK BULLETIN

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THE RURAL NEW YORKER,
409 Pearl St., New York.

MARKET NOTES

BEANS.—For a long time trade in beans was dull, and with no changes worthy of note; but light receipts and reports of poor crops have caused a big advance. Choice marrows reached the $3 mark, and have remained there for several days. Some holders are asking more than the quoted prices, but buyers do not think that the conditions warrant any further advance. The supply of imported beans is also very limited.

COTTON.—The report for July shows a seven per cent decrease from the preceding month. Drought is responsible for a large share of this, but excessive rain in the eastern portion of the belt damaged the stand and hindered necessary cultivation to such an extent that in some cases weeds took entire possession and fields were abandoned. These unfavorable conditions have caused a slight rise in price, but speculation is light, and the present trend of the Liverpool market tends to check any further advance. Spot prices here are: Middling uplands, eight cents, a drop of 1 13-16 cent from last year, and Middling Gulf 8¼ cents.

FRUIT NOTES.—The early apple is the most active item on the list. Hand-picked Red Astrachans and Nyack Pippins have brought as high as $3 to $3.50 per barrel. These extreme figures, however, do not apply to anything except choice fruit. Windfalls are bringing a surprising price, 75 cents to $1.25, but this means sorted windfalls. There is no use in sending the worthless culls here, as the market is overstocked with these, both of apples and pears. Southern grapes more plentiful but do not attract much attention, as most of them are of inferior quality. A few Maryland and Delaware Bartlett pears are arriving, but they are not up to standard and sell slowly. Watermelons are scarce, particularly large sizes, which would bring a premium over present quotations. There are plenty of muskmelons, such as they are, and, as usual, there is a wide range in prices. W. W. H.

LONG ISLAND NOTES.

THE NORTH SIDE of the Island is very hilly. After climbing a few of these hills one is likely to feel like calling them mountains, as some are 200 feet or more above sea level. The railroad runs through deep cuts of clean sand and white gravel. There are several harbors on the north shore, the best of which is Port Jefferson, where shipbuilding in the form of yachts and schooners is carried on. Along the shore in this vicinity are high bluffs. At one place a person can stand on Mt. Misery and see Conscience Bay on one side and Mt. Sinai on the other. Mt. Misery is well named, much of it being covered with a dense growth of small trees, bushes, wild grapevines, poison ivy, and a variety of tough briers which have a habit of growing like croquet wickets all over the ground. Wherever these cliffs are bare of vegetation they are gradually breaking away, owing to the action of storms, and the sea takes possession. From Port Jefferson to Wading River, a few small villages and many well-kept farms are seen, but much of the country is a wilderness covered with scrub, and for miles the road on each side is lined with huckleberry bushes. In some places I found the berries so plentiful that they could be picked by the handful.

CAULIFLOWER.—Going south to Riverhead a new industry is seen, namely cauliflower growing on a large scale. The plants for the early crop are already set and growing finely, while other fields are just being set. The plants are grown thickly in small beds, and, when the leaves are four or five inches long, are taken up and transplanted in the field in hills about 3x2½ feet apart. In taking up the plants an effort is made to leave a little earth on the roots. The transplanting is usually done when the ground is wet. One man takes the basket of plants and drops each one in the proper place in the row, much the same as in dropping potatoes. Another man follows to do the setting. He has an iron spike to which is fastened a short wooden handle. He jabs this spike in the ground, puts in the plant, gives the soil two or three whacks to pack it down, and goes on to the next one. I timed one man who seemed to be something of an expert at this work, and found that he was setting about 20 a minute.

ASPARAGUS was at one time a standard crop in this section, and large quantities were shipped fresh and canned, but the rust has made such havoc that only now and then a field is seen. Some growers have concluded that the crop is not worth the labor needed to handle it, since the rust has come. This is doubtless true unless prices are high, but this year asparagus has sold so well that, even with the comparatively light yield, it has paid. I stopped at Mattituck to look at the fields where last year the New York State Experiment Station made a test with Bordeaux Mixture on asparagus. Their work was described in THE R. N.-Y. last Fall, and the results on the field were very plain then, the rows that were thoroughly coppered being green and thrifty, while those that were left unsprayed were badly rusted. At the time of my visit, August 5, no spraying had been done, as the rust had not made its appearance. As asparagus rows are so wide apart, some growers follow the custom of putting a late crop, like beans, in between, there being plenty of room to run a cultivator on each side of this extra row.

THE NORTHERN PENINSULA.—From Riverhead to Orient is one of the finest farming sections I have ever seen. A stranger looking at a small map of Long Island might think that the little strip on the northeastern corner, about 20 miles long and averaging less than three miles wide, could not amount to much, but he would soon change his mind after seeing the corn and potato fields there this year. Of course, all farms are not kept up to this high degree of fertility, and the crops show this neglect at once. Probably the lack of feeding and care of land is seen more quickly in a section like this, of sea formation, underlaid with sand and gravel, than on the plains and among the hills and river valleys, where vegetation has had a foothold for a much longer time. A most interesting struggle is constantly going on between the sea and these exposed portions of land. Vegetation is at work trying to reclaim these sands from the ocean. It crowds down to the water's edge, there being certain plants which thrive and throw out an extensive root system in clean white sand, which, to all appearances, does not contain a trace of vegetable matter. In the battle their methods and those of the sea are entirely different. They work slowly, and for years make gains, when in some furious storm the ocean washes them away with all traces of their work. Yet, vegetation never gives up, and other plants at once continue this work. Portions of land like this section and Cape Cod are battle grounds worthy of being studied.

CORN AND POTATOES.—I have not seen any better corn this season than in many of the fields on the main road between Riverhead and Southold. It is tall and leafy, dark green and earing heavily. This light land, when well fertilized, is ideal corn ground. While occasionally a man on being questioned would say that the potato yield was slim, many more were found who had a heavy crop, perhaps not record-breaking yields, but large for this season and made still larger by the present high prices. Part of the early crop is already dug and sold. One man who had contracted 160 bushels at 50 cents was feeling blue, as his nighbors were now getting $1. I found another man who had sold $280 worth from 1½ acre, the price being 75 cents and $1 a bushel, and he was then sowing turnip seed on the same field. "Yes," he said, "these prices are a boom for potato growers around here, and will put some of them on their pins. I am also an auctioneer, and this prosperity will take away some jobs from me, but," he remarked, philosophically, "I always hate to sell a man out unless he really wants to leave for some other reason than bad luck."

LARGE FARM GARDENS.—At Orient is the farm of George W. Hallock & Son, which was described in THE R. N.-Y. a few years ago. They have about 85 acres under intense cultivation, raising corn, potatoes, onions, carrots and other vegetables. Carrots are sown between the rows of onions, and the latter are now being harvested. After being pulled and left in rows to dry, they are taken in wooden crates to buildings and either stored or shipped. It is needless to say that tillage and fertilization are carried on to best advantage in these gardens. The Messrs. Hallock own a steamer and have ample dockage and storage facilities on the side of their farm adjoining the bay. The produce is marketed in New York, and also Connecticut and Massachusetts points. About 45 men are employed on the farm at present.

W. W. H.

BUSINESS BITS.

THE Imperial pulverizer manufactured by E. S. Peterson, Kent, O., has proved to be an excellent implement for many of our readers. It pulverizes and rolls the land in one operation. Address as above.

THE Swan roofing material is not only used for roofing but for the sides of buildings as well. It is very popular with poultrymen for both roofing and lining henhouses. Many will testify that after 10 years of service their roof is apparently as good as ever. Write A. F. Swan Co., 114 Nassau St., New York City, for particulars.

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PAN-AMERICAN EXPOSITION NOTES.

Some of the Agricultural Exhibits.

PART I.

The agricultural exhibits are mainly found in the Agriculture Building, which is separate and distinct from all others, and is located between the Government Building and the Electric Tower, in a very beautiful situation. The building is not so large as it should have been, because there are a number of exhibits of this nature that are very much crowded, and some have been almost crowded out. The Agriculture Department is under the supervision of F. A. Converse, who is well known to the readers of THE R. N.-Y.; he has conducted it ably from the first, and seems to give general satisfaction.

NEW YORK.—This State occupies one of the largest places in the building. The exhibit is principally of cereals, field and garden seeds, nuts, manufactured products, all arranged in the same oak cases in which the agriculture exhibit was made at the Columbian Exposition. There are also samples of wheat and other grains in the straw.

CORNELL UNIVERSITY EXPERIMENT STATION is making a continuous show of fresh vegetables and forage crops. For instance, there were 18 varieties of beets and 19 varieties of onions all in a fresh condition, just as they were taken from the gardens, and arranged in a very unique way to show just how each variety appears. There is an exhibit of tobacco growing in pots, and also one of ginseng in the same condition; the latter being one of the special crops about which we hear so much in the papers of late, and it is well worthy of notice by farmers who are properly situated for growing it. The Division of Botany of the University of the State of New York has a very interesting exhibit of mushrooms, comprising about 50 varieties. These are in a preserved condition, pasted on large cards, and accurately named with both their popular and scientific names. On the whole, the exhibit from the State of New York is very creditable, although not so attractive and ornate in style as some of the others.

NEW JERSEY has an exhibit which is rather small, so far as the space occupied is concerned, but it is very representative, well arranged and much to the credit of the State. Its principal feature seems to me to be educational. There is an industrial map which shows all of the leading industries of New Jersey, giving the territory embraced by the growth of each of the leading crops; as, for instance, the locality where the sweet potato is one of the leading crops is distinctly marked. The same is true of the various fruit crops, the extensive floral industries, and the oyster regions in the coast waters. By the way, it may be a surprise to many to know that in central southern New Jersey there are some of the best corn crops grown of any in the whole United States. The size of the ears and the output per acre of the fields is fully equal to the best in Illinois, or any other of the leading corn-growing States, although the areas are comparatively small. There is being made a continuous exhibit of fresh vegetables and farm crops direct from the farms in different parts of the State, which show to the public just what is being grown. This is indeed a very pleasing feature, as well as a permanent one of this exhibit. There is also an educational section in which the beneficial and injurious insects and other such things are shown, especially with reference to the education of farmers' children. Franklin Dye, who is the leading spirit of the New Jersey agriculture exhibit, is doing the best he can with the small appropriation which has been allotted to him, and and no one need feel ashamed of what New Jersey is doing in this direction. H. E. VAN DEMAN.

A Country Lass,

Health in her beaming eyes, health in her glowing cheek, health in her merry laugh. Yet country air and country hours can't save her from the common experience of women—an experience which dulls the eye, pales the cheek, and turns the laugh to a sigh. Womanly ills come to almost all. But for these ills there is help and healing in Dr. Pierce's Favorite Prescription. It regulates the periods, stops unhealthy drains, cures inflammation, ulceration and female weakness. It makes weak women strong, sick women well.

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Live Stock and Dairy

A SEPARATOR ON WHEELS.

The papers often contain an account of some man in the West who has fitted a separator on a wagon and goes from farm to farm separating milk as desired—hauling the cream to a creamery. Is it probable that these reports are true? It is easy to see how such a thing would simplify the cream-gathering business, but we do not see just how a separator could be worked to advantage under such conditions.

We do not know here of the portable skimming station to which you make reference. This is not new, however, as you know. There have been a number of attempts of the kind before. Beard Bros., of Decorah, Iowa, were about the first, we think, to attempt it. They put out several wagons, using one of our dairy steam turbine machines with a small boiler, and one of the Beards took out a patent on an adjustable balancing device for the separator, and also on the combination outfit thus employed. They sent these wagons about from farm to farm, and considered the scheme a success. Soon after instituting it, however, they were forced into liquidation, and their business went to pieces. This was seven or eight years ago we believe. As to the practicability of the project, it is all right in theory, but we have never looked upon it as practical, though it is only fair to say that we have not given it serious consideration. It is absolutely necessary, as you may know, that a separator stands at perfect level when in use. This is difficult to arrange quickly with an outfit of this kind, and we think there would be a great deal of wear on a machine carted about in such a manner, as well as a material impairment of the thoroughness of separation under the conditions of use. THE DE LAVAL SEPARATOR CO.

We do not know of a single case where this has ever been tried where it proved satisfactory. For several years past we have had occasional inquiries from parties who purposed trying this plan, but we do not know of a single one that has operated it. In the first place, the separator would have to be leveled up every time it was used, as in operation the separator must stand perfectly level; furthermore, the different patrons' milk would all be getting cold while the separator was being taken from patron to patron, and good close skimming would thus be well nigh impossible. The time required in going from place to place and leveling up the machine and getting it in shape to operate would be considerable; in fact, as much, if not more time, would be consumed in going from farm to farm as would be required in the process of separation. Different adjustments of the cream screw might also be necessary among different herds of cattle, and when such different adjustments of the machine were advantageous or desirable you will at once readily see how it would still further complicate matters. Another great disadvantage would be the impossibility of providing a good firm foundation for the separator when mounted on a spring wagon, unless of a special construction, so that the platform of the same could be shored up in some way. A separator, in order to do good work at the high speed necessary, must set on a good solid foundation; otherwise it is impossible to produce the best results with it. Again, carting a machine like a cream separator constantly about over roads more or less rough would necessarily disturb the adjustment. We do not believe it would be possible to keep any cream separator that was ever built in good adjustment under those conditions. Other objectionable features might be named, but we think the above are enough, and more than enough, to deter anyone from wasting his money on an investment of that kind. P. M. SHARPLES.

We have heard from several different persons in regard to an attempt to carry a separator around in a wagon from place to place, separate the cream at farmers' houses, and then carry the cream on to the creamery. We know of one man to whom we sold a separator who attempted this plan, but so far we do not know of its having been a success. It looks practical, and ought to be feasible, except that it is necessary to have the separator set level, and this is not always easy to do, because of its being impossible to get the wagon always level, but if the operator will exercise some ingenuity, so as to enable him to level his separator quickly at each place, we cannot see why it is not entirely practical, using a gasoline engine for the purpose. Our judgment is that it would be much more satisfactory for each farmer to have his own separator and separate the milk fresh from the cows. The conditions of separation would then be much more satisfactory, and the farmer would have his skim-milk warm and ready to feed to his calves and hogs just at the time that he desired it most. The only feature that we see to recommend the arrangement is to save the farmer the expense of purchasing a separator, but we consider this would be more than offset by the advantage of having a separator to separate the milk fresh from the cows, and have the skim-milk ready for feeding at just the proper time.

VERMONT FARM MACHINE CO.

Fowls With a Cold.

What shall I do for a disease which has shown itself for the first time this Summer among my poultry? It affects both this season's chicks and the yearlings. A sudden and very pronounced swelling around one or both eyes, and within 12 hours a sudden drooping and death. As there is no other pronounced symptoms except the swelling at the eyes, no discharge from nostrils, offensive odor, etc., and as a generally healthy condition, with good appetite, seems to continue until the time of sudden drooping, it does not appear to be roup. The poultry have a thoroughly clean and roomy house, ample dust baths and grit, and the range of the whole farm of 70 acres, including orchard, and meadow with running water. S. W.

West Chester, Pa.

The symptoms of fowls, as described, would indicate, apparently, a cold which is liable to develop into roup. This Summer has been especially trying for poultry, owing to sudden changes in temperature, extremes of heat and cold, dry and wet. These birds are probably sufferers from overheated quarters the first half and underheated ones the latter half of the night. I would advise dissolving an ounce of chlorate of potash in one quart of warm water, and give them a teaspoonful twice a day. Examine their nostrils and squeeze them to see if any liquid matter comes out. If so, inject a few drops of kerosene and sweet oil mixed in equal proportions. F. E. W.

Eggs in October.

I do not know of any reliable method of forcing hens so that they will lay in October. Some hens, fed a fairly nitrogenous ration containing considerable old-process linseed meal, finished moulting earlier than others having a ration containing considerable starchy and fatty foods. After hens have begun to moult I should feed a liberal and rather narrow ration containing animal food and some nitrogenous grain foods mixed with the ordinary grains, and feed this ration also for a few weeks before moulting. Perhaps it may be found of advantage to feed a lighter and less stimulating ration until laying is discontinued. With Leghorns it has always been easier to secure the October eggs from early pullets, the hens very seldom laying until late in November, probably because they continue laying late in Summer. On the other hand, Cochin hens, which are hardly to be considered with the Leghorns for general laying, have often laid well during October, beginning even in September and continuing through the Winter. I have had hens of Game and Asiatic blood lay well in the Fall. So far as my personal experience with old hens goes I am inclined to the opinion that best results can be secured from the American, or possibly some of the Asiatic breeds in October eggs, but I would rather depend on Leghorn pullets. I believe that early moulting, an essential with hens which are to lay in the Fall, is largely an individual characteristic, and that improvement can be made by selection in breeding. W. P. WHEELER.

Food for Peacocks.

What is the proper food for peacocks, young and old; also care required?

Marquette, Mich. H. A. B.

From what I have learned from breeders of peacocks the food and care should be much the same as for young turkeys. They are even greater wanderers than turkeys, and must have plenty of range to do well, and they will gather their own food to a great extent. J. E. S.

Mixed Crops in the Silo.

Is it a wise plan to mix Soy beans, cow peas or similar crops with the corn when filling the silo? In theory this ought to give a better quality of silage, but is it practical?

In my opinion it would not be wise to try to balance the silage ration by mixing cow peas and beans with the corn silage in the silo. My experience with trying to silo highly nitrogenous plants has been far from satisfactory. Then, too, usually the beans and peas are not at the proper stage for silaging when the corn is in the best condition. We have tried not only cow peas and Soy beans, but Canada field peas. The latter give better results than the former, but all are far from satisfactory. Corn is the great silage plant and ever must be—easily raised, seed costing but little, yield large and the crop serves to clean the land when properly tilled. Far better silo corn alone and balance up the ration with cotton-seed meal, bran or other nitrogenous concentrated foods. Then, too, a ton of cotton-seed meal or bran can be purchased nearly as cheaply as can a like amount of nitrogenous foods be raised, and since these meals and brans are concentrated and quickly digestible, they are much to be preferred to coarse or unconcentrated nitrogenous forage plants. So many have practiced balancing the silage ration by mixing carbonaceous and nitrogenous plants together, and have abandoned this practice, that it seems hardly worth while to experiment along this line even in a small way. [Prof.] I. P. ROBERTS.

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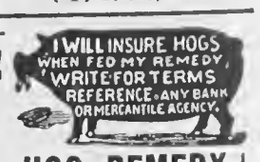

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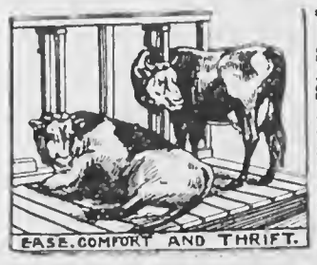

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DAIRY AND FARM NOTES.

Feeding and Working Problems.

VALUE OF ALFALFA.—I promised to give the result of a change from oats and peas to Alfalfa. The grain feed was kept up until the change was made to Alfalfa. I was somewhat in doubt which would be the better test, to continue the grain or take it off. The conclusion was finally reached that a more satisfactory test for the Alfalfa would be to take it away entirely. We have been feeding nine days. The milk from this dairy has decreased during this period about 50 pounds a day, or from 875 to 825 pounds. The shrinkage has nearly all taken place during the last three days, following 48 hours of heavy rain, which accounts at least for a part of the shrinkage. The dairy was eating during the oat-and-pea period about $1.50 per day. As closely as I can estimate, the Alfalfa has saved about 50 cents a day, a net saving, or really a net gain, of seven per cent on the sales from this dairy each day; certainly worth considering. I am not withdrawing any claims made for oats and peas, however. A small piece containing 1.3 acre fed 40 cows twice a day all they would eat clean, medium-sized Holsteins, hearty eaters, for 17 days, and enough cut which was too ripe to feed three days longer. No special effort was made to produce a large crop. It was better than an average growth. Is there any reason why cows should grub in a barren pasture when such small areas will produce so much feed?

COST OF SOILING.—I have kept tab on the men when they were cutting and feeding, and an average of one hour each day for two men and a team was sufficient. I met a farmer to-day who asked some questions about soiling. Said he: "What an amount of labor it must require to feed cows every day. I don't see how you get time to do anything else." Yet he had just come from the woods, having spent a half day with two men and a team getting two small logs to market, worth $1.50. It is just such efforts at false economy among dairymen that keep down the net earnings of their dairies. But after all said and done, we find it much easier to judge than to be judged. This same man no doubt considered it the act of a lunatic to pay men $1 a day and board to plow, sow, cut and feed green watery stuff to cows, and then see them lie down and chew their cuds, when they could as well be busily engaged cutting their own fodder.

FEEDING LAND.—The early oat and pea land has been plowed, fitted nicely and sown to flat turnips. I shall harvest them in plots and leave plots to go through the Winter to be plowed under in the Spring. I am much interested to know how far they are able to assimilate and digest insoluble phosphoric acid. Some nice plant-feeding experiments carried on by Dr. Jordan seemed to show that turnips could use insoluble phosphoric acid. We shall closely observe the results. Every crop points in the same direction on all of our lands, lack of phosphoric acid. We seem to have plenty of potash available, and in proportion to the mineral elements, plenty of nitrogen. I find as much necessity for a well-balanced plant food as for a balanced animal food. Excessive growth, without available mineral matter to back it up by way of stiff straw and full grain is very unsatisfactory.

MANURING.—I wish it was possible to strike the proper gait in farm management, and find changes unnecessary. I wonder whether others are thus affected. I have been watching very closely for three years the application of manures to corn land. For many years Winter surface application to unplowed sod gave much the better result. Three years ago and two years ago we found surface application to Fall-plowed lands, either turf or stubble, gave equally as much corn. I am satisfied now that the only reason for the changed results was the manner of working the manure into the soil. Formerly we had no efficient means of thorough incorporation with six inches of surface soil. Since using the heavy 20-inch disk harrows with three or four horses attached we have been able to mix the manure, and so results have changed, and we have no fear of Fall plowing for corn. For all other crops in northern latitudes Fall plowing has come to be accepted, and on our farms with above results, we would adopt it for all crops if it is possible to get it done. This season's corn growth now brings out another observation, and an experience which, if borne out in seasons with less rainfall than the present, will facilitate farm operations on "union home farms" very much indeed. Not all of the corn ground received manure, and the portions which are scattered through the whole field do not at present writing show the marked contrast that one would expect. A fertilizer made of 500 pounds cotton-seed meal and 1,500 pounds 14 per cent dissolved rock used at the rate of 300 pounds to the acre was used over an entire 20 acres. These results would seem to justify the application of the manure this Winter to young clover meadows as a topdressing, and the use of commercial manure on sod for corn. I fully understand that these somewhat varying results from year to year are due in great measure to the peculiarity of the seasons. This season, with an abundance of rain coming always when needed, the effect of surface application during the Winter to grass lands has been something marvelous; in 1899 and 1900 these same applications were not so effective.

JUDGMENT NEEDED.—Good judgment is required not to be guided purely by conditions in sight. I must confess that I am not strongminded enough not to be more or less influenced by things in sight, even though it is plain that local or seasonable conditions have been to a great degree responsible. The driver on a binder affects every part of the machine from his seat. So it is with agriculture; he can most effectively control the levers who can foresee and forestall; who deals with principles, who can analyze his soil through the laboratory of plant growth. He will Americanize his conditions; that is, adapt himself to his environments. We need ingenuity, mechanical constructive ability in our business; an ability to make a good joint, either square or mitered.

NEW YORK'S NEEDS.—The high or rather comparatively high prices of grains should stimulate an increased growth of grain on our eastern farms, and pay less tribute to our western cousins. I have just returned from a brief trip through central New York, and I must confess that we need more hustle and business effort among our farmers. So many fields are unproductive through default—a lack of systematic effort. I can pardon a man who has method in his madness; who finds it quite beyond his ability, financial or otherwise, to cover the whole farm with good work, and thereby takes a small plot only, and makes it blossom, permitting the remainder to grow to forest, or better still to go to sheep. But this system which has no stem or gudgeon, is wholly unjustifiable, and is the cause of so much criticism from our western friends. I was somewhat amused last Winter in Wisconsin when a large German farmer, after learning that I was from New York, inquired in all sincerity and honesty whether "der farms in der East vas all abandoned." He had evidently not traveled east. It is my candid opinion from a brief four weeks' observation that the western farmer has more hustle, more get-there than the dairyman of the East; a greater inherent agricultural adaptability. The farm influence is a greater comparative force than here both from an industrial and economic standpoint, and also a personal influence, which our varied eastern life has upon the youth, stimulating their city ambitions, which seem gilded with a perforated fringe of dazzling deception. Study agriculture, young man, and let us raise the agriculture of the East high above its present altitude. There is nothing so valuable in a man as local pride, town, State and National, each in its respective place, to fit him for a high place as a man and a citizen.

H. E. COOK.

Dry Country Feeding Notes.

They have had dry times in Kansas this season. The problem now, after the late rains have come, is to secure all possible roughage for Winter feeding. Prof. Cottrell, of the experiment station at Manhattan, is prompt with suggestions for farmers. In a recent bulletin we find the following hints:

Rape sown as late as September 1 will furnish pasture for hogs. Sow Dwarf Essex rape, five pounds per acre broadcast, or three pounds per acre drilled. It will do to feed in six weeks after seeding. An acre will pasture 10 to 20 hogs, and as seed costs only 10 to 15 cents per pound the cost is light. Rape is a fair pasture for cattle, but some dry feed must be given with it to prevent scouring. It takes a heavy frost to kill rape, so that it furnishes late pasture, and Kansas farmers should sow a large acreage to this crop. Turnips should also be sown largely, as the seed is cheap, and if a crop is secured the turnips will save a great deal of other feed needed for the cattle, young stock and hogs. We have not had success with late-sown millet, but if the Fall should be damp and cool, millet would make a fair crop. Wheat, oats and rye will furnish a large amount of pasture if the season is favorable, and while these crops are in good condition cattle will do well on them without any other food than straw. A farmer pastured his dairy cows on oats and sold during the Fall $7 worth of milk for each acre of oats pastured, the cows having no other feed.

It is too early to decide what will be the cheapest combination of feeds for Winter. The shortage will be in roughness. There is enough straw in Kansas to supply roughness for every animal in the State, and with many stockmen straw will be the feed to use. Farmers usually feed them 20 to 30 pounds of hay or fodder a head per day to stock cattle. Very much less may be fed if a proper grain ration is used. In 1888, a milkman in Manhattan wintered his entire herd of dairy cows without a pound of roughness, and he sold milk all Winter. The cows were fed all the grain they wanted, and in the Spring were strong, but they looked gaunt and rough. It always pays to feed a little roughness. The writer has brought cattle through the Winter in good condition on three to five pounds of hay per head a day, feeding grain. Bran or wheat will take the place of nearly all the roughness and can be mixed with cottonseed, gluten, germ oil or linseed meals, oats, corn or Kaffir corn, whichever is cheapest, and make a good ration at a reasonable cost. Wheat is worth about as much pound for pound as corn, and middlings are worth more as a hog feed. Fattening hogs fed all the Alfalfa or clover hay they will eat will fatten on much less grain than without hay. Sorghum hay is good for hogs. A few Winters ago some farmers in northwestern Kansas carried their stock hogs through the Winter on Alfalfa hay alone. Stock hogs fed twice daily all the Alfalfa, clover or sorghum hay they will eat will require much less than the usual amount of grain. Hogs should be fed sufficient rough feed so that they will need to eat the leaves only.

SORGHUM, Kaffir corn, cow peas and Alfalfa make safe pasture after cattle become accustomed to them, but great care must be used in starting stock, on such pastures. At the College we fill the cattle with straw or hay in the morning and then turn them on the sorghum or other green crops only 15 minutes the first day, the next day 30 minutes, and then increase the time 15 minutes each day until we reach an hour and a half, when it is safe to let them stay on all the time and not give them other feed. Cattle turned on such pastures at first, if hungry, will often eat a few mouthfuls and die in a few minutes or hours, says the Kansas Bulletin.

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"Is the ground around here very fertile?" asked the visitor. "Well," answered Farmer Corntossel, "us reg'lar agriculturists can't seem to do much with it; but some o' those real estate companies has managed to raise two or three crops o' building lots off'n it."—Tit-Bits.

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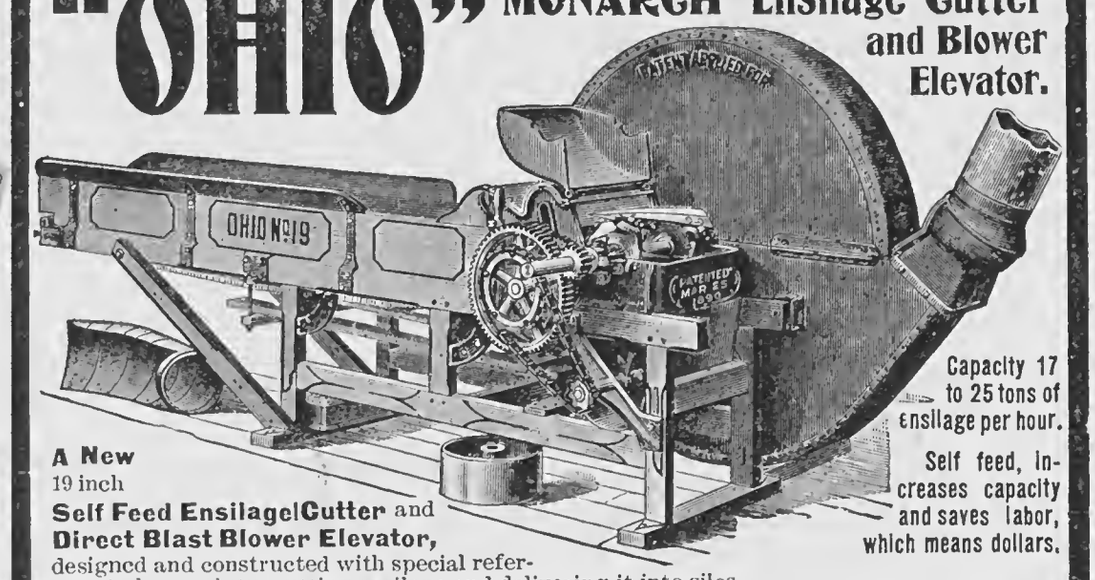

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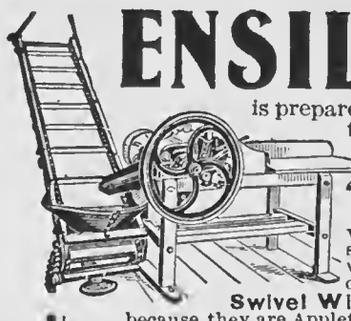

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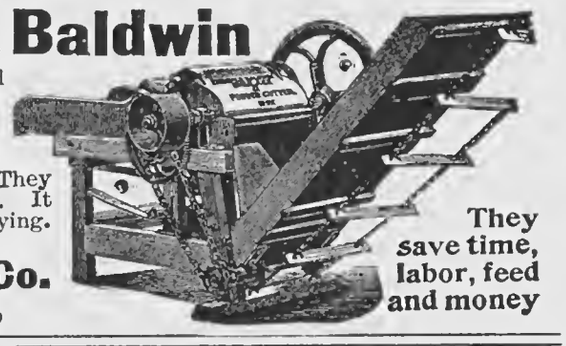

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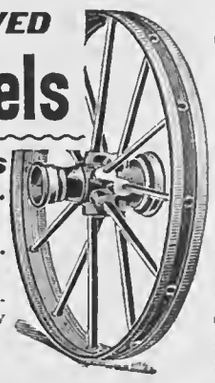

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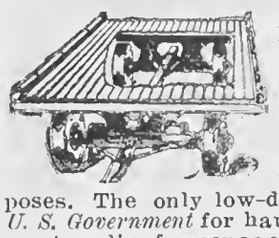

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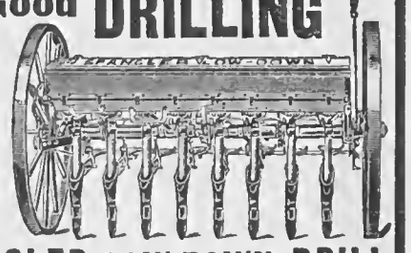

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No Robber Cows Here.

As many of our readers doubtless know, an interesting dairy contest is under way at the Pan-American Exposition. We have waited until now before describing it, in order that something like definite results might be given. There are 10 herds in competition—pictures of typical specimens of the breeds being shown at Fig. 253. The object of the test or contest is "to demonstrate in a practical way how cheaply milk and butter can be produced, under certain given conditions, with the various breeds of milch cows." Five animals from each herd were selected. They are not perhaps the best cows that could possibly be found, but they are all good working animals and quite representative.

A roomy and comfortable stable has been provided. Each herd of cows is kept together, and all are given the best of care. It might be said that the average cow in the average barn is not so comfortable as these cattle, and that therefore the test is not an "average" one. The answer is that these cows are daily surrounded by strangers. Their work is done in the midst of excitement and noise—quite unlike the calm life of the cow in some cool and shady pasture. It seems to us that this test is, on the whole, the most practical and business-like that we have had. Each herd is under the care of some person selected by those who own or manage the cattle. These managers select the feed and care which they consider best for their cows. For example, those who are responsible for the Holsteins or Brown Swiss cows may consider that they can make a better showing with more roughage and less grain. They have a right to feed twice as much hay as the other cows receive if they like, but every pound of feed or fodder is charged to them, and accurate accounts are kept with each cow. The following values per ton have been placed on what the cows eat: Oil meal, $35; bran, $15; ground oats, $18; cotton-seed meal, $25; cornmeal, $16; gluten food, $16; peameal, $25; clover hay, $7; silage, $2; green food, $1.75.

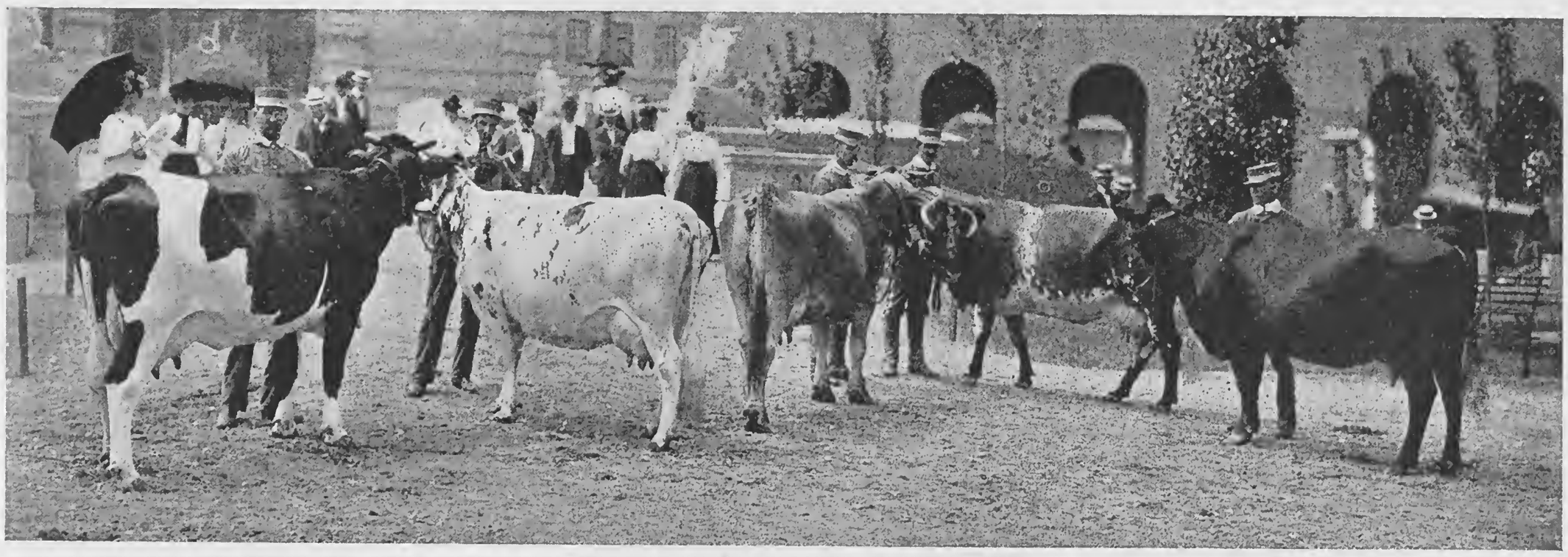
The food is kept under lock and key and accurately weighed out at each feeding. Each cow receives what her manager thinks will be the most profitable ration for her. Careful arrangements are made that no drugs or medicine are given any of the cows without the consent of the superintendent. As each cow is milked the milk is given to the superintendent, who weighs and samples it. The daily samples are mixed and tested each week by the Babcock tester. The cream from one day's milking of each herd is churned once each week, and precautions are taken in testing and sampling to insure accuracy. The value of the dairy products is figured at 25 cents a pound for butter, allowing 85 per cent of butter fat to the pound of butter. One of the most interesting things in connection with the test is the exhibition of samples of butter made from the cream of the different breeds. No artificial coloring matter is permitted, and it is evident from the showing made that the Guernseys, in particular, do not need any.

Prizes are offered as follows:

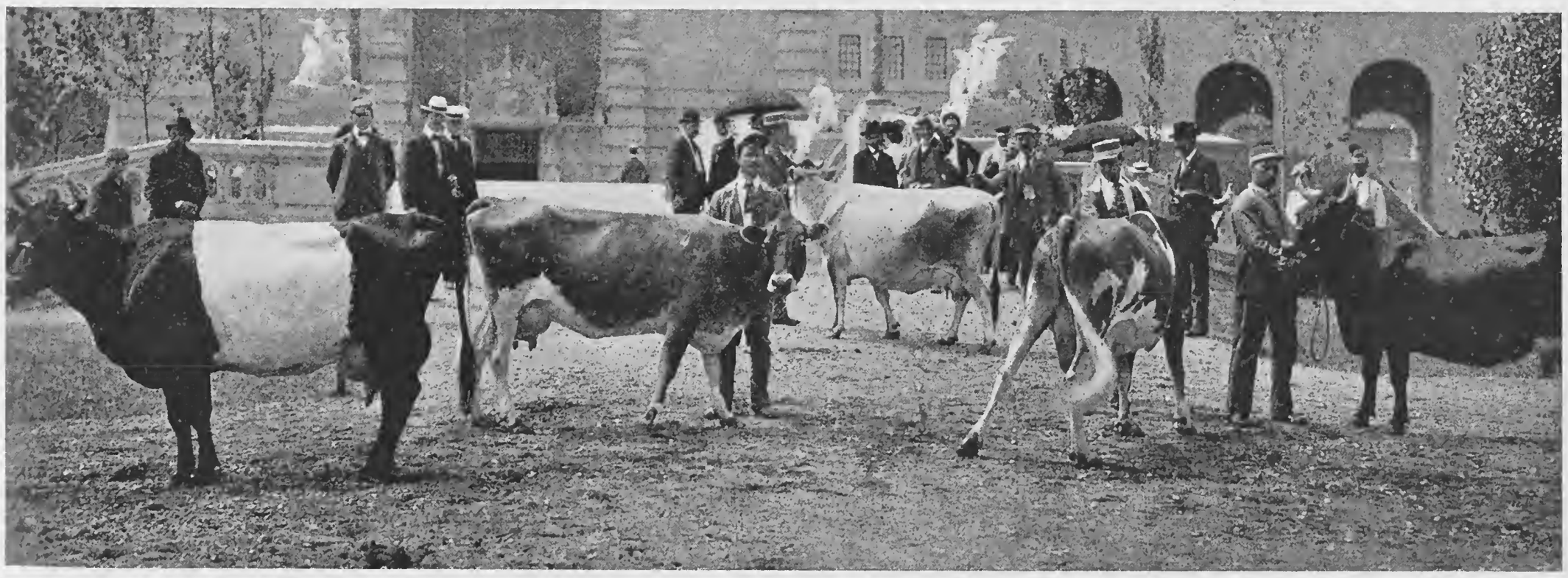
"A prize shall be awarded for the herd showing the greatest net profit, butter fat alone considered, as determined by the Babcock test.

"For the herd showing the greatest net profit, butter alone considered, as determined by the churn.

"For the herd showing the greatest net profit in total solids, and in loss and gain of live weight."



HOLSTEIN. AYRSHIRE. BROWN SWISS. SHORT-HORN. RED POLL.



DUTCH BELTED. POLLED JERSEY. JERSEY. GUERNSEY. FRENCH CANADIAN.

SOME OF THE COWS TO BE FOUND IN THE GREAT PAN-AMERICAN DAIRY SHOW. FIG. 253.

The following table shows how the various herds stand after three months of the contest. This statement includes the totals of each herd up to and including the week ending August 6:

Name of herd.	Lbs. milk.	Amt. of butter.	Value at 25c. per lb.	Total cost feed.	Profit.
Guernsey	16578.6	862.10	215.52	76.98	138.54
Ayrshire	19976.7	838.95	209.74	77.57	132.17
Jersey	16081.1	826.90	206.73	75.14	131.59
Holstein	22715.7	832.25	208.06	85.46	122.60
Red Polls	17554.7	792.82	198.20	77.79	120.41
Brown Swiss	18886.1	777.48	194.37	84 47	109.90
Short-horn	19159.8	760.21	190.05	88.70	101.35
Polled Jerseys	12280.7	647.19	161.80	60.54	101.26
French-Canadian	15137.5	669.89	167.47	66.16	101.31
Dutch Belted	14179.9	548.84	137.21	72.21	65.00

Thus it will be seen that the Guernseys lead, with Ayrshires and Jerseys close behind them. There is quite a difference in the way these cows are fed. The Guernseys have eaten $46.65 worth of grain; the Jerseys, $48.21; the Ayrshires, $48.66; the Holsteins, $54.69, and the Short-horns, $56.47. One would think that the larger cows like Holsteins and Short-horns would be fed heavily on hay, since it is a part of the argument made for them that they are masters at disposing of roughage. The fact is, that both of these large herds have eaten less hay than the Guernseys, although they have each used about two tons more of silage. Possibly at the close of the test it may be found that the Short-horns and other heavy breeds, while falling behind in butter production, have gained in flesh, and this will be credited to them at three cents per pound live weight.

The next two months will prove the most interesting of the test. Possibly some of the breeds now behind will be better stayers and pass the present leaders. We hope to give several studies of the cows, with opinions of expert dairymen based on these test performances. The test is in charge of E. Van Alstyne. He is a practical dairyman and thorough student of the cow. He has an able corps of assistants, and it is gratifying to know that the test is in charge of such thoroughly honest and capable men.

VALUES OF FARM PROPERTY.

How do agricultural values of farm property in your section compare with those of 20 years ago? Has there been any increase in farm land values for purely agricultural purposes?

DEPRECIATION IN NEW YORK.—Selling value of farm lands in this locality, as compared with 20 years ago, have, in my belief, depreciated more than one-half, and when sales are made very small payments are given on the purchase price. This is a good fruit locality, especially apples. F. B.

Yates Co., N. Y.

INCREASE IN ILLINOIS.—The farms here have increased over double the value of 20 years ago. Land that could be bought for $45 or $50 per acre 15 years ago will sell from $85 to $115 per acre for good improved farms well tiled. The agricultural values of land have increased, almost all being tiled, and more clover is raised than 10 or 15 years ago. F. A.

Braceville, Ill.

INDIANA LAND.—I bought 120 acres for $3,300 30 years ago. I repaired the farm, put up new house and barn, kept the farm 12 years and sold it for $7,000. The farm would not sell for more than $5,000 now. Ten years ago I bought 80 acres for $50 an acre, have repaired buildings and put in tile drainage. I will sell for $60 an acre. I rent 70 acres for $175 with buildings; that is a little over four per cent; then I must keep up buildings, fences, wells, windmill and taxes. Twenty years ago wheat was worth $1.25, now 65 cents. I do not know of any land that has increased in value. Farm crops do not yield as well as 20 years ago. It is a continual fight from Spring until Fall; Potato bugs, beetles, flies, lice and blight.

Butler, Ind. T. C. K.

GOOD VALUE IN WISCONSIN.—We bought this farm (160 acres) April, 1872, for $3,500; a few years later added 32 acres more to it at cost of $400. It is for sale now, and our price is $15,000. But it would not be fair to try to make it appear that the farm of itself had improved so much in that time. I have been in other business part of the time, and built a fine house in 1893, large barn in 1886, and silo in 1889, ice house, etc. The buildings are insured for $6,000. I asked a neighbor in regard to his farm of 100 acres, and he said that he bought for $2,500 a little over 20 years ago, and that his price now was $5,000; buildings no better than when he bought. He was offered $2,000 for a 40-acre lot with no buildings, and the land is no better than the rest, as I have cut grain on nearly all of it. Another neighbor who joins us on the south bought for $2,500 about 15 years ago, and his price now is $4,500, and the buildings are about as then. He improved the farm wholly from the farm, except perhaps by keeping a few bees. I know of one or two which could not be sold for as much now as they could a few years ago, but in those cases the people are not up to date, or perhaps might be classed as shiftless. I am quite certain that nearly all the farms in this county and many other counties in the State are worth from one-fourth to one-half more to-day than they were 15 to 20 years ago. I think raising cattle has helped the value more than any one thing perhaps, although some got rich 10 years or so ago in raising potatoes about here, but the Germans are our best farmers, I think, and they keep lots of cattle, hogs, etc. S. S. C.

Waupaca, Wis.

MASSACHUSETTS LAND.—I do not think that the values of the farms about here have increased any; they are about the same as they were 20 years ago, although assessors tax them for a little more, which I think is due to having water, light and new brick schoolhouse. We also have the electric cars running through the town, which perhaps makes some of the property more desirable. I think that we raise larger crops than we used to, as we buy large quantities of dressing from Boston, and go in for market gardening, also small fruits. I do not know of any increase of farm values in this neighborhood. I think that the farms will sell for about the same as 20 years ago. C. R. W.

Billerica, Mass.

PENNSYLVANIA COAL HELPS.—The best farm lands rate here now at about the same value as they did 15 years ago, and while they are not so productive as then, they sell more readily, because of the rapid development of extensive coal mining operations which have largely increased the non-agricultural population, thus affording a ready market near home for our farm products. The Pennsylvania Railroad Company also employs many men here now, which adds much to the business of our little town. But farmers in this county are now prospering mainly from the sale of the coal underlying their lands,

OLD APPLE TREES AT HOPE FARM. Fig. 254. See Page 683.

and many mortgages have been lifted by this means, and a wonderful improvement in the appearance of farm buildings has also taken place within the past two years for the same reason. This county (Cambria) is fast becoming one of the wealthiest in the State from its large production of bituminous coal, and the outlook for the energetic and well-to-do farmer appears to be quite encouraging. G. W. S.

Wilmore, Pa.

IN TENNESSEE.—From what I can learn, farm lands in this section have appreciated within the time you specify about 25 per cent, and farm products about the same. The farm I own was purchased about two years ago at an advance of 20 per cent over what it sold for seven or eight years ago. It is generally said that I bought it cheap. An advance of 50 per cent would not tempt me to sell it. I am of the opinion that farm lands do not sell readily for this reason. A greater circulation of money may be found where manufacturing interests or mercantile pursuits abound, and as man is prone to look for means to make money quickly he leaves the peaceful farm life with its conservatism to engage in more active life with a proportionate risk. I am one who believes in "not so much money but more farm life." J. W. B.

Sweetwater, Tenn.

MICHIGAN VALUES.—There has been quite a depression in farm lands for several years in this neighborhood, and yet there has been perhaps more land changing hands here than in many other places, as the town south of us is settled with Germans, and the young people are inclined to stick to farming, and have to be supplied with farms. But there has been quite a noticeable increase in land transfers, at least in this immediate vicinity, in the last year, and at slightly increased value, although the call seems to be for small farms from 40 to 80 acres, the purchasers being careful not to incur too heavy a debt. As to the value of my own farm, when I purchased it 13 years ago it was nearly all wild land, and very poor buildings. I have made quite a change in the farm and buildings, and, of course, increased the value of the property. C. F. W.

Adair, Mich.

VERMONT FARMS DOWN.—I think farm values 25 per cent less than 20 years ago, perhaps 20 per cent less than 15 years ago. There seems to be a general dislike to farming, and most of the farmers think they are working too hard and too many hours for the pay they get, as compared with other industries. It is also almost impossible to get help, either indoors or out to work on farms, and it seems to be growing worse from year to year. It is much harder to get help now than it was even five years ago. Farms do not sell with the exception of forced sales to settle estates, and these have to be sold for a mere pittance compared with the prices when inflated by the influences of the Civil War, the prices being one-third and some even as low as one-fourth the sum paid for them in the sixties. I have in view a near farm that a man paid $6,000 for in those days, and his son paid $2,000 for same two years since to close the estate. Another, one of the best dairy farms in town, was appraised at $12,000 when owner died about 20 years since, and two years ago was sold to grandson for $5,000 to close estate after having been rented trying to find a buyer for several years. These two cases seem to be a fair sample of all the farms in this section. Otter Creek interval, which has sold for $125 to $135 per acre, has sold under the hammer for $60 per acre within two years past, and located on a fine road only six miles from Rutland, a fine city of about 12,000 inhabitants. Agricultural values of farm lands have not kept up, but have fallen so low that it does not seem possible for them to shrink any more. Agricultural products, of course, are governed by supply and demand as to prices. Farm help hear the whistles blow, and that makes dissatisfaction as to hours and consequent dislike to farm work. My own farm was purchased in the Spring of 1865, when prices were inflated to their highest, and consequently would not sell to-day for 50 per cent of what I paid for it—although I have spent about $5,000 in addition to purchase price in repairing the buildings. It produces more and is in better shape than when I bought it 36 years ago. The reason is because of the general depression in real estate around, as so many are anxious to sell at any price. I do not recall a single instance where any real estate has increased in value in this vicinity for several years. I sometimes think that the fraudulent manufacture of food products, like oleomargerine, sold as butter, and the many kinds of pure Vermont maple syrup and sugar manufactured in Chicago have had a great influence in depressing the prices of the real to a non-paying business, and consequently help to make the farm profits much less. N. S. W.

Chippenhook, Vt.

FARMER AND COMMISSION MAN.

I wish to enter a protest against the idea you convey—at least, that will be drawn—from your editorial on page 536, when you tell of the two men playing tennis, and the farmer working hard. There are too many farmers now who are almost chronic grumblers because they feel they do not get their just dues, and you only add impetus to this disposition to kick and complain. The farmer works hard, if he makes a success, but he also has his play days. You will find very few farmers who work as hard, either mentally or physically, as an up-to-date successful commission man, and he richly earns his play time. To be a success in a city like New York he must be up and going, wideawake at all times—it is a gait that kills, and there needs must be a play day. I am not and never have been, and hope I never will be, a commission man, but I am and have always been a farmer, and I think I can do both justice. One would infer that you thought the commission men should have gone to the field and helped the farmer get in his hay. Quite likely they knew nothing about handling hay in the field, and would have been a hindrance instead of a help, fully as much so as the farmer would be trying to help them in a rush time on Washington Street. The farmer's wife fully deserves all the sympathy you can give her. She has a hard time, especially in the East, with all the farm hands to cook for. Down here the farm hands feed and house themselves, but I have no doubt the commission men were paying good board, as I have always found them liberal, and the farmer's wife was glad of an opportunity to get a little extra pin money. Besides, she would catch a few moments each day from her labors, for a little talk with these men, and these talks gave her glimpses of other life. This to a degree was a rest and recreation to her, and if they told of the hard life of some of the city's poor I have no doubt but she was thankful that she had a home and something to cook. S. H. G.

McIntosh, Fla.

SHORT BITS OF FARM PRACTICE.

Practical Experience Boiled Down.

FERTILIZER ON GRASS.—We like to put a top-dressing of commercial fertilizer on the newly-seeded pieces, or those giving a good crop of Timothy, right after haying. It helps to bring a nice crop of rowen, and the crop for the ensuing year is pretty well insured, whether the season is wet or dry. We use a formula about as follows, putting on 500 to 800 pounds per acre: 300 pounds nitrate of soda, 400 pounds muriate of potash, 800 pounds dissolved S. C. rock, and 500 pounds tankage or cotton-seed meal. If there are any rains after haying, and there usually are, this will get right to work, and after the rowen is cut an aftermath will come up that is a great Winter protection. We try not to leave any bare fields for the Winter winds and snow to carry off all the fine best soil, but if too late for a crop put on rye. It often will furnish good pasture feed even when sown late, and prevents soil washing.

EXTRA POTATO BEETLES.—Every year we hear the same old story that Potato bugs are worse than ever before, but somehow we believe it this year. We have seven acres, and have used already 24 pounds of Paris-green, and some of the potatoes need going over again now. This potato season is something of an enigma; varieties that are usually mature about July 15 are now (August 7) in blossom and have been blossoming for a month. Potatoes have set, but seem to grow very slowly. Vines are luxuriant and would seem to promise full crop, yet it is not there, and we don't know when it will be. It makes one rather tired not to have potatoes to sell, but rather have to buy when they are wholesaling at $1.75 per bushel. No such price known here before, but it has been fully that for two weeks. A few have dug potatoes, but we have yet to find one who has a fair yield.

SELLING BLUEBERRIES.—One of our retail milkmen gets $150 to $200 every season from his pasture lot that doesn't pass through the cow as grass and come out milk. His pasture has a large number of blueberry (sometimes called billberry) bushes which, as the land is well fertilized by the cows, bear every year a fine crop of good-sized berries. He takes one or two crates every day on the milk wagon, and readily disposes of them at an average price of 10 cents per quart. This does not take over a half hour extra per day, and as the season lasts from four to eight weeks quite an income is secured. One man will pick from one to two bushels per day, and as they come in after haying, they are a profitable crop that requires no care and no outlay.

CABBAGE PLANTS.—In the Spring we set out two lots of cabbage plants, mostly the same varieties, one lot from a local greenhouse, fine-looking plants taken right from the house to the ground, and set out on an ideal day, which at once began to grow. A few days later the other lot came 75 miles by express, was not promptly delivered, so there was a day's delay in setting. They were the meanest plants we ever saw, had been grown too thickly, and had long twisted spindle shanks. We hated to set them out and were tempted to write the sender a letter that we should hope would give him the blues. They were cold-frame plants, and were slow in starting, but they left the greenhouse plants, and we are selling a lot of extra fine cabbage from them. From the first lot hardly a head has as yet become salable. We can hardly account for it, but are glad we didn't write that letter. A lot of spindly cauliflower plants from Maryland that we were tempted to throw away grew finely, and good heads are now forming.

POOR HAY.—In a town only a few miles from here it is quite a common custom not to begin haying until the latter part of July and the first of August. The reason is that they can then get their extra help at from 50 to 75 cents per day cheaper. If the weather isn't good, and it often is not through August, you find them haying into September. Another advantage of this late haying is that it can be cut and put in the barn the same day, no tedder required, and it saves any labor of cocking and opening again. This isn't a fanciful sketch; it is truth. These men have never studied feeding cows for profitable results, nothing of protein or profitable dairy feeds. They keep cows and haying is one of the dreaded incidents that must be got through with as cheaply as possible. No silos in town. They are not making any money, and never can, and their farms are growing poorer every year. The boys leave them just as soon as they can, because there's no money and no pleasure in this style of farming. They are set in their ways, and it would take quite an earthquake to get them out of the ruts they are in. Talk about cutting hay in June, and they would laugh at you, and say that there wouldn't be any to cut then. It's about so, for they pastured the meadows so late in the Fall and early Winter, and forgot to put any manure on them, that the grass doesn't get very far by June. The farms are going down in value yearly, and it is rather a discouraging outlook. Cities need their college settlements, but towns like this are equally in need of an up-to-date dairyman who will run a farm on right principle, and make money out of it. You will find them laughing at first, but gradually you will find them copying his methods, and a different style of farming will ensue. H. G. M.

OCTAGONAL BARNS ARE NOT PRACTICAL.

I wish to build a barn in the near future, and have part of the frame material on hand, but lumber has risen greatly in price the last few years, hence I have thought of using a plank frame instead of the old style heavy frame. My barn as planned was to be 42x60 feet, and 20 feet high at the eaves. Barns in this region are now built high, as it increases the storage capacity greatly. A barn of that height will hold double the amount of dry forage that the old style 12 to 14-foot barn held, and with the hay unloading appliances now in use the necessity of elevating the hay to that height is no hindrance. Thus the high barn is economical in space and also in cost, as it requires no more roof and foundation than a low barn, and yet has so much greater space, and the cost of the two last named items is of importance. These frames then are set upon basement frames and we have the whole basement for stabling live stock. At present the silos are being built here, and I have given some consideration to the project of building an octagonal barn, with a tub silo in the center, feeding alley next to that, and the live-stock stalls next, the animals thus facing the silo. I should want the barn to have a basement to be used for the live stock, and to have a drive floor above for hauling in and unloading hay, grain and stover, and also for cutting silage. I should expect to build silo 25 to 30 feet high. I have no definite plans, and want information as to whether the scheme is practicable. The matter summed up in a simple question is this: Is it practicable to build an octagonal barn with silo in center with stalls in basement around silo, drive floor above, the frame of plank? J. B. M.

Grantsville, Md.

REPLY BY JOHN L. SHAWVER.

Your correspondent is correct in desiring a barn of good height, and 20 feet above basement is all right. I would prefer 40x64 to 42x60, as we would thus find four spans of 10 feet each in basement and four spans of 16 feet each in superstructure. Though octagonal and circular barns make a good appearance, and enclose slightly more space than the rectangular barn, yet much of this space is useless, because of angles, and for the same reason there is quite a good deal of waste in cutting the material. In constructing the second floor alone there is a waste of several hundred feet of timber. Besides that, I would not place a silo inside the barn at all, but build it at one end or side, entirely separate from the barn, to avoid much of the odor from the silage, which becomes obnoxious inside the barn. The inquirer can use the plank system on an octagonal barn very advantageously, but I believe that if he investigates the matter well he will never build that shape. I know of several who have built octagonal barns who say that they would not do so again, and some who have built their second barns rectangular. The round and the octagonal barns are much better for the eye and the imagination than they are for the pocketbook or the farmer's convenience.

THE ERYNGIUM OR SEA HOLLY. Fig. 255. See Page 582.

HEAVY GRASS IN CONNECTICUT.

You ask in a recent issue of The R. N.-Y. for reports from those who have tried the "Clark method" of grass seeding. I have read for some time about this method, but never tried it until last season (1900) and then I was not able to give the land the many repeated harrowings and cross-harrowings thought necessary by Mr. Clark, neither did I have one-half dozen or more implements that are manufactured by Mr. Clark to do what I did on it. True, I had the Cutaway harrow, but not another of the Clark tools. My land is a heavy clay loam, lies sloping towards the west mostly, and this five-acre piece, which I seeded on September 1, 1900, has been in grass for five or six years. It had been mown every year, sometimes once and in its earlier seeding twice if weather was damp enough to produce a second crop, until it had nothing on it in 1900 but daisies. We covered two acres of this piece with barnyard manure and plowed it in, after the daisies began to bud, letting the land lie without cropping. After haying was completed we harrowed this two acres with the Cutaway harrow repeatedly until very mellow.

Three acres lying beside the two already plowed were plowed after August 1, 1900, and these were also worked with the Cutaway harrow many times, how many I do not know, but much more than I ever did any other piece in my life; in fact, we worked that five acres so mellow that it was practically dust. Then we put 500 pounds of Mapes corn manure on the three acres plowed after August 1, distributing it with a Missouri drill evenly. August 31 it was reharrowed again with the Cutaway harrow, and September 1 it was sown and rolled in with a roller. I used a bushel of seed per acre, 14 quarts Timothy, 14 cleaned Red-top and four Mammoth clover. In a night or two we had a very fair shower, and the seed came up and looked like a lawn. The continued dry weather of the Fall of 1900 was not conducive to its benefit, and it pined and died out somewhat, but this Spring we had rain galore, and it took on new life and looked fine. About May 1 we sowed 200 pounds per acre (on the whole five acres) of corn manure. The hay is now in our barn, but has not been weighed. Some time this coming Winter it will be sold, and then it will be weighed. I had 14 large loads of hay on the five acres and I *guess* about 20 tons. When it is weighed I will let you know the amount. I made one mistake in seeding, that was in not going over our land after the last harrowing with the Cutaway harrow, with a smoothing harrow or a weeder. The seed lodged in the hollows made by the Cutaway harrow teeth, and the lot looked as if the grass seed had been put in with a drill. The next time I do this kind of a job I shall take my Success weeder (and it is a grand success by the way) and harrow the land both ways, thus distributing and mixing the seed evenly all through the land, and then roll it.

Connecticut. NEWTON OSBORN.

R. N.-Y.—Two years ago we described Mr. Osborn's farm and methods of fertilizing. He has been in the habit, we think, of seeding to grass with grain, following much the same rotation as that of Mr. D. C. Lewis, in New Jersey. This experience shows what can be done with "cutting across the rotation" on an old meadow. Mr. Clark does not claim that his tools are absolutely necessary to produce a good yield of grass, but we think he is right in saying that some form of digging harrow is needed.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

SHEEP AND SILAGE.

The following statement was received from one of our readers in the Winter at sheep-feeding time. The answers may be useful now:

"I put up a 12-foot tub silo last Fall for my sheep, but they think they are abused if I make them eat silage. If I fed them all the bean fodder twice a day they will eat, they don't eat much silage. It has considerable corn in it. I have a tight board cover, and feed from one-half the silo, and feed about three inches from one-half one day and turn the cover and feed from the other side. The silage is bright and nice, not moldy at all. The corn had just begun to glaze (not much). Did I put it in too ripe or too green?"

We are feeding silage to our sheep, and they eat it well. We feed clover hay and silage. I suppose if we fed all the clover hay they could eat they would not take the silage, at least at first, until they had become accustomed to it. I think the trouble described may be due to the fact that he gives the sheep too much bean fodder. If he will withhold that somewhat, and teach the sheep to eat silage I think he will have no trouble. Young sheep do not take so kindly to silage as do old, mature ones. The silage described seems to have been put up properly and to have kept well. The trouble seems to be with the feeder, not with the feed.

L. A. CLINTON.

From the description here given I can see nothing wrong about the silage and do not understand why the sheep don't eat it. It may be that this man expects them to eat more than they can. He should remember that an ordinary ewe weighing say 75 pounds should not be fed more than three pounds per day, or at the usual rate of four pounds per 100 of live weight. Now of good silage it does not take much to weigh that, and he may think they ought to eat much more. If they do not readily eat that quantity there must be something wrong with it, but from the description given, and without seeing it, no one can tell what it is. We have been feeding silage to all our sheep for a good many years, and never find any trouble in getting them to eat it. When we commenced to feed it we had the notion, then universal, that silage was not good for sheep, and when we fed the first lot, we selected a lot of the poorest old ewes in the flock, and fully expected some of them might be killed in the experiment, but to our surprise and joy we found them doing the best of any sheep in our barns, and soon the feeding of silage was extended to all our sheep, even the ewes raising Winter lambs I don't see how this man can make a success in raising Winter lambs without plenty of some kind of succulent food. We cannot, and if he is feeding no roots it must be that his ewes are eating more of the silage than he thinks, or surely the lambs would not get milk enough to do their best. We like to feed our ewes with Winter lambs both silage and roots, but if we could have but one would prefer silage. I suggest that he weigh the silage and see whether they are not eating enough (four pounds per 100 of live weight). J. S. WOODWARD.

Planting Seckel Pears.

W. M. T., Ogden, N. Y.—I have room for one row of large pear trees. I want them to be Seckel. Would it be better to set that kind, or some variety that would be more hardy and grow faster, and then graft? If the latter, what variety should it be?

ANS.—Seckel makes a good tree, as it is hardy, nearly free from blight and grows quite freely as a standard. I would be in no wise doubtful about planting the Seckel for the desired purpose. H. E. V. D.

A Lazy Mulberry Tree.

F. H. H., Fayetteville, N. Y.—We have a thrifty mulberry tree, about six inches in diameter, but to my knowledge it has never borne fruit. A tree in a neighbor's yard, very similar in appearance, bears profusely nearly every year. Can you tell me why ours does not fruit?

ANS.—Some mulberry trees have imperfect flowers, and in a few cases they are so much so that they will not bear even with those having perfect flowers in close proximity. I have never tried grafting the mulberry, but I believe it can be easily done. The New American is the best variety I know and the one I would suggest for trial. It is as hardy as any of our native mulberry trees.

H. E. V. D.

Apples and Plums for Kentucky.

A. B., Paducah, Ky.—I have a small orchard of peach, pear and apple trees. My pear trees are in bad condition. The bark gets black in spots and tree dies loaded with pears. I cut off the top limbs. Was that right? What is the best Winter apple to plant here? They grow poor fruit here. I believe they plant the wrong kinds. We have several Wild Goose plum trees, but do not get much fruit.

ANS.—Blight was the cause of the trouble with the pear trees and it was the proper thing to cut off the diseased branches. The danger is in not getting below the diseased parts. Winesap is a good Winter apple for your section. Wild Goose is a very common plum, bright red in color; it is not very prolific when planted by itself, but when planted near Smiley, Milton or some other variety of plum that will pollinate its flowers it bears very well.

H. E. V. D.

Early Apples for Virginia.

A. R. L., Barboursville, Va.—I live in the Piedmont section of Virginia and wish to plant a few apples for the Summer market. None but large ones pay to ship at this season. Give a short list of those varieties that you think most suitable. Also give description of the Keswick, both of tree and fruit.

ANS.—There are few apples that are large and attractive looking that ripen at any time during the Summer. Oldenburg is one of medium size that will ripen in Virginia in July and August, but it is too poor in quality for any use besides cooking. It is a most productive and hardy tree. Chenango is larger, most beautiful red striped and of good quality. Lowell is a yellow apple of the same season that is well liked for both home and market use. It makes a fine orchard tree and bears regularly. Keswick is a second early apple that is of medium size, roundish conical shape, greenish white color, and is intensely sour. The tree is of medium upright growth. H. E. V. D.

Raspberries, Lawn and Strawberries.

A. G. (No address)—1. When shall I cut the old canes from my raspberry bushes? Is it better to do it as soon as they are through bearing or not until Fall? 2. Also about my lawn. It is just full of Witch grass, and that is killing all the other grass. How can I get rid of it? 3. My strawberry patch is almost ruined. The plants were thrifty and full of green fruit, when a small green worm attacked the leaves. I tried some Slug Shot but it did not seem to help matters. Then a blight struck the plants, and many of them died. I cut off all the eaten and dead leaves and burned them, but the patch has never recovered its thrifty look. Do you believe they will be worth saving and working over, or would you advise just spading them under?

ANS.—1. Old raspberry canes are best cut out as soon as through bearing, as they often interfere with the new growth and are of no benefit after the crop has been produced. 2. If your lawn is well fertilized, and closely clipped once or twice a week, the undesirable grasses should diminish. Frequent applications of a good complete chemical fertilizer during rainy weather and constant clipping will do wonders for an old lawn, though some of the grasses with creeping rootstocks are very persistent. 3. It would seem better to give up the fight with the affected strawberry bed and start a new one. Spraying with Bordeaux Mixture and dusting with powdered hellebore would seem promising remedies.

Are Mulberry Trees Self-Fertile?

F. W. B., Antwerp, N. J.—Are mulberry trees dioecious? If not, what would you advise doing for a tree that blossomed full each year but bore no fruit?

ANS.—The mulberry is generally monœcious (that is, having flowers of both sexes on the same tree). Young specimens of the mulberry tree often produce few staminate blossoms. As they grow older the balance is more likely to be restored. It may be well to graft your tree over with scions from a good bearing tree.

Where to Put the Manure.

A. H. S., Clarendon, Mich.—I have about 20 loads of good manure, mostly fit for top dressing. I am only going to put out six acres of corn ground to wheat, but have some clover and Timothy sod that I shall plant to corn. Would it pay me better to leave this and haul the manure out on my wheat ground after cutting the corn, or haul out now and spread evenly on the sod to be plowed under in the Spring?

ANS.—It will depend on circumstances. In our own farming we would put the manure on the corn and consider the corn ground strong enough to produce a fair crop of wheat. If the corn was well manured last year we would leave it as it is, and use all the manure for the corn. If the corn was not well manured we would plow the manure in for the wheat.

Lime for this Soil.

J. K. B., Hagerstown, Md.—On a sandy farm (Potomac River land) where South Carolina phosphate has been sown for years, the land seems to be getting full of sheep sorrel and land cress; would lime be beneficial? The same land raises good wheat and fair corn, but we are unable to get a stand of grass; what change in the fertilizer would bring better results?

ANS.—We think that lime would surely help such soil. The sorrel is a pretty sure indication that the land is sour. Continued use of S. C. rock tends to make such soil acid. From 20 to 25 bushels of lime spread after plowing and well harrowed in will enable you to secure a much better catch of grass. Do we understand that you have used nothing but the S. C. rock? If so, muriate of potash and some form of nitrogen will pay, but probably lime is the element most needed now.

Disease of Peach and Quince.

C. Q. E., Mystic, Conn.—I send samples of diseased peach and quince. What ails them and what can I do?

ANS.—The peach seems to be affected with the brown rot fungus common in the West and South. The fungus affecting the quince fruit and twig is not so easily recognized, but is apparently very destructive. The only promising treatment would seem to be to remove all affected fruit and twigs and bury or burn them. Nothing further can be done this season. Next Spring before the buds open both peach and quince trees could be sprayed with Bordeaux Mixture of full normal strength (six pounds each of lime and sulphate of copper to 50 gallons of water), and the quince again with the full strength after the flowers fall, about the middle of June. The peaches may be sprayed in the same way, except that after the foliage appears the strength should be reduced one-half (three pounds lime and same of copper sulphate to 50 gallons of water). Thorough work of this kind will probably save your orchard from future damage.

The "Bag-Worm" on Evergreens.

L. B. H., Coatesville, Pa.—I have an evergreen tree on which I noticed a few cocoons this Spring. Within a few days small black worms enclosed in similar coverings or cocoons began coming down the tree. We did not notice them until they had spread to other trees, going along the grass and up the trees. We destroyed the original tree at once and all the insects we could. What have we and how can we get rid of them?

ANS.—The "cocoons" proved to be the cases made by and within which the caterpillar known as the "bag-worm" lives. The caterpillars carry these bag-like homes about themselves, sticking out their heads to feed and to crawl about. This bag-worm bears the jaw-breaking scientific name of Thyridop-

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THE RURAL NEW-YORKER, New York.

teryx ephemeræformis, and it is a common pest on evergreens, maples and other shade trees in Pennsylvania and southward. The adult male insect is a small winged moth, but the female has no wings and is simply a larva-like bag of eggs; she does not leave the caterpillar case or bag. The insect winters in the egg stage inside the bags. Hence, much can be done to check this pest by picking off and burning the bags containing the eggs during the Winter. Many of the bags will be found empty, and these are the ones from which the males were developed and emerged. It might be practicable in some cases to pick off and burn the caterpillars in their bags. When they are feeding in Summer, one could easily feed the caterpillars Paris-green or other poison by simply spraying the infested trees thoroughly. We would never cut down the tree. M. V. SLINGERLAND.

Anthracnose on Raspberries.

A. P. V. D., Amity, Pa.—My black raspberries show patches of disease or fungus on the canes, and are losing vitality. What is the trouble?

ANS.—Your raspberry canes appear to be affected with anthracnose, which, as you say, is a fungus disease. It appears in patches scattered all over the canes, which become feeble and grow slowly, finally breaking down when the disease is far advanced. The patches you see on the canes are merely the fruit or seed-bearing portions of the fungus plant, which consists of a network of vines or threads, growing through the substance of the canes and feeding upon the sap. As most of the fungus grows inside the cane, spraying will not entirely cure it. The best plan is to cut away all diseased canes, dig up the roots, and burn the plants to prevent further infection. Spraying several times during the season will prevent the remainder from becoming infected. Healthy young plants may be set in the vacant spaces, but they should be carefully watched to see that the disease does not recur. We are sorry to say that no certain cure for this destructive disease is known. It is probably best in the end to abandon the ground and set a new patch with healthy plants in uninfected soil.

EVERYBODY'S GARDEN.

MUSTARD SEED.—D. W. D., Hickman, Ky., asks how to clean onion seeds. He wishes to free them from husk to sow with Planet Jr. seed drill. Harvesting the seed must be done in the nick of time, else it is attended by considerable loss, and as it ripens unevenly the safe plan is to gather as rapidly as it ripens. As soon as the heads turn brown they should be gathered by clipping with five or six inches of the stalk. If ripe enough to shell, gather in tight boxes or baskets, and spread on a tight floor, where the air will have free access. Frequent turning will assist the drying, which should be done as rapidly as possible. When thoroughly cured pound out with a flail, or small amounts may be thrashed out with a stick or with the feet. The cleaning is easily done with the fanning mill, or lacking this, they may be winnowed by hand. Spread down a sheet or blanket, fastening down the corners to prevent the wind from blowing it away. Hold the seed high and pour slowly, and a moderately strong current of air will take out most of the refuse. Repeat the operation until clean. If too much chaff still remains, or much shrunken seed is present, pour the seed into water; the good seed will settle at the bottom, leaving the chaff and shrunken seed on top where it may be poured off. If water is used the seed must be dried without delay by spreading on cloth and exposing to the sun and air. If the husks or seed cells adhere to the seed there is but one conclusion, viz., the seed was gathered when too green, and in that case the risk of sowing it would be too great; and I would advise not using it even if other seed had to be purchased. In gardening there are but few things more disastrous or annoying than the loss of a crop through sowing poor seed.

The same inquirer also asks: "Is there any profit in growing black mustard seed for market? Give average price per pound." This answer involves several questions of prime importance. With the questions of favorable soil conditions and access to market settled, of which every man must be his own judge, other questions naturally arise, the first being the demand. The black or brown mustard seed is grown almost exclusively for medicinal purposes, or for use as a condiment or table relish. The available avenues for the output of the crop then, are the jobbers in crude drugs, the spice manufacturers or the seedsmen. In the crude drug trade the demand is not excessive, being only about as one to 100 in favor of the white seed. However, the demand is quite considerable even at this rate. In the spice trade the demand is much greater, and should be equal to, if not more than for the white seed, as the best brands of table mustard should contain an equal proportion, if not greater of the black seed than the white. Among the seedsmen there is considerable used, and is doubtless, like many other varieties of seeds, grown for them on contract. By writing personally to some of the many reliable seed houses a man might be able to contract advantageously with them for growing the seed.

In the drug and spice trade the California grown seed has the preference, while the southern grown is classed in a lower grade. This fact would enter as a harmful element of competition, which might, however, be eliminated, if cultural rather than climatic conditions are responsible for the disparity. All in all then the demand is evidently large. In the drug and spice trade the present prices would be about 5½ cents per pound. At these prices, the grower might perhaps realize four cents per pound. With these prices, and a yield of 25 bushels or 1,500 pounds per acre conservatively estimated, the returns would be $60 per acre. Doubtless the yield here is placed very low, but even these estimates would seem on the face to be quite enticing. There is, however, another side. The crop, while easily grown, is exhaustive to the soil, and at harvest time is particularly liable to damage or outright destruction through rain or dampness. Again, it is a moral impossibility to harvest and thrash the crop without more or less waste, and the seed thus wasted goes back into the ground and becomes a noxious weed of the worst type. Once in the land it will remain master of the situation, as to destroy it is well-nigh an impossibility. For the gardener, growing it as a salad or for greens, the work is safe and quite remunerative, as the crop is harvested before the seed pods form. Many farmers grow it for the seed, and doubtless at remunerative prices, but personally I would neither grow it myself nor advise others so to do on a farm intended for a life homestead.

STUDY THE MARKET.—A very important point in successful gardening is the market. It pays to cater for the best trade whether among dealers or private customers, and to do this successfully one must know their demands. For instance, the short or half-long varieties of carrots, the round or half-long beets, the green-podded or wax varieties of beans, all have their champions among customers, and a thorough knowledge of these facts often adds much to the profit side of the account. In many markets the prejudice as between the red and purple varieties of tomatoes is very strongly marked, and as to size many customers can hardly be induced to touch the extra large varieties no matter how superior their quality, until they have once been induced to test them. A very large tomato of exceedingly fine quality which I had the pleasure of first bringing into public notice in this country, was almost a dead letter for a time on account of its size. As they would not sell to any extent I gave away samples, with the result that since the first year of growing them I have never grown enough to supply the demand. Study the demands of your markets, and begin this Fall to save seeds with the eud in view of growing what will best suit your individual needs. The same reasoning will also hold good as to purchased seeds. J. E. MORSE.

Michigan.

Weeping Pipes and Chimneys.

A former experience of mine may help your correspondent. My office was heated with a wood stove that had a large door which closed tightly. Of a cold day I would about fill it with large sticks of dry hardwood. When the fire got going well I would close the draft and turn a damper that was in the pipe a few feet above the stove. The effect would be, of course, to hold combustion in check, and measurably prevent the heat from being carried up and out at the top of the chimney. Another effect would be that the pipe at the second elbow, where it changed from the horizontal to the vertical, would drip from the condensation of the gaseous products of combustion in the pipe above. This latter and undesirable effect I was able to prevent, as I discovered, by having one of the lengths of pipe above the damper made in such a way that whenever desired a large opening for the admission of air into it could be readily made. This length of pipe was double for about its middle third, a large oval opening being cut through the two thicknesses. By rotating the outer thickness, or jacket, the opening and closing of the aperture was effected. Whenever the draft of the stove was closed, and the damper in the pipe turned, my practice was to turn the jacket until the two openings came into correspondence. The air that would then be drawn into the pipe would carry with it the offending gases up and out at the chimney top. The ventilation of the room was, of course, provided for at the same time. The draft of the chimney was good. It only needed fair play.

Ontario. W. O. E.

I notice the remarks of H. E. M., page 541, in regard to dripping chimneys, and beg leave to explain the cause of the trouble with the stovepipe referred to. In my short note I gave the principle to which this dripping is due, and to go back to the principle is not always sufficient, for without a good deal of application the circumstances are not duly considered. Now, H. E. M. does not consider the rapid condensing effect of a stovepipe exposed so freely to the air, nor does he take note of the fact, which I think I mentioned, that ordinary dry firewood still contains about one-fourth its weight of water. The water is, of course, changed into vapor in which is mixed the pyroligneous acid of the wood, a spirit as we commonly call it, that is something which is—when hot—a vapor and when cooled is a liquid; and this is much more easily condensed by the rapid cooling of a stovepipe than it would be by the more easily warmed stone or brick of a chimney. I have been burning wood for 40 years, and at first studied out this matter on the principle given, which is scientifically correct, and then adapted my chimneys to it, and have had very little trouble since, except when a stovepipe is used to connect with the chimney and has an elbow in it besides, to act as a restraint on the smoke and vapor, and so produce an active cooling influence on the smoke and vapor, by which some of this condensible moisture is liquefied. If H. E. M. will discard the stovepipe, or encase it in the terra cotta pipes now used for this purpose, so as to avoid the rapid cooling of the hot vapors of the smoke, and run the stovepipe on a level into the chimney as near as may be, and will well season his firewood, and use it dry, the annoyance will cease. I am now burning dry wood, cut in the Summer, and keeping up seven fires in the Winter in my house, and there is no drip from three stoves; the other fires are in the open fireplaces, and have no trouble whatever, but when using green wood one stove which has an elbow in the six feet of pipe used, drips a little, enough to run down the pipe part way, the other pipes which go straight into the chimney do not drip at all. It would prevent the drip if the pipe in the room were double, as it would avoid the coldness of the inner pipe by which the acid is condensed. H. STEWART.

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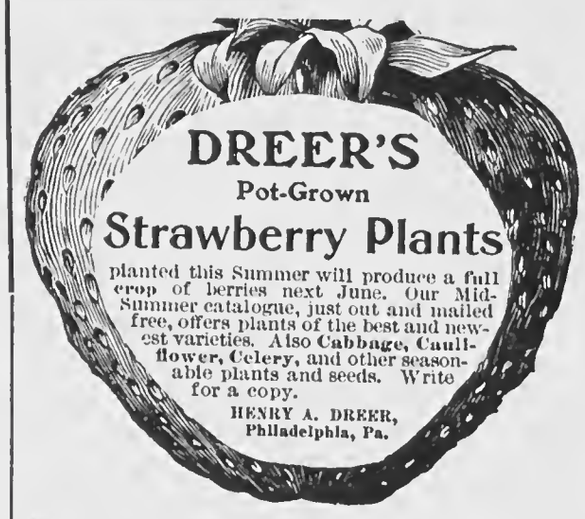

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Ruralisms

NOTES FROM THE RURAL GROUNDS.

THE TROUBLESOME MOLE.—Notwithstanding the multiplication of cheap mole traps, many cultivators remain at the mercy of these troublesome pests. A fair proportion of the correspondence received by agricultural papers consis s of inquiries for some means of checking moles. Many correspondents claim th t they have no success with traps and want some method of wholesale poisoning to clear their grounds of the destructive invaders, but the answer, when based on personal experience, must always be that moles cannot be successfully poisoned by any known method. They live almost entirely on earthworms and subterranean insects, though it is suspected that a taste for succulent roots and bulbs is sometimes acquired, and practically will not eat poisoned baits. The question of reducing their ravages comes down to the skillful and persistent use of traps, and if a little care is used in selecting the more permanent runway over which to set the traps, success is quite certain. The mole generally has his fastness in some uncultivated place, deep under rocks or stumps, and enters gardens and tilled fields to forage in the soft earth for his prey. The ensuing damage seems out of all proportion to his size and apparent strength, and though he is probably a strict utilitarian in his expenditure of energy it seems as though he upheaves our choicest plants and seed beds in pure wantonness, making many tortuous and superficial tunnels through which he does not intend to pass again. It is useless to place the traps on these temporary runways, but a little search should disclose one of a more permanent character, and some convenient point selected over which to place the trap. Many good traps are now on the market, costing from $1 to to $2.50 each, the cheaper ones often doing quite as good work if intelligently used. Most of these traps are designed on the old figure-four plan, and have a flat trigger or pan to be pressed down on the flattened runway, releasing the spring and pointed wires when it is lifted by the upheaval of the passing mole. Most failures result from premature springing before the mole is directly under the trap, as the earth pushes somewhat in advance, and the trigger should not be set closer than half an inch above the ground when finally adjusted. Given a judicious selection of location for the trap the runway should be closed, filling in compactly as narrow a section as possible, the trap firmly placed, springing it several times to make sure there is no obstruction to prevent free passage of the prongs to full depth, and then finally adjusting as above. The chances are that the mole will be caught as he returns. By prompt and persistent use of two very ordinary traps we have almost rid the Rural Grounds of moles, though there is particularly good shelter nearby. It is appalling to think of the havoc these energetic creatures can cause among rare and unique plants, and no effort is spared to secure a mole when traces of his presence are noted. Tar, kerosene oil and other disagreeable or sticky substances placed in the runs will disgust moles so that they are not likely to pass again, but chemicals are of little value as a permanent remedy.

SEED SOWING MADE EASY.—A Kansas man has invented a method of sowing small seeds with perfect accuracy by enclosing them at regular intervals in a little string of twisted tissue paper. The string is planted by a small drill with a reel, which makes a furrow of the proper depth, lays the string and covers it up. He claims that the tissue paper holds moisture and makes the seeds sprout quickly, while they can be planted in a perfectly straight line and with great ease in windy weather. Little time is consumed in planting, and much is saved in the subsequent thinning out, from the regularity with which the seeds are deposited. The adoption of such a method would certainly necessitate the use of good fresh seeds, or the resulting stand might be pretty thin.

THE ERYNGIUM, OR SEA HOLLY.—One of the oddest of all garden plants is the sea holly. It looks very much like a thistle, but belongs to the Umbelliferæ or Parsnip family. There are many species found in mountain regions in the north temperate zone. Most of them are hardy perennials, and have rigid spiny stems and foliage, usually steel blue or metallic purple in color. They are very ornamental, and excite much curiosity. The flower heads look like a metallic teasel or thistle, though the minute petals are usually white. Fig. 255 represents a small branch of Eryngium amethystinum, one of the handsomest and most manageable species. It makes a branching plant two or three feet high, and keeps in good condition throughout the growing season, which is more than can be said of many herbaceous plants. Sea hollies are best grown from seeds, as they do not propagate well by division, and should be placed rather in the background than in the frequently cultivated border among bright-hued plants. W. V. F.

Farming in Connecticut.

The recent articles by S. Marvin on farming in western Connecticut have started many questions from readers, some of which are answered below:

Was the grass mentioned on page 563 the heaviest you had?

No. I had heavier grass which was cut the last week in June. The seeding was two years old, and was heavily topdressed this last Winter.

Are the farms well kept up?

As a rule they are not. There are many poor fences, poor roads and bushes; in fact, much of this country is slowly but surely going back to the wilderness. Our people have but little time to keep up lawns and flower gardens, as it takes hard work the whole year around to keep things up square.

Did you use manure on the potatoes which preceded the grass?

Yes, they were manured heavily. This manure was plowed under deep, and the ground was fitted in a thorough manner, so that the potatoes had a good start and good culture.

Do you grow much grain?

Very little—usually not over four to six acres of corn. Our soil is hard to plow, and is better grass land. We raise grain in the potato field.

How can that be?

We plan to raise potatoes enough to provide for our own use, and also buy our Winter's feed. In order to produce our own grain we would have to plow up the entire farm, but three acres of potatoes in a good season will do it. We plan to ship a carload of potatoes in the Fall and get in exchange for it 15 or 20 tons of feed. Thus the potatoes feed the cows.

Fighting the Squash Insects.

The use of insecticides has become so indispensable to the garden, the orchard and the field that after 30 years of experience in their application I am prompted to a suggestion or two. For the protection of squashes, of which I have now nearly 30 varieties, constant vigilance is absolutely essential. The best remedy for the attack of the striped bug is a loose covering of mosquito netting during the short period of their siege. When growth requires the removal of this covering the squash bug or beetle continues its depredations, and for this Bordeaux Mixture is a specific and a permanent remedy. It is harmless to plant life, nor is it destructive to insect life. Its efficiency lies in making the plant offensive, thus warding off its enemies. The borer appears later, and is the most insidious and therefore dangerous of all. Its presence is generally discovered by the collapse of the running vine. As given in your issue of August 3, bisulphide of carbon is a specific for this pest, if applied in time, and as there described; let me suggest a single caution, however, in its use. Three or four drops are sufficient, while a much larger quantity generally proves fatal. It is a highly diffusive as well as volatile poison. Instances might be named of the ruin of an entire crop by its excessive use. L. P. C.

Storrs, Conn.

A SEEDLING PEACH.—I send you a sample of a seedling peach. I sent you one about two years ago; you will find a picture in THE R. N.-Y. of September 2, 1899, page 623, and a description on page 626, same issue, in which you say it is slightly cling, but this year and all other years since it commenced bearing it has been freestone. The tree has stood the severe freeze of Winter of 1899 and is still healthy, except that it has not been cultivated as it should have been, and does not make the growth that it should. I will bud some this month, but the growth is rather poor, as I said before, and they may not take so well. It is a little firm yet, and the season is about two weeks late here. My peach crop is nearly a failure this year owing to the wet Spring and circulio. I may have about 200 baskets from 2,500 trees. Peaches are rotting badly this year while green, and will continue up to the time of ripening owing to the season. I picked about one peck of Amsden June, and last year had about 80 baskets. Of course it is a very bad variety to rot. J. D. S.

Geigers Mills, Pa.

R. N.-Y.—We consider this peach an acquisition. It has good color and agreeable flavor. The sample sent was, to our judgment, more of a cling than freestone.

About "Billion-Dollar" Grass.

The crop of one square yard weighed 10 pounds, cut when dew free; this an average plot from two acres. As hay it was hauled to the barn in 9½ wagon loads of over a ton to the load. It was sown May 23, harvested July 22; average height six feet. The ground was disked, seed sown and harrowed in—all in eight hours by one man and two-horse team. The grass was cut in three hours and hauled in by three men and one team in 12 hours. It got one fair rain in May—no rain yet, August 5, so the second crop is a failure. It takes the best Ohio River bottom land and warm weather to grow it. On poor sandy soil with me it was a perfect failure. Common millet grew two to three feet high; the grass did not even sprout. "Hope Farmer," how would you like to have such land and such grass, when corn is a failure and potatoes and apples join company to make the farmer look blue? E. H.

Parkersburg, W. Va.

R. N.-Y.—We could stand any amount of it this year.

HAY CAPS.—I should say that even half a hundred hay caps on Hope Farm would do you lots of good. I have used mine this year more than usual, and they not only save hay, but enabled me to get through more than one Sabbath with real peace of mind when valuable clover lay protected under them, and the rain fell on top. READER.

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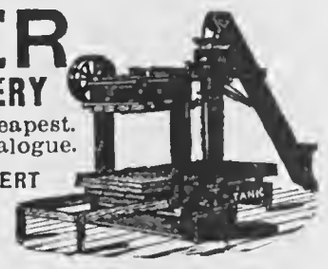
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Hope Farm Notes

THE OLD ORCHARD.—I have mentioned an apple orchard which stands back of the large barn. Some of the trees are, I judge, 50 years old. They are what I call "spool grafted." That is, the graft was set in the main stem, and stock and graft have not grown evenly. There are great bunches and drums on the stems and the trees are headed up in the air so that they have grown into ungainly looking things. Two of them are shown at Fig. 254. When we bought the farm I wanted to cut these old veterans out, but the Madame said "No" as forcibly as she could. She believes in giving things a chance to show their virtues if they have any. We Fall-plowed around these old trees two years ago, put on a good coat of manure and grew a fair crop of rape, Kaffir corn, sorghum, etc., last year. This Spring we seeded to oats with Orchard grass and clover and gave the trees a fair pruning. We cut oat hay enough to feed all our stock about 40 days, and have already sold over $100 worth of apples, gross, while there is a fine crop of clover and grass coming on. We can't find any fault with that. That's part of what you get by heeding your wife's advice!

PLANS WORKING OUT.—The apples mentioned above are all early varieties, mostly Nyack Pippins and "Sweet Boughs." We have picked up and shipped to New York 37 barrels of windfalls which sold for $50.50. With freight and commission out they netted us a trifle over $1 a barrel. This fruit was all more or less bruised, though we sorted out the best for shipment. Of the hand-picked fruit 146 baskets sold at retail for $50.64. There are a few more barrels yet to pick, and we have had at least 30 barrels for hog feed. If I had gone at it earlier we could have shipped 20 barrels more, but I was a little dull in comprehending what the great shortage of fruit means. In former years even the hogs have been inclined to turn up their noses at windfalls.. This year humans are calling for them. The only point I want to make about this orchard is the fact that it shows progress of the first one of our farm plans. I started two years ago to make that orchard more productive, and it is gratifying to see the results write "O. K." on the plans. If I could have sprayed the orchard thoroughly last Spring I think the returns would have been better yet. I know, of course, that this is not a fair year and that I cannot expect such prices every season. Still, I know that the orchard is all right, if I do my part. That's all we need to do with many other neglected things.

SEEDING ORCHARDS.—I have the following question from a friend in Pennsylvania:

> We desire to seed to grass our apple orchard of 10 acres. What kind and quantity of grass seed would you advise us to sow to the acre? Also time to sow, quantity of fertilizer, etc. This orchard has been cultivated eight times or more from early Spring to July for the past eight years, and from the remarkable wood growth we think a rest by seeding to grass, mowing same as mulch, would be beneficial.

I like a mixture of Orchard grass and Red clover for such seeding. With me this combination has been very useful. I seeded in the Spring, but this year I shall sow the grass seed in the Fall. We have an orchard which has, I believe, made growth enough for the present. I shall have it plowed early in September and thoroughly fitted. We shall then sow 2½ bushels of Orchard grass seed per acre. This is an expensive seeding, but I think it pays. The seed is fine and light, and the grass is likely to grow into little clumps or tufts unless put on thick. Next Spring I shall put on eight quarts of clover seed per acre. If we have manure enough left I shall put it on the orchard before plowing—if not about 300 pounds per acre of a fertilizer containing about 2½ per cent of nitrogen, eight of phosphoric acid and seven of potash. I prefer Orchard grass to Timothy because the former does better in the shade, ripens early and is, all in all, better for orchard conditions.

OATS AND SMUT.—The following question from Virginia demands attention:

> There is a great quantity of smut in the oats here this year, both in the Winter and Spring sown. I wish the Hope Farm man would tell us just how he treats his seed to prevent it. A. R. L.

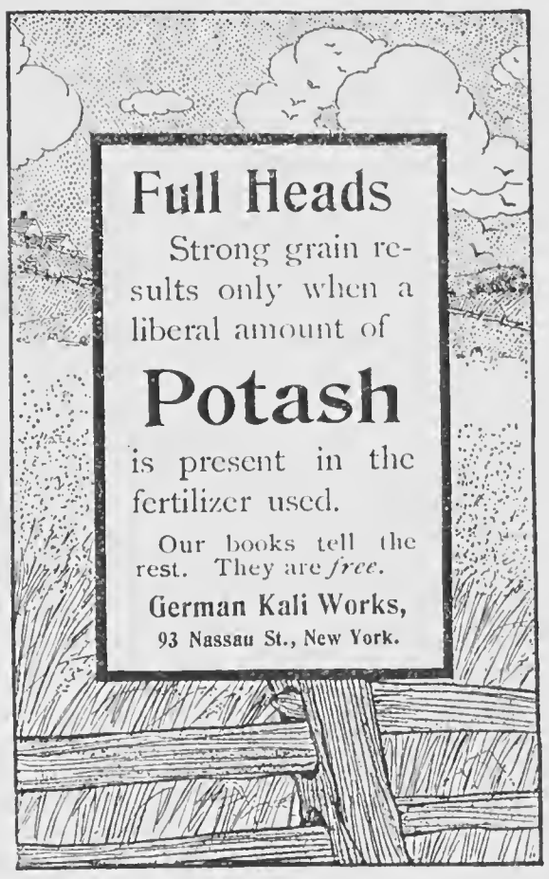
It will seem strange to northern men to speak of sowing oats in the Fall, yet in the South the turf or Winter oats are put in like our rye or wheat. We use formalin or formaldehyde (both the same) on the seed oats. A place on the barn floor is swept clean and the oats are spread out about six inches deep. Half a pint of the formaldehyde is dissolved in 60 quarts of water. Stir it up well. This will give 15 bushels of oats a good wetting. We sprinkle it on with a watering pot. After the oats are wet on top, we shovel them over rapidly for about five minutes, so as to get the water all through them. Then the oats are shoveled into a pile and covered for an hour and a half with a blanket or fertilizer sacks. Then they are spread out, so that they will dry as quickly as possible. We like to do this just before sowing. The germ or spore of the oat smut is killed by the gas arising from the formaldehyde. The water carries it to every part of the pile of oats. This is our way. We like it because it kills the smut.

POTATO NOTES.—If potato vines were salable this year I could cut a good slice out of the mortgage. The growth above ground has been excellent and, strange to say, there has been little if any blight. The tubers, however, are very disappointing. There are many of them, but so small that, as yet, they are scarcely worth digging. The vines of the Junior Pride were about dead by August 15, nearly two weeks later than last year, but they have made few large potatoes. The June Eatings are still growing, but have as yet set only few poor little tubers. I find quite a good many vines this year rooting at the joints like squash vines. We find tiny tubers nosing down into the soil where the stem has been beaten and partly covered by the rain. It looks as if the fertilizer which we applied shortly after July 4 is going to increase the crop, but September will have to tell the story. It looks now as though the potato field will eat up the returns from the old orchard, and then growl for more. Still $4 a barrel counts up fast and gives size to the little ones!

NELLIE SOBERS DOWN.—Last year I had much to say about the behavior of our driving mare Nellie Bly. She ran away, shied at bicycles and "got gay" on all occasions. The Madame wouldn't drive her and Nellie became quite a black sheep of the barn. Now that her daughter has appeared upon the scene, Nellie has become highly respectable. She goes steadily and swiftly about her business, merely sniffs at a railroad train and barely winks at a bicycle. The Madame drives her all about and takes pleasure in her society. What's come over Nellie Bly? She may be ashamed to cut up such pranks before her daughter! Men and women before now have sobered down and "quit fooling" when brought face to face with the responsibilities that belong to parentage. It's just as likely that old Major gave his barn mate a bit of advice. One can imagine the old fellow wagging his wise head as he says: "See here, old girl—don't make a fool of yourself—it don't pay. These folks want to use you well. When you get into the harness you go where you are directed. It's all against their interests to take you where you are going to get hurt. Quit dancing and jumping and behave yourself, or the first you know they will let you go and separate you from your colt. Look at me. I'm as stiff as a bone, but I do just what they tell me, and they know I would take a blind man safely to church. I won't be thrown out upon any cold world—or hot one either! I'll end my days right in this comfortable barn. So will you—if you behave yourself!" That's pretty sound advice and I hope she'll take it.

ALL SORTS.—My reasons for not taking a cigar seem to have stirred up a great discussion. I am getting letters from all sorts and sides. There seem to be three questions over which the best and bravest are ready to struggle—religion, politics and tobacco! I'm a man of peace, and when some fellow with a barb sticking in him gives me a piece of his mind, I try to reason that I ought not to take it because the fact that he throws it so hard is pretty good evidence that he hasn't mind enough to make it wise for him to give it away. It does me good to find that there are lots of people in this world who believe as I do about tobacco. It is fine stuff for killing insects and infants! . . . . The feed question will be a knotty one this Winter. Oats and corn are both short in the West, and this will mean a higher price for "horse feed," which many of our farmers buy. Wheat bran, too, is going up in price, which is all wrong in theory and fact, since the wheat crop is reported heavy. A friend of mine who is supposed to be very wise says that our export trade in corn has increased so fast that the surplus will soon be disposed of, and dealers will have to charge more. Our export trade is all very well in its way, but there will be a little tremble in the hurrah for "expansion" when some of our farmers get their bills for grain. . . . If grain prices keep rising in this way, I predict that many of our Eastern farmers will be forced to produce rather than buy. While I hope to work my farm into fruit, rather than pay extortionate prices for grain, I will raise more corn on the back fields and work until I get Alfalfa started. . . . The days are growing short. We have had so little real sunshine this year that when we did have a few bright days in August we were surprised to see the sun climbing the hill long before we were ready. Well, it's not so bad for the young folks, for a year chopped off the stick doesn't make so much difference, when there is a big surplus of life ahead. It's a little dark for the fellow with gray hairs though, for we haven't had full measure of pleasure and profit out of this hard season. Haven't, eh? Why not? Figure again and see about that. Put it all down and give your blessings a fair show. H. W. C.

NOTE FROM CANADA.—Bees that survived the Winter have been doing well, much better than last year, and prospect for the remainder of the season is good. Basswood blossom is not yet quite available. Grain crops generally promise well. Manitoba wheat crop is reported very promising, so much so that thousands of laborers will be needed from the outside. The Canadian Pacific Railroad each season sends from the older Provinces excursion trains of laborers at low rates to assist in harvesting the crop. Some of these remain as permanent additions to the population. I grow my strawberries on the matted-row plan. Last Winter I killed a number of the plants. I think of giving additional protection to some new beds by plowing a good substantial furrow between the rows to assist in holding the snow and any covering that may be put on; taking care to provide waterways to prevent the plants from being submerged. W. O. E.



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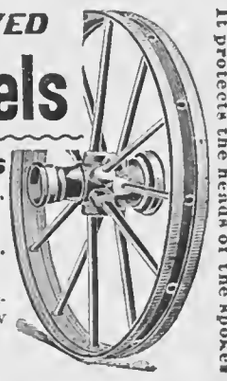

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As before announced, we will now send THE R. N.-Y. every week for the remainder of this year for 25 cents; that is, from the date the order is received up to January 1, 1902. The orders are now coming in, but we would like to see more of them. If every old subscriber would send just one the plan would be a great success. We wish to ask you to take this matter right home to yourself. You have at least one neighbor or friend who needs the paper. See that he gets it for the remainder of this year, and he will be pretty sure to renew himself afterwards. If you can get up a club all the better. Do what you can. Keep 10 cents and send us 15 cents with each name. If you can send a club of 10, keep 15 cents for each, and send us 10 cents with each name—the 10 for $1. We ought to get 50,000 new names on this plan before October. We shall if each one takes a personal interest in it. THE R. N.-Y. is simply a farmers' coöperative institution, belonging more to you as subscribers than to those who have temporary management of its details. The more members—subscribers—it has the greater its power of usefulness to each and to all. It is this coöperation that gives it power to speak in behalf of farmers' interests. It is in this spirit that we appeal to you to help increase the membership at this time. Last week we sent you a convenient blank and envelope for sending one subscription. If you have not used it, please do so at once now.

*

IT is claimed that agents of the Armour Packing Company are endeavoring to secure the entire crop of western apples. The Armours, according to the story, wish to secure 1,000,000 barrels of apples in Missouri, and they are said to be ready to pay $3,000,000 for them! With the present short crop there would be a big profit this year on such an outlay. But if the Armours can make a small fortune out of these apples why cannot the farmers make it instead? The chief reason is that they are not organized for business, but are acting mostly as individuals.

*

A FEW weeks ago a former resident of northern New York hitched up his team and drove, with his family, to North Carolina. This "long trek" was made in search of a new home. Through a series of misfortunes the old homestead which had carried the family name for generations passed out of the hands of our friends. It became necessary to seek a new home on a new farm. We are promised an account of this long and novel journey. We believe that it will make a strong and interesting story—appealing with strange power to the thousands who are forced to seek new homes.

*

FROM now until cold weather in many sections one will come across the wasteful practice of feeding green fodder and soiling crops in the field. It is easier, we will grant, to drive a load into the pasture, spread it around or throw it over the adjoining fence, and call the job done, but even this year feed is too scarce to waste any. It is hard work, and often unpleasant handling, to bring the heavy green food to the barn and place in the mangers, but in this way each cow gets her share, and a much larger per cent is eaten up clean, and none is soiled by the cow's tramping. The timid cow has no show in the field with her pugnacious companion, and is worried from heap to heap, or stands off a distance and goes hungry. If the cows are expecting a good meal at the barn they are more contented in the pasture. A little more time is needed to take food to the barn, but it is more satisfactory in every way.

AT last even the buyers and shippers agree that the apple crop is very short. What little there is of the fruit is sure to bring a good price. The danger now is that too many poor fruit will be put into barrels which are to sell as first class. It will be a great temptation to throw in the little stuff, but grower and buyer must resist it. Another year we may be begging the public to buy our finest fruit, with the very hogs rejecting the culls! Dishonest packing this year will do a fearful injury to the trade. The price will be high enough for all fruit this year. There will be more sin than ever in trying to swell a second into a first.

*

A BIG corporation in this city employs many workmen on the streets. These workmen are required to wear a blue and white badge on their hats. It is a good idea in many respects, but some of the workmen object to being "tagged" in this way. At noon, when these men are free, they take the badge off or turn their hats around so that it will not show. No man likes to feel that he belongs to another—that he is to receive only a percentage of the value of his labor. This is a natural feeling born in the heart of every true man. It is carried to an absurd and damaging extent, however, when a farmer, away from the farm, tries to disguise the fact that he is employed directly by nature. The true brand of the sun and the soil is a noble one, and no man need be ashamed of it.

*

IT is said that George H. Phillips, the Chicago man who so thoroughly cornered corn, and was afterward nearly cornered himself, has made this statement:

> No more corn pools for me. I knew that I was standing over a can of gunpowder all the time, and it was only by the merest chance that I escaped total annihilation. I was forced into the May pool, but I won't be forced into another. They're too risky and not at all to my liking.

Thus it would seem that those who attempt to manipulate the grain market are likely to have, occasionally, experiences not highly seasoned with unmixed happiness; and it is quite possible that the man who has enough to eat and wear, only a moderate mortgage hanging over his head, and nothing worse than mosquitoes to keep him awake nights, still has something to be thankful for.

*

SOME of the friends of the agricultural colleges are now calling upon Andrew Carnegie to help these institutions. This is the way they talk:

> If the agricultural interests of our Nation are on the decline, likewise must the other interests follow suit. Mr. Carnegie's interests have been made possible by and through the success of the agricultural interests of this Nation. What could be more in keeping with the eternal fitness of things than that Mr. Carnegie, who has received so much from the rural classes, should in turn make possible a better agricultural education by increasing the facilities at the splendid institutions already in existence?

Our advice is not likely to be asked, but we suggest that the agricultural colleges let Mr. Carnegie and his millions alone. Most of them now receive all the money that they can use in a manner really helpful to agriculture—some of them do not make the best use of what they get. There are already too many educational beggars who stand hat in hand before rich men. Let us have more independence in agriculture! If Mr. Carnegie and others like him will remove some of the conditions which make vast fortunes possible in this country he would do far more for agriculture than he ever could by erecting school buildings!

*

THERE are some men, and by long odds they are not all found on the farm, whose sole aim in life seems to be "How little can I give for the dollar I get, and how much can I possibly get for the dollar I spend?" They are always trying to get the best end of a bargain, and using to accomplish their purpose small petty means. Some of them accumulate considerable property, but they get no enjoyment out of it, and give pleasure to no one else. When you buy of them their measure or weight will always be found a little short unless you watch them. Hired help hate to work for such people, as they get long hours, poor food and no blessings. These men are despised by everyone who has dealings with them. It is twice the work for them to sell anything. No one buys a bushel of potatoes of them without measuring them before their eyes, and looking to see how many seconds were shoved in. No one wants to buy apples of them, because their aim seems to be to see how many poor quality knotty specked apples they can get into a barrel, and call them No. 1. Economy is a good thing, and trying to get a dollar's worth of goods for a dollar is all right, but one would rather have less of this world's goods and have the respect of our fellow men. The man who gives good measure, has honest goods that are No. 1 when he says they are, and pays a fair price for what he buys, can hold up his head among men. His face won't have quite so many wrinkles when he is 40, and there will not be as long a hook on his nose.

*

No more free passes will be given to employees of the Pennsylvania Railroad, orders to this effect having been issued from the head office of the company. Those working in railroad shops and living some distance away will now have to pay the regular commutation rates. Several of the larger western roads adopted this system some time ago, and a strong effort is being made to have the plan general on all roads of importance throughout the country. The companies take the ground that the granting of passes to employees is the same as extra compensation, discriminating against those who do not require them, and being contrary to business principles.

*

CASH wheat is selling in New York at 78 to 79 cents per bushel, corn bringing 63 to 64 cents, and oats 42 to 44. In order to understand just what these figures mean let us compare them with the prices in former years. The figures given are wholesale prices at about September 1:

	1896.	1897.	1898.	1899.	1900.
Wheat	67¼	102	70	73	86
Corn	26	37	35	38	49
Oats	19½	24	26	26	28

Thus it appears that there has been a steady rise in the price of corn, which has now taken a sudden jump to about the highest average figure in the past 35 years. Oats, too, have gone up in price, and the increased cost of these two cereals presents a hard problem to many farmers. During the past 10 years thousands of farmers have come to depend more and more on the cheap western corn. In some cases the cultivation of the grain has been given up or largely cut down, since there seemed to be more profit in growing the stalk for the silo, when western corn can be bought at 35 cents. Exports of corn to foreign countries are rapidly increasing. In 1891 the value of corn and cornmeal exported was $18,599,664, while last year this had increased to the enormous total of $87,354,810! The removal of this immense volume of grain (over 200,000,000 bushels) from the home market has been responsible for the present excessive price. We venture to say that this high price will hurt more farmers than it will help, so dependent have many of them become upon the western grain for feeding purposes. As a result of this year's prices we expect to see a large increase in corn growing on eastern farms, for there are farm lands in New Jersey which will produce as much corn to the acre as any soil in Kansas or Iowa. Thus the export trade in corn is likely to change the character of eastern farming.

*

BREVITIES.

READ Mr. Cook's ideas about silage on page 591.

WHO can know happiness without knowing sorrow?

TO regulate the pants of an overheated dog divest him of his coat.

CAST your ill-bred chickens upon the waters—and let them drown.

IN a season like the present what a blessing the Abundance plum is.

YOU tell some fellows to be clean, and they will scarce know what you mean.

HOW many of the farmer's wrongs can be remedied by the farmer himself? Lots of them!

THE honey bee seems to be more fully protected by the law than any other domestic animal. Why?

AN editor may offer his brains for a fair price, but his heart and conscience should be beyond purchase.

WE receive letters every week from western farmers who say that they wish to locate in New England.

WHEN a nurseryman gets in front of the San José scale and tries to hide it he deserves to be sprayed—and he will be.

SHOULD the milkman wear a white uniform? It's a good plan if he will keep it clean. A dirty white jacket is worse than a clean blue blouse and overalls.

THIS old world might be better if some men could or would get off in the woods at times alone and cry—let out their troubles and temper through their tears!

THE butter record is only one side of that dairy contest at Buffalo. The question of milk production also enters. In this the larger breeds naturally beat the smaller ones.

THE drought in the West is driving farmers to all sorts of shifts for Winter fodder. Who can give us any experience with sugar beet tops in a silo? Are they worth hauling three miles for this purpose?

WHEN some new horse bites a fraction of a second off the trotting record every horse lover feels the bite away down to his sporting blood. Every cow man ought to feel his cream at the story of the cows in that dairy test at Buffalo.

WE have a number of letters from people who conclude that they have cultivated their apple orchards until they have overdone the business. Now they want to know what grass is best for seeding. We like Red clover and Orchard grass.

AMERICANS import about 15,000,000 pounds of macaroni each year. It should all be made here, and will be when our farmers grow the special varieties of wheat from which it is made. The Department of Agriculture is trying to interest farmers in this matter.

Events of the Week.

DOMESTIC.—Judge Tuley, in Chicago, has decided the Illinois statute governing the coloring of grain to be unconstitutional. . . . . The safes of the Illinois Central Railroad and American Express Company in the station in Bollvar, Tenn., August 9, were blown open and robbed by two masked men, after the robbers had forced the night telegraph operator into a box car and locked him in. Only a small booty was secured. . . . . A large boiler exploded in a hotel at Long Beach, Long Island, August 11, crashing upward from the basement through the roof. No one was injured; loss $30,000. . . . . Fire at Rantoul, Ill., August 9, destroyed 50 buildings, causing a loss of $300,000. . . . . An outbreak of smallpox has occurred at Newark, N. J. . . . . George Bissert, the New York policeman accused of receiving bribes for protection given to lawbreakers, was sentenced August 12 to 5½ years' imprisonment and $1,000 fine. . . . . The gold stolen from the smelter at Vallejo, Cal., has been recovered by divers, having been hidden in the waters of San Francisco Bay. One suspect has been arrested. . . . . August 11, the explosion of a boiler on the steam yacht Quail, near McKeesport, Pa., injured 20 persons, two fatally. . . . . The entire business portion of Armstrong, B. C., was destroyed by fire August 11; loss $90,000. . . . . The warship Alabama is in quarantine off Nantucket, Mass,, owing to a severe epidemic of mumps among the crew. . . . . Train robbers held up a passenger train at Caney Switch, I. T., August 14, and robbed the passengers of all their valuables. Five men took part in the robbery, and held up the train two hours. . . . . Five men were burned to death, four drowned, four suffocated and several injured as the result of a fire which destroyed a temporary water-works crib in Lake Erie, two miles out in the harbor at Cleveland, O., August 14.

ADMINISTRATION.—In the case of the application of the California and Hawaiian Sugar Refining Company for the liquidation of certain drawback entries covering shipments of sugar to Guam, the Treasury Department has held that, while Guam and Tutuila remain foreign territory, so far as customs duties are concerned, they are not foreign countries within the meaning of the drawback laws, as exportations for this purpose must be made to countries without the jurisdiction of the United States. No drawback, therefore, can be allowed.

GENERAL FOREIGN NEWS.—Seven persons were drowned August 7, by the collision of the White Star liner Oceanic with the coasting vessel Kincora, off Tuskar, Ireland. . . . . A fire at Havre, France, August 11, destroyed factory property valued at $400,000. . . . . The town of Farösund, Sweden, was destroyed by fire August 13; about 1,200 people were rendered homeless, and the damage amounted to $400,000. . . . . Baron Erik Adolf Nordenskjöld, the Aretic explorer who discovered the Northeast Passage, died at Stockholm, Sweden, August 13. He was born in Finland in 1832. In 1883 he penetrated the ice barrier east of Greenland south of the polar circle, a feat which had been attempted in vain by many expeditions during 300 years.

FARM AND GARDEN.—Prof. W. J. Kennedy, of the University of Illinois, has recently been elected to succeed Prof. John A. Craig in the animal husbandry department of the Iowa Agricultural College. Prof. Kennedy is a graduate of the Iowa Agricultural College, and was elected to the animal husbandry work in the University of Illinois immediately after the completion of his course at Ames two years ago.

The National Hay Association has filed a complaint with the Interstate Commerce Commission against the present classification of hay by various railroad companies. The complaint states that up to January 1, 1900, hay and straw were classed by the railroad companies mentioned in the complaint as articles entitled to sixth-class rates. Official Classification No. 20, issued January 1, 1900, increased hay and straw to the fifth class. The increase amounted on shipments from Chicago to this city to five cents per 100 pounds, or $1 per ton of 2,000 pounds, being an advance in the rate from 25 to 30 cents per 100 pounds. The complaint alleges that such advance in hay and straw was made by the railroads to obtain additional revenues, and not because of any impropriety of the long existing classification of hay and straw as sixth-class freight. It further alleges that freight rates on hay and straw from points in Canada favor the foreign hay to such an extent as to compensate the foreign farmer and dealer for a large part of the customs duty, amounting in many instances, it is alleged, to three-fourths the duty, which is $4 per ton. This alleged preference by the railroads to foreign hay enables the foreign product to compete successfully with American hay in New England, in this city and on Long Island. The Treasury Department reported that during the whole year of 1899, before hay had been changed to fifth class, only 19,872 tons of hay, valued at $115,409, were brought into the United States from Canada. During the nine months ending September, 1900, 127,694 tons of Canadian hay, valued at almost $1,000,000, were shipped to the United States.

The heavy rain and wind storm that passed over sections of Cortland County, N. Y., August 7, did heavy damage to crops, particularly corn. In many places entire fields were leveled to the ground and the damage will amount to thousands of dollars.

The Eastern New York Horticultural Society asks its members and friends for fruit to be exhibited at the State Fair, Syracuse, N. Y., September 9-14. Early varieties should be placed in cold storage and shipped with other varieties by express not later than September 4, to E. N. Y. Horticultural Society, State Fair Grounds, Syracuse, N. Y.

The American Shropshire Registry Association offers a number of special premiums at Fall and Winter fairs; schedules may be obtained from Mortimer Levering, secretary, La Fayette, Ind.

The Society of American Florists, in annual convention at Buffalo, N. Y., August 6-9, elected John Burton, Philadelphia, Pa., as president for the ensuing year; vice-president, J. W. C. Deake, Asheville, N. C.; treasurer, H. B. Beatty, Oil City, Pa., reëlected; secretary, W. J. Stewart, Boston, Mass., reëlected. The convention will be held at Asheville, N. C., next year.

The superintendent of the free rural mail delivery is making arrangements to have weather forecasts promptly delivered to farmers by the rural carriers.

The National Good Roads Association will hold a congress at Buffalo, N. Y., September 16-21. The Association, in coöperation with the Illinois Central Railroad and Department of Agriculture, has just completed a very successful good roads campaign in the States of Louisiana, Mississippi, Tennessee, Kentucky and Illinois. Over 20 miles of earth, gravel and stone roads were built and several large, enthusiastic conventions held. Thousands of people flocked to see the practical work of the "good roads train" and to participate in the deliberations of these conventions.

FARM NOTES FROM INDIANA.

IS TIMOTHY DEAD?—I was passing a neighbor's farm lately and noticed a narrow strip plowed by itself. He said that he unfortunately or carelessly sowed some English plantain there a few years ago in finishing up some clover, and that it had been a great curse. He had kept it all out of the patch when tending it in corn, but it sprang up in the wheat that followed. The next Spring he went over the clover carefully and gouged out every stool that he could see, but it came in his clover the next year. Now he is plowing it after wheat to kill clover and all. He asked how he should know whether his Timothy sown in wheat this year is dead or not, as if it is, he wants to break the land. The drought here has been so severe that it has cut the corn crop in half and the young Timothy seems to be dead. I said that it is hard to tell whether it is dead or not, and since the field is near water I would throw a bucket full of water on each of three places once a day for three days and watch a little. If there is life it will show itself.

BLIGHTED CORN.—The corn crop is very spotted. Local showers kept places from total destruction. It does not seem to be wholly dryness that has hurt the crop. The ground is not so dry as it sometimes is. It is the extreme heat that damaged it. The crop is damaged where it is not fired at all. It is also peculiar that in the early-planted corn the extreme heat at time of tasseling killed either the pollen or the silk so that in very many well-appearing ears not one grain in 10 is filling. This is very strange for this section, and I had to examine for myself before I could believe that it was in any way general. It is, however, only in very early-planted fields that this occurs. Many stalks scattered about the fields have white tassels. These were killed by the hot sun. It was first noticed on the hottest day recorded in this State. The Government thermometer reached 106 in the shade. Ever since that day until it turned cooler lately, a period of near a month of hot weather, these blighted tassels have continued to appear. In many fields they now number one in 50. There has been much discussion as to whether a stalk so blighted will bear an ear. An examination seems to show that they will bear as well as others around them. This is, however, strenuously denied. I examined many of them to-day in different fields, on high and low land, and find them shooting as well as stalks around them, and that they have been fertilized by stalks near them, so that the grain is as well filled as that on ears nearby. Of course, there are many of them as with other stalks that will not shoot at all. One excellent farmer says that if the tassel blighted before the shoot started, there will be no ear. I do not think that rule holds good.

POOR CULTURE.—In passing through corn this morning some of it appeared drooping and severely tried, and it was very common to find half of the stalks not shooting at all. Our people are talking dollar corn, which is, of course, an impossibility in the general market. We have stirred all our high ground corn with a Planet Jr., and the effect is good as shown by check rows left with a crust. When on the road lately I have seen many fields of wilted corn which appeared ruined and had a hard crust on the soil made by a shower near harvest. The owner did not know that that hard soil was giving to the air from 10 to 20 tons of water a day per acre, and that a fine mulch three inches deep would stop nearly all of this loss of moisture. Still, the careful farmer could not avoid the extreme heat of the sun this year. But I noticed this morning in passing through a swamp that I had ditched and planted to corn that this corn was as green and perfect as though it had not seen hot weather. It reached down to water. This is conclusive evidence that the damage is far greater on account of drought. If moisture is plentiful the evaporation from the corn blades cools them so much that the excessive heat is not injurious. In fact it is a rule all the time that good tillage conserves moisture and helps the growing crop. During the last month of great drought farmers have been in such doubt as to the outcome of the corn crop that it has been difficult to sell corn harvesting machinery to them. They did not know whether there would be enough fodder to be worth cutting. Now they see that though many fields have almost no grain yet the fodder is worth saving, and now it is often said that with the high price of grain one must cut and save all his roughness.

CALVES GOOD.—Last week I bought 24 calves at the yards. They weighed 391 pounds and were in good order. They were from a Short-horn herd and had had all the milk they wanted. They were a dark red color and straight on backs and bellies. Said to be the finest lot of that number that had been in the yards for months. They cost $4.40. This is a good price. I have, however, had parties offer to take them off my hands since getting home. Lots of calves are selling at four cents. Some one criticised me for buying anything when corn is now 70 cents in the market at the city. But these calves will Winter on silage and shredded fodder with little grain, and will pass next Summer on grass and one more Winter on coarse feed. This will let one crop pass in the future to straighten things up before these calves will take much grain feed. I have lots of roughness and want something to eat it.

STOCK OUTLOOK.—Three months ago everyone was hunting shotes at five to six cents. A sow and pigs sold at fabulous prices. Now the trouble is to find a place for shotes. It is quite possible that it would be a blessing if every pig one has would die before morning, unless it be enough to pick up waste or follow cattle. Seldom have I seen so many violent changes in the lines of agriculture as in the last year. Our export trade has become so enormous that it is difficult to supply it. The supply of cattle, hogs and sheep at Chicago for last July was the largest ever known, and prices held up and even advanced. Chicago packers are taking everything they can afford to buy and have agents elsewhere shipping to them. It seems that the great commercial throat can never be satisfied. The man is lucky to-day who has a lot of stuff about fed out, and he is also happy who has lots of pasture and roughness.

Indiana. E. H. C.

Government Weekly Report.

Rain has fallen in a large part of the drought-stricken section, but dry weather still continues in the Ohio Valley, Tennessee, and the upper lake region. Heavy rains have caused damage in the Carolinas, Georgia, Florida and Alabama. On account of extreme heat in the interior of California, fruit is ripening too rapidly, and injury to grapes is reported. Late corn has greatly improved, and with fairly favorable weather during earing time, the yield in the Missouri Valley and Atlantic coast districts will be larger than previously estimated. In the central and eastern portions of the cotton belt more favorable conditions are reported. In the western part cotton needs rain. Picking is in progress in southern Texas. Tobacco is looking well except in Maryland, where there has been too much rain. A slight improvefent in the apple outlook is noted in the Ozark region.

Crop Prospects.

The wheat crop of France, which is just harvested, is thought to be about 56,000,000 bushels short of the actual needs of that country. French buyers anticipate getting 20,000,000 bushels from the United States, if prices do not rise above those asked for Russian grain.

AUGUST 4.—Manitoba, our prairie Province, to the north of Minnesota and North Dakota, announces a bumper crop of wheat, a crop so large that the harvesting of it is a cause of anxiety; 20,000 laborers are advertised for to assist. To these the railways offer as an inducement exceedingly low fares. Grain in this section of Ontario has been damaged by heavy falls of rain that have beaten it flat, causing it to sprout to some extent and, of course, making it more difficult to harvest. Root crops and corn are doing finely. Winter apples almost a failure; Fall apples a moderate crop. Asparagus so far shows only a little rust here and there. Strawberries and raspberries only half a crop. W. O. E.

Ontario, Canada.

AUGUST 10.—An extensive pear grower in Monmouth County, N. J., writes us that the crop is very light, LeConte a total failure, Kieffer very scattering, some orchards extremely light, others a few on each tree.

New York. S. H. & E. H. FROST.

AUGUST 12.—Oats rusted badly with us and are very light. Wheat and barley have been damaged by Hessian fly, and there are very few good pieces of either. Some fields of Dawson Golden Chaff wheat that seemed to promise large yields and were not hurt by the fly, on thrashing turn out to be a poor sample and yield only 18 to 23 bushels per acre. Cabbage is growing well, but the appearance of stump rot in some fields is causing much apprehension. R.

Ontario Co., N. Y.

AUGUST 12.—The apple crop gets less every day, especially Winter sorts. There has been a great amount of rain of late. Pastures are very fine, but preparation for seeding is kept back by the rains. Corn is growing fast, but is very late. Bartlett pears only about one-tenth of an average. Wheat is badly damaged by growing in the shocks. Oats are a failure, so far as grain is concerned. Potatoes are very late. Tomato crop is late and a very light set—lack of sunshine and excessive moisture is supposed to be the cause. I. J. B.

New Jersey.

FRUIT IN MISSOURI.—The collection of the fruit crop report for July from all parts of the State shows, at this date, a universal injury to the apple and peach orchards by the prolonged drought of nearly 90 days. The apple trees show considerable injury, especially where heavily loaded with apples. The excessive drain upon the trees will be a serious one unless rain comes soon, or the trees are thinned of their fruit. We find some are now taking off one-half of the apples from the trees, and it is surely the safe plan to follow. Orchards that have been well cultivated are certainly holding their fruit best, and this is the general report for both apple and peach. There never was a year when both the apples and peaches were so smooth and free from all insects and fungus diseases. The fruit is rather smaller than usual and later also. We find apples sunburned, too, in many places, especially where trees are so heavily loaded that the fruit is exposed to the direct rays of the sun. Some of this will never ripen and some will never grow to full size. The per cent of the apple crop has fallen from 85 per cent in May to less than 40 per cent for the State at this time. Some portions in the southern part report as high as 75 per cent still, while others report as low as 10 per cent. It is strange that the district most seriously affected is along the Missouri River hills, but the drought has been more severe there. The southern part of the State will have the best crop and the northwestern will come in a close second. Other orchards scattered over the State will have fine crops also. The peach trees have not been injured as much as the apple, but some of the fruit has suffered worse, hence the less supply. While many of our apple trees will die from the drought, yet I believe we shall not lose many of the peach trees. It will be well, however, to take off at least one-half of the peaches if we expect to get good-sized fruit, and relieve the trees. All trees well cultivated are reported in best condition. L. A. GOODMAN.

Secretary Missouri Horticultural Society.

Woman and Home

From Day to Day.

A CHEERFUL BROTHER.

Springtime finds me happy, Summer makes me sing;
Falltime is so glorious, I hear the joy bells ring!
Winter—I jest love it, with fires blazin' free;
Every blessed season is packed with sweets fer me!

Great old world, I tell you; don't care what they say,
With the frosts of Winter, with the flowers of May.
Ain't it doin' splendid? Anyone can see
Every cup is brimmin' with joy fer you an' me!

Great old world in darkness—great old world in day;
Reap its happy harvests, walk its happy way!
Lots more light than shadow—light a-fallin' free,
An' all the bloom an' beauty an' light fer you an' me!
—F. L. Stanton in Atlanta Constitution.

*

ODD little needle books recently seen were in the form of square soda crackers, made of silk, with realistic pinpricks, opening to show flannel leaves. The same shape has been a popular one in scent sachets.

*

NEW flannel waists for Fall wear show the buttoned back almost entirely. The effect is pretty, and it permits effects in trimming impossible otherwise. If well fitting, however, it is quite impossible for a woman to get into one of these without assistance, since they are harder to button than the thin wash waists. Very brilliant colors are seen in the flannel waists, and the old hunter's green is to be a favorite, under the new name of chasseur. National blue, golf red, myrtle and Nile green are standard shades.

*

WHITE Panama in a masculine shape is this season's contribution to the outing hats. They are still rather uncommon, but decidedly fashionable; smaller than the men's hats, but following their general outlines. The only trimming is a velvet band 1½ inch wide, sometimes with a little knot or rosette and occasionally with a single quill passing through it. As a rule, the band is black; sometimes, however, it is moss green or dark blue. The effect of the dark velvet on the white Panama is very striking.

*

A HOMELY philosopher observes that when a merchant is injured by the competition of a rival, he doesn't pull down the blinds and sulk; he puts some new attraction in the window, and there is a very large moral in this rule of business. The girl or woman who, in the face of social disappointments, or even greater sorrows, pulls down the blinds, and advertises her griefs and cares, is not only adding to the burdens of an overworked world, but is making herself less able to bear the everyday trials that come to all.

*

JUDGING from the display made already, the coming season is to be one of plumes and made feathers. Fall hats, both of straw and felt, often have two long plumes or breasts encircling them, next in preference to this being a big feather pompon. Large round black hats have two long white plumes around the crown, quite near the edge of the brim, with a black velvet knot in the center. Combinations of black and white lead in the midseason millinery. It is possible now to buy liquid hat dyes, for the renovation of straw hats; the dye, which may be obtained in various colors, is applied with a small brush. It is a decided improvement over shoe polish, which used to be our resource when black straw hats grew dull and dusty.

*

ICE cream sandwiches form a new dessert. A slice of well-frozen cream is placed between two wafers, the sandwich wrapped in parchment paper, and put back in the freezer until needed. Perhaps the caterer is indebted to the street vender of similar delicacies for the idea. There is a sidewalk fruit stand near THE R. N.-Y. where, for the sum of two cents, the wayfarer may be supplied with a frosty slab of ice cream, very aniline as to complexion, laid between two little wafers. The reason for supplying ice cream in this way is its economy; it does away with the necessity for dishes. Spoons are always a superfluity to the street vender and his customer.

3882 Woman's Fancy Blouse, 32 to 40 bust.

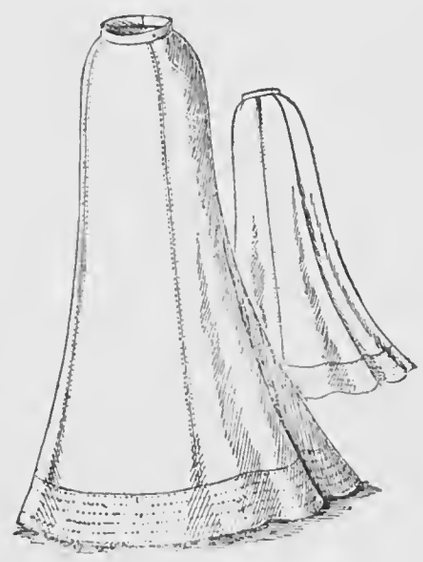
*

ONE of the saddest examples of wasted effort in the world is the woman who has expended hours and hours every year in curling her hair with crimpers and kid rollers and heated irons, and all the other mysterious implements of torture designed to that end, only to discover, in a moment of despair, that she looks better in every way when her silken locks are allowed to remain straight. It is one of life's mysteries that so many boys, to whom curls are a matter of derision, should inherit a topknot full of waves and crinkles, while their suffering sisters may wear a chevelure with about as much natural curl as a piece of telegraph wire. Fortune's gifts are distributed very unevenly; as one ungrammatical philosopher says, "them that has gits."

The Rural Patterns.

The blouse shown with sailor collar has a foundation, or fitted lining, closing at the center front. On it are arranged the various parts of the blouse proper, which closes at the left side beneath the box pleat. The center front is tucked in groups for a short distance, then allowed to fall free and form soft folds. The fronts proper are laid in one box pleat at each front edge, but otherwise are plain. The sailor collar is attached to the blouse, and the shield is arranged over the lining. The sleeves are in bishop style. When the lining is omitted the shield is attached to the waist beneath the collar, permanently to the right and buttoned to the left; and the waist is either gathered at the waist line or adjusted by means of tapes run through a casing. Otherwise there is no difference in the making. To cut this blouse for a woman of medium size, 4½ yards of material 21 inches wide, 3¾ yards 27 inches wide, three yards 32 inches wide, or 2½ yards 44 inches wide, will be required, with ⅜ yard of all-over lace. The pattern No. 3882 is cut in sizes for a 32, 34, 36, 38 and 40-inch bust measure; price 10 cents from this office.

The five-gored skirt has the great advantage of never going out of style. Slight variations there may be and details may require to be changed, but the general cut remains. The model illustrated is made with stitched seams and includes the latest novelty in the band flounce that completes the lower edge. The original is of gray satin-faced cloth, but all skirt materials are suitable, cheviot, serge, homespun and similar woolen fabrics as well as the heavy ducks and linens that are made on tailored lines. The front gore is narrow and gives the desired tapering effect to the figure. The wider side gores are smoothly fitted with hip darts and the fullness at the back is laid in an inverted pleat. The flounce is finished with rows of machine stitching. To cut this skirt for a woman of medium size eight yards of material 32 inches wide, 5¼ yards 44 inches wide or five yards 50 inches wide will be required. The pattern No. 3788 is cut in sizes for a 22, 24, 26, 28, 30 and 32-inch waist measure; price 10 cents from this office.



3788 Five-gored Skirt. 22 to 32 in. waist

A Busy Life.

The Cornell Reading Course for Farmers' Wives gives the story of one busy farmer's wife which doubtless could be duplicated, in all essentials, by many others. Says the heroine of this useful life:

"Two things I have been taught in my long farm life: one is, that work never kills, and the other is, that we must calculate work beforehand in order to save steps and do a great amount of work. I am 58 years old. Have been on a farm all my life until a year ago, when we built a new house on one end of our farm which opens on a public road and retired from farm labor. My father was a farmer and a minister of the old school, who believed in no salary, but believed in working for a living. I learned to milk when seven years old, and always did my share while at home. I was sent to school, but at 14 commenced to teach a district school on a third grade license. I soon reveived a second and then the first grade. I boarded around. I was married at 19, and then my farm life began in earnest. We always kept a dairy, from 12 to 14 head. When we were married we did not own a foot of land. My husband and I bought 30 acres the day after we were married, joining the old homestead of his people, with whom we lived. They owned 50 acres, but there was a mortgage of $350 on that. We took care of them until they died, paid the mortgage, bought enough more to make us 200 acres. We had a sugar orchard and made from 300 to 500 pounds of sugar and a great deal of syrup every year. We kept sheep and always worked up the wool, spun, wove and made full cloth for men's wear and for flannel sheets. We knit our own socks and stockings. I would always rise in the morning at four or half past, Winter and Summer, and have built my own fires, milked from four to eight cows, prepared the breakfast and had it at six. Until about 10 years ago we made butter, and since then have sent it to a factory. I always did my own churning, and many are the books of poems, histories, stories and newspapers I have read through while churning.

"I am the mother of eight children, five of whom are living. The others died when small. The oldest living is 36 and the youngest is 12. Three of them have graduated from high school and been a number of terms at an academy. One has been for five years at Cornell University. I have always done my own washing and weaving of carpets, as I have a large house, and it is furnished with rag carpets. I make my own garden and have helped rake hay and husk corn. One Fall, alone, I husked between 500 and 600 bushels. I had one daughter and she was at home at that time; so I did no housework while husking, although I attended to the milk and butter, milked, and got breakfast. One Summer I piled up 100 cords of wood and did my own housework. You will say there was no call for this. We were married the first year of the Civil War. In 1863 my husband was drafted, paid his $300 and stayed at home. That had to be met in hard times for the farmer. Not many modern wives would think they could pull flax, cut corn, dig potatoes, and do all things on a farm that we used to do. All this time I had a hired girl only a year and a half. We made our own table linen and toweling, spinning and weaving it, and our flannel dresses. I have been with the sick a great deal, and always went to church and Sunday school, and attended societies which belonged to the church. To-day I can walk a mile or more as quickly as anyone. At the present time I have two old people to care for; one of them is 86 and the other is 83. There are five in our family, and I am doing all the work myself, and am going to take the teacher to board next year. So you see, work does not kill, and there must have been some calculation to save steps. My husband says, 'You helped earn and saved more than I did.' The boys many times say. 'If it had not been for your pushing and helping us to school, we never could have done so well.' All this time I have kept up with the general reading of the day. I never counted my steps but once, and that was when I spun a skein of woolen yarn. I went a little over a mile."

As I know more of mankind I expect less of them, and am ready to call a man a good man upon easier terms than I was formerly.—Johnson.

DISTANCE sometimes endears friendship, and absence sweeteneth it—for separation from those we love shows us, by the loss, their real value and dearness to us.—Howell.

Sow Pansy Seed Now, Don't Put it Off.

Pansies sown in the Fall produce incomparably the finest and largest flowers of the brightest colors. Let no reader miss A. T. Cook's remarkable offer on page 587.—*Adv.*

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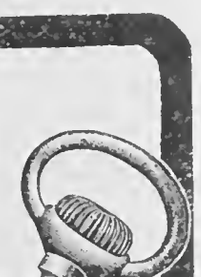

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His Wife and His Horse.

"Yes, I should say Jason had made a sensible choice. She looks strong and well, and will prove willing and patient and kind, I feel pretty sure. She doesn't look as if she was afraid of hard work or would shirk or complain much."

It was Mr. Fifield who thus summed up, at the breakfast table, the general impression made by a young woman the family had met for the first time the evening before, the newly arrived bride of the young farmer whose orchards joined theirs. Mrs. Fifield acquiesced. Lottie had already declared that she liked the new neighbor. Tommie had said she was not very pretty, and Ned, who was beginning to think he knew many things, had demurred at her "big mouth" and decided that she laughed too much. Little Bess, on the strength of some petting and a promise received the night before, devoted herself to her oatmeal after announcing that she should go to see Mrs. Jason every day, specially baking days. The child loved to cut cookies and make saucer pies, but received little sympathy in the home pantry. Only Fannie had remained silent. No one had noticed this and Mr. Fifield looked up surprised when, in response to his summary of the new wife's virtues she protested:

"Father! One would think you were discussing a new horse he had bought!"

Mr. Fifield regarded his daughter a moment, then he pushed back his chair, for he had finished his coffee some time before, and abandoned further discussion by going to the barn.

"Now you needn't look severe, I was not disrespectful," Fannie began in self-defence when the door was closed upon her father, and Bess and the boys had run off to feed the menagerie in the back shed. "I had to speak or choke. It makes me out of all patience. She is well enough, and I don't object to her, if Jason is satisfied. But she does appear as wooden as a clotheshorse and about as interesting as a cow. I don't say she isn't a good and useful person, but the idea of praising and lauding her to the skies as if brains were of no more consequence in a woman than in an ox, if only she be willing and able to work."

"I shouldn't wonder if she had been to school as many terms as we have," Lottie's slow even tones replied, "I'm sure we are not so remarkable ourselves that we have much excuse for looking down on other people."

Fannie's cheeks grew redder, and she turned about to escape the patient protest in her mother's eyes. "Oh you don't understand!" she cried. "It isn't what I am myself. I am miles and miles short of being what I like and admire, but I am not going to be carried away with admiration of a person who knows less than I do, and who probably hasn't an idea of anything but what she has realized in herself."

Lottie laid down the knives and forks she had been gathering up. "Now, Fan!" she said with decision, "if you are going to sail off into one of your moods of airs and high notions you shall work alone. If we talk we shall quarrel and get unhappy, and I prefer to keep quiet and enjoy myself. I think Cousin Emma and Aunt Sarah will be over this afternoon, and I mean to try a new kind of cake for tea. You may do the work here or upstairs as you prefer."

It is perhaps not necessary to record in what manner Fannie closed the door. She chose to set the sleeping rooms in order, and did an astonishing amount of dusting and sweeping during the morning. Girls of a certain type have many moods and notions to work off. No doubt the vigorous physical exercise assisted Fannie's return to placidity. At noon, when Bess discovered how exceedingly fresh and pretty the front rooms were looking, and ran off to call the mother and Lottie to come and see Fannie's beautiful bouquets and how nicely she had rearranged the parlor chairs, Fannie was once more serene and smiling. Later, when Sarah Fifield and Emma had duly appeared, and the five sat with their needlework discussing whatever lay uppermost in family interests, Fannie gave the visitors an amusing and perfectly fair synopsis of the verdict upon the new neighbor, not omitting her own naughty temper.

"I am not sure but men do choose their wives much as they do their horses," mused Sarah Fifield after Fannie's story was ended.

"You know, do you not, Aunt Janet, what helped your Clara to decide that she liked and trusted Theron Huntoon?" asked Emma, addressing Mrs. Fifield. "I did not know but she told you," Emma went on, seeing that no one knew to what she referred. "It made quite an impression on my mind. Maybe I should never have decided to marry Jack if I had not had that to help me say yes. Clara said she wasn't sure what she did think of Mr. Huntoon till one day he took her and Miss Peck off for a long drive. He had a hired horse, and she said she liked the way he treated it. He made it keep a comfortably good pace, but he was considerate and droll, too, and when it acted foolishly about a hand cart of some sort he encouraged it intelligently and showed patience and understanding. Clara said she had long had a theory that a man treated his wife as he did his horse, and she began from that day to appreciate and trust Mr. Huntoon."

"Mr. Harris whips his horses just dreadful," remarked little Bess from the door sill, where she sat endeavoring to

3838 Chemise Nightgown 32, 36 and 40 in. bust.

2987 Woman's Empire Nightgown 32 to 40 bust

put her dolly's dress on to the gray kitten.

"And his wife threatens to go home to her mother," Lottie added, laughing.

"When a man is in love and knows he is on trial I fear there isn't much dependence to be placed on his apparent amiability," remarked Sarah Fifield. "Maybe this Mr. Harris was good natured when he took his wife out to ride before they were married. And I cannot think that the young men who drive horses so cruelly are really hard hearted. I think they are oftener silly and full of false notions of smartness; they make the mistake of supposing that they make a fine appearance when driving fast. But I shouldn't wonder if Clara was right in some measure. The man who twitches and frets at his horse would be likely to be impatient and ungentle with his wife, perhaps."

"The Eliots indulge their horses to the last degree," said Emma gaily. "They are unchecked when they have a load to draw, and let to drink at every wayside brook."

"Yes, they feed their animals well and give them good care, but don't you trust too much to that, Emma," said Mrs. Fifield. "There isn't a pair of horses in town that do more work in a year than those your husband drives. It was always so on that farm. Mrs. Eliot and the girls could always have a horse to drive, and Jack rides down to the village many a night when other men would think their horses must rest. Use your own judgment, child, and don't trust any man to test your capacity for work."

"Yes, Aunt Janet," said Emma solemnly, but laughed the next moment and went on merrily. "It is because they humor their horses and keep them quiet and unfretted that they can do so much. Why, look at old Peggy! Nearly 30, and sleek and hearty yet! Not one of the young horses will cultivate as much ground in a day. But I will keep an eye on Jack, since you think I ought." P. T. PRIMROSE.

A Chapter of Pickles

Pickled Peaches.—For six pounds of fruit use three pounds of sugar and a pint of vinegar. Rub the peaches with a flannel cloth to remove the fuzz, and place in each two cloves and several small pieces of cinnamon. Put the sugar and vinegar on to cook, and when it is boiling hot drop in a few peaches and cook until they are tender, but do not allow them to lose their shape. The peaches and syrup should be put in the jars hot, and sealed. Only ripe peaches should be used for pickling, otherwise the fruit will shrivel.

Chopped Pickle.—Six large cucumbers, one peck of green tomatoes, one head of cabbage, four large onions, three large bunches of celery, four small peppers, five cents' worth of mixed white mustard and celery seed, one gallon of vinegar and one-half teacupful of grated horseradish. Sprinkle one-half teaspoonful of salt through the above vegetables after they are chopped; let remain 24 hours. Heat up in a weak vinegar at first, drain, then boil 20 minutes in the clear, strong cider vinegar. Will keep well in crocks unsealed.

East India Pickles.—Remove the seeds from six green tomatoes and two green and one red pepper; slice the tomatoes and 12 medium-sized green cucumbers, and chop the peppers and two onions fine; sprinkle with one cup of salt and let stand 24 hours. Drain the vegetables, pour two cupfuls of vinegar and one of water over them; slowly bring to a boil and drain again. Make a smooth paste with a little cold vinegar, three tablespoonfuls of sugar, one teaspoonful each of cinnamon and turmeric and one-fourth teaspoonful each of cloves and allspice; bring one pint of vinegar to a boil, add two tablespoonfuls each of chopped mint and white mustard seed, the spices, and then the vegetables; bring to a boil, cook 20 minutes, stirring constantly; pour into pint-size glass fruit jars and seal hot.

Pickled Damsons.—This is a sweet pickle, and very good served with mutton or venison. Ingredients required: Three pounds damsons, one quart of vinegar, three pounds moist sugar, one-half ounce cinnamon, three blades of mace, one-quarter ounce allspice. The plums should be ripe, but not too much so; the bloom is rubbed off with a piece of flannel or a clean cloth, and they are pricked a little with a needle. The vinegar, sugar and spices are boiled together for 10 minutes, then strained and poured over the fruit, in a large basin. Next day the vinegar is boiled again, and again poured over the damsons, and on the third day the damsons themselves are simmered in the vinegar for exactly five minutes. They should be tied down while hot. A quicker method of pickling either plums or damsons is the following: Remove the stalks from the fruit; wipe it and arrange in layers in a jar with good brown sugar sprinkled between. Fill up the jars with cold vinegar, tie them down and bake in rather a slow oven till the plums are tender, then tie down for use.

Cucumber Pickles.—Wash the cucumbers clean and place them in a stone jar. Cover with a brine made of one pint of salt to six quarts of water. The water should be boiling hot. Place grape leaves on top, weight down and let stand until morning. Pour the water off, rinse, then place alternate layers of grape leaves and the cucumbers in the pickling kettle. Pour over them alum water made of one teaspoonful of powdered alum to each quart of water; dissolve the alum in the water cold. After pouring it over the cucumbers, allow to come to scalding point. Let the whole stand closely covered, on the back of the stove for two hours, then drain and place in ice or very cold water. Pour this water off, wipe dry and place in a jar a layer of pickles and one of salt until all are in; allow about a pint of salt to each 100 medium-sized pickles. Pour boiling water over and cover with grape leaves. Heat this brine every morning for nine mornings. Then heat gently in warm, weak vinegar, wipe dry and place in glass jars. Pour over hot spiced vinegar and seal at once. The vinegar is to be prepared as follows: For each quart of vinegar (not too strong) allow two teaspoonfuls each of cinnamon and cloves, one teaspoonful each of mace and celery seed, a few thin slices of horseradish, an ounce of mustard seed, a saltspoonful of black pepper, a pinch of red pepper and a cupful of coffee A sugar. Put the spices in a thin muslin bag. Bring the vinegar to boiling point, add sugar and spices and let boil for 15 minutes; then pour over the pickles. Pickles made after this method never shrink or grow soft.

Pickled nasturtium seeds are an excellent substitute for capers, and they, with radish pods, make a nice relish for meats. Select the seeds as soon as the flowers have fallen off; gather them on a dry day. Spread in the sun for a few days, transfer to a jar, cover with well-spiced, boiling vinegar. Radish pods should be soaked in salt and water for three days; drain and cover with spiced vinegar.

Mustard Pickles.—Two red peppers, two heads cauliflower, two quarts silver skinned onions, one-half peck small cucumbers (gherkins), one pound brown sugar, three-quarters pound best mustard, three quarts vinegar, one-half ounce celery seed, one-half ounce white mustard seed, one dessertspoonful turmeric powder, one teaspoonful each cinnamon and cloves, five cents' worth mixed pickling spices. Put the cucumbers, onions and (picked) cauliflower to soak in salt water over night. In the morning drain; mix turmeric powder with dry mustard, wet with sufficient vinegar to mix without lumps; put remainder of vinegar over the fire, adding thereto the sugar, seed, spices, etc., carefully stir in mustard paste and let boil up well. Then add the mixed pickles (the peppers and seeds chopped), and stir all together. After it begins to bubble let boil well for five minutes; remove from the stove and put in jars.

Ripe Cucumber Pickles.—Thinly pare six ripe cucumbers, cut in halves lengthwise and scrape out the seeds, then cut into half-inch strips. Lay on a platter, sprinkle thickly with salt and let stand over night. Next morning drain and dry on a towel. From six large red peppers remove the seeds and cut in fine strips; also cut one root of horseradish into small pieces. In a stone jar pack the prepared cucumbers, peppers and horseradish, sprinkling through them one-half of a pound of white mustard seed. Pour over sufficient boiling hot vinegar to cover and set away. On the third day drain off the vinegar and arrange the pickles in glass jars. Bring the vinegar to the scalding point, pour over the pickles and cover them. In another week they will be ready for use, but will be better if allowed to stand for a month.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

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A. T. COOK (the Reliable Seedsman), of **Campton, N. Y.**, will send our readers his mammoth Pansy Collection, comprising seed of 50 Lovely Ever-blooming Prize varieties: Life-size Picture in 10 colors; Treatise on Growing Pansies; Useful Book on The Window Garden; and a 15c. Present—all securely boxed and postpaid for **ONE DIME**, or 12c. in stamps; 3 Collections for **25c.** This is special to our readers. The collection is a wonder, and really cheap at 5 times his price. Every wide-awake reader should order one. **Do not Get Left. NOW is the time to plant the seed.** Be sure and mention R. N.-Y.

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MARKETS

THE WEEK'S QUOTATIONS.

WHOLESALE PRICES.

NEW YORK, AUGUST 17, 1901.

GRAIN.—Corn has advanced 10 cents since last report, and other grains are up in sympathy with it.

Wheat, No. 2, red	—	@	79½
No. 1, Northern Duluth	—	@	81
No. 1, Northern New York	—	@	80½
Corn, No. 2, mixed, elevator	—	@	61½
Oats, No. 2, white	—	@	43½
Rye, No. 2, W'n, f. o. b., N. Y.	—	@	59½
Barley, feeding	—	@	52
Malting, new crop	—	@	63

BEANS AND PEAS.

Beans, Marrow, choice, per bu.	—	@3	00
Marrow, fair to good	2 60	@2	95
Medium, choice	2 50	@2	55
Pea, barrels, choice	—	@2	65
Pea, bags, choice	—	@2	60
Red kidney, choice	—	@2	55
Red kidney, common to good	2 10	@2	50
White kidney, choice	2 25	@2	30
Black turtle soup, choice	1 95	@2	00
Yellow eye, choice	—	@3	00
Lima, California	—	@4	60
Imported Giants, prime	2 90	@3	00
Imported, med'm, com. to fair	1 90	@2	10
Peas, barrels, per bu	1 30	@1	32½
Bags	—	@1	30
Scotch, barrels, per bu	1 40	@1	45

FEED.

Spring bran, coarse	17 50	@18	00
Winter bran	18 00	@18	50
Red Dog	19 50	@20	40
No grade flour	—	@21	00
Linseed meal, ton	—	@29	50
Cottonseed meal, ton	—	@24	60

HAY AND STRAW.

Hay, No. 1	90	@	92½
No. 2	80	@	85
No. 3	65	@	75
Clover	55	@	60
Clover, mixed	65	@	70
Straw, rye, long	70	@	85

SEEDS.

Clover, per 100 lbs	10 00	@11	25
Timothy, per 100 lbs	5 00	@ 5	50
Flaxseed, whole, per bu	6 50	@ 7	00
Millet, per lb	2	@	2⅛
Rape, German, per lb	3¼	@	3½
Sunflower, per lb	2¼	@	2½

MILK.

New York Exchange price at stations $1.21 per 40-quart can. This is the gross price, and from it must be taken cost of transportation and fees at receiving stations where such charges are made.

BUTTER.—Offerings more plentiful and market easy. A few out-of-town orders and a little speculative buying are reported.

Creamery, extra, per lb	—	@	20½
Firsts	19	@	20
Seconds	17½	@	18½
Lower grades	16	@	17
State dairy, tubs, fancy	18½	@	19
Tubs, firsts	17	@	18
Tubs, seconds	16	@	16½
Tubs, thirds	14	@	15
Tins, etc	14	@	18
W'n imitation creamery, fancy	16½	@	17½
Firsts	15	@	16
Lower grades	14	@	14½
W'n factory, June, finest	15	@	15½
Current packed, best	—	@	14½
Fair to good	13¾	@	14
Lower grades	12½	@	13½
Renovated butter, fancy	17	@	17½
Common to choice	14	@	16½
Packing stock	12	@	14

CHEESE.

NEW.

Full cream, colored, small, fcy.	9½	@	9⅝
Colored, small, good to chce.	9¼	@	9⅜
White, small, fancy	9¼	@	9½
Small, white, good to choice.	9	@	9⅛
Colored, large, fancy	9⅜	@	9½
Colored, large, good to chce.	9	@	9¼
White, large, fancy	—	@	9¼
White, large, good to choice.	8⅞	@	9⅛
Common	7	@	8
Light skims, small, choice	8¼	@	8½
Large, choice	—	@	8
Part skims, prime	6½	@	7
Fair to good	4½	@	6
Common	3	@	4
Full skims	2	@	2½

EGGS.—Receipts moderate. Quality is showing some improvement, yet the supply of high grades is still short, and dealers are drawing on the refrigerators.

QUOTATIONS LOSS OFF.

State & Pa., avge. prime, doz.	17	@	18
W'n, fresh-gathered, chce, doz.	—	@	17

QUOTATIONS AT MARK.

Nearby, State & Pa., fresh-gathered, fcy selected, doz.	19	@	20
Prime to choice	16	@	18
W'n, refrigerator, per doz	14	@	17½
Fresh-gathered, N'th'ly sections, candled, selected	13	@	16½
Reg. packings, N'th'n sect'ns.	10	@	15
Graded, Southerly sections	10	@	12
Reg. packings, S'th'ly sect'ns.	9	@	11
Very inferior, per case	1 50	@2	40
Fresh-gathered, dirties	8	@	11
Checks	6	@	8
Inferior culls, per case	1 25	@1	50

LIVE STOCK.

Steers	4 30	@5	50
Bulls	2 40	@3	50
Cows	1 50	@3	45
Veal calves	5 00	@7	65
Buttermilks	3 25	@4	00
Sheep	2 00	@3	50
Lambs	4 00	@6	00

LIVE POULTRY.—Chickens in good demand. There is a surplus of fowls.

Spring chickens, W'n, 4 lbs. & over to pair, per lb	—	@	13½
Far W'n, Southern & Southwestern, er lb	—	@	12½
Fowls, per lb	—	@	9½
Roosters, per lb	—	@	5½
Turkeys, per lb	—	@	9½
Ducks, average W'n, per pair	50	@	75
Average Southern, per pair	40	@	50
Geese, average W'n, per pair	1 00	@1	12
Average Southern, per pair	80	@	90
Pigeons, per pair	15	@	20

DRESSED POULTRY.—There is a good demand for Western Spring chickens and Spring ducks, but an accumulation of fowls, which sell slowly.

FRESH PACKED—ICED.

Turkeys, W'n, hens, small	7	@	8½
Western, toms	—	@	7
Broilers, Phila., over 4 lbs. to pair, per lb	18	@	20
Phila., mixed sizes, per lb	16	@	17
Penn., fair to good, per lb	11	@	15
Western, dry-picked, per lb	13	@	14
Western, scalded, per lb	—	@	12½
Small, dry-picked or scalded, per lb	10	@	12
Fowls, W'n, dry-picked, prime	—	@	9½
Western, scalded, prime	—	@	9
Western, poor to good	7	@	8½
Southwestern, prime	—	@	9
Old roosters, per lb	5	@	5½
Ducks, Spring, L. I., and other nearby, per lb	—	@	13½
Western	7	@	9
Geese, Spring, Eastern	13	@	16
Squabs, choice, large, dark	—	@2	25
Mixed, per doz	1 75	@1	87
Dark, per doz	1 25	@1	50
Culls, per doz	50	@1	00

FROZEN.

Turkeys, young hens, No. 1	11	@	11½
Mixed young hens and toms, No. 1	10½	@	11
Young toms, No. 1	—	@	10½
No. 2	7	@	9
Broilers, dry-picked, fancy	18	@	20
Scalded, fancy	—	@	14
Chickens, fancy, soft-meated	12	@	13
Average, No. 1	—	@	10
No. 2	7	@	9
Fowls, dry-picked, No. 1	—	@	10
Capons, fancy, large	15	@	16
Medium sizes	13	@	14

DRIED FRUITS.

Apples, evaporated, fancy, lb	—	@	9
Evaporated, choice, per lb	—	@	8½
Evaporated, prime, per lb	7¾	@	8
Evaporated, com. to good, lb.	5	@	7
Sun-dried, State and Western, qrs., per lb	4½	@	5½
Chops, per 100 lbs	1 25	@2	00
Cores and skins, per 100 lbs	1 25	@2	00
Raspberries, evap'rat'd, 1901, lb.	—	@	22
Sun-dried, 1901, per lb	18	@	20
Blackberries, 1901, per lb	—	@	5½
Huckleberries, 1901, per lb	—	@	12
Cherries, per lb	—	@	12

FRESH FRUITS.

Apples, Red Astrachan, h-picked, double-head bbl.	2 00	@	3 00
Duchess of O, hand-picked per bbl	2 50	@	3 50
Alexander, per bbl	2 00	@	3 00
Gravenstein, per bbl	2 00	@	3 00
Nyack Pippin, h-p, bbl	2 00	@	3 50
Sour Bough, h-picked, bbl.	2 00	@	2 75
Sweet Bough, h-p, bbl	2 00	@	2 75
H'd-picked, open-head bbl.	1 50	@	2 75
Windfalls, per bbl	75	@	1 25
Pears, Le Conte, S'n, bbl	1 00	@	4 00
Kieffer, Southern, per bbl.	1 50	@	3 00
Bartlett, per bbl	2 50	@	3 50
Bartlett, per crate	—	@	1 00
Bell, per bbl	2 00	@	2 75
Clapp's Favorite, per bbl.	2 50	@	3 50
Nearby, common, per bbl.	1 50	@	2 50
Peaches, Ga. & Ark., carrier.	1 00	@	2 00
Md. & Del., per carrier	50	@	1 25
Md. & Del., per basket	25	@	1 00
Jersey, per basket	25	@	75
Plums, per 8-lb. basket	20	@	25
Grapes, S'n, Niagara, car'r.	75	@	1 75
S'th'n Del., per carrier	1 00	@	2 00
S'n Moore's Early, car'r.	75	@	1 50
Huckleberries, Maryland, qt.	4	@	8
Jersey, per qt	5	@	9
Pa. & State, Mountain, qt.	6	@	10
Blackberries, up-river, cultivated, large, per qt	7	@	12
Jersey, large, per qt	6	@	10
Up-river & J'sy, small, qt.	4	@	8
Watermelons, per carload	100 00	@200	00
Per 100	10 00	@ 20	00
Muskmelons, Md., Del. & Va., per carrier	50	@	1 75
Md., Del. & Va., ½-bbl. bk.	50	@	1 25
Md., Del. & Va., crate	50	@	1 75
Norfolk, per bbl. crate	50	@	1 00
Norfolk, small crate	25	@	75
Jersey, per bbl	75	@	2 00
Jersey, per ½-bbl. box	50	@	1 75
Jersey, per bushel box	50	@	1 25

VEGETABLES.

Potatoes, L. I., per bbl	3 00	@3	75
Jersey, per bbl	3 00	@3	75
Southern, prime, per bbl	3 00	@3	75
Common, per bbl	1 50	@2	50
Sweet potatoes, yellow, bbl	3 00	@4	50
Red, per bbl	2 50	@3	50
Beets, Jersey, & L. I., 100 bchs.	—	@1	00
Celery, State & W'n, doz. roots.	10	@	40
Carrots, L. I., 100 small bchs	—	@1	00
Corn, Jersey, per 100	50	@1	25
Cabbages, L. I., Flat Dutch, 100.	3 50	@4	50
Cucumbers, Jersey, per box	25	@	35
Pickles, per 1,000	75	@1	50
Eggplants, Jersey, per bskt	75	@1	00
Jersey, per bushel box	50	@	75
Green peas, W. N. Y., bskt	2 00	@2	75
Lima beans, S'th'n, Potato, bk.	3 00	@3	50
Southern, flat, per basket	1 50	@2	00
Lettuce, W'n N. Y., per case	1 50	@3	00
Boston, per case	1 50	@2	00
Onions, S'n, per basket	1 00	@1	50
Conn. & East., yellow, bbl	2 00	@2	50
Conn. & Eastern, red, bbl	1 75	@2	25
Orange Co., white, per bag	2 50	@3	00
Orange Co., yellow, per bag	1 75	@2	50
Orange Co., red, per bag	1 25	@1	75
Jersey & L. I., red, per bbl	1 50	@2	25
Jersey & L. I., yellow, bbl	1 50	@2	50
Jersey & L. I., white, bskt	1 00	@1	50
State, per double-headed bbl.	—	@2	00
Peppers, Jersey, per bbl	1 00	@1	75
Jersey, per crate	40	@	60
Squash, yellow, per bbl	75	@1	00
White, per bbl	50	@	75
Marrow, per bbl	75	@1	25
String beans, W'n N. Y., green, per bag	1 00	@1	50
W'n N. Y., wax, per bag	75	@1	25
Boston, green, per bu. box	1 00	@1	25
Boston, wax, per bu. box	75	@1	00
Turnips, Jersey, Russia, box	—	@1	00
Tomatoes, upper Jersey, box	1 00	@2	25
South Jersey, Acme, box	1 25	@2	00
South Jersey, Stone, box	1 00	@1	50
South Jersey, Grant, box	75	@1	00

Book on Window Gardening Free.

It is a treasure. Don't miss it. Given free with the 10c. Pansy Collection offered on p. 587.—*Adv.*

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BUSINESS BITS.

WE know of no farm implement that has worked its way faster or more securely in general favor than the low-down wagons. The longer one has them the more uses he finds for them. They simply save labor for man in loading and unloading, and their broad tires makes draft lighter for the team. We are just in receipt of a nicely illustrated catalogue of the Electric Wheel Company, Quincy, Ill., showing many of the uses to which the low-down wagons are put, and something of the construction of their particular make. It will be sent you free, if you care to see it, and are interested in it.

PROBABLY the most remarkable advance of late years in agricultural practice is the increased feeding value lately given to the cornstalk. It has long been known that the stalk contained nearly or quite as much nutriment as the ear, but it has been impossible to utilize it. Machines for harvesting, fining and baling the stalk were needed before its great value could be realized. Now the McCormick corn harvesters and huskers and shredders have solved the problem, and surely made corn the king of grains. It always was in beauty, and now it is in economy. "King Corn" is the suggestive name of a pamphlet sent free by the McCormick Harvesting Machine Co., Chicago, Ill.

FROM now on to the end of September visitors to the Pan-American Exposition at Buffalo may see one of the 1901 Ohio self-feed silage cutters and new metal backed swivel carriers at work. It is used to cut green cornstalks for the different breeds of cows that are there under official test. About the middle of September a new Ohio Monarch self-feed ensilage cutter and new direct blast blower elevator will be used to fill a Green Mountain silo at the same place. These machines are both new, and this will give those who expect to attend the Exposition an excellent opportunity to witness and examine these machines and see them running under actual conditions, and this has special reference to the 1901 Ohio Monarch and blower elevator, inasmuch as this is its first season. These machines are made by the Silver Mfg. Co., Salem, Ohio, and the superintendent on the grounds will explain anything in reference to their work.

Alfalfa in Western New York.

I would seed in the Spring alone if possible. Prepare the ground thoroughly as for oats, and seed early. Keep the weeds down by running the mowing machine over the ground from time to time as needed, the first year. Alfalfa is a success here in western New York. My plot of five acres, seeded in the Spring of 1900, has cut two crops thus far this reason, and is good for one more. The stand was not a good one owing to the dry season of 1900, but the crop improves with good care and is making a good showing for itself. I shall seed another 10 acres to Alfalfa as soon as the piece can be made ready. I am heartily in favor of it. See that the ground is well prepared and moderately rich. Then sow from 15 to 20 pounds of seed to the acre with a seeder, and after the first season, from three to four crops can be cut each year of the best kind of hay. Stock eat it freely. M. ST. J.
Orleans Co., N. Y.

BORDEAUX ON POTATOES.—I did not use Bordeaux Mixture this year; have used it a number of times in years past, and found that it paid about one time in 10. Other growers that have used it have come to about the same conclusion, and but very little spraying for blight is now done in this section. Almost every farmer has a spraying outfit run by sprocket chain with two horses, and could easily use Bordeaux Mixture with his Paris-green if he wished. I think the potatoe crop of this section will be short next Fall on account of drought, and the terrific heat. The Rural New Yorker is the only variety, and I might say the only green plant, that has not wilted and in most cases dried up, during the past three weeks of 96 to 106 degrees of temperature. The Carmans are wilting badly every day, but revive somewhat during the night. E. H. CURRIER.
Wisconsin.

Pulmonary Consumption can be cured in its incipiency with Dr. D. Jayne's Expectorant. Of that there is no doubt; indeed, numbers of persons testify to having been cured by this remedy after the disease had reached an advanced stage. IT HEALS THE LUNGS.—*Adv.*

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Farm Managers, Gardeners, Buttermakers, etc., always on hand. No charges to employers. Write us Rural Science Agency, Durham, N. H.

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New Descriptive List quoting prices, FREE. Address E. H. KISTLER, Farm Broker, Warren, O.

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Residence or Business Property may be obtained through me. No matter where located. Send description and selling price, and learn my successful plan. W. M. Ostrander, North American Bldg., Phila., Pa.

FARMS FOR SALE
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Specialties:
APPLES and PEARS.
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GEO. P. HAMMOND & CO.,
Commission Merchants and Dealers in all kinds of COUNTRY PRODUCE, Apples, Peaches, Berries. Butter, Eggs, Cheese, Poultry. Mushrooms and Hothouse Products a Specialty. Consignments solicited. 34 & 36 Little 12th St., New York.

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Properly prepared, the swamp becomes the most valuable part of the farm. Our long experience in this business enables us to supervise the construction of successful bogs. In pieces of 10 or more acres will take a small interest in part-payment of services. Terms on application.
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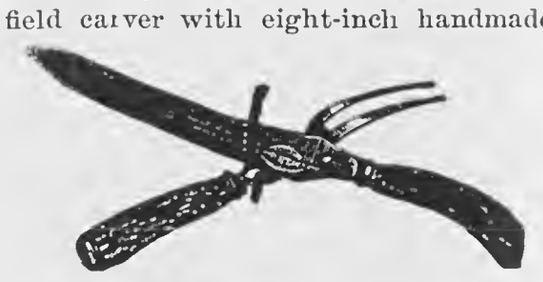
RAMS—A choice lot of Delaine and Black-Top Rams and Ewes to select from, will be sold cheap. Correspondence solicited. M. C. MULKIN, Friendship, N. Y.

A Carving Set.

Every family needs a carving set three times a day. This set consists of a Sheffield carver with eight-inch handmade



steel blade, buckhorn handle, fork and steel. Price, $1.90; or we will send it for a club of two new subscriptions at $1 each and $1.25 extra money, or free for a club of six at $1 each.

A Darning Machine.

This is the only successful darning machine we ever saw. We have tried others that were absolutely of no value. This one is little short of perfect. It enables you to mend underwear, stockings, curtains, table linens, clothing, and does an endless variety of art and fancy weaving better, easier and quicker than

by any other way. Full directions accompany each machine. When a lady has once used this little machine, she would not do without it for any consideration. We will send it postpaid for $1, or for two new yearly subscriptions at $1 each. All money returned if not satisfied.

Dietz JUNIOR Lantern Cold Blast.
For Kerosene.

A little smaller than the usual "Blizzard" Lantern, to supply a demand for a handy tubular lantern that shall give a good, full light and stay alight in any wind. But 12 in. high; weighs 26 oz., and holds enough oil for 13 hours continuous use. You fill, light and regulate the Junior without removing the globe, as the little lever at the side raises the globe to light, and locks the globe down on the burner. It is made with a round top oil pot, and is the handsomest tubular lantern made and absolutely safe.

Ask your dealer for Dietz Junior. If he hasn't it or won't get it, send us $1. and we will send you one all charges prepaid, safe delivery guaranteed. That illustrated Catalogue of ours will be sent you free on request.

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BOOK BULLETIN

FOR SALE BY THE RURAL NEW-YORKER

FERTILIZERS, by E. B. Voorhees. The source, character and composition of natural, homemade and manufactured fertilizers, and suggestions as to their use for different crops and conditions. Price, postpaid, $1.

FEEDS AND FEEDING, by W. A. Henry. A discussion of plant growth and animal nutrition; feeding stuffs and their effects upon farm animals, rations for fattening and milk production; and numerous tables, giving complete results of feeding experiments; 657 pages. Price, postpaid, $2.

CUT-PRICE BOOKS.—Any of these 20-cent pamphlets sent postpaid for 10 cents:

How to Plant a Place.
Accidents and Emergencies.
My Handkerchief Garden.
Chemicals and Clover.
Country Roads.
Fruit Packages.

THE RURAL NEW-YORKER,
409 Pearl St., New York.

MARKET NOTES

BOOM IN CANNED GOODS.—One of the effects of the drought in the West, which cut short fruits and vegetables, is the unprecedented demand for canned goods, and their consequent rise in price, 25 to 40 per cent in some cases. The New York market for canned goods is more active than for eight or 10 years. This is because western dealers are buying so largely, not only for present, but future delivery, as there is no sign of any let up in the demand this season. Tomatoes, corn and apples are the goods most affected.

FRUIT NOTES.—Southern peaches are at their best and selling well. I have noticed a few from Jersey and nearby, but they were mostly small, green and inferior, and stand but little chance in competition with the flood of fine southern fruit. Anyone having early apples of fair quality to ship will do well to send them on, but by all means leave the worthless little gnarly ones at home, for there are too many of this kind here now, that no one wants. The continued warm weather has made a good season for watermelon men, and prices remain high. From noticing those piled up in front of the stores day after day, I judge that more small melons than usual have been received. Muskmelon receipts are light, and the better grades are selling well. Grapes are of such inferior quality that they go slowly. I noticed Niagaras offered at 25 cents per four-pound basket, but few people will buy poor grapes at a high price while there are plenty of good peaches. A great variety of pears are seen. A few nearby Clapp's Favorite are bringing $3 to $3.50 per barrel, but for any except prime pears are not selling nearly so well as apples.

POTATO PRICES.—The figures at which potatoes have sold in some markets during the past week are surprising. From Boston and other large New England cities come reports of $5, or even more, per barrel. At New York prices remain about the same as last week, and at this writing the demand is slow. There appears to be no doubt that the crop in the East and Central West, with here and there local exceptions, is light, but whether it is short enough to sustain extravagant prices is a question. There is a limited number of people who will have potatoes anyway, no matter what they cost, and with them the same is true of any other necessity or luxury. But they form only a small fraction of the potato eaters of this country. A great many have to do close figuring in order to make income cover expenses, and it is doubtful if they will say yes to a retail price of $5 or $6 per barrel for potatoes for very long. They are quite likely to eat more bread and to substitute rice and other cereals for the tubers. Of course, one who has a fair quantity of potatoes for sale in a season of scarcity naturally wishes to get all he can out of them, but there is a chance of getting his ideas up too high. There is no doubt that some of this class will dream of $7 or $8 per barrel, carry the crop through until Spring, with all the extra trouble of sorting and handling, and then sell at a figure, which, taking the shrinkage into consideration, will be less than could be had now. Holding a perishable product for high prices is uncertain business, and the man who practices it year after year will find that loss as well as gain enters into the transaction.

W. W. H.

Beautiful Watches for Boys and Girls.
Easily obtained. Particulars and outfit is included in the 10c. Pansy Col. offered on p.587.—*Adv*

PAN-AMERICAN EXPOSITION NOTES.

Some of the Agricultural Exhibits.

PART II.

MICHIGAN has a very handsome display, especially of cereals, seeds and forage crops. It is got up in beautiful style, these different products having been used with good taste, and anyone who passes by will feel well pleased with the effect. There is also a fine display of wool.

MISSOURI has one of the best exhibits in the building. There are cereals in abundance, both in the straw and in the grain. There are a number of farm baskets, each filled with large ears of a variety of corn which is characteristic in the size of the ears, depth of grain, etc., a part at least of one ear of each kind being shelled to show the proportion of grain and cob. The wools of Missouri are shown to good advantage. The Angora goat industry is shown by illustrations, and there is also a nice display of mohair taken from several of the flocks. There is quite a nice display of cotton, which is grown to some extent in that State.

OREGON is represented with a very fine agricultural display. One thing which may not at first sight seem very attractive is a relief map made by Prof. Shedd, one of the best scientific scholars in the West, which shows all of the mountains, lakes, rivers, valleys, table lands, in fact, the entire State just as nature has made it. From this map one can get an excellent idea of the proportion of mountain lands to those of the valleys and plains, and the different elevations of each, and in some degree can form an idea of the soils and other physical characteristics. There are cereals, both in the straw and in the sack and in manufactured forms, and also an extensive exhibit of the same in the straw showing hundreds of varieties of wheat, oats, barley, etc. Corn does not appear prominently, although it is grown to some extent in Oregon. Macaroni and other like products made from wheat are shown in excellent condition—the wheat of that State being very suitable for this purpose. The display of wools is not only very extensive, but beautiful, especially the scoured wools from the mills at The Dalles. One of the statements made in connection with the wool exhibit is that Oregon has 2,500,000 sheep, which produce annually 28,000,000 pounds of wool and furnish 1,000,000 pounds of mutton annually, which is shipped to eastern markets. There is a beautiful display of hops from the famous Willamette Valley, where hop growing is carried on extensively. One rather peculiar product is pine-needle fiber, which is made into pillows, mattresses, etc., making an excellent substitute for hair and other material of this character. It has a peculiar fragrance which is very pleasant, and in addition to this there is an essence made which is shown in bottles, in condition to be used for inhaling, and also in the bath tub, as it has medicinal properties, as well as giving forth a delightful fragrance. The clams which are so abundant along the sea coast are shown in jars, and also the famous salmon from the Columbia River. There is also a beautiful painting of Mount Hood and its surroundings, placed conspicuously, which is a delight to every one who visits the Oregon exhibit.

ILLINOIS has mainly a corn exhibit. There are 42 different articles shown as being made from this grain, including hominy, grits, meals, starches, syrups, dextrine, etc. There is a corn oil which is used in making salads as a substitute for olive oil. It is also used in the manufacture of paints the same as flaxseed oil, to which it is said to be superior, although it is also somewhat more costly than the latter. Another product is a gum, like gum arabic, which is used for the same purpose. There is a rubber which is quite elastic, but not equal to the tropical rubbers. It requires mixing with these in order to make a good manufactured article of rubber goods. Another very remarkable product is called saccharine, which is 300 times sweeter than sugar. The whole arrangement of the Illinois exhibit is very fine, although it is made principally from corn. There are two large pictures showing farm scenes, which are made from the natural products of the farm. Illinois has done well in the Agriculture Building.

RHODE ISLAND has an exhibit such as we might expect from that little State, there being nothing whatever of agriculture, but only the oyster, clam and fisheries industries. It is well got up and instructive to anyone who will give it attention.

WISCONSIN has a very plain display of seeds and cereals in jars, with no attendant to explain things to the visitors, and they must judge for themselves about the exhibits. This is in great contrast to nearly all the other exhibits in the Agriculture Building.

MINNESOTA has a beautiful and picturesque display of grains and grasses principally. There is an old-fashioned corn crib, reminding one of old times on the farm. This State has not only a comprehensive farm exhibit, but one which is very pleasing to the eye.

NORTH DAKOTA has grains and grasses well displayed in their different conditions. There are many beautiful characteristic photographs of farm scenes, and a very large painting of some of the giant reapers in operation in one of the great wheatfields.

NEW HAMPSHIRE has an extensive display of the old-fashioned Yankee corn in its different varieties. There is also an extensive collection of popcorn, which is very attractive and instructive. Maple sugar and maple syrup are prominently shown, perhaps better than in any other State exhibit.

H. E. VAN DEMAN.

APPLE SHIPPERS' CONVENTION.

The annual meeting of the National Apple Shippers' Association was held at Toronto, Canada, August 7. J. W. Robertson, Canadian Commissioner of Agriculture, spoke on apple growing in the Dominion, and following are extracts from his address:

"Apple culture requires special knowledge and training. Many of the ignorant resort to books for their knowledge and purchase all sorts of varieties of apples. I have heard of one man who has six hundred varieties on his farm. From 12 to 20 varieties are all that should be grown in any particular district. They could then be grown to advantage, would speedily make a name and secure a better market. Canadians have been losing in the English markets by having too many varieties, and shippers might do much good by talking to the farmers and informing them what varieties are required. Too often the education of the grower is left to the college professor, whose pride it is to tell 150 varieties at sight and whose information is of no use to the grower in making money. The apple shipper should give exact information to the grower. The apple business in Canada has suffered severely from the faults of packing. 'What a thundering set of rogues you must be in Canada,' was once remarked to me in England, in reference to the practice of facing the barrels at top and bottom with good apples, and filling in with rubbish. Two special commandments for the apple man should be: 'Thou shalt deliver goods as they are represented to be,' and 'Thou shalt deliver them in the best possible condition.'"

George T. Powell, of New York, spoke on the possibilities of apple culture in the United States. He said that "Experience has shown that certain varieties are adapted to certain localities, and should be confined to them. The finest flavored apples are found in the belt extending from Nova Scotia through the New England States, reaching to Michigan, and taking in New York and north Ohio and a part of Illinois. The Northern Spy does not grow to perfection outside New York, Canada and Michigan. Growers should depend upon the varieties originated in their own soil and climate."

Charles Forster, of New York, read a paper on apple exportation. He showed that the past year was an exceptionally heavy season for the export shippers, the trade having shown an unusually large increase over the previous year. Canadian exporters shipped about 700,000 barrels of apples to the European markets, 280,000 barrels of which were exported from Nova Scotia. In the United States the New England States have become the leading center for exporting apples to the English markets. The total exports from New York, Boston and Portland were 805,000 barrels. Other addresses were made by D. S. Beckwith, of New York; C. H. Williams, of Illinois, and W. H. Barnes, of Kansas. The press committee reported the following as the indicated percentages for this year's yield: Ontario, 35 per cent; Nova Scotia, 75; New England, 25; New Jersey, 25; Pennsylvania, 40; New York, 20; Maryland 50; Virginia, 65; West Virginia, 65; Kentucky, 35; Tennessee, 35; Ohio, 40; Michigan, 30; Indiana, 40; Illinois, 40; Missouri, 45; Arkansas, 50; Kansas, 45; Nebraska, 45; Iowa, 25; Colorado, 85; Wisconsin, 15; California, 90; Oregon, 80; Washington, 80; general average, all sections, 46.

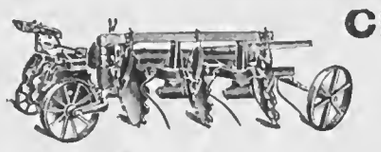
A USE OF MANURE.—Director Thorne, in a recent bulletin from the Ohio Station, mentions one use of manure not understood by all: "When a piece of marshy land has been drained it is often found that the crops planted upon it fail to thrive, although it seems to be very rich in nitrogen. The remedy here is to add barnyard manure, something which savors strongly of carrying coals to Newcastle; but the explanation is that the semi-aquatic vegetation which formerly occupied the land decays so slowly that cultivated crops cannot get nitrogen rapidly enough for their needs. When the manure is added, however, it sets up a fermentation which converts the nitrogen-bearing materials into a more soluble, and hence available form."

DR. PIERCE'S GOLDEN MEDICAL DISCOVERY

"I have been thinking of writing to you for some time," writes Mrs. W. D. Benson, of Maxton, Robeson Co., N. C., "to let you know what a wonderful thing Dr. Pierce's Golden Medical Discovery did for my little boy. He was taken with indigestion when he was a year and a half old, and he was under the doctor's treatment for five long years. We spent all we made for doctor's bills, and it did no good. He could not eat anything only a little milk and cracker, and sometimes even this would make him sick, and he got very weak; could not sit up all day, and I gave up all hope of his ever getting any better. Looking over one of your books I noticed Dr. Pierce's Golden Medical Discovery recommended for indigestion. We bought some and gave to our boy. Two bottles of Dr. Pierce's Golden Medical Discovery cured him. He is well as can be, and can eat anything that he wants and it does not hurt him. He has not been sick a day since, and it has been three years since he took your medicine. I pray that God will always bless you and your medicine."

FOR DISEASES OF THE STOMACH, BLOOD, NERVES AND LUNGS.

FENCE WIRE AT WHOLESALE
Send for price-list and free catalog of Wire Fences & Supplies. W. H. MASON & CO., Leesburg, Ohio.



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Sizes 2 to 8 feet wide or more for horse or steam power. TRASH CUTTER, perfect turner, light draft, strong, durable and cheap. *Made Only by*
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Send for Circulars.

DON'T DIG Potatoes by Hand.
It is a slow and expensive way. The cheapest, quickest and easiest way is to
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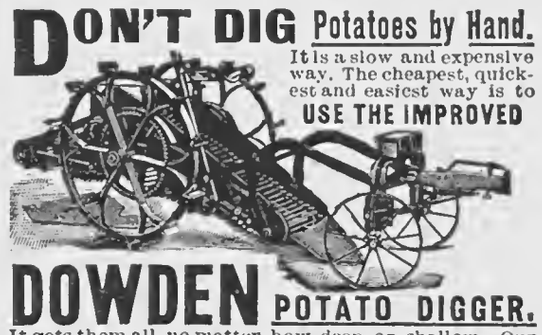

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Over 70 sizes and styles, for drilling either deep or shallow wells in any kind of soil or rock. Mounted on wheels or on sills. With engines or horse powers. Strong, simple and durable. Any mechanic can operate them easily. Send for catalog.
WILLIAMS BROS., Ithaca, N. Y.

SHOO-FLY The Animal's Friend
Kills every fly it strikes; keeps off the rest. Harmless to man or beast. ½ cent's worth saves 3 qts. milk and much flesh. Send $1.00 for Improved Sprayer and enough Shoo-Fly to protect 100 cows, or 25 cents for liquid alone. Guaranteed.
SHOO-FLY MFG. CO., 1005 Fairmount Ave., Philadelphia, Pa.

Gold-Shell Rings.

Most people like a nice ring. We show three styles. These are made by drawing a shell of gold over a rod of composition metal. They are better and will wear longer than solid gold rings of a low carat. The retail price would be from 75 cents to $1. We will send one of these rings postpaid as a reward for sending one new subscription at $1. Cut a slip of paper the size of finger and send for size.

Live Stock and Dairy

Ailing Animals.

ANSWERS BY DR. F. L. KILBORNE.

Colic Mixture for a Horse.

Will you advise a good safe remedy to keep handy in the barn in case of colic in a horse? We had a horse die last Summer from colic, and we have one now that I think is subject to it. A. M. H.

Flemington, N. J.

One ounce each of sweet spirits of niter, sulphuric ether and extract Jamaica ginger, to be given in a pint of cold water, and repeated hourly until relieved, or the veterinarian arrives.

Cow Suspected of Tuberculosis.

I have a cow that coughs a good deal; one side of udder cakes sometimes. She has a good appetite and is in good flesh. What can I do for her? T. J. B.

Beverly, W. Va.

The brief symptoms you describe are strongly suspicious of tuberculosis. Have the cow examined by a qualified veterinarian, and if necessary, submitted to the tuberculin test for tuberculosis.

Lice on Pigs.

I have two sows (one with pigs) running in an orchard, and they are covered with lice or ticks. The insects are round flat things, and very lively. I have tried insect powder, but it did no good; also tried alcohol, which killed some, but does not seem to clean them out. What can I do to get rid of them? C. B. H.

New Haven, N. Y.

Sponge the pigs all over with a mixture of kerosene emulsion, or of kerosene in six to eight parts of water. The emulsion is preferable to the kerosene alone, on account of its mixing more readily with the water. However, when you have but a few animals and do not wish to go to the trouble of making the emulsion, the kerosene can be used, if it is kept well mixed with the water. Repeat the application every five or six days until the lice disappear. Two or three applications should be sufficient.

Warts on a Heifer.

I have a Holstein heifer that will be two years old this Fall. She has a great many warts on her body, also a large one on the udder that may interfere with her being milked. Is there any remedy for them? She is in fine condition and a hearty feeder; not a wart on her dam.

Ancram, N. Y. C. L. B.

Rub the warts freely twice daily with pure vegetable castor oil (to be obtained of your druggist) and continue for at least four weeks. Any large warts that have a well-marked neck can be more quickly removed by tying an elastic band tightly around the base of the wart and allowing it to slough off. As soon as the wart drops off cauterize the raw surface with a stick of nitrate of silver, after which dust daily with iodoform, oxide of zinc or other antiseptic powder until healed.

Calomel for Lice on Calves.

Last Spring a druggist recommended me to use calomel to remove lice on calves. It was dusted on the two calves, and in a few weeks one died bleeding at the nose—feces like tar. In a few weeks more the other one died and its internal organs were examined. Its stomach and bowels were ulcerated. I asked the druggist whether the calomel could have caused the deaths, but he said it could not possibly have done so. The only directions he gave were: "Dust this on them and work it well into the hair." What is your opinion? If the calomel caused the loss, would the druggist be responsible?

Pennsylvania. H. C. Y.

The mercurous chloride or calomel is a powerful drug, and not a safe remedy to use freely on calves for lice. They would be liable to lick off too much of the drug, and might become poisoned. If the calves died within two or three weeks after the use of the calomel, or if they were sick within this time and died later, it is quite probable that the calomel may have been the cause of death. But if they died later, without being ill in the meantime, death was probably due to some other cause. Even if the calves were poisoned by the calomel, it would be very difficult to prove it so as to make out a case for damages, unless the organs were submitted to a chemical examination, showing the presence of the calomel in poisonous quantities. Your experience shows the necessity of using or administering powerful medicines only under the direction of a competent practitioner. It was either inexcusable ignorance or gross carelessness on the part of a drug clerk to prescribe the use of calomel on calves for lice, without advising you of the danger of using it too freely.

BETTER QUALITY OF MILK.

Will It Pay the Farmer?

There seems to be a growing demand, at a slightly increased price to the producer, for a milk richer in butter fat. This tendency is felt most in those places producing milk for retail trade, but is by no means confined to that part of the business. Our correspondence, which is mainly with milk producers, clearly indicates that something beside the satisfaction incident to owning a purebred bull is impelling farmers to buy that sort of animal to head their herds. Indeed, we have sold a great many of our best bull calves to farmers and creamery men to grade up their herds. CHAS. H. ROYCE.

Dutchess Co., N. Y.

Nearly all of the creameries in this State are buying milk on the basis of the per cent of butter fat, and the producers of milk are therefore paid according to its value. The policy of recognizing the distinction between good and inferior milk has become almost universal. At the college creamery, where we purchase between 15,000 to 25,000 pounds of milk daily, the price is governed not only by percentage of butter fat, but by its condition as to wholesomeness, freedom from taint, and other qualities as well. There is then every encouragement to the milk producer to select, breed and feed for good milk; at the same time keeping economy of production prominently in mind.

[Prof.] C. F. CURTISS.

Iowa Exp. Station.

"Farmers and dairymen are advised to grade up their herds of cows in order to produce a better quality of milk." I hold that this is good advice. I believe it is the universal custom of all creameries to purchase milk on the basis of the butter fat contained. The general proposition is, whether a farmer sells his milk direct to consumers or to the creameries, or makes butter for sale, that it is good policy to produce his milk from purebred dairy cattle, for the reason that he gets a larger product with the greatest economy of feed, and by reason of the increased secretion of butter fat gets a higher price for his milk. I believe the time is rapidly approaching when no dairy farmer can succeed with scrub cows in combination with purebreds. GUY C. BARTON.

Nebraska.

We do not think that dealers are willing to pay a fair price for rich milk, but have found that the consumer is willing to pay a better price for milk of a superior quality. We have had frequent remarks made about the sweetness of our Jersey milk over ordinary milk, as well as commendation for improved quality of cream as well as the richness. A bottle of my milk taken out of that which had been prepared for morning delivery without selection for quality, showed by analysis (of our State College) butter fat 4.8 per cent and solids of nearly 14½ per cent. We believe that if milk is properly handled, aerated and cooled, customers will pay more money for rich milk than they will for milk of poorer quality. Personally, we believe that there is not enough attention paid to the percentage of solids in milk, and also to the feeding of the cattle for digestibility of milk. Certainly milk can be changed to a certain extent in that particular. R. F. SHANNON.

Pennsylvania.

Is it practicable for dairymen to sell rich milk at an improved price? Yes, if the price is enough in advance over the ordinary to repay for the extra quality of cattle kept and extra cost of the best feeds to insure the best quality of milk. Eight cents per quart at least should be received for a better quality of milk than the present standard demands. As to whether milk dealers are inclined to pay for milk on the basis of per cent of butter fat, when the milk is flush they drop the milk of the one furnishing the poorest quality. In this way the producer of the best milk has the best of it. The question is asked whether there is practical inducement for the average milk farmer to improve his herd by the use of good Jersey or Guernsey bulls. If he is peddling milk direct from his own farm there is, as he is brought in direct contact with the consumers, some of whom are willing to pay for quality, and he can in time pick a route of such, but it takes time and costs money. Milk buyers are recognizing the fact that there is a great difference in the quality of milk, but they are not going to pay for it if it can be avoided, preferring to force it by State laws, and pay as little as possible. The wholesale milk dealer will not offer cash or practical inducements for an improved quality of milk if he can avoid it. J. B. B.

Massachusetts.

A Talk About Milk Handling.

We who ship our milk to New York are very careful and cleanly in our milking, and strain through patent strainers that are set in the top of our 40-quart shipping can, and to insure thorough straining we put on the bottom of strainer, fastened by rim made for the purpose, three thicknesses of fine cheesecloth, which takes out every particle of sediment. A simple wire strainer, no matter how fine the wire, will not remove all of the dirt. As soon as a can is full we place the can in ice water, each and every one, and keep it as low a temperature as ice will make it until the hour for daily shipment arrives. Milk should be stirred at intervals three times, say 10 minutes apart, to take out animal heat as soon as possible, which makes it sweeter and better.

Most farmers keep 16 to 20-quart coolers in addition to their cans, enough to use for one or two milkings, but these are seldom used, only as temporary receptacles for milk in case cans are held back, as sometimes happens by delay of trains. Regarding your question whether the Milk Producers' Association had any effect in the methods of milk handling, I think not, only as in their advised judgment that all milk can be better handled and cared for through cooperative creameries where every facility is used to make a superior article. Each and every farmer who ships milk has a milk room fitted up inside barn or adjacent thereto, with water vats and ice tanks. Some do not have to use ice, as water that stands at 42 to 44 degrees Fahrenheit is cool enough for shipment. Water that stands at 42 to 44 degrees is better than a lower temperature made with ice, unless milk is submerged in ice water in transit to New York. Train hands who handle our milk are not always careful to keep it well iced in transit. All cars that haul milk to our cities should be fitted with tanks in which the cans be placed and kept submerged to the necks in ice water. Many thousands of dollars could be saved to the farmers of the five States shipping milk to New York if their milk could be kept at an even temperature of cold until it arrives at its destination, through having refrigerator cars for the purpose, as every farmer loses by sour milk all because it is not properly seen to on trains and kept iced as it should be. I should think that liquid air would come in play for refrigerating purposes on trains handling milk, butter and all perishable products sent by shipment to our cities. A. B. M.

Grand Gorge, N. Y.

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DAIRY AND FARM NOTES.

Facts About Silos and Silage.

SILAGE CORN.—I wish there was a sure and easy way to tell just when corn contains the right amount of water for the silo. Formerly the plan was to get the corn in as soon as cut, without regard to its water content. I am convinced that this method is not a safe one for our locality. Five or six years ago we unfortunately put a hammer wrench through our cutter, with the result that a delay in cutting of four days followed. Ten acres of corn were already cut, and the weather was exceedingly hot and dry. One can easily imagine how the leaves would rattle and have every appearance of being too dry. I felt much anxiety and uncertainty about the result without wetting, but it was inconvenient to wet the stuff, and we took the chances. To our surprise the following Winter we had no better silage anywhere in four silos than this same apparently overdried corn. I was rather shy about giving the experience until the following Winter, which gave an opportunity to repeat the experiment, without the expense and bother of a smashup. The results were the same. I then felt quite free to advise it in institute work, that is in years like the present, when corn did not fully dry out before cutting. In many meetings men would indorse the idea, not usually from a well-planned experiment, but from feeding corn that had for one cause or another become dry to the eye. I do not suppose outside of our more northern latitudes that this scheme will have any value, but for the parallels of central New York and north of them, the problem is certainly worth studying. Even here one must take the advice with good judgment (not unlike all advice). In 1899 and 1900 corn was sufficiently dry for best results, and often the addition of water was advantageous.

LIGHTER STALKS.—I find another advantage aside from better silage, the corn is much lighter to handle, and our men appreciate the change. We have approximated odorless silage since adopting the drying method, which we did not get before with certainty. I have repeatedly said that one could not tell whether we fed silage or not, except at feeding time. The corn plant is unlike other forage plants, in that the stalk retains its water a long time. Although the leaves may be dry and rattle when the whole is mixed together and trodden down it feels wet to the touch. We are fast approaching a certainty of producing good silage without having "good luck." Air-tight pits, or nearly so, and fine cutting are largely responsible. We have practiced the extreme of weighting and tramping, even putting horses into the pit, and the other extreme of neither weights nor treading. It is my experience that we need a bit of Samantha's "mejumness," which means fine cutting and even distribution and some treading, not on the sides alone, but over every part alike. The excessive treading near the walls means putting more corn there; when the center settles most, as it will, the silage is consequently drawn from the sides, allowing just enough air to produce a white mold and a sticking together of the fodder. No silo question so often comes into the institute question box as this one. I do not now remember working out a single case in which the side walls were tight without finding this excessive treading the acknowledged cause. I have changed my mind in regard to a fine cut. The quality of silage, all other things being equal, is due to our ability to keep out the air and stop fermentation, and coarse fodder will not do it.

SILO TEMPERATURE.—Our scientific friends have not given us sufficient data on silo fermentation. By the time they get it worked out, I am in hopes we shall have succeeded in putting the corn away so free from air contamination that there will be no ferments at work to break down and destroy the feeding value. I observe that our good silage of recent years is cool. I had to confess ignorance last Winter to a question as to what degree the thermometer will register in a silo in the Winter a foot below the feeding surface. I answered by saying it should feel cool, much to the discredit of institute work as then determined, but I know our silos were not near to blood heat. The next morning a man came to me very quietly and said his silo registered 72 degrees. I went home the following Saturday and found in three silos then opened a temperature ranging from 62 to 75 degrees. These silos were filled with corn fairly dry, cut very fine, and packed as previously mentioned. We used last year a cutter with blower attachment and liked it so well that we shall use a similar machine again. The power required to elevate a ton during the same period of time is fully one-half more. Of course this latter statement is guesswork, because I had no means of accurate measurement, but the saving in bother with a chain carrier would more than balance the extra cost of power. One year's experience often fails fully to establish the right or wrong of a plan, and I shall take the liberty of giving the experience again after silo filling, which is so near at hand. With a good harvester, 12 willing men, and good power and machinery, silo filling has lost its dread of former years.

ALFALFA VS. CLOVER.—We have again changed feed from Alfalfa, all they would eat, to Red clover all they will eat. For the first few days the milk showed a gain, the last three days a shrinkage. I am not quite able to account for it. I don't know that they are getting enough dry matter. The growth is very rank. We had measured off a piece which was to be weighed August 15. While I don't care to exaggerate, our foreman says it will cure out two tons of hay to the acre, and he is a man who is always conservative.

ESSENTIAL THINGS.—"Do you always do the things most necessary to be done?" I find that to answer the above question in actual work is not easy. I like to see things nicely done, but a man can easily spend too much time oiling his harness or blacking his shoes. I know a farmer who would in plowing strike out his lands by stake, so straight and true that the last furrow in a land always had full even width through its whole length, but the amount of cultivation done was so meagre that he never grew a maximum crop. I have heard long arguments about milking, should the front teats be milked together and the hind teats the same, or should the milker cross, one front and one hind teat, when I knew by observation that the cows on their farms had never been fully and judiciously fed. I have spent time and money working for a fancy trade for our butter and cheese, and then taken milk into the factory that injured the quality of the whole day's output. I have always been opposed to job work in construction of buildings because of the great tendency to ignore this question. We built a large barn in 1888 and found it quite expensive, about $3,000. A year after a barn was built near us, smaller in size, yet at one-half the cost. I felt somewhat chagrined at our inability to get a good deal. To-day the difference is apparent—in more than one spot, the essentials were not attended to. There is a foundation wall to everything we do, but it requires a good mechanical eye to build it and have no cracks appear when the strain comes. The strain, the wear and test come sooner or later to every piece of work we do, and while we may "cut and cover" for a time, eventually the "paint and putty" will crop out in field or home, in constructive work, animal breeding, or plant growth. H. E. COOK.

Building a Round Silo.

I have a square silo, but will build a round one in Spring. Will you give me plan of best silo (round) to hold 125 tons? I would like to know how much lumber and hoops and what kind of foundation—if any—and anything else regarding the construction. J. H. M'D.

No. Bridgewater, N. Y.

Without doubt the best form of silo for you to construct is the round stave silo. If you desire a silo large enough to hold 125 tons of settled silage it will be necessary to construct one which will have a total capacity for about 150 tons. This is necessary because of the fact that the silage settles considerably, and the 150-ton silo would have a capacity for only about 125 tons of settled silage. It is not possible to fill a silo with settled silage. The silo should be 30 feet high and 18 feet in diameter. If it is desired to have silage for Summer feeding it will be better to construct two silos, 24 feet high and 14 feet in diameter. In making the foundation for a stave silo many have made the mistake of constructing expensive stone walls upon which to set the staves. A stone wall is unnecessary, and better not constructed. All that is necessary in the way of foundation is to scoop away the surface soil to a depth of six or eight inches over a space a little larger in diameter than the proposed diameter of the silo. Begin the foundation by paving this space excavated. Place at the bottom the larger stones, and work in smaller stones near the top, and top with a layer of coarse gravel. Make a thin mortar, using water lime one part to four parts of sand. Make this mortar so thin that when poured over the stones it will run down between the stones, filling all the interspaces. With a maul or pestle pound the stones firmly down, so there shall be no open air spaces in the foundation. Much of the success depends upon the thoroughness of the pounding. After the water lime has become fixed finish off the top with a layer one inch thick made of Portland cement one part, good sand three parts. This will give a firm solid foundation, and the staves may be set directly upon the Portland cement that forms the topping.

To construct a silo 30 feet high and 18 feet in diameter there will be required 108 staves six inches wide, two inches thick and 30 feet long, or they may be used in lengths of 20 feet, making joints at 10 and 20 feet from base. Eight hoops will be needed to hold the staves together. They should be of ⅝-inch round steel, and be joined by cast iron lugs. It would be cheaper to use some form of woven wire in place of the steel hoops. The Page Woven Wire Fence Co., Adrian, Mich., makes a wire on purpose for use on stave silos. In Bulletin No. 167 of the Cornell University Experiment Station, Ithaca, N. Y., you will find many valuable hints about the construction of stave silos. The bulletin will be sent you free upon request.

L. A. CLINTON.

SHOULD HORSES FACE THE LIGHT?—When I built my barn I made boxstalls for my horses, and on the one side there is a window to every stall, on the opposite is the feeding alley and no windows. The horses are loose in the stalls at all times, and whenever they are not eating they face the light or stand sideways to the light. It hardly ever happens that I see them facing away from the light. As a rule, they face the windows, but, of course, the sun does not shine in their eyes. It would be cruel to hitch a horse so as to compel him to face the glare of the sun, but were I to build a stable I would face to the light if I could avoid the direct sunshine because that is the verdict of my horses, and that I call "horse sense." L. W. LIGHTY.

Pennsylvania.

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The little swallows gulp and choke
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—Harvard Lampoon.

"Why does Harkins always speak of his automobile as 'she?'" "Because it blows him up so often."—Chicago Record-Herald.

"Pa, what is a philosopher?" "A philosopher, Jimmie, is a man who thinks he has got through being a fool."—Detroit Free Press.

Teacher: "If four boys have 20 peaches and 30 apples what will each have?" Bright Boy: "Chol'rer morbus!"—Philadelphia Press.

Pedestrian: "Will this road take me out into the country, little boy?" Little Boy: "I don't think it will; but if y' wait mebby a waggun 'll cum along."—Columbus State Journal.

"Experience," said Uncle Eben, "is a ve'y pow'ful teacher, but you wants to look out fo' her. It doesn't do de sailor no good to know whah de rock is aftuh he has done run into it."—Washington Star.

She: "I suppose you never met your affinity, Mr. Olebatch?" He: "I don't know. One can't tell one's affinity except by marrying, and then it may turn out to be a case of mistaken identity."—Puck.

"What would you do if you had a million dollars?" said one plain, everyday man. "Oh," replied the other, "I suppose I'd put in most of my time comparing myself with some one who had a billion and feeling discontented."—Washington Star.

The Boss: "If we are to retain your services, Mr. Lambkin, you must take more care of your appearance. You look as if you hadn't shaved for a week." The Clerk: "But, sir, I am growing a beard." "That's no excuse. You must do that sort of thing out of business hours."—Glasgow Times.

Mr. Sharpe: "Whatever Vice-President Roosevelt may have to suffer in his office, he is spared a torture that he underwent during the campaign." Mrs. Sharpe: "Torture! Isn't that a pretty strong word?" Mr. Sharpe: "Wouldn't you think it torture to have your teeth drawn every day?"—Harper's Bazar.

An Indianapolis woman called up her grocer by telephone the other morning, and after she had sufficiently scolded the man who responded, she said: "And what's more, the next order you get from me will be the last I'll ever give you." "It probably will, madam," said the voice at the other end of the wire, "you are talking to an undertaker."—Indianapolis News.

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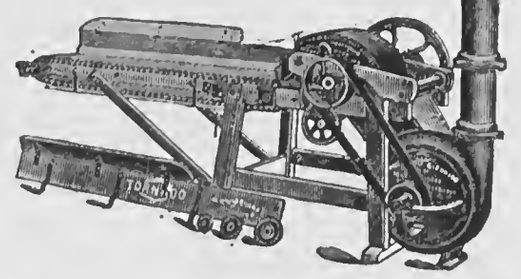

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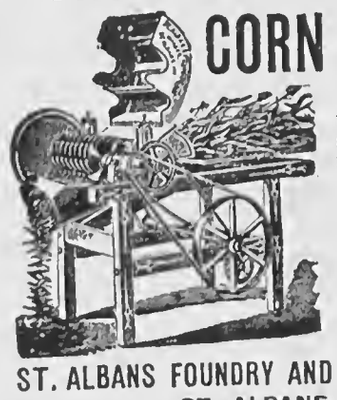
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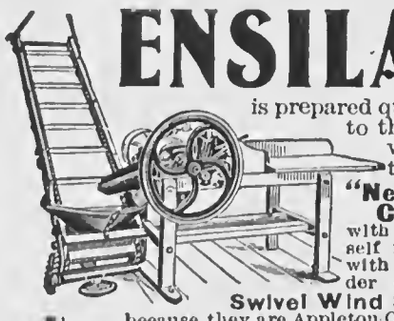
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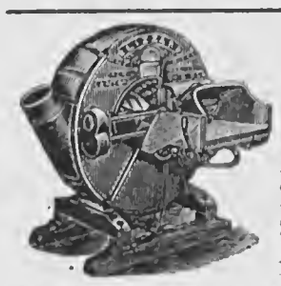
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CORNELL UNIVERSITY
AUG 30 1901

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2692. NEW YORK, AUGUST 31, 1901. $1 PER YEAR.

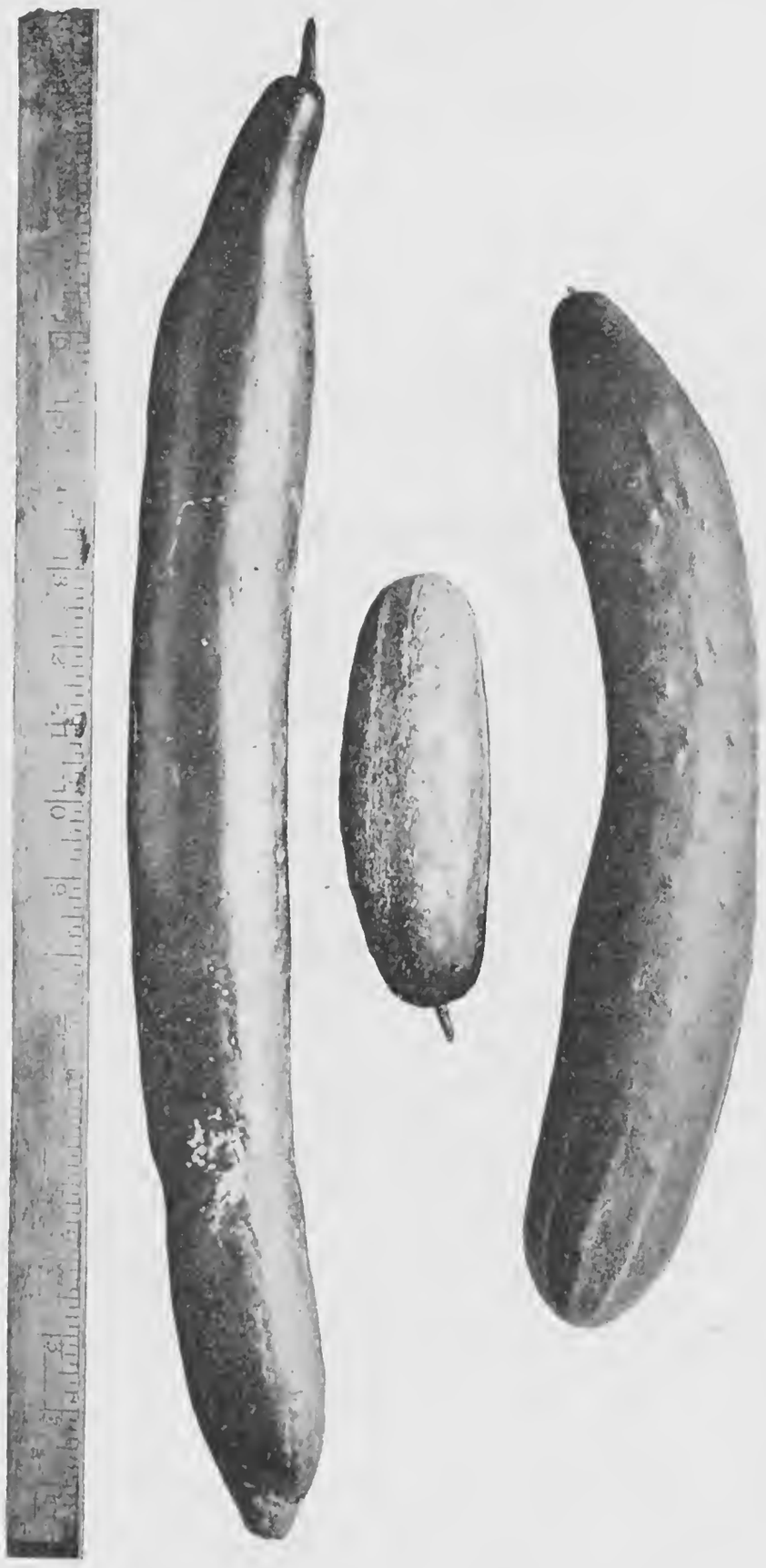
SOME EARLY HISTORY OF THE GRANGE.

SMALL BEGINNINGS OF A POWERFUL ORDER.

How Some of the Pioneers Worked.

The Order of Patrons of Husbandry was an outcome of the Civil War. President Johnson and Mr. Newton, the Commissioner of Agriculture, sent O. H. Kelley on a trip through the South in the Winter of 1865-66 to see what could be done to help restore the farmers and planters to prosperity. Mr. Kelley was a Minnesota farmer, who had been connected with the Department of Agriculture a short time. The depressed condition of the South suggested the idea to him that a secret society of farmers through the whole country, both North and South, might not only promote a brotherly feeling, but help the farmers in many ways. When he returned to Washington he talked with several friends regarding the matter, especially William Saunders, Superintendent of the Department garden and grounds; J. R. Thompson, of the Treasury Department, and William M. Ireland, of the Post Office Department. The four invited the Rev. John Trimble to criticise their work. Later, Rev. A. B. Grosh and F. M. McDowell, a fruit grower of Wayne, N. Y., helped them in some way. These seven men are generally called the "seven founders" of the Order. Mr. Kelley's niece, Miss Caroline A. Hall, suggested that women be taken into the Order on terms of equality with men. She also wrote songs for the Order and helped in many ways. During the 12 years Mr. Kelley was National Secretary, Miss Hall was his assistant and cashier. Nearly half a million dollars passed through her hands during this time. Anson Bartlett, of Ohio, also helped Bro. Kelley a good deal in preparing the ritual, but in reality Bro. Kelley was the man who did the hard work and took all the responsibility when there was no money in the treasury, which was often the case. Bro. Trimble used to say to him: "Go ahead, and if you make it a success I will hold up both hands and say, 'didn't I tell you so.'" December 4, 1867, the National Grange was organized with William Saunders for master; Anson Bartlett, overseer; J. R. Thompson, lecturer; William Muir, of Missouri, steward; A. S. Moss, of Fredonia, N. Y., assistant steward; William M. Ireland, treasurer; O. H. Kelley, secretary; the remaining offices left vacant because there were no members to fill them. Rev. A. B. Grosh was made chaplain a little later. In this humble yet bold way these five men began this now great society.

April 3, 1868, Kelley went to bid Saunders good-bye, previous to starting west to organize Granges. "Have you got any money?" "Yes, about $2.50." "Well, you are a fool." "Can't help that. I'll make the Order a success or bust." He tried to organize at Harrisburg and at Penn Yan, but failed; then went to Fredonia, N. Y., where he organized the first working Grange in the world, with N. E. Dodge as master, with only 10 members, all men. It is impossible for us of the present day, who are used to seeing the Granges in good working order, to imagine the trouble and difficulties Kelley met and overcame. It was a new and untried experiment, and required an endless amount of thinking, talking, planning and experimenting to get the thing in working order, but Kelley had so much faith in it that he threw up his clerkship and salary, and with a family to support and his Minnesota farm mortgaged worked his way west, trusting to the $15 fee for each Subordinate Grange dispensation issued by him to pay his expenses. These founders of the Order were mostly Free Masons, and sometimes he met a Mason who let him have some money, which was all returned later when money began to pour into the National treasury. It may be well to say that Fredonia Grange No. 1 lapsed or became dormant as we say after a little while. Bro. McKinstry, its first lecturer, says it was because it at first attracted mostly village people, who cared nothing about farming; that most of them did not have either crops or stock. He says: "We had no more idea of making it practical in the farming line than a Free and Accepted Mason has of laying brick." But to-day Fredonia is a large and prosperous



TELEGRAPH. WHITE SPINE. CROSSBRED.

CROSSBRED CUCUMBER AND PARENT TYPE. FIG. 260

See Ruralisms, Page 598.

Grange, composed of farmers. Kelley went on to Minnesota to his farm, organizing a few Granges on his way. From there he wrote to his associate, McDowell: "My wife has a block of 20 lots in a town in this State, intending to keep them as an investment for the children, but we must have funds to set this Order ahead. If you can raise any money by mortgaging these for 18 months you have full power to do so." Thus closed the month of July, 1868, the darkest in the history of our Order. He then went on starting Granges in Minnesota, one in a living room 12x16, with a stove, bed and other kitchen furniture in it. February 23, 1869, he organized the first State Grange, Minnesota.

The first annual session of the National Grange was held at Washington, April 13, 1869. Those present were Bros. Saunders, Grosh, Ireland, Trimble, Thompson and Kelley. D. Wyatt Aiken, of South Carolina, General Deputy for the Southern States at that time, says: "At the third annual session Worthy Master Saunders with marked dignity delivered his inaugural in the presence of Secretary Kelley, his entire auditory, and when he concluded asked leave to print in the next morning's daily papers, that the two might buy a few extra copies each, and thus be enabled to circulate their proceedings. Of course leave was granted. The printing was done, and 200 copies of the morning paper were distributed at private expense." It was not until January 8, 1873, that a real National Grange (a delegate body) met in Washington with 17 delegates from 11 States. More than half of the Granges were then in the States of Iowa and South Carolina. Then began the rush into the Grange; 1873 added 8,668 Granges, and 1874 brought 11,941 more Subordinate Granges into the Order. Brothers Kelley and Trimble are the only survivors of the "immortal seven."

S. W. COX.

Caledonia, N. Y.

FARMS IN THE SHENANDOAH VALLEY.

What a Farmers' Club Has Done.

I read in your issue of August 3 the letter of S. H. McK., of Gerrardstown, W. Va., relative to conditions in the Shenandoah Valley. I live near the old town of Winchester, Va., right in the heart of the Valley, a spot renowned in song and story. Being rather inclined myself to take exception to the tone of S. H. McK.'s letter, as being likely to convey a wrong impression of the exact state of things here, I had the same read to-day before our farmers' club. I might say of this Mutual Farmers' Club of Frederick Co., Va., as it is styled, that it is a body composed exclusively of farmers; was organized about 30 years ago, and still counts among its members about a half dozen charter members. Although the footprints of Father Time are plainly visible, yet these gray-haired sires still take a lively interest in all matters that pertain to farming. The club meets monthly at the residence of one of its members, making the round about once a year; has its officials elected annually, holds two sessions at each meeting, discusses subjects and exchanges ideas relative to our business, eats a good dinner prepared by our hostess, views the premises of our host, and offers timely suggestions if such are deemed necessary; then we return to our homes and feel highly benefited by our day's outing. As our club has taken upon itself to see to it that our farming interests are fairly represented, I have been appointed in behalf of same to send a line in reply to the letter of our worthy friend. He tells you that, had your question been as to the value of land now, as compared to 40 years ago instead of 20, he "could readily tell you that there has been a great slump." To voice the opinion of this club, lands are really higher now than they have been at any time during the past 40 years. Of course, immediately after the Civil War prices of land as well as all other commodities were higher, but it must be borne in mind that these prices were inflated because of cheaper money. This latter fact being taken into consideration, one has but to search the records in the clerk's office to verify the statement I have made as to comparative prices of land. The letter also states that very little land is changing

hands, and I might add that very little is offered for sale, both of which facts seem to point to the conclusion that farmers are pretty well satisfied with their condition. Another fact which has an important bearing upon this subject is, that our banks are at a loss what to do with their money. Bank officials say that while a few years ago farmers were their principal borrowers, they now cut no small figure as depositors. This would seem, at least, to be a contradiction of the rather gloomy view of the farming industry here as the writer puts it. Perhaps I ought to say that our location is about 20 miles farther south, and what he says with regard to the enhancement to double its former value of his own farm by the planting of fruit trees, applies also to much of the land in our own immediate section. The fruit industry is assuming large proportions. Large commercial orchards are quite common, and the area is widening with each successive year. Several have sold their peach crops, and about all the apple crop, consisting of thousands of barrels, has already been purchased by New York and Philadelphia firms at paying prices. L. M. BOYER.

ABOUT A RURAL TELEPHONE ASSOCIATION.

Two years ago, when H. W. C., of THE R. N.-Y., was in Ohio, he was greatly interested in the construction of a small rural telephone line, and the more so from the fact that he saw the president of the company digging holes for the poles. He remarked that it was a sight to see the president of a telephone company in a hole. That little company is now a pretty lusty rural line, and of it, and its connections, I wish to write. By reference to the accompanying map of Geauga County, O., a rude sketch is made to show something of the system that now covers completely not only Geauga County, but the north part of Portage, and east section of Cuyahoga counties, including the small city of Chagrin Falls, having its connections with all of the large independent lines east, west and south. About 18 months ago the five small companies represented that were doing business in Geauga Co., Chardon, Burton, Staffords, Bainbridge and Chagrin Falls, formed an association for mutual benefit and protection, and fought out to a finish an attempt of the "Bell's" to put them out. Then it was shown that the toll that each company levied upon the other for service, was practically an even-up affair, and the five companies established a system of free transmission of messages, so that now a subscriber in one company has the free call of any other box, in the association, although each company maintains and equips its own lines independent of the others. This proved a great feature, and the lines were, and are now being extended with great rapidity. There are from 40 to 100 'phones in each of the townships, and including the Garrettsville company, which is to become a part of the association, the total number of 'phones reaches something over 1,500. Of these, fully 1,000 are in the homes of farmers. In addition, the companies are connected with all of the great independent lines, with the Lake Shore lines to Erie and Buffalo to the northeast, the Mahoning Valley lines to Pittsburg and the east, on the south with the United States lines, and Citizens', and to the west through Cleveland with the great Cuyahoga company, the greatest of the Bell's rivals, the connections with Cleveland giving about 8,000 subscribers there alone that can be called from any 'phone in the association.

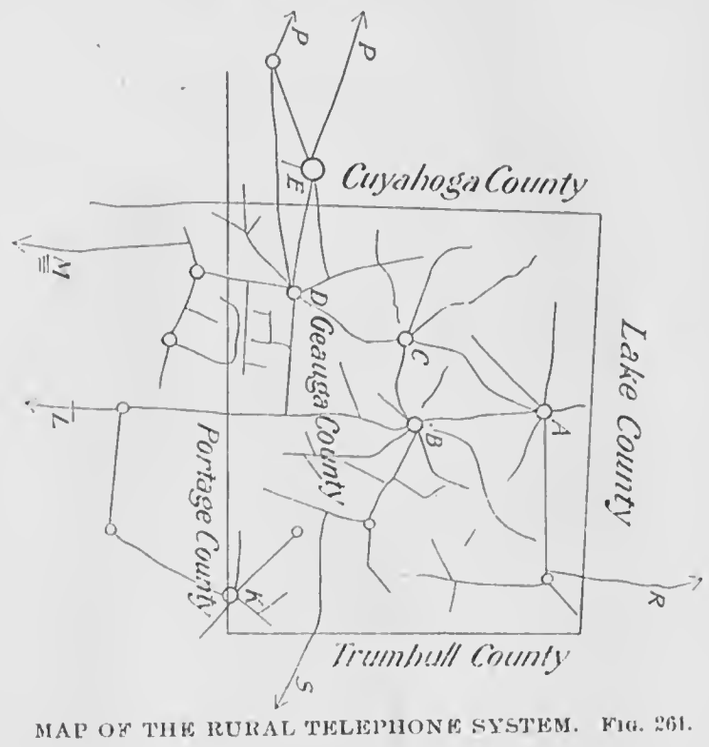
In this Geauga Association a uniform charge is made of $12 per year per 'phone, and no extras, when transmission is made over outside lines, and a minimum rate is then secured. In the territory covered it is said that there is not a firm, store, physician's office, or stock dealer's office but what has its 'phone, and the amount of country business done over the wires is a surprise. Often it is small and commonplace, but all the more reason that it should not take hours of time to transmit it when the 'phone helps do it "in a minute." The construction of these lines is thorough, the best of North long-distance 'phones are used, metallic circuits, and the exchanges are put up, and maintained as well, and with as prompt service as the city lines. The Bell lines cross the county, but are not allowed to maintain exchanges. While reports come that in places mutual and other forms of companies are giving satisfaction, there is no desire here from any quarter to question but that the proprietary lines are the best plan, leaving the renter of a 'phone free of concern, and giving him at really a nominal sum the best of service possible, and without unknown costs and expenses to be met. All of these company lines are owned by a few persons, and the stock is very hard to buy. One line—the Stafford—is the individual property of the constructor, and is, for the capital stock, a very valuable piece of property.

It is useless to write of the advantages of the 'phone to the country dweller, and how a 'phone once put into a house, is rarely ever taken out. The social life over the wires is a great feature to break up the far-apart element of farm life, and brings all the people into acquaintance, and often friendships, that would have otherwise been unknown. JOHN GOULD.

Ohio.

FARM NOTES FROM NEW JERSEY.

STRINGFELLOW PLANTING.—About four years ago I set a few trees of apple, pear, plum, quince and cherry, after trimming them severely, both root and branch, but they were not trimmed as much as Mr. Stringfellow advised. I was afraid to follow his instructions implicitly. They were set in the Spring, and all grew the first year. The next Spring one of the two cherry trees (both sweet varieties) failed to come out in leaf, and the other one died before Fall. All the other trees are still living, and have borne fruit. Not all of the apple trees nor all of the pear trees have borne, but the quinces and plums and some of the pears and apples have borne. Since I set these trees I have tried other trees, mostly of forest varieties, that came up where not wanted, with the genuine Stringfellow method, and they have invariably grown. I have set a walnut tree that was two inches in diameter in a hole made by a crowbar. It came up in the garden and grew there three years. Then its immense tap root and all of its surface roots—some of which were 10 feet long—were cut off, the trunk cut off below the branches and the stub jabbed into a crowbar hole. It is growing. A year ago I ordered six apple, three dwarf pear, three plum and three cherry trees through a nursery agent. They were delivered early in October. I trimmed them as closely as Mr. Stringfellow would have done, and set them in the ground without so much as watering them. The entire Fall was extremely dry, the Winter was dry cold, and the ground bare nearly all the time. One apple tree did



MAP OF THE RURAL TELEPHONE SYSTEM. Fig. 261.

not live through the Winter. All the others started to grow, but the two sweet cherry trees have since died. The sour tree (Montmorency) is still living, and has made a fair growth. The pear trees have made great growths and the other trees have done well. I believe this is the way to set dwarf pear trees, but doubt whether sweet cherries will do well by this method of planting.

CORN CULTIVATION.—I planted one-half of a nine-acre field with corn May 24, and was driven from the field by a shower. Rains continued so frequently that it was two weeks before the ground was again in good order for planting. I planted in rows, furrowing but one way. When we went to plant again the corn that had been planted was not yet up, but the weeds were making a fine start. Much of the ground was literally purple with young black-heart. Last year I used a steel-toothed horse rake as a weeder, and was well pleased with the results. I tried it on this field, but the rains had packed the ground so much that the rake wheels would not sink in the soil, and the rake did no good. Those weeds must be killed, or there could be no corn, and I plowed the field for corn. I hitched the team to a six-beam, spike-tooth harrow, and harrowed across the rows just as though it had not been planted. In a few days I gave it another harrowing. The corn first planted was then mostly up, though uneven and pale in color. It was next gone over with the horse rake, which now did a little good. A week later it was again harrowed with the spike harrow and the cultivator started. It was cultivated twice and plowed twice with a one-horse plow. I now have a very fine field of corn, but with all the "tormenting" I have given it there are still a few ragweeds and black-hearts in it. Had it not been for the harrow the corn would have been swamped by the weeds, for I know of no other practical method by which those corn rows could have been approximately cleaned. Not one hill in a hundred was injured by the three harrowings.

New Jersey. G. G. GIBBS.

THE STORY OF PLANT GALLS.

J. T. Roberts, of Syracuse, N. Y., recently sent us samples of a grapevine on which the curious growth shown at Fig. 262 had developed. Prof. Slingerland gives the following interesting account of the work of this gall insect:

Abnormal growths are not uncommon on many plants, and often they are of curious shapes. They may occur on the roots, trunks, branches or leaves of the plant, and they are often called "galls." In many cases insects are the cause of these galls, inside of which they live and develop. Children are familiar with the ball-like enlargements common on the stems of goldenrod, and one can scarcely find a leaf on an oak tree that does not bear one or more kinds of little galls; dozens of different kinds of these galls may be found on almost any oak tree. Usually the galls are named from their peculiar shapes, thus we have a curious "pine-cone" gall on willow, "bullet" and "star" galls on oak, and "trumpet," "filbert," "apple" and "tomato" galls on the grapevine. These grapevine galls are among the most striking and peculiar of insect galls. The galls found near Syracuse and shown in Fig. 262 are the "filbert" galls of the grapevine; from 10 to 40 of these galls may be found in a single cluster from one to two inches in diameter. These "filbert" galls are woolly, greenish growths, which have a fleshy, juicy, subacid interior. The mass of these galls springs from a common center at a point where a bud would naturally be found, and are thus an abnormally developed grape bud. Cut open one of the galls and a single elongated cell or cavity will be found in the center, containing a solitary orange-yellow maggot about one-eighth of an inch long. This little maggot will eventually transform into a minute gnat resembling a mosquito.

It is a remarkable fact that each species of gall-making insect infests a special part of one or more particular species of plants, and the gall produced by each species of insect is of a definite form. Hence, when an entomologist who has studied these insects sees a familiar gall, he knows at once what species of insect produced it. Naturalists have speculated much as to the way these galls are made to grow. It has been supposed that at the time the egg of the insect is laid there is deposited in the tissue of the plant with it a drop of poison which causes the abnormal growth. By this theory the difference between the galls of different insects was explained by supposing that the fluid produced by each species of insect had peculiar properties. There are certain kinds of galls which may be produced in this way. Thus it is said that the wound made by a certain sawfly in the leaves of willow causes an abundant formation of plant cells, and the gall thus formed attains its full growth at the end of a few days, and before the larva has escaped from the egg. But with gall-flies the gall does not begin to grow until the larva has hatched; but as soon as the larva begins to feed the abnormal growth of the plant commences. In this case, therefore, if the gall is produced by a poison, this poison must be excreted by the larva. There exists in many kinds of gall-flies an alternation of generations; that is, the individuals of one generation do not resemble their parents, but are like their grandparents. M. V. SLINGERLAND.

SOWED CORN FOR FERTILIZER.

On page 389 Prof. John Craig gave the inquirer, H. W. M., a very unsatisfactory answer in regard to plowing down corn. He says: "There might be difficulty in getting it well incorporated with the soil and well packed down if the season should be dry," neither of which is the case on either clay or sandy soil. I have brought up the poorest kinds of land with corn. Plow the poor land in the Fall; as soon as dry enough in the Spring lime it very heavily. Then harrow thoroughly from May 10 to May 25 (according to latitude). Sow your corn, not less than three bushels, using 200 or 300 pounds fertilizer to the acre. I prefer four bushels if sown by hand. Roll it and let go until about August 20. If it gets too large get at it sooner. After trying the usual way of getting down big clover I tried the roller same way as plowed. This put it down flat; all went under slick as a whistle. I then put it in rye and fertilized it, 200 pounds to the acre, sowed four bushels, plowed it down the last of May, plowing the same as I had the corn. My neighbors said I must be crazy for plowing down such nice rye, but it went down. I put it in potatoes; had a good crop; fertilized potatoes. Next Spring I put it in oats and seeded it to Timothy and clover, 15 quarts to the acre. We had 40 bushels of oats per acre, and the next season (the present) we cut close to three tons of good hay per acre, and the sod looks well, nicely matted all over. I wondered for years before why the plan had not been more generally tried. I intend trying another plan, practically the reverse, but I expect the same results. I have a poor field which will be put in rye this Fall, limed and fertilized; will plow it down in May, put it in sowed corn, plow it down in August, put part in wheat, and seed it. The other I may try Clark's system of seeding to grass; will know the system by that time, as I am going to try it this Fall. S. B. ARTHURS.

Pennsylvania.

WHEAT AFTER SILAGE CORN.

Where the farm land is to be kept busy all the time, and all farm land should certainly be so kept, one of the great advantages of the silo as an adjunct to the farm is in the ability of the farmer to get the corn crop off the ground in time to sow to wheat. If a clover sod is manured and plowed down for corn, or better, the manure applied after plowing and worked in with a disk harrow, a very fair start is made toward a good wheat crop. The good farmer will, of course, plow his land well for corn and work it thoroughly, giving his corn frequent cultivation and keeping the land free from weeds, so when the corn is removed for the silo, he has a clean, well cultivated surface for wheat and an ideal seed bed, after he has loosened up the ground with a good cultivator that does not disturb the corn stubs and roots being run to a depth of about two inches. Then he has the solid ground under his fine shallow surface. This is a much less expensive operation than plowing the ground after the removal of the corn, and more favorable for the wheat. The corn roots, not being torn up, are not at all objectionable in the harvesting of wheat, as the corn is cut so low to the ground that the stubble of it does not reach up to the wheat harvester knife. If we care to roll the wheat in the Spring much of the corn stubble will be entirely pressed into the ground.

When the wheat is drilled the corn rows are simply "straddled" between teeth of the drill. It is the practice here to use a drill with fertilizer attachment, and from 200 to 500 pounds of commercial fertilizer is drilled with the wheat. Frequently no Timothy is sown, and the ground seeded to wheat a second time. I think a much better plan, and one I have followed successfully, is to sow Timothy with the wheat, and clover in the Spring. I keep the young clover and weeds clipped after harvest, mow twice the following Summer and put corn in the ground the next Spring. The wheat is covered with manure during the Winter and another dressing given the young clover after the wheat is harvested. Another application of manure for the corn gives an application for each crop in the tri-rotation. This method allows active use of the land, and at the same time improves its fertility.

Pennsylvania. W. F. M'G.

A TALK ABOUT ASHES.

We are cutting pine, hemlock and cedar logs in our sawmill, and burning the refuse in our large iron burner. Could the ashes be used as a fertilizer on our garden, and would they be as good as manure? We have a large quantity, in pile outdoors, uncovered from last season. Could this be used, or has it lost its goodness?

Ford River, Mich. F. R. L.

We have so many questions about ashes that we will try to cover them in one answer. One of the best pamphlets dealing with the subject is Bulletin No. 74 of the Maine Experiment Station, Orono, Me. Ashes, as we all know, contain the indestructible parts of vegetable matter. Sometimes the combustion is not complete, so that the ashes contain small bits of charcoal or unburned wood, which add little to the value. There is, of course, no nitrogen in a well-burned ash, since that element is a gas, and is driven off by heat. The three valuable fertilizing elements found in ashes are potash, phosphoric acid and lime. The value of a sample of wood ashes was formerly measured by the amount of potash it contained, but now that the value of lime is more generally recognized, that element is considered. The value of any sample of ash will depend on the wood which was burned to produce it, and on the way it was burned. The director of the Maine Experiment Station makes the following classification:

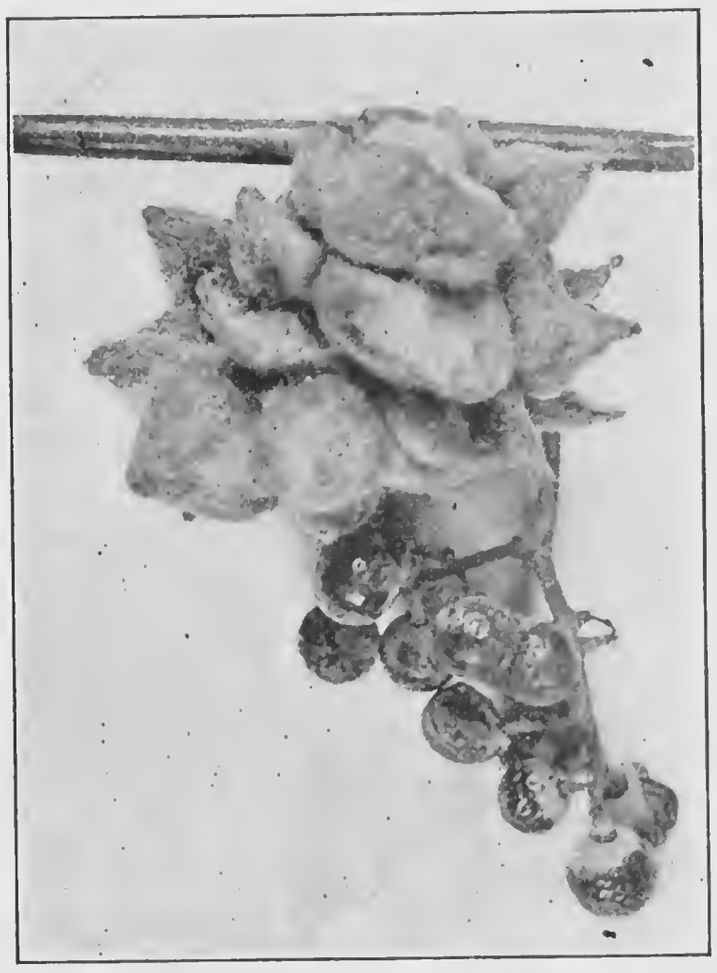
Kinds of ashes.	Potash.	Phosphoric acid.	Lime.
Unleached hard wood	8.0	3.3	36.5
Unleached soft wood (household)	2.6	1.8	23.6
Unleached soft wood (dump)	1.5	1.1	34.3
Unleached soft wood (mill furnace)	3.5	1.7	42.8
Unleached Canada	5.0	...	....
Leached mixed wood	0.7	1.7	26.5

This gives the amount of potash which is soluble in water. According to the table the hard-wood ashes are worth more than those from soft wood, but this is due largely to the way the wood is burned and the way the ashes are kept. This is shown by some experiments in Canada reported by the Ontario Agricultural College. Different kinds of wood were burned under the most favorable conditions—so that all the ash was saved and not mixed with sand. The following table shows how some of these woods compared:

Kind of wood.	Potash.	Phosphoric acid.	Lime.
Sugar maple	9.31	2.03	45.24
Oak	9.39	1.69	43.54
Birch	8.58	1.47	37.10
Beech	7.58	1.39	41.21
Apple	4.84	1.81	44.93
Poplar	10.42	2.98	28.38
Hemlock	8.73	2.76	45.83
Pine	11.22	4.03	20.28
Cedar	3.30	.98	49.06
Spruce	8.98	4.00	25.82

In actual farm practice it would never be possible to obtain pure ash, but these figures show that soft-wood ashes average well in potash, but vary in the amount of lime. Why then are soft-wood ashes, as sold, lower in potash? They are not always so, but many of them come from furnaces or mills where slabs are burned. These slabs are often covered with sand, which mixes with the ashes. The fires are usually very hot and part of the potash is actually driven off and lost, as is the nitrogen. Such ashes are not usually well kept. They are dumped outdoors in the dirt, and more or less exposed to the weather. With heavy rains some of the potash is leached out. It is probably safe to assume that the average ton of leached ashes, kept under cover, contains five per cent of potash, 1½ per cent of phosphoric acid and 33 per cent of lime. The phosphoric acid in ashes is insoluble, but the potash and the lime are both in good forms for plant feeding. As a fair basis for figuring values we may call the potash worth four cents a pound, the phosphoric acid two cents, and the lime a little less than half a cent.

Do wood ashes have any value in addition to what they give as plant food? They have a mechanical effect on soils. They bind the lighter sands more closely together, thus making them better able to hold water. The lime acts on clays to open or crumble them. The potash lye from the ashes, in solution, has power to dissolve organic matter and thus make nitrogen in the soil available. Wherever land is burned over a very rank growth is sure to follow. This is not all due to the potash left in the ashes from the burning, but because that potash helped to make nitrogen available. In direct answer to the question it will be seen from all this that the sawmill ashes will be useful on the garden. They cannot fully take the place of manure, for the latter contains nitrogen, while the ashes do not. Most garden spots are rich, and for a year or two the ashes might give good crops if used alone.



FILBERT GALL ON A GRAPEVINE. Fig. 262.

NITRATE OF SODA ON GRASS.

On page 463 of THE R. N.-Y., for July 7, 1900, Prof. Phelps advocates the use of 100 to 200 pounds nitrate of soda on grass lands, in connection with 150 to 200 pounds muriate of potash and 200 to 300 pounds S. C. acid rock. In a recent number of THE R. N.-Y. you state that Mr. Clark is now using about 266 pounds nitrate per acre. The question at once presents itself, how much nitrate of soda can be used on grass without losing a portion by leaching? Nitrate costs us 2½ cents per pound, and with hay only $10 to $12 per ton one does not like to use more of such an expensive fertilizer than the crop will assimilate, and have the remainder wasted. Would such a heavy application last until the second or Fall crop? For seeding in the Fall, is not cotton-seed meal preferable? The United States Department of Agriculture states that it lasts in the South about a year, and probably a longer period in the North. Again, Prof. Phelps states that the grass, when not grown for seed requires relatively small amounts of phosphoric acid, but does not the grass which blooms and is just forming the seed when cut for hay have practically the same demand upon it as if it were allowed to remain a few days longer to ripen the seed? F. C. C.

Maine.

ANSWERED BY PROF. C. S. PHELPS.

Nitrate of soda should always be used as fertilizer with caution. Unless there is a crop on the soil ready to take it up soon after it is applied, much of it may be lost by leaching. This again depends on the weather. Heavy rains, which soak down two or more feet, will probably carry away much of the nitrate, but many seasons the early Summer rains are light, and only wet the soil to the depth of about one foot. Nitrate is often profitable on such crops as potatoes or corn, which make little growth for a month or more after planting, but it is safer to use on grass or oats which are growing vigorously when the fertilizer is used. With hay worth only $10 to $12 per ton it is doubtful whether over 125 pounds of nitrate per acre would prove profitable. This would cost at 2½ cents per pound $3.13. We have found that nitrate of soda is often profitable on grass, especially when used on land that has been cropped several years without manure or fertilizers, and is soon to be plowed and reseeded. When land is in a comparatively low state of fertility it responds greatly to the stimulus of nitrate.

It is generally true that plants of the grass family which produce seed, such as corn, rye, oats and barley, use larger quantities of phosphoric acid than others which are not allowed to seed. When grass is cut before the seed begins to form it needs less phosphoric acid than the cereals. If cut late after the seed is fully grown more phosphoric acid is used, but even then not as much as is used by most of the cereal crops. It is generally believed that plants take up plant food from the soil as long as growth continues, and that only a part of the nourishment of the seed comes from the translocation of matter from the stems and leaves. Nitrate of soda, however, should not be used on grass in the Fall. Cotton-seed meal, fish, or tankage, with muriate of potash, are better for use when seeding grass lands.

HANDLING THE SILO CROP.

This is now one of the most important jobs of the dairyman's yearly work. It is hard work, from the cutting of the corn to the feeding of the cutter or properly packing the corn in the silo. A feeling of thankfulness comes over one when the work is well done and completed, for there is no more satisfactory food in the dairyman's bill of fare. Winds may blow, snow, rain or sleet cover the earth; there is no husking to be done with cold fingers, no moldy, wet fodder to haul in Christmas Day; no corn butts to clean out of the cow's manger or to bother one in the manure pile. It is hard work to handle silage, but who is not willing to work hard when he is accomplishing something? It is more satisfactory if one has his own cutting outfit, but this is not always practical, as silage machinery is rather expensive, and has but few days' use during the year. If one has his own outfit more time can be taken with the filling, which is sometimes quite a convenience.

Corn is late this year, and a good many will want to wait as late as possible, so if you have to hire an outfit it will be wise to watch your corn and make arrangements early, so that the corn will neither be frostbitten nor too far matured. We prefer to cut when in the milk stage. If beyond that period too much of the grain will harden and pass through the cow undigested, which is worse than wasting the best part of the food. Corn 12 to 16 feet long is heavy stuff to handle, and we should plan as far as possible to avoid all unnecessary lifting. Have low riggings on the wagon. Set the cutter or build platforms so that everything will work down rather than up. By lifting the rear end of the ordinary cutter and extending the table so it is 14 to 20 feet long the feeding will be accomplished much more easily. We tried cutting the whole field one year before starting the cutter, but did not like it. The top leaves will dry up and break off; it is more unpleasant to handle, many of the ears will get too ripe. If left in large bundles they will heat in the center. If rainy weather sets in the corn will be dirty, and decidedly unpleasant to handle. It takes more help to keep just ahead of the cutter, but it is more satisfactory.

If you are short of teams and have an extra wagon, as most farmers do, two teams will take the place of three by hauling the load to cutter and changing wagons. Pulling out the evener pin and changing to the other wagon will take but a minute. Care should be used in loading to have butts all one way, and even across the load. Begin loading at front or hind end of wagon, whichever way is most convenient for unloading at the cutter, and load as high at one point as you expect to load, then work backwards. Loads properly put on can be unloaded quickly and easily, and in at least half the time of those improperly loaded, and with much less exhaustion of patience. Feed the cutter evenly, spreading the corn from one side of table to other, so that there is a continuous uniform stream going into the cutter. Some men will require more power, and not cut over half as much corn by uneven feeding. It wants about the best man on the job at the feed table, as he can help or hinder greatly. The ordinary carrier doesn't deliver the corn in the best manner; ears will roll one way, with the heavier butts and the tops and lighter parts another. This will cause uneven settling and poor silage. One can make an A-shaped board apparatus to put under the end of carrier that will help greatly, or cutting ends of bran sacks and sewing together makes a swinging chute that can be swung all around the silo. Keep the sides well filled and tramp them hard; no fear of getting it down too much. If you have any dry corn fodder don't put it all in in one place, as it will be likely to firefang and spoil. Mix in a load with two of the green, and don't have any of it near the top.

There lies before me as I write a catalogue of a corn harvester. Every cut of the machine at work (and they are photo-engravings) shows the corn cut from a foot to two or more above the ground. This would be thought sinful waste in our section. Why throw away a good many tons that the cow will eat clean and with relish, besides making the field harder to get into shape for its next crop? We cut just as close to the ground as possible. Corn knives are cheap, and it is better to wear one out on the stones and earth than to top the corn. Don't leave the field bare all through the Winter. As soon as the corn is off we go over the field with hayrake, which picks up all the rubbish, then follow with the disk harrow, sowing rye, and finish off with the weeder. This makes good pasturage and prevents washing on our hilly soils.

Connecticut. H. G. M.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

BEET TOPS IN THE SILO.

J. O. S., Oconomowoc, Wis.—Can you tell me what kind of feed the tops of sugar beets would make if put into the silo, and what should I pay for them for that purpose? The beet fields are from three to four miles from silo. Feed is very high here this year, owing to the drought; tame hay worth from $12 to $15 per ton; bran, $17; other feed in proportion.

We are unable to find anyone who has actually tried the tops, in this way. Here are the opinions of practical men:

It is a common practice in the old country to throw beet tops together in heaps, cover them with a little earth, and feed them as they are needed, but I can give you no definite data as to the feeding value of the tops, or in regard to the quality of silage which might be made from them. For myself, I should not venture to place a very large quantity of them together in a silo where other silage material was to be placed above them, as I should expect the pressure to force out the juices and thus greatly lessen the feeding value. There would be little risk in finishing the filling of a silo with sugar beet tops; but I should not be willing myself to haul the tops and put them into the silo for feeding purposes, or pay more than 30 to 50 cents per ton at the outside. It would not be necessary to cut them, but if they could be put into the silo easier by running them through the cutter elevating the carrier, this could be done. They probably could be handled as hay is handled, either with the hay or with rope slings. [Prof.] F. H. KING.

Sugar beet leaves may be preserved in a silo like any other green material that will settle compactly together and exclude the air. There is no need of running them through a cutter. In feeding value they would not be very different from corn silage. While containing considerably more protein than green corn they contain less total nutrients. To feed with corn fodder or straw they would be worth more than corn silage. The objection to using them for silage is the difficulty in gathering them together in large quantities without mixing with the soil, and getting them fast enough so that those already in the silo would not take harm from exposure to the air before others are added. It is doubtful whether under ordinary conditions it would be profitable to put them in a silo, but under exceptional conditions and where the distance necessary to haul them is not too great it may be advisable. [Prof.] I. P. ROBERTS.

If I was short of feed and had nothing else to put in the silo I would try the beet tops. I would not think it necessary to cut them, but should keep the outside the highest while filling the silo, and well tramped, especially around the outside. I should want the tops as green as possible; that is, not partially dried, and free from dirt or other substances, and should want to fill as fast as possible. If I could not arrange cheaply for power to elevate them to the silo I would have two large baskets, holding two or three bushels, and with a pulley and rope they could be hoisted quite rapidly; one basket could be filled while the other was going up and down. Many of the farmers near me pay from 40 to 50 cents per ton for sweet corn husks and refuse for feeding purposes, and I should think perhaps the beet tops might be worth half as much, and perhaps more, to the man who wants them. If I had no silo I would put them in pits the same as potatoes, only make the pit long, and if the soil is dry, that is where no water could get in, dig down two or three feet or more, according to the situation. Commence at one end, fill and tramp, like putting in the silo, and cover with straw or swale hay enough to keep out the dirt; then cover with soil, and when wanted for feed open at the end and uncover as needed. I am not sure that, if it was not easy to get them in the silo, the pit would not be preferable. The tops would make succulent feed, thereby giving one a chance to use more straw and other roughage. As all feeding material is to be high the coming Winter, one must resort to every available resource to procure feed rather than to sacrifice valuable stock.

Seneca Co., N. Y. A. D. BAKER.

Rye to Follow Potatoes.

C. I., Rochester, N. Y.—Have any of your readers had any experience with sowing rye on potato ground after the potatoes are dug in the Fall, then plowing it under for oats in the Spring? We have about 15 acres of potatoes on land that is inclined to be gravelly, with a very little clay in places, but not heavy. It is gently rolling, sloping mostly to the north and west. Some claim that should it be a dry Spring the rye will do more damage than good; that it will absorb moisture from the ground. My idea is to sow rye just before digging the potatoes; that this operation would cover the grain in good shape as we dig with a digger. The ground is free from weeds. We do not like to have the ground bare all Winter, and it would seem that the rye should benefit the land.

ANS.—We would like to hear from any who have tried this. We have frequently sown rye after digging potatoes, and plowed it under the following Spring before planting corn, or potatoes again. Who has tried it for oats? In a wet Spring we feel sure that the growing rye will make the soil lighter and easier to work. In a dry Spring it should be well rolled after seeding, so as to pack the rye down hard. We should not seed before digging, but dig first and then smooth the soil down with a harrow, before sowing the rye. Unlike clover, the rye will add but little to the soil. It will, however, save considerable soluble nitrogen, which would otherwise be washed from the soil during October and November.

From Raspberries to Rape.

T. S., Camden Co., N. J.—1. What is the best way to care for red and black raspberries, blackberries and Lucretia dewberries, that is, when and how to prune? They are now tied to a wire 18 inches and four feet from the ground. 2. I desire to form a herbaceous bed at side of house that will take about 14 shrubs. Will you advise what to plant for succession of bloom? I would like the foliage to be evergreen or nearly so. I could supply bloom with lilies, Cannas and Phlox. 3. I wish to plant a clump of grasses either circular, half circular or three-cornered. Arundo donax and Arundo donax variagata I would like to form the background or center. Will you advise what other grasses to use and how far apart they should be planted? 4. I have considerable outbuilding covered with tar roofing paper that requires recoating. Would gas tar do for the purpose, or would it be better to use roofing paint at 75 cents for two gallons? 5. Would it be good to give horses Dwarf Essex rape? I see it recommended for hogs, sheep and cattle, but horses are not mentioned. 6. My peaches and Abundance plums rot as soon as they commence to turn color. Can anything be done to help them for another season? 7. What do you consider a good second early smooth tomato? Stone is all right, but something is wanted earlier, and a good cropper.

ANS.—1. Cut away completely all old canes soon after fruiting. The new growth should be topped as soon as they clear the top wire. Early next Spring the canes may be thinned to two or three to a plant, and all branches cut back to two or three buds each. 2. If evergreen shrubs are desired other than coniferous varieties the choice is limited to the various kinds of box, Kalmias, Rhododendrons, the Mahernia or ashberry, and the hardy laurel, Prunus Laurocerasus Schipkænsis, though the common privet, Ligustrum ovalifolium, may be added, as it retains its foliage until January in the inquirer's latitude. If some conifers are wanted there are varieties of dwarf Thuja and arbor vitæ and the native hemlock, which can be kept compact by frequent pruning, though conifers as a rule look better when planted in a group by themselves. 3. The Pampas grass, Gynerium argenteum, the various kinds of Eulalia, and Erianthes Ravennæ, which resembles the Pampas grass, but has the advantage of being hardier, would do well with the Arundos in the grass bed. Eulalia gracillima univittata is the best of the Eulalias, and should be freely used. The above varieties may be planted three or four feet apart. 4. From our own experience with gas tar we would prefer to buy the roofing paint. 5. We have fed rape to horses as a green or soiling crop. They do not eat it readily at first, but soon become used to it. Feed little to begin with and increase the quantity slowly. We would not pasture horses on it. Of course the rape cannot be made into hay. 6. The only treatment for fruit rot, giving practical results, is to spray the trees just before the buds swell with Bordeaux Mixture, five or six pounds each of copper sulphate and lime to 50 gallons of water, again after blossoming and finally as the fruit begins to color. All applications after the leaves come out should be reduced to half strength—three pounds each lime and copper sulphate to 50 gallons water. 7. The Combination tomato catalogued by W. Atlee Burpee & Co., Philadelphia, Pa., should meet your wishes under ordinary cultivation.

Pruning the Potato Vine.

S., Barnstable, Mass.—I have a field of potatoes which show very fine tops. I am advised to cut these tops off, leaving about eight inches above ground, on the theory that such pruning will cause the plants to set more tubers and mature them. Is this sensible?

ANS.—I have never tried the effects of cutting off tops of potato plants, and so can only tell you what I believe would be the effect. It is that it will reduce the yield and size of the tubers—the amount of injury depending upon the time when it is done. The potato tuber is a storehouse of starch. The starch is formed by the green leaves. The growth of stems and leaves during the early part of the Summer is preparatory to this manufacture and storage of starch which occurs naturally during the latter half of the life of the plant. Every green leaf that is killed by bug or blight, or removed by such pruning as is proposed, during this later stage in the plant's entire development, means a proportional loss in starch production and consequent decrease in yield. I am of course discussing the potato plant as it grows under Vermont conditions. It is conceivable that these might be different in the South or Far West, but I doubt it. L. R. JONES.

The Trade in Apple "Chops."

P. E. L., Lee, Me.—There are about here quite a quantity of natural fruited apples which I could buy cheap. What is the best way for a man of limited capital to render these apples salable? Describe the apparatus and method of making the form of dried apple known as "chops?" What price per ton does the producer usually get for "chops?" Do you think there would be a demand for what "chops" I could produce?

ANS.—What we call "chops" are apples of any size, kind or color, sliced into five to eight slices (without being peeled) by hand or with machine, and dried artificially in any kind of a drier—stove, hophouse or evaporator, but to sell for full value they must be bleached with sulphur before being dried, a process now well known in every community. We can procure the chopping machine for anyone desiring to make these goods who will ship them to us for sale, or will furnish one or more to responsible persons who will pay for them with chops. Last year the price went down to $20 per ton delivered here in bags, but they are now worth $40, and may bring more in September, October or November, but they may be lower in the Spring, as the crop of wine in France is so great that the demand may be small after New Years.

New York. A. C. WORTH.

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THE RURAL NEW-YORKER, New York.

Pollenizing Northern Spy.

F. H., Ludlow, Vt.—I am grafting over some old apple trees to Northern Spy. I wish to put in buds of some other late-blooming variety for the purpose of fertilizing the Spy. What shall I use?

ANS.—I am not sure that Northern Spy is not self-fertile, but of the contrary opinion that it does not need another variety to pollenize it. However, there might be some benefit in providing other pollen than its own. Genet is one of the latest blooming apples, and its season is practically the same as that of Northern Spy. It might be a good one for the purpose desired, if its pollen proved to be potent upon the flowers of the other variety. H. E. V. D.

Setting Apple Trees.

L. B., Tallula, Ill.—Would it pay in planting an apple orchard to set the trees 45 or 50 feet apart, and plant dwarf trees between them one way, or are dwarf apples a humbug? After a man is past 75 he does not like to wait 10 years more to taste the fruit of his planting if there is anything that will bear earlier.

ANS.—It is a good plan to give apple trees plenty of room, and where they grow to very large size 45 or 50 feet is none too far apart for them when full grown. But I would plant standard trees of early bearing varieties as fillers, and not dwarfs. It has been quite well proven that dwarf apple trees are too costly and unsuitable for American orchards, but in Europe they are quite popular. In Illinois there need be nothing to discourage one who is quite aged from setting apple trees with a hope of seeing them bear. Most varieties will begin to bear within less than 10 years after planting, and some will produce profitable crops at five years. Among the latter are Missouri, Oldenburg and Wagener. These are the varieties that I would use as fillers between the permanent trees. H. E. V. D.

Fruit Questions from Virginia.

H. J. W., Pearisburg, Va.—When would be the proper time to bud peach trees in the southwestern part of Virginia? Can peach trees be successfully budded that are about the size of a lead pencil, or a little smaller? Can peach trees that are budded this Fall be successfully transplanted next Spring? If they were transplanted in the Spring, would they not be more likely to form a better system of roots, as they could be dug without cutting the tap roots? If this were done, should the stocks be cut off just above the bud at the time of transplanting? I set out some peach trees last Fall, and wrapped the bodies of them about the middle of June with newspapers to protect them against locusts. I have not removed the paper yet, as it will prevent borers from getting into the trees. Will the paper injure the trees? When should it be taken off? I have a young quince orchard that seems much affected with blight. Would it be advisable to sow the same in clover and mow for a few years? If this is not advisable, what would you consider the best treatment for said orchard? Do you think that Japan plums would succeed in southwest Virginia?

ANS.—August and the early part of September is the proper time to bud peach trees in any part of Virginia. It is better to have peach seedlings for budding, a little larger rather than smaller than a lead pencil, but almost any size will do if the work is done by very skillful hands. Small buds should be used for small stocks. 2. Yes, it is entirely practicable to transplant peach trees that have their buds in the dormant stage, and this is sometimes done by orchardists. It can be done in Virginia any time between the time the leaves fall until the time for them to start the next Spring, but I do not like late Spring planting. I do not think that it would make any material difference in the future growth of the roots, whether the trees are transplanted at one or two years old. My plan has always been to cut off budded stocks close to the bud early in the Spring, whether left in the nursery, or set into the orchard. Some leave a stump above the bud to be cut off after a few months, but this has always seemed to me only a trouble. I prefer to have the healing of the wound begin in the Spring. Paper will do no harm when wrapped about the bodies of the peach trees if left on indefinitely. It will be a benefit in keeping out borers to a considerable extent. The blight which affects quince trees is the same that is so prevalent on pear trees, and there is no known remedy for it other than to cut off and burn the diseased parts. The cutting should be well below where the disease is observable. Seeding to clover and mowing instead of cultivating would not be likely to prevent the trouble in any material degree, although it would not harm the trees in the least. Clean cultivation is usually the best course. Japan plums are now grown to some extent in many parts of Virginia. Rot is the worst fault they have there and in many other sections H. E. V. D.

Bing and Napoleon Cherries; Virgalieu Pear.

M. W. F., Bryn Mawr, Pa.—1. Will the Bing and Napoleon (Royal Ann) cherries that have won so much favor in the West and on the Pacific coast, be likely to do equally well in eastern Pennsylvania? 2. Is the old-time Virgalieu pear—the most delicious pear ever grown—still to be had of fruit tree sellers? I never find it catalogued in their booklets. At what age does it come into bearing? I only know now of old trees in very old gardens.

ANS.—1. Yes, The Bing and Napoleon cherries do very well in those parts of the Eastern States where the other sweet varieties succeed, and Pennsylvania is included within that territory. 2. Virgalieu is a synonym of the pear properly White Doyenne. It is offered for sale by some of the nurserymen, although not by the majority of them. It is indeed a very delicious pear, but it is rather more easily affected by the fungus disease that causes the fruit to crack than most varieties. H. E. V. D.

What Killed the Tree?

W. H. W., Malden, Mass.—This year we were pained by the death of a fine cut-leaved birch, which had been growing vigorously for seven or eight years. We could assign no cause. This year, another five or six years old, looks very much discouraged and we are anxious about it. It is far away from the first, 75 or 100 feet. There is no possible gas leak, and we have had plenty of rain. Can you prescribe any treatment which may save a valued life?

ANS.—It can only be guesswork to assign a cause for the death of the birch trees without careful examination. In some localities death from root rot, caused by fungus attacks, is known to occur, but trees in built-up sections usually die from the effect of gas or water about the roots, or downright starvation from poverty of the graded soil.

EVERYBODY'S GARDEN.

SWEET CORN AND SMUT.—Experience seems fully to demonstrate that smut is a serious hindrance to the profitable growing of some of the first early sorts of sweet corn. It is also pretty clearly shown that the trouble is much more prevalent with some varieties than with others. As little has as yet been done to remedy the difficulty, it is best thing to grow the varieties least affected. The Early Cory, with all its newer strains, as the White Cob, the Mammoth and Giant, while very desirable as to earliness and table quality, are all, in so far as my experience goes, particularly liable to the disease. Of all the first early kinds tested here, the Sheffield Sugar seems nearest the ideal. It withstands the cold of early Spring better perhaps than any other variety, while the table quality is second to none. It is the best cropper of all the early varieties tested by me, both as to yield of ears and fodder.

VARIETIES FOR SUCCESSION.—For a succession, which will give an unbroken supply the entire season through, the following list for most localities will be found very satisfactory: Sheffield Sugar, Early Minnesota and Old Colony, in the order named, with Stowell's Evergreen for the finish, or what is equally satisfactory, the Old Colony planted from two to three weeks later than the first planting. These varieties planted at the same time will follow each other in very close succession, and their table qualities cannot, I believe, be improved upon.

OUT OF TIME.—Our sewing machine got to playing all sorts of antics; in fact, it utterly refused to do its work at all. We could see nothing wrong, but it just wouldn't work at all. The adjuster down at the office, after looking it over, said it was "out of time," i. e., some part of the machinery failed to work at just the proper instant, with the result that it threw everything else out of joint, or disabled every other part. Applying this to the garden work, there is no more fruitful source of leakage in the profits of the work than doing things out of time, or rather, behind time. Crops planted and tended out of season, in the majority of cases, prove a snare and a delusion. Give the weeds a few days to start, and the check to the crop will never be overcome, while the soil has been robbed of moisture and fertility sufficient to have added much to the growth and profit of the crop. Success in its highest sense is only attainable by the closest possible attention to details, and keeping a crop in the best condition for growth from start to finish. The only attainable success is through setting the mark just as high as possible, and continually and earnestly striving to reach it.

HARVESTING ONIONS.—For best results, the onions should be harvested just as soon as mature, and this condition may be easily told by the necks or stems. When the tops turn yellow and wither up is the proper time for the work. Do not wait for all the tops to reach this condition, as the main crop will suffer if left standing until all fully ripen. Many of the onions will remain green and grow on indefinitely; but if pulled with the main crop, will mature perfectly. At present, harvesting machines throwing two rows together are used by some growers, but in ordinary operations the work is still done by hand. By some growers, the topping is done previous to pulling, by going through ahead of the pullers and twisting off the tops. Ordinarily, however, onions and tops are pulled and thrown four rows together and left thus to cure, and the tops are removed by sheep shears or knife when the onions are gathered. In favorable weather, the onions will cure in from eight to 10 days, but this process will be hurried by carefully stirring with a wooden rake or other implement which will not bruise the onions. In wet weather it is safest to cure under cover, on the barn floor or covered scaffolds, but always where the air will have free circulation. Large operations, of course, require special facilities for storing and curing, and lacking these and experience in the work, it is safest to market the crop as soon as possible, leaving the Spring markets to those who have experience in storing for the Winter, as the work is particular, and at best, is usually attended with considerable loss.

Michigan. J. E. MORSE.

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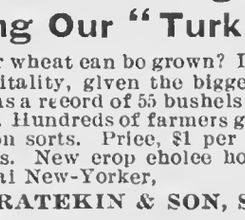

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Ruralisms

NOTES FROM THE RURAL GROUNDS

A Cross-bred Cucumber.—The long, smooth cucumbers known as English forcing, grown so extensively under glass in northern Europe, have never been popular in our markets. They can be grown in frames here to great perfection on account of our high percentage of sunlight, but are too late and slow in development for field culture, even if wanted in the markets. They are so large and handsome in color and form that many attempts have been made to cross them with our popular field varieties, but so far without results of practical value. The hybridization is, of course, readily effected, as both forms belong to the same species, Cucumis sativus, notwithstanding the wide horticultural differences, but the resulting mongrels do not seem to possess the needed characteristics. Fig. 260, first page, shows a type resulting from pollinating Telegraph, one of the best foreign cucumbers, with a selected early-bearing White Spine; together with the parent forms. The specimen shown in the cut is not as shapely as the average, but was in fine eating condition when it reached the length of 14 inches. It is very dark green in color, with a few scattering spines, well filled with immature seeds, which insures it the crisp sweet flavor so much desired. The cross was made last year on the Rural Grounds, and the resulting plants grown both under glass and in the garden. They are extremely vigorous and productive, setting almost as many fruits as the ever-popular White Spine, while they attain three times the size, as reference to the cut will show. This season they are fully as early as the White Spine parent, and bid fair to outlast it in bearing. The foliage is very large and heavy, giving the vine much the appearance of the foreign seed parent. Whether these useful features will be kept up in future generations remains to be seen, as hybrids between varieties of cucurbits are notoriously unstable. The quality of the English cucumbers grown in this country is very good, but the texture of the flesh is less brittle. It is well known that they can be grown without pollination, and the resulting fruits are seedless, but most people find the juicy crispness of our own varieties, with their immature seeds, more agreeable.

Border Spiraeas.—Systematic botanists are so mixed on the genera Aruncus, Astilbe, Hoteia and Spiræa that a layman may be excused for ignoring all technical differences and clinging to current catalogue designations which have become familiar by long usage. We may conveniently call the herbaceous species Border Spiræas in distinction to the permanent shrubby kinds, no matter to what particular species they may be assigned in the latest check-lists. There are several very handsome varieties which can be grown to great advantage in any partially shaded nook in the garden. The native species, S. Aruncus, goat's beard, and S. Ulmaria, meadow sweet, particularly the double white form, are always desirable. The former has creamy white flowers, and grows about four feet high when established; the latter is pleasantly fragrant and seldom grows higher than two feet. Both flower in June. S. Japonica is the feathery Japanese species, so abundantly forced for Winter decoration. It has beautiful glossy foliage, but does not last long in perfection. It is entirely hardy, and is grateful for more moisture than it generally gets. There are several highly improved varieties, varying in the number and density of the panicles or flower heads. The varieties Astilboides floribunda and Nana compacta multiflora are very fine, and much more satisfactory than the type. The latter is especially dwarf and free-blooming. Spiræa astilboides is a fine species growing two feet high, with large plumes of white flowers. A new foreign variety, Silver Spray, claimed to be a hybrid between Astilboides and S. Thunbergii, is attracting much attention from the density and brilliancy of its flower heads, which are white, slightly tinged with pink. Palmata, the crimson meadow sweet, is still common in old gardens, where its dark red stems and crimson-purple broad panicles of bloom make a great show. S venusta is also a showy red-flowering species, not so generally grown. Both kinds grow three or four feet high in congenial situations, and are of easy culture. S. Chinensis, a beautiful species from eastern Asia, has just bloomed on the Rural Grounds, and we regard it as much the handsomest of the colored kinds. It has bold and handsome foliage, which resists heat well and sends up branching flower stems three feet or more high, covered with heavy plumes of rosy pink flowers. It is beautiful in the garden and does finely for cutting. It is quite new to horticulture, and is sparingly offered by plantsmen. S. Aruncus Kneiffi, also from Asia, has been described as superior to all known kinds, but is disappointing to us. It grows three or four feet, and has finely divided fern-like foliage, which burns and blights badly on the Rural Grounds. The feathery blooms are a dingy white instead of the pure color indicated by the descriptions. It is new, and offered at a comparatively high price. Our specimens have died after blooming each season. Probably the handsomest of the genus is the very dwarf S. filipendula, especially the form known as Double-flowered dropwort. It has very pretty dark-green fernlike foliage and numerous plumes or corymbs of double milk-white flowers. It is an exceedingly attractive hardy plant, and if we were confined to a single Spiræa it would be our choice.

August Strawberries.—By means of constant irrigation and abundant fertilization we have induced our Saint Joseph strawberries to bear a fair midsummer crop, but find that the berries, though really of good flavor, are not wanted at this season. In comparison with choice bush and tree fruits they are rather insipid. W. V. F.

APPLES FOR SOUTHERN NEW JERSEY

I wish to plant an apple orchard in southern New Jersey, and want early bearers. Is Bismarck worth planting here? What about Yellow Transparent and Starr, and are Paragon, Mammoth Black Twig, Stayman and Arkansas synonyms for the same apple? Is it an early bearer?

May's Landing, N. J. J. T. B. S.

ANSWERED BY IRA J. BLACKWELL.

Bismarck is a very dwarf grower, and would not be profitable unless planting very close. I would advise to plant only as experiment. Yellow Transparent is a fair grower, and not a tardy bearer; may be one of the best. My knowledge of this is favorable. Starr is highly recommended; personally, I do not know the apple. Paragon, Mammoth Black Twig and Stayman are seedlings of Winesap. Paragon has often been planted for the Mammoth Black Twig; very few of the latter have been disseminated. They are a stronger or heavier grower than Paragon, quite distinct in wood and growth. Stayman has fruited in central New Jersey, is larger than Winesap, and I think would be safe to plant for trial at least. Arkansas belongs to the same class. I think it synonym of Paragon, but am not sure. I would advise the planting for market, of first early, Primate, not usually a heavy bearer, but an annual bearer and sells well; Early Ripe, not so good quality as Primate, a little later and much surer to bear. Alexander is likely to be the most profitable apple; may be called second early; tart, red in color on white ground, a fine-looking apple that sells high. Must be gathered as soon as ready, as it rots fearfully when left too long on tree. At present time I find this one of the best. Haglce comes in next, a little late for an early apple, yet it grows nicely, a good bearer, and usually sells. Peaches are by this time in the market, and apples are not usually very salable.

Williams Early may precede peaches, also Garrettson. Cornell's Fancy and Maiden Blush are fine fruits. In Winter apples there is nothing that I know that will bring the quick returns so well as the Smith, generally known as the Cider apple, and it not only brings returns quickly, but it keeps right on bringing in the cash, if half taken care of. Have known this tree to bear 14 bushels at one crop 14 years planted. Nero is a very mild sub-acid fruit that is safe to plant, provided there are no cedar trees near the south side of the orchard. It is very liable to be host to the Cedar rust when near a cedar grove on the southern side of orchard. Fall Flat-top has some claims, particularly for the family orchard; good bearer, large size, best quality for every use, but it ripens a little unevenly; keeps into November here. Smokehouse, September to October, needs no one to speak for it. Rebel is a fine apple, ripens in October; color red. Hawthorndon ripens with the Maiden Blush; considerably larger, sells best, bears well; poor grower. York Imperial will outkeep the Smith. An uneven bearer—that is, bears so heavily that it has to have an off year or two. Cooper's Market will have to be left out on account of tardy bearing. After 25 years of growth in the orchard, it begins to bear the finest of apples, that keep and sell well. For a Winter apple the Smith takes the lead in early persistent bearing, and has the ability, when broken down by over-bearing, of sending up shoots to form a new top that in two years will begin to produce apples.

Grape and Rose.—Several years ago you sent us a grapevine, the name of which is forgotten. Last year it bore its first grapes. This year it is quite full, but our severe drought is keeping them very small. Last year we sacked some of them, and, when fully ripe, we thought them better than the Concord. Our Ruby Queen rose was very full of bloom. It must have had at least 40 roses on it, but they did not last as long as our other roses. We planted it near the grapevine, but must move it to some better place, as it is too fine to lose. L. B.

Illinois.

R. N.-Y.—The grape was probably the Carman. It has not been very satisfactory in most parts of the North.

Strawberries and Lime.—A few years ago I tried the experiment on an acre of strawberries on low land (muck and mud land), the kind of soil people say needs lime to sweeten it; on half I used stable manure (horse manure), the other half equal value in money of Canada wood ashes and bone. There was but little difference that I could see; if any the stable manure was best, but with my 50 years' experience, I would rather rely on stable manure for all kinds of land to grow strawberry plants and fruit. I never used common brick lime, only the lime contained in the wood ashes.

Massachusetts. S. H. WARREN.

Bordeaux on Potatoes.—Just a word on the Bordeaux Potato-blight question. We have a small piece of potatoes, about three-quarters acre, near the house. The last time they were sprayed, about a month ago, when in full bloom, Bordeaux of the 4-4-40 formula was used (four pounds lime, four of copper and 40 gallons of water), in addition to the Paris-green. The last nine rows on the upper side of the piece were sprayed *with Paris-green only*. The tops on all the rows remained green and thrifty till last week, when I noticed indications of blight on the rows not sprayed with Bordeaux. It was three days before I observed any blight on the other rows; gradually, however, the disease has spread, and now the whole piece is affected, and the tops are rapidly turning brown. In this case one rather hasty spraying seems to have been of some avail in protecting the leaves from blight. Potatoes hereabouts generally reported a poor crop. R. W. R.

Millbrook, Conn.

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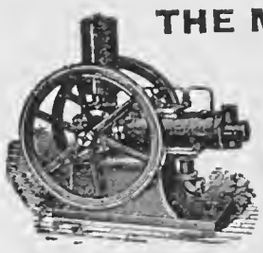
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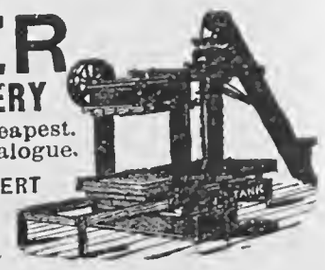


HOPE FARM NOTES

STRAWBERRIES.—This season has been a hard one for most farm crops, but there never was a season yet that did not suit something. Our strawberries have made a fine growth. When at last we had a few weed-killing days in succession I told the boys to let the corn go and clean up the yellow turnips and strawberries. It was too late in the season to clean up everything, so we will take the things that have the most promise. Our Marshall strawberries are fine, great stocky plants with thick green leaves, and not a trace of blight. They have been cultivated five times and hoed three times. We got down on our knees to them the last time and pulled out the weeds by hand. They will respond to that sort of a prayer. We are leaving only two or three runners to each plant. Small families for pedigreed plants or pigs! I want big rich berries, for most of our local growers seem to have the pins set up for smaller-sized fruit. Better four good, stocky plants to the square yard than a dozen! We shall put on more fertilizer the last of August, and let them go.

SPREADING OUT.—We set 2,000 plants last Spring. We plan to leave about 7,000 good ones and to transplant 4,000 more. These transplants will be set between the late cabbage, and in or after the early sweet corn. They will be the best plants we can find. If the soil is moist or wet we shall cut around the plant, and with the fingers squeeze a good-sized ball of dirt around the roots. If the soil becomes dry the Richards transplanter will be used. This cuts down into the ground and brings up the plant with a bunch of dirt around the roots about as large as a tomato can. When this is set out in a new place the plant never stops to wink. The point is to keep the roots from the air if possible. It is, of course, nonsense to expect a full crop from these transplants next year. They will give some good fruit, however, and the following year they will be ready for a full job. As they grow between the cabbage their bill for rent of land will not amount to much before coming into bearing.

FERTILIZING IN FALL.—I believe in feeding the strawberry heavily in late Summer and Fall. The fruit buds which are to produce next year's crop are started and formed usually during September or October. Some growers believe that the crop is completed—from bud to berry—in the short Spring season. That is an error, I am sure. The fruit buds will be formed in the next 60 days, and the plant must truly "work like sixty" to produce them. It will need potash and phosphoric acid in particular. I shall use corn fertilizer on all the small fruits. Last Spring, we found, on one of our back fields, a small patch of early wild strawberries. They were unusually large, and far ahead of anything around us in ripening. Whether some bird dropped the original seed, or whether this patch ran away from cultivation, I do not know. I think, however, that there is something in that lonely patch that may mend a hole in the strawberry supply, and I shall try to sew it on. We are digging up good plants and setting them in the rich soil at the lower end of the farm, where they will be fed and tended. Perhaps civilized food will give more power to their fruit buds. What other plants should be fertilized in the Fall? The Fall grain should be fed. Where one is using chemicals I think most of the potash and phosphoric acid might well be spread in Fall or Winter provided some green crop is left to grow. On our hilly farm it would be folly to use much nitrogen in the Fall. If I were to use stable manure in the Fall I should plow it in and not leave it on top of the ground. On level land, or that with a gentle slope, this advice would not be entirely sound.

POTATO NOTES.—The potatoes are slowly gaining. The tops have been satisfactory all Summer, but the tubers would not set and grow. They are now gaining, and may make a small crop yet. I think that the chance for a large crop has passed. Still, prices this year are such that a yield of 100 bushels per acre would give as much clear money as 200 bushels in a year of plenty. . . . As to future prices I am satisfied that most estimates are wild guesses and little else. The early crop is short, and many people who often hold until September have dug too early—tempted by the tremendous price. On the other hand, good reports of late potatoes are often based on the appearance of the vines which, this year, is the poorest possible guide. Again, people will eat turnips, cabbage and boiled rice in place of potatoes when the price goes to about $3.50 or $4 per barrel. It is true, on the other hand, that thousands of barrels which in an average season would be made into starch will this year be sold as food. With all these conditions who can tell? I expect to sell all I can spare this Fall as soon after digging as possible. . . . The most promising potatoes I have to-day are those planted in a naturally wet field which was covered with stable manure. They were planted very late in June, and while the field has been flooded again and again the vines are strong and vigorous. That is a little rough on the theories of a man who has said as much as I have about stable manure and potatoes. However, digging time is a good way off yet. The actual tubers may be so smooth and large that they will stamp on every corn on the feet of my theories—or they may be so small and scabby that they will pat it on the back. It is not safe, though, to turn a theory loose without putting some sort of hobble or halter on it.

NATURAL VS. TRAINED.—I have never cared much for fast horses, but the speed locked up in the legs and lungs of our lively colt has started a new interest in trotting records. Last week a horse trotted a mile in 2:03¼. The point of interest to me is how much of that speed is natural and how much is due to training and perfect conditions. Take the same horse on a farm. Let him earn his living like any other farmer—with a turn at the cultivator or plow, or hauling a good-sized vehicle over rough country roads. As a *farmer*—without race-horse training, what would be his *natural* speed? Charlie spent several years in caring for such horses, and he says that under these natural conditions The Abbot and the other flyers could barely squeeze the mile inside of three minutes. From all I can learn that is a fair statement of what human skill can do to hasten the passage of 5,280 feet through a watch. Much the same thing probably holds true of a cow, a hog, a tree or a field of corn. There are forces at work in all of them which are capable of doing a certain amount of work when left to do it in a natural way. They will do better when given the care and training which is common among men, but their highest excellence is not natural, but a human attribute grafted or budded into them by a trained and patient mind. No, I don't imagine that I am capable of trimming 40 seconds or so off Maria's natural record. I am not going to try it, for I feel sure that the mortgage would fatten at the race track. I shall, however, try to work out the same idea in the apple and peach orchards.

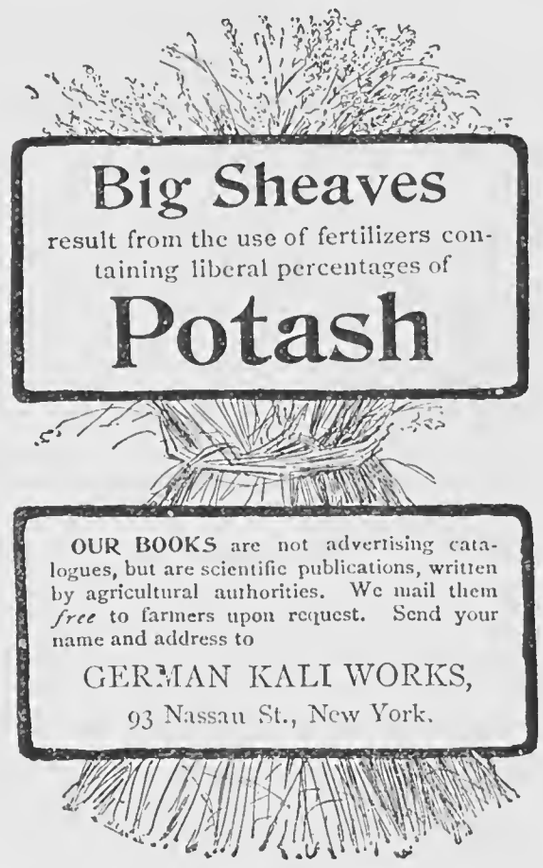
FARM CROPS.—The wet weather continues. August is crowding full of dark and cheerless days, with a deluge of rain at intervals, which keeps the ground well soaked. What a growth of weeds we have! We have mowed them down on the stubble fields, but still they come. It will make a fine lot of "humus" to plow in, but I am not quite in the humor to enjoy the appearance of the farm plate when cleaned up with ragweed. I call this a poor year for the Clark system of grass seeding, for with these cloudy days and constant showers it is next to impossible to kill out the weeds. . . . I realize how hard it is to clean ordinary land of weeds before seeding. Last year we worked one field again and again, until it seemed as though every separate grain had been exposed to the sun and air. Yet, with the second growth of grass the ragweeds are coming in as if all that culture was a mere scratch on the back. . . . . The corn which was sown broadcast late in July is making a heavy growth on the field; where the Crimson clover was plowed in it is already nearly shoulder high, and of a dark green color. That will give us good horse feed this Winter. At the top of the hill we planted Evergreen sweet corn on August 6. It is growing well, and should the frost hang off as long as last year it will make ears. . . . The Crimson clover and Cowhorn turnips are up and doing. No, I do not expect Cowhorn turnips so long that a yard will not hold them. Half that length will satisfy me, though of course I shall want to know why other folks can grow longer ones. . . . . Our pear crop is fair, and picking has begun. Two years ago I put a heavy coat of hog manure on the pear orchard. Experts predicted blight, but there has been little of it, but rather a very fine growth of new wood. I must say that last year we had cultivated crops and this year rye in that orchard. These other crops must have taken the curse out of that hog manure, so that what was left proved a blessing to the pear trees.

H. W. C.

THE SHORT POTATO CROP.

The following statement, taken from the New York Sun, will interest potato growers. The views of the consumers have much to do with the demand for food:

"If the reports from various parts of the United States, notably from New England and the South, are trustworthy, the people of this country may soon have to economize in the use of potatoes or pay extravagant prices for them. It is alleged that the southern potato crop this year is a failure, that the western yield is poor, and that throughout the Middle West and in all the States north of Maryland the crop is much below the average. Indeed, of all the States prominent as potato growers, Maryland appears to be the only one expected to maintain its average of former years. It has been estimated that the total potato crop of the country for 1901 will not yield over 100,000,000 bushels, or about one-half the quantity of other years. Of course, those figures represent all the domestic potatoes that will be available for export and home consumption. Persons who in the past have heard reports similar to these regarding a scarcity of potatoes may be inclined to discredit those now current; but the prices quoted for the staple in several cities of the Union tend to show that the foregoing statements are, at least, approximately correct. In a single day of last week the price of potatoes in Providence jumped from $3 to $3.75 per barrel as the result of a large purchase by dealers in Massachusetts, where the price per barrel has reached $6. On the day following this deal potatoes sold in Rhode Island at $4.50 a barrel and $1.60 a bushel. The market for this vegetable has advanced no less strikingly in other places. In New York the wholesale price per barrel for Long Island potatoes ranges from $3 to $4, with a strong tendency upward; in Chicago and Cleveland it is from $3.50 to $4; in Pittsburg from $4.50 to $4.75, while the prevailing quotations just now in and about Buffalo are such as almost to incline intending visitors at the Exposition to carry a limited supply of potatoes with them for personal use. The only explanation of the shortage given thus far is that the weather conditions throughout the regions where the yield is most affected have been unfavorable to a good crop. These adverse conditions appear to have extended over a vast area, which includes not only a large section of the United States, but also parts of Canada which, hitherto, have produced this vegetable in abundance. Briefly, excessive heat and not enough rain when needed seem to have put the crop in a bad way; and, strangely enough, no blame whatever has fallen on the Potato bug, despite the fact that for several weeks past that little fellow has been extremely active. It is possible, therefore, that, instead of exporting large quantities of potatoes, as in former years, we shall be forced to seek foreign markets for enough of the article to supply our own tables."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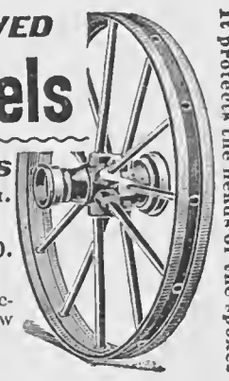
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The Rural New-Yorker

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THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, AUGUST 31, 1901

NEXT week we expect to begin a series of articles on nature study by Prof. F. W. Card. By "nature study" we mean an intelligent interest in some of the simple and common things in nature. Too many of us simply take these things as a matter of course, and never try really to understand them. We believe that Prof. Card's articles will prove a feature of THE R. N.-Y.—but they will speak for themselves.

*

As usual, THE R. N.-Y. will open headquarters at the New York State Fair. During the entire week our tent will be open, and we shall be glad to greet old friends and make new ones. The tent will be located in one of the most conspicuous corners on the Fair Grounds. It will be a good place to sit and eat your dinner, or to rest and observe the crowd. Come right in and make yourself at home. You will be welcome.

*

THE papers are well filled now with accounts of "epidemics of malaria" which are traced to mosquitoes. There is no more malaria than there ever was, and mosquitoes are no more dangerous than they used to be. We know more about them—that's all. Knowledge plunges down below the surface, and drives all sorts of disagreeable things into view. It is a good thing, for then we can fight them better. All this talk about mosquitoes will result in a sure thing—fewer of them!

*

A READER in Kansas sends us a list of 10 new subscribers and adds the following pithy postscript:

These names, except one, were secured in a few minutes by telephone. Blessed is the rural telephone!

We feel like saying amen to that! There is no doubt as to the value of the rural telephone. Some people think that they have good grounds for complaint at the way the free rural mail service is administered, but the rural telephone is always a blessing except perhaps when some creditor or unpleasant truth-teller gets on the other end. We welcome subscribers whether they come by telephone or ox team. Now that farmers are getting closer together in club or Grange we find that they are discussing and criticising the agricultural papers as never before. That suits THE R. N.-Y. exactly.

*

A FEW years ago we began to talk about the southern cow pea as a valuable manurial plant for northern farmers. Many people were at first prejudiced against this plant which, they said, is useful at the South but not suited for the North. On our own farm the cow pea continued to work like an inspired hired man, and we have kept on talking about it. Now, all of a sudden, we begin to receive good words for the cow pea. Here is a sample letter from Connecticut:

I do not wonder that you are a cow-pea crank if the plant will always get up and hustle as it has for me on this, my first trial of it. I rather think it will make me cranky, too. On July 10 we sowed a part of our lower orchard with Early Black. At this time (August 19) they stand about knee high, and look as though they were well fed and enjoying life. The soil is very deficient in nitrogen, the poorest spot on the farm, but fairly well supplied with potash and phosphoric acid. I feel sure that they could be plowed in in 45 days from sowing, and equal a good coat of manure, as every plant has on its roots from 15 to 40 of the little globules of nitrogen from the size of fine shot to that of a medium-sized pea.

A. C. I.

In Wayne County, N. Y., we found apple orchards and vineyards sowed to cow peas, and in every case farmers were high in their praise of the crop. The true value of these crops will not be realized until next season, when the surprising manurial effect will be evident. We believe now, more than ever before, that the cow pea, when its strong and weak points are well understood, is destined to change the plan of fertilizing and cultivating many orchards. By planting it in drills or hills it will permit the necessary surface cultivation, and still give a heavy yield of vegetable matter for pasturing or plowing under.

*

IN the end the short corn crop will not be such a calamity after all. Through many parts of the West the stalks and fodder will be carefully saved as never before. On some farms where, in former years, not a stalk of corn was cut for feeding, 40 acres or more of fodder will be bound and cured. If this is done once it will be done again, for the stalk, properly handled, will go a long way towards providing a substitute for the grain. In the East we feel safe in predicting that more corn than ever before will be planted next year. Hundreds of back fields and old pastures will be broken up and planted to corn with fertilizers. We have always believed that most eastern farmers should raise more corn than they now do, and if the present high prices for the grain drive them to an increase in their acreage they will be better off in the end.

*

IT hardly seems possible that there can be any apple grower in the country who does not now understand something of the situation. There is a demand even for the wild or natural fruit when made into "chops." Let no man give his apples away this year. In the East a good share of the credit for spreading this knowledge of the situation belongs to the New York State Fruit Growers' Association. It has made several accurate and thorough investigations, and has kept its members well informed. This has interested and benefited thousands of farmers who are not now members, but who ought to be. This Association has made a wonderful growth. It has already nearly 400 members, representing over 20,000 acres of bearing orchards, and new members are constantly joining. These members are live, working fruit growers who are close to the farm. The Association is organized for *business*, and it will make a vigorous effort to win the first prize offered for best collection of fruit at the New York State Fair.

*

A NEW YORK bee keeper kept 15 hives of bees in his yard adjoining the highway. They had been kept in the same situation for eight or nine years without injury to passers-by. One day they attacked and stung a team of horses which were passing. One horse died, and the other was greatly injured. A justice's court awarded damages for $70.25, but the county court reversed this decision. The case was carried to the supreme court, which has just upheld the county court. In a long and able decision the judge reviews the law covering such matters, and decides that the owner of bees is not necessarily liable for an occasional injury done by them to others. Such liability, he says, depends upon the propensity of the animal to do mischief. The bee, he says, has become almost as completely domesticated as the ox or the cow. It does not cause serious injury to persons or property from its attacks in a ratio more frequent certainly than injuries arising from the kick of a horse or the bite of a dog." This decision and others along the same line show that the bee has to-day fuller rights before the law than any other domestic animal in common use.

*

THE last Congress voted $20,000 to be used by the Secretary of Agriculture in promoting the interests of American fruit growers. The Secretary is a business man, and his idea is to increase the export trade in American fruits. As is the case with butter and cheese, he wants agents of the Agricultural Department to inspect fruit and send it abroad under a Government certificate. This certificate, he says, and we think rightly, will give a character to the fruit which it could not obtain in any other way. In order to obtain such fruit for shipment the Secretary guarantees to protect the shipper against loss. If the shipment fail to bring in the foreign market, what it would have brought here, the Department agrees to make up the difference. Some of the New York papers condemn this plan, because they say it amounts to an export bounty on fruit paid by the Government. This strikes us as a petty objection that will not stand. Naturally such shipments are more or less of an experiment. If successful in increasing our export trade it will be a National benefit. No one can expect a private shipper to stand the loss in an experiment to determine whether the Government stamp of merit on the barrel has any value. It seems to us that the Secretary is justified in offering the guarantee, and we hope that he will obtain the fruit needed to test the plan.

A FEW weeks ago we printed a discouraging letter from Virginia in which the writer told of the great depression in farm values and the general discontent of farmers. It was probably a true picture of conditions which prevail in that neighborhood. Yet, this week, we have a letter from a place about 25 miles distant which describes an entirely different state of affairs. Instead of depression and discontent we hear of prosperity and good feeling—a hopeful outlook and fair values for farm land. What makes the difference? We believe that the thing most responsible for it is the fact that in one place a live and progressive farmers' club has been maintained. It is next to impossible to measure the good which may result from the friendly intercourse and rivalry which spring up in such a club. Such organizations make better neighborly feeling, lead farmers to take more pride in their calling, and lighten the burden of life in a dozen ways. We think that Virginia farmers' club is chiefly responsible for the hopeful conditions named in the letter on the first page.

*

AT the Pan-American Exposition a company of United States regular soldiers gave a startling exhibition of battle drill. Advancing from one side of the great plaza they threw out skirmishers and slowly advanced upon an imaginary enemy. Part of them would run forward a few steps and then kneel or lie flat and deliver their volley, while another body of troops ran to their support. Thus slowly but surely, perhaps a rod at a time, they fought their way across the open field in open order, and presenting as small a target as possible to the enemy. It was a thrilling and interesting spectacle. One old soldier who stood watching it said: "If the British soldiers had known how to do that at Bunker Hill our Republic would have been set back half a century." There is much truth in what he said. The blind, stupid obstinacy of the British prompted them to march against the American sharpshooters in solid ranks, presenting a target which a blind man could hit! Had they spread out and employed modern tactics the rifleman would have lost half his power and Bunker Hill would have gone into history as a mere skirmish. There is a lesson here for farmers. Most farm organizations must spend their first years in learning to mass or act in concert. For a time they can only show a solid unbroken front, but sooner or later they must learn to work in open order, carrying the work of the Grange or farmers' club to the home and farm, and working in full sympathy with their brothers, though separated from them.

*

BREVITIES.

Ah there, Sir Thomas Lipton!
You have come across the blue
To "elevate the saucer"
With your Shamrock No. II.
Before *you* came Dunraven,
There are others yet to come
We've naturalized the cup, sir,
And America's its home.
Your boat's all right, Sir Thomas,
She is trim from mast to keel,
But our own Constitution
Has a very lively heel.
For Uncle Sam's her builder,
And his jack knife whittles close;
We're much afraid, Sir Thomas,
That you'll get another dose.
Yet win or lose, old fellow,
Here's a hand across the sea,
Let English-speaking sailors
Ever keep the ocean free.

SAVE every apple.

THE corn crop is gaining.

OH, what a season this is for flies!

POTATOES bring more than peaches in some markets.

THE vegetarian says that both fish and flesh are foul.

SOME folks are always "in hot water," and still never clean.

"AYE, there's the rub!" says the housekeeper on wash day morning!

CLOVER and turnips are popular this year for fertilizing orchards.

THOSE who shout loudest against sinners appear to be those who are without temptation.

GOD help the man whose hair becomes so gray that he's ashamed to drop his care and play.

WE hear on good authority of dealers buying apples which will cost, with cold storage, $5 per barrel by Christmas.

WE have been advised not to sow Alfalfa in the orchard, yet western New York fruit growers are putting it there. Are they right?

A NEW HAMPSHIRE reader writes: "Say, that article on plowing, page 563, is about as good an exposition of fool writing as I have seen."

WHAT a struggle the early Patrons had in trying to organize the Grange! It was years before results were visible. Then they came with a rush.

SOME large vineyardists in western New York have bagged grapes this year. One man alone used 48,000 bags. This is one of the seasons when it may pay.

THE old question comes up again this year. Is the shredded or torn silage equal to that cut squarely off with a cutter? We should say that the shredded corn is gaining in favor.

Events of the Week

DOMESTIC.—A great hurricane swept the Gulf of Mexico August 15. It struck the coasts of Louisiana, Mississippi, Alabama and Florida, from Pensacola to Grand Isle, La. In New Orleans the storm was first felt at Lake Pontchartrain in the rear of the city. The wind was from the southeast; accompanied by the highest tide ever known, 7½ feet, raised the lake 10 feet or more above the levee, and a wind blowing at the rate of 70 miles an hour drove the water over the lake shore and rear protection levees. At West End the waters were driven over the protection revetment intended to keep out the lake water. From there inland to Metairie Ridge, a distance of four miles, the water was from two to eight feet deep. Mobile, Ala., suffered severely. In spite of the great property loss, no loss of life is reported. . . . . Two men were killed and four injured by the wreck of a Canadian Pacific train at Ingolf, Manitoba, August 14. The victims were harvesters from New Brunswick and Cape Breton. . . . . At Chicago, Ill., August 17, five persons were killed outright and many others injured in a collision between a trolley car and passenger train. The motorman lost control of his car, which ran through the safety gates and crashed into the second coach of a rapidly-moving train on the Fort Wayne road. The motorman is said to be among the dead. The scene of the accident was a dangerous grade crossing, where many previous fatalities have occurred. . . . . Severe floods occurred in the vicinity of Allentown and Danville, Pa., August 17, the result of heavy rains. Half the town of Danville was under water, but no loss of life was reported. . . . . The steamer Alene ran down a pilot boat off Sandy Hook, August 17, and four men lost their lives. . . . . Three men were killed and 11 injured August 18, by an explosion of molten metal in a blast furnace at Youngstown, O. . . . . The steamship Islander, the flagship of the Canadian Pacific Navigation fleet, and the largest and fastest passenger steamer on the Victoria-Skagway route, collided with an iceberg off Douglas Island, Alaska, August 15, while on her way south with the largest number of passengers that she has carried since she was replaced on the run a few months ago, and sank within 15 minutes after striking. Her boilers exploded as she went down, killing many who were struggling in the water. The captain and 65 others were drowned. The steamer had on board $375,000 in gold, of which a small portion was taken off. . . . . Two men who were imprisoned under Lake Erie by the fire in the water-works crib, two miles out in Cleveland Harbor, were rescued alive August 19, after six days of darkness, and they will survive. . . . . The steamer City of Golconda, plying between Paducah, Ky., and Elizabethtown, Ill., was struck by a tornado at Crowells, Ky., August 19, and turned over; 16 persons were drowned. . . . . Five tons of dynamite, stored in a railroad round-house at Herkimer, N. Y., exploded from some unknown cause August 19, killing six men who were sleeping in the building The explosion caused much damage through the town. . . . . August 19, a large oil tank at Point Breeze, Philadelphia, Pa., was struck by lightning and set on fire. The fire continued to spread the following day, extending to other oil tanks, and becoming beyond control, until it threatened the whole river front. The property loss amounted to over $1,000,000, and three men were killed.

PHILIPPINES.—The annual report of Major-Gen. MacArthur, dated July 4, 1901, the day that he relinquished command of the military division of the Philippines, has been received by the War Department. Gen. MacArthur says that in the interval from May 5, 1900, to June 30, 1901, there were 1,026 encounters between American troops and Filipinos, and that the America loss was 225 killed, 490 wounded, 118 captured and 20 missing, while the Filipinos lost 2,854 killed, 1,193 wounded, 6,572 captured and 23,095 surrendered. Gen. MacArthur contends that there is no church question in the Philippines, and that under conservative procedure there need not be any trouble in disposing of the friars. He thinks that Chinese laborers are not at all essential, and that the Filipinos will work when properly paid. He recommends the gradual decrease of the Chinese in the Islands, but whether they are to be deported or not he does not say. According to Gen. MacArthur, the outlook for the future is exceedingly hopeful. He thinks that the Filipino people will, under republican institutions, become warmly attached to the United States through motives of self-interest and gratitude, but meanwhile he contends that "the molding force in the Islands must be a well organized army and navy." At a banquet in Manila on August 11, Governor Taft, speaking of the development of the Philippines, said that satisfactory legislation dealing with tariff reform must be passed at the next session of Congress, and that laws were imperatively required allowing grants of franchises and mining rights, providing for the incorporation of American banks, and prohibiting the sale of public lands and timber.

CUBA.—Chief Surgeon Havard announced August 18 that the experiments in the investigation of the propagation of yellow fever, so far as these involved the mosquito test, will be discontinued. This decision was taken because one of the non-immunes who was recently bitten by an infected mosquito died of yellow fever. The man was a Spaniard, desired to become immune, and therefore allowed himself to be bitten by an infected mosquito. Another man who was bitten is also suffering from a very bad case. Both were bitten by insects which had been set apart for the experiments of Dr. Caldas, the Brazilian expert, who has been arranging to demonstrate the alleged efficiency of a serum as a preventive against yellow fever.

FARM AND GARDEN.—The American Pomological Society will meet at Buffalo, September 12-13. It will be an unusually interesting meeting. September 12 the evening session will be held jointly with the National Bee-Keepers' Association.

The annual Summer meeting of the Wisconsin State Horticultural Society was postponed to the last week in August.

Prof. L. R. Taft has ordered the materials for three new greenhouses for Michigan Agricultural College, a rose house, a carnation house and a propagating house, which will be respectively 19 by 53 feet, 24 by 53 feet, and 7½ by 18 feet. They will be constructed with two-inch gas-pipe posts supporting iron gutters. The roof will consist of cypress sash bars and 16x24-inch double-strength glass. For growing the plants in the rose and carnation houses both solid beds and raised benches will be used. Effort will be made to have all the houses models of their kind.

The report of the census bureau shows that Alaska's total farm wealth, June 1, 1900, was $15,686, of which $2,196 was invested in live stock, $690 in implements and machinery, and $12,800 represented the value of buildings and other improvements. Buildings have been erected on nine of the twelve farms in the territory. Preparing the soil for cultivation has been the chief item of expense in opening farms, being in some instances $120 per acre. The 12 farms have a total area of 159 acres, and vegetables are the principal product. Five of the farms are only small market gardens of less than three acres. The total value of domestic animals and poultry was $2,196. Potatoes and turnips furnished the principal income from vegetables. Next to vegetables grass cut for hay and silage is the most important agricultural product. From the standpoint of income upon capital invested poultry raising in 1899 was relatively the most profitable branch of Alaskan agriculture.

The flood which followed the storm of August 18 covered 1,000 acres of onion land near Chester, N. Y., with four feet of water, and swept away 15,000 bushels of onions, which were gathered and ready for market. In Orange County the floods destroyed at least 35,000 bushels of onions. The peach crop also suffered by the tornado, fruit being blown off and trees uprooted.

All National live stock associations are requested to send three delegates each to a convention to be held at the Lindell Hotel, St. Louis, Mo., on Friday, August 30, at 11 o'clock A. M., for the purpose of conference as to the best methods to pursue to ensure the success of the live stock exhibit at the St. Louis World's Fair, which will be held in 1903.

The annual meeting of the American Oxford Down Record Association will be held at the Pan-American Exposition, Buffalo, N. Y., Tuesday, September 24; W. A. Shafor, secretary, Hamilton, O. The great sheep show at the Exposition will be held September 23 to October 5.

ODD NOTES.

During the past year Georgia farmers used over 478,000 tons of fertilizer, an increase of 66,000 tons over the previous year.

A consignment of ivory, said to be the largest single lot ever brought to New York, was recently unloaded from an Anchor Line steamer. There were 331 tusks in all, from four to six feet long. The ivory came from Africa, and is now worth about $3 per pound.

"A MODEL FARMER."—In THE R. N.-Y. of July 20 I see that S. W. Allerton poses as a practical and very successful farmer. I believe this is the same Mr. Allerton who has a large farm in this State of Nebraska situated about 120 miles north of the Kansas line, and nearly the same distance from the Missouri River, in Boone County. I have a son who lives on the east and in plain sight of a part of that farm. I usually go out there in July or August, and sometimes cross the Allerton ranch on my way to Cedar Rapids and note the method of farming. There is a great deal of Summer feeding for beef on this ranch. The pastures are extensive, the native grasses are rich, and self-feeders dot the pastures. The self-feeders are filled with shelled corn, and the cattle help themselves and grow fat. The feeding steers are brought in by the trainload, and the live beef is shipped out in the same way. I have seen some very choice beef in Mr. Allerton's pastures. Mr. Allerton is a success as a Summer feeder, but as a crop raiser Mr. Allerton is the most conspicuous failure it has been my fortune to see, and I am in my sixty-eighth year. Climate good, land new and extra rich, good crops raised all around him, I did not want anybody to tell me where the neighbor's crops stopped, and the Allerton crops began. The ranch is extensive. I have not seen all of it. What I have seen the most is at or near headquarters. The last visit to the ranch was in 1899. When the neighbor corn crop was too big to work, and was laid by, the Allerton corn was little wee stuff not much higher than one's knee. All the corn I saw on the ranch was listed in. The ground was scratched a little on each side of the corn, but the middle ground had not been touched. The middle was growing a fine crop of Foxtail grass. I don't think I should stretch the truth if I say that I saw hundreds of acres of corn crop that would not give back the seed planted to raise it. Other people raised a medium crop that year. I saw some good-looking small grain stubble that I judged had yielded a respectable crop. Some grain in the shock was more sunflower than grain. When passing through this ranch I said to my son: "This man is a success as a Summer beef maker, but a miserable failure as a farmer, and after his help is paid, the cost of tools counted, horses provided and fed, and taxes paid, then there will not be a penny for interest on the investment, and the land is growing poorer." What impudence, what stupidity, yes, dishonesty, for such a man to pose as a model farmer!

Palmyra, Neb. W. Y.

DRY IN ILLINOIS.—The past Spring was late and cold, but with about the right quantity of rain in this section. Oats were put in late; corn in good time. There was plenty of rain up to June 20; none since worth speaking of. Right here we have a fine hay crop of excellent quality, now selling at $11 to $14. Oats seem to run very uneven, good preparation of the ground having been a very great advantage this year. Corn was promising up to the time it began to "shoot," when we had a series of hot winds which killed very many of the tassels, and left but little pollen, so that the grains will, I fear, be very scattering on the cob. There is a great demand for corn binders to save the fodder, and more will be cut than ever before in this region. On this farm we shall cut 50 to 75 acres, where we generally cut none. The wheat crop was a large one, and both grain and straw promise to be a good price. Bad as the drought is here, a few miles west it is far worse. Beginning not more than 10 miles west, from there to St. Louis, 80 miles, the country is almost a desert. They had good wheat and nothing else. About July 10 I took a little trip to St. Louis over the "Big Four." Oats were four to six inches high, and too thin for a rake to get them, even if mown. Meadows were not worth cutting; pastures were eaten, roots and all. Wheat was in shock and burning up from the fires set by the railroad engines. In a run of about 30 miles I saw the marks of at least 30 fires on one side of the line. From a dozen to 100 or more shocks had been burned in each case. In many places the farmers were out watching and ready to fight any fires starting. Many thrashing machines were running, although it was Sunday, and with all this was the terrible heat, such as has never been known here before, 109 degrees at the Government station near here. For many days the hot winds blew and the heat continued, until now there is not feed enough nor water enough for the stock. I hear of one man near Alton who is killing his stock, as he has no feed and cannot sell, while feed will be so high as to cost him more to feed his cattle than they will be worth. On the other hand, from this point east, I am told things are in much better condition. A large fruit grower told me yesterday that his peach crop was cut three-quarters and other fruits much the same. Those here who held on to their corn last year will get 75 cents or more, I think. Oats are selling up to 34 cents, but wheat remains low, 60 to 65 cents. Stock is almost unsalable. Here we still have plenty of water in our wells, but cisterns are dry. We are hoping for rain. GEO. W. BLISS.

Christian Co., Ill.

CROP PROSPECTS.

In the past few weeks I have traveled over a large part of Oswego, Onondaga, Cayuga and Madison counties, N. Y., also over a portion of Oneida County, and have talked with quite a few of the fruit growers. I think that an estimate of 10 per cent of a crop of apples is high, and would estimate the pear crop at 25 per cent. Plums are also light. I think that the one thing that has impressed me above all others this Summer is the success of Alfalfa in New York State, especially in the vicinity of Fayetteville. Farmers were cutting their second cut the latter part of July, and I was in several pieces that were almost hip high, and was told that it would be cut once more in some instances. It does not seem to me that there is any other crop that can take the place of it on New York dairy farms, especially on upland. B. D. V. B.

AUGUST 14.—I have sown Alfalfa in Spring and in July; both started well, but the July-sown nearly all heaved out, and the Spring-sown did not heave much. I would not advise sowing in the Fall. Nearly everyone is crying "poor bean crop." We have about 30 acres planted early that promise now 30 bushels per acre, but some of our best farmers who raise red kidneys report in some instances a great loss from some insect or worm that cuts the stalk off. Hessian fly is working in the beans; rust and blight and the rain hurt a good many. In some fields about one-half of the vines have not a pod on. Red kidneys are in bad condition; something seems to girdle the stalk and they break over. One man here said that anyone who would give him his seed back could have his crop. CLARK ALLIS.

Orleans Co., N. Y.

AUGUST 15.—Many crops of potatoes are a disappointment. A good many are being dug and shipped at from $1 to $1.10. We have dug about seven acres, and as near as I can tell, we have averaged about 125 bushels per acre. Now they will give us 140 bushels per acre. We have sold $900 worth from less than seven acres, which means over $130 an acre. My judgment is we, or, rather, this locality, will have about half a crop. It would appear that all the later planted potatoes will not give a crop. D. C. LEWIS.

New Jersey.

AUGUST 19.—We are able to report one whole week without rain. Mornings have been foggy, but "burned off" as the sun got higher. Everybody now hopes for a fine Autumn, with sunny days and drier atmosphere. Crops are now where one can either "bank" on them or report failure. Corn is looking well as regards color and growth of stalk, and ears have set well; but there is plenty of smut to offset the good features. Still it seems that there must be more than an average yield. Late planted corn for silage is rank and fine. The potato crop now promises a very fair yield, and late planted and late sorts are still green and "toppy." Many farmers say, "All tops and few tubers," but if blight does not strike them there will be potatoes yet. Early potatoes have been marketed and the prices have ruled high—record-breaking, in fact. First diggings brought $1.75 and $1.60 in local markets. For two weeks price remained at $1.50 with good demand, and $1.25 is present price, with steady demand. Rye is mostly thrashed, with less than usual yield reported. Fields and pastures of emerald hue and good Fall feed assured. Many have cut latter crop of clover. No apples worth mentioning, and a big crop of early pears. Grapes heavy. Beans promised a good crop, but rust will dampen expectations. More Hungarian grass was sown this year in this section than ever before, and the yield has been good, but much of harvest has been wet. Prices for all sorts of garden produce are unusually high. It is a bad season for tomatoes here. Very few ripe ones, and rust has stopped further growth. Weeds are striving to smother all crops, and there will be some good bonfires this Fall. Wise farmers are buying barrels now for another year. Price is low. D. L. P.

Dover Point, N. H.

Crop and Weather Report.

During the past week the heat on the north Pacific coast has been excessive. The Middle and South Atlantic States have had heavy rains, with high winds in the South. Texas, parts of the Missouri and Upper Mississippi valleys and the upper Lake region, are still suffering from drought. Conditions are favorable in the Rocky Mountain region and California. In the corn belt the late crop has greatly improved, but nearly all of September will be required to mature it. The Spring wheat harvest is about finished. The North Dakota crop is disappointing, owing to poorly-filled heads and shrunken berry. Cotton in the eastern section of the belt has suffered from the excessive rains and wind, causing rust and shedding. Peaches in the Middle and South Atlantic States are rotting badly. The apple outlook is slightly improved in Ohio, Indiana and Illinois. Fall plowing is in progress in most of the Central States east of the Mississippi, the soil being in good condition for this work.

Woman and Home

From Day to Day.

AN AWFUL THREAT.

I won't ever live in this house no more,
And I'm goin' away, 'way off somewhere
In the dark woods! And mebby a bear
Or something nobody ever saw before
Might come and eat me up! And then,
I bet you, when
My pa has no little boy, he'll be
Sorry he punished me!

And I'm goin' to starve and not
Ever eat anything again at all.
And when I'm up with God and got
Wings and can look at my pa, and he
Comes home and sees my coat in the hall
And looks all around everywhere,
And I ain't there,
I bet he'll be sorry he punished me!

And when I'm far away
And nearly starved and can hardly stand
They might be a big, bad man come along
and say
He'd take me off to some strange land!
And then, when the people told my pa
How cruel he was, I bet he'd be
The saddest person you ever saw,
And sorry he punished me!

And when they had no little boy no more
Mamma would cry all day.
And when no little boy would open the door
For pa, at night and say:
"Hello," I bet
That's when he'd be
The saddest yet—
And I'll stay this time, but he
B-b-b-b-etter quit punishin' me.
—S. E. Kiser in Chicago Record-Herald.

*

ONE-pound baking powder cans make very good molds in which to pack ice cream for freezing. The slices cut from such a mold are of convenient size, and pretty in effect.

*

BROILED green peppers form a very desirable accompaniment to beefsteak. The peppers are cut into quarters, the seeds removed, and then broiled over a hot fire until the edges curl. A tiny bit of butter and dash of salt are put on each piece. The broiled peppers are very appetising served with corned beef hash.

*

ONE of our friends suggests that during the hot weather fruit may be cared for by simply canning it, making it up afterwards into preserves if desired. If canned with an abundance of juice some of the superfluity may be poured off and made into jelly by the use of additional sugar at any time. If canning is done according to modern methods it is the easiest of all ways of preserving fruit, involving less labor than jellies or preserves, and if possible to defer any of the extra labor until colder weather it would be a decided saving of strength.

*

MEDALLIONS of fine Hamburg with an initial in the center can now be bought for use on bed and table linen or underwear. The initial is embroidered, and the medallion is appliquéd on the article where it is to appear, by the embroidered edge. For more practical use in marking garments initial letters come on fine cambric tape, easily stitched in place. They are a decided convenience, for an up-to-date laundress who is unable to remove stains of writing ink seems to find no trouble in obliterating indelible marking ink at any time without apparent effort.

*

YEARS ago we used to apply cretonne flowers upon various articles of fancy work, sometimes with good effect, but the cretonne appliqué was often used upon felt, which was unsuitable, and therefore ugly. This work has been revived, and some of it is very pretty. Sofa pillows of denim decorated with cretonne flowers are effective, especially green denim with big pink roses or poppies. The cretonne is also used upon thin white curtains sometimes with really good effect. Straight valance window curtains of white muslin woven in stripes are finished at the bottom with bands of cretonne, with a very pretty old-fashioned suggestiveness.

*

AN Indiana man is suing a railroad for $20,000 damages to console him for the loss of his bride. The complaining citizen feel asleep on the train when on his way to be married, was carried past his station, and did not wake in time to get back the same day. A telegraphic explanation was received by the bride with scorn and contumely; she canceled the engagement by wire, and declines to be placated. If the case comes to a trial the Indiana jury will be confronted by a problem to which the wisdom of Solomon would be sadly inadequate. Not only must they decide the amount of monetary consolation due a man thus bereft of his bride, but they must also decide whether such a slumberous soul is really within the pale of legal sympathy.

*

THAT the sensible short skirt is here to stay is proved by the new Fall jacket suits now seen in the shops, which have skirts clearing the ground by about two inches. They are not golf or rainy day skirts, but are designed for street and walking costume. In addition to serge and cheviot, which are always in style, all the suitings used for men's clothes are considered desirable for these walking suits. We are threatened with a return of the plain habit back, which is the ugliest thing possible for a walking skirt; let us hope that its horrors may be mitigated a little. The postilion, which made its appearance rather shyly last Winter, is being urged again; it is a decided improvement to a very long-waisted or hollow-backed figure. There is also a tendency towards basques coming below the waist line, which have been pushed into the background for several seasons. If they come in again we must inevitably return to seams in the back of the waist, which are always something of a trial to amateur dressmakers; they have such a maddening habit of coming out crooked after being fitted.

Rural Recipes.

He ate pork chops and sausages,
And candied sweet potatoes,
His soups were full of onions and
Of garlic and tomatoes.

He ate salt mackerel and cheese,
And pastries and bananas;
And after having finished these,
He smoked a few Havanas.

And yet he oft, in mournful tones,
Was heard to ask this question:
"Why is it that I just can't find
A cure for indigestion?"
—Credit Lost.

Blackberry Pot Pie.—If you have bread dough on hand, use that, if not make a soft baking powder dough with two cupfuls flour, two eggs, one cupful sweet milk and two teaspoonfuls baking powder. Butter a deep dish, put in a thin layer of the dough, cover with the berries, then sprinkle with sugar; add another layer of dough, then more berries and sugar and a top layer of dough. Make a small, round hole in the center of each layer of dough, except the bottom one. Set the basin in a steamer and steam three hours. Serve with cream. Cherries or peaches may be used instead of the blackberries and are delicious. Bits of butter added to the fruit are an improvement.

Grandmother's Cherry Pudding.—Beat three eggs very light without separating them; add to them two cupfuls of milk. Measure 3½ cupfuls of sifted flour; add to this three teaspoonfuls of baking powder and half a teaspoonful of salt, and sift thoroughly. Make a hollow in the center and slowly pour in the liquid; mixing in the flour until you have a smooth batter. Then add two level tablespoonfuls of melted butter and two cupfuls of stoned cherries, well drained and dredged with flour. Stir well into the batter and then turn into the pudding dish or mold, cover closely and steam for three hours. The water in the steamer or boiler must boil continuously and if more must be added replenish with boiling water.

Apple Pan Dowdy.—Butter a deep, brown earthen pudding dish; peel and slice apples enough to fill it; for two quarts of apples, use a teaspoonful each of powdered cinnamon and salt, half a pound of brown sugar, half a pint of cider or water. Thoroughly mix the spice, salt and sugar upon the apples and pour the water or cider over them. Cover with a plain pie paste, place in a moderate oven and bake slowly for three hours, taking care that the oven is not hot enough to burn the crust. This may be eaten hot or cold, with sugar and cream.

Meat and Potato Pudding.—Boil the potatoes as for mashing, rub through a colander or put through a press; make into a thick batter with milk and beaten eggs, cut underdone roast beef or steak into rather large pieces, and lay in bottom of the dish; then a layer of batter; then more meat; seasoning well; more batter, and so on until all is used, having top layer of the batter. Bake a nice brown in moderately hot oven.

Stewed Beefsteak.—Cut a round steak weighing two pounds into pieces the size to serve. Dredge each piece well with flour; put into a stewpan with a little vegetable oil and brown on both sides; then add two dessertspoonfuls of good vinegar, sprinkle each piece with salt and pepper, cover closely and place the stewpan where the meat will cook at a gentle simmer for one hour. Remove cover, add one small onion sliced, a small carrot, a small turnip and one cupful of hot water. Cover and let simmer for two hours longer. Take up the meat and keep hot, skim off any fat that may appear on top of the liquor; add to the gravy such sauces and catsups as you may have that are suitable, Worcestershire sauce and mushroom catsup preferred. Rub all the vegetables you can through a sieve, add to the gravy and thicken with a little browned flour. Season to taste, let boil up and pour over the meat. A pretty border for this may be made by pressing plain boiled spinach into small cups or molds, filling about two-thirds full, then turning them out, flattening the tops and placing a slice of hard-boiled egg or sliced beet, cut into fancy shapes, on each mold.

Cabbage au Gratin.—Remove without breaking six of the outside leaves from a head of cabbage and cut up the remainder in small pieces. Put on to boil in cold salted water and when the whole leaves can be pierced with a broom straw strain them from the pot and arrange them around the sides of a baking dish as a shell to receive the creamed mixture. When the rest of the cabbage is thoroughly tender drain well and mix with one pint of cream sauce to which has been added one-half cupful of grated cream cheese. Turn into the baking dish, sprinkle the top with a little grated cheese and bread crumbs and put in the oven long enough only to brown lightly. This mode of preparing cabbage is delicious and will be found quite as delicate as the more expensive cauliflower.

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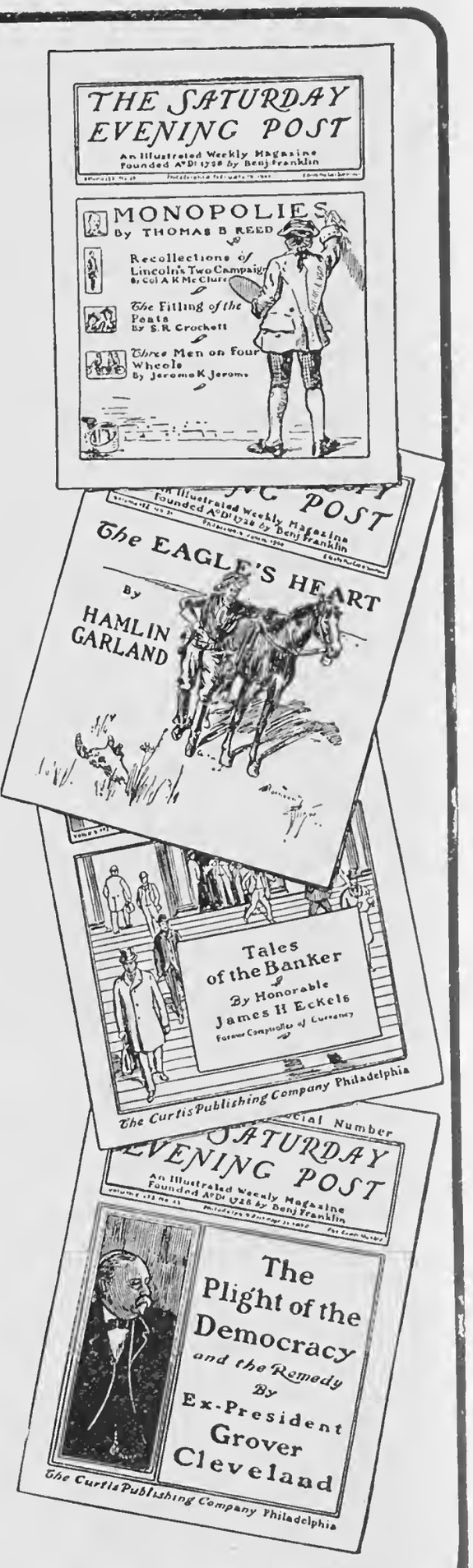


The Curtis Publishing Company, Philadelphia

The Cow Cure.

I was so surprised that I actually tumbled off my wheel and stood staring like an idiot till Elsie brought me to my senses by asking if I could not speak to her. You see it was three months since I had seen her, and since we had broken off our engagement. It wasn't any lovers' quarrel, you understand. We thought just as much of each other as ever, and it almost broke our hearts, but her health gave out, and she thought, and in fact I did too, that she was going into a decline. She had doctored and tried this, that and the other, till finally we both gave up in despair, and she declared that she could never marry me. Well, at about that time her uncle Jason, who has a farm out about 50 miles, wrote her to come and visit him and he'd undertake to cure her. It was nearly June, and the thought of the country was very inviting, and she decided to go. I know she did not expect to come back alive, and I didn't have much hopes, either, so our parting wasn't cheerful. She told me not to write to her, as the sooner I forgot her the better, and all that. Well, the next few months were not very happy, I can tell you.

One day I got a letter from Uncle Jason. In it he said, "I think if you can come out within a week, Elsie will be able to see you." You can imagine what a state that put me in. I expected I'd find her dying. Uncle Jason went on to tell me how to come, and I'd better bring my bicycle and ride from the station on that, and he gave me minute directions about roads. Well, I started early the next morning, and it was a little after 10 when I was spinning along the road towards the farm. Then, all at once, as I said, I tumbled off my wheel.

There, by the side of the road, sitting on a camp stool with a book in her lap, was Elsie. Near by was a big red cow lying down and chewing her cud. She had on a halter with a long rope, and Elsie had the end of the rope in one hand. All this was surprising enough, but the change in Elsie was the most surprising of all. The last time I had seen her she was a thin, pale, nervous wreck, but now she was the picture of health, with her eyes bright and a healthy, sunburnt color in her face. I didn't ask her then what had made the change, for you see we had more important things to discuss first. In about two minutes we were engaged all over again, and we even began to make some plans for the wedding.

Just then that cow got up and began to move off, and Elsie, in the most matter-of-fact way in the world, gathered up her camp stool, put her book in the Boston bag she had beside her, and started to follow the cow. They went along to a new piece of grass where the cow began to eat, and then Elsie opened the camp stool again and sat down. I had watched the performance in amazement, and when Elsie looked up at me, she laughed.

"Do you see any difference in my looks?" she asked. "Do you remember what a wreck I was before I came here, with 'nerves', insomnia, dyspepsia and all sorts of aches and pains? Why, now I am as well and strong as anybody. I sleep nine hours every night, I can walk 10 miles and not get overtired, and just see this," and she drew her sleeve tight and doubled up her arm to show the biceps muscles.

"I see," I said. "It is wonderful! But what has done it? Uncle Jason ought to start a sanatorium."

"It is the cow cure," said Elsie soberly, "and it is a great discovery." Here the cow moved on again, and Elsie followed.

"There!" she said. "I'm going to tie her to this tree while I tell you about it I don't think Uncle Jason will care just this once, and she does interrupt so." When the cow was tied, she began.

"I had been here a week, and I was as miserable as ever, for all that I could see. Uncle Jason watched me closely, and seemed to be worried, but he didn't say a word. Finally one night at the supper table, I said, 'Well, Uncle Jason, I don't seem to have improved under your treatment. I've been here long enough to show some improvement, but I'm not a bit better. I haven't any appetite, I don't sleep, and I'm tired all the time.'

"His face had been troubled and he appeared to be thinking deeply, but he didn't answer. Pretty soon he looked up and his face cleared suddenly. 'I have it,' he said. 'You see I didn't understand the case thoroughly at first,

3880 Girl's Sailor Suit,
4 to 12 yrs.

and I thought that just simple country living would be all that was necessary, but I see now that you need something more radical, and I'm going to try the cow cure on you.'

"'The cow cure?' I said. 'What do you mean?'

"'Wait till to-morrow,' he said, and I couldn't get another word out of him, except that I must go to bed early and get all the rest I could."

Elsie paused and looked at her watch. "Why, it is dinner time," she cried, and she immediately opened the Boston bag. She seemed surprised. "Do you know?" she said, "I have been worrying almost ever since you came about dinner. I knew I should have to divide with you, and I didn't see how I could stand half rations with my desperate appetite!"

"Well, if that isn't a compliment!" I said. "I guess I'll go home."

"No, don't," she cried, her face coloring deeply. "I know I'm horrid to think of such a thing, but you know, Fred, I'd share my last crust with you, and I never would have let you know, only, don't you see, Aunt Lucy has put in twice as much dinner as usual, so there's plenty for us both. I wonder how she happened to do it. She must have been thinking of something else."

"She knew I was coming," I said, and then I told her about Uncle Jason's letter.

Elsie's eyes filled. "Isn't he lovely?" she said. "He knew that you were all that was necessary to my complete recovery."

"Now go on about the cow cure," I said, when we had eaten our dinner. The cow was chewing her cud, now, so Elsie went on without interruption.

"The next morning after breakfast, Uncle Jason said it was time to begin the new treatment. He took me out in the yard. 'Here,' he said, 'is a cow, and here is a camp stool. Along the road is plenty of feed which is going to waste. The cow is gentle, so you need not be afraid of her. Let her feed along as she pleases, but don't let her get into anyone's fields if you can help it. Oh, and here's some lunch for you. If you can't manage to bring her back, I'll come and get you towards night.'

"With that he set me adrift. The cow took me along at her own sweet will. I'd sit awhile on the camp stool, and then I'd have to get up and follow wherever she choose to lead. Once I had a hard struggle with her, trying to keep her out of a field. A boy happened along and helped me. He looked at me curiously, and asked if that wasn't one of Torrey's cows, and I thought he regarded me as either a thief or an escaped lunatic.

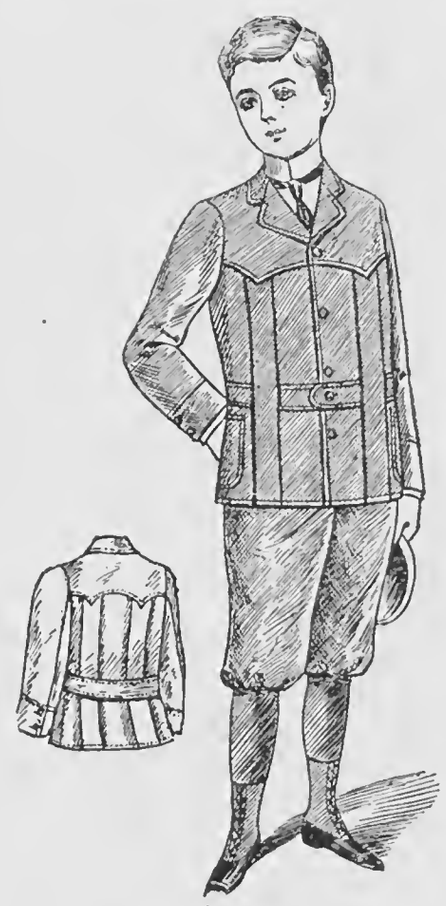
"Well, somehow, watching that cow eat gave me a fearful appetite, but the parcel of lunch was so small that it didn't seem as if it would be a drop in the bucket. I didn't have time to open it, the cow kept me so occupied, till she lay down and began to chew her cud. Then I undid the paper and found—what do you think? Four rather small, hard, oatmeal crackers. I felt so hungry and abused that I could have cried. I began to eat, and then it struck me that I would chew each mouthful as long as the cow chewed each mouthful of her cud. It worked beautifully, and made the crackers last a long time.

"Well, that was an awful day. I couldn't get the cow home. She would start in the right direction, and then her mood would change and she would go the wrong way in spite of my pulling with all my strength.

"Finally, at about five o'clock, Uncle Jason came and led the cow home, and I plodded along after them. Oh, how tired I was! Uncle Jason wouldn't let me eat much supper, and then I went right to bed. I slept like a log all night, and in the morning I felt better than I had for a long time, although there were lame spots all over me.

"Every fair day since then I have gone out with the cow. Gradually they increased the size of my dinner, and for a month I have been allowed to carry a book. I began to be able to control the animal, and now I can make her do as I like.

"I have tried to make Uncle Jason let me give up taking her out, but he would not hear of it. I told him I felt so lazy and shiftless, spending my time that



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way, and he said I'd have to feel that way a long while before I'd be cured of the insatiable desire to be busy every minute, which I had acquired by living in the city.

"But now"—and a look of determination came into her face—"I'm going to declare myself a graduate of the cow cure." She rose to her feet. "You may take the bag and the stool, Fred. Come along, Betsy Jane." And with that we all started.

She turned the cow in at the lane bars, and then we went on to the house. Uncle Jason met us at the door. Elsie went up to him and put her arms about his neck. "You are the best doctor and the best uncle in the whole world," she said. "And, Fred," she added, looking down at her clothes, "you must visit with Uncle Jason awhile, and when you see me again I shall not be a person of 'bovine flavors,' as Dr. Holmes used to say," and with that she disappeared inside the house.

SUSAN BROWN ROBBINS.

The Rural Patterns

The sailor suit shown is of marine blue linen with collar, cuffs and shield of white stitched bands of the blue, and tie of soft blue silk. The skirt has a front gore joined to wide, straight back portions that are laid in three box pleats on each side, and is attached to a fitted body lining. The blouse is smooth across the shoulders and can be made with or without the applied yoke. An elastic inserted in the hem at the lower edge regulates the fullness and allows of drawing the blouse over the head without an opening in front. The sailor collar is seamed to the neck and the shield is faced on to the body lining, the standing collar finishing it at the throat. The sleeves are in bishop style with straight cuffs. To cut this suit for a girl eight years of age, 5½ yards of material 27 inches wide, 4½ yards 32 inches wide, or 3¼ yards 44 inches wide will be required. The pattern No. 3880 is cut in sizes for girls 4, 6, 8, 10 and 12 years of age; price 10 cents from this office.

The Norfolk suit, as here shown, is one of the latest modes for little boys and growing lads, and will be much seen in the early Fall. The original is made of cheviot in a mixture of brown and tan with threads of green, but all wool suiting cloths are suitable for cold weather wear, linen, duck and galatea for Summer suits. The knickerbockers can be gathered into bands below the knees, as illustrated, or drawn up to the required size by means of elastics run through the hems. The jacket is made with a smooth yoke, that is pointed at the lower edge and finished with a collar that rolls over with the fronts to form lapels. Below it the jacket portion is laid in box pleats and a belt passes around the waist under or over the pleats as desired. The sleeves are in coat style, and a patch pocket is stitched to each front below the belt. To cut this suit for a boy of eight years of age 4¾ yards of material 27 inches wide, 2½ yards 44 or 50 inches wide will be required. The pattern No. 3898 is cut in sizes for boys of 4, 6, 8, 10 and 12 years of age; price 10 cents.

Preserving Corn.

For a number of years I have put down corn in the following manner, and it has always proved excellent. Fill wash boiler one-third full of water, when hot put in the ears of sweet corn (Country Gentleman is the best for the purpose I ever used) which have been husked and all silk taken off. Let boil just long enough to set the milk—no longer. Take out in pans and soon as cool enough cut kernels from the cob. Sprinkle a layer of salt (just so you cannot see the bottom) in a three-gallon stone jar; fill in the corn for an inch, then two handfuls of salt. With potato masher pound well; then put another layer of corn, never over two inches in depth before using the salt, pounding down well each time. When jar is full cover with salt just so you cannot see the corn. Place a clean white cloth over, then a plate, and weight with something; it will make its own brine, and if kept under the corn will not mold. When wanted, take out quantity desired and pour hot water over; pour off, doing this two or three times, the last time let stand until fresh enough, but if rightly handled only a few minutes are required. Boil a few minutes and the corn is ready for seasoning and table. I often put red kidney beans with the corn, and it makes a dish that even a New Yorker thinks excellent. Of course the beans are well cooked before being mixed with the corn, and a cupful of cream is the best seasoning. I tried laying down corn without cooking it first, as a recipe published directed. It soured and had to be thrown away, but after using the recipe given I have had no trouble.

MRS. FREDERICK O. JOHNSON.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

MARKETS

THE WEEK'S QUOTATIONS.

WHOLESALE PRICES.

NEW YORK, AUGUST 24, 1901.

GRAIN.—Corn is one cent up from last week. The wheat market is weaker than at last report.

Wheat, No. 2, red, N. Y.	—	@	78⅛
No. 1, Northern Chicago	—	@	79⅜
No. 2, hard, New York	—	@	78⅝
Corn, No. 2, mixed, elevator	—	@	62½
Oats, No. 2, mixed	—	@	39½
Rye, No. 2, W'n, f. o. b., N. Y.	—	@	58½
Barley, feeding	—	@	52
Malting, new crop	—	@	63

BEANS.

Beans, Marrow, choice, u	—	@	3 00
Medium, choice	—	@	2 75
Pea, bbls., choice	2 75	@	2 80
Pea, bags, choice	—	@	2 75
Red kidney, choice	—	@	2 55
White kidney, choice	2 25	@	2 30
Black turtle soup, choice	1 95	@	2 00
Lima, California	—	@	4 60

FEED.

Spring bran, coarse	17 50	@	18 00
Winter bran	18 00	@	18 50
Red Dog	—	@	21 25
No grade flour	—	@	21 00
Linseed meal, ton	—	@	29 50
Cottonseed meal, ton	—	@	24 60

HAY AND STRAW.

Hay, No. 1	85	@	90
No. 2	80	@	85
No. 3	65	@	70
Clover	55	@	60
Clover, mixed	65	@	70
Straw, rye, long	70	@	80

SEEDS.

Clover, per 100 lbs	10 00	@	11 25
Timothy, per 100 lbs	5 00	@	5 50
Flaxseed, whole, per bu	6 50	@	7 00
Millet, per lb	2	@	2⅛
Rape, German, per lb	3¼	@	3½
Sunflower, per lb	2¼	@	2½

MILK.

New York Exchange price at stations $1.21 per 40-quart can. This is the gross price, and from it must be taken cost of transportation and fees at receiving stations where such charges are made.

BUTTER.—Market for better grades firm. Medium qualities dull. Speculative and export business light.

Creamery, extra, per lb	—	@	20½
Firsts	19	@	20
Seconds	17	@	18
State dairy, tubs, fancy	18½	@	19
Tubs, firsts	17	@	18
Tubs, seconds	16	@	16½
Tubs, thirds	14	@	15
Tins, etc	14	@	18
W'n, imitation creamery, fcy	16½	@	17½
Firsts	15	@	16
Lower grades	14	@	14½
W'n factory, June, finest	15	@	15½
Current packed, best	—	@	14½
Fair to good	13¾	@	14¼
Renovated butter, fancy	17	@	17½
Common to choice	14	@	16½

CHEESE.

NEW.

Full cream, colored, small, fcy.	9⅝	@	9¾
Colored, small, good to chce.	9	@	9½
White, small, fancy	9½	@	9⅝
Small, white, good to choice	9	@	9⅜
Colored, large, fancy	—	@	9½
Colored, large, good to chce.	9	@	9¼
White, large, fancy	—	@	9⅜
White, large, good to choice.	9	@	9¼
Common	7	@	8
Light skims, small, choice	8	@	8¼
Large, choice	—	@	8
Part skims, prime	6½	@	7
Fair to good	4½	@	6
Common	3	@	4

EGGS.—Prime fresh eggs continue scarce and are wanted.

QUOTATIONS LOSS OFF.

State & Pa., avge. prime, doz.	19	@	20
W'n, fresh-gathered, ch., doz.	—	@	18½

QUOTATIONS AT MARK.

Nearby, State and Pa., fresh-gathered, fcy selected, doz.	21	@	22
Prime to choice	18	@	20
W'n refrigerator, per doz	15	@	17½
Fresh-gathered, North'ly sections, candled, selected	17	@	17½
Reg. packings, N'th'ly sect'ns.	14	@	17
Graded, Southerly sections	15	@	16
Reg. packings, S'th'ly sect'ns.	12	@	14
Fresh-gathered, dirties	9	@	12
Checks	7	@	9

LIVE STOCK.

Steers	4 30	@	5 50
Bulls	2 25	@	3 40
Cows	1 70	@	3 65
Veal calves	4 00	@	8 00
Buttermilks	3 00	@	4 00
Sheep	2 00	@	3 50
Lambs	4 00	@	5 60

LIVE POULTRY.

Spring chickens, per lb	13	@	14
Fowls, per lb	—	@	10
Roosters, per lb	—	@	6
Turkeys, per lb	—	@	10
Ducks, average W'n, per pair	50	@	75
Average Southern, per pair	40	@	50
Geese, average W'n, per pair	1 00	@	1 25
Average Southern, per pair	80	@	1 00
Pigeons, mixed, per pair	—	@	20

DRESSED POULTRY.

FRESH PACKED—ICED.

Turkeys, W'n, hens, small	7	@	8½
Western, toms	—	@	7
Broilers, Phila., over 4 lbs. to pair, per lb	18	@	20
Phila., mixed sizes, per lb	16	@	17
Penn., fair to good, per lb	11	@	15
Western, dry-picked, per lb	—	@	14
Western, scalded, per lb	—	@	13
Small, dry-picked or scalded, per lb	11	@	12½
Fowls, W'n, dry-picked, prime	9½	@	10
Western, scalded, prime	—	@	9½
S'th'wn, dry-picked, prime	—	@	9½
W'n & S'th'wn, poor to good	8	@	9
Old roosters, per lb	5½	@	6
Ducks, Spring, L. I., and other nearby, per lb	13	@	13½
Western	7	@	10
Geese, Spring, Eastern	13	@	16
Squabs, choice, large, dark	—	@	2 25
Mixed, per doz	1 75	@	1 87
Dark, per doz	1 25	@	1 50
Culls, per doz	50	@	1 00

FROZEN.

Turkeys, young hens, No. 1	11	@	11½
Mixed young hens and toms, No. 1	10½	@	11
Young toms, No. 1	—	@	10½
No. 2	7	@	9
Broilers, dry-picked, fancy	18	@	20
Scalded, fancy	—	@	14
Chickens, fancy, soft-meated	12	@	13
Average, No. 1	—	@	10
No. 2	7	@	9
Fowls, dry-picked, No. 1	—	@	10
Capons, fancy, large	15	@	16
Medium sizes	13	@	14

DRIED FRUITS.

Apples, evaporated, fancy, lb	—	@	9½
Evaporated, choice, per lb	8¾	@	9
Evaporated, prime, per lb	8	@	8½
Evaporated, com. to good, lb.	5	@	7½
Sun-dried, State and Western, qrs., per lb	4½	@	6
Chops, per 100 lbs	1 25	@	2 25
Cores and skins, per 100 lbs	1 50	@	2 00
Raspberries, evaporated, 1901, per lb	—	@	23
Blackberries, 1901, per lb	5½	@	6
Huckleberries, 1901, per lb	—	@	14
Cherries, per lb	12	@	13

FRESH FRUITS.

Apples, Duchess of O., h-pkd, per bbl	2 75	@	3 75
Alexander, per bbl	2 75	@	3 75
Twenty-oz., hand-pkd, bbl.	3 50	@	4 00
Gravenstein, per bbl	2 25	@	3 25
Summer Pippin, h-pk, bbl.	2 00	@	3 00
Holland Pippin, per bbl	2 00	@	3 00
Orange Pippin, h-picked, per d-h bbl	2 00	@	2 50
Orange Pippin, h-picked, per open-head bbl	1 75	@	2 00
Windfalls, per bbl	75	@	1 25
Pears, Le Conte, S'n, bbl	50	@	1 50
Kieffer, Southern, bbl	1 00	@	1 50
Bartlett, per bbl	2 00	@	3 25
Bartlett, per keg	1 00	@	1 50
Bell, per bbl	1 75	@	2 00
Clapp's Favorite, per bbl.	2 50	@	3 00
Nearby, common, per bbl.	1 00	@	2 00
Peaches, Ga., per carrier	75	@	1 50
Mo. and Ark., per carrier	1 00	@	1 50
Md. and Del., per carrier	50	@	1 25
Md. and Del., per basket	25	@	60
Jersey, per basket	25	@	50
Plums, Abundance, 8-lb. bkt.	15	@	20
Large blue, per 8-lb. bskt.	—	@	30
Green, per 8-lb. basket	20	@	25
Grapes, S'n Del. per carrier.	75	@	1 25
S'n, Moore's Early, car'r.	50	@	75
Up-river, Del., per carrier.	1 50	@	1 75
Up-river, Champion, car'r.	65	@	75
Up-river, M's Early, car'r.	—	@	1 00
Huckleberries, Md. per qt.	3	@	6
Jersey, per qt	4	@	7
Pa. & State, Mountain, qt.	4	@	7
Watermelons, per carload	100 00	@	150 00
Large, per 100	16 00	@	18 00
Medium, per 100	12 00	@	14 00
Small, per 100	5 00	@	10 00
Muskmelons, Baltimore, crt.	25	@	1 00
W'n Md. Gem, per crate	1 00	@	1 75
Other Md. and Del., per crate or carrier	25	@	1 00
Jersey, per bbl	50	@	1 00
Jersey, per ½-bbl. box	25	@	75
New Mexico, fancy, crate	3 50	@	4 00
Colorado, per crate	3 50	@	3 75

VEGETABLES.

Potatoes, L. I., per bbl	3 00	@	3 25
Jersey, per bbl	2 50	@	3 00
Jersey & Southern, com., bbl.	2 00	@	2 25
Sweet potatoes, yellow, bbl	2 50	@	3 00
Red, per bbl	1 75	@	2 25
Beets, Jersey & L. I., 100 bchs	—	@	1 00
Celery, State & W'n, doz. roots.	10	@	30
Carrots, L. I., 100 small bchs	—	@	1 00
Corn, Jersey, per 100	75	@	1 25
Cabbages, L. I., Flat Dutch, 100.	4 00	@	5 00
Cucumbers, Jersey, per box	15	@	25
Jersey, per bbl	40	@	60
Cucumber pickles, Rockland Co., per 1,000	1 50	@	2 25
Jersey, per 1,000	50	@	1 12
L. I., per 1,000	75	@	1 50
Eggplants, Jersey, ½-bbl. crate.	50	@	65
Jersey, per bbl	1 00	@	1 25
Green peas, W'n N. Y., basket.	2 00	@	2 50
Lima beans, Hackensack & L. I., Potato, per bag	1 25	@	1 50
South Jersey, Potato, bag	1 00	@	1 25
South Jersey, flat, per bag	50	@	75
Lettuce, W'n, N. Y., case	1 50	@	2 50
Boston, per case	1 50	@	2 00
Onions, Southern, per basket	—	@	1 00
Orange Co., white, per bag	1 75	@	2 50
Orange Co., yellow, per bag	1 75	@	2 00
Orange Co., red, per bag	1 50	@	2 00
Jersey & L. I., yellow, bbl	1 50	@	2 25
Jersey & L. I., white, basket	1 00	@	1 50
Peppers, Jersey, per bbl	50	@	75
Jersey, per crate	20	@	25
Squash, yellow, per bbl	75	@	1 00
White, per bbl	75	@	1 00
Marrow, per bbl	—	@	1 00
String beans, W. N. Y., g'n, bu.	50	@	75
W'n N. Y., wax, per bu	75	@	1 00
Boston, green, per bu. box	50	@	75
Boston, wax, per bu. box	50	@	75
Jersey & L. I, per bag	40	@	65
Turnips, Jersey, Russia, box	—	@	1 00
Tomatoes, Hackensack, box	1 25	@	1 75
Other Jersey, Acme, box	1 00	@	1 50
Other Jersey, Stone, box	75	@	1 25
Other Jersey, Grant, box	50	@	1 00
Albany, Acme, bu. box	1 00	@	2 00

HAY IN NEW ENGLAND.

Turf, Farm and Home, published at Waterville, Me., has the following account of the farm operations of Mr. Fred Pollard, who sold a business in a town and bought a farm on the Kennebec River. This was two years ago and the farm was then sadly neglected. Now the reporter says:

"While a good crop of hay was harvested last year it was nothing compared to what will be gathered this season, and Mr. Pollard estimates that the good work has only just begun. He says he shall not be satisfied with anything less than 35 tons this year, and that is just one-third of what he expects the farm to cut in the immediate future. The most gratifying part of this all is that it has been brought about without the expenditure of a large amount of either capital or labor. In fact, with the exception of haying time, Mr. Pollard has only had one boy, but this boy has been largely employed in hauling dressing from the stables in Waterville and Fairfield. Mr. Pollard made arrangements with the livery stables to furnish them with their straw for bedding, and to receive their dressing in return, and the result has been very gratifying. The coarse strawy material has had a splendid effect in breaking up the rather heavy clay soil of the farm, hence the great yield of hay. It was thought by some that Mr. Pollard paid a good price for a run-out farm when he purchased it, but he will readily sell hay enough off the place after wintering a good stock to pay every dollar of the purchase price in a few years."

The Springfield (Mass.) Republican describes the grass grown by Major W. F. Pond, of Massachusetts, as follows:

"The grass is five feet high, is very thick, and will yield four tons to the acre, which is saying a good deal, as the average in Massachusetts is about three-fourths of a ton to the acre. The grass that Major Pond is growing almost exclusively is Herd grass, as it yields more than most kinds, and is ready to be cut 60 days after planting. Major Pond the other night took a reporter out to his field and showed him some of the hay. He lays his great success in growing grass for hay to the fact that he uses much more and richer manure than most farmers. He said: 'If the farmers of Massachusetts used more brain and less hand work, they could accomplish what I accomplish every year on this 36-acre piece of land. The main weakness of most farmers is that they let their money stay in some of the Worcester banks, instead of buying lots of manure and fertilizing the land as they should, and then they wonder why they cannot get large crops of hay. I expect and will get 100 tons of hay off this small farm, and if anyone doubts this he can come at any time and I will convince him that what I say is correct.'"

ANGORA GOATS.—I recently saw a herd of 420 Angora goats, which a man in this county has brought up from Texas. They were all in one field, and attracted considerable attention. It is supposed that they will live on bushes, weeds and such stuff that nothing else will eat. They were browsing on willows and other bushes, some standing on their hind legs to reach for the branches. The prices asked for them run from $5 to $10 each. I can't see that they are any better than sheep, except for their disposition to browse, as they might clear up a neglected farm or piece of new land.

M. D. H.

Columbia Co., N. Y.

When there is frequent "hawking" of mucus, hoarseness, a hacking cough, or corresponding symptoms, more serious pulmonary troubles are to be apprehended. Dr. D. Jayne's Expectorant will remove such obstructions and effect a permanent cure.—*Adv.*

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THE RURAL NEW-YORKER, NEW YORK.

MARKET NOTES

HEAVY SUGAR RECEIPTS.—During the month of July, San Francisco received from the Hawaiian Islands 33 vessels containing 739,000 bags of sugar, equal to 88,680,000 pounds. This is the largest recorded receipt for any one month at this port, and gives some idea of the development of the Hawaiian sugar industry.

PACIFIC COAST VEGETABLES.—The general farming districts of California are having an unusual demand for vegetables. Usually the Central West does not have to buy potatoes, corn and similar products from other sections, but the drought this year has cut everything so short that the most unexpected calls have been made on the East and extreme West. California farmers are rapidly marketing their potatoes, of which there is a large acreage in the Sacramento Valley, and yields are said to be heavy. In the same section there are over 60,000 acres of beans.

NO WASTE.—"No," said an extensive New York egg dealer, "we don't throw away anything now. A few years ago, when eggs spoiled, they had to be dumped into the garbage cart, but a class of foreigners has come into this city who are genuine scavengers, and will buy eggs, no matter how badly rotten they are. The grade quoted as 'Inferior culls' at about $1 a case is far from prime, but we have sold to these people eggs so badly damaged that they brought only 25 cents per 30-dozen case. Of course, in ordinary seasons we don't have many spoiled eggs, but the excessive heat of this Summer has damaged a good many lots from a distance that were all right when shipped. I don't know what these people do with the spoiled eggs. Probably they are used in the cheap bake shops."

WHAT ABOUT POOR VARIETIES?—Every species of fruit has varieties that are worthless grown in certain localities, and some are of no account anywhere, yet they hang around the markets year after year. In small markets varieties that are unusually early or good shippers, even though inferior otherwise, will doubtless continue to be sold, as they come at a time when little fresh fruit is on hand; but in the larger markets these black sheep of the fruit tribe are being crowded out more and more each year. In New York, for example, there is always high-quality fruit of some species to be had at a moderate price. The prime apple season is a long one, lasting from the time the better Fall fruit comes until late Spring. The fancy orange overlaps the next vacant space, and then come strawberries, peaches and grapes, each for a time being king of the market. Pears, plums, cherries and berries, while important in their way, are seldom seen in quantities that exceed other fruits. Thus it happens that there is no time of year when prime fruit of some kind cannot be had. On account of the great number of buyers, dealers in large markets can keep a much larger and more varied stock than those in small towns. With this constant supply of fine fruit it is not strange that buyers, as they become familiar with inferior varieties, pass them by; and, as this practical education of the buyer goes on, he will certainly become more and more discriminating. Those going into fruit culture, who expect to ship to the great markets, should give this question of varieties a careful study before planting. That many have done this is evident from the receipts each year. Those who do not may find themselves with plantations of the fruit of which will have to be sold at a heavy discount or peddled out in small markets where the buyer has less good fruit to pick from. Again, this constant supply of prime fruit of some species is a damper on the sale of out-of-season fruits that are not prime. For instance, there are grapes in this market at present, which, while not of good quality, would sell readily at fair prices if it were not for the abundance of fine peaches. Buyers prefer good peaches at a moderate price to poor grapes at a premium. To this rule there is one great exception, the strawberry. Certainly no one can say much for the quality of the small, hard, knotty, ill-flavored strawberries that come from the extreme South in Winter, yet they sell at high prices, largely to make a display on hotel tables. For this purpose the most firm varieties are planted, regardless of quality, on account of their superiority in shipping. However, many of the early California berries received last Winter were of much better quality, and, in fact, as palatable as the later home-grown fruit.

W. W. H.

GEORGIA HORTICULTURAL SOCIETY

The annual meeting of the Georgia State Horticultural Society convened at Milledgeville, Ga., August 7-8, President P. J. Berckmans in the chair. Owing to the railroads having refused free transportation to the members of the Society the attendance was smaller than usual, only about 100 members being present. However, the refusal of the railroads to grant free transportation did not have any influence upon a number of the absentees, as the members from north Georgia were prevented from attending on account of being in the midst of their peach shipping, the season being from a week to 10 days late this year. The sessions of the Society were held in the Baldwin County Court House. The room was decorated with magnificent specimens of palms and ferns; many of the specimens would do credit to any first-class professional florist. The plants were all grown by women of this thriving town. The Mayor of Milledgeville, Hon. Julius A. Horne, made the address of welcome, and was responded to by H. A. Matthews and W. D. Hammock on behalf of the Society. Then followed the address of President Berckmans; he gave a practical talk, and laid particular stress on the denudation of our forests, and urged that some legislation be taken to prevent the useless and reckless cutting away of our forest trees. He also impressed upon the fruit shippers the necessity of using a uniform package in the shipping of their fruit, careful and regular packing. Prof. H. B. Bulst, horticulturist of Winthrop Normal and Industrial College, Rock Hill, S. C., followed next with an address on horticulture in our schools.

The afternoon session was opened by a talk from J. P. Fort, of Mt. Airy, Ga., upon insectivorous birds. This was followed by a report from the State Entomologist, Prof. W. M. Scott, showing upon the map of the State of Georgia the distribution of the San José scale, and saying that in every instance where the scale had been discovered in the State it had been vigorously fought and sprayed with kerosene, and is under full control, and in some orchards which were badly infested two years ago they have succeeded in almost totally eradicating the scale. This demonstrates that when the scale is fought according to the directions given by Prof. Scott the fruit growers need have no fear of its getting beyond their control. The brown rot is more to be feared than the San José scale. The night session was a most interesting one, Entomologist Scott and Assistant Entomologist Fiske giving most comprehensive lectures upon noxious and beneficial insects, these lectures being illustrated by a beautiful series of lantern slides. The morning session, August 8, was opened by a discussion upon pecan culture, which is becoming a very profitable industry in the South. This was followed by a discussion on brown rot, which was very disastrous to the plum and peach crop in certain sections of Georgia this year. In many instances where Bordeaux Mixture was used the fruit crop was saved, but in other instances spraying with Bordeaux seemed to have no appreciable effect upon the brown rot, but it is thought that if these cases where the brown rot was severe were investigated, we would find that spraying was not properly done.

The following officers were elected for the ensuing year: President, P. J. Berckmans; vice-presidents, B. W. Stone, James Cureton, R. E. Park, H. M. Starnes, Dr. Neill McInnes; secretary and treasurer, L. A. Berckmans. Macon, Ga., was selected as a place of meeting for 1902. A committee on legislation was appointed, this committee to go before the Legislature and ask for an additional appropriation for the entomological department, the present appropriation being inadequate. A committee was also appointed to draft a bill to prevent the destruction of insectivorous birds. The display of fruit and vegetables was very small, but the specimens shown were of superior quality.

L. A. B.

Wayne Co. (N. Y.) Fruit Growers.

Wayne County carries the banner in the New York State Growers' Association. It has a large State membership, and has also a vigorous County Association. It is easier to organize and carry on such things in Wayne County than in most other sections. Farmers have been educated in the benefits to be obtained through organization. The Grange is very strong. The farmers' institutes are well attended, and lecturers of National reputation have gone through the county carefully. Wayne County boys have come to the front at the Cornell College and Experiment Station, so that farmers have been brought close to these institutions.

All these things helped to make the field meeting of the Wayne County Fruit Growers' Association a success. Something over 400 people gathered at the fruit farm of B. J. Case, of Sodus. The day was warm and cloudy, but there was no rain and, in the afternoon, a light breeze from the lake made the air comfortable. Before dinner the fruit growers inspected the orchards and vineyards. Mr. Case has a fair crop of fruit—grapes being the best His peaches are light, but apples are fair. Everything was in apple-pie order, and special interest was taken in the experiments under way with cover crops. In one orchard cow peas are making a fine growth. Mr. Case says he is much pleased with this crop, and he expects next year to sow it in drills through the orchard, so as to cultivate thoroughly as long as he can get through the vines. When cultivation stops his plan is to go through with a roller and crush the vines down so as to make a soft place for the apples to fall. By using one of the trailing varieties this rolling would not be necessary. In other orchards combinations of Crimson clover, Alsike, Alfalfa and turnips have been sown, and were just coming up.

Dinner was furnished by the ladies of the Methodist Church under direction of Mrs. Case. After dinner the company drew up their chairs in a shady place on the beautiful lawn fronting the house, and listened to talks by H. W. Collingwood and Prof. M. V. Slingerland. The latter is very popular with the farmers of Wayne County. He started as a farm boy, and understands what the farmers need. The meeting was a great success and will help to bring the farmers of that section closer together for mutual benefit.

POSTAL CARDS.

Destroying Milkweed.

A. M. H., Toledo, O.—Milkweed, or Asclepias, is a deep-rooting, perennial plant, and rather difficult to eradicate. The only sure way seems to be to pull up or cut off the plants every time they appear above the soil, giving them no breathing spell, and in time the roots will starve out. The work must be thorough in order to be effectual. Tea plants can probably be procured from Dr. Chas. N. Sheppard, Summerville, S. C.

Greenhouse Sub-irrigation.

G. C. S., Somerville, Mass.—Greenhouse sub-irrigation has not been reduced to a practical basis. The most successful plan so far seems to be to bed two-inch tiles partially in cement, leaving the joints open near the top. They should be at least eight inches under the soil in which the plants grow. Lines of this tile placed 30 inches apart have proven quite effective in irrigating soil. Many think, however, that it is necessary to provide an absolutely water-tight basin, in order to receive the full benefit, as the water will not always rise to the surface if it can make its escape below.

Root-Knot Disease in Vegetables.

J. L. N., Cocoanut Grove, Fla.—The root-knot disease in eggplants, beans, cabbage and other vegetables is usually caused by eel worms, or nematodes, minute transparent worms, or some kind of fungus. There is no known sure remedy for plants after infection, the most promising plan being to put three or four drops of bisulphide of carbon in a hole near the roots of the infected plants, filling immediately with earth. This is at times fairly effective, but, of course, an inconvenient remedy. The best plan is probably to grow plants on uninfected ground. The largest variety of hothouse grape is probably Gros Colman.

A FIELD meeting of the New York Fruit Growers' Association was held at Olcott Beach, Niagara County, August 14. The attendance was between 300 and 400. Among the neighboring orchards visited were those of W. A. Sawyer, G. H. Bradley, L. M. Bradley, F. M. Bradley, Geo. L. Potter, S. M. Davis, Dr. C. A. Ring, W. T. Mann and E. A. Coates. Addresses were made by President L. T. Yeomans, W. T. Mann, Prof. John Craig, S. D. Willard, J. S. Woodward and H. E. Van Deman. Speakers from other States were: J. W. Stanton, representing the Illinois Horticultural Society, and W. H. Blodget, of Massachusetts, who spoke on the need of good varieties and proper packing for market. The report of the Committee on Fruit Statistics and Marketing emphasized the need of great care in obtaining reliable figures and a better knowledge of market demands on the part of the shipper.

KILLING WITCH GRASS.—I have had much experience with Witch grass (we call it wild rye), but I never saw a spring-tooth harrow, and have often wondered what they are made for. I do not believe they are any use on light or mellow land—free from stones. That is the kind I am used to. I will tell how I cleaned out a patch last season. It was mellow land, plowed in the Spring, and was a wet edge. As it was infested with Witch grass I reserved it for late planting, and worked it with Planet Jr. horse hoe with hoes set to turn in or cover. That would set the land up in ridges. Then in a few days I would put a 15-inch flat steel in the rear and cut those ridges again. I do not want the roots torn out; I simply want to stifle them by cutting every leaf two or three inches under. Beans and cabbages were planted July 2, and not a trace of Witch grass was seen during the remainder of season.

E. L. S.

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Live Stock and Dairy

DAIRY NOTES FROM CONNECTICUT.

HOT WEATHER NOTES.—Pasture feed getting scant, flies abundant and water not always handy and plentiful will cause the cows at this time of year to drop off in their yield. Grain is high, and many are tempted not to feed any. Nothing has been done about giving the cows green fodder, and things are a little discouraging. It is only a short job to spray the cows once a day; perhaps not so often if you are fortunate enough to get the right fly killer. That ends one of the troubles. See that the cows have plenty of good water. If necessary drive them two or three times a day where if they have any inclination they will have to drink. Cows will not go far out of their way these hot muggy days to get water, even if they need it. Happy is the man who has conveniences for giving them a good supply twice a day at the barn. Perhaps after harvest is a good time to put in such a plant that, unlike a good deal of farm outlay, is useful every day in the year. It need not be expensive. Fix them so a small stream is running all the time; then there is no stagnant water and less liability to freezing in Winter. Look over carefully any systems that may be in your vicinity. If you put in water basins have all main pipes as much as possible on straight line, and avoid short joints, as where water flows slowly the pipes are more likely to clog. Put basins back of manger where cows can easily reach, instead of in the manger, where they fill more quickly with grain, hay and silage. Whether to feed grain now or not each must decide for himself. We feed the year around, though a limited quantity in early Summer. We think cows keep in much better condition and do better throughout the year when grain is fed. If not fed now, and insufficient food, either in quantity or quality is fed, they will get in poor physical condition and will be unable to respond later to better feeding in a profitable way. Grain promises to be high this season, and it behooves the farmer to be more careful than ever of what he buys if he gets what he pays for. Many will be tempted to buy the cheaper grades of oat feeds, etc. We notice they are being quoted more frequently now, and more brands. We let them severely alone. They are too much like late-cut hay, a good filler of the cow but not of the pail. We can hardly conceive of a time when they would really be economical. The gluten feeds and meals, cotton-seed meal and oil meals are much cheaper, though first cost is much higher.

POOR GRASS.—Adjoining our farm there stood, June 25 to July 1, one of the finest pieces of grass to be seen in this neighborhood. It was still standing there August 5, but some changes had taken place. It was on early moist land. The grass had gone to seed and browned thoroughly; weeds had come in and were having their own way. Instead of 2½ or three tons per acre of choice hay containing five to six per cent digestible protein and fat, and carbohydrates as easily digestible, there is a tough dry mass of fodder that "will feed" as some farmers say. It has lost not less than half its digestible protein that some one will have to make up for later at five to 20 cents per pound at the feed mill. The easily digestible carbohydrates have changed to coarse indigestible crude fiber. It isn't palatable, and will never be a good milk-producing food. The cow would get about as much goodness out of a dirty dishrag, and would perhaps like it better. The owner of such hay may tell you, as we have so often heard, that "it will do for young cattle and dry stock," but that is one of the big mistakes that too many farmers make. They expect calves to grow (often without any grain) on this kind of hay, and turn out profitable cows, but they will not do it. You are only cheating yourself when you try it. Calves, to make profitable cows, should be fed food that will keep them growing constantly (without fattening) from birth to maturity. This kind of hay turns out poor miserable scrawny runts that are ghosts of the dairy cow. If you expect your cow while dry to grow a good calf and do profitable work at the pail when she comes in, don't make her depend on this kind of fodder. Don't worry about milk fever if you do. You can't cheat the cow. But was there any real necessity for not having choice early-cut hay?

KEEP THINGS CLEAN.—In spite of all the preaching about cleanliness the average dairyman doesn't practice it very hard. Unless he is in direct touch with the particular consumer he is not apt to be scrupulously clean. Recently we had occasion to draw off the cream of several patrons of a neighboring creamery run on the gathered-cream style. Most of them use the Cooley system. We could not help observing the amount of sediment in the bottom of some of the cans; enough in some unfavorably to bacterialize all the cream at the creamery. If cream is dirty and full of sediment when cows are at pasture night and day, one can imagine the product turned out in Winter, when the cows are stabled all the time. One patron uses separator, but has no proper conveniences for cooling the cream and no ice, though a good ice pond is less than a quarter of a mile away. His cream will keep sweet only a few hours, and never can compare with cream properly cooled and kept in ice water. The creamery that receives the cream from these and many more patrons doesn't make top-notch butter, and cannot, because it doesn't get the right cream to do so. It ought to be one of the most important duties of the creamery manager to make frequent inspection of barns, creameries and contents, and to see that strict cleanliness is observed, but this is not done. They seem to think their work done when the butter is sold and bills are collected, but one part is as important as the other, as the makers of the higher grades of butter can secure the better class of customers, where it is not so hard to collect the bills as to sell the goods.

H. G. MANCHESTER.

Starting With Sheep.

I am thinking of raising sheep. I have 25 acres of new land, about 14 acres under cultivation, the remainder timber and growing up to underbrush. Will it pay to keep sheep, and if so, how many can I keep? What kind is the most hardy and profitable? My land is just medium as to fertility, and a little wet Spring and Fall; is mostly loam and little sand, and quite frosty. Give all necessary advice, for I know but little about farming, and nothing about sheep. How many would you advise to start with? S. E. G.

Blairs Corners, Pa.

With but slight knowledge of farming and none of sheep, you will have an opportunity to experiment. Sheep should serve you well on the land you refer to, and the expense of 10 ewes this Fall will not be great. They will certainly very greatly assist in cleaning up the 11 acres you refer to. You should, if possible, consult some sheep-growing neighbor, and get him to assist you in buying the sheep. I should recommend yearling, high-grade ewes, of the medium wool class, of Shropshire or Oxford type. I judge your land to be fairly level and suited to this class of sheep, which are inclined to be quiet in disposition and suited to low ground, if not too wet. One could buy such sheep in many stock yards of larger-sized towns and cities, and a fairly intelligent butcher should be able to purchase them for you if you wish. The total cost of these ewes, at this time, ought not to be over $4 or so a head, the way prices on sheep are now ruling. What you want are good, uniform, stock ewes, that are perfectly vigorous and healthy. You can easily determine whether they are yearlings or not, for if they are the two middle front teeth of the eight on the lower jaw will be noticeably larger than the other six. If the sheep is two years old, she will have four teeth of larger size in the middle. Two new large teeth come in each year, until eight large ones occupy the lower jaw. There are no upper front teeth in the sheep. So look out and do not get imposed on with old sheep. Then it will pay you to buy a fairly good ram to mate with these ewes this Fall. Such a ram, for your purpose, can be bought for $15, and you can use him two years. Buy a yearling, get one of good size, weighing at least 225 pounds, with the wool thick on the body and hind legs, and covering the face as much as possible. Let the ram run with the ewes, and he should be turned with them by October 15. I suggest breeding the ewes, as much more profitable than keeping stock to feed only. Then the increase in lambs should pay for the keep of the flock, and a nice profit besides.

If at all practical, you should keep your sheep up in an enclosure at night, provided mongrel dogs are very common near the farm. Dogs kill many sheep in a year. In fact, in certain sections of the country dogs are the chief obstacle to successful sheep husbandry. If the sheep are put in a shed at night, they can be fed and also protected. About a pint a day per head of a mixture of equal parts oats, bran and corn will make the sheep thrive and keep in fine condition in Winter, and when suckling lambs. When on good pasture and not suckling lambs, no grain is necessary. If you take up this enterprise, you will no doubt find helpful sheep notes in THE R. N.-Y. from time to time.

C. S. PLUMB.

Good Grain for Young Pigs.

Which is the best pig feed, barley, rye or oats, for young pigs to grow bone and muscle? L. B.

Tallula, Ill.

Any one of these feeds will make good feed for young growing pigs. If you, however, will grind the oats, they will make, after being sieved, the most valuable feed. If you can use the ground oats with skim-milk, you will have a first-class growing combination. When the pigs get to weigh 40 pounds or so, it will not be necessary to screen the oats. Barley is also a superior feed for young, growing pigs. This grain is a staple feed in Europe, to produce a high-class bacon. The barley should be ground, however.

C. S. PLUMB.

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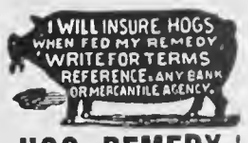

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DAIRY AND FARM NOTES.

Taking a Vacation.

VACATE THE FARM.—Can a dairy farmer, or, in fact, any other farmer, afford to take a vacation? A quarter-century ago such an innovation was a pretty sure indication of approaching insolvency. The frequent days of "visiting" when the gossip of the neighborhood furnished recreative material, the indulging at the "corner store"—have given way, in the up-to-date community, to a discussion of principles and methods of farm practice, and to the current events of the day. It all means that farm practice and economy call for more active nerve and brain force and less of the muscular energy of earlier days, and it is just this nerve force that makes agriculture successful. Is not the farmer, then, who uses during 12 months of the year this same vital force employed by the professional and business man, entitled to a vacation—a couple of weeks in which he can forget the demands of feeding and breeding, of plant foods and crop growth, and the endless detail of everyday work?

TIMES CHANGE.—I suppose the reader will query what place has such stuff in an information column of dairy and farm notes. Formerly I would have said that it had no legitimate place, but my mind has changed upon this subject as upon many others. This idea calls to mind an experience several years ago at Margaretville, Delaware Co., in which I answered a question on handling cream in a manner that called forth a sharp criticism from a listener who observed that I had given a different answer two years ago at the same place to a similar question. It also gave an opportunity to discuss change of mind and sentiment, which should be indicative of growth. Yes, a vacation for rest is a good investment, not only for health but financially, because a sharp keen mind is a safeguard against a relentless competition, which is to be sharper and closer each year.

HARD TO GET.—After all it is more easily said than done; to get away during the busy season is a sacrifice, and particularly is this true on a dairy farm, where mouths must be fed and milking done twice a day. It comes to be a question therefore whether this vacation may not as well be taken in the Winter, when time is not so valuable, and a trip to the city be made instead of a sojourn in the mountains, which the city people so thoroughly enjoy. As I write the eye can take in the beauties of Seventh Lake, Fulton Chain, and the lungs fill to their utmost with an air pure and vitalizing that so thoroughly oxidizes the system that one can almost eat and digest the proverbial rubber boot. Again this same natural tendency to equalize, and we find Nature, over a vast tract that is not crop producing, and where commerce and mercantile exchange cannot take place, preparing men and women by the thousand to battle with the modern agencies of civilization with a stronger arm and clearer brain.

AN EDUCATION.—I firmly believe that this city vacation may not only be made recreative but educational beyond the first conception of the reader. One of the crying needs of the day among farmers is a more general and also definite knowledge of market demands. I was recently discussing this question with W. H. Blodget, a large dealer of Boston and Worcester, a former resident of our town, who but recently addressed the fruit growers of western New York upon the subject of marketing fruit. Mr. Blodget, very pointedly said that "you farmers need education in packing and handling farm products for market." I could not dispute him, because I well remember a first city visit about 21 years ago, and to my then great surprise, other people were really making better butter and cheese and putting it on the market much more attractively. I had not been privileged to see outside of a narrow radius, and if there is any one thing that will grow conceit it is a narrow vision. This first visit was followed by others of a similar nature, and soon I found that opportunity for study and investigation of market needs and quality of products was not at my end of the line. Then another surprising thing developed. These same city people seemed to know just what they wanted, and frequently how it was produced. To-day there is no questioning the knowledge of a good business man; he comes in close contact with the consumer, and he is the final arbiter in these matters. Another false notion in the country is that farm products lose their identity as soon as they leave the farm; a most mistaken notion. I have known deception to be practiced in the country by people who were not naturally dishonest, in fact, they were reputable citizens, and given to square deals who had such a false notion on this matter that they would cover or attempt to do so, imperfections in their goods, only to have them rejected in the markets, and with the usual condemnation of dishonesty or unfairness on the part of the city dealer. It is to overcome this so oft repeated difficulty that I advise every farmer to set apart annually one week and sufficient of his crop returns to visit the city and get recreation and profit.

THE WIFE'S SHARE.—Take the good wife, for she is usually the equal, and not unlikely the best of the team. Woman's intuitive judgment rarely forsakes her; she may not be well informed in commercial phrases, but she knows the right and wrong of good or poor packing, and when she sees another package with better appearance she does not fail to recognize it, and to appropriate its significance for her own welfare. Yes, take a vacation, wherever you choose, but see to it that the results are for your improvement directly or indirectly. Do not dissipate; there are a thousand ways of dissipation—waste of energy and vitality from which no one profits—but the recreation that changes scenes, puts new thoughts in the place of old ones, that gives us a broader and more comprehensive view and conception of creation and its manifold laws and blessings is a Christian duty, whether we come from town or country, whether we produce the material or traffic in it. So God speed the American custom of taking a vacation.

H. E. COOK.

CLEAN VS. "CONTAMINATED" MILK.

Is there danger in the use of any of the different sprays now on the market to reduce the worry and torment of that pest, the Texas fly? Not being satisfied with my experience in this line with kerosene alone, as a spray for my cows, I have been inquiring of those who have a line of customers they supply with butter the year round. They have used other mixtures, but made the application after milking, and as the cows then went to pasture, they could not see where any bad effect could result from such applications. These men were farmers who have a line of customers whom they supply with butter at 25 cents per pound. One of them supplied a hospital for four months at 20 cents, the other eight months at 25 cents. From their customers they had received no complaint, nor had they lost any. I also conferred with the proprietors of three large creameries, who have a retail trade and supply some of the best houses in Utica, who do an extensive business with the best families of said city, and they failed to report the loss of a customer on account of any "queer" taste or flavor. Those who used the spray previous to milking claim that windows and doors being open, there was small chance for milk to be affected while they were milking, but still did not deny that it would be safer to apply the remedy after milking, as we practice the feeding of silage afterwards. These facts coming from good and trustworthy sources, were also good pointers along the line of purer, better and more wholesome production on the part of the farmer. As all dairy sections now practice milking the year round, if it is possible to affect the milk deleteriously by the use of kerosene or any of these other mixtures, what must be the effect of the milk being produced in badly-ventilated stables, cows lying in their own filth, and breathing an atmosphere laden with all the smells such vicious surroundings could produce? But when you find a farmer who so far forgets himself and his duty to his cows, and his customers, you will find that there are no educators like THE R. N.-Y. or any of our many agricultural papers on his table; that he simply exists, and, as a creamery man said to me "brought anything that would help to make the contents of his can weigh." It is no excuse for a farmer that he is poor, and can't afford the comfortable surroundings of his more prosperous neighbor. A man can wear a patched and ragged coat, but it is not necessary that it be dirty. One or two men in a community of 25 or 30 can furnish leaven enough to leaven the whole lamp. Educate the farming community up to the highest possible standard of clean, wholesome production. Then, with the best of goods on the market, we shall have gained the support of the consumer in our just fight against oleo, skimmed cheese and the adulteration of milk after it leaves our hands. J. E. H.

Some Indiana Fodder Crops.

Have begun cutting and feeding the second crop of Alfalfa for the season from a two-acre patch. This was sown a year ago last April, with an equal mixture of Red clover and Alfalfa seed. It yielded a fair cutting early in June this year, but it consisted mostly of Red clover, as that variety seemed to thrive better than the Alfalfa during the cool cloudy Spring. At this cutting there is about an equal amount of Alfalfa and Red, but a very slim cutting of the two combined. I have been reading the comments of THE R. N.-Y. on the Alfalfa patch as a cheap bran factory, but as yet I am not very enthusiastic over this bran business, for with two cuttings I estimate that I have not got more than 1,000 pounds per acre of Alfalfa hay. The soil is rather dry, gravelly loam, strong in lime, and produced (my renter says) 36 bushels per acre when last in wheat. With this estimate the bran product might be slightly in favor of the Alfalfa, but the bread and straw would easily balance the account in favor of the wheat crop. However, Alfalfa is said not to get to its best until the third year, and I shall give it one more year of grace before condemning it with a plow. All stock seem to eat it readily, and the cows never need to be driven home, when they are expecting a feed of it in waiting.

I have also grown rape, cow peas, Soy beans and sorghum in a small way for three years, but sorghum is the only one that has won my enthusiasm. Peas, beans and rape do fairly well, but the weeds will get all of them if you don't watch out. I have sown sorghum on the richest and also the poorest land on the farm, gave it no attention from sowing until harvest, yet it always manages to take care of itself and of the weeds as well, and produces a perfect wilderness of feed, relished alike by horses, cows, hogs and chickens.

Indiana. J. F. M.

R. N.-Y.—We doubt whether it pays to sow Red clover with the Alfalfa. We would rather sow it alone. Next year's crop will undoubtedly be heavier. We endorse what is said about sorghum.

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HUMOROUS

"You low and low the livelong day!"
Exclaimed the lamb. "Now, why?"
"Alas!" replied the homeless calf,
"I have no place to hie." —Puck.

KELLAR, the magician, is going to try farming. When he needs mo[illegible]nd he will probably turn a cow int[illegible].0-acre lot.—Chicago News.

"BLINKS is a confirmed o[illegible]chelor." "I bet if you'd shove a c[illegible]rfeit 50-cent piece on him he wo[illegible]arieк for a better half."—Baltimor[illegible]ish Comment.

"I WOULDN'T a-minded [illegible]alking over my hand," sobbed the [illegible] boy, who had been stung by the bumble-bee, "if it hadn't sat down so hard."—Baltimore World.

WILLIE came from the shed where Uncle Rufus was picking a chicken. "Aunt Sue!" he exclaimed, "what do you think? Uncle Rufus is in the shed husking a hen—honest true!"—Leslie's Weekly.

"YES," she sighed, "for many years I've suffered from dyspepsia." "And don't you take anything for it?" her friend asked. "You look healthy enough." "Oh," she replied, "it's my husband that has it."—Tit-Bits.

CITIZEN: "I'd give a clean thousand to find some way to exterminate these sparrows." Sporting Friend: "I'm your man. I've got just the thing." "Out with it." "Get the Legislature to pass a game law protecting them."—Life.

URBAN: "Why, old man, those chickens of yours are regular game cocks. What makes them such fighters?" "Suburban: "I'm sure I don't know, unless it comes from feeding them scraps."—Detroit Free Press.

EMPLOYER (meeting clerk at the ball game): "Why, Mr. Jones, when you asked leave of absence, you said you would like to attend your mother-in-law's funeral." Jones: "Yes, sir. So I would, immensely, but she won't die."—Baltimore World.

"YES," said the old inhabitant, "a mule kicked him 'crost a 10-acre field, an' when he landed a bull tossed him into a pine saplin', an' when he got thar a cyclone blowed the saplin' down, an' then he give up farmin' forever!"—Atlanta Constitution.

"WHY," inquired the New York girl, "do you Philadelphia people never eat snails?" "Oh!" answered the Philadelphia girl, with the air of one who had heard something like it before; "I presume it is because snails are so hard to catch."—Washington Star.

"So you rode the hair restorer agent out of town on a rail?" ventured the man on the coach. "Yes, stranger," drawled Amber Pete; "the cuss was a fraud. I poured three bottles of the stuff on my b'arskin breeches, an' it didn't make the hair grow at all."—Credit Lost.

MRS. NOOZY: "I think it's the most ridiculous thing to call that man in the bank a 'teller.'" Mrs. Chumm: "Why?" Mrs. Noozy: "Because they simply won't tell at all. I asked one to-day how much my husband had on deposit there, and he just laughed."—Philadelphia Press.

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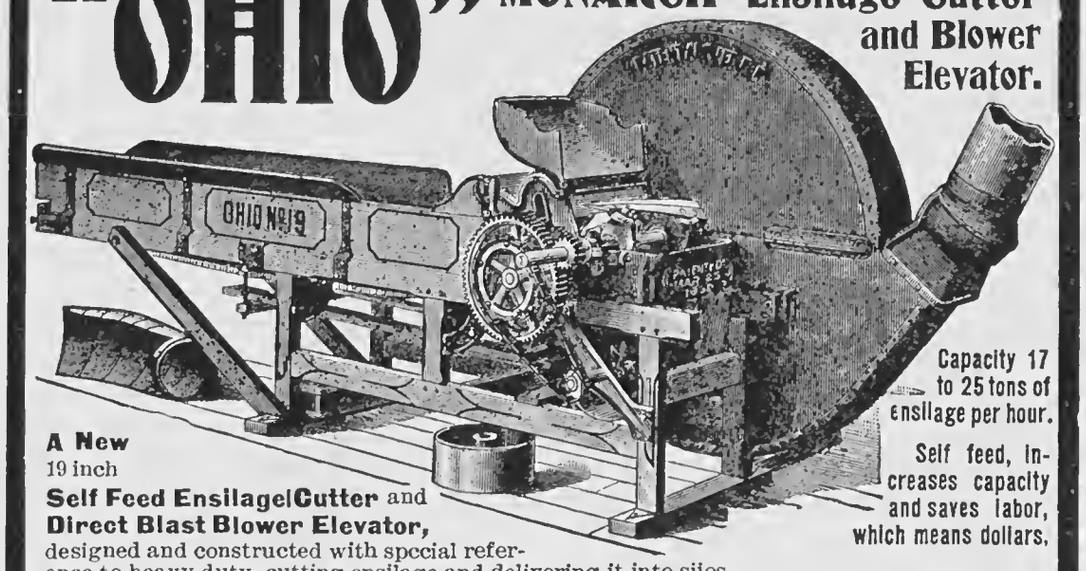

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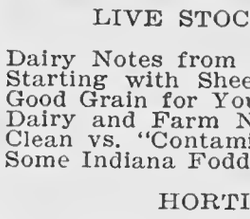

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2693. NEW YORK, SEPTEMBER 7, 1901. $1 PER YEAR

LETTUCE AND CUCUMBERS UNDER GLASS.

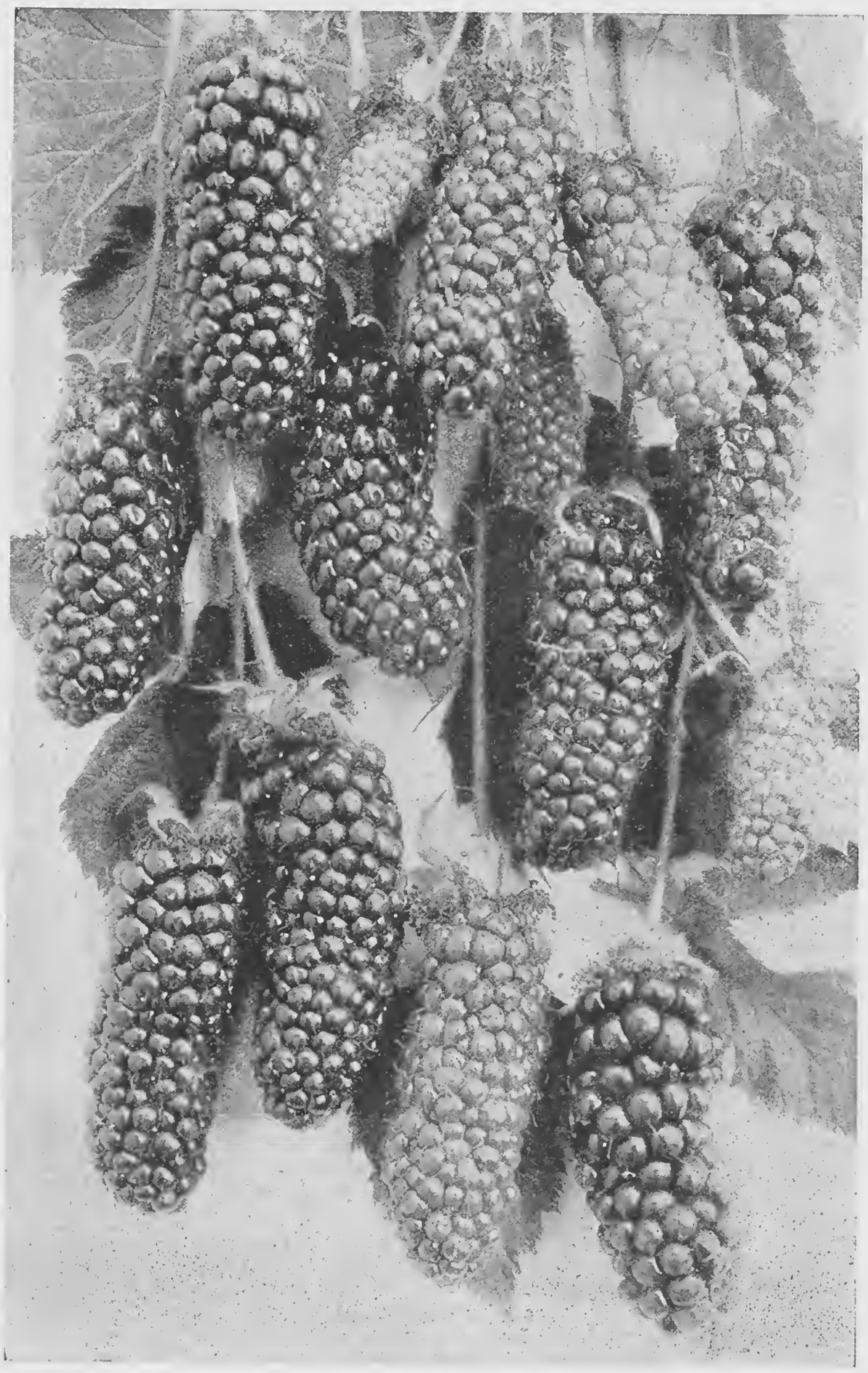
A BIG BUSINESS TO THE SQUARE FOOT.

How the Work Is Done.

Lettuce and cucumbers make a very attractive combination for the owner of forcing houses in these days of high-priced coal. There is a vast difference in fuel expenditure between the average of 45 degrees sufficient for the well-being of lettuce in Winter and the 60 to 75 degrees needed for most other glass-house products. By good management two and even three crops may be grown during the period of coal consumption, from November to April in the latitude of New York, and when well done Winter lettuce is conceded by practical growers to be the most profitable of all crops for the space occupied. For the best heads $1 a dozen was received during last Winter in the wholesale market, and the price for the season did not average much below 65 cents per dozen for those of good quality. When it is considered that greenhouse lettuce is planted eight to 10 inches apart, making it possible to get $1 for the product of about 10 square feet, and repeat the crop three times in a season, the possibilities appear vast. As in other horticultural operations, however, theoretical and actual results seldom tally. There is the usual gauntlet of destructive fungous diseases, depreciated markets and incidental defects to run, as well as the expense of a costly equipment. The warm-blooded cucumber comes in during the Summer months, when the solar heat is too much for lettuce. A great specialty is made of glass-grown lettuce and cucumbers in eastern New England, and the expert growers near Boston so monopolize the market that the outdoor southern product finds only a scant welcome. The output about New York is proportionately much less, and competition with southern growers is more keenly felt on account of cheaper transportation; nevertheless some of the finest lettuce and cucumbers known to the trade are produced in near-by establishments.

One of the most successful growers shipping to this great market is J. H. Becker, Morganville, N. J. He knows how to grow these acceptable esculents, and usually gets top prices for his products. Mr. Becker came seven years ago from Long Island, where he had grown market vegetables many years on land whose value per acre was expressed in four figures. He bought a run-down farm near the railroad, where transportation facilities are excellent, and built two forcing houses 40x315 feet each. His products proved so acceptable in the city markets that six more houses of the same width, but 350 feet in length, were soon added, making an extensive and complete plant. Meanwhile a most comfortable dwelling was erected, and the land brought into condition for satisfactory cropping. While fruits in abundance and garden vegetables are produced, lettuce and cucumbers in the big glass houses remain the special crop, and well fill the business year.

Lettuce planting begins about September 1, and an average of 25,000 plants are set in each of the longer houses. They are grown on the soil surface, no benches being used, the soil is carefully worked up, several tons of fine manure being used in each house.



THE MAMMOTH DEWBERRY. FIG. 265.

See Ruralisms, Page 598.

The after care, aside from frequent cultivation, consists of judicious watering and ventilation, as well as proper management of temperature. The object is to maintain a good growing moisture in the soil, but to keep the surface and the plants as dry as possible. The deadly "drop" and other fungi spread slowly on a dry surface, but with most malignant rapidity when sodden with moisture. The water is, of course, applied by overhead sprinkling, the effort being made to saturate the soil when the conditions of air and sunlight favor rapid surface drying. The necessary heat is maintained by hot water supplied by two batteries of three 3x12-foot tubular boilers, the coal consumption being probably the most serious item in the business. One house is planted each week until all are filled and the crops consequently mature in the same order. Cutting begins in the first-planted house about November 25. When cleared it is immediately replanted, getting, of course, another heavy application of fertilizer. This crop should be ready in January and the third in April. As the houses are not planted at the same time, only two crops are expected from the later ones. The varieties used are selected strains of the Boston Market type, generally named from the the seed grower, but Mr. Becker is now depending chiefly on seeds of his own saving. Glass-house lettuce must form a head if to be shipped, though the loose Grand Rapids type is all right for near-by consumption. The qualities sought are vigorous, rapid growth, resistance to disease, large, showy, stiff, dark green outer foliage, which may be crumpled or smooth, and a compact white head, as large and heavy as possible. This lettuce is packed for shipment in barrels of about 100 heads each, which are well lined with heavy paper in frosty weather. The quality of stiffness in the outer leaves thus determines to a great extent how full and attractive the barrel shall appear when opened at its destination. Lettuce is all right when intelligently grown with the proper equipment, as long as fungous troubles can be dodged. Mr. Becker has had little trouble so far, which he attributes as much to new soil and buildings as to his scrupulous care in management, but he looks for the day of reckoning when infection is so general that his soil must be sterilized, and is anxiously seeking information on the subject. Infection is so prevalent in the older New England houses that a practical steam sterilizer, to be moved over the beds before planting, has been evolved. It is said quickly to raise the soil temperature to 200 degrees to a foot in depth, and thus effectually cook all disease germs, and to be operated at a moderate expense. Sometimes soil is sterilized before filling beds.

As the April crop of lettuce is harvested the house is made ready for cucumbers, seeds of which are planted in March. They are set at intervals of four feet in rows the same distance apart. They are raised in plant boxes so arranged that the soil blocks may be cut apart without much disturbing the roots of individual plants. About 2,500 plants are needed for each house. A framework of cedar poles reaching to the glass roof, connected by transverse wires, is erected along each row of cucumbers to form a trellis, and the vines carefully tied on as they run. A hive of bees is placed in each house to pollinate the blooms. The first cu-

cumbers should be picked by the end of May, and the crop is practically continuous until lettuce is again planted in September, though the profits are small after July, when the local outdoor product reaches market. Only the best are then shipped, though all cucumbers must be cut to keep the vines producing. The effort is made, during the latter part of the season, to make the product of the houses pay running expenses, and is not always successful. A very liberal application of manure is worked in before the cucumbers are planted, as they are gross feeders, and if the market warrants top-dressings of fertilizer are given as growth proceeds. Water is given by a system of surface irrigation after the vines get on the trellis, and wetting of the foliage is avoided as much as possible to lessen risk of sunscald, to which cucumbers are liable under glass in hot weather. Lice and other insect pests are controlled by liberal applications of dampened tobacco stems to the soil, and the same remedy is used on the heating pipes for lettuce in Winter. Fumigation by burning tobacco is highly injurious to both cucumbers and lettuce, and the cautious grower has learned that his only salvation as regards aphids and other insect pests lies in preventing them from gaining a foothold.

The cucumbers are marketed in wooden half-barrel baskets, and are picked when six or seven inches long. The Arlington White Spine is the only type grown, and the effort is made to perfect a strain of the necessary vigor and productiveness, of thick symmetrical form, with few spines, retaining a rich dark green color under a faint bloom. A basket holds just about 100 cucumbers of the most perfect type, and early in the season $5 or even $7 does not seem too much for 100 such beauties. Mr. Becker has tried the best European forcing cucumbers, and while he can grow them perfectly, finds they will not sell. He thinks their flavor is much inferior to a properly-grown White Spine. W. V. F.

ADVICE TO "MOON FARMERS."

The following quotation is from a county paper of high repute, published in the western part of this State; it is a model county paper, ably conducted and edited. They have a column, "Farm Notes," made up of brief extracts from agricultural and other papers. This particular clipping surprises us. Does it state an actual fact, or is it an echo from the Middle Ages? "All things that grow out of the ground, such as peas, corn and the like, must be planted in the increase of the moon, from new to full; all things that mature in the ground, like potatoes, must be planted in the decrease or waste of the moon, from full to new." O. F. G.

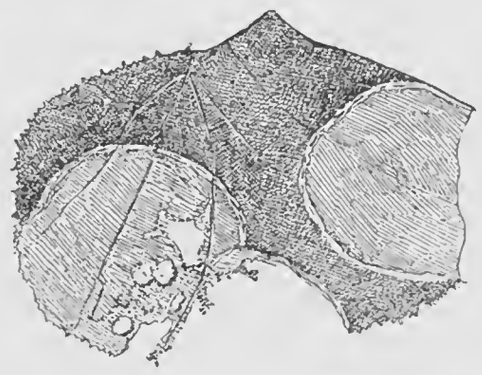
New York.

As the note reads it is utter nonsense. To say that crops *must* be planted "in the moon" is folly, for the best of crops are grown by farmers who never think of the moon at all. This echo goes back past the Middle Ages and will probably never die out. Many farmers are sincere in their belief that the moon influences vegetation. The scientific men are unable to prove that the "full" or the "waste" does not have a direct bearing upon the growth of plants. There is, probably, no experiment that would settle the matter, for half a dozen other things would make a difference with the crop, and no one could tell how much of this difference the moon was responsible for. It is safe to say that the best scientific men and farmers pay no attention to the moon in planting their crops. When the ground is ready they plant and let the moon run its regular course. Personally, we would just as soon imagine that it would make a difference in the digestion of supper if we ate it in the moonlight or in the shadow as to think that the moon could influence plant growth. We once pinned one of the moon farmers down to some definite reason for his belief. He said that bright moonlight deceived the plants. They thought it was still day, and kept at work, thus doing double duty! There was a time when such moon farmers would be called "ignorant." That word is not used as much as it was once, for as men gain in true wisdom, they realize how little they know. Any paper, however, that would use the word "must" in connection with the moon is too musty for live farmers!

CITY MEN ON FARMS.

Quite a number of farms in this vicinity have been bought and occupied during the past two years by city people, and most of their owners have been rare picking for the natives. The apparent trouble has been that these men knew absolutely nothing of the business, and what few ideas they had could be gained by reading one or two copies of a farm paper. There are a good many men like them, who seem to carry the opinion that farming requires no capital save the bare amount invested in the land and buildings, and no experience except what may be gained by reading a few farm papers for a month or two. Their ideas of the value of farm animals may be illustrated by one man who wanted to buy cows at $50 each. Whether they were worth $25 or $75 cut no figure; $50 was the price, and it is hardly needful to say that he got the $25 kind. They were told fairly good-sized stories by the real estate agent, and knew nothing of the soil and the crops suitable for it or for that region. One man told his neighbors he should be satisfied if he cleared $4,000 the first year on a small dairy farm. He hasn't the money yet, but quite a lot of experience. Some have depended on ignorant hired help, and have made a dismal failure.

I should not advise a city man to give up a sure thing in the city for an uncertainty in the country, unless he had sufficient capital to stand it a year or two without an income. The better way would seem to be, if possible, to make some arrangement with a good farmer and work for him a year, doing with his own hands all the different kinds of work possible, and keeping his eyes wide open. This may seem hard advice, but the experience will be gained much cheaper than going it yourself or depending on hired help. A man who knows nothing as to how work should be done, or when done, or how fast it can be



HOW THE LADYBIRD EATS. Fig. 266.

done, is a poor man to handle hired help. He ought, like the teacher, to be head and shoulders above the pupil in knowledge. Diversified farming, which is more suited to this locality, requires more experience and a longer head to make it successful than where one particular crop, such as onions, potatoes, cabbage or one or two kinds of fruit, are all that are raised in a section. Some of the city people who had good business heads, studied their branches thoroughly, starting them on a small scale, until they got their experience, and they have done fairly well; in fact, better than the old timers, as they had no ruts to get out of, or no false ideas, which sometimes are never eradicated from the country born and bred. Success to the city farmer, but go slow. Use your eyes, get your advice from successful farmers, and above all, don't brag; then you will have less to regret.

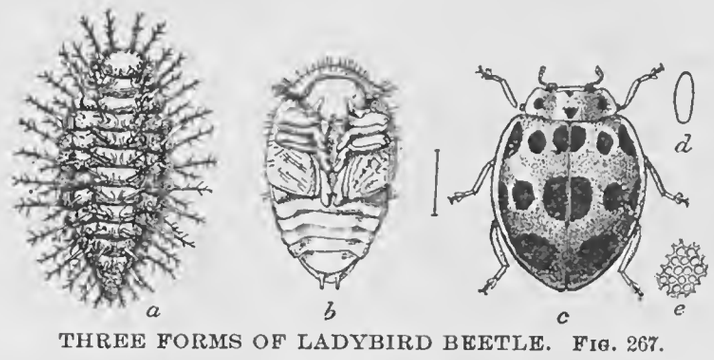
Connecticut. H. G. M.

SOME INJURIOUS LADYBIRD INSECTS.

I wish that Prof. Slingerland would describe the Epilachna borealis referred to in your reply to J. S. B. on page 532. Hitherto I have looked upon all the "lady-bugs" as my very best friends, and have, of course, treated them accordingly, and am desirous of being able to detect the "wolf in sheep's clothing" and treat him as he deserves. J. R.

Pennsylvania.

Of the more than 150 kinds of ladybird beetles in the United States, so far as we know of their habits, nearly all of them are beneficial to man in that they feed upon other insects that usually injuriously affect man's crops. But at least three of the ladybird beetles are vegetarians and have attained a place in the rogue's gallery of insect pests. The species which



THREE FORMS OF LADYBIRD BEETLE. Fig. 267.

is commonly injurious to vegetation in the East is known as the Boreal or Squash ladybird (Epilachna borealis). The four stages of its life—the egg, larva or grub, pupa, and adult or beetle—are shown much enlarged in Fig. 267; and in Fig. 266 is shown its characteristic manner of working on a leaf. In feeding it "stakes out a claim" in the form of a circle or semicircle, sometimes of great regularity, inclosing the portion of the leaf on which it is about to feed. The leaf is then eaten within this mark, and nowhere else. It is thought that this marking out of its feeding grounds is for the purpose of securing the wilting of the tissues of the leaf previous to its consumption. The Squash ladybird beetle is about a third of an inch in length (see hair line beside the beetle in Fig. 267), ochraceous in color and prominently marked with the rounded black spots as shown in the figure. Its eggs, deposited in clusters on the under surface of a leaf, are yellow, and the spiny grubs and the pupæ are also yellow. With these coloration details and the excellent illustrations, one should be able readily to determine this "wolf in sheep's clothing" among the ladybirds. In the West and Southwest beans are often seriously injured by another member of this same genus—Epilachna—of ladybirds, and it is said that the remaining third species of the genus in the United States is also a vegetarian. It is remarkable that all of the injurious members of the great family of Coccinellidæ or ladybird beetles so far as known, should belong to the single genus Epilachna. There seems to be but one brood of these injurious ladybirds in a season, and they readily succumb to the arsenical poisons. M. V. SLINGERLAND.

KEROSENE AND SAN JOSE SCALE.

There seems to be a feeling among some fruit growers that it is a disgrace to have it known that their grounds are infested with San José scale. This, it seems to me, is a very great mistake; still, it is a disgrace to have this minute thief on your place without making some practical attempt to dislodge him. I had heard lectures, seen pictures of him, had heard those scientific fellows tell how rapidly he would multiply, and how easy it was to get him and to get rid of him; but until last Spring never dreamed that I should be compelled to fight this scale in person. It had all appealed to me about as the reading of the accounts of the English-Boer war in South Africa; something a long way off. But about the first of last April it became a reality with a vengeance. In pruning my lower orchard of about 300 trees I discovered a peach tree badly infested. I at once sent for a team, pulled it out and burned it, and felt easy, thinking that that settled it with me, but not so. I very soon found the scale scattered here and there throughout the orchard. Then at once began running through my mind what I had heard and read—fumigation, kerosene, whale-oil soap, etc., but I did not know how to go to work. I finally decided to seek assistance, and at once wrote to Prof. Britton, of the Experiment Station. He said that all the above remedies were good, but he would hardly dare recommend any of them, for by that time the trees were in full leaf and fruit set, but finished his letter by saying that he would come and look the orchard over, which resulted in his sending down his spraying tools. June 19 the orchard was sprayed as follows: 225 trees with 15 per cent kerosene, 85 trees with 15 per cent crude oil, and a few trees with 20 and 30 per cent crude oil, also a few with common soap and water, one pound to two gallons.

The kerosene did no injury to leaf or fruit and killed about 90 per cent scale. The crude oil stripped off all foliage and fruit touched, and killed about 95 per cent of the scale. The soap and water had fully as bad results as the crude oil. The 20 and 30 per cent crude oil killed everything it touched, even the young twigs for several inches, and practically all the scale, but the trees have since leafed out, and at this time look vigorous. June 29 the first young scale were seen. I feel quite sure that if the spraying had been delayed until about July 1 a much larger per cent of the scale would have been reached and killed. While this one experiment does not establish the fact it looks as though 15 per cent kerosene was safe to use all over the peach tree. A. C. INNIS.

Connecticut.

WHAT TO DO WITH THE APPLES.

The apple crop of the United States and Canada is very much below the average. The result will be that the highest prices will rule, and a great many fruit growers and apple buyers will market almost everything that is grown, which will prove to be a very serious mistake While the crop is short, if this practice is carried out, there will certainly be a hard break in prices later on, as when the consumers find a large quantity of poor apples packed in with a few good ones, they will stop buying and turn their attention to other fruits. It will be particularly important this year to make strictly honest grades in packing. No. 1 apples should be strictly No. 1, entirely free from worm holes and other blemishes. A good No. 2 should be made, which will not be expected to be as fine as No. 1, though in this grade anything that is really bad should be excluded. All apples of medium size may be included in this grade if fair. It would be expected that they will not be entirely free from worm holes, although where badly affected, i. e., containing a worm hole in the side of the apple, rather than at the blossom end, such should be excluded even from the No. 2. If this practice is strictly adhered to the apple crop will bring a large amount of money to those who are fortunate to have this fruit, but if the poor are mixed in with the good, the reputation for this most desirable of all fruits will be seriously injured. Fruit growers cannot afford to jeopardize their future by taking advantage of the short crop to run in all the trash that grows in their orchards this year. People will pay good prices for good apples, but when the market is abundantly supplied, as it now is with many kinds of foreign fruits, they will not be imposed upon by poor apples put upon them at high prices. It is expected in the market that the heads of barrels will be faced up with the finest specimens, and while this may be permissible, they should follow right through every barrel, so faced, with good quality. The practice of facing with fine specimens, following with a half bushel of good apples and then filling in with culls is dishonest, and is nothing short of fraud. Honesty is always the best policy, and will be particularly so in packing apples this Fall. GEO. T. POWELL.

THE OLD FARMER AND THE NEW.

The R. N.-Y. Touches Both.

This issue is No. 2693 of THE R. N.-Y. We have subscribers now on our list who have taken the paper almost from the first issue. A picture of one of these old-time readers is shown at Fig. 268. William Wildey is still a hale and vigorous man. The writer met him last Winter at Medina shortly after he made the statement given below:

This is to certify that I, William Wildey, have been a resident of the counties of Orleans and Genesee, State of New York, for 60 years past. Forty-eight years ago I subscribed for the paper that was known as Moore's Rural New-Yorker at that time, since changing its name to THE RURAL NEW-YORKER. The length of time that I have taken the paper should be evidence of the fact of my approval of the same, as the knowledge that I have derived from reading it has been of great advantage to me. It has gradually grown better, keeping its editorials and readings up to date as to all points of interest to the agriculturist, and during the last two or three years, the paper has improved greatly in my estimation, and entirely to my satisfaction. My appreciation of it is such that it has become a part and parcel of our household.

Medina, N. Y. WILLIAM WILDEY.

Wherever we go among the people we find men who say: "Why, Father used to take Moore's Rural New-Yorker—I was brought up on it!" We find such men everywhere. Some of them have remained on the farm, and most of them, like Mr. Wildey, still take the paper. Others left the farm years ago, and have been successful in town or city. Some of these men continue to read THE R. N.-Y. While their life work has branched away from farming they still look back to the old home where Father and Mother lived, with grateful and happy memories, and THE R. N.-Y. helps keep up the connection. We fully realize what a strong hold the old paper had upon the heart and confidence of the old-time farmer. There is far more competition now, and there are hundreds of new things to attract attention—therefore, it gives us great satisfaction to feel that the modern R. N.-Y. is still going into the old homes, even though in many cases the old readers have passed away.

While referring to Mr. Wildey and his 48 years as a subscriber, it will not be out of place to mention our youngest subscriber. A picture of Master Clement G. Yates, of Connecticut, is shown at Fig. 269. He is now 11 years old, and has read THE R. N.-Y. thoroughly for the past three years. He is what we call a loyal subscriber, for he reads the advertisements and patronizes those who patronize THE R. N.-Y. He said one day: "I saw ——'s seeds for sale, but they're not advertised in THE R. N.-Y., so I wouldn't buy them." That is certainly what we call a loyal subscriber! This boy is specially interested in studying the diseases of horses and other domestic animals. It is good testimony in respect to the clearness of Dr. Kilborne's articles that Master Yates well understands what to do for the common diseases. When he hears of a sick animal in the neighborhood he gets out to help prescribe for it, and the first part of his prescription is the advice to subscribe for THE R. N.-Y. The cat shown in the picture was taken sick last year. Its owner wrote to THE R. N.-Y. about it, and was fully answered, so that the cat was quickly cured. No wonder both face the reader with confidence. This boy will probably make a farmer. He loves the country, though until three years ago he lived in the city. If he does choose agriculture as a profession he will make a good farmer, for he is building broad and deep in the science and practice of the business. It is a pleasure to think that THE R. N.-Y. can not only go down the shady side of life with the older men, but climb up the sunny slopes with those who have only a look ahead.

THE DESTRUCTIVE FRUIT ROT.

Fruit rot, soft rot, brown rot, known to the mycologist by the name of Monilia fructigena, causes every year more or less loss of early plums and peaches. This season, in central New York the damage has been severe. It is all the more apparent because of the comparatively small crop of fruit. When Alexander began to ripen, a couple of weeks ago, rot appeared and spread with aggravating rapidity. Sound peaches to-day were a mass of pulp to-morrow. Our men were certain that they rotted over night. Weather conditions were undoubtedly favorable. The days during the first half of August have been characterized by a high percentage of humidity, while the nights have been comparatively cool, yet not cool enough to arrest the progress of this destroying agent. At the present writing, plums, particularly Domestica varieties, are rotting badly. The natives, especially those of the Hortulana section, are more immune than the Europeans, while Japs occupy a somewhat intermediate position. Prunus Simoni, represented on the Cornell grounds by three trees very heavily laden, has been very slightly affected. Is not this a good point in favor of this plum, particularly from the plant breeder's standpoint?

A pointed question is, what shall we do? Bordeaux Mixture cannot be satisfactorily used on peaches and plums at this season of the year. It seems to me that remedies should fall under three heads—thinning, spraying, sanitation. While thinned fruit on our grounds was not by any means immune to rot, yet it was much less susceptible than fruit unthinned. Plums or peaches touching each other transmit the disease with great rapidity, while properly thinned fruit is safer to that degree. What shall we spray with? I am inclined to think that fruit growers have overlooked too much the advantages of the ammoniacal copper carbonate spray. This is not much more expensive than Bordeaux Mixture, is applied with a great deal more ease and comfort, does not stain the fruit, and is just about as effective as Bordeaux. We have got into the habit of using Bordeaux almost exclusively, and have paid too little attention to some of the other fungicides which have special features of usefulness. Can we help the situation by good sanitary practices? An affirmative answer seems reasonable. How many orchardists carry out the practice each Autumn of picking off and burying the mummified plums? How many cut off and burn the dead twig ends on their peach trees caused by this fungus? If spraying and sanitation were practiced a great deal of seed of this destructive disease would be destroyed. JOHN CRAIG.

Cornell University.

WILLIAM WILDEY. FIG 268.
An Old Reader of THE R. N.-Y.

R. N.-Y.—Readers will remember that the Bordeaux Mixture is composed of lime, sulphate of copper and water. The other spraying mixture mentioned by Prof. Craig is composed of carbonate of copper dissolved in ammonia and diluted with water.

MASTER CLEMENT G. YATES. FIG. 269.
The Youngest Subscriber of THE R. N.-Y.

BLIGHT AND WILT ON MELONS.

I wish to inquire regarding the article in a late R. N.-Y. about the muskmelon crop at Briarcliff Manor School. You say that the entire crop was destroyed by blight last year within a few days of ripening, but that the growers think they can pull them safely through this year. We would like to know how they are going to do it. Have they been attacked by wilt? If so, what preventive or cure has been used? L. J. B.

Central Ohio.

Last season our muskmelons were destroyed within 10 days of marketing because no attention could be given them in the way of spraying, the school not having started, nor was there any apparatus at that time. This year, by starting the plants in the greenhouse and transplanting to the field we hoped to secure the crop, due attention being given to spraying and other essentials. In this exceedingly trying season we have gathered some melons, not a full crop by any means, but still enough to give us great hopes for future crops. Vines when put out were a little larger than they should have been, owing to unfavorable weather for setting, and after being transplanted they were severely checked by cold weather. Rain has fallen in torrents upon them through the whole Summer, and the Bordeaux Mixture with which they have been sprayed has often been washed completely off within a few hours of its application. Under such conditions the surprise is that we gathered any fruits at all. Those that we picked were of far better quality than melons purchased in the New York market at the same time, and we have great hopes for the success of future crops. The blight can be controlled by Bordeaux Mixture, the 75-gallon formula, if the plants are sprayed every week from the time they show their first leaves until they are robbed of their fruit. It is essential to apply the Mixture to the undersides of the leaves from the very start. A bent-necked Vermorel nozzle is the best we have, since it makes a very good mist-like spray. Enough of the fungicide will fall upon the upper surface without any effort to place it there. This disease makes its appearance usually in August.

Vine wilt is more serious. We have no remedy. Our plan for next year with respect to it is to plant upon land that has not grown any cucumbers, melons, squashes, etc., for years, and to prevent the attacks of Squash bugs and other insects, since they carry infection. This is not easy. Bugs must be caught by hand, and the striped beetle repelled by tobacco dust. We shall also cover the vines with netting to keep bugs off. Our other vines have suffered from wilt; late squashes will not be more than half a crop, even though thousands of bugs were picked off them, and no eggs were permitted to hatch until the vines commenced to run and the picking became too extensive. This was a grand year for Squash bugs, and the "radish cure," if I may call it such, referred to in THE R. N.-Y. several weeks ago, was utterly useless, though the radishes, which were planted in the hills by students, were thick enough for lawn purposes. In fact, the bugs seemed to enjoy the shade of the radishes while they lay out at full length to sip the luscious squash juice. Our Summer squash is but little affected, either by bugs or diseases, and considering the bad weather has done nobly. M. G. K.

A TRAP FOR THE HESSIAN FLY.

About a year ago Prof. Roberts visited the writer of the following letter, and advised him to sow a decoy strip of wheat around his field, which he did. The results, as set forth in the letter to Prof. Roberts, are so satisfactory that it is deemed wise to lay the matter before the farmers without delay.

PROF. I. P. ROBERTS: August 19, 1901.

Dear Sir—I have just read with a great deal of interest your latest bulletin, No. 194, on the Hessian fly, and it reminded me of my promise to inform you of my success with the "trap or decoy" strip that you recommended me to sow last Fall. I sowed two widths of the drill around a 20-acre field August 25 last year, then sowed the remainder of the field September 27-28, and just before the last sowing came through the ground, plowed the "decoy strip" under just as you advised, and resowed it. When I plowed that strip under I found that practically every leaf and stalk of wheat was completely covered with the eggs of the fly, so that the strip looked brown, and myriads of the fly swarmed up in front and under the horses as they walked over it.

Now for the result of my extra labor, amounting to one-half day's work for man and team and two bushels of wheat used on the "trap strip." I have just thrashed as fine a sample of No. 6 wheat as you could wish to see averaging 21½ bushels per acre, this average including seven acres on a nearby field that was sowed after beans, where I could not use the trap strip. From the amount of straw harvested on the 20-acre field, in comparison with that grown on the bean ground, and the difference in the condition of the two fields at the time of harvesting, I am confident that the 20-acre plot gave me 25 bushels per acre of first-class wheat. You will perhaps remember that we called upon some of my neighbors, when you were here, and you advised them to sow the "trap strip," and I went to them afterwards and begged them to coöperate with me in this fight against this terrible pest; but I could not get one of them to do so, with the result that they are thrashing out from two to eight bushels per acre of poor chicken feed. Most of my neighbors are now preparing the trap strips, and we are going to sow them this week, and I am besieged with questions from those at a distance who have heard of my success along this line. I would rather risk the "trap strip" and thorough preparation of the soil and a good fertilizer and late sowing with No. 6 than to attempt to raise Dawson or any other so-called fly-proof wheat of an inferior milling quality.

I have a scheme to catch the fly that we found lodging in the "trap strip" when we plowed it under, i. e., to plow this strip under in the night or very early morning, while they are stiff with the chill of the late September nights, and I believe that we can rid ourselves of millions more of them. S. W. WADHAMS.

It is urged that farmers sow decoy strips of wheat around their fields. The season seems to be favorable for an early development of the fly and these decoy strips together with late sowing of the main crop on well fitted ground will probably go a long way towards circumventing the pest. J. L. STONE.

College of Agriculture, Ithaca, N. Y.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Wages for Grape Packers.

Reader.—What wages or prices are paid for packing grapes?

I never pack grapes in baskets, and do not know what is paid by those who do. The gathering of my grapes is done by my regular help, as required, and no account of cost kept apart from other work. This wet, sultry weather is causing some rot in grapes, more, I think, than usual with me, though not serious.

New York. WALTER F. TABER.

I have never had grapes picked by the basket, for the reason that I keep so many employed in the nursery that when we pick grapes we have our men pick them. However, I do not grow many grapes anyway, and there are not many grown here. I pay my men from $1.25 to $1.50 per day; a few skilled men I pay more. SILAS WILSON.

Iowa.

The average price for packing grapes in this section is seven cents per hour. The work is done by women, and costs, when the grapes are in fair condition, about one cent per five-pound basket. For regular work men get $300 per year, or $30 per month; $1.25 per day and board themselves. For picking currants and cherries we pay one cent per quart; strawberries 1½ cent per quart.

Trumansburg, N. Y. D. R. P.

In this grape section packers are almost invariably paid by the day and not by the basket. The average price per day is 50 cents and board, or 75 cents without board. What that would be per basket depends somewhat on the worker's skill and experience, but more on the condition of the fruit. In this vicinity all grapes are picked at least 24 hours before packing, so that the stems can wilt slightly. The clusters can be packed more closely in the basket without breaking the stems or cracking the berries; then all imperfect, decayed and cracked berries are trimmed out. A good packer will pack from 300 to 500 baskets per day, and keep several girls busy trimming. No grapes are ever packed direct from the vine into the basket, in this Keuka Lake grape region, as they do in Chautauqua County. The wages of other help in vineyard and on fruit farm vary from $1 to $1.50 per day for men according to their ability.

Penn Yan, N. Y. E. C. G.

Hessian Flies and Ragweed.

L. F. A., Walworth, N. Y.—I send you a box containing stems of ragweed cut from wheat fields. Are insects in the stem the Hessian fly maggot? I have examined several fields where the fly ruined the wheat crop, and find nearly all of the ragweed in this condition. I have examined ragweed in corn and other places, and do not find any of the insects. If this is the fly why not mow the weed and burn it? A small acreage of wheat will be sown here on account of the ravages of the fly.

ANS.—No, the stems of ragweed were not infested by the Hessian fly. The stems had been tunneled by a small caterpillar, but nearly every caterpillar in the stems sent had been killed by a little ichneumon parasite. I found many of the little brown cocoons of this parasite in the stems, and one or two pupæ of the caterpillar which bored the stems. I think that farmers will make a mistake in giving up sowing their usual acreage of wheat this Fall. For, even though the fly should be as numerous as it was last Spring, the weather conditions thus far this Summer are such as to indicate that the flies will emerge at their normal time, or early in September, and thus late-sown wheat will be much more likely to escape the fly than it did during such an abnormal season as last year, when the flies continued to emerge much later. I would advise farmers thoroughly to prepare their soil, and sow a decoy strip of wheat around the field at once. Then wait until about September 20 to 25, and plow under the decoy strip, and then sow the whole field. I believe that by this maneuver a farmer will win nine times out of 10 against the Hessian fly. One must not expect to grow any crop without risking something. M. V. SLINGERLAND.

Value of Pearl Millet.

D. L. P., Dover, N. H.—What is the true name of "Pencillaria?" A neighbor planted quite a lot this Summer and it much resembles corn growing in tufts or stools. Is it of agricultural value and adapted to silage?

ANS.—One of the older botanical names or synonyms of Pearl millet, Pennisetum typhoideum, is Penicillaria spicata. Pearl millet is a very strong-growing species from northern Africa. Planted in rows three or four feet apart on rich ground it will give an astonishing amount of palatable forage, which is relished by cattle and horses. In good seasons it may be cut three or four times, and two or three crops may always be expected. It does not amount to much on poor land or under careless cultivation. It is little grown in this country except for experiments, but could be made useful where soiling crops are wanted.

Pruning a Cherry Tree.

J. R. F., Norwich, N. Y.—One of my Black Tartarian cherries is strong and vigorous, but though standing in the open, persists in making an almost perpendicular growth—like a poplar. Will it harm the tree to head it in severely next Winter when dormant? The authorities I have consulted say a cherry should be pruned sparingly.

ANS.—Sweet cherry trees as a rule need little pruning, but in case of too upright growth the top may be headed back, taking care to cut to an outside bud as far as possible, so that the new growth will be likely to spread.

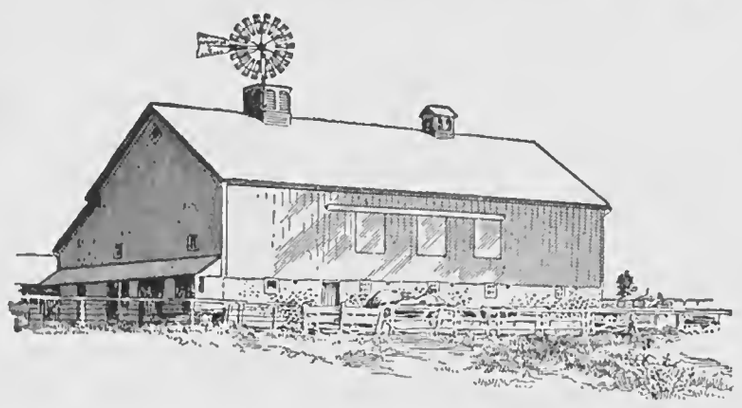
A Parasite on Raspberries.

P. M. H., Littleton, Mass.—I send a piece of Cuthbert raspberry vine with a vine which encircles it. It was first seen perhaps a month ago, and I paid but little attention to it. I dug around the vines, supposing it came from the ground, but find it grows from the cane, adheres firmly and spreads badly. I have cut away 20 or 30 stocks, and fear it will still spread. A neighbor who has quite a large field of raspberries says he never saw anything like it. What is the parasite and how is it destroyed?

ANS.—The plant is Cuscuta Gronovii, and for lack of a well recognized common name it is usually called in the books Gronovius dodder, from Dr. Gronovius, who first collected it in Virginia and sent a specimen to Europe for identification in the early Colonial days. There are more than 100 species of dodder recognized, many of them native in this country. This one is abundant in many localities throughout the eastern part of the United States. It generally grows on coarse herbs and bushes in low land. I have but one record of it heretofore as growing on raspberry bushes. That was at Andover, Mass., and an account of it occurred in a recent number of THE R. N.-Y. Gronovius dodder, like all other species of dodder, is an annual, and is propagated by seeds which germinate in the soil, sending up tender shoots. These swing about in the air until they touch some green plant upon which they can grow. If a suitable host is found the vines twine around the plant, sending suckers or small rootlets into the tissues of the host, through which the parasite obtains nourishment. The connection with the ground then dies. The young dodder soon dies off if it finds no suitable host plant. This species grows most rapidly in the shade, or where the vegetation is rather dense. The best remedy for its destruction is therefore to keep the raspberry canes thinned out, and to cultivate the soil so as to destroy the young seedling dodders. The infested stalks should be cut and burned, to prevent the seed production, and the place where the dodder has been introduced should be closely watched next season, so as to destroy the young dodder plants as soon as they appear.

LYSTER H. DEWEY.
U. S. Department of Agriculture.

LET THE WIND WORK FOR YOU



Don't do work that the wind can do for you. A windmill isn't for pumping alone; that is but a tenth of its possible service. Let us send you our 40-page book showing the dozens of things that a power Aermotor can do. The hardest part of your work can be saved by it.

Wind power costs nothing. It is almost always available, if you have the right windmill. The first cost is small; the running expense almost nothing. Its efficiency is marvelous.

Take feed-grinding for instance. We make a simple and inexpensive grinder which, in connection with the 12-foot Aermotor will, in a fair wind, grind from 12 to 15 bushels of feed per hour. A 16-foot Aermotor will operate two or three of these grinders with a capacity of 25 to 40 bushels per hour.

Besides doing his own work, many a farmer has paid for his power Aermotor the first season by doing custom grinding for the neighbors. Many are clothing themselves and their boys every year with what it earns.

Then there is feed to cut, corn to shell, and wood to saw. The grindstone must be turned; the churn must be operated; the machinery in your tool room needs to be driven.

No need of doing these things by hand.

If you hire this work done, it may cost you as much every season as an Aermotor would cost.

If you or your boys do it you are wasting as much. And it is that kind of drudgery that drives boys away from the farm.

These very boys like mechanics. The operation of a power mill is fun for them. And they will find a score of ways to make it help in the farm work.

Let them do it. They will save all the dollars that you pay the miller and blacksmith. They will make more dollars by doing the same work for others.

You are using farm machinery that serves you but a few weeks in the year, and it pays. No modern farmer would think of doing without it.

A power Aermotor that costs less works 365 days in the year. Almost no attention is needed; the power is free.

You who get along without an Aermotor don't know what you miss. If you used one a season you would not go without it for many times what it cost. You would do without your mower first.

LET US SEND YOU OUR BOOK

If you would like to know more about the power Aermotor, write for our book. Remember that the Aermotor is the result of 5,000 experiments to learn how to get the utmost power from the wind. This book was written by the man who is highest authority on wind power.

It tells how he gets that power in the Aermotor; how he utilizes it without waste by friction; how he has made a power Aermotor, covered with 55 patents, that does as much work with a 12-foot wheel as the old kinds will do with a 16-foot wheel.

He tells how he cut the cost of wind power to one-sixth what it was when he started.

It also contains some very interesting extracts from very careful, scientific experiments made at the Universities of Kansas and Wisconsin. These facts are a matter of public record, but can be more conveniently read from this book, which we furnish upon request.

These reports show how wonderfully the Aermotor surpasses all other windmills in efficiency. They also give the results of a large number of experiments showing just what can be accomplished with different kinds of grain in winds of various velocities.

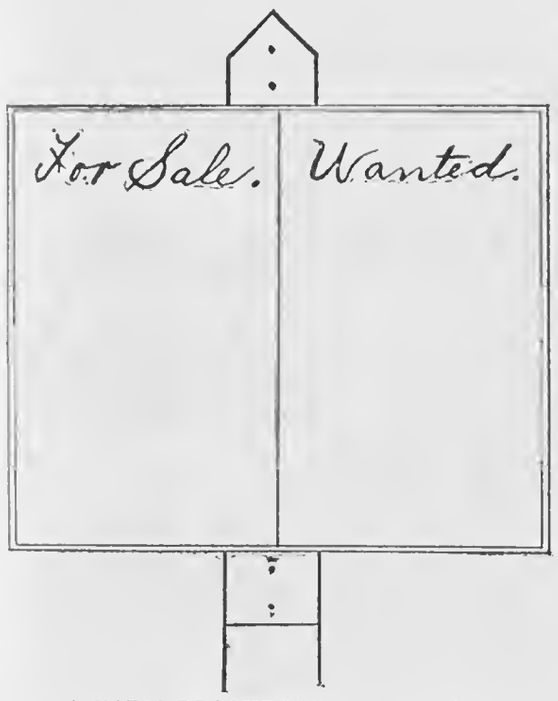
You can't afford to buy any power mill save the Aermotor. You would pay more and get far less if you bought any other. This book tells you why. More than half the world's buyers choose Aermotors now, both for pumping and power; and the other half would, too, if they knew them.

The book is free for the asking. Write today; we will send you the book and tell you the nearest dealer who has Aermotors on show.

AERMOTOR CO., 1206 ROCKWELL ST., CHICAGO

EVERYBODY'S GARDEN.

ADVERTISING ON THE FARM.—In nearly every locality, much may be accomplished by advertising whatever we have for sale. Proof of this will be found in your own desire to see what others advertise for sale. Personally, I am ready to admit that the advertising columns of any paper always have a strong fascination for me, and if I see what others offer for sale, others will see what I may have. The local newspapers judiciously used will nearly always bring ample returns. Neat circulars stating what you have for sale and how it may be obtained, mailed to your customers or to prospective ones, will usually meet a response. A very convenient way, and also one which has brought us very satisfactory results, is the simple device of a bulletin board. Referring to the illustration, Fig. 270, we have "For Sale" and "Wanted" columns, which words may be lettered permanently with white paint, or printed with chalk as occasion may require. A very cheaply constructed board (any desired size), may be made as follows: Use only the best quality of soft-wood lumber, free from pitch and knots. The boards should be evenly cut the desired length (a convenient size is 2½x3 feet), and fastened tightly and firmly together with cleats and screws. The screws should be driven from the back of the board, and



A FARM BLACKBOARD. FIG. 270.

should be ¼-inch shorter than the combined thickness of the cleat and board, so that they shall not reach through to, and interfere with the surface of the board. The outside cleats should be put on flush, or nearly so, with the ends of the boards; and the center cleat should be cut long enough to extend two or three inches above and below the board. A post should be firmly set in the ground to which the board may be fastened by driving screws through the projecting ends of the center cleat into the post any desired height from the ground. This leaves the entire surface of the board free from screws or nails, and it may be put up or taken down at will.

To prepare the blackboard for use, take the best grain alcohol and shellac in the proportion of two parts of the former to one part of the latter; one pint of alcohol to one-half pint of shellac would doubtless be sufficient. To this mixture add sufficient of the best black drop (powder), to give the desired color, which should be a dead black, and one tablespoonful of finely powdered pumice stone. This latter is added to give the mixture sufficient grit to take the chalk freely when thoroughly hardened. Apply with an ordinary paint brush, three or four coats, allowing each application to dry thoroughly before the next is made. This formula has been sold at high prices, but was furnished me by an experienced decorator, and pronounced the best blackboard dressing in the market. Try it on your school blackboards, and save exorbitant charges by one hired to do the work.

Lacking this more expensive device, equally good results may be obtained by using the ordinary tarred building paper tacked on to any smooth surface. It is best held in place by tacking a lath or light strip of board over each edge. Use ordinary school crayons; the writing is easily erased with a wet cloth when any changes of products wanted or for sale are required. Of course, it goes without saying that the board should be erected in as conspicuous a place as possible, and buying, selling and exchanging can be very advantageously advertised, often with surprising results. J. E. MORSE.

Michigan.

"DIDN'T KNOW IT WAS LOADED."

Radish Seeds in Squash Hills.

I am the man who did it, but really I did not know it was loaded, and might kill 350 hills of squashes as A. M. J. says it did. His letter of complaint was conspicuously posted well up on the editorial page, an honor few of us may hope to attain. If this can go in at all, chuck it in any odd corner, or in the humorous column, which by the way, my wife always reads the first thing, too often finding the mailing tag stuck over the best joke. There is a seriocomic aspect to the whole affair, though it was evidently no joking matter to A. M. J. He seems a bit riled about it somehow. This is no choke, as the Teuton said when they were stringing him up.

The writer saw the suggestion to plant radish or turnip seed in squash hills as a discouragement to bugs in a publication sent out by one of the oldest and most eminently conservative seed firms in the United States. The name, if mentioned, would be immediately recognized wherever the English language is used. For obvious reasons it won't do to insert it here, but if the matter is of enough importance to warrant such procedure I am willing to disclose it to a select committee of 13, duly sworn to secrecy, in order that said seed house shall not receive gratuitously the advertising that will result. THE R. N.-Y. is a far-reacher. Drop in a pebble; it will at least make a ripple. It may hit nothing or nobody hard, but then again it may hit dynamite and kick up quite a muss. Let us look for this. A sermon might be preached on the malign effects of imperfectly interpreted suggestion, with some remarks on the danger of going off half cocked. The text might be "Let your communications be yea, yea, and nay, nay."

The editor stated my case fairly. I *did* just want to know. I did not tell any one to do this dreadful evil thing. I only asked had others tried this method. I tried it again this year, and failed utterly, and tried also dusting with lime or plaster scented with carbolic acid. No good; everything was "teetotally" eaten up. Of course I may have felt a little jealous because the unfortunate victim got in on the editorial page, but I did not become obstreperous when I received a good whack for rushing into print with new and untried things. I took it as a sort of sop to the other fellow, for whom we all feel so sorry, and I was disposed to accept the rebuke as meekly as if I had deserved it, until the other day, when I met an aged grandmother who had been brought up on Long Island in a section where the intensest high-grade successful farming had prevailed for nearly a century. I asked her about the practice in question, and the dear old lady laughed heartily. "New! Untried!" she cried. "Why, I have known it all my life. We always planted radish seed in squash and cucumber hills." This got my dander up a little, and provoked me into offering this explanation and defense. I shall venture to keep on asking questions now and then, not too often, nor too many, for I am aware that there are others who want to know about things, but I will try to be careful; I have learned that questions may be dangerous.

For years I have noticed in an admirable little paper noted for its terseness and brevity, the injunction not to let cedar trees grow near apples. I wanted to know why, but would not ask, and finally after years of careful watching, learned the reason. Since then along my line fence I have cut down several fine cedars, because I thought they would injure my neighbor's orchard. I have been told that no Black walnuts should be allowed to grow near pear trees, and have wondered whether butternuts had any pernicious influence upon fruit of any kind. There are some other things I hope to know when the experts get done fighting over them, and are able to tell me what is what. Right here and now there is another question I am going to ask, no matter whether it is loaded or not. I was informed recently that hollyhocks are injurious to roses. There is a big one in the same bed with Ruby Queen and other roses. Must I yank it up? Tell me, oh tell me, Dr. van Fleet, must the hollyhock be fired root and branch out of the rose garden, and can this weighty question be safely fired into print and into the wide constituency of THE R. N.-Y. readers, without threatening the extermination of the stately and beautiful hollyhock?

J. YATES PEEK.

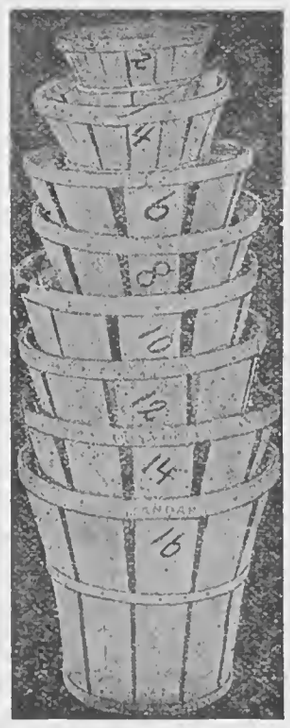
Let the hollyhock alone. It won't hurt the roses if they don't crowd it too much. Fire any questions you like.

W. V. F.

An Ice House With a Cellar.

A. B. W., Newlin, Pa.—I expect to build an ice house, and I would like to build it on the following plan, if you think it would be a good one. Size of house 10x10 feet. I wish to dig out the same as for a cellar, build the wall 18 inches thick, and about six feet high; put an iron beam in the center each end to rest on wall, then cover over with flagstone, the flagging to rest each end on the wall, and also on the iron beam in the center; then fill out all cracks with good cement mortar to make it airtight. The house built on the wall and put about 12 inches of sawdust on top of flagstone, then fill with ice the same as other ice houses. The cellar part below the flagging I want to keep my milk and cream in. Have any readers of THE R. N.-Y. tried anything similar to the above plan? Will ice keep well in such an ice house?

R. N.-Y.—Have any of our readers tried this? If so, we shall be pleased to have them report.



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Peach Covers
Square and Round Wood, Burlap and Cotton.

Ga. Peach Carriers
With six Baskets.

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Sizes 5, 8 and 10 pounds.

Berry, Peach and Grape Crates
Crate Stock and Box Shooks in all sizes, direct from the manufacturers.
Special Prices to Dealers and Carload Buyers.
Write for Catalogue.

COLES & CO.,
109 & 111 Warren St.,
NEW YORK CITY.

FINE NURSERY STOCK
Grown in the famous Delaware fruit land. Free from disease; true to name. **Fruit Trees, Berry Plants, Asparagus Roots.** Try our prices on **two-year Kieffer Pears.** DOVER NURSERIES, E. H. ATKINSON, Dover, Del.

125 STRONG POTTED STRAWBERRY PLANTS, early and late, sent safely anywhere postpaid for One Dollar. **$1**
A. B. KATKAMIER, Macedon, N. Y.

Beautiful Strawberries in 1902

We can furnish you with pot-grown Strawberry Plants that will bear a full crop of fruit next year. Celery and Cabbage Plants. Full line of Fruit and Ornamental Stock. Write at once for our Summer and Autumn catalogue. It explains all. Fruit packages of all kinds for sale at low prices. T. J. DWYER & SON, Orange County Nurseries, Box I, Cornwall, N. Y.

STARK TREES SUCCEED WHERE OTHERS FAIL.
Largest Nursery. *Fruit Book Free.* Result of 76 years' experience.
STARK BROS., Louisiana, Mo.; Dansville, N.Y.

CRIMSON CLOVER SEED—New crop; home grown. Now ready.
R. S. JOHNSTON, Box 100, Stockley, Del.

CLOVER SEED—Choice, clean Crimson or Scarlet of my own raising, $4 per bu.; sacks free. J. C. ELLIS, Millsboro, Del.

Seed Wheat—Dawson's GoldenChaff, Democrat, McKinley, Bald, Jones No. 1. and White Chaff. 25 tested kinds.
"SMITH'S" Wheat Farm, Manchester, N. Y.

Dawson's Golden Chaff

Greatest yields of the year. Our yield 36 bushels per acre, thrasher's measure. White, plump, clean, pure. Also Gold Coin. $1 per bushel; bags, 15c. O. C. SHEPARD CO., Medina, O.

LIME FERTILIZER.
Special preparation giving splendid satisfaction. Correspondence solicited. THE SNOW FLAKE LIME CO., Bowling Green, Ohio.

FOR SALE—Seed Wheat—Red Harvest King. Not fly-proof, but one of the best fly-resisting heavy yielding varieties, $1 per bushel; bags free.
GEO. M. TALLCOT, Skaneateles, N. Y.

CRENSHAW BROS.,
Wholesale and Retail **Field and Garden Seeds**
Correspondence solicited, with view of either buying or selling. We grow Velvet Beans, Giant Beggar Weed, Florida Favorite and New Triumph Watermelon Seeds. 1222-1224 Franklin St., Tampa, Fla.

DAWSON'S GOLDEN CHAFF WHEAT is a variety which originated in Canada. After being tested by the Ontario Agricultural College, also the Michigan Agricultural Experiment Station, it has never shown any trace of the Hessian fly, while adjoining fields were ruined. It is very hardy, a big yielder, heads compact, squarely built and well filled, red chaff and light amber grain. Will yield from 30 to 40 bushels under ordinary circumstances. Price, $1.25 per bushel. We also have the Mammoth White Winter Rye, very hardy, and a big yielder. $1 per bu. Black Winter Rye, 75c. per bu. Ask for prices on Timothy and Clover Seeds.
HARVEY SEED CO., Buffalo, N. Y.

TREES AND PLANTS—Free from Scale. New and Choice Varieties. Blackberries, Strawberries, Raspberries.
Our FREE CATALOGUE will save you money. MYER & SON, Bridgeville, Del.

TREES $8 PER 100—APPLE, PEAR and PLUM, 3 to 5 feet high. HEALTHY and TRUE TO NAME. Best varieties.
We sell all kinds of trees and plants at lowest **Wholesale** prices. **Don't** buy until you get our Catalogue, which is free, or send list of wants for **special** price. Address RELIANCE NURSERY, Box 10, Geneva, N. Y.

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Leading American Nurserymens offer one of the Most Complete Assortments of
FRUIT AND ORNAMENTAL TREES, SHRUBS, ROSES, BULBS, ETC.
48 Years. 44 Greenhouses. 1000 Acres. Correspondence Solicited. Catalog Free.

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Why Not Add to the Certainty of Growing a Good Crop of Winter Wheat by Sowing Our "Turkish Red"

THAT always produces a good crop wherever Winter wheat can be grown? It is iron-clad and the hardiest wheat in existence; has proven of strongest vitality, given the biggest yield and best wheat in the world at every Experimental Station where tried. It has a record of 55 bushels at Iowa Experiment Station, and an average yield of 45 bushels for the past 10 years. Hundreds of farmers grew from 10 to 20 bushels more per acre this year from our seed than from best common sorts. Price, $1 per bushel, bags free, f. o. b. here. Write for **Free Catalogue** and descriptive circulars. New crop choice home-grown Timothy seed, $2.50 per bushel, sacks free. Address, mentioning The Rural New-Yorker,
J. R. RATEKIN & SON, SHENANDOAH, IOWA.

THE BEST FERTILIZERS
FOR SEEDING DOWN TO
GRASS OR GRAIN
ARE MADE BY
THE AMERICAN AGRICULTURAL CHEMICAL CO.
BOSTON — NEW YORK — CLEVELAND.
Be sure and write us before ordering any fertilizers.

Ruralisms

NOTES FROM THE RURAL GROUNDS.

SOME BERRY OBSERVATIONS.—The following comments on Ruralisms' berry notes have been received among many others:

In Ruralisms, page 550, I noticed what appears to me as an error in describing the Mayes and Lucretia dewberries. I think the description as given of one variety applies to the other in each case; that correction made I think the difference between the two varieties well stated, but with me there is another important difference, and that is that the Mayes is hardier under exactly same conditions. Also, the crop of Mayes is off in half the number of pickings, which fact, together with its being earlier, gives it the preference with me over any other cane fruit.
Burlington Co., N. J. E. S. HOLMES.

The late discriminating and appreciative articles on the Mayberry and the Iceberg blackberry have been read with interest. I am glad that the Mayberry has found a welcome in some localities, and was somewhat disappointed that it did not prove more generally useful. I have varieties much more than twice as large as the Mayberry, which I first sent out, firmer, and with a really delicious flavor, which cannot be found in the original Mayberry. The white blackberry, Iceberg, was stolen from me while in the hands of some eastern propagators, and 100,000 plants were offered for sale before I knew it was to be introduced. You are correct in the statement that the flavor of Iceberg is somewhat astringent, but I have a variety now, second generation from Iceberg which is fully equal in quality to any blackberry in existence, and by most people claimed to be better than even our favorite, Lawton. It is also much firmer than Iceberg, a better bearer, and the berries are more nearly white. The Iceberg came from the old Crystal White, pollinated with the Lawton. *Every* seedling from this cross was black in the first generation, and every seedling in the second generation (several hundred plants), was black, and most resembled the Lawton, which is very prepotent, except two white ones, Iceberg and another that proved worthless. The new one spoken of above will certainly have a place as a market berry, but cannot be introduced before three or four years, as the stock is limited.
Santa Rosa, Cal. LUTHER BURBANK.

The Lucretia and Mayes dewberries on the Rural Grounds are grown under labels as received. It is evident that Friend Holmes's varieties are reversely labeled from ours, and the question is, which is correct? He prefers the Mayes, which would be our Lucretia, and after reviewing the season's experience we like Mayes (his Lucretia) rather the better, as it produced more perfect berries. We want more light on dewberry varieties.

The remarkable picture on first page, Fig. 265, is a natural-sized photographic reproduction of the Mammoth blackberry or rather dewberry noted on page 550, as grown in California. Our plants set last year only produced berries half as big, but we have no doubt of the literal correctness of this picture, kindly furnished by the disseminator, James Waters, Watsonville, Cal. Mr. Waters writes that berries even larger were gathered this season. We found the Mammoth hardy as regards last Winter's cold, productive and of very agreeable quality, and we expect larger berries as the plants gain strength. The reputed parents of Mammoth are not large fruited species, and the production of such immense berries by the offspring is to the plant breeder a singular and unexpected result.

A BLUE DAISY.—The very extensive family of Compositæ or daisy-like flowers runs chiefly to white and yellow, though red is not wanting, as seen in the pink of the English daisy, Bellis perennis, the brilliant orange scarlet of the new Gerbera Jamesonii and the deep blues and purples of Centaureas and Cinerarias, but a porcelain blue "daisy" is something of a novelty. Arctotis grandis is a newcomer from southwest Africa and is best grown from seed as an annual, making a large branching bush two or three feet high. The downy-white foliage reminds one of the dusty miller, Centaurea Cineraria. The flowers are borne on long stems, and are two or three inches across, of the usual single daisy make-up. The color is bluish white, with a deeper blue disk. There is a little yellow at the base of the petals. The general effect is light porcelain blue, which is more pronounced when flowers are closed as they usually are in dull weather. The flowers are produced in constant succession all Summer. Although a little coarse in effect this Arctotis should make a desirable plant for mixed borders, and in time be improved as Cosmos and Dahlias have been. The blooms are lasting when cut, but close too easily to be very useful. Seeds for trial were furnished by H. A. Dreer, Philadelphia, Pa.

GERMINATION OF SWEET CORN.—Two blocks of cross-bred sweet corn planted at intervals of 10 days show a remarkable difference in stand. Soil, variety and conditions of planting were just the same, but seeds for one lot were kept over Winter in the dwelling, where the temperature probably did not go below 60 degrees at any time, while the other was wintered in a barn loft, where the cold reached close to zero on two or three occasions. Both lots were selected from the field at the same time, and thoroughly cured together, the only difference being the manner of wintering. The 10-day difference of planting seemed rather to favor the "cold" corn, as the season was advancing and rainfall abundant, yet the germination and vigor of the young plants was much inferior to the first lot, which had been kept warm and very dry. A single trial with different planting dates does not prove much, but it is well known that sweet corn is very sensitive to adverse storage conditions. Most planters find seeds of their own saving, when the selected ears are hung in a warm, dry place over Winter, grow better than "store seed"; and it is possible that the action of damp cold may be as prejudicial to the seeds as imperfect or hurried curing. Seedsmen have a difficult problem to keep their sugar corn seeds vigorous as well as pure, and in the main they handle it very well.

A RESISTANT EARLY CORN.—We feel justified in calling attention to Mr. Morse's endorsement of the Sheffield Sugar corn on page 597. We made this cross between Early Cory and Adams Early, a white dent hardy corn, much grown for the table in the South, 11 years ago in the hope of securing greater resistance to cold and an increased immunity from the dreaded smut. After careful selection for six years it was disseminated, and is steadily winning its way in the regard of practical growers in competition with the multitude of new kinds put forward with similar claims. We find it getting better every year under careful selection, and seldom care to plant any other early variety. An early planting of Sheffield and succeeding ones of Evergreen or Country Gentleman keep the table supplied with tender sweet corn from early July until frost. A single success of this kind among the multitude of recurring failures is sufficient encouragement to a hopeful plant-breeder. W. V. F.

PROF. MUNSON'S NEW GRAPES.

PART I.

The writer recently (August 5 and 6) made a visit to Prof. Munson, of Denison, Tex., to see and test his many new grapes. The purpose was to examine into their value, and compare them critically with best native standards like the Concord, Niagara, Brighton, Delaware, etc. Out of more than 100,000 seedlings that he has raised and fruited only 127 had been deemed worthy of continued culture. About 40 or 50 of the best of these were selected, and we then went to the vineyard and cut a fine sample cluster of each, including one each of the standards. Sheets of white paper were then laid upon the broad veranda of Prof. Munson's residence, and a cluster of grapes, properly labeled, was laid upon each, when the work of testing and comparison began. In cutting the clusters note had been taken of the vigor, health and prolificacy of the vines. The cluster of Concord was large and fine, better than the average of northern Ohio Concord grapes. It was also fully ripe, but the berries contained the well-known sour, tough and unpalatable pulp, constituting, with the seeds, from one-half to two-thirds of the bulk. From this cause more than half the people who eat the Concord grape swallow the seeds. The tissue surrounding the pulp was sweet, juicy and good, although having a foxy aroma peculiar to the Labrusca class, it became strongly manifest in comparison with the foreign and new grapes of Prof. Munson. There were also magnificent clusters of Campbell's Early and McPike further to make comparison. But both of these fine-looking grapes contained the same relative proportion of sour, tough and unpalatable pulp—a defect too serious to close our eyes to the possible improvement of our native grapes.

First comparison was of black varieties, Munson's America. Clusters as large as the largest Concord, more compactly set with berries and heavier, bulk for bulk. Berries with slight bloom, good medium size, almost pulpless and containing much coloring matter. Seeds few and small. Quality rich, pure, vinous, sweeter than the Concord, a fine table grape. The vine is very vigorous, healthy and exceedingly prolific, probably bearing a greater weight of fruit year after year than any other purely American grape. It is estimated that the fruit on the original vine this year will weigh 125 pounds, and the dense and beautiful foliage almost completely covers it from sight. Upon parting the leaves there was presented a beautiful view, and the most delightful aroma flowed out. Some of the new hybrids of this grape promise fully to equal it in yield, and may eclipse it, at the same time having finer quality, proving America to be a very fine mother for hybridizing purposes. The fruit keeps well, hangs well to the cluster, has a thin but tough skin, does not crack, and will stand long distance shipping. The finest port wine has been made from it. Parentage Post Oak and Rupestris only, and is hardy.

The Manito grape has long cylindrical clusters, a little loose but set very uniformly. Berries reddish black, above medium size and very prettily marked with circular dots of white bloom. The pulp readily frees its seeds, and has no unpleasant taste. Quality sweet, sprightly and vinous, far better than the Concord. This grape never cracks, and bears shipment well. The vine is very vigorous and highly prolific, bearing immense crops. Ripens with Moore's Early and is hardy. Parentage Post Oak, Rupestris, Labrusca and Vinifera.

The R. W. Munson has clusters much larger and longer than the Concord; berries same size, but very uniform in ripening. The quality is very pure and sweet, superior to its northern rival. The vine is a very strong grower, with a fine healthy leaf capable of fully maturing the great crops that it annually bears. The fruit never cracks, keeps well, ships well and sells well. Post Oak, Labrusca and Vinifera.

Bailey: Clusters very large and compact, larger and closer set with berries than the Concord, making the clusters remarkably heavy and attractive. The berries are as large as the Concord; do not crack, hang tightly, and are covered with a fine bloom. The quality is higher than the Concord and the seeds part more readily from the pulp, which is not unpleasant to the taste. It ripens evenly and the berries are of a very uniform size. It sells well and is a long keeper. Parentage Post Oak, Labrusca and Vinifera.

Beacon: Clusters very large and compact. The berries average larger than the Concord, are very firm, good keepers and will bear shipment well. The quality is fully as good. The bloom is not quite so heavy, but the larger clusters and berries command instant attention on the market. It is hardy. Parentage Big-berry Post Oak and Labrusca.
Ohio. G. L. TINKER, M. D.

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THE
POULTRY-HOUSE
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As a water-proof covering for Poultry-Houses, RUBEROID has no equal. Keeps the houses cool during the warm weather, and warm in Winter, and the chicks dry and comfortable. The sun cannot melt it.
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Send for price list and free catalog of Wire Fences & Supplies. W. H. MASON & CO., Box 67, Leesburg, O.

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And other Insects can be Controlled by Using
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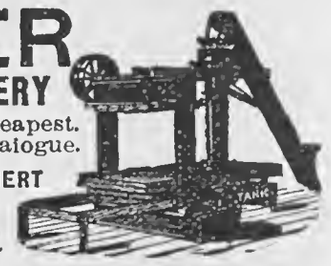

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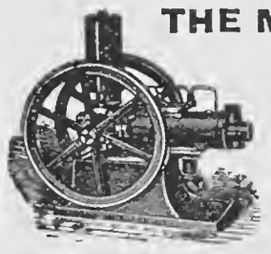
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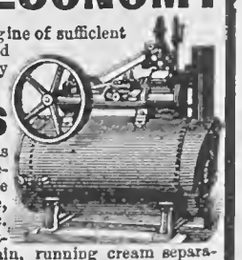

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HOPE FARM NOTES

This appears to be examination week for the Hope Farm man. The questions come in thick and fast, and I am not sure that I shall be able to "pass." We will try it anyway.

TAIL HOLDERS.—Here is a tale of a troublous tail from New York State:

We have a horse which has the habit, of years' standing, of catching the rein with his tail and hugging it very tightly; this habit took him off a narrow bridge and into the creek last night, when hitched to a reaper; no serious harm resulted, but the next wrong move may not prove so fortunate, and now will you tell me how the bad habit can be remedied? We have been advised to have his tail drawn tightly up over his back and left for 12 hours, when the ability to hug the rein will be removed and the horse not harmed. B. I.

Our old Major has just that trick. He is as expert with his tail as a boxer is with his arms. He will go jogging along apparently half asleep. The driver will touch him up with the whip, and quick as a flash that old brown tail will dart over one of the lines and hold it so tight that the horse will nearly turn himself around—especially when he is going away from home. We have done nothing for it except to hold the reins higher and watch his tail! A number of remedies are suggested. A single strap longer than the crupper may be buckled or tied around the tail about eight inches down from the root, and fastened tight to the back strap, so that the horse cannot crowd his tail down. The veterinarians, I am told, sometimes cut a muscle on the underside of the tail so that the horse loses power to press down upon the reins. This does not interfere with the side motions. I have heard of a loose bandage with tacks inside being placed around the tail so that when the horse tried to "grasp the lines" he would see the point at once. Now some one will get up and say: "Why don't you try some of these 'cures' on Major?" The fact is, that Major is too old a horse to do much mischief. The trick is not dangerous with him—simply annoying. With a younger horse I should certainly try "prohibition"—with knife, tack or strap.

FEATHERED CANNIBALS.—Here is a question that beats me:

I would like the Hope Farm man and other readers of THE R. N.-Y. to tell me how to prevent young chickens from eating each other. We have about 200 Black Minoreas that were hatched in an incubator in May and June, and for the last three or four weeks they kill and eat each other, as high as three in one day. They have a roomy house and yards 20x60 feet to each 50 chicks. They are fed a variety of food, and green cut bone once a week. Can anyone give me a remedy? S. H. O.

We have seldom had chickens act in that way. The little roosters fight sometimes until one is killed, and I have known the rest to eat the one that was defeated, but that, with us, happens only now and then. We found the Minorcas inclined to be quiet and peaceable—more so than the Leghorns. Several years ago a so-called "new breed" was offered, and it was claimed that they would kill and eat sparrows, rats and squirrels. These claims were pretty well founded, for the birds would fight like tigers. They had blood of the Javas in them. If I had these cannibals I would separate the roosters from the pullets at once, as I think the former are doing most of the mischief. As soon as they are large enough I would sell every rooster that is not wanted, feeding them more meat and keeping them either at large or in smaller flocks. I do not think the pullets alone will do much damage.

DAMAGED WHEAT.—The following letter comes from Pennsylvania:

What would you do in my case? I have 300 bushels of wheat damaged by rain. Millers only offer 40 cents per bushel. I do not want to sell it for 40 cents, and I purpose to feed it to hogs, horses and cows, using oats and corn, along with good corn fodder and bright oat straw. Give me a balanced ration out of this feed, or should I feed something else along with it? A. S.

That wheat is certainly worth more than 40 cents a bushel. If I had it I would lay aside 100 bushels for chicken feed. We have never found anything better than whole wheat for chickens. I would take 50 bushels more for feeding little pigs and shotes. Scatter it in the yard or pasture where the pigs run, and they will get every kernel of it. Some people think a pig cannot pick up such a small grain. What a mistake! That wonderful under jaw of the pig will pick up clover seed if need be. I met a man out West who feeds all his wheat in this way, and the pigs pay him more than the millers. For work horses and cows I would grind two parts wheat, two parts oats and one part corn. For hogs I would leave out the oats, and grind equal parts of corn and wheat. Oats are for the workers, and the cow works as hard as the horse does. This feed, with good, bright cornstalks, will make a fair ration, but as I am situated it would pay me to feed in addition to each cow daily a pint of oil meal, and the same to the horses three times a week.

GRUBS AND POTATOES.—The following note came from North Carolina with a sample of the insect:

I planted a small piece of land in potatoes which proved productive of fair-sized tubers, but a "grub" or some kind of a black-headed worm has eaten them three-fifths to such an extent that they are ruined. Can you give me the name of the insect and state a remedy? Sample of potato and grub mailed under separate cover. W. J. W.

The insect proves to be the common white grub. Our own potatoes are alive with them. We have found one or more in every hill thus far, and they are likely to get more potatoes than we are. I have seen them on potatoes before, but never knew them to do so much damage as they have this season. They have destroyed the strawberry plants, but have not seriously damaged other crops for me before now. I regret to say that there is no practical way of fighting them. Of course the potatoes should be dug as soon as they are ready. Constant cultivation through the season will set the teeth of the next generation of white grubs on edge, and Fall plowing, leaving the ground exposed, will kill out many. But what is the use of talking "constant cultivation" when you can't get into the field without rubber boots? I regret to say that you will have to let those white grubs fatten on the tubers until they are ready to dig.

CLOVER HAY.—Another farmer in Pennsylvania presents this problem:

Last Spring we seeded a six-acre lot to barley, and with it one bushel of clover and one of Timothy seed. At this writing we have the finest growth of clover I ever saw. What shall we do with it? It is now in full bloom. Shall we pasture it, make hay, or let it fall on the ground? If the latter, I fear the plants will be smothered out. It will be a difficult task to make hay at this time, as we are having so much wet weather. How would you handle it if it was on Hope Farm?

J. T. R.

If I had that clover I would do just as I shall try to do with the clover in the orchard—cut it when ready. I need more hay. I don't believe in letting the first growth of clover die down. I would clip it anyway even if I had to leave it on the ground. We could feed a good deal of it to the stock without curing. It is not so hard to cure clover hay in damp weather if we go at it just right. The "curing" must be done in cocks, and it won't do to let it go half-cocked, either. In good-sized firm piles the clover will "sweat" out much of the moisture in the stems—provided the leaves are not dried out early in the game. I would feed such clover out early to the cows, but I would try to cure it anyway.

FROGS AND MUSHROOMS.—Here is a Jerseyman with a suggestion for some of the agricultural croakers:

Can you give me any information about the raising of frogs for market, or can you direct me as to some reading by which I can receive such information? I shall be grateful if you can give me some knowledge of the business. I also wish to learn something about the cultivation of mushrooms. E. L. J.

The best information I can give is that "frog farming" is one of the theories that burst at a puff of practice. There is a fair demand now for frog's legs in the best markets, and it is a favorite scheme for the man who knows nothing about it to figure the vast profits of frog farming. It looks easy, but the trouble with frog farming is the fact that Mr. Frog himself is remarkably fond of frogs' legs! It is quite easy to hatch out the little fellows, but almost impossible to protect them from their relatives. The older frogs devour the little ones and ruin the business. A pamphlet on frogs will be sent on application to the United States Fish Commissioner at Washington. Of the great quantities of frogs that come to market practically all are caught one at a time in ponds and streams. A book that will give you an idea of mushroom culture is, Mushrooms—How to Grow Them, by W. Falconer; price $1 from this office. We have never attempted the culture of mushrooms. I have seen them growing in dark cellars, but have always felt disposed to leave their production to those who are specially fitted to handle this special product.

LOAFING HENS.—Here is a man from North Carolina with a question that never dies:

What would you advise to make hens lay that have open field and woods to run in? We have about 15 and hardly get an egg a day. O. J. H.

I don't believe you can make those hens lay until they get ready. We have now about 35 hens, and they lay from four to six eggs per day. They have begun to moult, and we presume your hens are also calling in Nature's dressmaker to fit them with a new Winter's suit. An old married man with several years' experience in family matters will tell you that when Mother and the girls are getting ready for the dressmaker he must expect plain fare and little attention. He will tell you that it will all be made up to him later when those dresses fit. It is about so with a hen. Some people tell how easy it is to crowd a hen through her moulting season and make her forget that she ever had feathers, but I have never been able to do it. We have fed meat, sunflowers and oil meal. A few of the hens seemed to lay even when they were so bare that they had no place under which to lay their head, but most of them shut up shop completely no matter what they are fed. My opinion is that those hens will do little laying beside laying off until they get their new clothes on. I should either line my soul with patience and wait, or line the stomachs of my family with chicken pie—and wait not!

FARM NOTES.—The rain still keeps up. A day without at least one shower is as rare as an angel's visit is said to be—though most of us entertain angels unawares every hour. We have scarcely been able to turn a furrow all through August. I hoped by this time to have the wheat land all plowed at least. The lower part of the farm is nearly knee deep in mud. We have cut off the weeds where we could not plow them or pull them up. . . . The second cutting of the "Clark" grass will not amount to much. Rain and fertilizer will do much, but they cannot do it all without sun, and grass will not give satisfaction unless the sun shines on it. . . . The corn crop is very promising—that is, the stalks are tall and of good color. We shall have a large amount of fodder, but unless the weather changes, it will be impossible to cure it properly. The grain is forming well, though I shall not be surprised if there are few kernels on many cobs. . . . Lima beans and melons are largely grown by farmers in this section, but this year they are minus quantities. In former years we have made entire meals out of Lima beans and bread and butter, but this year the best we can make is a "succotash" of sweet corn and a few Limas to give it a little color. However, we don't starve—not by a good deal. There are 25 or more young roosters out in the coop, and a sure supply of apples, plums, pears, beets, cabbage, onions, potatoes, peppers, tomatoes and turnips. We have had from 12 to 17 people in the family all Summer, and so far as I know they have all had enough to eat. . . . Few have skipped a meal, for in spite of the constant rain, the soaking ground and a wet cellar this has been a healthy Summer. We have had no serious sickness. On the other hand, Hope Farm has been able to provide a refuge for several good people whose nerves and muscles gave out in the fierce strain of fighting society for a living. They will go back to their work with clearer eyes, stouter hearts, well-packed bones and a little bunch of the Madame's faith and hope under their jackets. If I could put a market value on some of these things we could figure out a fortune this year. H. W. C.

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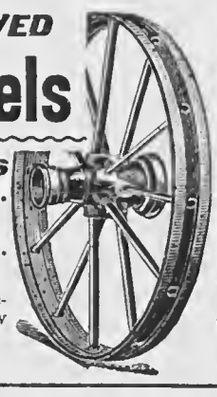

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The Rural New-Yorker

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A National Weekly Journal for Country and Suburban Homes.

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THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, SEPTEMBER 7, 1901.

THE Canadian census returns are said to be disappointing to those who give most thought to the future of Canada. Quebec and the western provinces have made fair gains in population, but Ontario and the maritime Provinces are nearly at a standstill. It is hard to understand why Canada does not gain more rapidly. Ontario is a most desirable section for fruit growing and general farming. It is filled with good farmers, and the market facilities are excellent. Some Canadians profess to be satisfied with this slow growth, but it is certainly not up to the standard of Yankee enterprise.

*

SOME of the electric railroads that reach out along the farm highways are beginning to carry freight. As a rule, they give quick service at a fair price—in fact, they haul freight at express speed and about half the express charges. Of course, the steam railroads and express companies object to such freight carrying. They have had a monopoly of such business for years, and do not look with favor upon any competition. Such service is, however, of great value to the farmer, and we hope it will be extended all over the country. All such things make country life brighter. The farmer should be able to send his voice over the telephone and his crops over the trolley.

*

THE Department of Agriculture is preparing to publish a digest of the game laws of this country. This work will be appreciated not only by sportsmen, but by farmers and others who wish to take a day or two off during the year for a little hunting. The game laws are so complicated that something up-to-date and covering the whole country is needed. Most States have strict laws against exporting game, many require non-resident hunters to get a license costing from $10 to $40, and some prohibit the sale of all kinds of game. We feel sorry for the man whose duty it was to digest and arrange these complicated and conflicting game laws. He must have a bad case of mental dyspepsia!

*

LET us suppose that a large and powerful trust or combination of business men secured control of the marketing of farm products. It became known to farmers that it was the intention of these strong men to do what they could to break down the power of the Grange or of other organizations which endeavored to secure the rights belonging to the farmer. Would the producers be justified in organizing a strike for the purpose of maintaining their right to organize as they saw fit? The consequences of a general strike among farmers—that is, a general refusal to crop their land—would be worse in its effect upon humanity than the most awful war in history. Would they ever be justified in using this tremendous weapon?

*

A FEW weeks since we said that the time may come when the automobile will be trained to farm labor. It ought to carry the farmer's family or load along the road and then stand on its front feet and turn machinery with its hind legs. Since then we have heard of a case where this has actually been done. A city man with a powerful automobile goes to the country to visit his farmer friend. At the farm the auto is backed into the barn and well braced. The rubber tires are taken from the hind wheels and the back end of the vehicle raised. A belt is attached to the hind wheel and used to turn a fodder shredder, or mill, or to work the pump. This auto is a strong one, with six horse-power. Such a machine is too expensive for the average farmer, but it shows the possibilities of the steel farm horse. These machines are sure to be sold at a reasonable price some day—following the development of the bicycle and the traction engine. We understand that a patent has been issued for a special device for enabling the auto to kick at machinery with its hind legs. Thus the horseless carriage, like the telephone and the trolley, may yet serve the farmer as well as the city man.

*

THE fearful damage done by the Hessian fly this year has made the study of that insect doubly interesting. Washington was the first American farmer to make the Hessian fly. His favorite remedy was the "trap system," and he used it with great success at the Battle of Trenton. He studied the habits of the Hessian and knew that he was sure to "emerge" at Christmas and get into such a condition that he could be easily handled. So he waited until the Hessians were spread out thick on their Christmas celebration, and then he crossed the river and fell upon them like a thunderbolt! The plan which the entomologists suggest for this season is therefore older than our present Government. Briefly stated, it is to sow a strip of wheat early in September. In consequence of the wet season the "fly" will "emerge" early. He will get to that early wheat as the Hessian soldier surrounded his Christmas cheer. He will be just about as helpless, and can easily be plowed under and destroyed. This is a specially good season for the farmer to emulate the Father of his Country.

*

THE daily papers have printed great stories of tobacco growing in Connecticut. We receive letters from western readers who ask if it is true that tobacco is being grown under great tents in the Connecticut Valley! Yes, the statements appear to be correct. Last year Dr. E. H. Jenkins, of the Connecticut Experiment Station, conducted some experiments in growing Sumatra tobacco under shade. The quality of the tobacco was so fine that this year about 30 acres of this tobacco are being grown under cheesecloth shade, with every prospect of great success. One grower is reported to have surrounded his entire patch with mosquito netting to keep out the grasshoppers. The profits from these tented tobacco lands are almost past belief. The Government went ahead and experimented, and the growers had the nerve to follow on a larger scale. What would the grandfathers of these Yankees say could they see these great tents stretched over their old fields? They would probably say that the modern Yankee doesn't need to go away after a job on the farm, and that he has sharpened and polished his grandfather's brains!

*

AT the annual meeting of the Five States Milk Producers' Association the following resolution was passed:

Resolved—That we, the members of the Five States Milk Producers' Association, in convention assembled, knowing the danger to the dairying interests of the country and to the health of the community implied in the production of 100,000,000 pounds of oleomargarine yearly, all of which is sold as butter, and realizing the injustice both to the butter producers and consumers in the fraud perpetrated, ask our representatives in Congress to work for the passage of the so-called anti-oleomargarine or Grout bill, if introduced in Congress next Winter, or for any substitute therefor.

That is good as far as it goes. Of course, the bill will be introduced into Congress. Let there be no "if" about it. But what will be the sense of "resolving" in this way if J. W. Wadsworth is again appointed chairman of the committee on agriculture and permitted to hold the bill up once more? If the road is muddy and we see a log across our way we do not lash the horses, but we get out and chop away the log. Chairman Wadsworth is the log in front of the anti-oleo bill. The thing to do is to chop him off. Where is your ax? The pen is mightier than the ax. Write a letter to Hon. D. B. Henderson, Washington, D. C., and tell him that you want no one but a friend of the farmer on guard.

*

MOST farmers are familiar with the history of Jersey and Guernsey cattle. They were kept on their little islands for many years, and carefully protected from any outside blood. The type was thus narrowed, and uniform specimens were produced which when taken elsewhere for breeding purposes were sure to stamp the strong points of the breed upon their offspring. It is not generally known that much the same thing is being done with sheep in Maine. On certain islands near the Maine coast sheep have been bred for years. No new sheep are brought from the mainland, but the best specimens of the island sheep are reserved each year for breeding. The sheep have slowly changed from the former type and now have original and valuable characteristics which make them really a new breed. They are wonderfully hardy—spending the Winter in good condition with little to eat but seaweed and fish. It is now proposed to keep these sheep pure—that is, to introduce no outside blood, as it is thought that for some purposes they are superior to most other breeds. We expect to have some articles later on these thick-coated wool-backs.

*

THE bicycle side-path law in force in New York State is an excellent thing so far as it goes. Riding on these paths without a license is a finable offence. Licenses issued in any county are good through the entire State, and a badge is furnished which can be attached to the bicycle. Some counties charge 50 cents and others $1 a year, the money being used to improve the paths. If this tax were doubled and the funds properly used, still more improvement might be made, and it is probable that most wheelmen who use these paths would willingly contribute this amount to a work which is of such direct benefit to them. A bicycle is a nuisance among the wagons on the highway, and it is a comfort to horsemen as well as wheelmen to have a separate place for each.

*

IRRESPONSIBLE publications often contain advertisements purporting to come from some "detective agency," which asks for local representatives whose efforts will cover the localities in which they live. Boys who have fed their imagination upon trashy fiction are much impressed with the glory of becoming amateur sleuths, after the manner of their favorite heroes, and they cheerfully hoard and save to obtain the deposit required as a preliminary by the agency. One New York lawyer tells how, when he was a boy, he managed by strenuous efforts to save $2, which he sent to one of these advertisers. In return he got a nickel-plated star as big as a saucer, and a set of credentials setting forth his official dignity. He says:

> My territory was a peaceful agricultural district some six miles square, and I was to ferret out all crime in that district. I pinned the star in my flannel shirt and went around looking mysterious and wise. But the only disturbances in my town were occasional cases of bucolic drunkenness, and after a month or so I sold the star and credentials to another boy and went out of the business.

Another similar agency is a so-called bureau of newspaper correspondence, which operates on similar lines. After advertising for "reporters" in different districts, it demands a fee, merely as a "guarantee of responsibility." Paying such fees is a form of education for the unsuspicious, but a disheartening one.

*

BREVITIES.

The pleasant town of Get There lies far up a rocky hill,
Across the sands of Courage and above the swamp of Will.
The path that leads to Get There leaves the pleasant thoroughfare
And wanders off 'mid rocks that grind and brier vines that tear.
And thousands pass along the road that leads to Nowhereville,
And grumble at the few who climb to Get There on the hill.
And others start the thorny path and seek the town to gain,
But falter at the swamp of Will and turn them back in pain.
Oh, happy town of Get There shining in the morning sun,
You only show the toiler how yet higher peaks are won.
The truest recompense you give for self-denying years
Is but the promise old, yet new, that conquers doubts and fears.
For no one lives at Get There, but with heart and purpose set
On better things, from peak to peak, they climb up higher yet.

SET a trap for the Hessian fly.

EGGS lose weight when cooked.

WHAT is your farm doing for humanity?

THE first crow of the young rooster is crude.

THE customary order for the apple pie is last.

THE general-purpose man needs more private purpose.

THIS is no season for bush Lima beans. How they do rot!

PEA flour mixed with wheat flour is recommended for bread making.

THE shell makes about 15 per cent of the weight of the Guinea fowl's egg.

BETTER be original in the primer class than a parrot in the third reader.

THE "old home week" is a strong feature of New Hampshire rural life.

THE account of Prof. Munson's grapes, page 614, will interest many fruit growers.

CURE a little of the finest clover rowen this Fall to feed the calves and hogs during the Winter.

IT seems to us that there is a good opening for bright young men in the study of scientific forestry.

A CYCLONE in Pennsylvania was followed recently, according to veracious observers, by a shower of string beans.

NOTE Mr. Morse's directions for preparing a blackboard, on page 613. That paint formula is a good thing to know.

"YES," remarked the weather, "my surroundings have been very *August* for the last 31 days, but now I'm in for a Fall."

NO, we will not seed to grass on land so wet that we could not kill out the weeds. We will seed to rye or wheat alone, and wait for a better weed-killing season before sowing grass seed.

Events of the Week

DOMESTIC.—Jack Winters, who stole $283,000 in bullion from the Selby smelting works, Vallejo, Cal., and afterwards confessed and disclosed the hiding place of the plunder, was sentenced August 21 to 15 years' imprisonment. Winters asserts that he had no accomplices. . . . . Five men were drowned August 21 as the result of an explosion in the tunnel under Lake Erie, at Cleveland, O., where another casualty had occurred a week before. . . . . In a head-on collision between a passenger and freight train at Prentice, Ill., August 21, five trainmen were killed and six badly injured. . . . . August 24, severe storms and cloudbursts occurred in several localities in New York, New Jersey and Pennsylvania. At Mauch Chunk, Pa., flood swept away a pavement on which a man and three boys were standing, drowning all four. . . . . The explosion of a soda fountain at Ashley, Ind., August 26, wrecked a drugstore, killed one person and fatally injured another. . . . . The falling of two steel girders of a new railway bridge being built across the Congaree River, near Columbia, S. C., August 26, killed four workmen and injured three others. . . . . The Attorney General decides that newspaper guessing contests requiring study and calculation do not fall under the law prohibiting the advertising of lotteries or games of pure chance. . . . . The Government has discovered wholesale smuggling of Chinese over the Mexican border at Nogales, Ariz., where corrupt officials have been selling certificates. One of the implicated officials committed suicide.

PHILIPPINES.—The insurgent Colonel Loreel, with 17 officers and 73 men, has surrendered at Talisay. The military force at Manila is to be increased to 1,000 effective soldiers to guard against any possible uprising. It is expected that with the opening of Congress, the Government will submit a bill providing local self-government for the Philippine Islands. The measure is understood to follow the lines of the government maintained by Great Britain in the Straits Settlements. The subject of franchises will be the most difficult to settle.

FARM AND GARDEN.—A decision handed down August 21 by Judge McConnell, sitting at Cleveland, Tenn., dissolves the injunctions granted two weeks before in a case involving $5,000,000 invested in the copper industry near Ducktown, Tenn. About 40 farmers asserted that their land had been ruined by the copper fumes and that vegetation was being destroyed. Suits for damages were filed, injunctions were granted and the plants of the companies were shut down. The feature of the hearing preceding the dissolution of the injunction was a petition signed by 3,000 citizens of the county, asking that the industry be not interfered with. The companies concerned are the Tennessee Copper Company and the Ducktown Copper Company. The first has spent $3,000,000 and employs 2,000 hands. The latter has spent $1,000,000, contemplates the immediate expenditure of $4,000,000 more, and employs about 1,000 hands. Individual suits will be heard at the September term of court.

John Hyde, the Statistician of the Agricultural Department, returned to Washington August 21 from a tour of the countries of Europe, where he arranged for a system for the exchange of telegraphic crop reports.

Capt. G. P. Ahern, of the Ninth United States Cavalry, who is in charge of forestry work in the Philippine Islands, by resolution of the Philippine Commission, is in Washington to examine applicants for positions as foresters, September 9. Six foresters, with salaries from $150 to $200 per month, are to be appointed. One of the qualifications is that applicants shall be graduates of forestry schools.

Live stock shows will be held at Atlanta, Ga., October 14-24; at Chicago, Ill., November 30 to December 17, and at Philadelphia, Pa., October 8-19.

The annual fair of the Michigan State Agricultural Society will be held at Pontiac September 23-27.

The Wisconsin State Fair will be held at Milwaukee September 9-13.

The Tompkins Co. (N. Y.) Agricultural Society will hold its sixty-second annual fair at Ithaca September 17-20. A night carnival will be held in connection with the fair, this being a novelty.

The first Louisville (Ky.) Inter-state Fair will be held September 23—October 5.

The second International Live Stock Exhibition will be held at the Union Stock Yards, Chicago, during the first week in December. Entry blanks are now ready. If intending exhibitors of pure breeding, and fat stock, and horses, will make application for them to W. E. Skinner, General Manager, International Live Stock Exposition, Union Stock Yards, Chicago, stating how many animals they desire to enter, and the class or breed, it will greatly expedite matters in the office, and they will receive their many entry blanks promptly. Carloads of live stock do not need to be entered until arrival at the Union Stock Yards, Chicago. Premium lists will be sent out with the entry blanks only on request.

The Western New York Horticultural Society, as the trustee, has awarded the Barry medal to Charles C. Hooper, Rochester, N. Y., for the new red currant, Perfection (cross of Fay's Prolific and the White Grape), combining mild, rich flavor of the latter with size and appearance of the former, with larger bunches and more of them than the Fay. The medal is offered a new fruit, ornamental shrub, tree, flowering plant or vegetable which, after a three years' test, shall be considered worthy.

The Cape Cod Cranberry Growers' Association held its annual meeting recently. Nearly every town in Barnstable County was represented, and a large delegation from Plymouth County was present. It was estimated that the crop this year from these two counties would be about 20 per cent less than last year, when the output was 175,000 barrels. It was the sense of the meeting that berries should not sell for less than $6 per barrel at the outset. Emulus Small, of Harwich, was reëlected president; George R. Briggs, of Plymouth, vice-president; Franklin Crocker, of Hyannis, secretary-treasurer.

R. J. Warder, secretary of the Board of Control of the Ohio State Experiment Station, is appointed Superintendent of Parks in Chicago, Ill. He was at one time a member of the Park Board of Cincinnati, O.

Louis Cusin, secretary of the Pomological Society of France, and for many years a prominent figure in French horticulture, died on August 1 in his 78th year.

The St. Louis World's Fair, 1903, purposes to make a very special feature of agriculture and horticulture. The Committee on Agriculture was formed with the special object in view of gathering together in the St. Louis World's Fair Grounds of 1903 the most magnificent and complete exhibition of horses, cattle, sheep, swine, poultry, farm products, horticulture, forestry, etc., ever exhibited.

The twenty-eighth annual Grangers' Interstate Exhibition and picnic was opened at Williams Grove, Pa., August 26. The machinery exhibits were larger than ever before. Among the speakers were officials of the State Department of Agriculture; Aaron Jones, of Indiana, Worthy Master of the National Grange; W. F. Hill, Master of the Pennsylvania State Grange, and J. B. Rogers, of New Jersey.

The Connecticut Pomological Society will hold its fourth annual fruit exhibit at New Britain, Conn., October 1-2.

The American Veterinary Medical Association met at Atlantic City, N. J., September 3-6.

The Devon Cattle Club offers a special list of prizes at the Pan-American Exposition, which will be of interest to Devon breeders generally.

The Holstein-Friesian Association will duplicate all prizes offered by the New York State Fair Commission in the butter-fat test, provided the prizes are won by recorded Holstein-Friesian cows, thus making a total of $500 if won as above. Arrangements have been made with the officials of the Pan-American Exposition whereby all cattle to be shown at Buffalo may remain at the State Fair in Syracuse until Thursday evening, September 12, at which time they will be sent by special train to Buffalo. Judging cattle at Buffalo will begin Monday, September 16. Prize lists may be obtained from Frank D. Ward, Empire House, Syracuse, N. Y.

FARM VALUES.

Farms in this vicinity have depreciated in value fully two-fifths from what they were worth 15 or 20 years ago, owing to the fact that farm produce does not bring more than one-half as much as it did 15 years ago. For example, wool sold for 33 cents, now 16 cents; wheat from $1.25 to $1.40, now 70 cents; barley from 75 cents to $1, now 50 cents; while the cost of production is just as much now as it was then. The difference in the prices now and 18 years ago ought to make from one-half to three-fourths difference in valuation of farms. The only cases where there has been any increase in valuation have been on account of buildings being improved, and fences built and kept in repair. J. S. B.

Ontario Co., N. Y.

We have read the articles published in THE R. N.-Y. from time to time on the subject of run-down farms, and more recently on the depreciation in farm values. The location of farm property has much to do with its value and its capability to produce. A farm located in this tobacco belt is worth more to-day than for years preceding. The tobacco industry was never more promising than at the present time. A new feature of the cultivation is the growing under canvas, and many acres have been grown in this way this season. An experimental piece was grown last year which was sold at about 60 cents per pound for wrappers, while that not shade grown brought from 25 to 30 cents per pound. This tobacco was grown under the supervision of an expert furnished by the Government, and proved so much of a success that acres and acres are this year grown under canvas. D. K.

Hartford, Conn.

It is my opinion and that of others who have lived here longer than I have, that farm values will not average to exceed 40 per cent of what they were 20 years ago, although the buildings, etc., are generally much improved since then and the farms in fully as good a state of cultivation. This for our immediate neighborhood. A little north and west of us the decline has been much more even than here. I know of no case where there is any increase of values nor of any farm that will bring 60 per cent of the supposed value of 20 years ago. It is very rare that there is a farm sold unless it is by the mortgagee. I did not sow any cow peas this year owing to want of time and the wet season, but there are a few growing that came up after plowing the orchards. They have mostly made a very fine growth, much better than last year. I have two bushels of seed saved from last year that I expect to plant next season. S. D.

Greene Co., N. Y.

For the last 15 or 20 years farm values have steadily advanced. Land which sold then for $25 to $35 now sells more readily at from $35 to $45. This is land without permanent improvements to speak of. An 80-acre adjoining mine, without permanent improvements, was bought in 1880 for $35 per acre. The same farm was sold last Winter for $65, with about $1,500 permanent improvements. A 160-acre farm adjoining mine was bought about 18 years ago for $6,000, and was sold last Winter for $10,000; the improvements are worth probably $500 more now than then. About my own farm I do not know what it would sell for. But the assessor puts a higher value on it than any near it. I bought it 29 and 18 years ago, at about $25 and $30 per acre. I do not know that the advance has been greater for the last two years than the average, but more land has changed hands than at any time before. The farms I have spoken of are two and three miles from the railroad; six to 10 miles back land sells from $40 to $50 per acre. J. S.

Corning, Iowa.

Farm land has dropped in value about one-third, and is not changing owners. About the only sales that I can report are in settling up estates. Land in this section is yielding larger crops at the present time than years ago; everything in farm production is bringing a good price except wheat, which is worth 70 cents; old corn, 60 cents; oats, 45 cents and none to sell; a complete failure. One farmer got 80 bushels from 20 acres. Potatoes, $1 a bushel; hay, $12 a ton; rye, 56 cents; horses, $150 to $200; cows, $30 to $50. Everything in good demand; butter, 28 cents; eggs, 16 cents. The reason for land producing more I credit to late improvements and information gained by our young people through farm papers and institutes. I can call to mind farms to-day that yield three times the amount of grain that they did 20 years ago. These farms passed into the possession of young men who are using any amount of commercial manures, and have learned what to use and how much; have also learned how to handle barnyard manure. We are having plenty of rain at present, which is helping out our late planted corn. I planted 16 acres June 6, and before the rain I put it down as a complete failure, but it is earing all right and promises well. On the other hand, all corn planted early will be a short crop. The buckwheat in this section is looking fine and promises to be a good crop. A great many farmers take off buckwheat and sow wheat on same ground. In 1899 I sowed wheat on buckwheat stubble and harvested grain that yielded 34 bushels per acre. This wheat was sown October 2.

Columbia Co., Pa. E. H. S.

It must be admitted that farm values have steadily declined during the last 15 years in our vicinity, except where some other consideration than that of farming had kept up the price of land in favored areas of limited extent. Good farm land now within a radius of three miles from Harrisburg sells at from $80 to $100 per acre, while 15 or 20 years ago such land sold from $100 to $150 per acre. As to whether the sales from the farms are equal to those of 20 years ago, we believe they are not where the farmer depends largely upon the sale of the cereals for his revenue, but that they are where successful dairying or gardening is combined with the raising of grains. In our judgment the Pennsylvania farmer of 100 acres cannot compete with his western brother, who farms perhaps 1,000 acres in raising grains. He needs nearly the same appliances, requiring almost the same investment, and has much less use for them, and consequently receives much smaller returns from the same investment. The farmer here must depend largely upon fruit, vegetables or milk if he would make his farm pay. Many are doing this and succeeding. Our farmers in general here complain that they cannot make money as they could years ago; but even those who complain will point out a farmer here and there who has changed with the times and admit that he is making money. Farmers of this sort are not the ones who sell out for $80 or even $100 per acre. J. G.

Progress, Pa.

CROP PROSPECTS.

AUGUST 19.—Hay, good; oats, half crop; apples a failure. Corn, 75 per cent; potatoes looking fairly well, but only a few in a hill. Buckwheat never looked better. Rye about 11 bushels per acre; grapes good. L. M. S.

Yates Co., N. Y.

AUGUST 25.—We have had heavy rains here this Summer that have done damage by washing side hills, but it also made crops grow wonderfully. No apples near here; every peach tree full. Late potato tops look well; no early ones planted on account of wet Spring. Buckwheat and corn look very well. Meadows as green as June. Bees are gathering honey from buckwheat and Fall flowers. F. W.

Center Co., Pa.

AUGUST 22.—Oat harvest nearly completed; the crop greatly injured by rust and some smut. White Russian oats I treated with formalin and sowed May 25 are well filled, and no smut or rust visible. Corn planted June 5 is over 12 feet high and heavily eared. Many silos are being built in this section now. Last Winter the silage from 3½ acres fed 14 cattle five months, without other feed, and left them in fine condition. There is but very little fruit of any kind here. Grasshoppers are very thick. Numerous heavy showers. Beans are not filling well. J. S. B.

Allegany Co., N. Y.

Crop and Weather Report.

During the past week the Middle and South Atlantic States have suffered from heavy rains, which have damaged crops and hindered work, and in some instances washed the land severely. The drought still continues in Iowa, Oklahoma and Texas. Great improvement is noted in the condition of late corn. Much heavier earing than was anticipated is reported in the Central West and the Ohio Valley. The last of the Spring wheat harvest was hindered by rains, but is now practically finished. Thrashing is in progress and yields are satisfactory except in North Dakota, where the grain ripened prematurely and the kernels are shrunken on account of excessive heat. Shedding and rust are reported throughout the cotton belt. Tobacco prospects are favorable in the Ohio Valley and Tennessee. The apple outlook in Illinois, Indiana, Arkansas and Missouri is improving. Plowing is in progress in the Central and Eastern States, where the ground is in condition to work.

The Milk Producers.

The annual meeting of the Five States Milk Producers' Association at Binghamton, N. Y., resulted in the election of President, Ira L. Snell; vice-president, T. J. Arnold; secretary-treasurer, H. T. Coon. Executive committee—J. C. Latimer, Ira L. Snell, H. T. Coon, F. B. Aiken and O. G. Sawdy. After four years' work the Association has a cash balance of $108.48. The following resolutions were passed:

We affirm that the present net price of milk paid to the producer, which is now on the basis of the Milk Exchange only about 1¾ cent per quart, is insufficient.

Resolved—That in view of the prices of hay, grain and all products that enter into the production of all dairy food and the certainty of a great advance in the near future, we do not deem it expedient to fix a valuation on the same to govern the action of our members until our coöperative stations are so united that they will stand together as a unit in sustaining the price set by the committee, recommending to all that they carefully calculate the cost of producing the same and demand a remunerative price to cover cost and a fair compensation for labor, and all sales should be made subject to the demand of the milk by a F. S. M. P. A.

Resolved—That we unhesitatingly earnestly recommend and advise that our members shall refuse to make any contracts for delivery of milk to dealers.

We reaffirm our desire to coöperate with all efforts to procure clean, pure milk for the consumer by greater care in the production, and the prevention of skimming and adulterating of the milk before it reaches the consumer.

We heartily welcome the action of the medical society in New York in its endeavor to secure healthy dairy foods for the people of the city, and pledge our help to that end.

Woman and Home

From Day to Day.

DISAPPOINTMENT

Good Fortune in disguise
Crept shyly to my door;
Want in her haggard eyes,
Grief in the garb she wore.
How should I know the guest
Who came so poorly drest?

With fear I let her in
Who would not be denied:
No greeting did she win
No welcome to my side—
This uninvited guest,
Who stole away my rest.

But in the morning light,
Another face was there;
I saw a visage bright,
A beauty strange and rare.
My dear, deceitful guest
Had put my faith to test.

Now Joy and I are friends,
Who thought to be estranged;
Now Fate hath made amends,
And all the world is changed.
For since I knew my guest,
I find her gifts the best.
—F. W. Clarke, in the Independent.

*

A GIRL may be permitted to long for the unattainable if such longing does not induce her to pass all the housework over to her mother.

*

ONE experimenting housekeeper has decided that the proper way to lay matting is to sew the widths together like carpet, instead of fastening the joins down with double tacks. This would certainly simplify the taking up of the matting, preventing tearing, but it means a good deal of extra work.

*

KNITTING or crocheting small shells into drapery makes a picturesque material for decorating. At the Florida beaches last Winter many young women found this a pleasant occupation. The small pearly shells were gathered, the sort that is usually found with a little hole in each; if such was wanting, it was supplied. They were then caught regularly in the meshes of a coarse silk crocheting, a strand of rich yellow showing with a specially good effect. Red and gray were also used. One industrious woman knitted a long curtain, measuring three yards, in this way. The same shells are to be found at many northern beaches, and the experiment may be tried in Summer as well.

*

A VERY useful piece of furniture described by the Boston Beacon is an ex-ironing table. This is one of the tables bought in the shops for from $2 up and which with the broad table tipped back forms a high backed settle with a deep box below the narrow seat. The tables are in the natural wood without finish when purchased. The woman who finds hers of such value painted it green, upholstered it by tacking a covering over a thin stuffing upon the back and seat, and now the settle is a picturesque feature of her dining-room. When the back is turned down for a table it is most convenient for cutting or work of different kinds, and the box under the seat holds any number of things for which there seems to be no other place.

*

THE Norfolk jacket is with us again, and makes a nice useful suit with a walking skirt, especially suitable to an unformed or girlish figure. The jacket is made with a yoke back and front, one pleat running from the yoke to the lower edge of the jacket in the back, the belt outside this pleat, and two similar pleats in front, with the belt passing under them. The newest of long skirts is called the serpentine, which is something like a revival of the old bell skirt. It tapers down to just below the knees, where it flares out very full. Many of these skirts have a flounce, not very deep in front, but rising to a much greater depth in the back. Of course such a skirt needs a swirl of ruffles under it from the knees down, to make it hang properly. This is the reason, no doubt, why the short walking skirts are now cut without the flare, because no one wishes to wear a chaos of frills under a garment designed for bad weather or active exercise.

*

TOAST-making appears a very simple art, yet many housekeepers never seem to strike the right medium between flabbiness and cinders. If the bread is very quickly browned over on the outside, the interior remains damp, and we find that the butter lies on the top in the form of hot oil. To make good toast, the slice of bread should first be warmed on both sides without browning, and then browned slowly. Properly, dry toast should never be laid flat upon a plate, because the condensing steam makes it damp and tough, but toast racks, in which the slices are held on edge by vertical bars, are rarely seen on American tables. The toast rack usually forms part of an English breakfast service, being made of china or silver.

*

CATSUP making is upon us, and we simplify the work very much by seeing that bottles, corks, sealing wax, etc., are all at hand, and in good condition. Soak the corks in boiling water; drive them well into the bottles while they are still hot, and then cover the cork with sealing wax. Over this tie two thicknesses of cloth, and then saturate the cloth with wax. Seal the catsup while hot, and when cold put in a cool, dry, dark place, resting the bottles on their sides. Cook catsup in a granite or porcelain kettle, and stir with a wooden or silver spoon. We like to make catsup early in September, before the fruit gets watery, yet try to avoid very warm weather, which leads to fermentation. Overripe fruit should never be used in catsup, any more than in jelly or preserve.

Farm Home in Massachusetts

Those of our readers who have ever been in rural New England will quickly recognize the type of farmhouse shown at Fig. 271. It was in just such houses that the best blood of Yankee land was born and reared. There is something about the whole place that advertises the solid character of the New Englander of the past generation. The comfortable house, without trimmings or adornment, was built by sober men and women who held strong and severe ideas of duty toward family and country. Usually the timbers in these old houses are too good to come down, so the boys and girls (or some "city farmer") will tack on "bow windows" and other frills as more in keeping with our modern age. There was usually a long shed running from house to barn so that the farmer could go out and look at the "creatures" in the tie-up without facing the storm. They were mindful of comfort when these houses were built, and there was a Winter's supply of dry wood in the shed. In many of the big barn doors two other doors were cut—one swung open for the men folks and the other at the bottom for the cat. It was a serious matter to pass the husk mats at the back door without leaving on their rough coats the dirt which might otherwise be tracked upon the kitchen floor. The big stone wall was another feature of the New England front yard. When Father and the boys could find nothing else to do they picked up big stones—thus entailing a job on the present generation. The old men called it "good for sore eyes" to see their fields cleared, but now their great stone piles are truly eyesores to those who follow them, and these monuments to labor are put underground or broken up to provide road metal. In Massachusetts, where this old house is located, the electric railroads are stretching out over the old country highways, and changing the whole aspect of affairs. As the cars go whirling over the country they sow the seeds of a new order of things. It is like tearing away the curtain which kept the old time life and habits apart from the busy town. The houses are painted and made over, the stone walls disappear, flowers spring up in the yard, and slowly but surely the old type of the New England home is passing away. The changes are on the outside, however, for the family feeling, the thrift and loyalty are still there. There is not enough electricity in a trolley wire to change that. The home figured in the picture has now descended to two women, who aim to farm on modern lines, while preserving their loyalty to the older traditions of the good Bay State.

A WOMEN'S FARMHOUSE IN MASSACHUSETTS. FIG. 271.

Household Notes.

What experienced housekeeper has not been disturbed by seeing a careless person scrub a floor, using the first broom at hand, which was generally the newest one, and jamming the broom into a pail not half large enough to admit it without doing serious damage? This operation is continued to the end of the job, and nearly to the finishing of the broom.

In warming up potatoes, a favorite dish this time of the year, after they are sliced into the spider and seasoned, a convenient and expeditious way is to use a baking powder can to chop them up. It will do much more execution than a knife in the same time.

Sometimes when making a batch of cookies or doughnuts, by mistake they are made too rich, so that when put into the hot lard to fry they absorb too much grease and prove to be a failure. If the dough is laid aside in a cold place until the next day the trouble will be done away with.

I have often noticed a little act of thoughtlessness which ought not to occur; in a church or hall, when many people are gathering in the usher brings perhaps one person to an empty pew, and that person sits down in the place nearest the entrance, and others who come later must crowd past her, or perhaps she will move enough to accommodate that one, and so on, when if the first one would take the farther end of the seat more people could be comfortably seated. A little thought for the convenience of others would seem desirable.

An enthusiastic sweeper will often seize a broom and bring it down with a circular motion, sending all the available dust into the air to choke all present and then settle back on the furniture, making extra needless work.

Here is a recipe for Henrietta's bread pudding: One pint bread crumbs, one pint milk with tablespoonful of butter and pinch of cinnamon; three spoonfuls sugar. Heat up and pour hot over the bread crumbs. When cool enough stir in one egg, yolk and white beaten separately, and bake 20 or 30 minutes. Raisins or other fruit to your taste.

AUNT RACHEL.

Preparing Grape Juice.

The recipe for canning grape juice in a late R. N.-Y., though it gives the pure unwatered juice, would, I fear, deter the ordinary housewife, who probably has no cider or jelly press, as it seemed a little difficult. We use a good many gallons every Summer put up easily this way: Cover the grapes with water, mashing as they come to a boil, press out the juice, add one-third cupful of sugar to a quart, let it just boil up, and can or bottle. If bottled be sure to soak the corks an hour at least before putting in, so that they will shrink in. When cold dip in melted beeswax all over the cork. When using add one-third to one-half cold water; sugar if you wish it sweeter, and ice. E. C. G.

IF thou workest at that which is before thee—following right reason seriously, vigorously, calmly, without allowing anything else to distract thee, but keeping thy divine part pure as if thou wert bound to give it back immediately—if thou holdest to this, expecting nothing, fearing nothing, but satisfied with thy present activity according to nature and with heroic truth in every word and sound which thou utterest, thou wilt live happy. And there is no man who is able to prevent this.—Marcus Aurelius.

A Day With the Babies.

Where the narrow strip of Jersey shore rises abruptly to the Palisades, with the white dome of Grant's tomb gleaming directly across the Hudson, a small vine-covered cottage attracts the passer-by. It is not the gay window boxes, the smooth green lawn, sloping up towards the rocky bluffs, or the abundant shade that causes one to linger near, but the avalanche of babies, overflowing from the cottage to the lawn, the roadway, and even to the river's edge. It is not a kindergarten or an orphan asylum, as a first glance might suggest, but a fresh-air day nursery, where poor mothers may take enfeebled infants and children from the crowded city for a breath of wholesome country freshness. It is doing practically the same work as the Floating Hospital, described in THE R. N.-Y. two or three years ago, only, instead of a day on salt water, the Edgewater Créche provides the pleasures of the country.

It is 16 years since the Créche began its work. A good woman started its career with Mason Cottage, a pretty little shingled building like a Swiss chalet; an open-air pavilion was added and a bath house is now in course of construction. A bathing pool has been enclosed between two jutting piers, within stone's throw of the front door, and it is a joyous sight to see the children in various stages of undress, paddling or splashing in the river. The guests of the Créche receive tickets entitling them to its privileges, and providing them with transportation across the river, from various churches, societies and nurses' associations in New York. Last year between June 15 and September 15, 10,192 guests were received. The Créche is entirely dependent upon voluntary contributions, and makes no distinctions of race, color or creed. In addition to the matron, a trained nurse is in attendance, and it receives a daily visit from a woman physician.

From the reception room, furnished in a cool harmony of blue and white, we go upstairs to a dormitory, with rows of little white cots for sleeping babies.

"Do your guests ever stay over night?" we asked.

"Sometimes," said the matron. "We may decide that a sick child would be greatly benefited by staying, or our nurse may wish to arrange for its care. We have a bed here for the mother, too."

Looking at both mothers and babies, we were struck by their neat appearance. Many looked ailing, with the bleached tenement-house complexion we grow familiar with in the city, but there was no appearance of squalor. Mentioning this to the matron she said:

"You can't judge poor people by outward appearances. They wear their best clothes when they come here, and their self-respect prevents them from making any parade of their circumstances. There may be real want among those you see now."

The number of visitors goes as high as 375 in a single day. The collection of babies at the time of our visit was a very variegated one. There was one family of five Japanese, ranging in age from about 10 years to as many months, and these little slant-eyed subjects of the Mikado pranced about the lawn and took flying jumps off the terrace with as much exuberance as the native born. One solemn baby sat alone in the middle of the crowded lawn, apparently feeling that this was no occasion for levity; his attention was equally divided between a pair of sky-blue stockings and the wandering shadows from the branches over his head, which were evidently a new experience. Brick-and-mortar babies know little enough of the things that grow; some of the tired women who visit the Créche and view the growth about the Palisades say that they never before knew so many trees and flowers grew in America!

The bath house now being built is a memorial gift; it contains 15 baths for babies, and three for adults, but the river pool is the great attraction to the children old enough to enjoy it. It is pleasant, too, to see the bland satisfaction with which the juveniles imbibe milk, a little-known fluid with many of them. To the average tenement dweller, milk is a luxury, and not a food. One mother who had commented on the good temper of her baby while at the Créche, was asked whether she gave him milk

3805 House Gown, 32 to 42 in. bust.

at home. "No, indeed," she answered with surprise. "He gets his coffee, like the rest of us. Milk costs too much; beside, it's too much trouble."

The white-capped nurse and white-aproned matron, little women both, with a big responsibility resting upon them, can tell many a tale of the silent heroism, the suffering, and the mutual and brotherly charity of the poor. Some of the saddest sights we see from the tall windows of THE R. N.-Y. office, are the frequent babies' funerals from the nearby tenements—sometimes with the senseless parade of hearse, procession and brass band—sometimes a pathetic little coffin carried into a shabby hack. The poor city baby must have a strong grasp on life to keep his hold on it at all, and this present Summer has been harder than usual to endure. Such institutions as the Edgewater Créche, St. John's Guild, and the various fresh-air associations mean life to many a child, and even those who doubt the usefulness of many so-called charities must be in sincere sympathy with their work.

The Rural Patterns.

The house gown or wrapper shown has the yoke faced on to the lining, but both the gathered fronts and the pleated back are separate and are arranged over it. The neck is finished with a regulation stock, and shaped bretelles fall over the shoulders and make a most effective trimming. The sleeves are in bishop style with pointed bands at the wrists. The original is held at the waist by ribbon velvet, but when desired the gown can be allowed to fall free from the yoke. To cut this gown for a woman of medium size 12 yards of material 21 inches wide, 11 yards 27 inches wide, 10¼ yards 32 inches wide, or 6½ yards 44 inches wide will be required, with one yard of plain silk for tucking or ⅝ yard of tucked material for yoke and collar. The pattern No. 3805 is cut in sizes for a 32, 34, 36, 38, 40 and 42-inch bust measure; price 10 cents.

The breakfast jacket illustrated is suited to dimity, batiste, lawn and the like, and to such light-weight wools as cashmere and albatross, but in the original is made of white lawn with frills and bands of needlework. The fronts are tucked to yoke depth, then allowed to fall free and form folds, but the back is laid in pleats that are stitched in tucks and produce a tapering effect. At the neck is a sailor collar and the sleeves, as shown, are tucked and in elbow length, but the pattern also includes those of full length that are cut in slight bell shape. To cut this jacket for a woman of medium size, four yards of material 27 or 32 inches wide, or 2½ yards 44 inches wide will be required, with 4½ yards of embroidered bands and seven yards of edging to trim as illustrated. The pattern No. 3892 is cut in sizes for a 32, 34, 36, 38 and 40-inch bust measure; price 10 cents.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

Rural Recipes.

Peach Roll.—Cream together half a cupful of butter and a cupful of sugar, add two well-beaten eggs, also half a pint of rich milk. Mix well, then sift in flour enough to make a soft dough. Divide the dough in three, roll out each piece in a long oval, and cover the upper sides of the dough sheets with ripe peaches, peeled and sliced thin. Roll up the sheets, pinch the ends, and lay them in a baking pan side by side, then set them in a brisk oven. Serve with a very rich sweet sauce, flavored with the peach kernels, blanched and shredded fine. To make this sauce, cream a cupful of butter, mix it well with two cups of sugar, beat very light, then set over hot water, beat in the juice of a lemon. Add the shredded kernels, and stir hard. Keep the water around the sauce boiling until ready to serve. Cut the roll in thin slices, put three on each plate, and deluge them with the sauce.

Preserved Melon.—Muskmelons, or cantaloupes, that are underripe, and the rind of watermelons, may be preserved in this manner: Make a syrup of sugar and water, one pound of sugar to a quart of water; when the syrup is boiling, drop in the melon and allow it to stand until the next day; then pour off the syrup; let it heat to boiling point and pour over the melon slices and let stand until cold. Repeat this for three days. After boiling up the syrup the last time and before pouring it over

3892 Breakfast Jacket, 32 to 40 Bust.

the fruit, flavor delicately with vanilla extract.

Spiced Melon.—Select melons not quite ripe or take the rind of watermelons, slice, pare and cut into strips or blocks. Steep these for 24 hours in cold water and vinegar; have water enough to cover and add enough vinegar to make the water tart, but not very acid. Then drain them and put them into a cold syrup made of sugar and water boiled together. Bring slowly to boiling; then let get cold; then drain off the syrup; add to it a few sticks of cinnamon, a few cloves and little ginger root; boil up and pour over the melon slices; repeat for three days; then seal up in jars. Another way is to take five pounds of the fruit, cut into blocks; put into a stone jar. Boil three pounds of sugar with one quart of vinegar and pour over the fruit. Continue to do this for eight days. The following day pour off the syrup, add to it half an ounce of whole cloves and one ounce of stick cinnamon; boil together for a few minutes; then add the melon and simmer gently for half an hour. Seal in jars and do not open for two or three months.

Cucumber Catsup.—Pare large, ripe cucumbers, remove the seeds; grate fine and measure. Place the pulp in a colander and drain well. To every quart of the pulp allow a half-teaspoonful of cayenne pepper, one teaspoonful of salt, two tablespoonfuls of grated horse-radish, and a pint of good cider vinegar. Mix together thoroughly, do not cook; bottle and seal. This is very nice to serve with fish.

WHEN you write advertisers mention THE R. N.-Y. and you will get a quick reply and "a square deal." See our guarantee 8th page.

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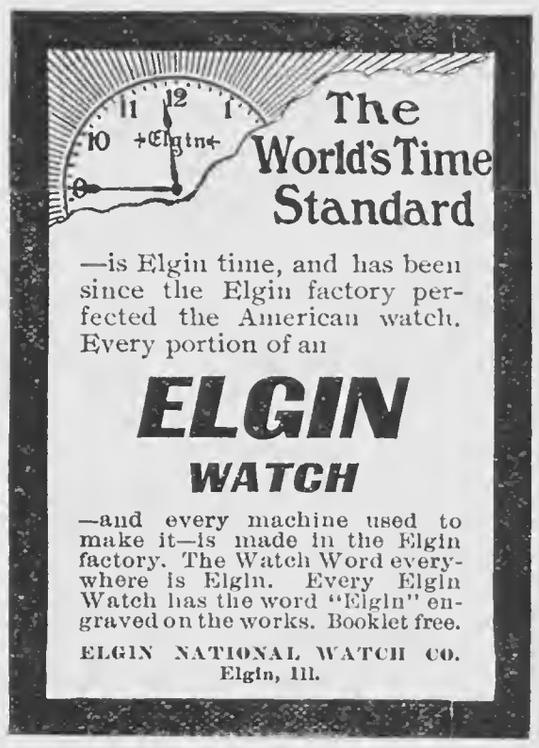

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This is a neat, moderate sized tubular lantern with strong reflector, attachable to any vehicle, and gives an extra good light that will not blow out in any wind. It is but 12 in. high; weighs only 26 oz.; burns 13 hours. Can be used as hand, wall or dash lamp. Attachment for dash accompanies each. There is no removing of the globe in filling, lighting or regulating. It is easily kept clean and absolutely safe.

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Before you buy anything in Lamps or Lanterns obtain our large illustrated catalogue, sent free on request.

R. E. Dietz Company, 87 Laight St., New York City. Established 1840.

MARKETS

THE WEEK'S QUOTATIONS.

WHOLESALE PRICES.

NEW YORK, AUGUST 31, 1901.

GRAIN.—Wheat and corn down one to two cents. Rye too high for export.

Wheat. No. 1, Northern N. Y...	—	@	77¾
No. 1, Northern Duluth.....	—	@	78⅛
No. 1, hard Duluth.....	—	@	78
Corn, No. 2, mixed, elevator....	—	@	61½
Oats, No. 2, mixed.....	—	@	38
Rye, No. 2, W'n, f. o. b., N. Y..	—	@	60
Malting, new crop.....	63	@	68
Malting, new crop.....	—	@	68

BEANS.

Marrow, choice, per bu.....	—	@3	00
Fair to good.....	2 70	@2	95
Medium, choice	—	@2	75
Pea, bbls., choice.....	—	@2	80
Bags, choice	2 75	@2	77½
Red kidney, choice.....	2 55	@2	60
Common to good.....	2 10	@2	50
White kidney, choice.....	2 30	@2	35
Black turtle soup, choice.....	—	@2	00
Lima, California	4 75	@4	80
Italian, medium	—	@2	50
Other foreign, medium, good to prime	2 30	@2	40
Imported, med'm, com. to fair.	2 10	@2	25

FEED.

Spring bran, coarse.....	17 50	@18	00
Winter bran	18 00	@18	50
Red Dog	—	@21	25
No grade flour.....	—	@21	00
Linseed meal, ton.....	—	@29	50
Cottonseed meal, ton.....	—	@24	60

HAY AND STRAW.

Hay, No. 1.....	82½	@	87½
No. 2	75	@	80
No. 3	60	@	70
Clover	50	@	60
Clover, mixed	65	@	70
Straw, rye, long.....	70	@	85

SEEDS.

Clover, per 100 lbs.....	10 00	@11	25
Timothy, per 100 lbs.....	5 00	@ 5	50
Flaxseed, whole, per bu.....	6 50	@ 6	75
Millet, per lb.....	2	@	2¼
Rape, German, per lb.....	3¼	@	3½
Sunflower, per lb.....	2¼	@	2½

MILK.

New York Exchange price at stations $1.31 per 40-quart can. This is the gross price, and from it must be taken cost of transportation and fees at receiving stations where such charges are made.

BUTTER.—Receipts are heavier and, without any increased demand, there is a surplus, which has unsettled the market.

Creamery, extra, per lb.....	—	@	20
Firsts	18½	@	19½
Seconds	17	@	18
Lower grades	—	@	16
State dairy, tubs, fancy.....	18	@	18½
Tubs, firsts	17	@	17½
Tubs, seconds	16	@	16½
Tubs, thirds	14	@	15
Tins, etc.....	14	@	17½
W'n imitation creamery, fcy..	16½	@	17
Firsts	15	@	16
Lower grades	14	@	14½
W'n factory, June, fancy.....	—	@	15½
June, good to choice.....	14½	@	15
Current packed, best.....	—	@	14½
Fair to good.....	13¾	@	14
Lower grades	12½	@	13½
Renovated butter, fancy.....	17	@	17½
Common to choice.....	14	@	16½
Packing stock	12	@	14

CHEESE.

Full cream, colored, small, fcy.	—	@	9⅝
Colored, small, choice.....	9¼	@	9½
White, small, fancy.....	—	@	9½
Small, white, choice.....	9¼	@	9⅝
Small, good to prime.....	8½	@	9
Colored, large, fancy.....	—	@	9⅜
Colored, large, choice.....	9⅛	@	9¼
White, large, fancy.....	—	@	9¼
Large, good to prime.....	8½	@	9
Common to fair.....	7	@	8¼
Light skims, small, choice.....	8	@	8¼
Large, choice	7¾	@	8
Part skims, prime.....	6½	@	7
Fair to good.....	4½	@	6
Common	3	@	4
Full skims	2	@	2½

EGGS.

QUOTATIONS LOSS OFF.

State & Pa., avge. prime, doz..	19	@	20
W'n, fresh-gathered, choice, dz.	—	@	18½

QUOTATIONS AT MARK.

Nearby, State & Pa., fresh-gathered, fancy selected dz.	21	@	22
Prime to choice.....	18	@	20
W'n, refrigerator, per doz.....	15½	@	17½
Fresh-gathered N'th'ly sections, candled, selections....	17	@	18½
Regular packings, N'n sect's.	15	@	17
Graded, Southerly sections...	15½	@	16
Regular packings, S'ly sec's.	13	@	15
Fresh-gathered, dirties	11	@	13½
Cheeks	10	@	11

LIVE STOCK.

Steers	4 80	@5	85
Bulls	2 40	@3	50
Cows	1 50	@3	75
Veal calves	5 00	@8	00
Buttermilks	3 00	@4	00
Sheep	2 50	@4	00
Lambs	4 25	@5	75

COUNTRY-DRESSED MEATS.

Calves, veal, prime, per lb.....	—	@	10½
Fair to good, per lb.....	9½	@	10
Common to medium, per lb...	7	@	9
Buttermilks, per lb.....	7	@	8
Grassers, per lb.....	5	@	6
Pork, country-dressed, light, lb.	8¼	@	8½
Country-dressed, medium, lb.	8	@	8¼

LIVE POULTRY.

Spring chickens, per lb.....	12	@	12½
Fowls, per lb.....	—	@	10½
Roosters, per lb.....	—	@	6½
Turkeys, per lb.....	—	@	10
Ducks, average W'n, per pair..	50	@	70
Average Southern, per pair...	40	@	50
Geese, average W'n, per pair..1	00	@1	25
Average Southern, per pair...	80	@1	00
Pigeons, mixed, per pair.....	—	@	20

DRESSED POULTRY.

FRESH PACKED—ICED.

Turkeys, W'n, hens, small.....	7	@	8½
Western, toms	—	@	7
Broilers, Phila., over 4 lbs. to pair, per lb.....	18	@	20
Phila., mixed sizes, per lb....	16	@	17
Penn., fair to good, per lb....	11	@	15
Western, dry-picked, per lb..	13	@	14
Western, scalded, per lb.....	12½	@	13
Small, dry-picked or scalded, per lb.....	11	@	12
Fowls, W'n, dry-picked, prime.	10½	@	11
Western, sealded, prime.....	10	@	10½
S'th'wn, dry-picked, prime...	10	@	10½
W'n & S'th'wn, poor to good.	9	@	9½
Old roosters, per lb.....	5½	@	6
Ducks, Spring, L. I. and other nearby, per lb.....	12½	@	13
Western	7	@	9
Geese, Spring, Eastern.....	12	@	15
Squabs, choice, large, dark.....	—	@2	25
Mixed, per doz.....1	75	@1	87
Dark, per doz.....1	25	@1	50
Culls, per doz.....	50	@1	00

FROZEN.

Turkeys, young hens, No. 1.....	11	@	11½
Mixed young hens and toms, No. 1	10½	@	11
Young toms, No. 1.....	—	@	10½
No. 2	7	@	9
Broilers, dry-picked, fancy....	18	@	20
Sealded, fancy	—	@	14
Chickens, fancy, soft-meated...	12	@	13
Average, No. 1.....	—	@	10
No. 2	7	@	9
Fowls, dry-picked, No. 1.....	—	@	10
Capons, fancy, large.....	15	@	16
Medium sizes	13	@	14

DRIED FRUITS.

Apples, evaporated, fancy, lb..	—	@	9½
Evaporated, choice, per lb....	—	@	9
Evaporated, prime, per lb....	8¼	@	8¾
Evaporated, com. to good, lb.	5	@	8
Sun-dried, State and Western, qrs., per lb.....	4½	@	6
Chops, per 100 lbs.....1	50	@2	25
Cores and skins, per 100 lbs...1	50	@2	25
Raspberries, evap., 1901, per lb.	—	@	24
Sun-dried, 1901, per lb.....	—	@	20
Blackberries, 1901, per lb.....	—	@	6
Huckleberries, 1901, per lb.....	—	@	15
Cherries, per lb.....	12	@	13

FRESH FRUITS.

Apples, Duchess of O, hand-picked, per bbl.....	2 50	@	4 00
Alexander, per bbl.....	2 50	@	4 00
Twenty-oz., h-p., bbl.....	3 00	@	3 75
Gravenstein, per bbl.....	2 25	@	3 25
Summer Pippin, h-p., bbl.	2 25	@	3 25
Holland Pippin, per bbl...	2 25	@	3 25
All sorts, h-p., common to fair	1 75	@	2 25
Green varieties, h-p., open heads	1 75	@	2 50
Windfalls, per bbl.....	75	@	1 50
Pears, Kieffer, S'n, bbl.....	50	@	1 50
Bartlett, avge. lots, bbl...	2 00	@	3 00
Bartlett, per keg.....	1 00	@	1 50
Bell, per bbl.....	1 75	@	2 00
Clapp's Favorite, per bbl.	2 00	@	3 00
Beurre d'Anjou, per bbl..	2 00	@	2 25
Nearby, common, bbl.....	1 00	@	2 00
Peaches, Mo. & Ark., car'r.	1 60	@	1 85
Md. & Del., per carrier...	50	@	1 25
Md. & Del., per basket....	30	@	85
Jersey, per basket.....	25	@	65
Plums, Abundance, 8-lb. bkt.	15	@	20
Large, table blue, 8-lb. bkt.	25	@	35
Green, per 8-lb. basket....	25	@	35
Grapes, S'n Del., carrier...	75	@	1 25
S'n, Moore's Early, car'r.	50	@	75
Up-river, Del., carrier....	1 25	@	1 50
Up-river, Niagara, carrier.	75	@	1 00
Up-river, Champion, car'r.	40	@	50
Up-river, M'r's Early, c'r.	60	@	85
Up-river, Worden, car'r...	75	@	90
Watermelons, Md., Del. & Jersey, carload 100	00	@200	00
Md., Del. & Jersey, 100....	10	@	20 00
Va. & S'n, carload.....	35	@100	00
Va. & S'n, per 100.....	5	@	15 00
Muskmelons, Balt., crate...	50	@	1 00
W'n Md., Gem, per crate.	50	@	1 25
Other Md. and Del., per crate or carrier.....	40	@	1 00
Jersey, per bbl.....	50	@	1 00
Jersey, per ½-bbl. box....	25	@	60
New Mexico, fancy, crate.	2 00	@	3 00
Colorado, per crate.....	2 00	@	3 00
Far Western, overripe....	50	@	1 50

VEGETABLES.

Potatoes, L. I., per bbl.....2	50	@3	00
Jersey, per bbl.....2	00	@2	75
Sweet potatoes, So. Jersey, bbl.3	50	@4	00
Yellow, Virginia, per bbl.....3	00	@3	25
Red, per bbl.....1	50	@2	00
Beets, Jersey & L. I., 100 bchs..1	00	@1	25
Celery, State & W'n, doz. roots.	10	@	30
Carrots, L. I., per bbl.....1	00	@1	25
Corn, Jersey, per 100.....	50	@1	25
Cabbages, L. I., Flat Dutch, 100.4	00	@5	00
Cucumbers, Jersey, per box....	20	@	30
Jersey, per bbl.....	60	@1	00
Rockland Co., per large bbl..1	50	@2	00
Shelter Island, per bbl.....1	75	@2	00
Cucumber pickles, Rockland Co., per 1,000.....1	50	@2	50
Jersey, per bbl.....	50	@1	25
Long Island, per 1,000.....	75	@1	50
Eggplants, Jersey, ½-bbl. crate.	50	@	65
Jersey, per bbl.....1	00	@1	50
Green peas, W'n N. Y., basket..1	00	@2	50
Lima beans, Haekensack & L. I., Potato, per bag.....	—	@1	25
South Jersey, Potato, bag....1	00	@1	25
South Jersey, flat, per bag...	50	@	75
Lettuce, W'n N. Y., ease.....1	50	@2	00
Boston, per case.....1	25	@1	50
Onions, Southern, per basket...1	12	@1	25
Orange Co., white, per bag...2	00	@3	00
Orange Co., yellow, per bag..2	50	@2	75
Orange Co., red, per bag.....2	25	@2	75
Jersey & L. I., red, per bbl...2	50	@2	75
Jersey & L. I., yellow, bbl....2	50	@2	75
Jersey & L. I., white, bskt...1	25	@1	75
Conneeticut, white, per bbl...2	75	@3	00
Connecticut, yellow, bbl.....2	75	@3	00
Connecticut, red, per bbl.....2	75	@3	00
Peppers, Jersey, per bbl.....	75	@1	00
Jersey, per crate.....	25	@	35
Squash, yellow, per bbl.....	75	@1	00
White, per bbl.....	75	@1	00
Marrow, per bbl.....	—	@1	00
String beans, Jer. & L. I., bag	40	@	60
Turnips, Jersey, Russia, box...	—	@1	00
Tomatoes, Haekensack, box...	60	@	75
Other Jersey, Acme, per box..	50	@	60
Jersey, Stone, per box.....	50	@	60
Other Jersey, Grant, box.....	30	@	40
Albany, Acme, per bu. bskt..	50	@	75
Boston, per bushel box.....	50	@	75

BUSINESS BITS.

WHEAT-sowing time is near at hand, and those desiring change of seed will do well to look into the value of Turkish Red, offered by J. R. Ratekin & Son, Shenandoah, Iowa. It has the endorsement of every experiment station where tested, and it has a record of 55 bushels per acre at the Iowa Station, with an average yield of 45 bushels.

IT is seldom that such an opportunity is offered to buy an ideal fruit and dairy farm as that of T. G. Yeomans & Sons, Walworth, N. Y., in this issue. It is unusual to find the conditions desirable for both fruit and stock on the same farm, but this one seems to combine them to the fullest extent. Anyone interested will do well to write for prices and particulars.

EVERY year the farmer recognizes more and more the value of corn crop for fodder. If the crop is not put in a silo, the stalks are either cut or shredded as the next best means of preparing them for cow food. One of the very best cutters for either silage or dry fodder cutting is made by the Belcher & Taylor A. T. Co., Box 76, Chicopee Falls, Mass. Write for full particulars, prices, etc.

G. G. BROWN, of Bristol, N. H., writes that he has used Tuttle's Elixir in the different diseases in horses, and considers it the best horse medicine in the market. He has never failed of obtaining good results in every case he has used it. Every man owning a horse should have a bottle of it in his stable. Write to Dr. S. A. Tuttle, 30 Beverly St., Boston, Mass., for his book, "Veterinary Experience," which he will send absolutely free. Dr. Tuttle is Boston's most prominent veterinarian, and his experience is valuable to every horse owner.

THERE is no farm implement of recent invention which contributes more to the comfort and convenience of the farmer than the blower attachments for fodder and silage cutters, a pipe attachment designed to carry the cut fodder to any desired place. The continual annoyance from breakage and slipping of belts from the old-fashioned long carriers has been overcome by this device. The blower manufactured by the Belle City Manufacturing Co. is especially popular for its simplicity and the ease with which it may be adjusted to old or new machines. Write the Belle City Manufacturing Co., Racine, Wis., and get their latest printed matter on this line of machinery.

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CREAMERY—A young man, 26, with experience in butter-making, would like a position in a creamery or a dairy. Good references as to character and ability. Address Box 154, Norfolk, Mass.

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Dairyman, competent to bottle, separate, test and keep accurate daily records. State age, experience and wages wanted. Also milkers wanted. Strictly first-class men only, used to handling certified milk. Send references P. O. Box 57, Scarsdale, N. Y.

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THE RURAL NEW-YORKER,
New York.

MARKET NOTES

FRUIT SPECULATION.—One reader wishes to know whether he can safely pay $1.50 per barrel for apples and pears for shipment to commission dealers in New York. It is not possible to give a definite answer to this, as so much depends upon the quality of the apples and pears. At the present prices for apples anything of reasonably good quality ought to be a safe investment at this figure, but it certainly would not do to buy pears at this price for reshipment at present, unless they were extra. Just now pears are selling slowly. A fruit dealer told me that not long ago he sold a small lot of choice pears at $2.40 per keg. The returns for this lot seemed to make the shipper crazy, and he immediately wrote that he would send on 40 kegs more. The dealer tried to stop him, stating that the pear market was down, but he insisted on shipping them, "and there they are," said the dealer. "I haven't had a decent offer for them yet." The best way for a man who wishes to do business in buying and shipping fruits is to make connection with a thoroughly reliable handler in the market; then keep in close touch with him and follow his directions. He may make a mistake now and then, but he certainly knows more about the demands of his trade than an outsider. Speculation is at best uncertain business, and but few have the ability to carry it on for any great length of time without learning what the word loss means most emphatically.

PACKAGES.—The terms basket, box, carrier, bag, etc., used in market quotations of fruits and vegetables are rather indefinite to an outsider, and we have several requests for explanations of the capacity of these packages. Many of the city dealers and buyers neither know nor care how many quarts a certain box or crate contains, as the stuff is bought and sold by the package rather than the quart or bushel. The life of the produce commission merchant is at times an exceedingly busy one. He is at it long before sunrise, and every day has a lot of tough problems to handle. He must wrestle with the keenest buyers and do the best he can for his shippers, or he will soon lose their trade. It is no wonder that he does not bother with matters that are of no account to him. The packages described below are some of the standard sizes regularly seen in this market, but it must be remembered that there are always odd-sized boxes, baskets and crates on hand that are of no particular size. The slatted tomato and cucumber box is nearly square and holds a bushel. The common melon crate has about the same capacity, but is of different shape, being longer. The peach carrier contains six oblong baskets, holding a little over three quarts each. This is a most desirable package for shipping peaches from a distance. They load to advantage in the car and the fruit does not get bruised to any great extent. No doubt it will in time largely take the place of the old-fashioned peach basket for the better grades. The well-known form of peach basket, the inverted bell, contains 16 quarts. At present a large quantity of peaches from Jersey and other nearby points are seen here in these baskets. They make a good display in the store, as the top being larger than the bottom the fruit is more conspicuous than the package. Another popular basket of this same form holds about one-third of a barrel, and is used for melons, string beans and other vegetables. Bushel bags are used to some extent for green Lima beans, and a good many tomatoes are seen in ordinary, handled bushel baskets, such as are used about the farm. The various grape packages will be described later. W. W. H.

CONNECTICUT FRUIT GROWERS MEET

A field meeting of the Connecticut Pomological Society was held August 22 at the farm of the Connecticut Valley Orchard Co., half way between Berlin and Meriden. Arrangements had been made with the railway people to let off passengers at the orchard, and there were about 200 in attendance. J. T. Molumphy, manager of this fruit company, piloted the visitors about the orchards, where they had an opportunity to see the methods employed and sample the varieties then ripening. This trip around the farm was followed by a substantial New England picnic dinner in a grove near the house; and the afternoon was given to addresses and the discussion of various questions connected with fruit growing. President Platt called for Mr. Molumphy, who, in reply to questions about the fruit industry at this farm, said that they have about 240 acres in orchards, three-fourths being peaches. The yield of peaches this year will be not far from 25,000 baskets. Favorable conditions in early September might increase this to 30,000. The wet weather and lack of sunshine have been unfavorable for the fruit, and increased the tendency to rot. Elberta is the chief market variety. Other sorts raised are Stump, Thurber, Mountain Rose, Oldmixon, Crosby, Waddell, Carman and Tillotson. In apples Baldwin is the principal variety, and will be about one-fifth crop. Fallawater and Ben Davis are well loaded, but these are not grown to any great extent. In Japan plums Burbank and Abundance are the leading varieties, with a few Ogon, Red June, Hale, Wickson and Chabot, all bearing well this year. There is also a plantation of Bartlett and Kieffer pears, and a vineyard of Worden, Concord and Niagara grapes.

Mr. Merriman, ex-president of the Society, who has been spending some time at the Pan-American Exposition, urged the members to brace up the State fruit exhibit there by sending fine specimens of varieties now ripening. Connecticut having an enormous crop of peaches this year, has an unusual opportunity for making an attractive display. To pack for exhibition purposes he recommended taking a strong basket, putting excelsior in the bottom, wrapping every peach in paper and packing tightly with excelsior on top. He spoke of the amusement and interest shown in the Connecticut exhibition of wooden nutmegs, which can be made from any kind of wood and can't be told from the genuine. Following are parts of J. H. Hale's address:

"For a number of years people in this State have been planting trees and trees and more trees, until this year they have run up against the proposition of handling a big crop, many being unprepared for it. A few years ago I sold a man a few hundred Japan plum trees. I had forgotten all about it until one day he sent me word to come down quickly if I wanted to see some plums. I went there, and found that he had at least 200 bushels that should be picked in a week. How do you think he was trying to dispose of them? He was carting them to a town some distance away and peddling them out in small lots. In that way he could have handled but a small fraction before they spoiled, but it took considerable urging to stir him up to the necessity of hustling around and getting an outside market instead of peddling them out by the quart. Our local markets can't begin to handle our peaches and plums this year. We must go outside, and my opinion is that at present New York offers the best inducements. Boston, while usually a superior market, has not panned out well this season. From the reports in reply to inquiries made of members of this Society, I find that within 12 miles of Hartford there are at least 200,000 baskets of peaches to ripen in five weeks. At its best Hartford cannot consume more than 1,200 baskets a day, or 40,000 for the next five weeks, leaving this remainder that must be shipped away. It is a good thing for the consumers this year, for they can fairly wallow in peaches. What is true of the section mentioned, in a measure applies to Wallingford, New Britain and Middletown. Also, the railroads have not made any special preparation for handling this fruit, largely because they did not know definitely about the size of the crop, and farmers have not put any pressure on them for cars. The southern roads and the northern connecting ones send their agents through the South weeks in advance of marketing, that they may know how much transportation to prepare for. These crop statistics that we have been gathering will be circulated, and it is hoped will prove a material help to our fruit growers in attracting buyers from outside, who otherwise might not know the extent of the crop and the heaviest fruiting sections."

Other speakers were J. W. Clark, of North Hadley, Mass., and Dr. Russell, of Hartford. This Society is neither dead nor dreaming. In addition to the social pleasures of such a meeting, the members have learned the advantage to be gained by taking now and then a day off to exchange ideas and experiences, and go about actually to see what others are doing and how they do it. When a yellow jacket goes for some one who disturbs his nest, he has a definite object in view, which he immediately makes known to the trespasser, and continues to make it known until he is killed or driven away. The same persistence in fruit growing; the sandwiching together of science, sense and work, and the application of this combination to a definite object, is sure to work out something worth showing and talking about. The fourth annual fruit exhibition of this Society will be held at New Britain, Conn., October 1-2.

W. W. H.

PAN-AMERICAN EXPOSITION NOTES.

State Agricultural Exhibits.

CONNECTICUT.—The whole design of the Connecticut exhibit is good. Native Red cedar posts and railing have been used, which give the display a very rustic appearance, and added to this are some very nice decorations made of grains in the straw and forage plants. The exhibit of cereals is very good considering the natural conditions of the State. Corn is displayed in large variety, especially the sweet corns, of which latter there is a great quantity grown for seed, because the conditions there seem to enable the farmers to grow the very best quality. The display of varieties of popcorn is also very fine. There is little wheat grown, and the showing of that grain is very small; but rye, oats and buckwheat are grown very extensively, especially for home consumption. There is also an extensive display of vegetable seeds, the growing of which is the chief business of a number of the farmers. Connecticut tobacco is known all over the country, and the line of samples shown are of the best grades. One particular feature of the tobacco exhibit is a line of samples of the Sumatra, which was grown under sheds covered with cheesecloth. These are said to rank in quality with the best tobacco grown on the Island of Sumatra itself. Connecticut having been called the "Wooden Nutmeg State," those in charge of the exhibit here thought it proper to show some of their wooden nutmegs, of which there is quite a nice display. It is said that some one was once twitting Prof. W. H. Brewer with the fact that his State was such a small one, and had been engaged in the manufacture and sale of wooden nutmegs, and his reply was: "Bring me a grater." A large collection of hickory-nuts is shown, in which there are 18 choice varieties. This is one of the small but very profitable cash products of the State. There are also Persian walnuts shown, which proves that all varieties of this nut are not too tender there. There is also a beautiful exhibit of the oyster industry, showing how the bivalves are propagated, and their different stages of growth and the market grades. A very conspicuous motto is displayed which says: "Connecticut, small but mighty, situated in the heart of the best market region of the country."

MASSACHUSETTS.—In great contrast with nearly all the other States is the display made by Massachusetts. It is, perhaps, the least attractive of all, and this is indeed a very sad fault, for at an exposition where people go, perhaps primarily to be instructed, they must first be entertained. The exhibit is severely plain and formal, there not being a single agricultural product of any kind shown. There is a series of charts, diagrams and maps which would explain to the student what the agricultural resources of the State were and the products of the rural industries and other such things, but to the ordinary visitor I believe they are exceedingly dull and uninteresting. Neither is there an attendant in charge to explain matters, so far as I have seen in the halls which I have made there. However, there is a beautiful exhibit of photographs of the native trees of the State accompanied by small specimens of the wood of each, showing the grain in both cross and vertical sections. These were made by an eminent workman in this art, Romeyn B. Hough, of New York State, and are excellent. Of course, their proper place would have been in the Forestry Building.

GEORGIA.—This State has a small but very nice exhibit. The cereals and seeds are shown in jars, and there is a nice display of grains in the sheaf, which shows that the State of Georgia is able to grow products of this sort that are of good quality. There is also a very excellent display of forage crops of various kinds in bales ready for market. One of the handsomest bales of cotton to be found in the building is on the Georgia space. It is to be regretted that there is no attendant in charge of the exhibit to explain the things that are so well shown there.

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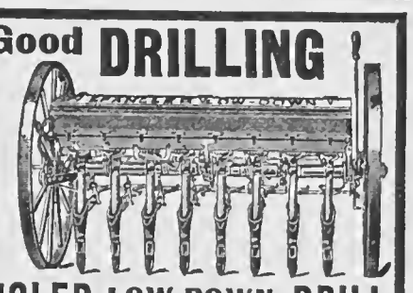

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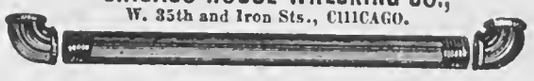

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DAIRY AND FARM NOTES.

Discussion of a Balanced Ration.

I wish to get a fairly good ration for cows without purchasing much hay. I have prospects of plenty of corn and fodder corn, mangels, parsnips and sugar beets. Advise how you would feed same to make a balance, and what is best to add to it?
New York. H. B.

Assuming, of course, that these cows are in a good flow, and are of good milking stock (and by that I mean cows that are making 250 or more pounds of butter, or its equivalent in milk or cheese) to analyse the foods at hand we find first the corn and corn fodder. If this corn fodder is fed whole to the cows a somewhat different resultant ration will follow. I think this fact is not always recognized in ration making, when so-called corn fodder is fed whole. Every feeder knows that the leaves and upper portion are consumed without much waste, while the butt end of the stalk is found rejected. The leaves contain a greater proportion of protein, and the butts a greater proportion of carbonaceous matter. The animal will always make an effort to balance the ration to her individual wants. To illustrate: If the protein foods, such as cotton-seed, gluten, brewers' grains or bran are fed with corn fodder, the animal will labor almost unceasingly to eat the whole stalk in her effort to get enough heat and energy-producing food. I have seen our cows eat well-ripened wheat straw with as much relish as they did clover hay or good silage when giving a full flow of milk, and not reduce the flow, and at times increase it somewhat. This idea seems quite strange, but it simply shows the necessity of a certain amount of coarse dry fibrous matter, especially when the ration is deficient in sugars and starches.

The reader will readily see that with a surplus of corn fodder for coarse food more of it will be consumed if the purchased food is gluten, cotton seed, or brewers' grains (dried) fed in connection with one-third wheat bran or oats ground. I would not be so particular which of the foods was used. The cost of a pound of protein would govern. For two years gluten feed containing 27 per cent protein, and purchasable at $18 to $21 per ton, has been a cheap protein food. As I write I am not posted on prices. We bought a part of a carload of gluten before the sharp rise in corn, at $21, which I considered reasonable.

The mangels and sugar beets are quite well balanced. That is, a ration will not be materially changed in its ratio of protein to carbonaceous matter by the addition of either of these roots. But of course dry matter will not be increased very rapidly by their addition; 100 pounds would not give the cow over 10 pounds; a trifle more in the sugar beets, but not in the mangels. With the foods mentioned they will have a double function, viz., as a food and as a digestive agent. There is no mistaking it as a fact that succulence has a cash value. It is rather my judgment that most farmers are better fitted to grow corn silage as food and succulence combined, than to grow roots, and we have quite abandoned root growing since feeding silage. But in institute work it is no uncommon thing to find very substantial and reliable farmers feeding both with profit, and this idea again brings up a very important question in animal feeding, palatability. The questioner usually asks how to balance, but the cow, like the human, says: "I like it" or "I don't like it"; that settles the question with mankind; and so it does with stock so far as profit is concerned. If roots are added we have also variety as well as palatability, and cows do certainly like a variety of food when kept in the barn. We think sometimes that when at pasture they get only one kind of food. Not so; they are eating by far a greater variety than any feeder will furnish, not only of grasses but weeds and herbs that furnish medicinal properties as well as food.

It is this variety, with the above-mentioned reasons, why the animal will do so much better as a rule on pasture, with less bowel trouble, in fact, less trouble all the way through, and I am not sure but a run of the rougher lands on this account alone may be profitable where soiling is practical. It is the lack of these medicinal properties that has called for the patent stock foods on the market, which are sold at such extravagant prices. Practically all the food value they contain is found in their 90 per cent oil meal. A very good substitute for these foods can be made of 100 pounds oil meal, five pounds powdered charcoal, four pounds gentian, five pounds salt, three pounds fenugreek, three pounds saltpeter, five pounds Epsom salts and three pounds allspice. This mixture will cost $5, or about four cents a pound, and my experience in feeding would warrant the statement that it is just as good as the high-priced stock foods. A little ginger may be added, and for Winter use increase its value. The charcoal is an absorbent; the gentian a fine tonic, fenugreek a flavoring, saltpeter a diuretic, Epsom salts a mild cathartic, and the allspice —well, I don't know myself. A little mystery is always valuable in anything we purchase. Prof. Voorhees says that "The fertilizer manufacturers mixed in a bit of mystery and got $5 a ton for it," so in this combination we put in the allspice.

To summarize, I should feed a half bushel of roots per cow, beginning with one-quarter that amount; a grain ration made up of at least one-third bran, or oats two-thirds, and in weight from five to 10 pounds, depending upon period of lactation and age and size of animal, and all the corn fodder the animals would eat and relish. If the cows were not holding enough flesh for health I would displace the grain ration above-mentioned with enough cornmeal to accomplish the desired result. I am unable to give any information in regard to parsnips. H. E. COOK.

THE MERITS OF LINCOLN SHEEP.

The Lincolns were originally large and ungainly sheep. They were bred from time immemorial, on the low marsh lands of Lincolnshire, England, a great deal of this land having been reclaimed from the sea. Englishmen claim that Lincolns were crossed with the improved Bakewell Leicesters, which has greatly changed the character of them, and they are now ranked as one of the most useful breeds of the British Isles. In form they are larger than the Leicesters or Cotswolds; they are indeed the heaviest of all breeds, and if possible shorter in the neck. Their fleece is heavier, longer, and much finer. Their wool is, in fact, the longest of all the British breeds, often reaching 20 inches in length, and is usually massed in flakes or strands, moreover it is further distinguished by a peculiar brightness or luster which adds much to its value, no other wool having such brightness. It is said that it can be used for more purposes than any other wool raised in England.

The principal buyers in the Lincoln markets are men from South America, South Africa, New Zealand and Australia, all these countries having a very dry atmosphere. The sheep certainly have adapted themselves to all countries they have been introduced into. They will thrive in the torrid zone as well as in the frigid. They are also becoming popular among the ranchmen of America to cross upon the range sheep to get wool and mutton. For a mutton sheep as compared with the other long-wooled breeds they are equalled by few and surpassed by none. They have a strong constitution, and live to a good old age. While I exhibited at a western fair several years ago a Boston wool buyer asked leave to get into my pens and examine the wool. He gave it a thorough inspection. When he got through I asked him what he thought of the wool. He said that it had more life in it than any wool on the fair ground, and he also said that the American people made a great mistake in crossing the American sheep, which he said was largely Merino, so much with the Down families. Then he gave his reasons for what he said. It does not increase the quantity, quality or length of fiber, but rather deteriorates it, more especially when crossed with the Shropshire, which he said was a poor wool at the best, and after the sheep got old it was very little better than shoddy. One reason why the South American people value the Lincolns so highly is for their superiority in crossing with the range sheep of that country. With care, attention and good management, they will do well almost anywhere. It is said that all sheep are a good deal what you make them, and to attain the best results they want good care. How do they compare with other long-wooled sheep? I have perhaps answered this question, but will try to answer it more exactly. One superiority over the Cotswold is that their wool has more life in not being so dry and harsh; as compared with the Leicesters they will shear more wool, it being covered more evenly over the body and down on the legs. I have tried to keep within bounds, and would not like to write anything that would mislead or deceive the people.
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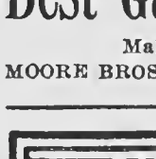

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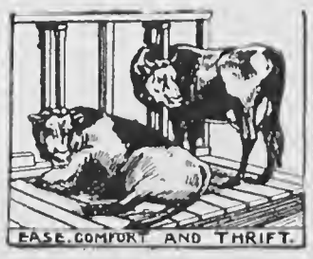

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A SIMPLE STORY OF CREAM.

BUILDING UP A NEW BUSINESS.

A Suggestion for Farm Neighborhoods.

Four or five years ago, being engaged chiefly in the sheep business, and having but few cows, our dairy products were taken at the door by a peddler who furnished customers in the city of Waterbury, Conn., about 15 miles distant. Owing to the failure of his health, however, we were left without a market for even the small amount thus produced, so we concluded to take the route he was obliged to give up. This route was small, less than 40 pounds per week, and considering the distance traveled—once a week in Summer and once in two weeks in Winter—was not a very profitable enterprise at the prices received, 25 cents in Summer and 30 cents in Winter. It was well fitted, however, to set one thinking how to improve matters. Many supplement such a butter route with raising and marketing garden truck, eggs, poultry, etc. This seemed hardly practicable, besides not to our taste. We made observation, began to sell a few pints of cream, which gave good satisfaction, and brought better prices than butter, and cost less work. We also noted the condition of the market, how little cream, comparatively, was used and that the demand was growing. We believed that cream should be more largely used, and also that it would be if a satisfactory article were introduced at a reasonable price, and so began to extend the business along that line. As our dairy was small this soon called for the purchase of the product of another small dairy, and a little later of still another. One of our objects from the first had been to relieve the household of butter making and this, too, was the desire of some of the neighbors. Applications to furnish milk or cream came in ahead of our need, but several more were taken on as business increased.

We changed from plain to Pasteurized cream, and from going once a week to twice a week, and later three times a week was called for, as we had begun to furnish grocery stores, meat markets, etc., where there were refrigerators for keeping the cream. Under the present management confectioners and the ice cream trade have been catered to. Thus by close watching out for chances to increase it and close watching of the quality and condition of the cream, the business slowly grew till nearly the whole store trade of the city was secured. Often it was necessary to do things that for a time scarcely paid, or that were done at actual loss, and faith was called for (as doubtless is always the case with every new venture) especially at turning points, or "divides," between a small business and a possible larger one. For example, it hardly paid at first to change from once to twice, nor later to three times a week, and it called for faith in the enterprise based on judgment of its possibilities. But it had to be done to go forward, and we are not sure but once every day in hot weather and the ice cream season might be advisable. But with proper care and facilities probably it will not be necessary.

During this time of growth or up to a little over a year ago, we had no creamery, not even a regular dairy room, but used the pantry, the back rooms, the spring house, etc. The building of a creamery became a necessity as the accommodations became too small, turning the hand separator a burden too hard to be borne, and washing of bottles, etc., in fact, the whole business was an elephant in the house. For lack of capital we resolved to build the creamery largely ourselves, or with little but unskilled labor for help, which, by the way, is in accord with a theory we have that farmers should do more such work themselves with such help as they have—or it will likely go undone. Work upon the creamery and the careful personal oversight of the cream business, in addition to farm work with scant help proved rather too much. So, carrying out prematurely a plan cherished as a possibility for some time further in the future, when everything had become more thoroughly established, the cream business was rented to others; two men who had for some time been helpers, and were quite familiar with nearly every part of it, from running the separator to delivering the cream in the city. They still follow the business. One, a man with a family, now lives near the city, bottles, sells and delivers; the other, single, attends to the creamery end of it, and delivers it to him in bulk. We sell our milk to him as do the other farmers—but with the advantage of a market right on the farm and so of less travel.

As soon as the creamery plant was sufficiently complete for use above and below work on it was done more at leisure, and it is not yet complete in all minor details, and probably will not be for some time. It is built convenient to spring and brook water, with ice pond and ice house handy. One end of the creamery wall forms part of the wall for the dam. The lower story, or creamery part is of stone and cement (cobble work with trimmed stone outlines), the upper part, for tenement use, is of wood, shingled, and counted roomy and convenient for its small dimensions. We built small preferring to have left a compact, substantial building rather than too unwieldy a one for private dairy and farm use, if the time came when running it for general use became impracticable. But there seems no good reason why such an enterprise should not continue in any farm neighborhood when once well established, unless it should fall to the management of some one with a languid fear lest he should take too much and too steadfast pains and vigilance to make things as near absolutely secure every time, or to some one having a serene unconsciousness of the extent of the damage he does his business when he allows things to go wrong a few times—the cream to go sour or the quality poor. In that case they would soon be confronted by lessening sales and a large and unprofitable surplus on hand. In the cream business as in other affairs, "the prudent man foreseeth the evil and hideth himself," according to the proverb. Better throw a can of cream on the ground than have it go sour on the market. Success in the cream business depends peculiarly on "confidence" and confidence depends on good cream—not the "confidence" of the speculating money lender who wants confidence that the dollar he lends on the bond will appreciate and be worth two dollars 10 years from now, besides the interest. But the merchant wants confidence that he will not be confronted by his customer brandishing a sour bottle of cream, with a still sourer disposition, and his customer wants confidence that the expensive dish she has prepared will not be spoiled by finding too late that she has only sour cream. This confidence once established a ready and growing market is almost assured. Cream will then come, through habitual use, to seem a necessity, not a luxury, as one of our merchants and best customers remarked that it had, when commenting on the growth of the business since we began with him. A. WETMORE.

"Clark" Grass; Cow Peas and Corn.

Last year I seeded about seven acres to Timothy after the Clark method, to the disgust of most of my neighbors. We had no rain for six weeks after the seed was sown, and only about an acre came up at all. That acre happened to be next the road, and I left it and mowed it, getting about 2½ tons of nice hay. This year I have seeded 12 acres to Timothy, clover and Alsike, and though the seed has been sown only a week it is now nicely up, and with an occasional shower I see no reason why that piece of land will not pay better than if sown to wheat to be destroyed by Hessian fly. I don't approve of trying to grow two crops on the same ground at the same time. But I have made so many experiments in the last few years that have not proven very successful, and thereby have been laughed at by my neighbors, that if I can hide anything new I do it.

Just as my silage corn was coming up last May I planted in the rows on about three acres some cow peas, and no one happened to see me do it. To-day they are a sight to behold. The corn is fully eight feet tall, and some of "them beans of Hardy's" are taller. If the Jerseys don't relish that silage next Winter and give ample returns therefor in the churn why then I shall raise no more cow peas. It looks now, however, as though I should plant quite a few of them next year; just what way I don't know.

Seneca Co., N. Y. D. P. H.

Corn and Cow Peas for Silage.

On page 547 of a recent issue of THE R. N.-Y. I see a question asked about mixing corn, Soy beans and cow peas in the silo. The answer given by Prof. I. P. Roberts does not agree with my experience. I tried filling my silo for several years with corn alone. I then tried filling with corn and cow peas, and was so well pleased that I kept it up for several years, till I sold out my dairy. Judging by the way the cows ate them if anything the peas made the better silage. When run through the cutter the green peas would cut very fine and pack very close, and made a better keeping silage than the corn alone, and for me it had one other decided advantage in growing the crop. It is very convenient to have whatever you put in the silo near at hand, and by growing corn and cow peas I could use the same field each year, growing one-half in each and alternating. The fourth crop with this rotation was the heaviest. As soon as the silo was filled the ground was harrowed and sown to rye; 100 pounds of raw bone to the acre was the only manuring it had. The calves ran on the rye all open weather during the Winter, and when it started to grow in the Spring my herd of 40 cows were hardly able to keep it down till the Blue grass got a start, when it was plowed again, and left alone for several weeks; then thoroughly prepared and planted to corn and peas. There is no trouble to get them to come together with me. I plant our medium variety of corn about 10 days before the Whippoorwill pea, and they have generally come together about right. There are others here practicing this plan, who like it. I do not claim that it does away with the necessity of feeding concentrated feeds, but that it makes a better silage, and that it has its advantages. There is no rotation I have ever tried where as much feed could be got from the same piece of ground each year.

Clark, Ky. N. F.

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HUMOROUS

"I may not be," the smooth banana said,
"The Fruit Forbid that brought in sorrow's ban;
Yet I confess that I have done my share
Toward assisting in the fall of man."
—Philadelphia Times.

"You must think I'm made of money," complained Slopay to his tailor. "Well, I certainly realized that you're not made of dust," replied [illegible]ilor. "No?" "No, dust always sett[illegible]" —Credit Lost.

CUSTOMER: "But [illegible] you think $2 a terrible price for a [illegible]en?" Dealer: "Not suburban ch[illegible], sir. Why, every one of these [illegible] was raised on flower seed that co[illegible] cents per package."—Chicago Ne[illegible]

"JOHNNY," said [illegible]oung man, who wanted to concili[illegible]im, "if I should give you a penny what would you think?" "Humph! I'd think mos' likely y' wanted me t' buy a automubble an' break my neck."—Denver Times.

MRS. BOERUM: "Willie, I hope you didn't disgrace me at the picnic to-day by asking for a second piece of pie." Willie: "Nope! They gimme a second piece without my asking, and I only had to ask for a third!"—Brooklyn Eagle.

YOUNG WIFE: "I received to-day a beautiful diploma from the cooking school—on parchment—and I've celebrated by making you this dish. Now, just guess what it is!" Young Husband (chewing on his burnt omelet): "The diploma?"—Fliegende Blatter.

"THOSE city folks seem to get lots of fun laughing at you when you get togged up ready for church, Uncle Reuben." "Wal, not half the fun I git hawhawing at them when they're fixed in their red jackets to go and play golf in the pasture 'long o' the cows."—Credit Lost.

"YOU should be thrifty and lay something aside for a rainy day," said the man who gives advice ad libitum. "Mister," said the Kansas farmer, "you talk like a blame theorist. What we people need to do is to lay something aside against a drought."—Washington Star.

"SOME folks git stuck mighty easy," remarked Farmer Clovertop, looking up from his copy of the Podunk County Clarion. "For all they think they're so all-fired smart, the city folks is having artificial ice shoved off on 'em. I'd like to see anybody fool me on ice."—Philadelphia Record.

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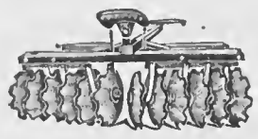
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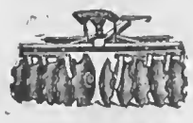
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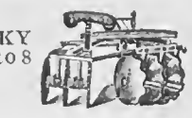
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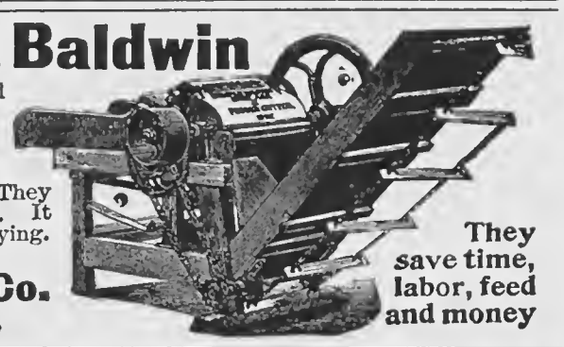
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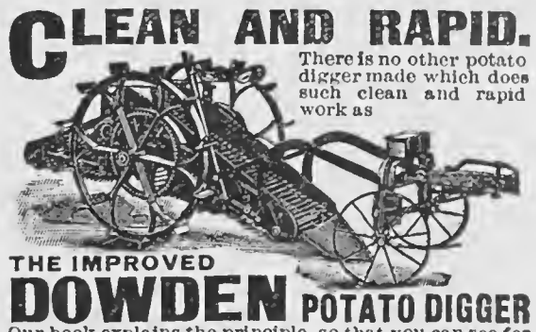
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A CLEAR STATEMENT OF CONDITIONS.

Climate, Crops and Soil.

The question is often asked: Are there any profitable business openings for Americans in our new West Indian possession? The writer will endeavor to outline the general situation there, so that the reader may balance the pros and cons and judge for himself. Porto Rico is a land which has until very recently been under an oppressive form of government. The laborers, or peons, are extremely poor, and live in a most primitive way. There is no large, influential middle class as in the United States, where diversity of occupation, free schools, and a government whose basic principles, at least, are democratic, furnish favorable opportunities for the average man. These conditions, and the dense population, close the door for the American laborer in Porto Rico. The average wage of the peon is 50 cents per day on the sugar estates, and 40 cents in the interior. The man of small means, especially if unacquainted with the climate and the Spanish language, to succeed in Porto Rico must possess skill in some line which the Island lacks. It is safer for such to find employment and become acquainted with local conditions and values before investing in land. The opportunities for investment, especially for the cultivator who can afford to wait a few years for full returns, are now exceptional, as foreclosures on mortgaged lands are beginning, after having been held up since the American occupation. For the first time in the history of our country, we have a purely tropical territory, open for settlement, under stable American government, a region where oranges, pineapples and other tender fruits and vegetables can be grown without a check from frost or cool weather in the Winter months, as the mercury usually stands in the sixties, during the nights of January and February. These conditions insure a rapid growth, whereas in Florida at the same time wide fluctuations of temperature occur, involving enormous loss.

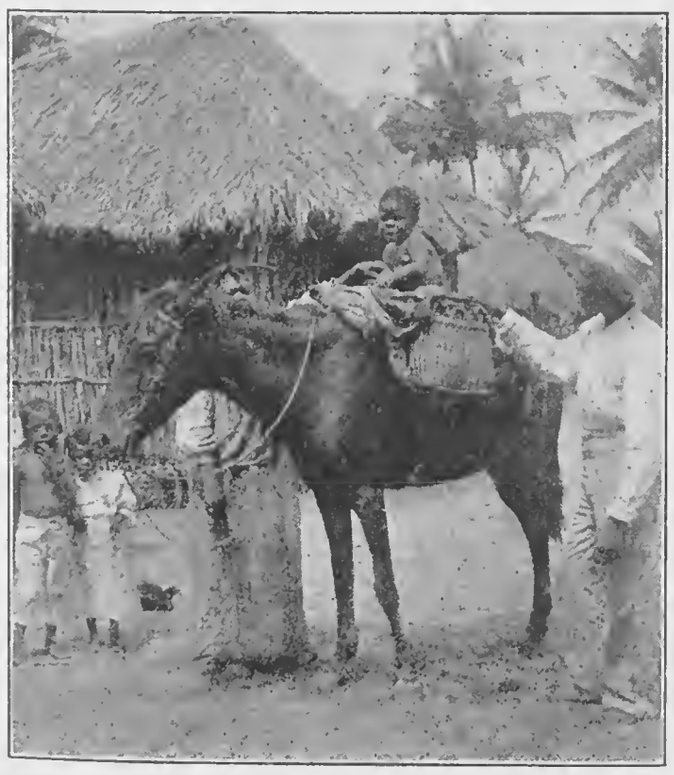
Free trade with this country, which takes effect March 1, 1902, is practically a bounty upon all the products of Porto Rico which pay a duty when imported into the United States, over the same products when imported from Cuba, Jamaica, Mexico and other tropical countries, which is sufficient to make a handsome profit in itself. At present 85 per cent of the duty has been removed. Porto Rico has good shipping facilities, as the fine five-days' steamships of the Red D Line and the New York and Porto Rico Steamship Company together supply an excellent weekly service both ways between Ponce and San Juan and New York. Labor, while uninstructed in modern methods of tillage, is quick to learn; it is much superior to the negro labor of Jamaica, being a mixed blood, largely Spanish. It should be said, however, that Porto Rican labor, to be effective, must have supervision which is continuous and intelligent, or it is dear at any price.

The climate of the Island is more healthful than that of most tropical countries. It is hilly, there are but few swamps; there is a large number of streams of pure water, and the trade winds prevail throughout the greater part of the year. The most marked characteristic of the climate is the steadiness of the temperature. The average at sea level is about 75 degrees for January, and about 83 degrees for July. A northern man can live and work out of doors in the tropics if he observes such rules of health as are required in our warm Summer weather, which is strictly tropical for weeks at a time. There are no oppressive nights in Porto Rico in a properly-ventilated sleeping room. Among the hills the nights are quite cool; there is a very heavy dew, and blankets are required. The first floor of houses should be raised

A PORTO RICAN HOME. FIG. 275.

several feet from the ground, to allow free circulation of air below. Persons working in the field should push their work early and late, taking a long rest at noon. There has been remarkably little sickness among the Americans—soldiers and other residents on the Island. The sickly appearance of many of the natives, especially in the interior, is due to poor diet and unsanitary conditions of living. There are a few localities subject to malarial fevers. These are swampy sections, and particularly when care is not taken to use rain water for drinking purposes. In most parts of Porto Rico, however, the water from the small streams is good when filtered. Ice is only obtainable in the larger towns. The water is cooled in a large porous jar, which stands in the air upon the balcony and receives it as it drops from the filter. To maintain full vigor a northern man should return to the North for a few weeks once a year or once in two years, it is said, as the continuous warm weather becomes wearing in time. A liberal and appropriate diet and the practice of taking a daily shower bath, the writer believes, as the result of his own experience, will go far toward combating the depleting effects of a tropical climate.

The political situation is satisfactory and encouraging. There is no party opposing American sovereignty, although the wealthy mercantile and landed class strenuously object to the tax law passed by the



RAPID TRANSIT IN PORTO-RICO. FIG. 274.

A GIANT FERN. FIG. 276.

recent session of the Legislature, a law which is based on the principles which prevail in our States. This law was passed by the popular party, and was originated by Dr. Hollander in the Executive Council. The business outlook is vastly better than it was a year ago, the marked improvement dating from the Civil Government law which went into effect the first of last May, and fixed the tariff status of the Island. Municipal affairs are still carried on in much the same way as in Spanish times, and Americans complain that they do not get justice in the courts of the alcaldes or mayors—at least in many places; but the larger affairs of the Island are being rapidly improved. Under the progressive Superintendent of Instruction, Dr. M. G. Brumbaugh, rural schoolhouses are being built, each with its acre of land for a school garden. They will be equipped with garden tools, and instruction given in practical work. This manual training is especially important in Porto Rico, because the natives are behind the times in their knowledge of farming and gardening, and there are few opportunities open to them in other lines. The recent school disturbance in San Juan—which is the most Spanish in sentiment of all the Porto Rico towns—was only possible because of the inefficiency of municipal officers and police, and their lack of coöperation with the Department of Education, which is under insular and American control.

At the present, Porto Rico is not a desirable country in which to rear a family, as the social and educational status of the people is low. In a few years conditions will be vastly improved. Railways will penetrate the rich valleys of the interior. American gardeners and fruit growers will bring new industries, new implements and new methods. The American public school will have produced a generation of young Porto Ricans more intelligent than the present, and understanding the English language and something of American institutions. When that time comes, Porto Rico will have much to commend it for family life; its balmy Winter, where coal bills and heavy clothing are not costs to be considered, and the fact that expensive buildings are not required for comfort, coolness and not warmth being the desideratum. The cost of living is also immensely reduced by the fact that the bounty of nature is such that food for man and beast is produced throughout the year, and the husbandman can market his crops in every month, and is not limited, as under the exacting conditions of northern agriculture, to a few months of production. The charming climate and picturesque scenery of Porto Rico are attracting many American visitors who desire to escape the vigors of our northern Winter months, and some of these remain as set-

tlers, or become investors, and these will be a growing stream as our fruit growers and gardeners realize the rare opportunities now open there. Next week I will try to give in some detail an account of the various openings in horticulture on the Island. Figs. 274, 275, 276 and 277 represent scenes in Porto Rico.

F. M. PENNOCK.

THE COWS AT THE PAN-AMERICAN.

The dairy contest is still going on, and will continue until November 1. Week before last the Jerseys made a little spurt but, as will be seen by the following record for week ending August 20, the Guernseys are still leading. Good judges who study the cows say they are well pleased with the Red Polled cattle. They come near to filling the bill for "general purpose":

Breeds.	Milk, lbs.	Butter, est. lbs.	Value of butter.	Cost of feed.	Profit on butter.
Short-horn	1129.4	48.00	12.00	6.07	5.93
Holstein	1393.7	53.63	13.40	6.58	6.82
Ayrshire	1112.7	50.73	12.68	5.05	7.63
Jersey	982.7	50.86	12.71	4.60	8.11
Guernsey	938.6	52.66	13.16	4.49	8.67
Brown Swiss	1078.7	47.33	11.83	4.85	6.98
Red Polled	1068.7	49.87	12.47	5.10	7.37
Polled Jersey	765.3	41.91	10.47	4.00	6.47
Dutch Belted	971.5	39.37	9.84	4.78	5.06
Freneh-Canadian	830.3	39.26	9.81	3.64	6.17

The following table gives the record for the week ending August 27. The Jerseys gain a little on the Guernseys in actual profit. The larger breeds, like Holstein, Short-horn and Brown Swiss, are giving most milk, though the Ayrshire crowds them hard. It will be seen that if one is figuring from a milkman's standpoint, a quart of natural milk would come cheaper from the Ayrshires than from Jerseys or Guernseys. Why does the Polled Jersey make such a poor showing?

Breeds.	Milk, lbs.	Butter, est. lbs.	Value of butter.	Cost of feed.	Profit on butter.
Short-horn	1005.5	44.20	11.05	5.85	5.20
Holstein	1272.5	49.63	12.40	6.31	6.09
Ayrshire	1004.4	44.32	11.08	4.65	6.43
Jersey	880.6	48.74	12.17	4.36	7.81
Guernsey	871.6	49.60	12.40	4.42	7.98
Brown Swiss	1008.8	43.44	10.86	4.71	6.15
Red Polled	945.6	45.68	11.42	4.69	6.73
Polled Jersey	676.0	38.49	9.62	3.81	5.81
Dutch Belted	838.7	34.57	8.64	4.63	4.01
Freneh-Canadian	792.2	38.98	9.74	3.55	6.19

THE GOVERNMENT AND THE APPLE TRADE.

The Agricultural Department Tries Experiment.

Referenee has been made to the plan of the National Agricultural Department to develop the export trade in apples. Some of the daily papers have eritieised the plan, claiming that it establishes the prineiple of a bounty on exports. We are glad to give the following clear statement of what the Department has in mind:

The contemplated experimental export shipments of fruit are to be made primarily for the purpose of determining the requirements of the export trade in these products, with a view to insuring the safe delivery of American fresh fruits in sound condition in foreign markets. It has been found true in many cases that fruit, apparently sound when shipped, deteriorates rapidly in transit, arrives in bad condition, and sells at prices so low that no profit remains to either the producer or the shipper. Part of this deterioration is believed to be due to unsuitable temperatures and conditions in transit. Much of it is undoubtedly due to improper methods of picking, packing, storing and handling on the farm, and somewhat to the use of packages poorly adapted to the purposes for which they are used. To determine as accurately as possible just what the requirements of this trade are, it is proposed to make certain experiments in fruit marketing, storage and shipment, as authorized by Congress under the appropriation for "Pomological Investigations," for the fiscal year 1902. This clause is as follows: "To investigate in coöperation with the other divisions of the Department and experiment stations of the several States, the market conditions affecting the fruit trade of the United States and foreign countries, and the methods of harvesting, packing, storing or shipping fruits and vegetables, and for experimental shipments of fruits to foreign countries, for the purpose of increasing the exportation of American fruits, and for all necessary expenses connected with the practical work of the same."

In the experimental shipments it is of course necessary to utilize existing commercial facilities for transportation and refrigeration. As the fruit for these shipments cannot be produced by the Department, it is necessary to secure it from other sources, and as the shipments are to be of experimental character, to determine the requirements of the export trade, some of them must be expected to result in the loss of a part or even the whole of the shipment. An experiment that demonstrates that a certain method is impracticable, or is at least attended with great risks, is frequently of value in pointing out to the farmer what he should avoid. It was to cover such cases as this that the appropriation was recommended by the Secretary of Agriculture in his Annual Report for 1900, upon which the item in the appropriation was based.

Coöperation with fruit producers and dealers being considered desirable in this work, and in fact necessary, to accomplish the desired end, it is proposed to guarantee to those who furnish fruit for these experiments, which are to be under the supervision of the pomologist in the Bureau of Plant Industry, a definite net return per package on fruit thus shipped under the direction of the Department, rather than to purchase the fruit outright and sell it on Department account. The advantages of this plan over others that have been suggested appear so obvious, both as affecting the outcome of the experiments and the dissemination among fruit growers and shippers of the information sought to be obtained through the work, as to need no further comment. The shipments, though necessarily made through commercial channels, are to be conducted wholly along experimental lines in accordance with the letter and spirit of the law, as expressed in the clause above quoted. The Department does not enter into partnership with the growers, nor offer them a bounty or subsidy in any form, but simply guarantees to them the home value of the fruit needed for use in the coöperative experiments. Certain criticisms recently expressed in some of the daily papers appear to be based upon a misconception of the purpose of the Department, and of the intention of Congress in framing the bill which authorizes the work.

J. H. BRIGHAM.
Acting Secretary Department of Agriculture.

J. H. HALE TALKS.

A representative of THE R. N.-Y. recently met Mr. Hale, the peach man, and had a few minutes' conversation with him.

"Do you have more trouble with fungus diseases in your Georgia orchards than at the North?"

"Not so much. About the only fungus disease that bothers us is brown rot.'

"What treatment do you use for this?"

"Before the buds started last Spring we sprayed

VIEW OF SAN CRISTOBAL, PORTO RICO. FIG. 277.

with Bordeaux Mixture until everything was blue. Then we sprayed later with a weaker solution. This is a help, but there is some danger of burning the leaves, even with a half-and-half solution."

"Do you find it possible to save the early, easily-rotting varieties in this way?'

"Some of the early sorts seem less resistant to disease than others. I experimented with two plots of Carman, sprayed both equally the first time, but gave only one the second spraying. The plot that got only one dose rotted more than the others."

"Does curculio trouble you much?"

"Yes; we did a big job of jarring off and catching them this Spring. People said that I could not jar so many trees, but I told them that it was only a matter of arithmetic."

"Did you use the wheelbarrow machine?"

"O, no! That's too slow. It does very well for a garden patch or small orchard, but where there are thousands of trees to jar some hustling is needed. We took two sheets, with a notch in the edge of one, so that it would go around the trunk of the tree. These sheets covered a space 12 feet square. A boy took hold of each corner; a man walked with them to hit each tree a hard whack, and we got along rapidly. I sent the bugs to the experiment station people, who counted them, and will give the number destroyed in their next statistical report."

"How do Carman, Waddell, and Emma do with you?"

"Carman is a fine peach; there is not much choice between that and Waddell. I want a year or two more to decide which is really the better. I would not advise planting Emma. It is a good peach and sells well, but it is a shy bearer."

"What would you advise planting for the South other than Elberta?"

"Elberta has been overdone. Any good peach that will grow and ripen earlier will sell well. Belle of Georgia is a desirable variety."

"Are you in the apple business to any extent?"

"I have set out several fair-sized orchards in Connecticut, nearly all Baldwin. That is the best variety for this section."

"What about Ben Davis, Mr. Hale?" said a bystander. "There are some Ben Davis trees that are well loaded and will bring a good price this year."

"Yes; and I can show you a whole lot of places where one can make money by keeping a saloon; but a man won't do his fellow man much good by keeping a saloon or raising Ben Davis apples."

W. W. H.

WAGES IN THE GRAPE BELT.

Wages in this section are for men about $1 to $1.25 per day in grape harvest; boys, 75 cents to $1. Some good hands are in demand at better than $1.25; this is for day hands without board. By the month with board $18 to $25; probably $20 would be a good average. By the year on fruit and grape farms $15 to $25, with house, garden, cow pasture, etc. Some good men are in demand at $30 to $40, with allowances as above. Trimming is mostly done by men in February and March at about $1 per day, or about $1.25 per acre. Tying is a woman's job; pay about 75 cents per day, or $1 to $1.25 per acre. March and April is the time; no Summer tying is done. Picking and packing is mostly done by women and girls; over 5,000 find employment from six to eight weeks every Fall in this belt. Not much day work is done by these people; it is mostly by the basket or crate. Crates or trays for bulk stock hold usually about 35 pounds; the price paid the women is from 2½ to three cents per crate. Crates are taken to vineyard and when filled are covered and drawn away by day help, men or boys. About 40 to 45 crates is the average day's work for the pickers; some, however, easily do 60 to 75 a day. Grapes go to market in these packages, going from vineyard direct to cars. Baskets used are eight-pound and four-pound, holding about seven pounds and 3¼ pounds of grapes respectively. A large amount of grapes is packed in these baskets in the vineyard. Women receive for this work from one cent to 1¼ cent for large basket and one-half cent to six-tenths cent for small. About 100 baskets per day is good work, but some can put up 150 to 175 of the eight-pound size. They are filled about one-half inch more than full, and then drawn to packing house, where they are left till next day. By this time the stems will have wilted and grapes settled so cover can be put on without injury. This work is done by day help. Another method is for women working by day at 75 cents to 80 cents to pick grapes into trays to be repacked next day by other women in the packing houses. Prices for packing in the house are same as in field, so it of course costs the grower more. Grape time is a busy time here, as in this belt from about Silver Creek, N. Y., to Erie, Pa., there are 8,000 carloads of grapes to be disposed of in 60 days.

A. I. LOOP.
Pennsylvania.

DO RAILROADS WANT PASSENGER TRAFFIC?

While certain business methods of farmers are often held up to ridicule, there are some things common enough in the business world that might well astonish the ordinary farmer. I have before me a poster announcing excursions to the Pan-American. If the outside Pan-Americans, from Panama to Patagonia, have as much difficulty as we do in getting there, the show must be conspicuous by their absence. It might be supposed that the railroads are anxious for passengers, inasmuch as they were created to haul people as well as freight. But the restrictions, conditions, time limits and general red tape and uncertainty connected with these tours are enough to scare the most adventurous Yankee. If he doesn't read his ticket every meal as regularly as he takes his food, he is liable to get left. In Buffalo some of the railroads require that the ticket bought at this end of the line be "registered" before it will be accepted on return, and for this "registry" charge an extra dollar. It may have been lost, strayed or stolen, and failure to prove property every little while leads to the inference that the holder is a thief. In other words, there is more anxiety to hedge in passengers with barbed-wire restrictions of all kinds than there is to get their money for carrying them around. At the present rate of progress it will not be long before a certificate of good moral character will be exacted of all to whom tickets are "sold at a reduced rate," the same as now in some States it is required of those who apply for admission to the bar, and it would be little less ridiculous in the one case than in the other.

How many apples would a farmer sell if he asked $2 per barrel in consideration that they should not be "assigned" or "transferred," otherwise the price would be $2.50, with the still further "condition" that if not eaten within 10 days they be returned to the seller? What difference does it make to any company whether it carries a man or his neighbor, so long as so many miles of travel have been paid for in advance? There is no doubt but "good reasons" exist for the limits and restrictions in railroad tickets, nevertheless I submit that if money is what they are after, they could pay larger dividends by oiling the wheels of travel, rather than by tying them or putting on brakes.

G. S. PAINE.
Maine.

ALFALFA IN SOUTHERN OHIO.

April Sowing With Barley.

I know of no Alfalfa in this section of the country that has been growing more than three years. About the middle of July I went to see a plot of about four acres that had been mown twice and was again making a nice start. This was on high limestone upland; it is the second season's cropping for this field. The owner was so well pleased with results that he sowed another plot last Spring on bottom land. This at the time I saw it was making a good start, after having had the protecting crop of oats or barley cut off. This had been overflowed by a flood from an unusually heavy rain; some of the stubble or growth left lying on the land was at least 18 inches long. Another plot on bottom land that was sown last year gave at first cutting this year about two tons of hay per acre. Last year the stand was not thought to be very good, but the growth this year was very thick, showing the strong tendency of the plant to put out numerous shoots from the crown. The second cutting from this plot gave about one ton per acre. My impression is that the first crop was not cut soon enough. The second I know stood too long, as it was almost in full bloom when cut. The wet weather we have been having will probably make the third cutting better than the second. In another instance a field sown one year ago last Spring, that was pastured during the Summer and Fall, did not show up satisfactorily this year; this was on sugar-tree land, rather high and rolling. Still another field sown last Spring one year ago, sown without a shelter crop, was clipped once and pastured with cattle later in the season. This field, I understand, stood the Winter, although cold, wet land naturally. Still another field the freezes of last Winter lifted so badly that it was plowed under last Spring.

I stood back from trying the plant till last Spring, going under the impression that I had no land suitable to make it successful. This impression I gained from what I read in the farm papers and bulletins. Observation last year led me to believe that it was not definitely known on what kinds of soil it would make profitable growth, if given an intelligent trial. With the object in view of knowing something more of the possibilities of the plant, and with a hope that it would prove a success, I sowed an 11-acre field April 9 and 10 last, using a little over 16 pounds of seed per acre, and not quite 1½ bushel of barley per acre. I could not have selected during the last decade a Spring more favorable for the trial. There are four or five kinds of soil in this field; about one acre of black soil, with water but a few feet below the surface; two or three spots, aggregating nearly one acre, of stiff red clay, the hardest of all land to get in order after Spring plowing. Then there is a south side of a hill near half an acre in extent, that is limestone gravel, not bad for road building. This plot always starts the corn rapidly in the Spring, but it never ears right, because it burns before the growing season is over. The highest part of this is at least 20 feet above the black land. The remainder of the field is clay land, on which, in cutting tile drains, we strike considerable limestone, pebbles, or gravel, three feet down. The seed was sown from the grass-seed sower on the drill, sowing the seed in front of the hose. The plants show an even distribution over the land. A field sown on another farm, the seed thrown back of the hose, I suppose, shows nearly all the plants in the hoe marks.

On my field the slowest places to start were the red clay parts. The black soil on the gravel bank started first. Much of it on these favorable places was six inches high when the red clay points hardly made a showing. After harvest, the latter part of July, I gave the clay points a topdressing of barnyard manure at the rate of 12 loads per acre. Good rains since have caused the Alfalfa on this red clay to make an excellent start, so that now it is well up with the remainder of the field. Part of the field has been clipped twice since the barley was harvested, a second cutting so soon to keep back the foxtail that made too strong a showing on part of the field. The rate the Alfalfa is growing now may make it necessary to go over the whole field before the middle of September. I do not want the plants to exhaust themselves blooming. Next year, if the hay cuttings are satisfactory, it will be my aim to topdress the field with barnyard manure some time during the season; I think I can prolong its usefulness in this way. If it is going to be my most profitable crop it will deserve this care and treatment. I feel sure that three cuttings in a year for a decade will certainly impoverish the land. The great depth to which the roots penetrate may prevent the noticeable deterioration in the soil made by surface-feeding plants. If I do not use the manure production from this crop in helping make the crop, what am I to do with it? For I do not want to rob this, the poorest field on the farm, to build up the others.

Ross Co., O. JOHN M. JAMISON.

CORN-BINDING MACHINERY.

At Fig. 278 is shown a corn harvester at work on the Cornell Experiment Farm. In witnessing the well-nigh perfect work of this machine it is pleasant to remember the first attempts at binding corn. Nearly 12 years ago THE R. N.-Y. printed a picture of a machine made at the suggestion of Prof. I. P. Roberts. At that time no one knew just how to grasp and cut the hill of corn with fingers of wood or steel so as to give the best imitation of the human hand and arm. In all farm machinery, except that of fitting the ground for a crop, the ideal of the inventor has been to imitate the hand work of a skillful man. The first corn binder was a heavy, cumbersome affair, not at all suited to the conditions which are found on the average farm. It went at the work in the wrong way. A man in cutting corn gets his arm around the hill and holds it tight for the knife; then, with the aid of shoulder, hip, and knee, it is pulled and shaken into place. This is what the corn binders were asked to do, and it is wonderful how the inventors have responded. On the farms where a good-sized area is put in corn, the work of cutting is now as easy as grain harvesting after the binder. The horses now swing the corn knife or grain cradle, and men only pick up and shock the bundles. The introduction of this machine has changed the character of farming in many places. It is of especial value where corn is grown for the silo. It saves labor at a critical time, and expands the productive power of the farm which supports only one good team of horses. We believe that before many years most of the corn in the country will be cut with these machines—either owned by individual farmers or carried from farm to farm, much as traction engines or thrashers are carried at the present time.

A CORN HARVESTER AT WORK. FIG. 278.

FACTS ABOUT "FLY-PROOF" WHEAT.

Every year that the Hessian fly attracts unusual attention by its ravages, there are usually certain varieties or certain fields of wheat which suffer much less than others, and in consequence a few varieties are heralded as "fly-proof." Soon after the insect began its ravages in this country, more than a century ago, the Underhill wheat became a favorite, and it bore its "fly-proof" reputation for many years. From 1850 to 1880 several varieties gained a reputation for resisting the fly in certain regions; as the Mediterranean variety in the Middle States, in central New York the Lancaster variety, and in Michigan the Clawson. And nearly every Hessian fly year other or newer varieties supplanted the former favorites, so that there have been a score or more so-called "fly-proof" varieties of wheat in the past century. There has been considerable discussion in the literature about these "fly-proof" varieties, and the remarkable immunity from the pest of certain varieties in New York this year, as related in Bulletin 194 from the Cornell Experiment Station, has again opened the discussion. For example, Dawson's Golden Chaff wheat has apparently, without exception, almost perfectly resisted the attacks of the fly all through New York this season, and the varieties known as "No. 8," "Prosperity," "Democrat," "Red Russian," and "White Chaff Mediterranean" are also reported as suffering but little from the pest. Although the Dawson's Golden Chaff made such a remarkable showing in New York, in its original home in Canada it suffered very severely, and will not yield more than one-third of an average crop in the infested areas. In the experimental plot at the Ontario Agricultural College the following varieties were but slightly infested this year: Imperial Amber, Egyptian Amber, Michigan Amber, and Early Genesee Giant, and the following varieties were badly damaged: Dawson's Golden Chaff, Turkey Red, Buda Pesth, Clawson, and Treadwell. So it goes; one variety may resist the fly in one locality and not in another, and a variety which is equally resistant under all conditions and locations has not yet been evolved. The gist or whole truth of the matter is that no variety of wheat is absolutely "fly-proof." Even Dawson's Golden Chaff seemed to be as badly infested as other varieties in the Fall on the Cornell farm, and yet it was remarkably free from the fly this Spring. But we cannot escape the fact that some varieties do sometimes show a remarkable resisting power, even when grown in the same field with others.

This brings us to the all-important question: Why are certain varieties more resistant to the fly than others? It would be worth millions of dollars to American wheat growers if it were definitely known what qualities of the wheat or what other conditions are necessary to make a variety "fly-proof" in all locations. No one knows, and but little data has yet been obtained on this point, but there are some sensible notions proposed to explain the why of it. If we only knew all about it, our wheat breeders would know just what kind of a wheat to develop, and could then breed along those lines. But I doubt whether such a millenium will ever come for our wheat growers. The so-called "fly-proof" varieties often have coarse and siliceous stems, enabling them to stand and not break over from the presence of the fly; also, varieties which tend to develop secondary shoots or "tillers" are considered preferable during Hessian fly years. There seems to be no difference in the susceptibility of the bearded and the beardless varieties, but some observations in California several years ago gave indications that early varieties were not so badly infested. Some seasons the red varieties, which the millers often prefer, suffer less than the white kinds, but this did not hold true in Canada this year.

While there is no doubt that some of the resisting power against the fly is inherent in the qualities of the wheat itself, yet we believe that much of it often comes from the kind of soil, its location, and the way it is prepared and fed. Oftentimes wheat on unusually good soil will make a good crop in spite of the fly, and yet there were cases this year in New York where Dawson's Golden Chaff on soil not rich enough to enable it to make a large yield, seemed not to be affected by the fly; how long this variety will retain these resisting qualities in New York no one can tell. We would not advise farmers to depend solely on the "fly-proof" reputation of a variety, and expect it to yield satisfactory crops under all conditions. Test the so-called "fly-proof" varieties, and select from these, or from others, the one which you can make produce the best crops on your soils, and the one that the market wants. We believe that often a farmer can raise a good crop of wheat in spite of the fly if he will properly prepare and feed the seed bed, which must be in good soil; especially is this true if he will also decoy the fly into narrow strips of wheat sown early (in August) and plowed under just before the main crop is sown, late in September. In short, the resisting powers of wheat against the Hessian fly may often depend largely upon the forethought of the farmer himself in choosing and properly preparing the seed bed, using the decoy strips of wheat, and sowing late. We believe these factors will enter more largely into the causes which may make a variety "fly-proof" than any "tillering," "stalk-stiffening," or other qualities which may be inherent in the seed. Give the variety which does the best on your farm, and is best adapted to your needs or markets, the best possible chance that you can with your knowledge of soils and their preparation, and sow at the right time, and we believe you will win against the fly nearly every time.

M. V. SLINGERLAND.

IT will require a rich man to provide two apples each day for personal eating this year. Most city people will pass so little apple down their throats that even the Adam's apple will grow smaller.

BITS OF NATURE STUDY.

Introduction.

At the outset I should like to have a little talk about the meaning and purpose of nature study. Nature study is not the same as elementary science. Science presupposes a teacher and a class room, or its equivalent; nature study does not. Science demands a rigid search for exact truth and the whole truth; nature study does not. Science calls for a systematic order of procedure; nature study does not. The purpose of science is to acquire knowledge; the purpose of nature study is to awaken the interest, enlarge the sympathy and add to the enjoyment of life. Nature study simply asks for an intelligent interest in the thing nearest at hand. It does not insist upon complete truth, nor even upon exact truth. It invites the observer to a closer companionship and a deeper love for nature, rather than to a detailed scrutiny of her ways. It presupposes no previous training, and offers as much pleasure to one who knows nothing of a subject as to one who knows much. It asks the student to take in hand the seed, the leaf, the stone, or the insect and read the story written there, rather than one written about it in a book.

A YOUNG APPLE SHOOT. Fig. 279.

The best article on nature study would be the one which would cause the reader to throw it down unfinished to betake himself out of doors in search of the object itself. These articles are written with the hope that the reader will go to the object itself for most of his information. It will always prove more interesting than the article.

The Birth of a Strawberry Plant.

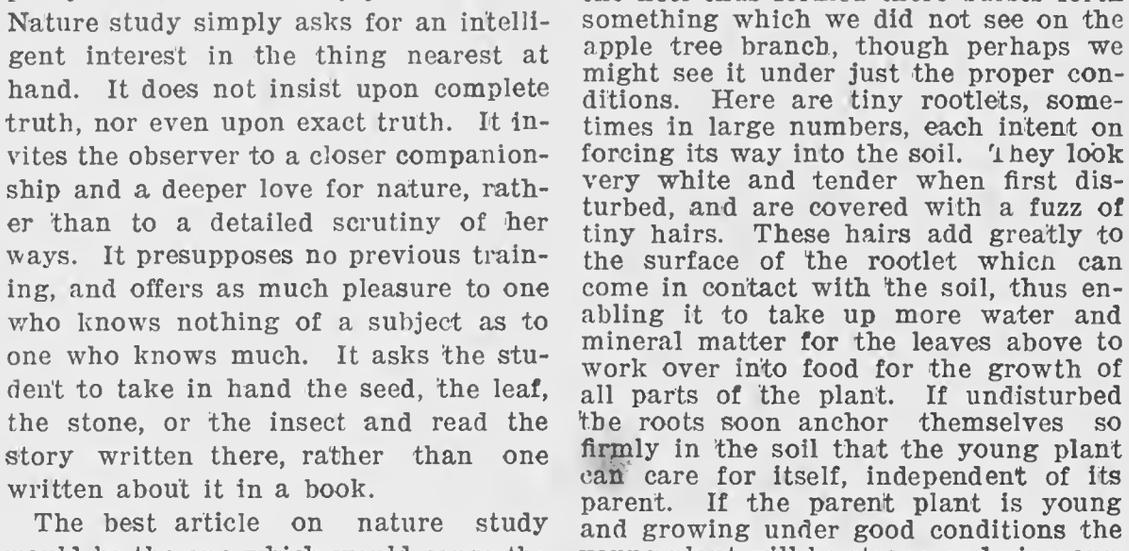
An apple tree and a strawberry plant seem very unlike. Yet we may understand the strawberry plant better if we examine carefully a young shoot from an apple tree. It should be a shoot of the present year's growth. Notice how the leaves are arranged, and how an insect would circle around the twig if it were to climb from leaf to leaf, as a boy would climb from branch to branch on a tree. Notice the little leafy or scaly points, at the base of the leaf stalk, one on either side. The botanist calls these stipules, and you will find them more prominent on the strawberry plant. On the apple twig you may not find them at the base of every leaf, for they fall away in time. Do not overlook the bud between these, which is sometimes almost hidden by the leaf stalk. Do you find such buds anywhere else? This location at the base of the leaf stalk, between it and the twig, is called the axil of the leaf. None of these buds seems to grow. What becomes of them? To answer the question look at the older part of the branch, the part which grew last year. How many leaves are there at each bud on this year's growth? How many at the buds of last year? Have these buds lengthened any? Did the shoot you are examining grow from such a bud?

Now look at a strawberry plant. Do you find anything in the axil of its leaves? If so, it must be a bud, like that of the apple tree shoot. Have any of these buds begun to grow? We should expect them to grow into branches. What kind of branches do they make? The leaves on the apple tree shoot which grew this year are some distance apart. On some of the short side branches they are crowded close together. On these strawberry branches they are still farther apart. Notice the first one. There is a bud in its axil. What comes from the bud? The second joint is not like the first. More than one leaf appears here. The branch seems to divide. From the axil of one leaf a branch continues, while at the same time there develops a short thickened stem, more like the parent plant, or like the short branches on the two-year-old wood of the apple tree. This branch takes a sharp turn upward. At the heel thus formed there bursts forth something which we did not see on the apple tree branch, though perhaps we might see it under just the proper conditions. Here are tiny rootlets, sometimes in large numbers, each intent on forcing its way into the soil. They look very white and tender when first disturbed, and are covered with a fuzz of tiny hairs. These hairs add greatly to the surface of the rootlet which can come in contact with the soil, thus enabling it to take up more water and mineral matter for the leaves above to work over into food for the growth of all parts of the plant. If undisturbed the roots soon anchor themselves so firmly in the soil that the young plant can care for itself, independent of its parent. If the parent plant is young and growing under good conditions the young plant will be strong and vigorous. If the parent is old and exhausted by much fruit bearing the young plant will be weak also. FRED W. CARD

Propagating Lily Bulbs.

F. E. K., Troy, N. Y.—When and how are lily bulbs propagated? I refer to the Candidum, large flowering, and Croceum type. Give careful directions how successfully to increase these bulbs.

Ans.—Lilies of the above type multiply by bulblets forming in the soil about the base of the stem. They are most numerous on old bulbs that have not been disturbed for several years. The little bulbs may be planted in frames of good soil enriched with old rotted manure. The bulblets should rest upon and be embedded in a layer of sand about two inches thick. They may be placed two or three inches apart in rows wide enough to hoe between, and covered with about four inches of good soil. The sides of the frame should extend 12 to 14 inches deep in the earth, to keep out mice and moles, as the former are very fond of lily bulbs. No sash is needed in Winter, but a mulch of chopped hay or straw after the ground is frozen is very beneficial. The frame should have perfect drainage, as standing water is quickly fatal. The bulblets may grow in such a frame two or three seasons, when they will be large enough to plant out. Some lilies are propagated from the bulb scales, which may be treated in the same manner, but planted more thickly and at a less depth, but the process is uncertain and needless with the above types. After the stems have made a few inches of growth lilies are much benefited by a mulch of old manure.



THE GROWTH OF A YOUNG STRAWBERRY PLANT. Fig. 280.

Brown Rot in Grapes.

V. T. B., Topsham, Me.—I send a bunch of grapes; can you tell me what is the matter with them, and what is the remedy?

Ans.—The grapes you send are affected with the brown rot, one of the most destructive pests of the grape. It is very prevalent this year, its spread being favored by the extremely hot and damp weather. There is no cure for it after the grapes are affected, and the only remedy is to spray the vines in the Spring, before the buds open, with full strength Bordeaux Mixture (six pounds each of lime and copper sulphate to 50 gallons of water), and later, as the fruit develops, with half strength.

Choisy Cherries.

N. G. H., Rothsville, Pa.—In reply to C. F. C., page 563, would say that we have five Choisy cherry trees planted eight years on gravel soil. We had a few cherries this Summer and find them to resemble the old-fashioned Amber cherry so much that we are inclined to graft trees next Spring with a valuable dark variety that we have growing on our place. Amber cherries sell for three and four cents on our markets, when other varieties sell for six to eight cents per quart.

Ans.—This is the right sort of facts to have stated. There is no doubting the common experience of marketmen, that they find more ready sale for dark cherries than for light ones. For home use we can grow any variety, regardless of color, that we desire; but for market we must yield to the popular demand, at least in some degree. H. E. V. D.

Liquor Follows the Flag.

H. E. G., Conn.—Will The R. N.-Y. give us the facts about exports of intoxicating liquors to the Philippine Islands? I have heard many conflicting statements.

Ans.—The following figures are the best we can obtain from the Government:

	1896.	1900.
Malt liquors (bottled) doz. bottles	835	470,451
Malt liquors (unbottled) gallons	64	16,080
Brandy (gallons)	—	18,063
Bourbon whisky	—	58,056
Rye whisky	—	5,371
Other spirits	—	1,054

The total value of the liquors exported to the Philippines last year was $717,792—by far the heaviest "agricultural" item in the list—in fact, the entire exports to the Philippines in 1900 amounted to but $1,656,871. Why these intoxicating liquors should be classed as "agricultural" is more than we can understand. Some of the other items of export in 1900 were: Horses, $211,550; mules, $230,400; dairy products, $25,941; meat products, $34,128; breadstuffs, $168,726. Thus far the Philippine trade seems to consist in providing food and drink for the American Army and office-holders.

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EVERYBODY'S GARDEN.

SPINACH.—The Winter season is generally so barren of any green vegetables other than greenhouse products, that anything in that line which can be easily and cheaply grown, always finds a ready market, at remunerative prices. Spinach being essentially a cold-weather plant, meets all these conditions, and the culture is so cheap and easy that it should not be omitted either from the home or market garden. It is used entirely in the cooked state for greens, and is excelled by no other vegetable for that purpose. The culture is very simple, and for Winter or early Spring use, the seed should be sown during the month of September for localities north of Philadelphia, and south of there it may be sown then or even later. South of the above locality, it will require no protection, but in the North a slight protection of straw, leaves or other litter is essential. It may be cut at any time when the depth of snow will permit, and when frozen should be covered with cold water for a few minutes to draw out the frost before cooking. In preparing for market, all yellow or otherwise imperfect leaves should be removed, washing if necessary, and marketed in bushel baskets, or, if shipped, it should be packed in barrels. The ground should be very rich; in fact, there is little danger of overdoing that part of the work, and, if possible, it should be plowed some little time before the seed is sown, so that the weed seed near the surface will have time to sprout and be killed by culture. For Winter or early Spring use it is preferable either in small gardens or for market purposes to broadcast the seed at the rate of 10 to 12 pounds to the acre. Spring seeding may be done either in drills or broadcast; some prefer however, the drilling one foot apart, that the weeds may be kept down by cultivation, and thinning may begin when the leaves are an inch wide, taking the larger plants of course. For Spring and Summer use the variety known as Long Standing is the most desirable, as it continues growing much longer than other varieties before the seed stalks appear, which render it unfit for use. The Long Standing Prickly is also desirable on this account, and is a heavy cropper. The Savoy Leaved, Broad Flanders, Victoria and Prickly Winter are all valuable Winter sorts. As a money crop, spinach is very satisfactory, and is also useful as a cover crop.

EXHIBITION VEGETABLES.—As the fair season is now at hand, some hints as to the preparation of fruits and vegetables for exhibition purposes will be timely. But first a few words preliminary; the township, local and county fairs ought to receive the hearty coöperation of every farmer and gardener, and it should be the aim of every family to be in attendance and to be further represented by the very best possible exhibit in some one or more lines. Township and even street fairs are growing much in favor, and are found by their patrons to be the very best means of encouraging higher standards of excellence in every line of agricultural and horticultural industry. Last Fall it was the privilege of myself and family to visit a township fair located several miles from anything that could even be called a village; simply a thickly settled farming district along one of the principal thoroughfares leading out from the city. The history of this fair is only what may be developed in almost any locality, with very beneficial and lasting results. The county and State fairs can at best, only be patronized by comparatively few people. The local fairs can and ought to be patronized by the masses, old and young; and if there is a more effective means of encouraging the boys and girls to stay on the farm and of arousing their ambitions to excel in agriculture and horticultural pursuits, I have yet to learn it.

Briefly, the history of this fair is that a few years ago some of the farmers decided to have an exhibition in a small way, and an upstairs hall in the hotel was secured for the purpose. So much interest was aroused that for the following two years a large two-story building was found inadequate, and subsequently grounds of 15 or 20 acres were leased on which permanent buildings were erected, and arrangements made for an abundant water supply. Last year the exhibits were fuller in nearly every department than at the county fair of one of our leading counties a few miles distant. In the poultry department, of which I chanced to be one of the judges, the leading exhibitors and those carrying away most of the prizes were boys under 17 years of age. Thus as a means of polishing up the wits of the older members of a community, as well as developing and encouraging the best efforts of the rising generation, these local organizations cannot be too strongly urged. With an interest in the work, and a determination if possible to be an attendant upon the fair and make some personal showing, then comes the question, the display.

PREPARING EXHIBITS.—Many otherwise creditable entries are spoiled by the miscellaneous collection of boxes and baskets in which they are displayed. Packages for the various classes should be uniform in size, bright and new. Fruits are usually exhibited on plates, and great care in handling is necessary. Grapes and plums ought always to be handled by the stems and never by the clusters or fruits, as this destroys the natural bloom. Peaches should be carefully picked, and when laid on the plates an occasional stem with two or three bright green leaves will add much to the appearance. Thoroughly polish apples and pears with a dry cloth, and the improvement thus made will be surprising. Tomatoes should also be carefully polished, and exhibited only in shallow baskets. Potatoes and the root crops ought never to be washed; but should be carefully dried without exposure to too much sunlight, and then polished with a soft brush. Washing gives a sickly faded appearance that can never be remedied. Beans are nicely displayed by pulling up the stalks and tying in neat bunches, with the same varieties shelled in quart berry boxes. Corn will appear to best advantage if the best hills are pulled up by the roots and hung or stood up, also the same varieties should be shown husked and in baskets, with some ears broken that the depth of the kernel and size of cob may be easily determined. Cabbage and cauliflower are nicely trimmed up as for market, and grouped in half-dozen or dozen lots. The vine products, also eggplants and peppers, should be nicely polished, and stems left intact; these are also grouped in convenient lots, peppers excepted, which should be shown in baskets. Celery may be prepared by bleaching each plant separately, using pasteboard or tarred paper strips tied around the plant with cord or strips of cloth. When pulled wash the roots clean, but not the stalks, and pack the plants in upright position, half-dozen in a box. Use wet moss and pack the roots firmly, so that the plants will stand erect.

Canned goods, pickles, jellies and preserves, whether of fruits or vegetables, should, whenever possible to do so, be cooked in the cans to preserve the color and form as perfect as possible. The jars should be of the best and clearest glass, with new tops and rubbers. Arrange them on the display stand with an eye to the color scheme. Attention to these little details will count many points in their favor. It goes without saying that no blemished specimens of any variety should ever be allowed to creep in, and the generous strife should always be for every exhibitor to make the best possible display, and carry away just as many prizes as possible. It is interesting to note that some of the leading seedsmen offer liberal prizes to exhibitors who take premiums on vegetables grown from their seeds; but while too late for those who have not already done so to arrange with the seedsmen for this year, it is best to have it well in mind for next year's work. Thorough organization along these lines is well worth a trial, and I would be glad to see the day when the boys and girls, as well as the parents, in every school district, would have its organization in full running order. J. E. MORSE.

Plums for Kentucky.

J. W. M'D., Warsaw, Ky.—I wish to plant, say 10 native plum trees, for family use, making preserves, plum butter, canning, etc. What varieties that will pollinate each other would you recommend as the most desirable?

ANS.—The following varieties are likely to succeed in Kentucky. They should be planted about 15 feet apart, and be grouped together as much as possible to secure pollination: Wild Goose, Munson, Newman, Milton, Wyant, De Soto, Surprise, Miner, Golden Beauty and Wayland.

An Old Cellar for Cabbage.

E., Ontario Co., N. Y.—I have an outdoor cellar I have used for storing potatoes; it is 50 feet long, 14 feet wide, six feet deep; posts and boards at the side instead of wall, door in each end, ventilator every 10 feet, perfectly dry. Would that be suitable for storing cabbage?

ANS.—We can see no reason why this cellar would not make a good cabbage house. The only trouble that could occur would be neglecting to keep the cellar well aired. You must be very careful about that.

Peaches, Raspberries and Blackberries.

D. M. J., Seaford, Del.—1. I am selling peach trees through my neighborhood and wish to give honest service. Let me have your opinion of the following varieties of fruits: Fitzgerald, Bishop, Matthew, Waddell, Sneed, Connett, Willett and Carman peaches. State those that rot the worst. 2. Can you give me any pointers on the Strawberry raspberry Early King blackberry and King red raspberry?

ANS.—1. The Bishop, Matthew, Waddell, Sneed, Connett, Willett and Carman are all peaches that ripen in the early part of the peach season, and some of them are very early, especially the Sneed. None of them is poor in quality, and all of them are worthy of thorough trial, to say the least. I would not advise anyone to plant largely of any of these varieties at the present time, although I really know nothing serious against any of them, unless it is that Bishop and Connett are more likely to rot than any of the others. Fitzgerald is a variety that ripens about mid-season, and is good in quality and generally liked wherever it has been grown. 2. The so-called Strawberry raspberry is a novelty that is of no value except as a curiosity, and it sometimes becomes a nuisance because of the persistency with which it sprouts, and the difficulty of killing all of the underground stems. It is a species of the raspberry family found in Asia, that grows about a foot high and dies down every Winter. The fruit is quite large and very handsome, brilliant red, but has an insipid, almost tasteless flavor. The Early King blackberry is a high quality variety, moderately hardy, and quite productive. It is considered too soft for market. It is of a medium size, and a week or 10 days earlier than Snyder. It makes a small, erect bush. The King raspberry is a red variety, showing traces of European parentage. It is a good berry of medium size and fair quality, light crimson in color. It was sent out by a Virginia nursery in 1892. H. E. V. D.

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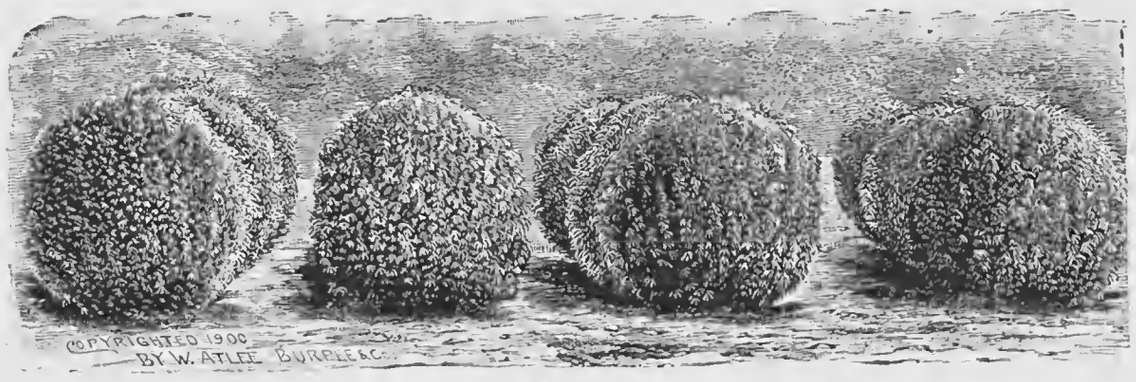
Ruralisms

NOTES FROM THE RURAL GROUNDS.

THE MOCK OR SUMMER CYPRESS.—Fig. 281, from the seed catalogue of W. Atlee Burpee & Co., Philadelphia, Pa., though rather formal, does poor justice to the symmetrical outlines of Kochia scoparia or Summer cypress when naturally grown in the garden. Although this plant has been known for the greater part of a century, it is so seldom grown in this country that it excites the utmost interest when seen. Little plants started indoors in April and set out in ordinary soil in May, two feet or more apart, make symmetrical bushes nearly three feet high, much resembling a carefully sheared evergreen, by September. Soon after the branches are covered with a crimson or coral-red inflorescence, which entirely changes the aspect of the plants. The flowers are very small in size, but countless in number, crusting every twig. The plant dies soon after having ripened its innumerable seeds. A dozen Kochias were used in a clump to fill up space in an unfinished shrub bed on the Rural Grounds for the Summer, and visitors all inquire what rare evergreen has been established there. The genus Kochia belongs to the Chenopodiaceæ, or Goosefoot family, which includes the cultivated beet. The 30 or more species of Kochia differ much in appearance, and none is of horticultural interest except K. scoparia, the species under consideration, which is native to northern Asia and some parts of Europe. The foliage is long and narrow, pleasing light-green in color, with a silky texture. The regular conical form is developed very early, and maintained until maturity. It so closely resembles a well-known dwarf Retinospora, except in the lighter green tint, that many persons can scarcely be convinced it is grown from seed in a few weeks' time. Kochia seeds germinate quickly and the plants are easily handled. It is said to thrive best in clay soils, and to appreciate a sprinkling of saltpeter, or even table salt, on the ground about the plants. We have seen it growing with apparently equal vigor in light sand, loam, and clay, and would consider it an easy and desirable plant for occasional trial, if not regular cultivation in the way of foliage beds, groups and Summer hedges. It is said to be grown in Europe more for its short-lived brilliancy at the flowering period than for its trim greenness during early growth.

MORE SCALE TALK.—A subject that will not down is the persistent spread of the Pernicious or San José scale. Although introduced near the Rural Grounds over 10 years ago, and pretty well disseminated throughout this corner of New Jersey, little damage has hitherto been noticed on large bearing trees, though many young orchard and ornamental trees have been killed. The present season, however, witnesses the practical destruction of some previously vigorous apples, at least 30 years old; situated at some distance. The writer first noticed scales on these trees in 1899. They were few in number, scattered over the new growth, and looked as though they had a difficult task to conquer their large and lusty hosts. Last year gray crusts over the lower branches showed that the pests had increased to millions; the leaves on infested limbs dropped early, and the fruit came to nothing, being shriveled and dotted with scales. This Summer reveals still more painful evidence of their deadly work. Half the branches are bare and dead, dying from below upwards; no fruit was set, and the trees have the discouraged look that precedes dissolution. Pernicious scales are found at times on such ornamental trees as willows, Mountain ash, and Osage orange, but are not observed on many other smooth-barked trees where they might be expected. The result of two years' trials of crude petroleum on the Rural Grounds may be summed up in destruction of scales and immunity from reinfection for one season in 11 young fruit trees; reappearance of scale in midsummer after spraying with crude oil in March, one tree. Destruction and immunity for two successive years with one spraying, eight successes and one failure, the scales appearing the second Summer, though apparently free the first year. The failure to clear out scales the first season was in a good-sized Satsuma plum tree, headed back to get rid of small branches. The tree was sprayed carefully late in March, but damp and foggy weather evidently prevented the oil from sticking, and the June brood spread over the unprotected areas, but has not gained a foothold on the greasy surfaces. Records of similar experiences come from many sources, and the serious nature of the pest is being strongly impressed on all tree growers. A continuous battle is in prospect, and the price of tree fruits in the near future, like liberty, will be eternal vigilance. The difficulty of thoroughly spraying large trees is at once evident on trial, and the final outcome, unless totally new methods of relief are discovered, is likely to be a demand for low-growing and early-bearing varieties. While good quality and prolific bearing will continue as essential as in the past, the search will be for trees that promise quick returns and occupy small space. Every fruit tree planted will demand constant attention, and possibly occasional expensive treatment with spray or gas fumigation. Long-winded and rampant growing varieties will be discarded for the precocious and compact kinds plant breeders are expected to create. The time is past, if it ever existed, to hope for the extermination of this minute and destructive scale, and the problem of protecting our individual choice trees and shrubs now faces every gardener.



THE MOCK OR SUMMER CYPRESS. FIG. 281.

BURBANK'S ELEGANCE VERBENA.—Plants of Luther Burbank's new sweet-scented Verbena Elegance were forwarded for trial early last Spring, and planted in congenial light soil in the Rural Grounds. Like most propagated Verbena plants, they started off rather slowly, but are now blooming profusely, making very neat and compact plants. The clusters are about three inches across; the individual flowers of the largest size. The type of coloration is new and very distinct. A clear white center covers more than half the plant, with outer shadings of light lavender purple. The fragrance is the usual Arbutus-like odor occasionally found in seedling Verbenas, chiefly in the light-colored varieties, but more strongly marked. It is more noticeable in the evening, diminishing considerably in strong sunlight. Mr. Burbank's first scented Verbena Mayflower has been disseminated about six years, and is now well known. It resembles in color and, of course, in fragrance the dainty Trailing arbutus, Epigæa repens, familiarly known as the Mayflower in the Eastern States.

AN OLDER BLUE DAISY.—Referring to Arctotis grandis, the newly discovered "blue daisy" noted on page 614, we omitted to mention the neat little Felicia ameiloides, formerly known as Agathea cœlestis. This Aster-like plant was introduced several years ago by a prominent seedsman as a blue daisy, or "Marguerite." It makes an elegant pot plant, and may be grown like a Cineraria, but is not adapted for the border. The preposterous name of Arctotis Stœchadifolia is now brought forward for A. grandis under the claim of priority, it having been overlooked by the highest botanical authorities. Whatever may be the justice of the claim, it is safe to predict that the gardening public will scarcely consent to use a name which must sound so much like an explosive sneeze. W. V. F.

MULCHING THE ORCHARD.—Grant G. Hitchings, of Onondaga Co., N. Y., has an original way of caring for his apple orchards. He told the writer about it at the annual meeting of the New York Fruit Growers' Association. A correspondent for a local paper recently gave the following description of Mr. Hitchings's plan:

"He sets young trees in grassy instead of cultivated fields, mulches with the mown grass, drawn straw, etc., and grows the trees slowly with low branches and very little trimming, and sprays thoroughly. When the young whip-like branches are loaded with apples, the tips rest on the grassy ground, the upper limbs rest on the lower ones and the tree has a pyramidal shape. The wind has very little effect, and the few apples that fell lay on or in the luxuriant grass. Those who have noticed a naturally grown Norway spruce covered with Winter snow or sleet without a broken limb can imagine an apple tree thus grown and loaded with fruit. At the Geneva Experimental Station the apple trees have horizontal or fastigiate branches and the orchards are carefully cultivated, while here in the backwoods of Onondaga an opposite, unorthodox course is taken with far more successful results."

THIS is the way the Mirror and Farmer puts it: "Prof. Frederick Starr, of the University of Chicago, one of those eminent gentlemen who earn salaries and achieve notoricty by discovering things that are not so and recommending what cannot be done, has made a bid for the gratitude of his fellow citizens of the western metropolis by informing their park commission that it can easily rid the city of mosquitoes by planting castor beans along its streets and walks and in its squares, and that any other place on the map can do the same." We may hear next that a steady diet of baked beans will make one immune to mosquito bites.

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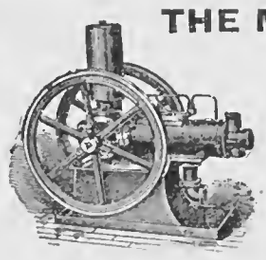

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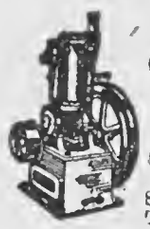

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HOPE FARM NOTES

GIVING ADVICE.—Among the letters recently received is one containing the following:

You are constantly advising others how to manage a farm with apparently good advice, and at the same time recording your failures with apologies and excuses that don't excuse. You approve the Clark grass method—you tried it—you did not get Mr. Clark's result. Reason, your fields are not adapted to the method, or something similar. You should have known this before trial was made. Again, you say "There is more work on the farm than can properly be done"—surely a condition resulting from bad management. Write up one crop that you have ever been successful with, i. e., that paid for its cost and showed a profit, and I am sure all your mistakes will be forgiven. H. H.

Now this gentleman may have seen a farm from the windows of a railroad train, or perhaps he has read some of the articles written by men who farm on paper. It is true that several years ago I was so full of advice that a good deal of it ran over and hit others a hard whack. Since then I am frank to say that I have tested some of these bits of easy advice with sweat-stained dollars—and they have shrunk! Which? Why, both dollars and advice. That is why I give a fair report of many of our failures. All farmers make mistakes, and all fail with some crop at one time or another. Some farmers take the records of such failures out in the back yard and bury them—then they put a monument over the grave with "Success" written on it. As a rule, the dead do not come back to dispute their epitaph. We don't try that at Hope Farm, for we don't pretend to be model farmers.

SOME FAILURES.—Yes, I certainly do approve the "Clark" grass culture. Correct—we did not raise as much grass as Mr. Clark does, yet I am quite satisfied that we cut the heaviest crop of grass that ever was taken from the fields where we tried it. Ought to have known we couldn't do it? I am not a prophet or a mind reader. As we have two fields well stocked with grass and good for some years I am not going to complain. I think our trials have made clear the chief point about Mr. Clark's method—you must have certain conditions of soil and location just right before you can hope to raise grass. You can't any more raise "Clark" grass on a rocky hillside than you can make perfect music on a piano with half the strings out of tune. That is no reason why one should keep the hillside in weeds or the piano shut tight. . . . . Yes, ever since June 1 we have had more work on the farm than could properly be done. The wet season is responsible for that. We had our plans laid with great care, but the constant rains have washed all the stiffness out of them. Our friend seems to have an idea that drenching rains on a heavy soil will kill weeds and make the cultivator work easier. It would do me lots of good to see this man take the mud out of our cornfield, the blight out of the potatoes and Lima beans or make the sweet corn ear and the tomatoes and melons ripen by "good management." My experience is that sunshine is needed for these things, but it appears that I am wrong.

CROPS THAT PAY.—My apple crop has paid a good profit. The early orchard has given a good crop of oats, nearly $115 worth of apples, and now has a heavy seeding of clover and Orchard grass. I do not believe that the apples from that orchard averaged $20 a year for the 10 years before we started to brace it up. Our pig department has paid well. I have paid less than $40 for purebred stock—the rest are grades raised very cheaply on refuse and a little grain. We have sold nearly $50 worth of pigs, besides eating $25 worth more, and if a man were to offer me $125 for the stock now on hand I should laugh—not at him but at his offer! The cost of raising these pigs is light, because we feed quantities of refuse that are not salable until they are made into pork. In the last five years we have made a good profit on two crops of potatoes, and come out about even on two more. This year's crop is as yet a mystery. I first expected a big crop, though luckily I didn't plan to buy a new carriage on the strength of it. I judged the crop by the tops. When I began to dig we concluded that there would be no crop at all, and we began to take better care of the strawberries in the hope of making it up next year. Now the chances are for a fair crop after all, and the high prices may make a profit. Every good farmer knows that farming is not a business to be judged by any single year, but rather by a series of years. Take a crop of wheat. The Hessian fly may ruin it so that the grain will not pay for the fertilizer, to say nothing of labor and rent of land. Yet that crop may not be a failure, because the clover may be so fine that it will show results in half a dozen following crops. I am starting a peach orchard on the Stringfellow plan. It has cost me some little money, and won't pay a dollar for two years anyway. It may prove a failure after all, but even if I never get a cent out of it I believe it will teach lessons that will be mighty profitable. My farm is an old one, and it takes longer to make such tough old soil yield a profit than it does to make an old dog forget his bad tricks.

FARM NOTES.—I have to think of J. Whitcomb Riley's lines:

An' all the corn that's wallered down
Will elbow up again.

We had rain after rain and cloud after cloud until the fodder corn first went down on its knees and there rolled over on its back. Why, it was so thin and bloodless that the cows wouldn't eat it. Then all of a sudden the sun pulled off its coat, jumped into the northwest and booted those miserable clouds right and left. It left them so weak that they gave us a week of bright sunshine. It was good to watch that corn. After one sunny day a few stalks started up here and there in a half-hearted way. They seemed to say: "We have been fooled a good many times this Summer, Mr. Sun. If you mean business this time, say so, and we'll try again. If you are not man enough to hold the fort—we'll stay down." The sun assured them in some way that he meant business, and they "elbowed up" with a will. Some of the corn planted on July 6 is already making tassels. The week's sunshine seems to have saved our main crop of corn. As we all know, this was planted very late, but it is earing well, and the chances are now good for more grain per acre than we had last year. . . . . The second cutting of grass will be a good one. On these two "Clark" grass fields the Red-top made a great showing at first, and I feared for the Timothy. In this second growth the Timothy seems to have come with a rush, while the Red-top is taking a vacation. We are now only waiting for the promise of two or three sunny days to cut all the late grass. . . . . We have a little handicap this Fall in the shape of a sore horse. Old Frank has not been well for some time, and now his shoulder is sore. This has been a hard season for the farm team on a heavy and hilly farm. They would stand still for days in a rainy time, and then be forced to violent exertion when a few days or hours of sunshine came. It is like a leak in the engine boiler when old Frank flinches at the plow.

POTATOES.—At one time I about concluded that if our six acres gave us enough to feed our big family, with a few little ones left for the pigs, I wouldn't complain—at least publicly! The tops were all right—but what's the value of a top that has no bottom to it? But the potatoes, like the corn, "elbowed up" in some way, and at least two fields are doing well. One is the place where we put the mixture of equal parts of nitrate of soda and sulphate of potash around the hills early in July. These hills took on new life. I notice that they kept green and strong, while others beside them died. They are still growing, and the tubers are large and shapely. That fertilizer will pay well this year, yet I cannot lay it down as a settled rule that such late fertilizing will always pay. The other promising potatoes are in that low, wet field, where we put most of our stable manure. No use talking, I must admit that, up to date, those manured potatoes are the best on the farm. At one time one could hardly see the potato vines for the weeds, but we have finally cleaned those weeds out, and find the vines green and thrifty, and what is better, a big bunch of tubers hanging to every Carman plant. Remember that I say these potatoes *promise* well. Wait until they are dug!

MONEY WITH "FUR" ON IT.—The following note has given me quite a little thought. It is from a Connecticut man who told us of some of the wonderful profits in growing tobacco under shade:

Now, while the Hope Farm man refuses a cigar, I do not think he would refuse the money a 10-acre field of tobacco would bring, nor do I believe he would object to growing it if Hope Farm were located in the Connecticut Valley tobacco district.

D. K.

Now, that is a tough one, but I have thought it out with some care. If our friend will offer me the money made in 10 acres of tobacco I will gladly take it, but not one cent would be spent on my family or myself. I would give every dollar of it to some place where true charity is practiced, or true education is attempted, and give it right off. I am told that in Connecticut the Legislature passes a law to prevent the sale of cigarettes, and then turns around and provides money to boom tobacco growing! No, I would not raise tobacco unless I was to use it for killing insects! If any man thinks to kill the Hope Farm mortgage with nicotine we thank him for his good intention, but would rather have the mortgage keep on eating than to have it wiped out by money from the sale of either rum or tobacco. The Madame and the Bud, who are joint owners in the property, will back me up in this. What a crank that fellow is!—you will say. Very likely—I was made a crank by seeing alcohol and nicotine turn the crank that ground honor, health, respectability and manhood out of some good friends of mine!

H. W. C.

Tent Cure for Consumption.

The following statement from the Boston Transcript will interest many people who are studying the dread disease:

"As soon as the weather will permit and proper locations can be selected there will be pitched near Boston the first of a number of camps for consumptives. This camp (and each succeeding camp will be like it) will consist of 10 piano-box tents, arranged in a circle with an open-air fire in the center, and surrounded by a duck wall eight feet high. Each of these tents will be a consumptive's home; a consumptive will sleep there, even through the coldest weather, with no other protection than plenty of felt blankets, felt sleeping boots, and a two-gallon jug of hot water. The tents are made of 12-ounce duck, are only seven feet high, with four-foot walls, boxed in around the bottom a foot from the ground. They will be lined with weather paper. The flaps will open towards the fire, the 10 tents making a little circle about a clean gravel court. In the duck wall which will surround the whole will be a single entrance. The people who live there will wear one heavy suit night and day. They will each of them take one quick soapless bath a week, and will eat three good hearty meals a day, with coffee in the morning and hot chocolate any time of the day or night. Their bill of fare will include milk, eggs, vegetables, bread and butter and meat—chiefly beef, mutton or pork, broiled on spits before the fire, or roasted in the embers, or boiled down into soup. This open life is expected to cure them of their disease. The method is the result of experiments made last Winter in a tent by a scientist whose name has not yet been divulged. This man pitched his tent during the coldest part of a January which was more than usually cold, and stayed in there until the early Spring, engrossed in his experiments, but finally seeing patients and announcing that he wanted as many consumptives as possible to prove the truth of his theories."

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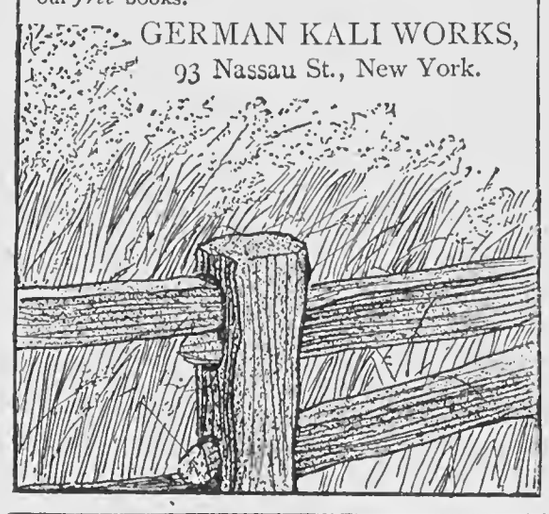

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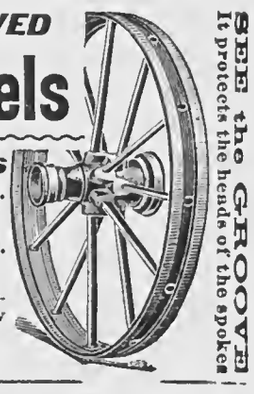

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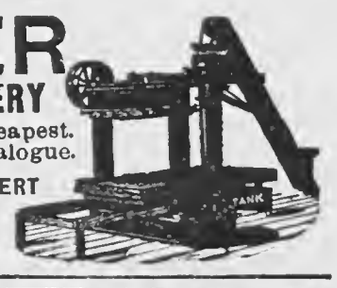

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THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, SEPTEMBER 14, 1901.

CUT away the trees, shrubs and vines from around the well-arranged country home, and you will cut a big slice from the selling price. Add such things to the treeless home and you make it worth more, and also easier of sale. Why should the farmer scorn such things when they have a direct bearing on the selling value of his property?

*

WE hear many reports of the depreciation of farm property, but some of the "slumps" in other lines of business are seldom reported. Two mills in New England were recently sold at auction. One was appraised by experts in the Spring for $123,850.47—yet it brought only $41,250. Another, appraised at $57,692, brought only $21,650. Farming in some localities is hard work, but wouldn't you rather have your money in a comfortable farm than in such mill property?

*

THE statement by Assistant Secretary Brigham on page 626 puts the position of the Agricultural Department with great clearness. It is possible to develop a great market for our fruits in Europe. In order fully to meet the requirements of this market we must know how to pack, what to pack and how to ship. Our customers are many miles away—how can we best reach them? It will evidently cost money and time to find answers to these questions. In providing a new market for surplus agricultural products the Government benefits the entire country. We think the Secretary of Agriculture is clearly within his privileges when he guarantees shippers against loss in these experiments.

*

PROBABLY the largest cotton grower in the world is the State of Mississippi. This State operates 12 large farms, using the convicts as farm laborers. This work was begun in a small way as an experiment, but was so successful that now the yearly profit is said to be $150,000, and the State has purchased 12,000 acres of cotton land. It is now proposed to use the county convicts on smaller farms. Louisiana and Texas, it is said, have followed Mississippi with State convict farms, and other Gulf States are considering the matter. Should they all decide to adopt both State and county farms, an amount of cotton would be produced which would seriously affect the sale of the crop grown by small farmers. Thus far the amount of this State cotton has not been large enough to make competition with free labor serious—but it will be easy to overdo the matter.

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THE other day a farmer volunteered this information: "The people in my neighborhood prefer THE R. N.-Y. to any other agricultural paper!" Of course we wanted to know why. His reasons are about as follows: "There are a dozen or more good agricultural papers in the country. They all have their strong points, and are well worth the price. The information they print is timely, but one can pick up this week's paper and tell pretty nearly what it contains by looking at the corresponding issue for last year! In other words, you know pretty well what to expect before the paper comes. On the other hand, THE R. N.-Y. always contains something new and original. You feel sure that every issue will contain a pleasant surprise. A tired farmer will find rest in its columns, and carry from its reading thoughts that will haunt him for many a day." We quote this answer here because it was evidently sincere, and seems to indicate that our plans are working out into definite results. It has never been our policy to disparage the work of our contemporaries. There is room for all who will work honestly and fearlessly for agriculture. Our ambition is to make THE R. N.-Y. so fresh, original and helpful that it will occupy a class by itself. During the past season our circulation has increased faster than ever before, and this increase has been largely due to the personal influence and work of our regular subscribers.

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THE list of troubles and diseases that may be helped or cured by work is a long one. Let some genius establish a sanitarium in a healthful country place, provide manual labor of various kinds in field, shop and kitchen, study his patients, prescribe for each certain forms of work, and tactfully get them to follow out his instructions as well as they do those of the physician, and he could publish a startling list of cures. Without irreverence it may be said that a multitude of people can, if they will, work out their own salvation so far as health is concerned, though it is doubtful whether this work cure will ever become popular. Wholesome employment, that stirs up the blood and unused muscles, will remove the cause of many forms of nervousness, melancholy and other mental diseases, and make one forget for a time at least, homesickness and disappointments.

*

IT is becoming the custom with some farmers to raise chickens in the latter part of the Summer, or after haying. The reasons for this are somewhat as follows: One cannot get Winter laying pullets unless the chicks are *very* early. After the first few chicks of Spring are out, those hatched in July and August will lay about as early the following Spring as those hatched in the fore part of the Summer. The cost of raising from August on is not so great, and much of the time, from the middle of August till the first of November, is quite favorable for the growth of chickens. Besides this, there is, on most farms, more leisure time to look to the chicks after haying is over than during the rush of Spring work. Add to this the fact that the early hatches are more uncertain than those later in the season, and the case is, for many people, strongly in favor of Fall-raised chicks. It is also true that in some locations the Winter egg does not bring the most clear money. Eggs in late Summer cost less and bring nearly as much money.

*

ON September 1 a law went into effect in New York State prohibiting butchers from selling meat on Sunday. A great amount of business has been done in meat markets on Sunday morning, especially in the larger cities. Much of this buying is the result of thoughtlessness on the part of people who might as well have laid in their supplies Saturday night. There are some who have no conveniences for keeping meat over night in hot weather. This law may work hardship to them, but it is doubtful whether there is any great number of meat buyers in this class. The law is the result of a movement in the interest of the journeyman butcher, whose Sunday has heretofore been beheaded. Many butchers were not anxious to open their shops on Sunday, but felt that they must, or suffer severe loss of trade. Putting off until Sunday morning buying that could as well have been done Saturday night is practically robbing some one of rest to which he as a worker is entitled; and it would seem as though those who claim to have respect for the Sabbath, as well as a reasonable regard for the rights of others, should not add to the present burden of unnecessary Sunday trade.

*

WE receive a good many lively letters about the bulletins issued by the experiment stations. A fair summary of this correspondence indicates that the majority of farmers, including many of the more prosperous, are not able to understand most of these bulletins except after hard study. Among the various opinions brought out in this discussion is the following:

In your issue of July 27, page 515, S. R. Walker says: "I do not think that the bulletins should be made so plain that any farmer could read and understand them as readily as he could a daily paper—if he could he would forget their contents just as soon." If his theory is correct I would suggest that our experiment station bulletins could be improved if written in blank verse like Milton's Paradise Lost. J. W. S.

There may be poets budding out at the experiment stations who can give us a stirring poem on the slaughter of bad bacteria or the benevolent murder of Potato beetles by some of their parasites. We doubt, however, if their poetry will ever be committed to memory or declaimed at school exhibitions. The fact of the matter seems to be that one sort of a man is required to dig out and develop a scientific fact, and quite a different one to present that fact so that the common people can grasp it. The world has known some men who were able to do both kinds of work, but as a rule the scientist who gets nearest to Z appears to forget the time when he did not know A.

AND now we are to have another great fair—at St. Louis in 1903 to commemorate the great "Louisiana Purchase." It would seem as though the public is being treated to rather more than its fair share of fairs, but this one will be probably the greatest agricultural exhibit ever known. Among other things it is designed to have living exhibits of vines and trees. For example, a complete exhibit of all well-known varieties of American grapes will be planted in the Spring of 1902, so as to have them in actual bearing during the Exposition. Other trees and vines will be grown and exhibited in the same way. This will, we feel sure, prove an attractive display. We have urged the managers of the New York State Fair to have fields of potatoes and corn planted on or near the Fair grounds and encourage trials of farm implements in actual field work. That ought to make one of the best displays at the Fair.

*

RECENT experiments in Europe and Cuba demonstrate beyond all reasonable doubt that mosquitoes carry and transmit the virus of yellow fever and malaria. Persons in normal health, shielded from exposure to these diseases, have permitted themselves to be bitten by mosquitoes previously allowed to bite patients suffering from these particular diseases, and in almost every instance typical symptoms quickly followed, ending in several yellow fever cases, with the death of persons bitten. The vast benefits to humanity to be gained by fixing the chief source of transmission of these dangerous maladies tax the imagination. When we have located the enemy the problem of limiting his efforts becomes much simplified, but what can be said of the heroism of those who take upon themselves such terrible personal risks, with no hope of adequate compensation should they survive? It is evident that true courage is not confined to boastful rough riders, but is rather to be met with in the more obscure walks of life. Some of the subjects of the recent yellow-fever experiments wished to become immune by experiencing an attack under the best medical care, so that they might devote their future to nursing those afflicted with the dread scourge, but all were said to be impressed with the possible benefits to humanity and science arising from their ordeal. All honor to such unselfish men and women.

*

BREVITIES.

HE is surest of his laugh who laughs first.

NO, people who are set in their ways seldom hatch out new ideas.

THERE is an unnatural demand for "natural" fruit this year. It can all be sold.

PLENTY of farmers have been obliged to "hoe potatoes with a sickle" this year.

LAST year Americans exported 32,069,371 pounds of clover seed, nearly half going to Germany.

A REPORT from Kansas: "The Ruby Queen died, like most everything else in Kansas this year."

WE do not believe that there is any danger in cutting the hemp twine bands on machine-bound corn into the silo.

THE demand for corn fodder is so great in the West this year that we understand even the sled corn cutters are about all sold.

THE average yearly exports of potatoes for the past five years were 809,472 bushels. This was only about two per cent of the total.

REPORTS of attempts to "corner" the apple crop come from various sections. No question but that buyers are hard at work getting all the fruit they can.

WE have fodder corn which has so little quality in consequence of lack of sun that the cows will hardly eat it. They must certainly call it "green goods."

WHAT a flood of turnip seed has been sown this year for manurial purposes. It is going into many orchards and cornfields—much of it mixed with Crimson clover.

ONE of our readers who has just been through the Province of Quebec says he saw at one place a shipment of a dozen new spinning wheels, such as our grandmothers used to turn!

AN English orator was endeavoring to paint the troubles which at times confront the dairy farmer. He told of a farmer who had 50 cows to milk. "It was a case of all hands to the pumps!" said the orator.

THE newspapers report that the Colorado Potato beetle has finally appeared in England. If it spread to Germany and France as rapidly as it did in this country the food supply of Europe will be upset for several years.

MOSQUITOES have carried many disease germs and pricked them in, but another germ may be their undoing. A scientist is now searching for a disease germ which will end the mosquito problem. This germ is to be used on live mosquitoes, which will be set free and sent abroad to spread the disease among their fellows. Let us hope our scientific friend will succeed in his search.

THIS is the way one friend puts it: "The talk on smoking reminded me so forcibly what an influence the devil in our natures will wield over us if we stop to parley with him. Intellectual arguments are all right when only intellectual things are at issue, but when there is a question of right or wrong there should never be any compromise, or even consideration, by the man whose highest aim is to be right though the heavens fall."

Events of the Week

ATTACK ON PRESIDENT.—September 6 an attempt was made to assassinate President McKinley while at the Pan-American Exposition. He was holding a public reception, the assassin while apparently preparing to shake hands with him, firing two shots from a concealed weapon, one bullet penetrating the stomach, and causing a serious, though not necessarily fatal wound. The criminal is a Pole, giving the names of Czegolz or Nieman. He asserts that he is an anarchist, but members of the anarchist party disclaim his assertions.

DOMESTIC.—A boiler explosion wrecked the steamer City of Trenton on the Delaware River below Philadelphia August 28, killing 29 persons and injuring many others. The victims were horribly injured. . . . . A dynamite explosion in a coal mine at Shamokin, Pa., August 29, shockingly mangled eight men, two fatally. . . . . State Treasurer J. R. Stowers, of Mississippi, was suspended by Gov. Longino August 28. Mr. Stowers had admitted that $107,000, missing and unaccounted for when the Governor counted the cash August 15, had been deposited in banks, which is forbidden by law. The Jackson banks denied having any of the money on deposit, and Mr. Stowers' explanation of its whereabouts was not satisfactory to the Governor. . . . . During a terrific storm at Altoona, Pa., August 31, while a golf tournament was in progress, one person was killed, seven were rendered unconscious, and 200 spectators were more or less seriously shocked by three successive bolts of lightning. . . . . An appeal to President McKinley for protection for the negroes who are being lynched for their crimes was formulated and indorsed by the negro territorial Baptist Sunday school convention, in session in Oklahoma City, O. T., August 30. The convention does not attempt to excuse offenses, but asks the President to use his executive power in securing for them a fair trial in the courts before punishment is meted out. . . . . A rainstorm that prevailed September 1 in Cleveland, O., wrought havoc all over the city. Houses were wrecked, and only heroic work prevented heavy loss of life. Trains were delayed by washouts, and street car traffic on many lines was at a standstill. The river was a raging torrent. The property loss is estimated at $1,000,000. . . . . A railway collision at Newark, N. Y., August 31, killed 16 persons. . . . . At Kalispell, Mont., August 31, 18 freight cars broke loose and rushed down a mountain, crashing into a passenger train. A terrific wreck resulted, the cars taking fire; 41 persons were killed. . . . . The revenue cutter Rush has returned to Sitka from Yakutat, 200 miles westward, where it went to quell serious Indian troubles, which have caused great alarm among the whites. Governor Brady addressed the Indians, warning them to obey the laws and refrain from disorders. They also were ordered to stop polygamy. Nearly 200 were vaccinated by the surgeon of the Rush. . . . . The seventh week of the great steel strike shows no actual change in the situation. Except in a few scattered cases the strike has been noticeable for its quiet and orderly character. The most serious blow the men have received is the refusal of J. P. Morgan to make contracts directly with a labor organization unless it is an incorporated body.

ADMINISTRATION.—Mr. Tracewell, the Comptroller of the Treasury, has rendered a decision which disposes of the famous De Lima case. He holds that under the recent decision of the United States Supreme Court the judgment obtained by De Lima & Co. for $14,597 from the United States on account of duties paid by them on goods shipped from Porto Rico to the United States, between the date of the ratification of the Treaty of Paris and that of the approval of the Foraker act, may be paid out of the general appropriation of the Treasury Department, without further action by Congress. . . . . The President has appointed Wm. H. Hunt, of Montana, Secretary of Porto Rico, to be Governor of the Island, vice Allen, resigned.

HAWAIIAN ISLANDS.—The members of the Bar Association of the Islands ask for the removal of Abram S. Humphreys, judge of the circuit court of the First Judicial Circuit Territory. They charge that Judge Humphreys controls and is actively engaged in the publication of a partisan newspaper while exercising the powers and performing the duties of circuit judge; that he takes an active part in bitter political controversies; that he uses his powers as judge to promote his own personal and political ends; that he is harsh, arbitrary, tyrannical and vindictive towards members of the bar and others, and that he has held in disregard the obligations devolving upon him as judge, and has brought the same into public disrepute and under suspicion. Judge Humphreys denies the charges, and the matter is under investigation.

FARM AND GARDEN.—Plow manufacturers of the United States have decided upon an advance of 10 per cent in the price of plows during the coming year. They claim that the cost of production is much greater than it was a year ago.

The county fair at Brandywine Springs, Del., opened August 28. Addresses were made by Aaron Jones, of South Bend, Ind., Master of the National Grange, and R. H. Daly, Master of the State Grange. The largest prize winner was J. Edward Addicks, receiving 17 on his exhibit of swine, vegetables and horses. The next largest prize winner was Arnold Naudain, who received 10 awards on cattle.

Prof. Leroy Anderson, late of Cornell Agricultural College, is now instructor in dairy husbandry at the University of California, Berkeley. The special course in dairy work is attracting students from all parts of that State.

The Wolverine Sugar Company, at Benton Harbor, Mich., failed August 28, the announcement being made August 31. Legal proceedings already have been begun to protect the holders of outstanding notes to the amount of $107,700 and the Chicago Trust Company, which holds $125,000 of the company's bonds. Local fields during the last two years have not raised enough beets to run the factory, and the managers had contracted for the product from 4,000 acres near Shelby, Ind., for this season. The factory cost $320,000.

A meeting of the Gloucester County (N. J.) Board of Agriculture was held at Mullica Hill, N. J., September 3. The question of "Needed Legislation for the Good of Agriculture and How to Procure the Same" brought out the views of the farmers. William H. Hoffman said legislation that would regulate sending produce to market might be a good thing. He didn't believe it was good policy to send truck to market that some farmers wouldn't feed to hogs. In the matter of legislation, Thomas Borton thought the farmer was not fairly represented. "Farmers," he said, "should agree among themselves, organize and stay organized, and work as a unit." He said it lies with the farmer to correct politics, and what interests a Republican farmer should interest a Democrat farmer. The question, "How Can We Maintain and Increase the Dignity and Honor of Our Occupation," was ably discussed, the leading thought being that the Grange is one of the best means of elevating the farmer in his occupation.

The fruit crop of Kansas, comprising apples, pears, peaches, plums and grapes, is very promising, and, with good weather, will be abundant in all fruit-growing counties. Some have more than ever in their history. Apples, and in fact all fruit, is freer from insect depredations and fungous diseases than usual. There will be a larger proportion of first-grade apples than ever. Trees generally in excellent condition, mainly owing to the excessive Spring rains.

Oregon will produce between 20,000,000 and 24,000,000 pounds of dried prunes this year.

The sixth annual meeting of the American Association of Farmers' Institute Workers will be held at Buffalo, N. Y., September 18-19. A large number of delegates will be present from the United States and Canada.

Crop Prospects.

AUGUST 31.—We are very busy in bean harvest; weather extremely bad for beans. They are ripening unevenly and heavy showers cover a good many with mud; great complaint of not podding well. Big vines but few pods. Potatoes late and poor mostly; apples, none; wheat ruined by Hessian fly, but farmers peg away as if there was no such word as fail. S. W. C.

Caledonia, N. Y.

We are having ideal corn weather, and the outlook for late-planted fields grows brighter every day. Nothing but a very early frost can prevent a good average crop. There seems to be a special crop of Potato bugs provided for the late-planted fields. Wheat is yielding better than expected, but there will be a large acreage of rye sown this Fall. Buyers began to ship Bartlett pears about August 25, paying $1 per bushel and 60 cents for Clapp's Favorite. Evaporator men are hustling for the few apples we have. They are paying from 40 to 60 cents for everything on the tree. The Ben Davis brings the latter price, but the time will undoubtedly soon come when the picture given of that variety by Editor Collingwood at our Wayne County Fruit Growers' Association will be a reality, and expert grafters will be in great demand. At least 75 per cent of all the apple trees planted in this section during the last decade have been of that variety, and it will so continue while growers realize a greater profit from them. E. A. G.

North Rose, N. Y.

The Western Corn Crop.

Reports from the West about the corn crop vary widely. The truth seems to be that on the whole the damage done by the drought is not as serious as was at first supposed. There will be more corn than dealers figured on a month ago. One thing however is true. The drought has taught farmers to save the stalks. The following note taken from the Live Stock World is a fair statement of conditions:

"Those who never used shredded fodder don't know its value, and they seem hard to convince. For two seasons previous to this we have cut no hay, have fattened and sold five loads of cattle, and they were fed no hay. Fodder and oat straw in addition to the grain ration also wintered stock and breeding cattle in good condition. I consider it one of the best of feeds for horses either idle or at work. All that is not eaten makes the best of bedding, and is well worth all it costs for manure. I believe it only a question of time, which should be now, where there will be as stable a demand for it as there is for hay and straw. There will be fodder enough left standing in the fields here if properly cared for to winter, in good condition, a large portion of the stock sacrificed by owners in the States affected by drought. Yet people here still continue to let the cornstalks stand in the field, and what cattle they keep grow poor all Winter when here is forage abundant if they would only save it."

Macaroni Wheats for America.

In THE R. N.-Y. for August 24, under Brevities, page 584, you speak of macaroni wheats. Are there any special conditions required for those wheats? This portion of North Carolina is at present producing a fine quality of wheat. The last half-dozen years have proven wheat to be one of our best crops—cash crop at that. Cotton and tobacco no longer have that exclusive distinction. In fact, southern agriculture has shown a tendency during the last few years to grow the crop best suited to the soil and climate, and nearest to the market. With the culture of wheat our milling facilities have almost kept pace. Not more than a decade back this section was a large buyer of northern and western ship stuff and flour; now flour and feed is shipped from here. Last Fall, within the neighborhood of Thomasville and mostly to the south of it, there were upwards of 100,000 bushels of wheat thrashed. That meant $75,000 to the farmers. This Summer has not been as favorable to the perfection of the crop as last; too much rain. Now we begin to need something like a wheat exchange or elevator facilities to handle the large crop that is being raised, and which every effort will be directed to keep raising in the future. It is reported that it took 400 binders to gather the wheat crop of 1900 in Randolph County, the county joining Davidson on the east. During the last three years more than 1,000 binders were brought into this section. Each year sees an increase of improved machinery coming here. The one-horse plow is not the breaking plow, as it was not many years ago; more heavy disk plows and heavy three-horse plows are used to break the wheat land. Last Summer, at the time to break land for wheat, the weather was dry and ground hard. We put four horses abreast to the big three-horse plow, weighted the plow—it had a wheel at the end of the beam—and the plowing went right on. The disk harrow, drag and roller, made a good seed bed. Last Fall the early seeding was almost destroyed by the Hessian fly; years ago, during the days of slavery, when not much wheat was grown, the early seeding would do the best. But now with so much greater acreage and better tillage, with land made so much richer by growing clover and fertilizing heavily, the later seedings, after the middle of October, are better and safer. Besides the Hessian fly in the Fall the late frosts in the Spring right often kill the early-sown wheat. I would like to see the macaroni wheat tried here. J. B.

Thomasville, N. C.

R. N.-Y.—The National Department of Agriculture, Washington, D. C., has issued an interesting pamphlet on this subject. Send and get a copy of it. Seed is to be brought from Italy, as we understand it, and sent into the most desirable places for experiment.

Crop and Weather Notes.

Heavy rains have injured crops and hindered farm work in parts of the South Atlantic States. The weather continues hot and dry in the Missouri and upper Mississippi valleys, and late corn is suffering. In California the weather has been too cool for the proper maturing and drying of fruits, and light frost is reported in Nevada. Late corn in the central valleys is doing well, and will be out of the way of frost by September 20. The week has been unfavorable for cotton. Rust and shedding and premature opening are reported. The apple outlook has slightly improved in Kansas, Indiana, Illinois, Arkansas and West Virginia. Plowing and seeding are well advanced except in Virginia, where there has been an excess of rain, and in Missouri, Nebraska and Arkansas, where the soil is too dry to plow.

The Potato Beetle in Europe.

The agricultural authorities of England wisely take great precautions to prevent the spread of the Colorado potato beetle in that country. Considering the amount of shipping to English ports, and the wandering habit of the bug, which delights in crawling into boxes and barrels, it is surprising that the pest has not gained a stronger foothold there. The following from the Journal of Commerce tells of the lively reception the bug gets when found in an English potato field:

"Several specimens were discovered Sunday in a potato patch near the Tilbury Docks, on the Thames, which caused an extraordinary commotion among the agriculturists. Since the presence of the bug was reported, the Board has caused the ground to be quarantined and all plant and animal life upon it was destroyed. The environs were searched for other specimens and a notice was issued to the public, calling attention to the law, which provides that any person may be fined £10 who does not immediately notify the police of the discovery of the bug. The policemen are obliged, under heavy penalties, to warn the Board of the presence of the bug."

A Practical Method of Co-operation.

One of the chief drawbacks to selling farm produce is the fact that it seems necessary to sell it through middlemen. Why is it not possible for farmers to exchange products to a greater extent than is now practiced? For example, the farmers of the sandy portions of south Jersey produce fruit and sweet potatoes to sell. They buy a part or all of their Winter supply of round potatoes, apples, oats, corn, hay and bran. In Vineland there is a successful Sweet Potato Growers' Association, which sells the produce of a large number of farmers. One barrel or a carload of sweet potatoes can be shipped at short notice. Sweet potatoes have been shipped as far as Dakota every Fall by Vineland growers, and have been stored there for Winter use. Therefore, it is reasonably safe for any Grange or other farmers' organization within 500 miles of Vineland to buy sweet potatoes for members to store for their own use in Winter. Full instructions would be sent for storing. When distant farmers have learned to store them successfully, they can fill their cellars and sell them at a high price during the cold spells in Winter when their nearby village cannot have them shipped in because of danger of freezing en route. So much for the sweet potato side of the problem. Fruit could also be shipped to advantage, but sweet potatoes would be the best to start with.

The farmers of Vineland could use or sell, in car lots at our local markets, round potatoes, apples, oats, corn, hay and lumber; and in smaller quantities butter, cheese, wheat, etc. Even if our sweet potatoes and fruit were not wanted we would like to buy our products in large lots direct from producers. If this method were practiced farmers would gain on both buying and selling, and especially if carloads were shipped on transportation also. If a business of this kind developed sufficiently probably THE R. N.-Y. and other farm papers would set apart a special column for advertising products of the different sections of the country. All that would be needed would be a heading to the column something like this: "This column is devoted to the advertising of farm products particularly with a view to bringing producer and consumer nearer together by means of exchange of produce wherever possible." Under this heading the advertisement could be made very short; for example, "John Smith,——Grange, Little Falls, N. Y. Cheese, apples, potatoes." GEO. A. MITCHELL.

New Jersey.

Wages for Grape Packers.

"Grape help" as we understand the term here in the Chautauqua grape belt, applies to harvest hands, also those employed in tying the vines to the wire in early Spring. It is composed of sturdy women, also boys and girls from 14 to 20 years, and "sissy" men. The prevailing wages are $1 per day without board and $3 to $3.50 per week with board. During the past four years piecework method has developed to some extent. For picking and packing eight-pound baskets in the vineyard, one cent per basket is paid. During the same period there has been considerable development in selling grapes in bulk. These are picked in gift crates holding about 30 pounds each, for which two cents per crate is paid. The piece-work price means that the picker boards herself. Picking and packing baskets in the vineyard is often carelessly done, and to such extent as to impair the reputation of grapes from this belt. Our help, for the most part, is from good families; more so formerly than now. Near canning centers, Italian help is being used more and more. JNO. W. SPENCER.

Woman and Home

From Day to Day.

JUST BEING KIND.

So many bright-hued hopes are vain!
  So many years doth Time devour
In fruitless striving after gain
  To serve the pleasures of an hour!
We toil and struggle hard to reach
  Some bright ideal good, and blind
To happiness within our reach—
  The reflex joy of being kind.

With aspirations pure and high,
  For some grand, noble work to do,
To bless our fellows ere we die,
  We strive with hearts sincere and true;
Ignoble aims we cannot brook,
  Our duties we have well defined,
But 'mid their clamor overlook
  The one most weighty—being kind.

If backward o'er our lives we cast
  A glance, we see transfigured there
Sweet faces—"plain" in that dim past—
  Halo-encircled now, and fair;
"What is this wonder-working power
  Which glorified?" we ask, and find
The secret like the scent of flower,
  So simply sweet—just being kind.
—The Ram's Horn.

*

THE smile cure is one of the latest remedies for morbid melancholy. If you keep the corners of your mouth turned up you can't feel blue, and considering how many bodily ills are intensified by mental depression, an even cheerfulness is a duty we owe to our bodies as well as our souls. When in doubt or depression, just smile a little; if nothing more, the smile will be an antidote against the fretful little lines which, on a woman's face, often mean conscience and self-sacrifice rather than anxiety or ill-temper.

*

VERY good advice on the subject of health is offered by Ithuriel Butters, one of the characters in "Geoffrey Strong," a charming New England story by Laura E. Richards. When the doctor asks him whether he ever studied medicine, Mr. Butters grimly replies, "No, sir! but I've lived with my own bones and insides till I know 'em considerable well; and I've seen considerable of folks, them as doctored and them as didn't. My wives doctored, all three of 'em. I buried two of 'em, and good ones, too; and, like as not, I'll bury the third. She ain't none too rugged this Summer though she ain't but 70. But what I say is, start well, and stay well, and don't worry. You tell your patients that, and fust thing you know you won't have any."

*

ON the occasion of Grange meetings, farmers' institutes or similar gatherings, where there are few facilities for providing meals for those from a distance, some modification of the following plan may prove useful: To raise money for a village charity, a circle of the young ladies of the place took advantage of the gathering of a men's county convention, and served luncheon to the members in rather a novel way. Individual boxes were packed and sold at 25 cents each, a little slip in every box entitling the purchaser to a cup of tea or coffee served at a table set up for the purpose on the village green. The luncheons were put up with the greatest care and daintiness, different articles that might grow mussy being wrapped separately in waxed paper. Two or three homemade bonbons, with fruit, cake, a tiny cup of salad—chicken or salmon—a relish of some kind, like olives or pickles, were included in each box, a Japanese napkin of pretty design being folded and placed on the top before the cover was put on. The scheme was so successful that the same idea was carried out afterward at a church festival, with the additional touch that in some of the boxes went a card bearing the name of one of the young lady attendants, every one of them being thus represented. The man who was lucky enough to draw one of these boxes had the privilege of buying another box, and asking the young lady named to take supper with him.

*

A FRIEND asks how to make plain little cakes, something like short cake, with sour cream. Use a cupful of sour cream which is well loppered but not old enough to have any suspicion of mold about it; stir in a scant half teaspoonful of soda, or just enough to make the cream sweet to the taste; add a little salt and enough sifted flour to make a dough as stiff as a pie crust. Roll the cream cakes out as thin as a pie crust, and cut the crust into long oblong strips

3903 Misses' Five-Gored Skirt, 12 to 16 yrs.

about 1½ inch wide by three inches long. Bake the cakes in a hot oven until they are a rich brown. They should be baked quickly, like a pie crust, and like a pie crust they will increase many times in size. These are a delicious accompaniment to the breakfast coffee, when freshly baked. Dough made after this recipe is excellent for short cake, or as a crust for chicken pie.

*

DON'T forget to have a plant or two of parsley potted in the Fall to keep during Winter in a light place in the kitchen. The leaves produced by these old roots are strong in flavor, and sometimes rather bitter, but it is always a pleasure to have them for garnishing. Parsley can be preserved for winter use by drying. Scald the leaves, dry in a slow oven, and pack in airtight jars. When used, freshen a moment in warm water. Dried thyme, parsley, sage and mint, at least, should always be provided for Winter use. Among dried leaves for flavoring we should not forget bay and orange or lemon. Bay leaves are excellent in soup, stews and spiced meats; orange or lemon leaves give a spicy sprightliness to milk puddings, especially rice. Bay leaves are also used in these milk dishes.

*

FALL traveling hats, very suitable for general wear, are made of frieze or camel's-hair cloth, tucked and stitched to form little ridges over the fabric. Many of them are close turbans, that fit snugly upon the head, trimmed with a knot or loops of bengaline silk and a pheasant's breast or duck's wing. These hats are usually seen in the lighter shades, white, string, beaver, castor, nickel, beige, gray and brown, though they are also made in cardinal red, myrtle green and Wedgewood blue. It is saddening to all friends of the feathered tribe to learn that whole birds and all sorts of wings are again appearing freely in the Fall hats, as well as the plumage of game birds and domestic fowls. The breasts and montures made from the plumage of birds used to provide food are artifically mounted to give very beautiful results, but apparently neither legislation nor sentiment affects the woman who still insists on decorating her hat with a barbaric adornment of pathetic little feathered bodies.

The Rural Patterns.

The girl's skirt shown combines five gores with a graduated circular flounce. The upper portion of the skirt fits with perfect smoothness, the fullness at the back being laid in inverted pleats, while below the knees it takes the fashionable flare. The flounce can be arranged over the skirt on indicated lines, or if preferred, the material can be cut away beneath and the flounce seamed to the edge or, again, the skirt can be cut full length and left plain. To cut this skirt for a girl 14 years of age, 6⅝ yards of material 21 or 27 inches wide, 6¼ yards 32 inches wide or 4½ yards 44 inches wide will be required when the flounce is used; 4¾ yards 21 or 27 inches wide, 4⅝ yards 32 inches wide or 2⅞ yards 44 inches wide when the skirt is made plain. The pattern No. 3908 is cut in sizes for girls 12, 14 and 16 years of age; price 10 cents from this office.

Simple blouses with deep round collars are among the latest designs shown, and are very generally becoming. The design illustrated is tucked across the front to yoke depth and includes tucked elbow sleeves, which are charming when the stock and shield are omitted, but can be made with full length bishop sleeves when preferred. The tucks at the front give graceful fullness below. The original is made of figured louisine silk in shades of pink, and is banded with black velvet ribbon; but all pliable materials suitable for tucking, are appropriate. The foundation or fitted lining closes at the center front. On it are arranged the smooth back, the tucked fronts and the deep collar. The elbow sleeves are peculiar, being tucked in the center and free at top and bottom, and

3907 Blouse Waist, 32 to 40 Bust.

form graceful frills at the elbows. When the waist is desired high neck the shield and stock are added and the plain sleeves can be substituted for the fancy ones whenever preferred. When made unlined the gathers at the waist line are stayed with a band of material, or the fullness is drawn up by means of tapes inserted in an applied casing. To cut this waist for a woman of medium size, 4¼ yards of material 21 inches wide, 4¼ yards 27 inches wide, 3¾ yards 32 inches wide or two yards 44 inches wide will be required when elbow sleeves are used; 4¾ yards 21 or 27 inches wide, 3¾ yards 32 inches wide or 2¼ yards 44 inches wide with bishop sleeves. The pattern No. 3907 is cut in sizes for 32, 34, 36, 38 and 40-inch bust measure; price 10 cents from this office.

Rural Recipes.

Beach Plum Cheese.—Beach plums are a kind of small wild plum. They are very acid. It is considered best to gather them when they have been slightly touched by frost. Put the plums into a jar and cover it. Stand the jar in a pan of boiling water, and continue boiling it till the fruit is quite soft. Next turn them on to a wire sieve and rub them through. This will prevent stones and hard skins getting into the preserve. Then measure the juice and pulp as you put it into a bright preserving pan, and to each pint of pulp and juice allow one pound of loaf sugar. Boil carefully, skimming and stirring well till some will set firmly when cooled on a plate. Put it into small jars or molds and when cold tie down securely. To serve, slip it out of the pot on to a pretty glass dish or plate, and cut into slices.

Grape Catsup.—Wash the fruit, drain, and put into a preserving kettle. Mash well, place on the fire and cook until tender, and then strain. To every 10 pounds of pulp allow six pounds of sugar, one tablespoonful each of cinnamon, cloves, allspice and pepper, and a teaspoonful of salt.

Plum Catsup.—Wash the plums and stew until tender in enough water to prevent burning, then strain and weigh. To four pounds of pulp allow one pound of sugar, four teaspoonfuls of cinnamon, two teaspoonfuls of cloves, two teaspoonfuls of pepper, and salt to taste. This is an excellent relish to serve with roast meats.

Tomato Catsup.—Nearly every housekeeper has her own recipe for this; the following, however, is very good: Scald, peel, slice and core a peck of ripe tomatoes. Use the bright red tomatoes. Place in a porcelain kettle, and cook until tender, and then strain. To this quantity of tomatoes add three large onions chopped very fine, one tablespoonful of salt, one teaspoonful of cayenne pepper, five tablespoonfuls of ground mustard, and a tablespoonful each of ground black pepper, ground cloves and celery seed in a bag. Simmer about six hours.

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Western New York Sixty Years Ago.

In 1832 a New England family, seized with the emigration fever, left their home in Vermont to try frontier life in western New York. They bade a long, and as they believed a last, farewell to their relatives, for they were going to the then primitive Far West. They rejoiced in the luxurious mode of travel, altogether new at that time, by which they could have the shelter of a roof as they journeyed, and could be moving on towards their destination while sleeping in their beds. Their hearts often swelled with gratitude to Governor Clinton, whose enterprise had secured for them the Erie Canal with its easy and rapid mode of transit. In two weeks this family made their journey of 400 miles, settling about 30 miles east of Buffalo. Here a log house—a log cabin we would say to-day—awaited them; the heavy timbers of this building anchored it so firmly to the soil that the Winter winds did not blow it away, but they came in at every crevice, with their bitter blasts, freezing the dish towel in the hands that used it, and biting the fingers that held it. The fire on the hearth did its utmost to drive out this discomfort; I think the wide open chimney-place would have taken in a cord of primeval forest wood at 10 mouthfuls. I have seen the first cut of a forest tree rolled with a crowbar into its place as a back-log; the andirons, which had been removed while the log was rolled in, being set back, huge sticks of split wood were piled high in this crater. One word about these andirons. They were made of unadorned iron; if they had had brass knobs on them we should have thought we belonged to the aristocracy, so slight were the gradations between this class and the common people. Soon this fuel gave out a wealth of warmth and brightness, as it blazed and crackled and shot up great tongues of fire. Our times can afford no such luxury as this oak or hickory back-log; but to know what wonders such a fire could do you need to taste some of the dishes it had flavored for the table; the matchless short cake baked before the fire, rounded at its edges, its whole face wrinkled and fluted as only the richest cream could make it, with such a delicate brown as the kiss of the firelight alone could give. The utensil in which this was cooked is as much a thing of the past as the back-log. We called it a spider; I think this was the name by which it was sold in the market; its three long legs, by means of which it was tilted up before the fire no doubt suggested the name. These supported a modern frying pan. On bread days this spider yielded its place on the hearth to the tin baker; some ingenious Yankee is said to have made a fortune out of this baker, by selling a large stock of them to southern ladies for side saddles. Certainly one of them would have held the rider in securely on three sides.

When the vegetables were boiling in the pot and the teakettle was seething and bubbling on the crane, making the lid dance merrily to its music, and the meat was sizzling and sputtering in the spider, now set over a little heap of glowing coals that had been drawn out on the hearth, the times were lively indeed. We little thought then that the power in that teakettle was so soon to revolutionize the ways of the world; that it would send long trains of elegant buildings on steel rails from the Atlantic to the Pacific, from Maine to Mexico, in less time than it had taken to make our little journey on the canalboat. That we did not discover the power under that teakettle lid was our lost opportunity. The world seemed very vast in those days; soon after we began to learn from our geographies that it must be a globe, for Captain Cook had sailed round it in three years. The gladdest day in all the year to the children was when the turkey turned its glossy sides round on the spit, dripping, and oozing out its sweet odors, in the heat of the blaze, until it was done to a turn, so crisp and brown that not an inch of the original color was left. In this open fire and in the savory dishes it furnishes is found to-day the highest charm of gipsying during our Summer vacation. The happiest time of all the day was when we gathered round the hearth fire, which had driven out the darkness and the cold, and left us merrily to crack our nuts; to listen to the jokes of our elders; to eat doughnuts, and to drink our own sweet cider. The shadows dancing on ceiling, wall and floor, playing at the same time hide and seek in the corners, were things to sink deep into the heart of a child. One day our little girl of more than 60 years ago had told her first lie, the penalty for which she served out by sitting down one half hour alone in this great room. She well remembers how gloomily the fire burned, though it was blazing high, and the twilight in her soul fell much faster and deeper than it did in the world outside.

The soil here, almost a virgin one, was very, very deep, up to the hubs it came in muddy weather. The father of this pioneer family was very fond of fine horses, a span of which he always kept, but when the bottom dropped out of the roads a yoke of oxen only could drag the wagon which carried the family to church on Sunday. Our log house was set where two ways met. One day while standing in the open door, we saw a fawn rise from the ground, much as a huge bird might have done, fold its legs under its body, and leaping high in the air, clear the rail fence, then scarcely touching the road which it crossed, bounding over a stone wall, it paused one moment to drink from a brook which ran in front of the house, and sped away across the field to covert. Through wide open eyes memory took in here a piece of statuary such as no sculptor could ever make. This was the only time we ever knew of a deer passing that way; there was no game left in this region for the Indians.

A tribe of Tonawandas who had a reservation near Buffalo made our neighborhood one of its trading posts. A little company of their squaws came often to our house, bringing splint baskets of all sizes which they wisned to exchange for food, apples or cornmeal, which seemed their favorite article of diet, or pork; this last they called squesquaw. They were so honest that we could trust them to pay on their return trip any little balance that might have been left due us. The squaws brought their papooses with them; after having swathed the baby in clothes until it looked like a small-sized mummy, they lashed it to a board which was shaped much like a little coffin-lid; equipped in this manner for a journey the mother would sling the baby over her shoulder until it was well balanced on her back in a perpendicular position; then drawing across her own forehead a broad band or strap which supported much of the weight, she would set out for home, a walk of many miles.

The trundle bed, drawn out from under the larger bed where our parents slept, held two little ones, and on the floor in the same room sometimes Indians, who had been welcomed to a free lodging for the night, snored out the weariness of their day's tramp; I say snored, for I think this must have wakened me one night, as I have a distinct "picture hung on memory's wall" of several of these huge-bodied men wrapped in their blankets lying scattered over the floor, while the dying fire light made the whole scene visible, but I felt no fear. Our latchstring was always out, and a veritable leather latchstring it was, while the door of which it formed an essential part, had neither lock nor key. There was not one haunted house within 50 miles of us, and we had never read the record of any murder that had been committed in all that region. We had learned from the story of "Blue Beard" that men did sometimes break the sixth commandment, for had not Fatima escaped death, only by the timely arrival of her brothers; and in the story of "Jack and the Beanstalk" we had almost heard the dreadful giant's "fe-fo-fum"; these brought down nearly to our own time the fact that men who had blue beards might hang up long rows of their wives in some secret chamber, or if they were giants they might greatly desire the blood of some little boy, who like Jack, had climbed up out of his sphere; the Bible too told us of the assassination of kings and queens and of a few others, but these were to us, only the deeds of very wicked men, in a very wicked age and very long ago.

If our fire of coals had gone out at night under its heavy covering of ashes there was a great stir in the house next morning, and once our six-year-old girl I remember was sent to the neighbors to "borrow" some fire, which she brought home on a shovel. Lucifer matches were then in the dim but not distant future. Our only mode of getting the fire was by striking steel and flint together and catching the spark in tinder. If matches had been in the market I am quite sure the manufacturer of them could never have made a fortune, and we should still have been without them, for there were fewer pennies in those days than there are $10 notes to-day; much of our business was done by barter. Even 15 years later, a man in Rochester who was worth $50,000 was called the rich man, and he was so beset by appeals for charities that little time was left him in his office to attend to his own business! I well remember too when John Jacob Astor was considered marvelously rich—the marked man of the nation—with half a million of money. Everywhere through hamlet and country the question ran "How did he get such a fortune?" this to be quickly followed by the answer: "He has been dealing in furs." The madly rushing world has left behind it these picturesque days of quietness and safety, but in its onward sweep it has gathered up much of comfort, and luxury, and knowledge, and even brotherly kindness which we would not exchange for the good things of the past, and which check the sigh for that which is fast sinking into oblivion. HARRIET S. OSMOND.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

Some Laundry Suggestions.

Even with set tubs two wooden ones of handy size help out amazingly. One had better be kept especially for table linen and for rinsing the finest white things, says Emily Holt in Chicago Record-Herald. Use the other for soaking, but do not soak too long. An hour is long enough to soften and dissolve the dirt, yet not long enough to set it all through the garment. Soaking suds strong with soda will eat and destroy the fabric, but dirt comes out easier, and without damage to the fiber if the soiled things are wet through with and well wrung out of warm soda water before they go in soak. This wetting and wringing out will whiten and sweeten without hurting the clothes. The caustic soda attacks the dirt first and is washed out, or dissolved away, before it has time to eat the fabric. It must not be too strong—a tablespoonful of soda to three gallons of soft water is about the right proportion. Hard water requires a fourth more soda, as some of it goes to neutralize the lime.

Keep a sharp lookout for spots and stains in the sorting. Either wet fruit stains in alcohol, whisky or camphor, or pour a stream of full boiling water through them. A stain once set by suds is thenceforth almost hopeless. Beware especially of grass, paint, mud and wagon grease marks—all of which must be taken out before washing or not at all.

Kerosene in the boil whitens clothes safely, especially such as are yellow from long lying. Use a tablespoonful to a gallon of water. For things very yellow or grimy make an emulsion of kerosene, clear lime water and turpentine in equal parts. Shake together until creamy, then add a cupful to a boilerful of clothes and keep over the fire half an hour. The same emulsion is good for very dirty things, as jumpers, overalls, working shirts, children's trousers. Use it in conjunction with very strong suds, as hot as the hand can bear, and rub it well upon the dirtiest spots. Leave the clothes five minutes before washing out, and be sure the second suds and the rinsing waters are as hot as the first suds.

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MARKETS

THE WEEK'S QUOTATIONS.

WHOLESALE PRICES.

NEW YORK, SEPTEMBER 7, 1901.

GRAIN.—Corn up 1¼ cent. Wheat one to two cents down and trade dull.

Wheat, No. 1, Northern N. Y...	—	@	75
No. 1, Northern Duluth.....	—	@	77¾
No. 1, hard Duiuth.....	—	@	83
Corn, No. 2, mlxed, clevator.....	—	@	62¾
Oats, No. 2, mixed.....	—	@	38½
Rye ,No. 2, W'n, f. o. b., N. Y..	—	@	60
Barley, feeding	—	@	53
Maiting, new crop.....	62	@	67

BEANS.

Marrow, choice, per bu.....2	95	@3	00
Fair to good.....2	70	@2	90
Medium, choice 2	70	@2	75
Pea, bbls., choice.....2	75	@2	80
Bags, choice	—	@2	75
Red kidney, choicc.....2	55	@2	60
Common to good.....2	10	@2	50
Whlte kidney, cholce.....2	30	@2	35
Blaek turtle soup, choice.....	—	@2	00
Lima, California	—	@4	80
Foreign, medlum, good to chce.2	30	@2	40
Common to fair.....2	10	@2	25

FEED.

Spring bran, coarsc.....17	00	@17	50
Winter bran 17	50	@18	00
Red Dog	—	@20	75
No grade flour.....	—	@22	00
Unsound wheats, per 100 ibs..	67	@	70
Linseed meai, ton.....	—	@29	50
Cottonseed meai, ton.....	—	@24	60

HAY AND STRAW.

Hay, No. 1.....	80	@	82½
No. 2	65	@	75
No. 3	60	@	65
Clover	50	@	60
Clover, mixed	55	@	65
Straw, rye, iong.....	65	@	80

SEEDS.

Clover, per 100 ibs.....10	00	@11	25
Timothy, per 100 lbs..... 5	00	@ 5	50
Flaxseed, whole, per bu..... 6	50	@ 6	75
Millet, per lb.....	2	@	2⅛
Rape, German, per lb.....	3¼	@	3½
Sunflower, per lb.....	3	@	3¼

MILK.

New York Exchangc price at stations $1.31 per 40-quart can. This is the gross price, and from it must be taken cost of transportation and fees at receiving stations where such charges are made.

BUTTER.—The quality of the receipts for the past week has averaged lower, and there is a surplus of undergrades which are hard to dispose of.

Creamery, extra, per lb.....	—	@	20
Firsts	18	@	19½
Seconds	16½	@	17½
Lower grades	15½	@	16
State dairy, tubs, faney.....	18	@	18½
Tubs, firsts	17	@	17½
Tubs, seconds	16	@	16½
Tubs, thirds	14	@	15
Tins, etc.....	14	@	17½
W'n imitation creamery, fancy.	16½	@	17
Firsts	15	@	16
Lower grades	14	@	14½
W'n factory, June, faney.....	—	@	15½
June, good to ehoice.....	14½	@	15
Current packed, best.....	—	@	14½
Fair to good.....	13¾	@	14
Lower grades	12½	@	13½
Renovated butter, fancy.....	17	@	17½
Common to choice.....	14	@	16½
Paeking stock	12	@	14

CHEESE.

Full cream, colorcd, small, fcy.	—	@	9½
Colored, smali, choice.....	9⅛	@	9⅜
White, smali, fancy.....	—	@	9¼
Smali, white, choice.....	9	@	9⅛
Smail, good to prime.....	8½	@	8⅞
Colorcd, large, fancy.....	—	@	9
Colored, iarge, choicc.....	8¾	@	8⅞
White, large, fancy.....	—	@	9
White, large, choicc.....	8¾	@	8⅞
Largc, good to prime.....	8¼	@	8½
Common to fair.....	7	@	8
Light skims, small, choice.....	—	@	8
Large, choice	7½	@	7¾
Part skims, prime.....	6½	@	6¾
Fair to good.....	4½	@	6
Full skims	1½	@	2½

EGGS.—Reccipts of medium grades are heavy, and quotations given are extreme.

QUOTATIONS LOSS OFF.

State & Pa., avge. prime, doz...	—	@	19
W'n, fresh-gathered, chcc, doz.	—	@	18½

QUOTATIONS AT MARK.

Nearby, State & Pa., fresh-gathered, fancy sciected, doz.....	21	@	22
Prime to choice.....	18	@	19
W'n, fresh-gathered, N'th'ly sections, candied, sclections.	17	@	18
Regular packings, N'th'n secs.	15	@	17
Graded, Southerly sections...,	15½	@	16
Regular packings, S'th'ly secs.	14	@	15
Fresh-gathered, dirties	12	@	13½
Checks	10	@	11
Refrigerator, per doz.....	15	@	17½

LIVE STOCK.

Steers 5	00	@5	80
Bulls 2	45	@3	75
Cows 1	75	@4	25
Veal calves 5	00	@8	00
Buttermilks 3	00	@4	00
Sheep 2	50	@4	00
Lambs 5	00	@6	25

COUNTRY-DRESSED MEATS.

Calves, veai, prime, per lb.....	10	@	10½
Fair to good per lb.....	9	@	9½
Common to medium, per lb....	7	@	9
Buttermiiks, per lb.....	7	@	8
Grassers, per lb.....	5	@	6
Pork, country-dressed, light, lb.	9¼	@	9½
Country-dressed, medium, lb.	9	@	9¼

LIVE POULTRY.—There is a large surplus of Spring chickens and the market is dull and weak.

Spring chickens, per lb.....	—	@	11
Fowis, per lb.....	—	@	10½
Roosters, per lb.....	—	@	6½
Turkeys, per lb.....	—	@	10
Ducks, average Western, pair..	45	@	60
Average Southern, per pair...	40	@	50
Geese, average Western, pair..1	00	@1	25
Average Southern, per pair....	80	@1	00
Pigeons, mixed, per pair.....	—	@	20

DRESSED POULTRY.—Receipts are light and fowls very scarce; chickens plentiful; Spring ducks selling well; geese duli.

FRESH PACKED—ICED.

Broilers, Phila., over 4 lbs. to pair, per lb.....	18	@	20
Phila., mixed sizes, per lb....	16	@	17
Penn., fair to good, per lb.....	11	@	15
Western, dry-picked, per lb..	—	@	13
Western, scalded, per lb.....	—	@	12
Small, dry-picked or scalded, per lb.....	10	@	11
Fowls, W'n, dry-picked, prime.	10½	@	11
Western, scaided, prime.....	10½	@	11
S'thw'n, dry-picked, prime....	10½	@	11
W'n & S'thw'n, poor to good..	9	@	10
Old roosters, per lb.....	6	@	6½
Ducks, Spring, L. I. and other nearby, per lb.....	13	@	13½
Western	7	@	9
Geese, Spring, Eastern.....	12	@	15
Squabs, choice, large, dark.....	—	@2	25
Mixed, per doz.....1	75	@1	87
Dark, per doz.....1	25	@1	50
Culis, per doz.....	50	@1	00

EVAPORATED FRUITS.

Apples, fancy	9¾	@	10
Choice	9	@	9½
Prime	8⅜	@	8½
Chops, prime 2	00	@2	25
Waste, prime	—	@2	00
Sun-dried, quarters	5	@	6
Raspberries, lb.....	—	@	25
Blackberries, lb.....	7	@	7½
Cherries	15	@	16
Apricots, boxes, lb.....	9	@	13
Bags, lb.....	8½	@	12½
Peaches, Cal., unpeeicd, boxes.	6½	@	9½
Bags	5½	@	8½
Peeied, per lb.....	10	@	16
Pears, California, per lb.....	7½	@	12

FRESH FRUITS.

Apples, Duchess of O, h.-p., per bbl.....	3 00	@	4 00
Aiexander, per bbl.....	3 00	@	4 00
Twenty-oz., h.-pkd, bbl....	3 00	@	3 75
Gravenstein, per bbl.....	2 75	@	3 50
Fali & York Pippin, bbl...	2 75	@	3 50
Holiand Pippin, per bbi....	2 50	@	3 50
Ail sorts, h.-p., com. to fr.	1 75	@	2 25
Green varieties, h.-p., open heads, per bbl.....	1 75	@	2 50
Windfalls, per bbl.....	75	@	1 50
Pears, Bartlett, fancy, bbl..	3 50	@	4 00
Bartiett, avge. lots, bbl...	2 25	@	3 25
Bartiett, per keg.....	1 25	@	1 75
Beurre d'Anjou, per bbi....	2 00	@	2 25
Nearby, common, per bbi..	1 00	@	2 00
Peaches, Md. & Dei., carrier.	75	@	1 37
Md. & Del., per basket.....	35	@	85
Jersey, per basket.....	30	@	75
Pine Isiand, per carrier...	1 25	@	1 75
Pine Isiand, per basket....	50	@	1 00
Up-river, per pony basket.	20	@	40
Plums, Abundance, 8-lb. bkt.	15	@	20
Large, tabie blue, 8-lb. bkt.	25	@	35
Green, per 8-lb. basket....	25	@	30
Grapes, up-rivcr, Del., car'r.	—	@	1 00
Up-river, Niagara, car'r...	75	@	1 00
Up-river, Moore's Eariy, pcr carricr	55	@	65
Up-river, Worden, car'r...	60	@	75
Watermelons, Md. & Del., per carload 100	00	@200	00
Md. & Dei., per 100.....	10	00 @	22 00
Jersey, per carload.....	75	00 @140	00
Va. & S'th'n, carload.....	35	00 @125	00
Va. & S'th'n, pcr 100.....	5	00 @	14 00
Muskmeions, W'n Md., Gem, per crate	50	@	1 00
Other Md. & Del., per crate or carrier ..-.....	40	@	75
Jersey, per bbi.....	50	@	75
Jersey, per ½-bbl. box.....	25	@	65
Far W'n, good to ch, crate.	2 25	@	2 75
Far Western, poor to fair.	1 00	@	2 00

VEGETABLES.

Potatoes, L. I., per bbl.....2	50	@2	75
Jersey, per bbi.....1	75	@2	50
Jersey & S'n, common, bbl....1	50	@1	75
Sweet Potatoes, yeiiow, Va., bbl.2	00	@2	25
Beets, Jersey & L. I., 100 bchs..1	00	@1	25
Celery, State & W'n, doz. roots.	10	@	35
Carrots, L. I., per bbl.....1	00	@1	25
Corn, Jersey, per 100.....	50	@1	00
Cabbages, L. I., Fiat Dutch, 100.4	00	@5	00
Cucumbers, Jcrsey, per box.....	25	@	40
Jersey, per bbl.....	75	@1	25
Rockland Co., per bbl.....1	00	@2	00
Shelter Island, per bbl.....2	00	@2	25
Cucumber pickles, Rockland Co., per 1,000.....1	50	@2	50
Jersey, per bbl.....	75	@1	50
L. I., per 1,000.....	75	@1	75
Eggplants, Jcrsey, ½-bbl. crate.	40	@	50
Jersey, per bbl.....	75	@1	00
Green peas, W'n N. Y., bskt...2	00	@2	50
Lima beans, Hackensack & L. I., Potato, per bag.....	—	@1	00
South Jersey, Potato, bag....	85	@1	00
South Jersey, flat, per bag....	50	@	75
Lettuce, W'n N. Y., per case...1	50	@2	50
Boston, per case.....1	50	@2	00
Onions, Southern, per bskt.....1	12	@1	25
Orange Co., white, per bag...1	50	@3	00
Orange Co., yeilow, per bag..1	50	@2	50
Orange Co., red, per bag.....1	25	@2	50
Jersey & L. I., red, per bbl...2	50	@2	75
Jersey & L. I., yeliow, bbi....2	25	@2	75
Jersey & L. I., white, bskt....1	25	@2	00
Connecticut, white, per bbl...2	75	@3	00
Connecticut, yellow, bbl.....2	75	@3	00
Connecticut, red, per bbl.....	—	@3	00
Peppers, Jersey, per bbl.....	50	@	75
Jersey, per crate.....	20	@	25
Squash, yellow, per bbl.....	75	@1	00
White, per bbi.....	75	@1	00
Marrow, per bbi.....	—	@1	00
String beans, Jersey & L. I., per bag	40	@	60
State, per bu. basket.....	50	@1	00
Turnips, Jcrsey, Russia, box...	50	@	75
Tomatoes, Hackcnsack, box....	50	@	60
Other Jersey, Acme, box.....	40	@	50
Jersey, Stone, per box.....	40	@	50
Other Jersey, Grant, box.....	25	@	40

BUSINESS BITS.

WE have no apologies to make for directing the attention of our readers to a matter of such importance as the saving and proper distribution of farm manures. There is probably no one thing in connection with the whole subject of agriculture which is fraught with so much importance. The conservation and increase of fertility is certainly the keynote to successful agriculture. The first great basis of fertility is the homemade manure pile. It can certainly be best and most economically distributed in a mechanical way. For this purpose we can unqualifiedly recommend the Improved Kemp manure spreader, which is manufactured by the Kemp & Burpee Mfg. Co., of Syracuse, N. Y. It is so constructed that it will spread any and all kinds of manure. The coarsest, hardest and most lumpy manure is torn apart, made fine and distributed in a manner that would not be possible by hand spreading. Strawy manure and that filled with cornstalks, which so seriously annoy the farmer, are handled with greatest ease and regularity. If at all interested in this great economic question, it will pay you to write to the manufacturers for their latest catalogue. In addition to a full illustration and description of their improved spreader, it contains much that is of value on the subject of housing, handling and spreading of manure.

THE Spangler Manufacturing Co., of York, Pa., is the manufacturer of the well-known Spangler low down grain and fertilizer drill. The name gives a very good idea of the character and form of the drill. Being of the low down type, the grain box hangs low, and is in consequence easy to load. This is a particular advantage in loading various kinds of fertilizer which, as our readers know, are quite heavy and difficult to handle. The drills are well and durably made and are excellently suited to general seeding requirements. Write these people for catalogue before buying.

H. K. HARTSUFF, JR., Secretary of Beaver Coal and Coke Co., of Wampum, Pa., writes: "I would just say that two months ago we had three mules that I would have given away if I could have found anyone to take them. After using 15 bottles of Kendall's Spavin Cure on the three mules, we put them to work. They are working now and pulling as much as they were before injured, and I figure that the 15 bottles just saved us buying three new mules, or rather a saving of from $450 to $500. I never saw anything that worked like it, and I will certainly recommend it to all my friends."

THE A. F. Swan Co., of 114 Nassau St., New York, are the manufacturers of the famous Swan's standard roofing, which has been upon the market and in successful use for the past 37 years. This roofing differs from others of its kind in that it is made of either two or three-ply specially prepared tarred felt. The process employed in the manufacture is peculiar to the Swan Company, and the result is a very superior roofing. It is guaranteed to be wind, water and fireproof, and can be laid by anybody, without experience or any expert knowledge. The only tools necessary are a knife and hammer. Write for sample of the roofing, circulars, etc.

MESSRS. SPROUT, WALDRON & CO., Muncy, Pa., are offering to send any of their portable mills on 15 days' trial. This is a new departure in mill selling—and a substantial evidence of the worth of the mills, as it leaves the mill to prove its own worth, even in inexperienced hands. This firm has built up a great business in the 35 years it has been making mills, and is now selling more mills than ever before. Whatever may be needed to equip a grinding room on the farm or a great milling plant can be bought from Messrs. Sprout, Waldron & Co. with the assurance of lowest price and best quality. Surely, there could be nothing fairer than their proposition of letting a mill prove its own worth and utility.

THE well-known National Dairy Machine Company, forced by a constantly increasing business to seek larger quarters, has moved to its new factory, 114-120 William St., Newark, N. J. In the commodious new home, which is fitted with all the modern appliances and improvements for the manufacture of dairy machines, the firm will be able to keep up with the demand for their National hand separator. The sterling worth of this popular separator has been the prime factor in the growing prosperity of this firm. Their offer to ship the machine on 10 days' free trial is proof conclusive of its efficiency and a trial will substantiate the claim that, by its use the milk of eight cows will yield as much cream as that of 10 cows by any other system. Full particulars of the 10 days' trial plan and complete catalogue of their goods can be had on request.

WHAT shall we say of the milk farmer who has a good farm, but makes so little milk that the forenoon he spends peddling it doesn't bring him in 15 cents an hour? It is easy to see why he doesn't make more milk, for we called at his place recently. He has practically no crops, and his haying not yet begun. During the time when he ought to have been haying he was shingling his barns. He's always a month or two behind. Another one had the best recipe we have heard of to avoid plowing and reseeding. His plan is to let his Timothy go to seed every year before cutting; says "it never runs out." When asked as to what good the hay was, said: "Well, I suppose it ain't quite so good, but the cattle eat it all up." H. G. M.

A CURE FOR ASTHMA.

Asthma sufferers need no longer leave home and business in order to be cured. Nature has produced a vegetable remedy that will permanently cure Asthma and all diseases of the lungs and bronchial tubes. Having tested its wonderful curative powers in thousands of cases (with a record of 90 per cent permanently cured) and desiring to relieve human suffering, I will send free of charge to all sufferers from Asthma, Consumption, Catarrh, Bronchitis and nervous diseases, this recipe in German, French or English, with full directions for preparing and using. Sent by mail. Address with stamp, naming this paper, W. A. Noyes, 847 Powers Block, Rochester, N. Y.

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Farm Managers, Gardeners, Buttermakers, etc., always on hand. No charges to employers. Write us Rural Science Agency, Durham, N. H.

WANTED—Cheesemaker in private creamery by the year, who understands making light skim cheese. State age and nationality.
F. H. GATES & SONS, Chittenango, N. Y.

EXPERT POULTRYMAN wants position. Lifetime experience in raising fancy and market poultry and feeding for Winter eggs. For full particulars and references, address
EXPERT, care of The Rural New-Yorker.

FARM WANTED, on half shares; small place of 25 acres or so with good buildings, not over 50 miles from New York City, with view to purchase. Address, with full particulars,
W. L., P. O. Box 139, Brooklyn, N. Y.

Fruit Farm, near markets, schools, churches. 1,200 apple, 300 peach, 200 cherry, 5½ acres asparagus, 2 acres blackberries, 1 acre raspberries, 2 acres strawberries. All crops, stock and tools, good buildings. $5,500; easy terms. A. H. DENNETT, Box 393, Middleboro, Mass.

100-OHIO FARMS FOR SALE.

New Descriptive List quoting prices, FREE. Address
E. H. KISTLER, Farm Broker, Warren, O.

We can sell your farm for cash, no matter where located. Write us to-day.
BELL BROS.,
Dept. E. Marysville, O
If you want a farm, send for catalog No. 76

Suburban Home

For Sale. On account of infirm age of owners, will sell 27 acres, good buildings, 500 bearing apple, pear, plum and cherry trees, 150 grapes—a very fine fruit and garden farm, near Muncie, Ind. Address
JAMES PIXLEY, P. O. Box 574, Muncie, Ind.

Money-Making Farms

BORDER the Kennebec Valley lakes; dairy, sheep, stock, fruit, poultry; near railroad, schools, churches; comfortable buildings, shady lawns, fine fishing and boating; $10 an acre; fare by boat, $1.75 from Boston Particulars free.
E. A. STROUT, 9 Scott Street, Augusta, Me.

For Sale—Gentleman's Farm.

One hour from New York City by Central Railroad of New Jersey. In close proximity to a growing town. No malaria. Good society. About 140 acres, in two farms, mostly in grass. This year's first crop 235 large two-horse wagon loads of hay; second crop very promising. Home market. Modern buildings. Chance for speculation in building lots. Owner having taken up his residence in Europe, will sell this place below value. For circular address owner
FREDERICK LOESER, Personal,
484 Fulton Street, Brooklyn, N. Y.
Real Estate Agents please enclose their card.

The Old Reliable Commission House.

Specialties:
APPLES and PEARS.
Address WM. DUNCANSON, 98 Park Place, N. Y. City

Apples and Pears

This time of the year we make a specialty of handling shipments of apples and pears, and are now prepared to handle consignments to the best possible advantage. Write us at once for information regarding shipping, etc.; also for stencils.
ARCHDEACON & CO., 100 Murray St., New York

FOR SALE—Thoroughbred HOLSTEIN-FRIESIAN CATTLE of the best families. Also, 30 high-bred Bulls at reasonable prices. Write the MAPLES STOCK FARM, Binghamton, N. Y., WM. ROOD, Prop

White Wyandottes and White Plymouth Rocks.

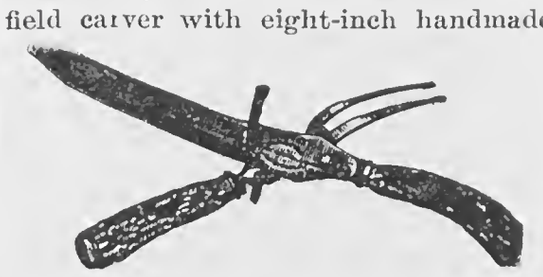
I am now ready to ship pullets and cockerels for those who wish to exhibit at shows or to improve their stock by show blood. Prices reasonable for quality. WARREN WHITE,
Normandy Farms. Newton Highlands, Mass.

The Domestic Sheep.

Its Culture and General Management. By Henry Stewart. An up-to-date book on sheep. The most scientific, practical and useful book ever published on this subject. Indorsed by the world's highest authorities, press and sheep public everywhere. It contains 372 pages of "boiled-down" knowledge and 165 plates illustrating the recognized breeds and every department of sheep life. Price, $1.50 postpaid, or free for a club of four subscriptions at $1 each.

A Carving Set.

Every family needs a carving set three times a day. This set consists of a Sheffield carver with eight-inch handmade



steel blade, buckhorn handle, fork and steel. Price, $1.90; or we will send it for a club of two new subscriptions at $1 each and $1.25 extra money, or free for a club of six at $1 each.

BOOK BULLETIN

FOR SALE BY THE RURAL NEW-YORKER

THE FEEDING OF ANIMALS, by Prof. W. H. Jordan. The relations of plant and animal life; chemical elements of nutrition; digestion of foods and conditions influencing it; relative value of nutrients; selection of rations and general management. A most instructive work on the principles and practice of feeding and the composition of feeding stuffs. Price, postpaid, $1.25.

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THE RURAL NEW-YORKER,
409 Pearl St., New York.

MARKET NOTES

TOMATOES.—There are plenty of these on hand now from New Jersey, although the appearance and quality are inferior. Growers say that the trouble is caused by wet weather and lack of sunshine. The color is a sickly greenish red; the fruits are knotty and irregular in shape, and some are cracked badly. Considerable rot also is reported.

POTATO PRICES have dropped, and none is now quoted in this market above $2.75. There are two reasons for this: the late crop is turning out better than was anticipated, and consumers have become tired of paying over $3 a barrel. No further material drop is likely to occur at present. A range of $2 to $2.75 is not excessive for the consumer, and removes from trade the restrictions caused by extravagant prices.

APPLES AND PEARS.—There is a large supply of inferior pears, which can hardly be sold at any price. Good Bartletts are scarce and selling well. A few excellent Fall apples are seen and a limited quantity of the choicest are being exported. Shipping facilities have been so much improved that Fall apples packed in boxes are said to arrive on the other side in good condition, and it is possible that a quite extensive trade may be worked up in this early fruit.

HEBREW HOLIDAYS.—Several of these occur in the Fall. On September 14-15 the new year, 5662 according to Jewish reckoning, is observed. Then follow the Day of Atonement, September 23; Feast of the Tabernacles, September 28-29; and the Feast of Laws, October 5-6. There will be a demand for prime live poultry for these celebrations—chickens, fowls, ducks and fat geese. Poultry intended for these markets should be on hand four days before the dates mentioned. This will close up the special live poultry trade until Purim and Passover, in the Spring.

MELONS.—The finest watermelons I have seen this season are now on hand There seem to be a good many of the larger sizes, which were so scarce earlier in the season. The cool weather, however, keeps the prices down. There are plenty of the Colorado muskmelons, which sell for very high prices, $2 to $2.50 per bushel crate unless overripe. The supply from New Mexico is grown under practically the same conditions of irrigation and sunshine, and sells at the same figures. There is a large quantity of melons grown in different parts of the East, masquerading as Rocky Fords, but lacking in quality. The rains have damaged the crop of Hackensack and other nearby melons.

WESTERN FRUIT MATTERS.—The Pacific Coast occupies a peculiar position so far as market facilities are concerned. California, for instance, produces great quantities of the finest oranges, grapes and plums, but must ship them hundreds, or, rather, thousands, of miles to reach consumers. New York, New Jersey and Connecticut are extensive fruit producers, but seldom have any trouble in disposing of the better grades at least, for they are within a short haul of the greatest market in this country. But California, while an enormous producer, has no such hungry next-door neighbors as New York, Boston and Philadelphia. The stretch of country between the coast range and the Mississippi is so thinly settled, and much of it so far from railroads, that it can use but little of this surplus of fruit. If the time ever comes when these great plains are thickly populated, California's market difficulties will be largely wiped out, and the East may have to do heavy bidding to get as many western oranges and grapes as desired. The problem of transporting and disposing of this perishable fruit is a serious one, and western growers soon learned that, instead of working alone, each for himself, organization and the most thorough business methods were necessary in order to get a fair return for their invested time and labor. These organizations have met with much opposition, often from those who could have been most benefited by them. In the cured fruit business the situation is different; that is, there is a whole season in which to dispose of the crop, while orange growers sometimes find that there is a shortage of cars just at the time when the largest shipments should be made. The Raisin Growers' Association has seen many ups and downs, though, on the whole, it has been fairly successful. This year a new form of contract is offered, in which the growers practically lease their vineyards, giving them entirely into the hands of the Association, and becoming merely profit-sharing employees of it. This plan was adopted to give the directors more complete control of affairs, with less interference from individual growers who do not understand the situation, and try to run things in their own way. Naturally, the growers hesitate about signing a contract of this sort. It certainly would be a dangerous thing to do unless the integrity and business ability of the officers were unquestioned. The indications are that there will not be enough signers to carry out the new plan, as some outside growers are bitterly opposed to the present management. The Association, however, has practical control of the market, and it is reported in trade papers that plans will be made to freeze out its opponents so thoroughly that they will be glad to come into the Association or go out of business. W. W. H.

PROF. MUNSON'S NEW GRAPES.

PART II.

Xiuta: Clusters of the largest size, well shouldered and long. Berries very black, having no bloom, as large as the Concord, sprightly, rich, vinous. The pulp is tender, readily freeing the seeds, no sour unpleasant taste like the Concord. When fully ripe the pulp dissolves in eating. This grape is very vigorous and prolific, and in every way superior to the Concord. It is a good table, market or wine grape. Post Oak, Rupestris and Labrusca.

Husmann: Clusters of the largest size, thick through and long, filled with beautiful berries of good medium size. The size is remarkably uniform, every berry being alike. Skin tough and jet black beneath the fine bloom. This grape is an extra good keeper, and may be shipped long distances. Quality very good, sweet, sprightly and agreeable, much better than the Concord; no foxy flavor, no sour pulp. Vine vigorous and very prolific. This is the big southern grape to capture the northern markets with in August. Parentage Post Oak, Bourquiniana, Labrusca and Vinifera.

Success: Cluster as large as the Concord and compact. Berries variable in size from small to above medium, very sweet and rich, of the best quality. The seeds part very readily from the pulp, and there is no need to swallow them in eating. The skin is thin but tough, and it is one of the best keepers in hot weather. There is no grape that could be shipped a greater distance and held longer on the market in good condition. The vine is very vigorous and highly prolific. It has taken several years to establish the value of this grape, for it has grown steadily better from year to year, until now it takes a foremost place among the most promising of all as a most valuable market grape. If Prof. Munson had produced no other grape than this his life work as an originator must be pronounced a success. Parentage Post Oak, Rupestris and Bourquiniana.

Talequah has a beautiful conical cluster above the average size. The berries are dark red, almost black, about the size of the Delaware grape, and the quality is nearly or quite as good. This grape is almost pulpless, for it melts in the mouth in eating. The skin is thin and tough, does not crack and the grape keeps fairly well. Parentage Post Oak, Rupestris and Bourquiniana.

Captain: Clusters much larger and longer than the Concord. Berries a little above medium size, bloom slight, pulp easily freeing the seeds. Quality high, much better than the Concord. It is a rich good grape that will make a market for grapes wherever it is sold. Ships well, does not crack and the large clusters are very attractive. Parentage Post Oak, Rupestris and Labrusca.

Salado: A fine black grape that compares well with the Concord, adapted to limy, adobe and the black soils of the South where few other grapes will grow. It stands drought, has a vigorous vine, and is highly prolific. It is a splendid southern market grape, but being pistillate must be planted near a pollenizer.

Cloeta: A very high quality black grape. It has a sweet, rich, pure vinous flavor and is hard to excel in quality even among foreign grapes. An extra fine table grape, good for market, and also likely to prove valuable for wine making. The cluster is a little smaller than the ordinary Concord, but the berries will average as large. It does not crack, keeps well and is firm enough to make a good shipping grape. The pulp is exceedingly tender and the seeds part from it as readily as in the Vinifera. The vine is vigorous, healthy and highly prolific. This grape and Shala, another of the same parentage, and fully as good, are among the later triumphs. Shala differs in having more bloom upon the berries, the berries not quite so large, but the quality is remarkably fine, exceling the Delaware. Post Oak, Rupestris, Labrusca and Vinifera.

The following were noted among the red varieties:

Headlight: Cluster and berry good medium size. Cluster compact and finely shouldered. Berries bright red, becoming dark red when fully ripe. It is nearly equal to the Delaware in quality, quite sweet and becomes sweeter and finer from hanging on the vines, which it does for over a month in the South in the hottest weather. It is the earliest of all grapes to ripen, being several days earlier than the Early Ohio or Champion. The vine is healthy, vigorous and prolific, outyielding the Delaware. It will prove a very valuable early market grape. It may be introduced this Fall. Parentage Labrusca and Vinifera.

Atoka: A dark red grape with a fine Delaware flavor. Clusters two or three times as large as the Delaware, large and long and heavily shouldered. Berries about the same size and quality the same. The pulp frees its seeds more readily than the Delaware. The vine is vigorous and very productive. It has proved a fine near market grape. Post Oak, Rupestris and Vinifera.

Yomago: This grape has also strong characteristics of the Delaware, but it excels it on several points. It is more prolific; it grows better from cuttings; the foliage is less liable to mildew; the pulp is more tender, readily freeing the seeds; the size of the berries is a little larger; it is a brighter red, a few days earlier, and the quality is richer. It has proved a fine early market grape. Labrusca and Vinifera.

Delago: A fine red grape with a rich Muscat flavor. Clusters medium size, cylindrical; berries ovate, as large as Brighton, bright red with little bloom. Skin thin but tough; does not crack. Pulp tender, easily freeing the few seeds, rich, sweet and quite juicy. It is greatly relished as a table grape, and sells at outside prices. The flowers are pistillate and a self-fertile vine blooming at the same time must be near it. It has proved a splendid mother vine for hybridizing purposes. The growth is vigorous and prolific. Labrusca and Vinifera.

The white grapes were compared with the Calabrian, a fine foreign grape, and Niagara. Olita: Cluster medium size, very beautiful and attractive. Berry nearly as large as the Calabrian and of better quality—sweeter, very rich and aromatic. Color a translucent pearly white. Skin very thin and delicate but does not crack; ships as well as the Niagara. One of the finest dessert grapes. Parentage Labrusca and Vinifera.

Rommel: Cluster as large as the Niagara, and equally as good shipper. Berries as large as Calabrian and sweeter than the Niagara. Can be eaten in large quantities, quenching thirst and not cloying the appetite. It is a superior market grape, in great demand in Texas. Vulpina, Labrusca and Vinifera.

Biondin: Cluster as large as Niagara, more compact. Berries equally large and of better quality—less pulpy. It keeps well and is a good shipper. One of the few white grapes with Post Oak blood. Post Oak, Labrusca and Vinifera.

Hidalgo: A grape of remarkably fine quality, sweeter than the Calabrian, richer and almost as pulpless. Cluster not quite so large as Niagara, but more beautiful and attractive upon the table or in the market basket. The skin is very thin, but firm, and the grape keeps well and ships well. Labrusca and Vinifera.

Wapanuka: Is probably the best American white grape yet produced. The cluster is as large as Niagara, while the berries are larger than the Calabrian. The quality is also better than the latter, sweeter and very rich in exquisite flavors. Its very large beautiful pearly white berries are highly attractive upon the market. It is one of the finest table grapes, and as much superior to Niagara in quality as that grape excels the wild fox grape. It is a fine keeper and may be shipped a long distance if carefully packed. The skin is very thin but tough, and does not easily crack unless overripe. In vigor, health and productiveness it is the equal of the Niagara, and in hardiness probably superior. This grape is one of the great triumphs of the hybridizer's art and may fitly crown the brow of the world's greatest grape specialist. Vulpina, Labrusca and Vinifera.

Prof. Munson is also engaged in improving Vitis rotundifolia, the scuppernong grape of the South. He has produced several hybrids combining Post Oak, Labrusca and Vinifera. So far the scuppernong type of vine, leaf and fruit is little changed, except that the clusters are a little larger, and one of the vines shows a remarkable increase in productiveness. A few more crosses will break the type, when we may expect a long list of decidedly new creations in grapes, with new and marvelous flavors. The Professor's health is impaired by occasional attacks of fever due to a severe injury several years since. We hope he may be spared yet many years to prosecute his noble calling. G. L. TINKER, M. D.

Ohio.

Tears

Many a woman has periodic crying spells. She meets her husband with eyes red and swollen and he cries out: "What has happened?" "Nothing" his wife replies. "I don't know what is the matter with me, but I just had to have a good cry." Men don't have crying spells. It would seem therefore that an affection confined to women must have its cause in the womanly nature. There is no doubt that a diseased condition of the delicate womanly organs, is in general responsible for feminine nervousness and hysteria.

The use of Dr. Pierce's Favorite Prescription makes women happy by making them healthy. There are no more crying spells. "Favorite Prescription" cures inflammation, ulceration and female weakness. It makes weak women strong, sick women well.

There is no medicine "just as good." Accept no substitute.

"For three years," writes Mrs. Mary A. Sasser, of High, Lamar Co., Texas, "I suffered with falling of the womb, also ulceration of the womb. After using three bottles of your 'Favorite Prescription,' four of 'Golden Medical Discovery' and two vials of 'Pleasant Pellets,' I found relief. I am able to do my work with ease. I recommend your wonderful medicine to all my friends, for I truly believe it saved my life."

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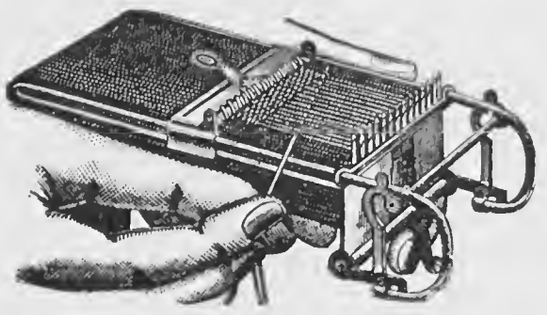

by any other way. Full directions accompany each machine. When a lady has once used this little machine, she would not do without it for any consideration. We will send it postpaid for $1, or for two new yearly subscriptions at $1 each. All money returned if not satisfied.

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Having decided to visit the Pan-American, the first question to be settled is the route by which to go. There are a number of lines by which the tourist can "go West," but among them all none equals in convenience, comfort, celerity, certainty, economy and varied and interesting scenery the LACKAWANNA RAILROAD.

"The finest train to take, all things considered, and probably the finest train by which Buffalo can be reached from the East, is the LACKAWANNA LIMITED, which leaves Hoboken every noon, arriving in Buffalo at 10 P. M., making the 410 miles in just 10 hours, and always on time. This train covers the greater part of the journey by daylight, and the trip is well worth taking for the scenery along the line alone. The corresponding train in the opposite direction leaves Buffalo at 11 o'clock in the morning, arriving in New York at 8:55 P. M."—Bristol (Conn.) Journal.—*Adv.*

Live Stock and Dairy

DAIRY FARM NOTES.

WEEDS.—I was interested a few days ago in an address at our Pomona Grange upon weeds—not on account of its offering any very satisfactory method of getting rid of them, but it seemed to open my thoughts to their real value. To free a piece of land by hand labor is impracticable, and too expensive, unless it may be when introduced. Careful watch will keep them out for a time. We are now watching out and pulling wild carrot, but I am satisfied that it is only a question of time when with that weed pulling will be as much out of the question as it is now with Orange hawkweed. It is easy to say, keep out the weeds, but the saying is not unlike a hundred other things in farm practice. If it was as easily done as said, either in print or from the platform, every farm would be a garden and every farmer a bondholder. The question becomes more complicated in the East by reason of large areas of broken land that are breeding places for every manner of foul stuff. Now I am not writing from the standpoint of having solved the trouble, but we are working along lines that are perhaps as practical as any, for large areas.

CULTIVATION.—The Department at Washington published a bulletin giving treatment of over 100 weeds, and fully 80 per cent had only one treatment presented, viz., cultivation and rotation of crops. This method is the only general treatment possible. Wild mustard or charlock is an exception to the rule. This weed seems to thrive under good treatment; the seed will lie dormant a long time, making it a disagreeable thing to handle. For a dozen years or more we have been very carefully grading seed grain, and separating out all foreign seeds, until we were reasonably free from the yellow weed. The machine this year was out of condition, which was not known when the men cleaned seed grain. The work was poorly done, some seeds left in, and sure enough, the grain fields showed the yellow in due time. I am satisfied that this weed can be safely combated if we stop sowing the seeds.

USELESS FENCES.—The silo has come to be an important aid in weed-seed destruction. If they get in there they die. We are fast removing another weed burden. Our teams are now engaged in moving away a mile of fencing, mainly road fence, which had been necessary in pasture and driving cows to it. The fence value is easily $100, which will be saved because it will take the place of some purchased material. The land will be more easily worked, and to the eye, how much value? Oh, I don't know. This much I do know, that this removal and cleaning up is the last of the kind, making altogether about two miles of trash, stone walls, etc., which we have been patiently working at for a long time; that is, as fast as we had the money to do the work. This job takes away every rod of fence not absolutely necessary on our farms, as they are now managed. This is no new thing, but as I ride through the State I see miles of fences kept up, the value of which would pay the interest on the mortgage. Get rid of the fences as far as possible, clean up the roadsides as fast as you can, and another weed-breeding establishment has been removed.

BULKY COW FOOD.—I do not wish to appear ridiculous when there is so much talk about high-priced cow foods, but really we have so much of the bulky, coarse foods that we are at loss to know just how to handle them all. An immense growth of clover has come on, more than enough corn to fill the silos, and such a growth! Corn planted in June is 10 to 12 feet high on an average, and earing splendidly. The second-growth clover is being fed to the cows; all they will consume, but Winter will come before they can eat it all. It rains every day, or nearly so, and to cut it for hay would be unsafe. I shall try 10 tons or more in the silo with the corn, feed all we can, let some of it remain, and possibly plow under a small area. But from present indications the Spring sowing of clover, both upon Winter wheat and Spring grain, will get so large as to endanger the crop by smothering; seven acres of clover on Winter wheat now stands knee high. Cows to eat it will cost $50 a head, and stables are now, or will be later, full. It is my judgment that a surplus to look at may be a good thing. The Alfalfa is ready to cut again, the third crop; while the Red clover is about good enough, the Alfalfa seems to have suited the cows a trifle better. I am now interested in feeding problems, just a trifle out of the usual run of questions. We are feeding one dairy all of the green clover they will eat; another all the well-eared corn they will eat; another green oats, a small ration of three pounds middlings and gluten, and corn. The last-named are giving the most milk per cow, but there are other reasons than the kind of food. The first two are much alike in lactation, age, and ability to give milk, and they are getting quite different rations; one of them corn, the other clover. It proves that well-eared green corn is a pretty good milk-producing food, and it also proves another thing that I have contended for, and that is the necessity of feeding enough to satisfy every demand of the animal in succulence and bulk. As I write, the foreman who is feeding the clover has been in, and I have asked him to see whether the cows will not eat just as much clover and a daily ration of green corn besides. I think that they will, and, furthermore, produce more milk. In a week or 10 days the cows will tell the story, and I shall copy it here.

SOWING WHEAT.—The experience of the past three years has put my mind in a state of uncertainty in regard to the proper time to sow Winter wheat. Our custom has been to sow late in August or early in September, which we did three years ago. Two years ago the soil was so hot and dry that it seemed unwise to put seed into the ground, and, by the way, I know of seed being injured by the heat before it could germinate. We therefore waited until October 1 before sowing. The growth, of course, was small—not quite enough to cover the ground; but the yield and growth of straw was very good. Much the same climatic conditions prevailed last year, and we sowed late, even sowing one piece November 1. This late-sown, with the heavy snow, proved the best of the whole sowing. In order to get around the whole trouble, we are going back to first principles, and commenced sowing the first week in September, in order to get through before silo filling. It is this ever changing of natural conditions, this kaleidoscopic presentation of rain and snow, heat and cold, drought and flood, that calls for good judgment and makes farming, after all, attractive to the thoughtful man or woman. I suppose other occupations are much the same, but to me the counter work of the merchant, the circumscribed horizon of the mechanic, or the worry and anxiety of the speculator lack the easy, attractive, changing panorama presented daily to a wide-awake farmer.

DAIRY MATTERS.—I am at loss to know why the Wisconsin cheese markets have ruled so much higher than our own; nearly one cent a pound for fully two months. The casual observer would say at once that drought is responsible, but I do not think so. Cheese can be put into the western markets at one-half cent a pound, provided all other conditions are uniform. I saw one of our own large dealers just on his way from Chicago, who explained the situation as purely speculative on the part of a large New York concern. This explanation somewhat relieved the tension on my mind. With Lewis County making the high scores at Buffalo, as she does at nearly every cheese show I don't like to see these Wisconsin fellows getting more money. Their product is certainly not better than ours, if as good. I am not a believer in reputation, only so far as backed up by quality. In every class of goods to-day name and brand count only as the quality is back of them, and while we said for years that the West could not make fine cheese, they are making it just the same and we have in New York, since we came to realize the situation, made rapid strides in quality. The State Department has done much for our cheese interests. Lewis County, which has become famous for its home-trade product, can give credit to Mr. Horace Rees, State expert, for the unselfish effort which he has made in behalf of our chief product. I don't believe in waiting until a man dies before telling him of his good works, if he has any. The Lewis County cheese interests should erect a monument to Horace Rees. My local pride, or State pride, is quickened by the demand from other States for agricultural material. Prof. Anderson and Prof. Ward of Cornell have gone to California, and now rumor has it that W. E. Griffith, butter instructor at Cornell, has been invited to take charge of their new dairy school, which all means but one thing; New York is still at the dairy head, but she can maintain her position only by the most persistent effort on the part of every one connected with it. Cow keepers and feeders, butter and cheese makers, all must work together. H. E. COOK.

KILLING YOUNG HORNS.—I want to know what to use to destroy or kill the horn just starting to grow on the young calf. I have seen in print some form of caustic paste or caustic stick used for that purpose, but am not sure of it now. J. B.

Thomasville, N. C.

Caustic potash is used for the purpose. The hair close around the horn is clipped off and the horn moistened with warm water. The stick of caustic potash is then held to the little horn until the germ is killed. This must be done when the calf is very small; otherwise the horn will not be thoroughly killed, but will send out a rough stub.

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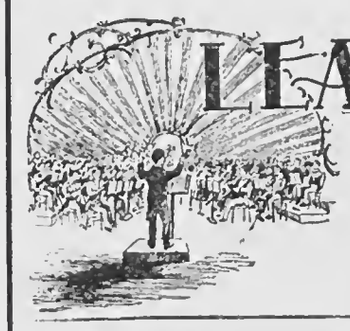

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Ailing Animals.

ANSWERS BY DR. F. L. KILBORNE.

Cow Affected With Warts.

A cow four years old last May is affected with numerous warts which have grown on her teats since last Spring. How can they be removed? She is a valuable cow, and I do not wish to beef her. C. W. B.
Bethel, Conn.

Rub thoroughly with pure vegetable castor oil after each milking, and continue for at least three or four weeks, if necessary. Such warts can often be removed by the castor-oil treatment, without making a sore, as in the case of the use of acids, which would be undesirable on the teats of a milch cow.

Heifer Weak in Back.

What can I do for a fine 17-months' heifer, that appears weak in back or legs? She can hardly get up, and then staggers around. She has been this way for about two weeks; I do not see much change. She has eaten, drinks, chews her cud all right. For the past day or two has not drank much water. F. W. G.
Wallingford, Conn.

The weakness may be due to sprain or other injury, or to some general diseased condition. If possible have the heifer examined by a competent veterinary surgeon, to ascertain the seat and nature of the trouble. If there is no available veterinarian, try the following course of treatment: Rub the whole region of the loins with ammonia liniment, sufficient to blister mildly. Internally give a small teaspoonful powdered nux vomica in feed three times daily, and gradually increase the dose to two teaspoonfuls at the end of a week or 10 days. Continue for two or three weeks or longer. If twitching or jerking of the muscles should be observed reduce the dose of nux.

Pigs Weak in Hind Quarters.

I have a litter of seven pigs 13 weeks old; all are apparently thrifty and are good feeders. About three weeks ago I noticed one of them rather slow in getting out of its nest; would get on its fore feet and then rest again until feed or something would excite it into action. When moving it walks stiff with its hind legs, and when standing still the hind feet would be drawn nearly centrally under the body. Later examination developed what appears a hard substance on the inside of the hind leg just below the knee joint, and extending about one inch down the bone, but not entirely around it. When not moving the pig lets itself down on its hind quarters, evidently for relief. There are two more of the same litter beginning with the same trouble. The inside floor is of cement and nest kept dry; the outside is plank floor. With their feed they had a daily supply of grass, pulled up by the roots; have never fed any kind of condition powders. I have now of all sizes 36 swine, four Chester White brood sows, one full blood O. I. C. boar. The remainder of my stock is a cross of the above. I expect to put the pigs out on broader range as quickly as I possibly can. We fence for our stock; not against our neighbors. Can you tell me what to do to restore my pigs? What work on swine would you recommend me to get? J. R. N.
Bloomsburg, Pa.

Pigs get weak in their legs, and especially their hind quarters, from various causes, such as injury in fighting or slipping, confinement on hard floors, overfeeding, rheumatism and worms. I suspect the trouble in these cases is due to one or more of the three first-mentioned causes. Place the affected pigs on a ground floor, or preferably a small yard, but where they can have a dry, comfortable nest to go into when they wish. If the pigs are fat, reduce the grain ration, or take it away entirely for a time. If there is constipation feed boiled flaxseed meal or oil meal in their slop. Swine Husbandry, by F. D. Coburn, is an excellent book; price $1.50 from this office.

A TALK ABOUT SWINE.

Our experiments indicate that, if there is any difference, cross-bred swine are superior to purebred for quick fattening if put in a close pen and fed a well-balanced ration. That rule, however, holds good only in the case of a first cross, or certainly where a purebred male is used; if followed down beyond that, results are by no means so satisfactory. There seems to be a prejudice in this eastern country against black swine, but we have never been able to find any valid objection to the breed, as they are easy keepers and respond quickly to generous treatment. Several years ago a young Poland China sow about due to farrow was taken from the herd and placed in a yard about 100 feet square, where there was good grass, and the man in charge was told to cut the feed down, as the animal was too fat; later the orders were repeated, as no reduction in flesh was perceptible. Still later the writer walked some distance again to criticise the man for overfeeding the sow, and after listening he replied: "Good heavens! I have fed that sow nothing but water (and the grass she helped herself to) for three weeks, and unless you want her kept on wind that is about the best I can do." The next morning there was a nice litter of pigs in that yard, and all were raised.

We have nearly the whole farm of 400 acres fenced "to scare hogs," and all breeds are, as a rule, given free range during the Summer, as most of our stock is sold for breeding purposes. We have never had any trouble to speak of with disease, although we frequently have more than 100 hogs on hand at a time, and we have always believed that our freedom from disease was due in a great measure to the fact that our swine were given extensive range, there having been at different times considerable loss by disease in our immediate neighborhood. A neighbor of the writer's has for several years fed for his own use a pair of Suffolks, and two years ago, in a dark pen and on a cement floor, the animals got crooked-legged, lame, and were nearly a failure. The next year, at my suggestion, a large window was put in the pen, part of the cement floor covered with boards, and another pair of Suffolks given exactly the same treatment as before, with the result that everyone who saw them thought they were about perfect. For a large hog the Jersey Red would probably be as satisfactory as any, but for an animal to be brought to a marketable condition as quickly as possible, especially if he was expected to pick up a part of his living in the pasture until late in the Summer, we should probably favor the Suffolks, with the Poland Chinas a close second. J. D. VAN VALKENBURGH.
Chenango Co., N. Y.

Hen Profits.

The profits of a flock of hens vary about as the "square" of their healthfulness. I have known flocks in a fair condition to pay a profit of 25 cents per hen, and others in better condition to pay a full dollar each. Sickly or diseased fowls are an abomination. We use every precaution to keep the flock in perfect healthfulness. Whenever I find a hen ailing or slightly drooping, I remove her to the "hospital"; that is a roomy pen apart from the other fowls. In a few days she is usually "on her feet" again. Before returning that hen to the flock she is marked. This is done by placing a wire around the leg. I get some annealed wire, wind a few turns about a round stick half an inch in diameter, and then cut it into pieces at each turn. These turns are placed on the hen's leg, without fastening, except what the resistance of the wire itself holds. The mark means that the hens wearing it are to be disposed of at the first favorable opportunity, no matter what is done with the rest of the flock. H. M.

Grain Hay in California.

We have frequently mentioned the fact that in California "hay" is wheat or barley cut while green and cured as we cure Timothy or clover. The Pacific Rural Press has this to say about a Government contract:

"The War Department knows of something which they call Timothy hay. We used to know all about this Timothy back East, but we cut his acquaintance when we came to California. The army people are not so; they propose to stand by Timothy to the bitter end no matter in what part of the world they are, and as for hay—by any other name than Timothy it does not smell so sweet. The result is that army contractors are obliged to chase Timothy hay way up in the State of Washington and pay nearly twice as much for it as they could get fine cereal hay for in California. The Department says our hay is nothing but straw, and it calls loudly for its friend Timothy. The result is that though on a pinch the army bought last year 20,000 tons of California hay, which was shipped to the Orient, this year not a pound, it is said, is being taken, although this year this State has produced a larger and better hay crop than in many seasons past. Through advices from the North the fact is established that in June 6,000 tons of Timothy hay were purchased in Seattle at $21 a ton. This was loaded on the steamer Algoa that had cleared from San Francisco with a partial cargo and completed her clearance from Seattle with Government contract hay. This hay is justly regarded as inferior in quality when compared to the California product, and at the price named, based on the ruling quotations, an excess of $21,000 was paid by the Department.

STAND by the kicking cow. I have six grade Jerseys; I think they have more vitality than purebred. Place cow in stanchion and tie hind legs above gambrel with three-quarter-inch rope or heavy strap; be sure to draw gambrel close and tight. We always use this on heifers for a few days. C. N. H.

WE notice the many ways suggested to handle that kicking Julia. While all may be good we know one way to be practical. Our plan is to use a common neck-yoke strap (1½ inchx5 feet), wound twice around each hind leg *above the hock*, and buckled firmly. The cow cannot upset the pail, harm the milker in any way, or injure herself. We have used this device for several years with good results. O. B. S.

SORE EYES IN CATTLE.—The Indiana Station warns farmers against a strange eye disease which is troubling cattle. Prof. R. A. Crane says in a recent bulletin: "The symptoms are local and general. The body temperature is raised, the appetite interfered with, and rumination checked. In the mild cases these symptoms are not marked. When first affected one or both eyes are held nearly closed, the lids swell, and tears pour over the face. A whitish film forms over the eyes which may become dense. The cornea may bulge forward, owing to the pressure of the abscess from within. Yellow spots from the size of a pinhead to that of a grain of corn form, and from the margin will radiate reddish lines. These are abscesses, and when they heal whitish scars will take their places. One eye may be attacked and then the other. The course will last from three to six weeks, but it rarely happens that there is complete blindness in both eyes. The treatment is comparatively simple. Keep the badly affected cattle in the shade of a woods, or in the barn if necessary, during the middle of the day, to prevent aggravation. Locally, apply equal parts of finely powdered boracic acid and calomel, by means of a small insect powder blower. This can be done quickly with little restraint, and is preferable to an eye wash for the cow."

Every year, Bronchitis, under the mistaken name of Consumption, sweeps thousands of people to a premature grave. Dr. D. Jayne's Expectorant nearly always cures this form of disease.—*Adv.*

"The Separator"
is the title of a paper containing an expert's reasons and opinions on the different kinds of dairy separators. It is well worth reading and no one should buy any cream separator before seeing this. We send it free to any applicant, together with Catalogue No. 153.
Sharples Co., Chicago, Ill. P. M. Sharples, West Chester, Pa.

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Price $1; six for $5. As a liniment for family use it has no equal. Ask your druggist for **KENDALL'S SPAVIN CURE**, also "A Treatise on the Horse," the book free, or address
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THE RURAL NEW-YORKER, NEW YORK.

HUMOROUS

Cornell University Library 28 Oct 01

The black-eyed Susans nod and
In grace that quite bewitches,
The while with ragweed do they
Each little Dutchman's breeche
The darning-needles swiftly fly,
And when the day is sped
The Susans, just like children,
The chickweed go to bed!

GEORGE: "I have just invest[illegible] one of those new 'pepper and sa[illegible]uits. Robert: "Ah: That ought t[illegible]good for two seasons."—Baltimore World.

"WHY do you eat that looking-glass?" asked the dime museum visitor of the human ostrich. "Oh, it's food for reflection," replied the freak.—Baltimore World.

"A FINANCIER is a man who makes lots of money, isn't it, father?" "No, Freddy; a financier is a man who gets hold of lots of money other people have made."—Our Dumb Animals.

"ARE your mother's slippers felt?" asked the visitor. "Are they felt?" echoed the youngster who had just returned from the woodshed; "well, I should think they were."—Phila. Record.

MISS SHARP: "So you don't think that women are equal to men?" Mr. Noodle: "Dear me, no! Why, woman was an afterthought." Miss Sharp: "Exactly. And, are not second thoughts best?"—Punch.

OLD LADY: "Now, little boys, can any of you tell me what commandment Adam broke when he ate the forbidden fruit?" Tommy: "Please, ma'am, there wasn't any commandments then."—San Francisco Chronicle.

"WILLIE, I am glad to hear you say you would like to be an angel. What would you do if you were one?" "I'd fly up to the top of that big cottonwood tree in our yard an' take my kite out of it."—Chicago Tribune.

MRS. SNAGGS: "They must have some big pistols out West." Mr. Snaggs: "Why?" Mrs. Snaggs: "There's something in the paper about a train robber covering a conductor with a revolver."—Pittsburg Chronicle-Telegraph.

"THE road to knowledge nowadays," said the old pedagogue, "is too swift and too easy. It's a regular railroad." "Exactly so," remarked old Professor Birch, "and it's a railroad with insufficient switches."—Philadelphia Press.

"I UNDERSTAND that your boy Josiar is a good deal of an athlete," said a neighbor. "Yes," answered Farmer Corntossel; "I'm kind o' worried about Josiar. Sence I saw him jumpin' over parallel bars an' turnin' somersaults jes' for the fun of it, I'm downright afeard he will work hisself to death when he gits here on the farm where there's practical business to 'tend to."—Washington Star.

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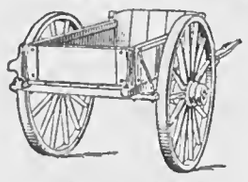
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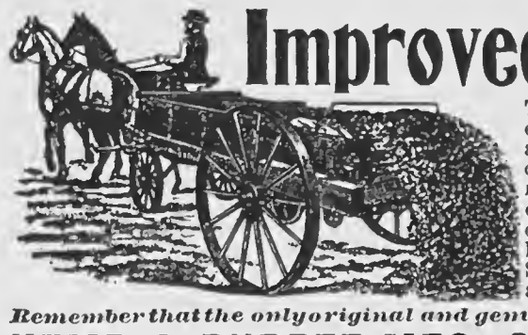
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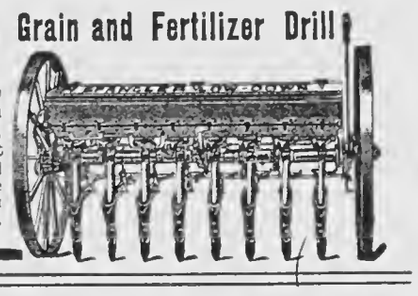
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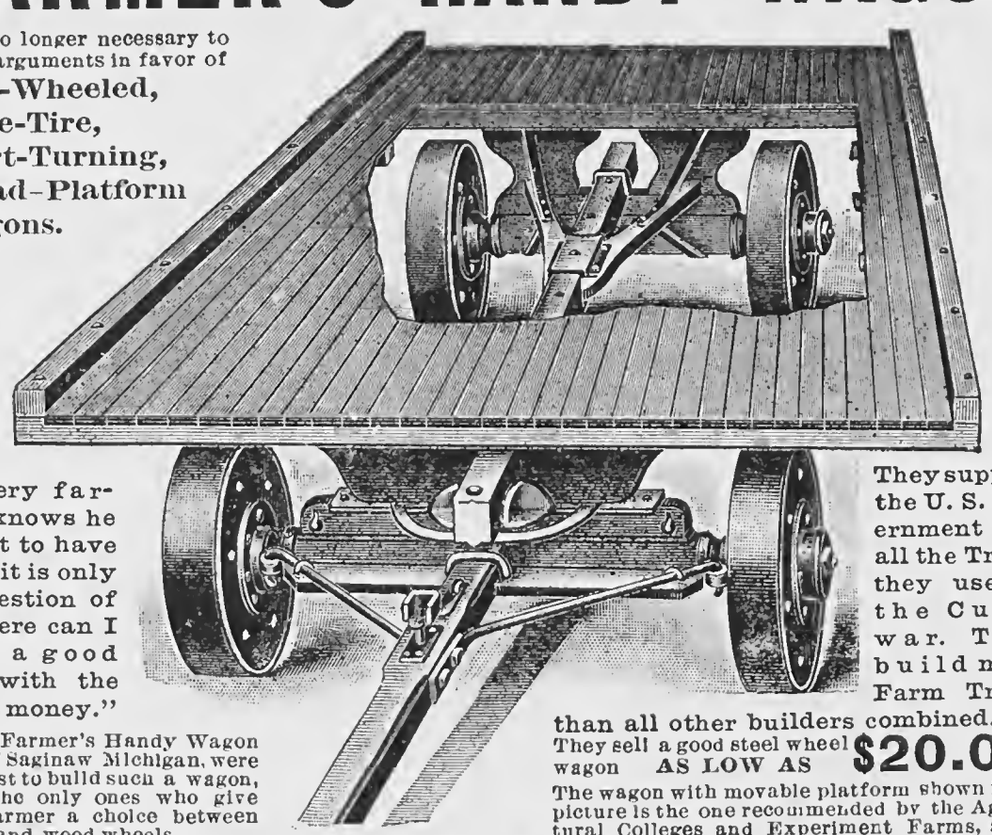
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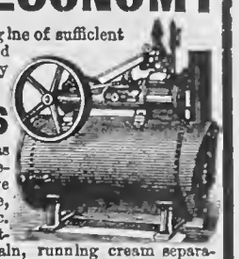
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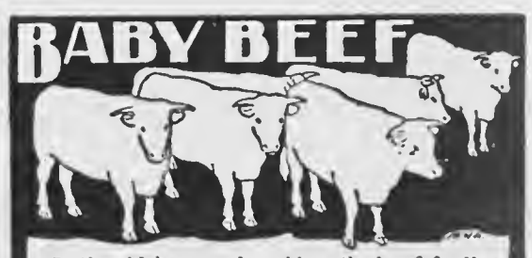
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OCT 22 1901

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

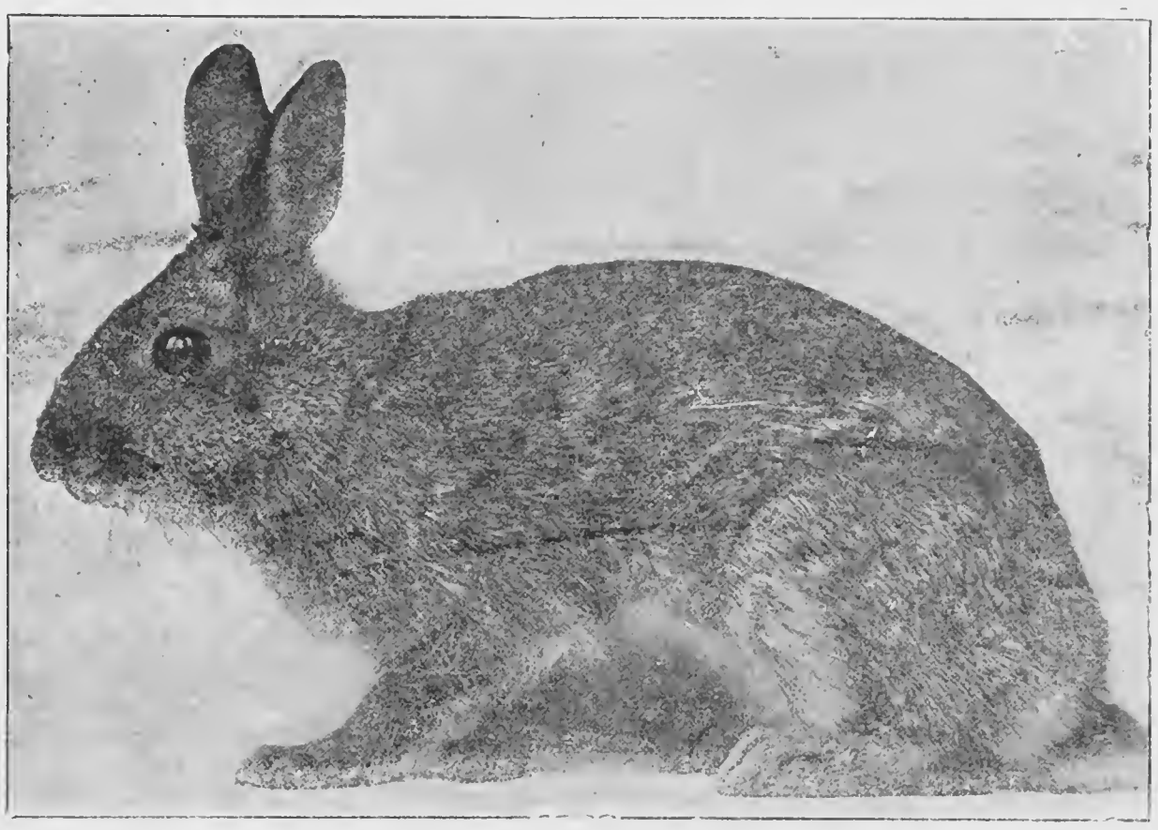
VOL. LX. No. 2695. NEW YORK, SEPTEMBER 21, 1901. $1 PER YEAR

HABITS OF THE WILD RABBIT.

ITS INJURIES TO FRUIT TREES.

What To Do With Them.

Prof. H. Garman, of the Kentucky Experiment Station (Lexington), gives in Bulletin 63 some interesting facts about rabbits. These little animals prove a serious pest in some parts of the country, as they gnaw the bark of young fruit trees, and even eat crops. The pictures shown in Figs. 284, 285 and 286 are taken from Prof. Garman's bulletin, as are also the following notes:



THE COMMON WILD RABBIT. FIG. 284.

In the more closely settled portions of Kentucky hunters and dogs keep the numbers so reduced that complaints of injury by barking trees are rare, but in sections where there is still a great deal of forest with undergrowth, hunting is not sufficient to keep them in subjection, and whenever snows are deep and other food becomes scarce, the trees suffer. I have examined nurseries in which 25 per cent of whole blocks of apple trees was so badly gnawed as to be worthless. When trees are from one-half to one inch in diameter of trunk the bark alone is commonly eaten, but they may be completely girdled for a distance of eight or 10 inches up the trunk. Very young trees (one-year-olds) are sometimes cut off by the sharp incisors as cleanly as if severed with a knife. Hunters cannot be given the freedom of a nursery, because of the damage done to trees by charges of shot. Dogs alone are not a complete protection. Other means are a necessity at times.

RABBIT-PROOF FENCES.—When the nursery is small it is possible to enclose it with a close slat fence that will "turn" rabbits. Two types of fence suitable for the purpose are to be seen in the State. The most common is made of rough slats four to six feet long and about three inches in width. The slats are securely fastened together from one to two inches apart with No. 11 wire, stout posts being set at intervals of 10 to 16 feet to insure stability and keep the panels upright. Since the slats can be adjusted to any unevenness of the ground, it is possible to exclude anything that a fence can reasonably be expected to turn. The second type is made of shorter slats, three or four feet long, and these may be supplemented above by one or more wires stretched from post to post. J. Q. A. Rahm has built such a fence about his nursery. He uses slats three feet long, none less than one-half inch thick and sets his posts in Spring; waiting until hot weather in August and September before putting up the slats, in order to have the wire fully expanded at the start. The wires are simply crossed between the slats, and are kept taut while building by a harrow loaded with about 1,000 pounds of stone and placed from 100 to 400 yards ahead of the workmen. Near the harrow the wires are secured to a singletree made of a piece of stout timber, a log chain being passed around this and secured to the weighted harrow so that it cannot slip.

A RABBIT-PROOF FENCE ABOUT YOUNG NURSERY TREES. FIG. 285.

TRAPS.—Rabbits are very easily caught, notwithstanding their well-known cunning. One of the simplest and best traps used for the purpose is made of rough fence boards six inches wide and about two feet long. These pieces are nailed together so as to make an oblong box, one end of which is closed with a short piece of board, while the other is provided with a door consisting of another piece of board which slides down from above in grooves cut in the projecting sides, or between slats nailed on to the end, as shown in Fig. 286. The bottom piece may also be allowed to project so as to make the door more secure when closed. A small hole is bored through the top at about the middle of the box, and midway between this and the door a stick is secured in an upright position. Across the top of this latter a second stick is secured, by a nail, in a notch made in the upright one so that it will see-saw up and down. A third stick of small size is notched near one end and secured at the opposite end by means of a piece of twine, to the end of the larger movable piece. This movable piece is now connected by twine at its forward end to the top of the door, when the trap is ready to set. The door is elevated, the little stick passed through the hole in the top and secured by the notch to the front edge of the hole. When the rabbit enters it pushes the projecting end of the stick before it, setting it free, allowing the suspended door to descend and thus cutting off its own escape. P. E. Downer, of Todd County, keeps numbers of these traps set among his young trees at all times during the Winter, catching scores of rabbits, and completely preventing injury from them. The traps may be baited with a piece of apple or cabbage placed in the the end farthest from the door, but rabbits sometimes go into them when no bait is used, either out of curiosity, or in search of shelter. They are very likely to take refuge in the traps when closely pursued by dogs. The traps can be taken indoors in Summer, and with this care will last for a long time. They should be made of old weather-beaten boards, as these are less likely than new lumber to arouse suspicion. I have seen traps of this pattern made by a 10-year-old boy that worked well, to the great delight of their owner.

A second trap sometimes used in the State is made of the same material as that described, but the door is hinged at the top and swings inward, so that when open it is against the top of the trap. It is secured in this position by a wire which passes through a couple of eyelets and is finally connected with a treadle consisting of a loose piece of board resting on the floor, by its front edge, while farther in it is raised by means of the wire connected with the open door. When any weight presses up on the treadle, the wire is drawn from beneath the edge of the door and lets it drop. Being somewhat longer than the opening it strikes the bottom of the trap in an oblique position, and any attempt of a rabbit to escape only wedges it the more securely. The hinges required may be made of bits of old leather. The wire commonly employed is that designed for fences. The common form of snare used in this State consists of a ring of small pegs driven into the ground so as to project about three inches, the pegs set one inch apart and the ring made about five inches in diameter. Then in place of one of the pegs a small figure-four is made, with the horizontal piece bearing an apple projecting to the middle of the ring of pegs. A sapling is bent down, a piece of chalk-line attached and the noose at its end is passed about the ring of pegs and connected with the figure-four, so that when anything disturbs the apple the noose is released and the sapling flies up.

RUBBING TREES WITH BLOOD.—Even in the nursery it is possible to go over blocks of trees during the Winter and rub the trunks for 1½ foot above the ground with blood from a slaughtered hog or steer, and those who have tried it claim that it is a complete protection against rabbit depredations. Sometimes a piece of liver is used, the rubbing being done in either case with the hands, these sometimes protected by an old mitten or glove. The practice does not commend itself to me as the best means of attaining the desired end, so far as the nursery alone is to be considered. In the young orchard the rubbing can be done with less waste of labor. Young orchard trees can be protected, however, by simply wrapping the trunk with closely-placed cornstalks, coarse straw or stout paper. Such wrappings are frequently employed, and I am assured by those who have tried them that trees so defended are never disturbed by rabbits, though it must be confessed there is no evident reason why they should pay heed to so flimsy a covering when their stout teeth could easily remove it.

HABITS OF COMMON RABBIT.—Our common rabbit makes a very attractive pet when captured, even after he is fully grown. But a wilder thing was probably never handled than an individual just taken from the trap. He comes as near jumping out of his skin as anything alive. His fright is pitiable to behold, and, mute that he is at other times, the wail he then sets up is enough to touch the heart of the most hardened and brutal. Much of his life is spent in thickets about cultivated fields, at the edges of woods, wherever suitable forage is to be found. His trust in his fleetness and cunning is such that he penetrates even into the edges of cities. During the day our rabbits remain on their "forms," which consist of slight depressions in the ground among grasses and weeds. Their colors harmonize so completely with their surroundings that they are very effectively concealed, and it is only when one stumbles on them, or when dogs nose them out, that they are started. They do not burrow, and are not much given to going underground, although they will dash into any hole or crevice that offers refuge when closely pursued. During very severe snowstorms they resort to brush heaps, and are sometimes surrounded here and killed in large numbers. In the Spring, often in March, when the weather is still cold, the female makes a little pocket, a few inches in depth, in the soil in some retired place, and lines it with the soft fur torn from her body. The young, which number four or five, remain in this snug retreat for several weeks, but soon run about, probably remaining in the neighborhood of the mother for some time later.

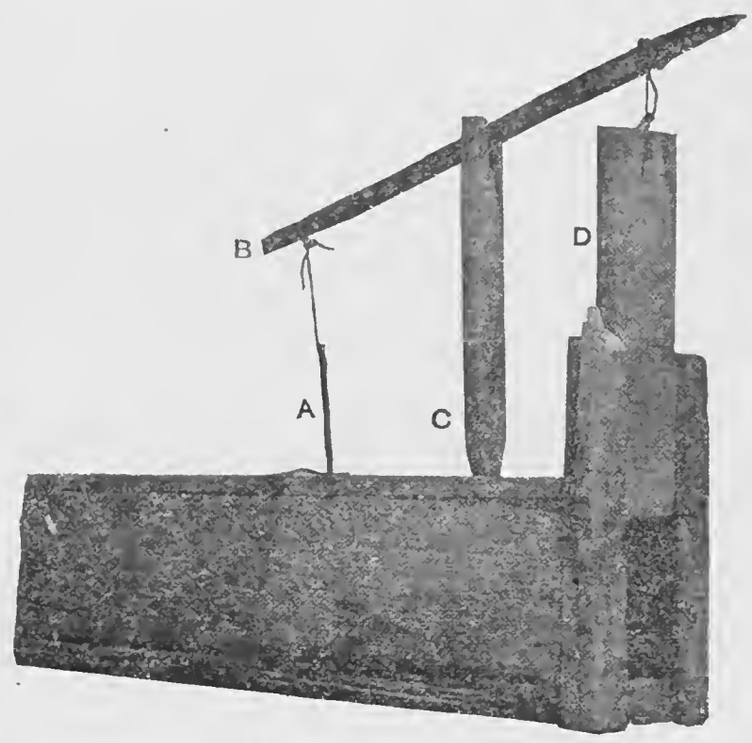
PORTO RICO FOR AMERICANS.

Fruit and Vegetable Growing.

VEGETABLES.—No portion of the United States domain offers such a profitable field for the employment of horticultural skill backed by capital as Porto Rico. Its wonderfully sunny Winters, with uniformly warm nights, make it superior to Bermuda or Florida, because absolute immunity from frost is secured. The writer grew tomatoes, egg plants and beans last Winter on a property near Jobos Bay, on the south coast of the Island east of Ponce, which demonstrated that this business is practicable under present conditions. In this experiment the seed was sown in December, four months too late, and a third of an acre each of tomatoes and egg plants were grown. Marketed in April and May the tomatoes brought $2 to $3 per carrier (30 pounds), and the yield was such as to warrant the conclusion that, starting operations at the proper time, the gross receipts should be from $800 to $1,600 per acre. Egg plants flourish luxuriantly in the Porto Rico Winters, and this crop is perhaps more easily handled than tomatoes by the gardener new to the climate. A wind-break of hills, or of trees such as bananas, should shelter the vegetable field from the prevailing trade winds, which, while very delightful in the shade, combined with the heat of the sun cause excessive evaporation in soft-leaved garden crops. These conditions make irrigation desirable for the most complete success, because while there is in many sections of Porto Rico an abundance of rainfall, there are frequently short droughts during February and March, which would prove disastrous in cutting down the yield. Intensive methods are necessary to grow vegetables successfully, and this is nowhere so imperative as where highly-developed plants are grown under the strong push of the tropical sun. The conditions are quite similar to those of the hothouse. Thorough fertilization, cultivation, watering and rigorous pruning of laterals are among the conditions requisite to insure success in growing tomatoes and egg plants to perfection in the West Indies. There are insects of course in Porto Rico as well as in the States, and the intelligent gardener will be provided with modern means for combating them. September, October and November will be the planting months for Winter vegetables in Porto Rico. Potatoes and onions should be planted at the close of the heavy Fall rains of October, on well-drained land, when they will succeed the best in the slightly modified heat and drier climate of the Winter months, ripening in February, March and April, when new potatoes command $7 to $9 per barrel, and new onions $1.50 to $2 per crate in New York.

PINEAPPLES.—It is doubtful whether a climate and soil can be found anywhere more congenial for the growth of pineapples than Porto Rico. They are found growing wild in old clearings throughout the Island, in situations where they have continued to grow and bear fruit, somewhat stringy it is true, holding their own in the wild growth of the bush. The deliciously sweet yellow-fleshed "par de azucar," or sugarloaf variety and the large white or "cabezonia," known in the northern market as "Porto Rico," are the varieties now chiefly grown. The latter, on account of its superior size and shipping qualities, is the better for commercial planting. This luscious fruit can be grown on a large scale in Porto Rico at the present time, as it is one which is simple in cultivation, and the market for the fresh and the canned product is immense. With good management they should yield a net profit of from $100 to $300 per acre, especially if a fine stock is grown.

ORANGES.—Orange growing, on account of the magnitude of the market in the United States, has naturally attracted more Americans than any other line of horticulture. Probably 50 Americans have started to establish groves on the Island, and during the present season more than ever before. One of the pioneers in this line, Gustavo Preston, of Boston, who was born on the Island, and has extensive business interests there as a sugar and molasses importer, was recently interviewed by a reporter of the Boston Herald, in the course of which he said that he bought 300 acres after the American occupation, and has gone into the fruit business in a modest way. His land is in the southeast end of the Island, well into the country among the real natives, five miles from the nearest village. He found it a good location for orange culture, many orange trees growing wild there. From one of these, 3,500 delicious oranges were gathered one season, which made about 20 boxes. The duty on these 20 boxes was about $16 (the rate is one cent a pound) and if an acre of trees (70) would bear as well the duty for the product of the acre would amount to $1,120. If Jamaica planters can make a profit from oranges imported to the United States, paying this duty, one can estimate the increased profits accruing to the Porto Rican planter. As for California and Florida fruit, the freight from these States to the market will average from 70 to 90 cents; but from Porto Rico to New York the cost is only 25 cents. He imported from Florida orange trees of different sizes, and secured others in the vicinity of his land, and set out in all about 10,000 trees. As one



A RABBIT TRAP COMMONLY USED IN KENTUCKY. Fig. 286.

has to wait several years for the first crop of oranges, he began the cultivation of several products well protected by the United States tariff, such as tobacco, rice and beans, which yield fair profits with small investments. This small investment for labor has greatly increased the comfort of the neighboring population, which he found to be an exceedingly lovable, tractable and grateful people, honest to a degree, and living in the same way their fathers did from the produce of their little plots of yams, sweet potatoes, plantains, etc. The district adjoining Bayamon, which is only a few miles from San Juan, has been up to now the favorite for Americans locating orange groves in Porto Rico, as it combines good soil and sheltered location with excellent shipping facilities. Every quarter of Porto Rico has soils and localities adapted to fruit growing, and better means of communication only are required to open up hundreds of thousands of acres of these in the hill country of the interior, which can now be bought for a merely nominal price. The southwest portion of the Island, the neighborhood of Mayaguez, is the district where the largest number of fine pineapples and oranges are now found growing, as climate and soil conditions are very favorable there, but at present the transportation facilities do not favor this section for exporting.

TOBACCO.—Tobacco growing in Porto Rico has a bright future, as there are many regions where the soils produce a high-grade leaf, similar to the famous vuelta abajo tobacco of western Cuba. Much of Porto Rico tobacco was formerly sent to Cuba, where it was recured and sorted and sold for Havana. Porto Ricans do not understand the fine arts of curing and preparing the leaf for market so well as their cousins, the Cubans, and just now are not prepared to take advantage of the enormous tariff bounty which they possess in this great industry.

CANE.—Cane growing for sugar, molasses and rum manufacture, under a highly favorable tariff, is now enormously profitable in Porto Rico, but not over 10 per cent of the lands, the rich alluvial soils of sea coast and river valleys, are suitable for this business. Cane growing to be profitable must be conducted on an enormous scale. It is said that over $1,000,000 has been invested in the land, railroad and new sugar plant of the De Ford Company on Jobos Bay, Porto Rico. Under such circumstances the sugar industry offers a few situations to efficient young men who have executive ability, and some knowledge of Spanish, but only the very wealthy can engage in it as proprietors.

COFFEE.—The coffee business was already in a depressed condition on account of low prices to the grower, when the American occupation brought a rise in the duty in Spain and Cuba. This was followed within a year by a desolating cyclone, which destroyed the branches of the coffee trees throughout a large portion of the Island. The coffee growers are many of them ruined, and little work has been done on these properties, because most of the growers are in debt. These sad conditions are among the causes of the suffering of the laboring classes in the interior of Porto Rico. As coffee is on the free list there is no advantage in growing this crop in Porto Rico over countries beyond the control of our Government. Probably in time much land now devoted to coffee may be planted to fruit and vegetable crops which produce a higher value per acre. This can only be done, however, as better roads and railroads penetrate the interior coffee districts. As Americans come in to develop the waste places of Porto Rico, and as labor becomes more intelligent and proficient, the minor products of the Island will be more and more exploited, and the crops more and more diversified. New industries will spring up, based on utilizing the products of the soil, and those already started, such as the manufacture of cigars, cigarettes, hammocks and hats, etc., will be systematized and extended. Porto Rico will become a delightful Winter garden for the United States, the home of the fruit grower, and the favorite haunt of the tourist seeking Winter diversion.

F. A. PENNOCK.

SUCCESS WITH COW PEAS IN DELAWARE.

The present season has been a record breaker all along the line. In July and early August we had the longest continuous spell of high temperature within the memory of the oldest inhabitant. Accompanying this were frequent rains and a high degree of atmospheric humidity. These were just the conditions requisite to produce the highest development of the corn and cow-pea crops, both of which have a prominent place in Delaware agriculture. I have been growing cow peas for 12 years past, and have often secured very heavy crops of them, but I do not remember a year when the growth has been so uniformly rank and heavy as it is this season in every field I have seen. The Mt. Olive and the large early black varieties have long been great favorites with me on account of early maturity and bush habit of growth, at the same time producing as heavy crops as can be comfortably turned under. But they have grown this season as never before, and I should not recognize them at all from appearance of the vines. My field of Mt. Olive is a sight to behold; planted in rows 32 inches apart they completely hide the ground, and by actual measure the vines are over four feet.

I have completed cutting a field of Early Black for hay. It was in my pear orchard of standard Bartlett trees, and had occupied the ground only 70 days. The plants were well podded, and a few pods had ripened. A pair of Norman horses and a strong McCormick mower were used, and of all the tough jobs I ever had cutting hay, I think that was the toughest. Many of the vines were over 10 feet in length, and tangled and twisted in every direction. The first "through" in each space between three rows wes especially difficult to cut, and I had to stand up on the machine in order to see where to drive. By keeping the team on a lively walk I could sometimes cut several rods without stopping, but more often would not get more than one or two rods before the guards would load up with vines and leaves, necessitating a stop. The "divider" failed to divide, but slipped along under the mass of vines, and the only guide I had was the impress of the wheels made the previous round. The next thing is to cure it properly, retaining the leaves. This I hope to do, as the weather is fine, and promises to continue so. I fed six tons of excellent cow-pea hay last Winter to milch cows and work horses with grand results. Out of 76 acres in my farm, 24 acres are now in cow peas. Twelve acres of them will be limed and plowed under in October and sown to rye, which in turn will be plowed down next May, and the field planted in corn. This treatment I expect to give as good results in the corn crop as a heavy dressing of stable manure. I have no failures with cow peas. I always use good seed, and plant or sow them in June or July, when the soil has become thoroughly warm. Early sowing, April or May, will result in failure. The cow pea is a hot-weather plant and must have proper conditions to thrive. Crops are generally good in Delaware this season, and are bringing very satisfactory prices. Peaches were never finer in color, size and quality. Quite a number of farms have been sold recently to northern and western farmers, who are finding out the advantages of climate, healthfulness, soil, location, etc., offered by Delaware.

E. G. PACKARD.

USING THE FARM ROLLER.

The roller is an implement which should be upon every farm, and yet if it is used without an understanding of its operations it may be productive of harm instead of good. Now that land is being prepared for wheat the farm roller should be hauled from its resting place, and should be used in fitting the wheat ground. Ordinarily the roller is looked upon as an implement with which to crush clods, and with which to press the stones into the ground upon the meadow land. But when used upon wheat land it becomes something more than a clod crusher. It compacts the surface soil, it firms the seed bed, and as a result of its action upon soils the harrow is made far more effective in its action. That this last statement is true can be easily proven if one will take a freshly plowed field and roll a portion of it before harrowing. The truth of the statement is especially seen on sandy or loamy soils. By the use of the roller the surface particles of soil are pressed closely together, and surface capillarity is greatly increased. A short time ago in conversation with a farmer who was rolling a piece of plowed land, I asked him why he was rolling the land. He replied: "I do not know; to make it more moist I suppose." He had noticed that where the soil was compacted at the surface it was darker in appearance, indicating that the moisture was rising from below. It had never occurred to him, however, that the moisture was passing off into the atmosphere and was being lost from the soil. It should be made a principle in farm practice that whenever the roller is used upon plowed land it should be followed with the harrow so that the surface soil may be again loosened and the escape of moisture be prevented. See Fig. 287.

Where the roller is to be used at the time of drilling in grain, the roller should precede the drill. After the plants have appeared above ground and are from one to two inches high the roller may be frequently used to advantage. It serves to firm the soil about the plant roots, and gives them a firm contact with the soil; it pushes the small stones which may be upon the surface into the ground, and thus prepares the way for the reaper or mower. In fitting the land for wheat this Fall the roller should be used to firm the subsurface soil, for wheat does best in our latitude when made to feed near the surface of the ground in the Fall. A precaution which should always be observed is never to roll land when it is so moist as to be sticky, for then harm will be done. Sandy, gravelly soils may be rolled often, but the harrow should follow soon after. L. A. CLINTON.

A MYSTERIOUS BEAN TROUBLE.

I mail you under another cover some beanstalks, as specimens of the work done by some insect, the grub of which I think you will find in some of them. I could not find the insect that lays the eggs, but perhaps you can tell what it is. They do the most damage in the best beans; the eggs are laid from the surface of ground up to the branches, and sometimes where the branches join the stalk. When the pods get heavy, they bend over and break the stalks, and the beans wither up. I have seen a little fly, like the Hessian fly, in the field, but do not know whether they are the guilty ones.

Shortsville, N. Y. J. R. W.

Bean growing has come to be a very important industry in western New York, and until this season we have had few complaints of their being seriously injured by pests or other troubles. But during the past month reports have come in from several localities that the bean stems were being cut off by some insect, so that the top of the plant, with its pods, fell over and shriveled or died. From the specimens of the stems sent to us we were unable to diagnose the trouble. We were wishing for a favorable opportunity to inspect some of the injured fields when J. R. W.'s query came in with one or two others the same day. We at once went to Shortsville, and made a close inspection of the field conditions. In Fig. 288 are pictured some of the injured stems that we found. The common white beans usually were not affected noticeably, but the Yellow Six-Weeks kidney beans often suffered seriously. Some of our correspondents report that it is the work of a maggot or grub, and once in a while a broken stem will be found in which there are a few minute maggots, but we are quite sure that the little mother fly was attracted to the spot by the decay or rot going on; hence the maggots are not the cause, but may be secondary accompaniments of the trouble. Some thought that it was the work of the Hessian fly, but no trace of this insect can be found in or about the stems, and it has never been known to attack beans. Others found many large black beetles on and around the plants. We found these also, and as they are ground beetles which feed upon other insects, and sometimes on the seeds of weeds, we are sure they have nothing to do with the stem trouble. In fact, the general appearance of the break indicates that it is not the work of a biting or chewing insect, like a beetle or a cutworm. We doubt whether any insect has any connection with the trouble, but it is possible that a sucking bug may, in puncturing the stem, so poison the wound as to cause a cracking of the stem, which would let in rot spores; this is scarcely probable, however.

We noted that the stems always broke over at a joint, and there was always more or less rotting of the tissues at the break, and often at other joints above. Growers state that in many cases the fields were so wet that they could not cultivate down the weeds, so that with the shade of the weeds and the continued wet weather the bean fields are reeking with just those moist conditions which are most favorable for the growth of the rots and other fungi. In many cases, also, it is said that the beans have grown too fast, so that the stems may be weaker and the tops heavier than usual. Thus, when the stem was weakened at a joint by a wound or rot, the swaying of the heavy top might easily cause the break, which suggested insect attack.

From our observations in J. R. W.'s field we believe

FITTING GROUND WITH THE ROLLER. Fig. 287.

that the trouble is largely due to the above unusual natural conditions, aided by some rot disease. The trouble seems to begin in a slit or crack in the stem at a joint, as shown on the stem marked A in Fig. 288. Whether the unusual conditions of quick growth cause this first slit in the skin of the stem or not, we cannot say with certainty; we do not believe it was done by an insect. But some disease or rot spores apparently soon find this ideal place of lodgment, and chance to work in the tissues, and a rot begins which weakens the stem at a joint until the heavy-topped plant in its swayings at last breaks the hollow stem. Sometimes the rot continues and girdles the stem at the break, and the top of the plant shrivels and dies. Oftentimes, however, the break is not complete, and the top, bent over on to the ground, continues to get enough sustenance through the other unbroken side to enable it to mature its crop, so that but little damage is done. From what we saw, we are inclined to believe that if there had been less moisture and weeds in the injured fields, but few of the stems would have broken over. Too much moisture and too fast a growth, which induced unusually favorable conditions for rot spores and other

BEANSTALKS BROKEN BY ROT. Fig. 288.

fungous troubles, seem to us to be the principal causes of this new and widespread bean-stem trouble.

M. V. SLINGERLAND.

WHAT GOOD APPLES MEAN.

I am thankful for remarks on page 566 on Baldwin apples in New England. I have never seen or heard of any apple of its season as good as the Baldwin, grown where it belongs. All these Winesaps, Ganos, York Imperials and the host of other red apples make me long for a good Baldwin when ours are all eaten, and I have to buy in the market. And there is a turnip apple, the B—— D——, and a turnip pear, the K——. How can these claim any better place in the list of products than oleomargarine? They ship well and they look well, and they are not what they seem. I imagine St. Peter has many a surprise in store for the man who cries fraud at oleomargarine, and plants and ships fruit to market which looks like good honest flavor and is not. Our fruit stands in the great cities all Winter are loaded with this wretched stuff, which no sane man would ever buy twice, and many have to throw away when bought. The result is that but few of our 75,000,000 people eat apples. We are six in my family, and all enjoy good health, thanks to an apple orchard my father planted, Baldwins, Russets and Greenings, down in Rhode Island. We never sit down to any meal without baked apples or apple sauce on the table, of which all partake three times a day, 365 days a year, as freely as one would eat bread or potatoes or drink milk. We always keep a barrel of apples open in the cellar from August 1 until strawberries come in. All the children eat all they want whenever they want, morning, noon and night. I personally will easily average four to five raw apples a day for 10 months of the year.

Why do we do this? Because we have been taught to know what apples have good flavor and are digestible. I could not eat two King or Porter apples in succession; they are not digestible. But Baldwins, Greenings and Fall Pippins are. Now I wish some of your readers who are planting B—— D—— apples which no one can eat, would think what it would mean to their apple market if one-half our population were as well posted on the food value of apples as I happen to be, and I wish you would take this question up on its merits—and as long as fruit is shipped solely on its looks and keeping qualities, teach those men who ship it that that is precisely what oleomargarine comes in on. W. B. W.

APPLES IN CALIFORNIA.

We are feasting on apples this year. Red Astrachan, our earliest variety, came along about July 4, followed quickly by Yellow Harvest. As there were more of these than we could use, we made some cider, but found it too poor to use. Next to ripen was Wealthy, about August 1. Wealthy is a very acceptable early apple here, always bearing some, and generally a good crop of medium-sized tender juicy apples, and besides, I have a soft spot in my organism somewhere for the originator, Peter Gideon, having known him in my boyhood days, and how he found only one good apple out of 10,000 seedlings, and named it Wealthy. Out of my boyhood's earnings I paid $1 for a Wealthy tree only about a foot high, and planted it with great expectations in a choice place in our garden in the suburbs of Minneapolis. The place where it was planted is now covered with buildings, but my expectations are realized here in California. August 8 I picked one apple from a two-year-old Red Harvest tree in the experimental orchard. It was a better apple than the Yellow Harvest, and will doubtless come earlier when the tree is old enough to bear a crop. August 9 I picked the first Gravenstein, and we are still eating this most delicious Summer apple. While the Gravenstein has the fault of bearing irregular crops of various-sized apples from the size of crab apples up to four inches in diameter, its fine quality makes it a very desirable apple for the family orchard. Its thin skin and small core are good recommendations, and I write from practical observation, for to me falls the pleasant task of preparing the apples for table use. The next apple to ripen is the Skinner's Seedling—called by some nurserymen Skinner's Pippin. This apple is now in its prime and is in demand for eating from the hand, cooking, canning or drying. It is very tender and thin-skinned, but has a rather large core. It originated in this county and is named for its originator. The tree is a strong healthy grower and is one variety that resists the effects of Paris-green spray excellently. In my experiment orchard several varieties are bearing enough apples this year to give a test as to quality. Stark has borne two crops, and although large and attractive, the quality is poor. It will probably be one of many to be grafted to some more desirable sort. Arkanasas Black and Delaware Red produced a few apples last year and this. They do not promise well, but will have a fair trial.

We have few worms this year. We sprayed three times, and now have bands around the trunks of the trees, which we examine every week and destroy the worms found there. We have found that the foliage of some varieties is very tender and easily injured by Paris-green, Jonathan and Newtown Pippin showing the most injury in our orchard. The windfalls are picked up every week, the best ones are used for drying, and the poorest sent to the hogs. A few weeks ago I passed through the famous apple district near Watsonville, and saw evidences of a large crop of apples. The varieties raised are almost entirely Newtown Pippin and Yellow Bellflower in the proportion of three of the former to one of the latter. These apples are almost all of them shipped to eastern markets and to London. Prices paid by the buyers range from 80 cents to $1 per box on the trees for sound apples large enough to pack five tiers in the box. These prices yield handsome profits to the owners of apple orchards. H. G. KEESLING.

Santa Clara Co. Cal.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Treatment of Old Pear Trees.

P. G. S., Morton, Pa.—I have about a dozen old pear trees between 50 and 75 feet high, which have been growing wild for years by the looks of them. This year they bore no fruit. They are, I think, Catharine and Seckel. Are they of any use? Could they be pruned so as to bear within a year or two? If so, describe treatment for same.

ANS.—It would be impossible to give positive advice regarding the proper thing to do with these old pear trees without seeing them, but if they are in healthy condition it is quite probable that they would be valuable when grafted. I have set grafts on pear trees fully 40 feet from the ground that nourished and bore fruit abundantly in after years. I think, however, that it is a mistake in believing that any of these trees are Seckel, for this is one of the best varieties known, and would certainly bear abundantly under anything like proper treatment. It would be unwise to haggle the trees by severe pruning and this sort of treatment would not be likely to make them bear, but rather to make them produce a lot of new wood that would only bear after growing two or three years. If the trees bear worthless fruit the grafting would cause them to bear good fruit. The proper thing to do, in my opinion, would be to get some person who has a good knowledge of pruning and grafting to look at the trees and then decide what to do with them. H. E. V. D.

How Raisins Are Dried.

H. H. C., Nelson, N. Y.—Describe the process of raisin making. What varieties of foreign grapes are used for that purpose? What varieties of our native grapes would be best for raisins?

ANS.—There are a number of varieties of the foreign class of grapes which are used for making raisins. Among them is the Muscat of Alexandria, which is the principal one used. It is a large green, or yellowish green grape, and the bunches sometimes weigh as much as two or three pounds before they are cured. Being of a light color before they are dried they make quite a light-colored raisin. The Sultana is a variety of the same color and makes even a lighter-colored raisin, but the berry is smaller and without seeds. There are a number of other varieties which I might mention which are used for raisins, but these are the leading kinds. All of them must necessarily be meaty in character and not simply skin, juice and seeds, as nearly all the grapes are that are grown in the Eastern States. None of this latter class will make raisins, as there is not enough flesh about them, and it would be useless for anyone to undertake to dry them. They are rarely grown in California or any of the other States beyond the continental divide, because there they can grow the richer and more valuable varieties such as have been described. In making raisins the grapes are picked upon trays in the vineyard, and in many cases are left right there to go through the first stage of drying. Sometimes they are taken to a special drying ground, and the trays there spread out to the influences of the sun and air. In either case they are partially dried by turning them over from time to time and are finally taken to a curing house which is built for this special purpose, where they are brought to the proper state of dryness and then packed. Quite recently there has sprung up an extensive business in seeded raisins. By this method all seeds and stems are removed, and only the valuable part is packed and transported to the market. This is a great saving, because by the old way there were many thousands of tons of seeds and stems sent to market, which were not only useless to the consumer, but very troublesome as well. H. E. V. D.

Small Fruits in Connecticut.

H. C. M., New Haven Co., Conn.—1. Some nurserymen are offering stock of raspberries and blackberries, in fact almost all nursery stock, for Fall planting. Is it advisable to plant raspberries and blackberries in the Fall, especially blackcaps? I have had some difficulty in getting raspberries to succeed with Spring planting. Would Fall be the better time? What protection is necessary for stock set in the Fall? 2. Will you give a list of profitable varieties of blackberries, those in use by commercial growers? 3. What is the best way to treat a blackberry plantation on a light, gravelly soil, to grow paying crops of fruit? 4. What is the best mulch to use on spinach during the Winter? 5. Do you recommend mulching the strawberry bed with coarse stable manure in the Fall? Will it not be likely to seed the ground with too many weeds? 6. Are the improved dewberries profitable commercially in New England? What is the best method of culture?

ANS.—1. In Connecticut it will do very well to plant raspberries and blackberries in the Fall, but I would advise to mulch them so they will not be heaved out by the Winter freezing. So treated, they ought to do very well over a large part of the Eastern States. 2. Among the most popular blackberries are Erie, Minnewaska, Agawam and Snyder. The latter is small, compared with the others, but very hardy and productive. 3. It would be necessary to manure light sandy or gravelly land very highly in order to get the best results from blackberry bushes. Plenty of coarse manure of almost any kind will add humus and fertility as well to the soil. Mulching with the same kind of material from year to year among the plants in the rows will be a great benefit; for this will help to retain the moisture in the soil and maintain the fertility. 4. A very light covering of marsh hay will be as good a mulch as can be used for spinach during the Winter. I have used pine needles for this purpose, but they cannot be as easily obtained in Connecticut as marsh hay. 5. Coarse stable manure makes a good mulch for strawberries, provided the forage from which it is made is not full of weed seeds. That made from wheat or oat straw or corn fodder is likely to be quite clear. When Timothy hay is fed there are likely to be many weed seeds, and the grass seed is also troublesome when it grows. 6. Lucretia is about the only variety of the dewberry that is generally acceptable to the commercial growers. It is large when properly grown, and comes in before the true blackberries begin to ripen. Mayes (sometimes called Austin) is another large and well-flavored variety, but it is too soft for general use. Both these varieties or any others should be lightly covered with coarse litter during the Winter, and tied to a trellis of some kind during the rest of the year. Windom is also a fairly good variety. H. E. V. D.

Peaches in the Cold North.

W. C. G., Victoria, B. C.—You have told lots about peach growing in THE R. N.-Y. of late. There is one point yet that I would like to know on which you did not touch so far as I noticed. Is it too cold for the peach to do well where the night temperature falls to 45 degrees during the growing season? What temperatures are considered most suitable to the peach?

ANS.—As long as the temperature keeps above freezing the minimum may be disregarded. I do not think it is a matter of minimum temperature during growing season which settles such questions as this. It is rather a question of *total Summer temperature.* If the total amount of heat received during the growing season is sufficient to ripen the peaches, and is fairly well distributed, an occasional low temperature will not spoil the result. Looked at this way, it is equally impossible and unnecessary to determine what are the optimum temperatures for the peach. It is not so much a question of whether the thermometer occasionally goes too high or too low as it is whether the days are warm enough month after month. It is a study of climate in all its factors, and extending over a long period. It takes experience in a given locality to tell whether it is a good peach section or not. Meteorological observations are very doubtful guides. The foregoing statements answer the question, I believe; but I would like to add the more practical information which seems to be what your correspondent wishes. In all probability peaches of the hardier varieties can be grown at his place. We grow a good many peaches in Vermont; and our Winter temperatures sometimes go as low as 30 degrees below zero. (Here's where a minimum temperature observation really comes in.) Peaches can be grown farther north than most persons suppose; but they are suitable only for the family garden, where they can have special attention, and where the grower does not expect to sell the fruit at a profit. F. A. WAUGH.

Vermont Exp. Station.

How to Move Large Trees.

J. C. D., Sodus, N. Y.—I have a pine tree about six inches in diameter which I wish to transplant. Will you tell me the best way I can move the tree?

ANS.—A tree six inches in diameter should not be too large to move, but much depends on the species. An evergreen of that size would need to be handled more carefully than a deciduous tree. Probably the best plan would be to wait until the ground is thoroughly frozen. Then cut a trench around the tree, not less than three feet from the trunk, and preferably four. Dig down through the frozen soil and undermine the cake of earth, which should not weigh much more than a ton for a tree of that size. It can then be skidded up on a strong sled and moved to the place selected for planting. The excavation to receive it ought to be a little larger, and, possibly, a few inches deeper; but the tree when set should on no account stand much deeper than it grew. The tree should be severely headed back, taking away at least one-third of the top, and should be well supported with guy ropes or wires, using old rubber hose around the tree, to prevent swaying in the wind until well established. If it is not feasible to wait until the ground is frozen, the tree may be moved as soon as the leaves have fallen, or any time in the Spring before the new growth starts. In that case, start digging four or five feet away from the trunk. As fast as the larger roots are exposed follow them up a foot or so further, cut them off cleanly, and at once envelop in wet bagging or burlap. Undermine the tree and pull it over to one side, protecting the roots with wet cloths. In this manner the tree may be handled and then loaded on a wagon or strong sled, and taken to the hole prepared to receive it. In planting it out, work the soil very firmly around the roots, hammer it well, and fill the main part of the cavity with rich surface soil. It should be stayed with wires the same as a tree set when the ground is frozen, and also headed back. The after treatment consists in keeping the soil moist and as well cultivated as a flower bed during the first growing season or two. A good plan is to keep the soil loose and well cultivated until about July, and then mulch heavily with old hay or straw after a rain. After the second season there is little danger of losing the tree. Pine trees may be safely moved as late as May and seldom need much pruning.

Clover for Seed.

C. I., Rochester, N. Y.—We have 10 acres of clover which we do not need for hay or pasture, and which is a fine crop. Our plan is to cut it for seed and put the straw after thrashing into the barnyard. Some of our good friends claim that it will be more value to the land to let it fall down on the ground this Fall, and plow it under in the Spring for potatoes than the clover seed will be worth. We can't see why it should be worth so much more to lie on the land this Winter than it will be put into the yard and drawn out on the same land this Winter or Spring. We do not intend to pasture the land in the Spring, but let the clover get as big as possible before plowing. Will not plow it until about June 1.

ANS.—Our plan would be to cut the clover for seed and let sheep and other stock pick over the straw or haulms, and then use it for bedding or in the manure. We think that would pay better than to let the whole crop rot down.

What is the "Center of Population"?

Several Readers.—We read of a certain point in the country known as the center of population. What does that mean?

ANS.—It may be called the center of gravity of all the population of this country. Suppose there are 79,000,000 people in the United States, scattered from the Atlantic to the Pacific. If we assume that each person has the same weight, and the whole country were a level plane, there would be some point where the whole thing would balance exactly. This point is now in southern Indiana, about six miles southeast of Columbus, in Bartholomew County. There is really no practical significance to this center of population, except that it indicates its change or transfer.

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EVERYBODY'S GARDEN.

FAIR EXHIBITS ONCE MORE.—As creditable exhibits mean extra effort, and much previous preparation is always necessary, it is always well to begin in season. The rules governing exhibits in which you desire to compete should be well in mind, and, if possible, exclusive space for staging will be far more satisfactory than dispersing your entries. Obtain neat cards, mark each variety plainly, and tie to the package with baby ribbon. White plates or platters are best, and should be used in preference to baskets or other packages, except where too large amounts are specified in the rules of competition. Ordinarily the rules of societies prohibit the names of exhibitors appearing on their displays, and this is correct, as eliminating one element, at least, of seeming favoritism, so then contestants' names should only appear in the private record books of the society, and never on the displays. Attention to these points will greatly facilitate the labors of the judges, and go far in bringing such carefully-prepared work into favor.

TYING UP TOMATOES.—The experience of this season more fully than ever demonstrates the necessity of growing the tomatoes up off the ground. In thin light soils where heavy growth of vines is not likely, the damage of course from rain and wet ground will be far less than with rank-growing vines. Our loss will be large this year, from recent heavy rains and excessive growth of vines. In large areas, staking or trellising is doubtless, under general conditions, impracticable; it can always be done, however, in small gardens, and is usually the safer plan. A heavy mulching with straw or coarse litter applied before the vines fall down will to a large extent prevent the damage by decay. Pruning and tying up will not, evidently, give as large a number of fruits, but they will be larger, fairer and less liable to rot than when allowed to lie on the ground, and often be pressed and crowded out of shape by the weight of the vines resting upon them. Opinions of growers differ widely upon the subject, but the above seems to be a reasonable view.

SEED CORN.—For the sweet corn seed I am this year selecting only from stalks bearing two well-developed ears. This selection will reject many very fine ears growing singly on the stalks, but the double-ear theory will be strictly adhered to, and results carefully noted.

LIMA BEANS.—Although coming this year much later than usual, the Lima beans are here, and bring with them their usual share of good cheer. With us, Burpee's Willow Leaf is proving the earliest of the bush varieties, and holding its record as an immense cropper. The pods are smaller than are some other varieties, but abundant as to number, and always well filled with beans, pure white in color, and second to none in flavor. The bush itself is a novelty, being very ornamental, and with leaves almost identical in shape with the willow. If we mistake not, this will prove a valuable general-purpose sort, either for large or small gardens.

PREPARING FOR FROST.—In many localities frost may now be expected at almost any time, and some protection for the tomatoes, squashes, etc., will be in order. Tomatoes require and should receive special attention, as one or two heavy frosts will usually send prices up with astonishing rapidity. It is not at all uncommon for prices to advance 50 cents per bushel or more within a few hours, and hence it is exceedingly satisfactory if provided with a supply to meet these upward prices. Watch the weather closely, and pick the tomatoes before being frosted, carefully rejecting all specked or otherwise unsound fruits. It is utterly useless to waste time with any that are decayed in the least, as they will only destroy the good ones. Place a thick layer of straw in the hotbed and pack the tomatoes in layers with the greener ones at the bottom. Put on the sash, which will not only protect from storms, but also hasten the ripening, but while thoroughly protecting from rain they must also have plenty of ventilation. Care in handling will mature the fruits, even if placed in when very green. The cellar, if perfectly dry, will also mature the fruits nicely, but they should not be piled, but spread out thinly on straw if the cellar bottom is at all damp. In this way tomatoes may be kept in very good condition until late in November.

Pumpkins and squashes may be carried through quite severe frosts without injury, by covering well with straw or coarse litter. With especially fine hills, which may not have fully matured, it will usually pay well to do this, as they will often make very decided growth after the surrounding vines which were unprotected are dead beyond any hope. Four years ago, some very large pumpkins which I was growing were in danger of being killed by frost before maturity. They were intended for show windows in some of the large stores, and my object was the largest possible growth and thoroughly matured fruits. They were carefully covered, fruits and vines, and came through without injury, and kept growing vigorously until the second frost came, which killed the leaves and leaf stalks. At this time the pumpkins only were covered, the vines being left to care for themselves. But being very large and strong, the main vines still remained green, and the pumpkins by actual measurement made very decided growth after everything but the main stems was dead. Did all this trouble pay, do you ask? I think so, for the pumpkins were sold at satisfactory prices for the purpose for which they were grown, and the cards upon them with the grower's name and residence were a good advertisement. Cabbage, celery and all late-growing vegetables will be greatly benefited by a liberal use of the hoe and steel garden rake to loosen and fine the soil, and admit the air and sunshine. J. E. MORSE.

Michigan.

Alfalfa in Orchards.

We have noticed in several orchards of western New York mixtures of the clover and turnip seed sown in orchards as a crop to follow Summer cultivation. In most of these mixtures Alfalfa has taken the start, and its plants are readily noticed. Some authorities say that Alfalfa should never be sown in an orchard, and they give good reasons for it. Prof. John Craig explains why the Alfalfa was used.

ANS.—I have advised the use of Alfalfa as a cover crop in orchards. It was on the understanding, however, that the crop should be plowed under early next Spring. I do not think that it would be a desirable crop to introduce in an orchard on the perennial basis, but on the annual plan I think it possesses many desirable qualities. As a matter of fact the character of the plant cuts very little figure under the present system of orchard cultivation as practiced in western New York. The cultivation is so thorough in the early part of the season that the plant used for cover purposes, whatever its proclivities may be, is bound to be eradicated. I have used Alfalfa for this purpose in several orchards, and have had no difficulty whatever in turning it under. I have been advising mixtures of Alfalfa and peavine, Crimson clover and cow peas, peavine and cow peas, etc. Twenty-five or 30 men in the State are trying some little experiments along these lines.

JOHN CRAIG.

How and When to Bud Fruit.

G. B., River View, N. Y.—When should I bud all kinds of fruit trees? When should the buds be cut, and how are they set?

ANS.—Fruit trees are generally budded in August and early September, though the work may be done any time when the stocks peel freely and the buds are fairly developed. The buds should be cut when plump and fully formed, while the leaf is still firm. June budding is successful if the stocks are large enough, and firm buds can be found. As a general rule buds should be used as soon as possible after being cut, but may be kept some time by covering the branches with damp moss in a cool place after trimming off the leaves. To set buds first clear the necessary space on the stock from leaves, branches and loose bark, make a horizontal cut a half inch or so long about the stem just through the bark, and a downward cut from the middle of the first somewhat longer, the two cuts joining like a capital T. Lift the angles with the edge of knife and slip the shield-shaped piece of wood and bark carrying the bud under the raised edges, pushing down until snugly in place. If the stock is in the right condition the bud will peel up the bark readily as it slips down. When in place tie tightly with damp raffia or similar material, covering all the cuts to keep out wind and rain. The buds should be examined within two weeks, and the bandages loosened or removed if the bud has grown fast. Nearly all fruit trees may be successfully budded, in the following order of facility: Peach, apricot, plum, cherry, quince, pear and apple.

Some Experiments With Wheat.

Last year I sent you a brief account of a new variety of wheat I was developing, and its peculiar behavior. It began with a single stool of wheat which I found among my Dawson's Golden Chaff in 1898. My attention was called to it by its heading out above the Golden Chaff wheat, and a week or so earlier. I saved and planted it by itself that Fall, and at the harvest of 1899 I saved from it 1½ pound of the most mixed lot of wheat I ever saw. Every kernel that I sowed was red wheat, but I harvested some white, some red, and every shade between the two. I called it a sport, and assorted the wheat, putting the pure white kernels by themselves, the pure red by themselves and the intermediate grades in a third parcel. These I sowed again, each parcel by itself, and in 1900 harvested about one bushel in all, but with the same result as before. In each parcel I got a mixed result—white wheat where I sowed only red, and red wheat where I sowed nothing but white, all mixed together with intermediate shades. There was also a marked difference in the shape of the kernel between the white and the red—the white being shorter and plumper, or rounder than the red. I made up my mind that it was useless to try to separate the varieties, especially as there was but a small proportion of white wheat among it at this time, so in the Fall of 1900 I sowed it all together in a piece of corn ground, which was fitted by dragging it with a spring-tooth harrow, and without fertilizer of any kind. I have harvested from it 17½ bushels of an almost pure red wheat, which weighs 63 pounds to the measured bushel. I have set aside six bushels to sow this Fall on corn ground, which I shall give a better show than I gave it last year, and have had the rest ground to test its milling qualities. It is a bald red wheat, which ripened this year a week earlier than Dawson's Golden Chaff sown the same day in the same field. It has a strong stiff straw, and withstood the attack of the Hessian fly remarkably well. The flies were plenty in it, as they were in all the wheat in this section—many fields of which were never harvested. Under the circumstances I consider the yield of 17½ bushels for one bushel sowed on less than an acre of ground a remarkably good one. The reports from our miller and baker are so far very favorable. F. HODGMAN.

Michigan.

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Ruralisms

NOTES FROM THE RURAL GROUNDS.

FIGHTING THE MELON BLIGHT.—Gardeners have many theories regarding the destructive blight of melon vines that blackens whole fields of these delicious fruits just as the oldest melons approach maturity. No matter how healthy and luxuriant the plants may be; how thorough the cultivation, nor how generous the supply of plant food may have appeared at planting time, the dreaded brown spots are almost certain to appear on the foliage at the base of the vines, shriveling the leaves and spreading with disheartening rapidity out to the youngest growths, until the field looks as though it had been subjected to a killing frost. The vines stay green and plump for some time after the leaves are gone, but the melons remain absolutely in a stage of arrested development, those not ready for the table gaining nothing more in sweetness or flavor, but falling into insipid decay as the leafless vine perishes. The rapid progress of the blight, often spreading in a day or two from a given point over the whole patch, and the partial immunity that goes with a thorough use of the copper fungicides, when begun at an early period in the development of the vines, quite conclusively prove it to be of fungous character, though many practical growers who have repeatedly witnessed the devastation of their fields, claim it to be simply unpreventable sunscald. The most violent attacks generally occur when hot sunshine closely follows profuse rains, but this is precisely the condition that most favors the spread of germ troubles. The Melon blight, though not unknown in early days, has spread nearly over the country in its destructive form, and is most prevalent in the older melon-growing sections, where the soil seems thoroughly infected. It is beginning to affect the Rocky Ford melon fields, although the dry climate does not favor its development, and it seems to be only a question of time before it invades any new tract upon which melons are grown. While it attacks all melons, the better varieties of muskmelons are most subject. Watermelons and some of the coarser cantaloupes are partially resistant, and in favorable seasons often escape serious injury, though the most successful growers count on a yearly curtailment of the crop from this cause.

In past years the market gardens about the Rural Grounds were noted for the excellence of their melons, which were largely shipped to less favored localities, but the crop has lately grown so precarious that it is only planted for casual trials, with little hope of profit. The vines generally start off well under expert treatment, but succumb when the strain of fruit ripening comes on, leaving the blackened field full of nearly matured but worthless melons. Our own record is two partial crops of fair melons in six years. The cost in money and labor of spraying the plants from the blooming period to maturity each week is too great, and the effort was made this season to give greater vital resistance by supplying them with abundant soluble plant food at the critical period of greatest strain when the prepared fertility in the hill was becoming exhausted. When the first melons attained a diameter of two or three inches, five-inch flower pots were sunk in each hill, a tablespoonful of nitrate of soda thrown in and the pot filled with water, which gradually soaked into the soil, distributing the fertilizer. This was repeated two times, adding as much bone phosphate and muriate of potash at alternate applications. Several hills were left without preparation as checks. Although the growing season was too rainy for the best results of such stimulating treatment, the treated plants grew much more vigorously, resisted the blight longer and ripened the only well-flavored melons we secured. Two applications of dry Bordeaux powder were made when blight was first noticed, and it undoubtedly delayed the spread of the disease, which was very gradual. There was enough difference in the behavior of the stimulated plants to warrant repeated trials, and better results may be possible in a normal or dry season. The idea is to feed the plants just at the time the rapidly developing fruits demand the greatest activity in the elaboration of the sap by the foliage. The plants under trial all had a plentiful supply of compost in the hills, but it is probable that nitrification of organic manures may not go on quite rapidly enough at the moment of supreme demand to preserve the vigor of the plant and enable it to resist parasitic germs.

A LONG TREE AVENUE.—The first bulletin of the International Society of Arboriculture is wholly devoted to advocating the extensive planting of the hardy native Catalpa, C. speciosa, as the most useful and promising timber tree of the future. The Government and corporations are specially urged to make extensive plantings to counterbalance the rapid exhaustion of hardwood timber now evident to all. The true Catalpa speciosa, growing naturally in the lower Wabash Valley, is often confounded with the more common C. bignonioides, found in all the Southern States. Bignonioides is much inferior as a timber tree, being of smaller crooked growth, yet its seeds have been substituted for Speciosa to a great extent, much to the disappointment of planters. The timber of Speciosa is declared to be, as the result of innumerable experiments, the most useful of any of our native woods, equaling the best in strength, durability and beauty of finish, and greatly exceeding all in rapidity of growth. A special plea is made for the cultivation of Speciosa for railroad crossties, the consumption of which yearly sweeps away thousands of acres of thrifty young forest. It is said to be very lasting for this purpose; ties put in under ordinary conditions 10 years ago scarcely showing decay, and the prediction is made that they will endure 30 years when properly ballasted, and posts set half a century ago are still in use. Some were exhibited at the New Orleans Exposition that had been standing in a fence for 90 years and were still sound enough for long additional service. The cause of this great durability, which is quite unique among rapid-growing trees, is sought in the chemical composition of the wood, which is found to be charged with fatty and resinous matters, acting as permanent antiseptics. If the railroad corporations of the country could be induced to plant Catalpas along their right of way the astonishing feature of avenues of trees over 1,000 miles long would be possible along many important lines. As experiments have already demonstrated that the Catalpa will make ties in 16 years and renew itself from the stump when cut even more quickly, it seems possible to keep up a continuous supply after plantings are once established. The present limited dissemination of Catalpa speciosa is explained by the fact that the seeds are not distributed, like species bearing edible fruits or nuts, by birds or animals, and only to a limited extent by wind; the winged seeds being almost entirely scattered down stream by water. The confusion with the comparatively valueless C. bignonioides is responsible for the general lack of appreciation of its economic qualities.

THE LESCOVEZ QUINCE.—Several distinct and excellent quinces are grown among the Balkan Mountains, forming the northern boundary of European Turkey. Among these is the Lescovez quince recently illustrated in a foreign horticultural journal. It is said to be very large and handsome, and to possess a most distinct flavor, which it imparts to marmalade, the product being very light in color. Considering that quince marmalade has been made and appreciated for more than 2,000 years the desirable varieties of quinces have increased very slowly in number. We are still planting practically the same varieties that were popular at the close of the eighteenth century, although hopes are entertained of the new kinds originated by Burbank. The Lescovez quince trees are said to be hardy and very prolific. The Borgeat quinces now on trial on the Rural Grounds are vigorous and handsome growers, but have not yet fruited. W. V. F.

Hardiness of Munson's Grapes.

W. H. W., Malden, Mass.—I have been very much interested in Dr. Tinker's article on Prof. Munson's new grapes. But when he says America, Manito and Beacon are "hardy," what does he mean? Hardy *where?* In Texas or in Ohio?

ANS.—In writing from eastern Ohio reference to hardiness in my article on Prof. Munson's new grapes applies to Ohio, for a grape that is hardy here is hardy in any part of this State. The parentage given following each variety will give to those acquainted with the hardiness of each of the species of grapes some idea of the probable hardiness of these sorts. However, all Prof. Munson's grapes can be grown in the Northern States that do not ripen later than the Catawba, and fruited successfully by covering the vines with soil in the Fall, and so can many of the pure Vinifera if grafted upon resistant stocks. Nearly all of the pure Vinifera will stand zero temperature in Winter. America and Beacon have stood 27 degrees below zero, and borne good crops. I have reason to believe that a large number of Prof. Munson's new grapes can be successfully grown in the grape districts of the North without protection.

G. L. TINKER, M. D.

Tardy Bearing Plums.

H. J. S., Kenwood, N. Y.—I have 18 plum trees with three seasons' growth on them from nursery. They are Abundance, Spaulding, Satsuma, Juicy, Milton, Burbank and Wickson. They have made a growth of nearly four or five feet in a season. None but the two trees of Burbank have borne execpt specimens. The Burbank, with much thinning of fruit, has done well this year. The new growth has been cut back freely each Spring. Can I induce bearing by cutting back the new growth before the leaves fall this Autumn?

ANS.—It sometimes occurs that plum trees will not bear as early as they should, but they are rarely faulty in this respect, especially the varieties that are mentioned, except it may be Satsuma and Wickson, which are quite thrifty growers, and somewhat tardy in their bearing. To cut them back severely at this time of the year would not be wise, but a little clipping of the branches would not hurt them. But I don't think it would cause fruit buds to develop, because it is too late in the season. Fruit buds are usually formed in June and July, according to the best information we now have. They are not old enough to bear much yet. H. E. V. D.

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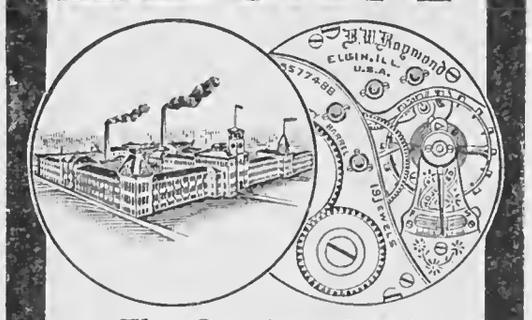

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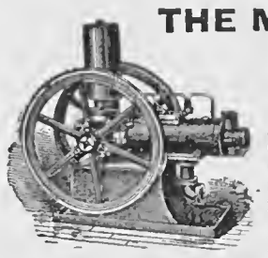

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HOPE FARM NOTES

TRANSPLANTING STRAWBERRIES.—I received the following note from a first-class fruit grower of Massachusetts:

I see that you will transplant strawberry plants in wet soil. You say: "Cut around the plant, and with the fingers squeeze a good-sized ball of dirt around the roots." On my soil, which is heavy, this does not work well, for the little ball cakes hard around the roots and restricts them. They do well for a time, but the roots do not work out through the ball.

We have not been troubled in this way, though we have followed the plan for several years. Of course we do not leave the plants in the sun after squeezing the soil around them. They are not permitted to bake hard. When put into damp soil we scratch the earth around and over the ball, and in a short time it becomes as soft as the soil around it. The danger from this plan I should think would be in squeezing the ball around the roots, letting it bake hard in the sun, and then setting in partly dry soil. The place where we set the plants is close to where they are grown, and we take few at a time. The soil is now much drier, and so we are using the Richards transplanter. The plants set with this never stop growing. Not long since we received some plants of new varieties by express. The soil had been pinched or balled around the roots, and had baked quite hard. They were set in moist ground and now it is impossible to find where the ball was.

A LAZY WINDMILL.—For the first time in two years our windmill stood still for four days in succession. On September 1 the sun came out hot and clear, but with hardly a breath of air. We kept the mill in gear night and day, but I doubt whether it pumped a gallon in 100 hours. The tank ran dry—aided by a small leak at a joint near the pump. We had been pretty liberal in our use of water anyway of late. We never knew what that mill represents until we found it necessary to pump that water by hand. The women folks demanded just as much, and the stock refused to go thirsty just because the wind took a week off. When you come to the job of pumping water up into the air just for the sake of letting it run down when you want it, the steel and wood of the mill beat the human back all hollow. We never know how hollow the victory is until the back aches, and we straighten up from the pump only to hear the Madame say: "Hurry now and let me have more water—there's not half enough here!" The trouble with us was that we got a little too sure of our friend the wind. There were plenty of chances to pump the tank full and keep it full. We let the pump stand idle and when the wind caught the asthma it caught us with a tank half full. That's what you get by taking chances with wind. When we woke up Sunday morning and found a young gale blowing we kept that mill at it till the tank filled up and ran over.

HAY NOTES.—The sunny weather during the first week in September gave us a good chance to get the second cutting of hay under cover. One old hillside that has, I think, been seeded for a good many years, threw up a heavy second growth of "foxtail" and wild carrot. We cut and cured it as though it were the finest of Timothy. What is the use of fooling with this weed, you will say. The horses eat practically all of it. Old Major cleans up the wild carrot as most horses do the tame vegetable. It is a clear saving of fodder. How about the weed seeds? I consider them less dangerous in the manure pile than when blown and scattered all over the farm. Many are killed in the manure. Those that survive go out on the corn, where good cultivation is given, so that weeds are killed. The animals eat certain weeds at pasture—doing it, I think, partly to "doctor" themselves. These same weeds, when dried in the hay, are useful for the same purpose. . . . The second growth on the upper field where we tried the "Clark" grass culture is heavier than the first. This is a pleasant surprise, and seems to show that the crop will do its duty yet. Very little Red-top is apparent in this second crop. After the first crop was cut we broadcast a mixture of equal parts of nitrate of soda and sulphate of potash. My experience in grass and this year on potatoes makes me feel quite sure that it is much better to use potash with the nitrate. . . . . The lower field of "Clark" grass is pretty close to a failure—so far as the second crop goes. The wet season has kept this field drenched. The soil was fit only to produce coarse swamp grass and weeds. Soil does just what it is fitted for, and so instead of a good crop of Red-top and Timothy we have on most of the field a crop that will be useful chiefly for bedding.

AROUND THE FARM.—It happens that we have no cow peas this year except a volunteer crop on one of the back fields. Last year's crop stood on the field all Winter. I thought rain and frost last Fall had ruined the crop, and many bushels of seed were lost. This Spring we plowed a strip in this field, turning under the cow-pea vines. To my surprise a fair stand of plants started up on this plowed ground and are making a good growth. I had no idea that cow peas could stand such a trial as that. . . . We are slowly getting the land plowed and fitted for wheat. I do not intend to sow Timothy with this wheat, but shall sow clover alone next Spring. This will be our preparation for setting an apple orchard. I may set the trees this Fall right among the wheat, and plow three or four furrows on each side of them next Spring. On a field at the far western end of the farm we had last year a heavy growth of cow peas. They rotted down on the ground, and the Spring was so wet that we could not turn them under in time for oats. They have covered the ground all Summer, and now we are plowing them under for wheat. The goldenrod where these cow peas were rotting stood 18 inches higher than that on the natural soil outside of this strip. . . . The corn is earing out well, and in spite of the late planting there will be a fine crop. Some of it was planted 25 days after the ordinary "corn-planting time" for New Jersey. It is on a hillside. I should hardly dare attempt such late planting in a low valley. . . . What a season this has been for turnips. I have never had them grow so fast. The yellow turnips are spreading out in the rows as though they knew that worthy people expect to draft them as substitutes for potatoes next Winter. The Cow-horn turnips do not grow so fast, but they have far outstripped the Crimson clover. Where the two were sown together one would think at first sight that it was a field of young rape, but the clover is there—stooling out beneath the turnip leaves.

TABLE STUFF.—Nott's Excelsior peas have given us a fair crop this Fall. They were planted late in July, and in spite of the wet season matured a fair crop. Telephone peas are blooming, and promise to fill the basket before frost. We have never before had such success with late peas. . . . Baked Fall Pippin apples with thick cream help to make the Hope Farmers let September pass without regrets. The cow is a gentle creature, and cream is her purest extract, but when it lines a man's stomach it gives him the courage of a lion. . . . . Sweet corn is at its best just as the nights take on a little nip of coolness. The time to pick it off the stalk is when the women folks begin to get ready to take up dinner. Let it live until the last moment. Then snap off a long, slender ear with the silk just turning a dry brown. Get its jacket right off and bob it at once into a kettle of boiling water and put the cover on tight. Cook it rapidly and rush it to the table so hot that few dare touch it with the bare hand. To see a hungry man put salt and butter on one of these great ears and then slowly put it between his jaws is enough to fill the toothless man with the wildest possible pangs of regret, and to make him remember that the same condition which seems to loosen his own teeth appears to firm and sharpen those of Time.

RUNNING DOWN.—So old Time gets a little firmer grip at you as the years go by, does he? It would seem so, and we feel it more in the Fall than at any time of the year. September comes much like a man waking up on the morning of his forty-fifth birthday. Three corners of the average working square have been passed. You are no longer young, and the harvest doesn't amount to much after all. There are weeds in the corn and small potatoes in the hill of life. They might have been larger if you had not spent so much time resting in the shade. Some men reflect on these things, and end by saying that since their chances are gone there is no sense in working on with a poor job. Others get themselves together and mutter: "Work, for the night is coming when no man can work!" No man has any business to sit with folded hands listening to regrets. Let them alone—kick them off and work on. September doesn't mean that the end of all is coming. Nature is just getting ready for a rest. While she rests you may work and catch up a little. H. W. C.

The Cause of Appendicitis.

The following article is reproduced from the University Medical Magazine. I believe that the article may be of interest to you because it very clearly demonstrates the folly of fearing to eat seedy fruits, such as grapes, raspberries, etc., on account of the possibility of appendicitis developing because of the lodgment of seeds in the vermiform appendix. This fear has in many localities lessened the consumption of certain fruits, and while injuring the fruit growing industry, the chief reason for regret is that many people deny themselves the use of wholesome fruits.

An interesting study of the relative frequency of foreign bodies in the vermiform appendix is presented by Dr. John F. Mitchell in the Johns Hopkins Hospital Bulletin for January, February and March, 1899. Of 1,400 cases of appendicitis collected from various sources during the last 10 years he found only seven per cent of true foreign bodies; while in 700 of these cases, in which a definite statement was made as to the nature of the foreign body, there were 45 per cent of fecal concretions. In 250 cases of appendicitis in the Johns Hopkins Hospital, in the past 10 years, there was only one foreign body—a segment of tapeworm. Osler, in 10 years' experience in Montreal, found foreign bodies only twice; in one instance five apple pips, and in another eight snipe shot. The most common foreign bodies have been gallstones, round worms, spicules of bone, bristles and pins.

Pins have been especially frequent. Dr. Mitchell has collected 28 cases in which a pin was found in the appendix at operation or autopsy, together with two instances in which a pin had perforated the cæcum. It seems remarkable that in no single case was there any knowledge of a pin having been swallowed. Contrary to what might be expected, they occurred more frequently in males than in females (males, 17; females, nine). The resulting appendicitis was of a very variable type, in some cases the symptoms were mild, leading to chronic appendicitis, with recurrent attacks, or with long-continued pain, and, perhaps, finally ending in an abscess. In the majority of cases, however, there was rapid perforation and abscess formation following the first appearance of symptoms.

The pin entered the appendix by its head or point, and, except in one or two instances, where it lay directly across the lumen, it was straight, with its long axis parallel to that of the appendix. In seven of the 28 cases the appendicitis was associated with abscess of the liver. The author concludes from his investigations that foreign bodies at one time thought essential in appendicitis are now known to play a much smaller role than that formerly accredited to them; and fecal concretions are much more apt to be present as an exciting cause. Foreign bodies of light weight, like grape seeds and cherry stones, so popularly assigned as the cause of appendicitis, and against which we are forever being warned, are in reality exceptional, and their frequency is much overestimated on account of the close resemblance of fecal concretions and the lack of careful examination of the bodies described.

I think that the essential facts of the article above should be given wide publicity. J. S. R., M. D.

Reading, Pa.

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THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, SEPTEMBER 21, 1901.

JUST outside a window of a New Jersey house a large black spider has spun a web about the size of a dinner plate, and is making an effort to handle his end of the mosquito problem. The window attracts the mosquitoes. They evidently expect to fly into the house, but land in the web instead, and their long legs and wings are quickly tangled up in its meshes. On warm evenings the spider has to work overtime to handle his victims, and he is certainly a high liver in every sense of the word at present. The inmates of the house consider him a public benefactor, and will not brush away his web until the mosquito season is over at least. It is to be hoped that the mosquitoes will not give the spider a touch of the malaria.

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ONE of our readers says that he spent a good share of Labor Day chasing thieves and hunting police and constables to arrest drunken rascals. No wonder he says:

> This is "Labor Day," and withal a legal holiday. Selling whisky on legal holidays is in our State a crime punishable by a heavy fine, as is also selling it to minors. Yet with all these boasted bulwarks of safety thrown so protectingly around us, I was obliged to call the police to arrest a boy apparently not more than 18 years old, and naked except for pants and shoes, raving like a madman and threatening everything in reach. A part I suppose of the boasted liberty and civilization of the twentieth century.

Why, yes—when law and its enforcement fall into the hands of politicians a good share of the "liberty" seems to go to rascals and rogues.

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MANY references are now made to the so-called "grandfather clause" in the new constitution which is to be submitted for ratification to the voters of Alabama. This clause gives the right to vote to all men of legal age who are descendants of soldiers who fought in the Colonial, Indian, Mexican or Civil wars. The object is to save illiterate whites from the general requirement that no person shall be allowed to vote who cannot read and write any Article in the Constitution of the United States. The "grandfather clause" is generally regarded as an unjust discrimination against the negro, and it is also held by some eminent men that the creation of a class of hereditary voters is contrary to the basic principles of our Government. The question is arousing a great deal of controversy, and is likely to be carried to the United States Supreme Court to settle its constitutionality.

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A THOUGHTFUL business man once said that the neglect to pay small bills is the unpardonable sin. Such neglect certainly does at times cause serious annoyance, if not embarrassment, but to our mind it is a much greater wrong to dispute the bill on technical grounds, after the service has been rendered. One may excuse the man who, with an honest purpose to pay his bills, neglects for a time to do so, but there can be no excuse for the wilful dodger. This man, after having received honest and worthy service, disputes the bill for the evident purpose of forcing a compromise which the creditor will often consent to rather than go to the trouble and expense of a lawsuit. A favorite trick of this class of debtors is to propose an arbitration. He offers to choose a man, the creditor to choose another and, in case they do not agree, they to choose a third. This is an alluring and deceptive proposition. It would be fair enough if an honest difference of opinion existed, but the debtor is simply working to scale down his just obligations. He has nothing to lose and everything to gain. The representative of the creditor can demand only his just dues, while the debtor's man, sometimes with a promised share in the spoils, can demand a large reduction. Of course, they do not agree, and the natural thing for the third man to do is "split the difference" and close the dispute. A strictly honest man may neglect his bills for a time, though the habit is a bad one, but no one but a trickster or a rascal will attempt the other course of "compromise" with intent to steal!

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THE most remarkable thing about the murderous attack upon President McKinley is the folly and uselessness of such a thing. A man of singularly pure private life, remarkably free from public scandal, is shot down in the most cowardly manner under circumstances that should make the blood of every true American boil with indignation. What could the cowardly rascal who did this foul deed expect to win by it? How could he hope, in this country, to improve his own condition or the lot of any honorable body of citizens by committing murder? Here in this land apparently set aside by a divine Providence as a place where men should work out the great problems of human liberty, thrice within a single generation the ruler is laid low by the assassin's bullet. What does it mean? There are many sides to the question—one being the fact that most of the bloodthirsty king-killers have been driven out of Europe, to find a refuge here. They take advantage of the very freedom of thought and action granted them here to keep up their murderous work. The time has come to squelch them with a heavy hand. Down with them. They have no place in a republic!

THE DEATH of the President causes sincere and heart-felt grief throughout the entire country; political strife or personal feeling is alike hushed in the presence of a great sorrow. All classes unite in affection and respect for the memory of one whose private life and character represented all that is best in American citizenship. In the solemn moments of a National calamity which binds us together in sympathy for the bereaved, we are the better able to judge of the purity of life and loyalty to country which brought our late Chief Magistrate so close to the plain people. There is no need to eulogize the dead; half-masted flags and costly trappings mean little, for they are lavished on worthy and unworthy alike, but the real and enduring monument of William McKinley will remain in the heart of the great American people, whose respect for an honored Executive is now merged in earnest sorrow for the man.

OF the hundreds of millions of people who have lived in this world, not a thousandth of one per cent have been known outside their immediate neighborhood; fewer have done anything sufficiently out of the ordinary to attract much attention; and still fewer have gained any considerable amount of money. It is evident that, if a name, great deeds or wealth are essentials of a successful life, most people have failed. The fame of many has been infamously bad, and their wealth ill-gotten, so that the number who have been famous for their good deeds, or have become rich without dishonesty or oppression of others, is exceedingly small. On thinking over these things some people become depressed. They give up all idea of attaining anything great, and are wretched because they can't, thus adding misery to discouragement. Take these three things: good character, money, and fame. The first lasts, is within the reach of all, and should be looked upon as the one essential. Of the two latter it is safe to say that one should get as much as he can with due consideration for others, and the fact that so few have attained these two much-to-be-desired things should spur him on to great, yet intelligent effort.

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RUMORS reach us that the oleo people will endeavor to capture the National Farmers' Congress, which meets in Sioux Falls, S. D., next month, through attempts to convince the cotton growers of the South and the fat-stock men of the West that oleo is essential to the success of their respective interests. Governor Odell, of New York, has done well to appoint a strong delegation from this State to help refute these arguments. We could suggest no men better qualified to represent the great dairy interests of New York State than those named in this delegation. There is just one man, however, who should be added to the list. That man is Commissioner Charles A. Wieting. It would add strength and force to this already strong delegation if it can be led by the head of the Agricultural Department of the State. The other delegates, conscious of the task before them, and confident of the strength which the Commissioner's name would add to the delegation, are making efforts to secure his attendance. No doubt so long a trip at this time would be a severe tax on his already crowded time, but since there is a demand for his service we believe that he will not shrink from the responsibilities, no matter at what sacrifice of either personal or other official duties. The Commissioner should head the delegation from the Empire State.

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THIS year we have been overrun with insect pests of all classes. Those injurious to farm and garden have been most perniciously active; so, too, were all the indiscriminate beetles, worms, flies and bugs whose apparent mission in life is to rasp the nerves of mankind. Several persons have remarked to us that the caterpillars now skeletonizing both shade trees and garden are merely a temporary trouble; that they would be destroyed by the first frost. Such persons are, of course, quite ignorant of the life history of insects, but doubtless there are many others who take the same view, and ignore any means of lessening the plague. It is true that Nature herself takes a hand, and restores her balance sooner or later by plague or parasite, which thins the ranks of injurious insects, but that is no reason why we should adopt a let-alone policy. Every community should unite in the fight against insects known to be of injurious character. Tent-caterpillars and Hessian fly appear to have no redeeming qualities whatever, and the present season has shown us forcibly that a united policy of extermination is needed. Don't let them alone. Don't adopt an open-door policy towards these insect criminals!

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WHAT shall be done with the anarchists? That is a vital question just now while the President of this Republic lies on his bier, their victim. It has been the boast of Americans that in this free country, free speech is permitted if not encouraged—as it ought to be. It is evident that this privilege has been abused. The man who tried to kill President McKinley was inspired by the frenzied speech of a half-crazed anarchist. The people who give such murderous advice regarding the use of the knife and torch would not themselves carry out their own threats. They either lack the courage to do so, or are merely talking for effect. Some poor, weak-minded person listens to their wild talk and carries out their suggestion. We have in this country a class of men, writers and speakers, who are dangerous because they are reckless in their public advice, and statements. Probably without meaning to do so they lead men to thoughts of hatred and revenge—sowing the seeds which in time will produce lawlessness and murder. The country to-day is in no mood to play or experiment with those who preach murderous doctrines. The anarchists who would send half-crazed men to assassination must shut up or view the inside of a prison!

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BREVITIES.

WHY are bees winged merchants? Because they keep stores and cell honey.

LET the fat hen bring back her love for eggs by laying for concealed grain with her legs.

WE consider that the work done by T. V. Munson has been of great value to horticulture.

AN English ship just starting for the polar regions is to be lighted by electricity—generated by means of a windmill placed in front of the mast.

IN some parts of the West farmers turned out with other workmen in the Labor Day parade. Why not, since the workmen are the farmers' best customers?

EVERY time a human being is lynched without due process of law, every time human life is cheapened by greed or carelessness, seeds are sown which will one day spring up into an attempt at public murder.

LONG ISLAND pickle growers are having a prosperous season. More than the usual number have sprayed their vines with Bordeaux, and the result is that the blight has done but little injury. It is said that some fields are yielding 100,000 pickles to the acre, which are selling at from $1.50 to $2.50 per 1,000.

CONFIDENCE men have hatched up a new form of swindle in the shape of bogus gold dust and nuggets, which have been palmed off on Klondike dealers. Brass filings in small quantities have been mixed with the genuine dust, and it is said to be very hard to detect the deception. In one case a large nugget was found, which proved to be brass and copper thinly washed with gold.

EDWIN VAN ALSTYNE, the efficient manager of the dairy contest at the Pan-American Exposition, would hardly be taken for a poet, yet we are told in a press report that he was recently heard humming the following original song:

"How doth the little busy pig
Improve each shining hour,
By gathering sausage all the day
From every opening flower.
When the shades of evening fall,
He hies him to his sty
And sings his pretty evening hymn,
Root, pig or die."

Events of the Week

THE PRESIDENT.—The crisis in the President's condition was reached September 13, and his death occurred early the next morning. A number of avowed anarchists in Chicago have been arrested as associates of Czolgosz, and the group in Paterson, N. J., suspected of complicity in the murder of King Humbert, is under close surveillance. There is a disposition in all European countries, and in the United States, to enact further special legislation for the suppression of this class. In this country, such an attempt, unless death result, is punished with an extreme penalty of 10 years' imprisonment, unless a new law is enacted for his case. It is advised by many of the judiciary that such a crime be specified as treason and punished by the death penalty. Indiana and Wisconsin purpose introducing bills into their next legislatures to exclude all avowed anarchists from these States. Emma Goldman, the anarchist lecturer, was arrested in Chicago September 10, it being believed that her utterances inspired the attack by Leon Czolgosz.

DOMESTIC.—Six armed men held up a passenger train near Texarkana, Tex, September 4, blew open the express safe, and secured a large sum of money, estimated at $50,000. . . . . Suit has been instituted in Schuylkill County, Pa., by Mrs. Elizabeth Burmeister against the borough of Ashland, to recover $10,000 for the death of her husband from smallpox, the borough having failed to organize a board of health. . . . . Advices from northern Labrador show that Arctic floes continue to blockade the coast. Such a state of things was never known before. The fishery is very backward; indeed, it is the worst on record in the more northern parts. Thousands of fishermen are doomed to a very poor return for the work of an arduous season. Numbers of bergs are floating southward past the Strait of Belle Isle, forming a serious menace to ocean navigation. . . . . Fire which broke out in a factory at Jefferson, Wis., September 5, threatened to destroy the town. It was finally subdued, with a loss aggregating about $60,000. . . . . Forest fires are ravaging sections of Newfoundland, and threaten several large lumbering districts. Twenty-three houses have been destroyed in the settlement of White Bay, and it is feared that other villages have also been burned. It is impossible to cope with the fires, and unless a heavy rainfall extinguishes them the loss to timber interests will be very great. . . . . A fire at Salt Lake, Utah, September 10, caused damage reaching $200,000. A dynamite explosion caused by the fire injured four firemen. . . . . Memorial services were held at Galveston, Tex., September 10, in memory of those who perished in the great storm a year ago, and garlands of flowers were spread upon the incoming tide of the Gulf at sunset. . . . . The gale on lower Lake Michigan and Lake Huron, September 8-9, caused damage to shipping amounting to $200,000. No lives were lost, but 56 persons were rescued by life-saving crews. The gale was rendered more dangerous by thick smoke from forest fires. . . . . A fire at Denver, Col., September 8, caused loss reaching $100,000.

PHILIPPINES.—The Congressional party on the transport McClellan, which left New York July 10, arrived at Manila September 9. This delegation is to examine into the general administration of affairs in the Philippines, and report back to Congress any recommendation which it may consider necessary for the improvement of existing conditions on the Islands. The party consists of Senators Bacon, of Georgia, and Dietrich, of Nebraska, and Representatives Mercer of Nebraska; Smith, of Illinois; Burleson, of Texas; De Armond, of Missouri; Driscoll, of New York; Gaines, of Tennessee, and Green, of Pennsylvania.

GENERAL FOREIGN NEWS.—The Korean government has issued an order that no rice or grain should be exported, the cause being that little short of a famine threatens the country on account of a lack of rain. The whole country is in a most dreadful state. . . . . The Butchers' Association of Vienna has adopted a resolution demanding that the maximum tariff be imposed upon American lard, bacon and sausages. . . . . Venezuelan troops have begun the bombardment of Rio Hacha, an important town on the coast of Colombia. . . . . A fire at Foo Chow, China, August 20, caused damage amounting to over $1,000,000, and many people perished in the flames, which burned for two days. Riots accompanied the fire, and many were killed by the troops.

FARM AND GARDEN.—The Texas State Millers' Association, representing 200 millers, reports a shrinkage in the wheat crop of the State of from 15,000,000 to 5,000,000 bushels.

Professor B. T. Galloway, of the Department of Agriculture, has returned from an extended tour of the recently drought-stricken regions of the West. He was sent by Secretary Wilson to make an official and expert examination of the conditions of the districts where the suffering was most prolonged and the loss the greatest. He started with Michigan, and visited the States of Ohio, Illinois, Indiana, Missouri, Kansas, Nebraska and Colorado. The results of his observations will be embodied in an elaborate report on the causes and phases of drought and the remedial expedients to which the Department can advise farmers to resort. Mr. Galloway says the drought was a great moral lesson to farmers generally, and that they will be likely to profit by their experience in the development of ways to avoid the consequences of a failure of crops for want of rain.

The rural free delivery service will, in a few weeks, furnish to its patrons stamped envelopes bearing return notices, stating the route on which they were mailed. In case of non-delivery they will be sent back to the carrier who first collected them, and be by him returned to the person who deposited the letter in the mails. This new feature of the service is intended to give the rural patron the same facilities that are now enjoyed by those who live in the cities, and to render their letters more secure in the mails.

The Farm Crops Division of the Illinois College of Agriculture has been called upon to supply corn and other crop judges for the Illinois State Fair, the Indiana State Fair, the Peoria Corn Exposition, the Atlanta Fair, the Champaign Fair, and numerous other exhibits of corn and farm crops. In addition to this, the students of this department have been asked to judge the exhibits of corn, wheat and oats at nearly all of the county farmers' institutes in the State this year. The work will be done according to the score cards arranged for judging corn, wheat and oats which are used in the regular class instructional work at the University.

The eleventh annual meeting of the New York State Veterinary Society opened at Ithaca, N. Y., September 10. Many veterinarians from other States came from Atlantic City, where the annual meeting of the American Veterinary Association has been held. Among them were Dr. S. S. Stewart, secretary of the American association; Dr. C. C. Lyford, one of the leading practitioners of Minneapolis, and Prof. M. H. Reynolds, of the University of Minnesota. The officers of the Society for the present year are as follows: President, Roscoe R. Bell, Brooklyn; vice-president, George H. Berns, Brooklyn, and secretary-treasurer, Claude O. Morris, Binghamton, N. Y.

The eighth annual convention of the National Hay Association began at Indianapolis, Ind., September 10.

SELLING VALUES OF FARM LANDS.

How Has Agriculture Prospered?

CONDITIONS IN WASHINGTON.—Land has increased in value 15 per cent within the last 20 years. You will remember that this is a new country; 20 years ago there was not over one-tenth of the land taken or settled. A great deal of the land belonged to the Northern Pacific Railroad, which was sold to settlers at from 50 cents to $10 per acre. This same land is now selling at from $5 to $40 per acre. Other lands are selling in like ratio. One cause of this is a demand for homes from people of the Middle West. But the principal cause is that the farmers have found that a great deal of land that was not considered good for anything but pasture is the very best for wheat and fruit. H. R.
Diamond, Wash.

A DECLINE IN A GOOD MARKET.—Tamaqua is situated very nearly in the center of the anthracite coal fields of Pennsylvania; but north, east and south of us there are sections of fine agricultural land, which are highly productive when well farmed, and the latter is the rule, because of the fine home market at the mining towns and collieries within easy reach of the farmers. While the productiveness of farm land has been increased in the last 20 years, the land itself has decreased in value, and on sale now rarely sells for more than one-half the price it sold for 20 years ago. Money lenders and institutions in the towns will not loan on farm property except at a large margin. While I know of many cases where farms have sold at decreased prices, I know of none at an increased price. The causes may be the laborious character of the occupation, the inclination of the farmers' sons for other occupations, and the consequent scarcity of farm labor. H. B. G.
Tamaqua, Pa.

A DECLINE IN OHIO VALUES.—About 29 years ago David Hilty, former owner of the farm I now reside on, refused $125 per acre. The farm contains 171½ acres; then had not a tile on it, and the same buildings we have to-day; about four acres of apple orchard. Seventeen years ago I bought this farm at the administrator's sale for $91 per acre; have kept buildings rooted and in fair repair, and except being somewhat out of style, they are in many respects as good as new. I have tiled out on this farm all the wet places, laid in miles of tile, from two to eight-inch in size; have planted over 1,200 fruit trees, such as peach, quince, sour cherry, pear and plum; many now ready to bear—a model young orchard. This sold at public sale on June 12, 1901, with about 20 acres of wheat growing on it that will make 30 bushels and more per acre; 25 acres of Red and Alsike clover mixed that will make over 2½ tons per acre; 75 acres of White clover and Blue grass pasture equal to anything that can be produced in famous Kentucky, for $46 per acre *on long time*. I have learned years ago that while the public press was parading the great National prosperity *we* were enjoying, that we as farmers were positively and completely excluded. J. C. A.
Rittman, O.

DAIRY PROSPERITY.—The price of farms and dairy products touched bottom here just previous to the Summer of 1899. The rise in price of dairy products during the Fall of 1899 and 1900 gave farmers here a real slice of prosperity, and caused farms to be in good demand at an advance of about 25 per cent. Before me lies a statement of one of the best cheese factories around here. The sale is from July 19 to August 1, and the net for 100 pounds of milk is .774. The little spurt of prosperity for the general dairy farmer has nearly disappeared; and while the farmer takes .774 for his milk he finds himself charged trust prices on nearly everything he has to buy, especially labor. Tenant-farming is on the increase, and generally hastens run-down conditions, with a galaxy of docks, wild carrots, paint-brush, live-forever, etc. All kinds of pests combine to make it harder for a farmer than 20 years ago. One of the largest, best and most productive farms here about 28 years ago sold for $12,000. The farm and buildings were steadily improved and sold 12 years ago for $10,000. This year the same farm sold for $8,000, a decline of 33 1-3 per cent in 28 years. In 1873 the milk from 21 cows netted $1,100 from the cheese factory. Last year the same farm sent a larger quantity of milk and received $900, and last year was the best in years. A. L. H.
Norway, N. Y.

ADVANCE IN MINNESOTA.—I came here on this place (soldier homestead) in 1880. It was considered worth $1.25 per acre. I have 171½, and to-day I value it at $4,000. The farms have all been taken under homestead entry, mortgaged, and then abandoned. Land here is being taken now by men from Iowa, Missouri, etc., and nearly all occupied. Values of produce, such as potatoes, are not quite as high as when I came here, as I have sold potatoes for $1.50 per bushel. They are now selling at 40 cents. I do not see but that my place produces as well or better than when I first came here, as I have never had a complete failure since I have been on it. We have a light sandy loam near me, but on Mississippi River have heavy clay. I will take the loam. I do not raise much tame hay; we have fine wild meadows. I think the reason of the advance in price of land in this locality is caused by having a better class of people coming in. The first ones were a kind of Oklahoma boomers trying to get something for nothing. There have been five new houses put up here this Summer, and the places that have put them up five years ago could have been bought for $500 each. Now you could not get them for $1,000. Of course, our sales are a great deal more now than when we came here, for then the place was new. I have now only about 40 acres in cultivation; the rest is pasture and hay. My business is butter. E. A.
Crow Wing Co., Minn.

SOME IMPROVEMENT.—There has been a very heavy decline in prices of farm property; from 15 years ago to four or five years since from 25 to 50 per cent. What is the cause? I can only give my opinion. From 20 to 25 years ago much property changed hands at high figures, men giving mortgages at high rates of interest. They failed to meet their obligation and this resulted in foreclosures of mortgages, thereby throwing a large amount of farm property on the market, and there were more sellers than buyers. This condition was brought about by so many going West to obtain cheap lands. Another cause was that men who had money to invest put it into western lands as well as bonds and mortgages, at a high rate of interest. High rates of interest and low prices of farm produce almost invariably cause cheap lands, while low rates of interest and a high price for farm produce result in high-priced lands. So a combination of causes produced depreciation in farm values. But within the past three or four years there has been a gradual stiffening of prices and greater activity in the market for farms, simply because there is not so much cheap land to be obtained in the West, and farm produce is bringing better prices than 20 years ago, as my book of sales indicates. Although no great number of farms have been disposed of at great advance in price, I have heard of several places that have sold at quite an advance, and there is a strong tendency to ask more than formerly. I believe a reaction is taking place, and it will not be long before our farms will bring former prices.
Palermo, N. Y. G. F. H.

A REPORT FROM MICHIGAN.—Your question, whether farm lands have increased in value, causes me to give a few figures in this locality, Clinton Co., Mich. Farm lands compared with 1893 have increased in value about five per cent, but this is an unjust comparison. The farm that I occupy was purchased in 1886 at $55 per acre; $2,500 worth of substantial improvements have been made and it has been offered for $60 per acre. The annual income of this farm ranges from $1,400 to $1,700, besides furnishing milk, butter, eggs, meat, fruit of all kinds, fuel and vegetables for a family of seven. A farm joining me sold for $41 per acre; buildings old and rundown, for which in 1876 an offer of $75 per acre was refused. A farm on the south sold recently for $40 that would have brought $60 in the year 1875. Farm values have not advanced since 1884; with added improvement, compared with 1876, they have fallen 25 to 40 per cent; compared with 1893 have advanced five per cent. It is very evident to me that farm values have not shared in the boasted general prosperity, and why they do not I cannot see. Farming is a very profitable business in this section. I know of farmers who are making an annual payment of $800 to $1,000 a year on a 120-acre farm, besides a good living, but much depends upon the skill and management of farm and economical purchase of luxuries and fixtures. This is one of the richest counties in Michigan, the assessed valuation over $17,000,000, and this chiefly an agricultural district. Only one other county in the State has as much land under cultivation.
St. Johns, Mich. W. N. R.

THE NEW YORK STATE FAIR.

The weather was against the Fair this year, and the attendance was not so large as was hoped for, yet it will go into history as one of the best of the series. It was as clean as a whistle. There were no objectionable side shows or "barkers" to draw attention from the legitimate exhibits, but the respectable and orderly crowds enjoyed themselves in true rural fashion. The exhibits of live stock were enormous. Some of the finest animals in the State were shown, and the stalls and pens were constantly surrounded. The display of fruit and vegetables exceeded anything ever seen before in the State. Much of this was due to the increased competition caused by the work of the New York Fruit Growers' Association. This society was organized barely six months ago, yet it won first prize for best exhibits, showing all told 2,254 plates of fruit, or 462 varieties. These comprised 195 varieties of apples, five of crabs, 64 pears, 74 plums, 66 grapes, seven quinces, 46 peaches, three exotic grapes, one chestnut and one Japan quince. We hope to give next week a special report or study of the fruit exhibit.

As usual the most interesting feature of the Fair was the crowd. The farmers of New York who attend the State Fair are, as a rule, the cream of the profession. They are worthy and intelligent people, and to talk with them is to get a clear idea of the conditions of New York agriculture. Most of them are hopeful this year, but it must be admitted that the season has been a hard one. The fruit is scarce, and that means much to the New York State farmer. It is surprising what a factor in farm income good apples have become. Some of these careful and intelligent farmers are working out methods of culture and fertilizing that will make the work done by the experiment stations doubly effective.

Crop and Weather Report.

Drought still continues in portions of Texas and Oklahoma. There have been light frosts in the Rocky Mountain regions and Michigan, and snow has fallen in Montana. Farm work in Nebraska and South Dakota has been hindered by rains. The Eastern States have had a very favorable week. In the Central West late-planted corn is maturing and will soon be out of the reach of frost. The cotton outlook has improved, and picking is in progress. The only sections where improvement is noted in the apple crop are Arkansas and West Virginia. Wheat sowing in the Ohio Valley is progressing rapidly.

Woman and Home

From Day to Day.

THE REMORSEFUL CAKES.

A little boy named Thomas ate
  Hot buckwheat cakes for tea—
A very rash proceeding, as
  We presently shall see.

He went to bed at eight o'clock
  As all good children do,
And scarce had closed his little eyes,
  When he most restless grew.

He wrapped one leg around his waist
  And t'other round his ear,
While mamma wondered what on earth
  Could ail her little dear.

But sound he slept, and as he slept
  He dreamt an awful dream
Of being spanked with hickory slabs
  Without the power to scream.

He dreamt a great big lion came
  And ripped and raved and roared—
While on his breast two furious bulls
  In mortal combat gored.

He dreamt he heard the flop of wings
  Within the chimney-flue—
And down there crawled, to gnaw his ears,
  An awful bugaboo!

When Thomas rose next morn, his face
  Was pallid as a sheet;
"I never more," he firmly said,
  "Will cakes for supper eat!"

—Eugene Field.

*

AMONG the little cake cutters now sold are several decided variations from the ordinary round or oval scalloped molds. They are to be purchased in a series of animals, birds, letters, numbers and geometrical designs, some quite elaborate; also spades, hearts, diamonds and clubs, these latter being for card parties.

*

VERY uncommon rag rugs are made by knitting strips of cotton material like yarn, on large wooden needles. It may be knitted in stripes of contrasting colors, blue and white being very clean and cool looking. Such rugs may be washed easily. Artistic furnishers now realize the beauty of humble rag carpets and rag rugs, and they are often seen in handsome Summer homes. A large rug of good hit-and-miss carpeting, fringed at the ends, is very suitable for a dining-room finished in natural wood.

*

RUSTLING dress linings are out of date, say the fashion authorities. Time was when a gentle rustle meant silk linings and nothing else, and the desire of every woman with dress ambitions was to emulate that rustle. Then we began to get rustle percalines, and mercerized almost-silks, copying the truly-silk rustle so closely that it no longer remained exclusive. Consequently, the latest dictum is that we are to swish about softly, without that aggressive rustle, which, at times, became very oppressive.

*

REFERENCE made by fashion writers to the "singlet," in describing sailor and guimpe dresses, prove a little puzzling to the uninitiated. This name is given to the under bodice to which a shield or guimpe is attached. Many women who have been wearing the popular sailor suits this Summer find that the white shield, when detached, is very troublesome, riding up at front and sides, and disclosing unseemly gaps. This is obviated when it is attached to the underwaist or singlet, which buttons in the back. The little girl's singlet is, of course, attached to her skirt. Reference to the shields which insist upon divorcing themselves from sailor blouses reminds us of the gaping lace yokes which give an untidy look to so many Summer frocks. Out of sight, out of mind, says the old proverb, and when a waist fastens in the back or on the shoulder many women seem quite regardless of its proper closing. It is very difficult to contrive a fastening for a yoke of continuous fine insertion that does not spoil its effect. Most women compromise on small ornamental pins, but we know some who always sew themselves in! "It isn't so very hard," explained one, "after you get used to it, but it is a nuisance, when you're tired and hot, to pick out the stitches before you can get out of your frock!" This recalls the days of phenomenally tight sleeves, when some women were accused of having the inner seam of the sleeve, at the upper part, stitched together after the waist was on, to secure an absolute-

3902 Child's Tucked Dress,
1, 2, 4 & 6 yrs.

ly wrinkleless fit. At that time no really fashionable woman could put her hat on after her gown was fastened. We have certainly progressed since then.

*

A SMALL boy who had been directed to a course of nature study was recently called upon to write an essay upon bullfrogs. Johnny thought long and deeply upon the subject, and this was the result:

The bullfrog is large, green and warty. He can jump several times his own length. His voice is loud, but not pleasing. The bullfrog is shy and diffident. He builds his nest in damp swampy places, where it is difficult to track him. At the slightest alarm he utters a low, plaintive note and immediately seeks refuge in the water. He is a good diver, and can swim like a fish, except that he does not wiggle, but kicks. There was a frog once that blowed himself full of air until he busted like a paper sack. This shows the folly of vanity and self-conceit. O, my friends, let us endeavor not to act in that manner, but to be good and truthful. Let us remember that life is short, and that we must always be up and doing. Some people like bullfrogs to eat, but I would rather have pie.

*

IT is often thought that fish served at good hotels or restaurants is much nicer than that cooked at home. Really, the fish offered at the home table is likely to be better in quality, but the professional cook pays more attention to the sauce served with it. The simplest sauce for fish consists of about two tablespoonfuls of butter rubbed smooth or melted, to which has been added a teaspoonful of lemon juice and a tablespoonful of chopped parsley; this put over the fish just before serving. Half a cupful of chili sauce heated and poured over the fish is excellent; so is heated tomato catsup, thinned a little, with the addition of a few chopped olives or pickles. These are all simple. For smelts, or other small fried fish, sauce Tartare is usually served; this is an ordinary mayonnaise dressing, to which chopped olives, gherkins and capers have been added.

The Rural Patterns.

Simple little frocks that fall from the shoulders make the best possible models for little children. The pretty example is suited to both boys and girls up to two years of age, and to girls until they reach the mature age of six. The original is made of French nainsook and is untrimmed, the fine tucks making a sufficient and dainty finish; but all fine white lawn, batiste, dimities and the like are suitable for the better dresses, and a sash tied around, low down, and bowed in back gives it the French effect. Ginghams, cotton cheviots and similar materials are better for the knockabout frocks. The little dress is cut with front and back portions, which are tucked to yoke depth, but fall in soft folds below, and which may be arranged over a yoke lining that holds the tucks in place. The lower edge may be simply hemmed or have three tucks added above the hem as illustrated. The bishop sleeves are tucked at the upper portion and plain below the elbows. The neck is finished with a straight tucked band or collar. To cut this dress for a child of four years of age, three yards of material 27 inches wide or 2½ yards 32 inches wide will be required. The pattern No. 3902 is cut in sizes for children of one, two, four and six years of age; price 10 cents.

The middy suit shown is made of white serge banded with blue, but blue serge or cheviot with white is equally appropriate for cool weather, duck and linen in both colors for Summer wear. The trousers are long and shaped on sailor lines. The blouse is simply full with the sailor collar, that can be square or round as preferred, shield and fashionable sleeves that are pleated to form cuffs. At the left side is an inserted pocket and the collar is held by a genuine sailor's knot with ends. To cut this suit for a boy of six years of age, 4¼ yards of material 27 inches wide, 2⅜ yards 44 inches wide or 2⅛ yards 50 inches wide will be required. The pattern No. 3922 is cut in sizes for boys of

3922 Boy's Middy Suit,
4 to 10 yrs

4, 6, 8 and 10 years of age; price 10 cents from this office.

WHEN you write advertisers mention THE R. N.-Y. and you will get a quick reply and "a square deal." See our guarantee 8th page.

Hanging Out Clothes.

It is nearly as essential to hang out things properly as to wash them well. If big things, such as table and bed linen, dry out of shape stretching and pulling them straight wears them more than use. Hang sheets, table cloths, towels and napkins across the line, ends down. Warp threads are so much stronger than filling that if things are habitually hung crosswise, they will certainly split along the fold. Indeed, all washable things should be hung out that the weight while wet—which is thrice the weight dry—comes upon the lengthwise threads. To do this with skirts, shirts and made garments generally, get a strip of clean inch-square deal, some wooden barrel hoops and plenty of good-sized screw hooks, along with a few picture hooks. Saw after the manner of a coat hanger. For shirts the deal ought to be long enough to reach a little way in the sleeves. Fasten the neck-band and slip the hook over the line. Thus a full-size shirt will be properly dried and aired in about six inches of line space. The barrel hoops are for skirt hangers. Tie stout twine so it makes a knotted cross in the middle of the hoop, and slip a picture hook under the cross. Then fasten the skirt band, put the hoop inside the skirt, and hook upon the line. The line must be extra stout, and properly braced for such hangers, as they mean extra strain through quadrupling its drying capacity.

Whether hung on hangers or simply a line, take pains to hang out shirts so the bosoms will not drag. Once the several thicknesses pull apart and dry in creases, it will be hard work to get them back into shape. It is the same with cuffs and collars. Snap them out straight and hang so warp and woof pull true. All these stiff and polished things need to get bone dry before starching. They also need to be well wet in blood-warm water before rubbing. Stiff linen is nearly as breakable as cardboard, especially the fine sorts used in good shirts.

If my name isn't on your lamp chimneys you have trouble with them.

MACBETH.

If you'll send your address, I'll send you the Index to Lamps and their Chimneys, to tell you what number to get for your lamp.

MACBETH, Pittsburgh.

ARMSTRONG & McKELVY Pittsburgh.
BEYMER-BAUMAN Pittsburgh.
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ATLANTIC, BRADLEY, BROOKLYN, JEWETT, ULSTER, UNION — New York.
SOUTHERN, SHIPMAN — Chicago.
COLLIER, MISSOURI, RED SEAL, SOUTHERN — St. Louis.
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IS THERE any Pure White Lead nowadays? Yes, and it is made in the old-fashioned way by the "*old Dutch process*" of slow corrosion.

The brands named in margin are genuine, and, with pure Linseed Oil, they make the only durable and satisfactory paint.

For any color or shade required, use NATIONAL LEAD COMPANY'S Pure White Lead Tinting Colors. Pamphlet sent free upon application.

National Lead Co., 100 William Street, New York.

Abimelech Higgins's Way.

The Peace-on-earth-good-will-to-man Society of Peachem was holding its regular weekly session, and every woman there was busy patching old garments and cutting out and sewing up new ones, or was otherwise industriously engaged in one branch of that charity which we have Scriptural authority for believing is greater than faith and hope.

"These pantaloons," remarked the wife of the postmaster, bringing a pair of emaciated trousers from a basket and holding them up for the inspection of the society, "is a perfect shame. 'Tisn't that I object to that kind of charity, or any kind for that matter, but I do hate to see a woman let her husband wear clothes till they ain't fit for a self-respecting scarecrow to appear in public in."

"Even a cupful of cold water in charity, Sister Carroll," ventured the wife of the tailor, a gentle little woman who never harbored an unkind thought against a living creature.

"Of all women, you ought to be the last to advocate men's wearing their clothes too long," tartly responded Mrs. Carroll.

"Sh—sh," came from the wife of the druggist, who held up a reproving finger. "Charity begins at home, and we shouldn't quarrel among ourselves."

"Faith, hope, charity, these three; but the greatest of these is charity," said the wife of the pastor.

Mrs. Carroll smiled, letting the smile include the wife of the tailor.

"Whose pantaloons was these?" inquired Mrs. Sneckles, the wife of the grocer, reaching for the garments, quite regardless of the ethics and relevance of Mrs. Carroll's story.

"Mrs. Higgins sent them in," explained the secretary of the society.

"Oh," smiled Mrs. Sneckles, giving the trousers a vicious jerk, "they're Abimelech Higgins' old pants, air they? Well, I'll bet a cooky if Marthy Higgins got them out of the house without a fuss it was when Abimelech was unconscious or away from home. He's closer than the skin on the back of your hand, and I don't believe he'd give up a single stitch of his old rags for an angel to wear, saying an angel would wear such."

"Charity, charity!" chorused a number of the ladies.

"Charity be flusticated," replied Mrs. Sneckles, recklessly. "Charity may be greater than faith and hope, but justice is greater than the three of them, and I'm going to speak my mind about Abimelech Higgins though the whole firmament of the heavens caves in. He's got more money than any two people in the community has got and does less good with it than all the rest of us put together." A statement somewhat vague, but Mrs. Sneckles was careless of the quality of her ammunition so long as she succeeded in bringing down her game. "And he's getting worse every day of his life," she went on. "I've knowed him ever since he wasn't more than knee-high to a hop-toad, and he didn't use to be a bit like he is now. I mind mighty well when he married Marthy Biggs, one of the sweetest girls that ever lived, he give her a set of earrings and breastpin that cost $15, wholesale, and for a long time he treated her as if she was a real human being. He used to have a way of keeping her in pocket money by letting her have the extry dollars he would git selling anything. For instance, if somebody offered him $30 for a cow, Abimelech would dicked and dicker—he was the everlastin'est dickerer, anyway—till mebbe he would squeeze out $31 or $31.50 or mebbe $32, and when he come home he would put the 30 away and give Marthy the balance, 'jest to make it even,' as he always said. Of course Marthy never got more than $4 and 90 odd cents, according to what Abimelech got, but she got it a good many times in the course of a year and so made out to git along without having to ask him for money, which no woman that has any respect for herself likes to do, and no man with any respect for her ought to let her do. As he got older he began to git closer and meaner with Marthy, though he called it 'necessary economy,' and the extrys come along so few and far between that Marthy began to look shabby, and bimeby stopped coming to the meetings of this society, as you all know, and I'm telling you now what the reason was, if you hadn't guessed it before."

The members of the society, by this time, had quit sewing to listen to the narrative of Mrs. Sneckles, and though she paused at this point no one ventured to say "Charity" to her—the watchword of the society, and the warning cry to the thoughtless of speech.

"But the meanest thing he ever done," resumed Mrs. Sneckles, "was when he sold that farm down on Sand Creek. You know it was a fine farm and he got $10,000 for it, with some extry for a passel of odds and ends he insisted on having pay for, so's all that was coming to him, with the two cents for the stamp on the check that the man who drawed it didn't have at the time and Abimelech let him have, was $10,249.98. He told Marthy what he got for it—his telling her most everything is his only redeemin' trait—and being that she needed a new dress and other clothes and shoes and stockings and a bonnet, and the children all needed clothes, and she hadn't had any extry money for she didn't know when, she thought Abimelech would let her have something out of it, jest to make it even, if for no other reason. Ten thousand dollars was enough for him, anyway, for there was a whole lot in morgidges besides, and so Marthy dreamed of the new things she was going to get till her cheeks acchuly began to redden and her eyes to shine like they used to. She was hoping she would git the whole $249.98, but if she didn't she knew of so many nice little things she needed that she could get for the $49.98; but if she didn't get that she could get the children something for the $9.98, and even if she didn't get that 98 cents would buy enough calico to make the two little girls new dresses to wear to school. I really don't know what some women is made of. I know I ain't made of it, for before I'd 'a' done like Marthy Higgins I'd chased Abimelech off the place with a broomstick.

"Well, Abimelech come home that day at noon with the money to let Marthy see it before he put it in the bank, and she was looking mighty cheerful, and had a nice dinner for him that she raised in her own garden and cooked herself, for he couldn't afford to have a hired girl, so he said. He come back in the dinin'-room where she was and spread it all on the table before her, and counted it out in five hundred-dollar bills, and hundreds and fifties, and tens and fives, and twos and ones, and on down to the nickels and coppers till the very last cent was in the pile

"'There's $10,249.98, Marthy,' he says, drawing out the figures between his teeth like he was eating molasses candy.

"'Oh, Bim,' says Marthy—she always called him Bim—'ain't it perfectly lovely?' And she reached out for it as if she wanted to hug it to her bosom, but Abimelech, he put his hand out and stopped her.

"'There's only one thing lackin',' says he, looking at her like a sheep-killin' dog.

"What's that, Bim?' she asked, kind of trembly, because she was afraid he was worrying about what he was going to give her.

"'Two cents, jest to make it even, Marthy,' he said. 'Ain't you got that much somewheres around that you can give me?"—W. J. Lampton, in Saturday Evening Post.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

Apple Butter.

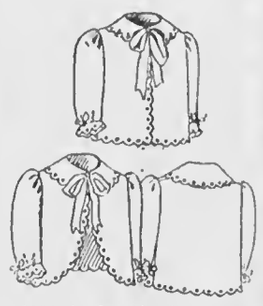
"The madame" wants a recipe for apple butter. Can you supply one? N. G. V. New Jersey.

This should be made with new cider, fresh from the press, and not fermented. Fill a porcelain-lined kettle with cider, and boil until reduced one-half. Continue this until you have enough for quantity of apples, boiling the cider the day before making the apple butter. To every four gallons of boiled cider, allow a half-bushel of nice juicy apples, pared, cored and quartered. Fill a large kettle with the boiled cider, add as many apples as can be kept moist, and cook, stirring frequently. When the apples are soft, beat with a wooden stick until they are reduced to pulp. Continue to cook, stirring continuously, until the consistency of soft marmalade, and dark brown in color. If it becomes too thick, add more boiled cider; if too thin, put in more apples. Add ground cinnamon and nutmeg to taste, 20 minutes before taking from the fire; no sugar is used. Put into stone jars, and when cold cover closely, and store away like any other preserve.

Comments on "A Busy Life."

Reading in your issue of August 24 about one woman's "Busy Life" has made some of us farmers' wives, who thought we worked hard, feel that we are like the lilies of the field, which toil not, neither do they spin. It really takes away one's breath to read of the hundreds of bushels of corn she husked, the hundreds of cords of wood she piled up, of her spinning and weaving, table linen, carpets, "men's wear" and women's dresses, sheets, etc. She tells of getting up at four or half past, Summer and Winter, building her own fires, milking from four to eight cows, making garden, pulling flax, digging potatoes and cutting corn. Where in the meantime was the man she married? We are sadly wondering if she was not too efficient, and if in addition to her own wearing duties as wife and mother she did not invade the man's realm and shoulder most of his responsibilities. Is hers an example you would have us all follow? We believe it is right for wives to do their share in bearing burdens, but do not see the necessity for their having a monopoly in that line.

3894 Infant's Wrapper, One Size.



3899 Infant's Sacque, One Size.

I once knew a clergyman and his wife who taught me a lesson. Like the Martha, whose letter was quoted, this wife was up early, would attend to all fires, shovel the walks in Winter and usually have her washing done before her husband would rise, at half past eight perhaps, and eat the good breakfast always ready for him. Then he would take a long brisk walk for his exercise, after which he would seat himself in his study to read or write at his leisure. He was a good man, and might have been a good husband if she had not spoiled him by waiting on him as if he had been a lord, and she simply a servant to drudge for him. She was a "Hannah Jane," and "rubbed herself quite out." Did he appreciate her sacrifice and honor her for it? Nay, nay; he was so used to it that he took it as a matter of course. When he went into cultured society he never thought of her going with him. To tell the truth, he would have been ashamed of her if she had, for she had grown careless of her personal appearance, was angular, ill-dressed and homely. Though good as gold at heart, she was destitute of the outward charm of gracious womanhood which clings about the loved and honored wife. Is it not a sad truth that it is not those who do the most for one who are best loved, but those for whom one does the most? This woman who writes so—dare I say boastingly?—of the work she has done in her 58 years, says *work does not kill*, but she also says that three of her eight children died when "small." Can she be sure that work did not kill them? When we read her account of her life we can only wonder that any of them lived. The strongest machine made of iron is limited in its power. We had thought the delicate machinery of the human body was much more so, but it would seem there was no limit to work in the strenuous life of the woman who says to her weaker sisters that work does not kill. Well, perhaps it does not, but are we wrong in thinking that a wife and mother, bearing and rearing children, must be exceptionally strong to do her whole duty by them, and at the same time do so much of the hard, rough work that by right belongs to the stronger partner?

A FARMER'S WIFE.

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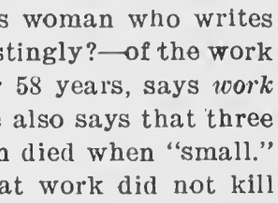

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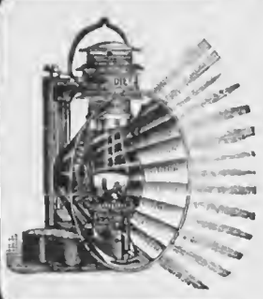

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MARKETS

THE WEEK'S QUOTATIONS.

WHOLESALE PRICES.

NEW YORK, SEPTEMBER 14, 1901.

GRAIN.—Export trade in wheat is active. The corn market is easier although prices are practically unchanged.

Wheat, No. 1, Northern Chicago.	—	@	76⅛
No. 1, Northern Duluth	—	@	76¾
No. 2, red, Buffalo	—	@	74½
Corn, No. 2, mixed, elevator	—	@	62⅛
Oats, No. 2, mixed	—	@	38
Rye, No. 2, W'n, f. o. b., N. Y.	—	@	60
Barley, feeding	—	@	57
Malting, new crop	62	@	67

BEANS.

Marrow, choice, per bu	—	@	2 85
Fair to good	2 65	@	2 80
Medium, choice	2 55	@	2 60
Pea, bbls., choice	2 62½	@	2 65
Red kidney, choice	2 50	@	2 52½
Common to good	2 10	@	2 45
White kidney, choice	2 30	@	2 35
Black turtle soup, choice	—	@	2 00

FEED.

Spring bran, coarse	17 00	@	17 50
Winter bran	17 50	@	18 00
Red Dog	—	@	20 75
No grade flour	—	@	22 00
Unsound wheat, per 100 lbs	67	@	70
Linseed meal, ton	—	@	29 50
Cottonseed meal, ton	—	@	25 00

HAY AND STRAW.

Hay, No. 1	80	@	82½
No. 2	70	@	75
No. 3	60	@	65
Clover	50	@	60
Clover, mixed	55	@	65
Straw, rye, long	65	@	75

SEEDS.

Clover, per 100 lbs	10 00	@	11 25
Timothy, per 100 lbs	5 00	@	5 50
Flaxseed, whole, per bu	2	@	2⅛
Millet, per lb	3¼	@	3½
Rape, German, per lb	3¼	@	3½
Sunflower, per lb	3	@	3½

MILK.

New York Exchange price at stations $1.31 per 40-quart can. This is the gross price, and from it must be taken cost of transportation and fees at receiving stations where such charges are made.

BUTTER.—Market is unsettled except on extras, which are firm.

Creamery, extra, per lb	—	@	20
Firsts	18½	@	20
Seconds	16½	@	18
Lower grades	15½	@	16
State dairy, tubs, fancy	18	@	19
Tubs, firsts	17	@	17½
Tubs, seconds	16	@	16½
Tubs, thirds	14	@	15
Tins, etc	14	@	17½
W'n imitation creamery, fcy	16½	@	17
Firsts	15	@	16
Lower grades	14	@	14½
W'n factory, June, fancy	—	@	15½
June, good to choice	14½	@	15
Current packed, best	—	@	14½
Fair to good	13¾	@	14
Lower grades	12½	@	13½
Renovated butter, fancy	17	@	17½
Common to choice	14	@	16½
Packing stock	12	@	14

CHEESE.

Full cream, colored, small, fcy.	—	@	9½
Colored, small, choice	9⅛	@	9⅜
White, small, fancy	—	@	9¼
Small, white, choice	9	@	9⅛
Small, good to prime	8½	@	8⅞
Colored, large, fancy	8¾	@	8⅞
Colored, large, choice	8½	@	8⅝
White, large, fancy	8¾	@	8⅞
White, large, choice	8½	@	8⅝
Large, good to prime	8⅛	@	8⅜
Common to fair	7	@	8
Light skims, small, choice	—	@	8
Large, choice	7¼	@	7½
Part skims, prime	6½	@	6¾
Fair to good	4½	@	6
Common	3	@	4
Full skims	1½	@	2½

EGGS.—Receipts are large. Medium and lower grades are selling slowly.

QUOTATIONS LOSS OFF.

State & Pa., avge. prime, doz	—	@	19
W'n, fresh-gathered, chce, doz.	—	@	18½

QUOTATIONS AT MARK.

Nearby, State & Pa., fresh-gathered, fancy selected, dz.	21	@	22
Prime to choice	18	@	19
W'n, fresh-gathered, N'th'ly sections, candled, selections.	17	@	18
Reg. packings, N'th'n sects.	14½	@	17
Graded S'th'ly sections	15	@	16
Regular packings, S'th'ly secs.	14	@	15
Checks	10	@	11
Refrigerator, per doz	15	@	17½

LIVE STOCK.

Steers	5 10	@	6 00
Bulls	2 50	@	3 50
Cows	1 75	@	4 00
Veal calves	5 00	@	7 50
Buttermilks	3 00	@	4 00
Sheep	2 50	@	4 00
Lambs	4 00	@	5 25

LIVE POULTRY.—On account of the Jewish holiday trade market is clearing up in good shape, with occasional fancy lots selling at a premium.

Spring chickens, per lb	—	@	11
Fowls, per lb	—	@	11
Roosters, per lb	—	@	7
Turkeys, per lb	—	@	10
Ducks, average W'n, pair	50	@	65
Average Southern, per pair	40	@	50
Geese, average W'n, pair	1 00	@	1 25
Average Southern, per pair	80	@	1 00
Pigeons, mixed, per pair	—	@	15

DRESSED POULTRY.—Fowls and fancy dry-picked broilers are scarce. There is a surplus of medium grade chickens, which sell at irregular prices.

Broilers, Phila., over 4 lbs. to pair, per lb	—	@	18
Phila., mixed sizes, per lb	12	@	14
Penn., fair to good, per lb	10	@	14
Western, dry-picked, per lb	—	@	12
Western, scalded, per lb	—	@	11
Small, dry-picked or scalded, per lb	9	@	10
Fowls, W'n, dry-picked, prime	11	@	11½
Western, scalded, prime	11	@	11½
S'th'wn, dry-picked, prime	11	@	11½
W'n & S'th'wn, poor to good	10	@	10½
Old roosters, per lb	6½	@	7
Ducks, Spring, L. I. and other nearby, per lb	13½	@	14
Western	7	@	10
Geese, Spring, Eastern	12	@	14
Squabs, choice, large, dark	2 25	@	2 50
Mixed, per doz	1 75	@	2 00
Dark, per doz	1 25	@	1 50
Culls, per doz	50	@	1 00

DRIED FRUITS.

Apples, evaporated, fancy, lb	9¼	@	9½
Evaporated, choice, per lb	8¾	@	9
Evaporated, prime, per lb	8¼	@	8½
Evaporated, com. to good, lb	5	@	8
Sun-dried, State & W'n, qrs., per lb	4½	@	6
Chops, per 100 lbs	1 50	@	2 25
Cores and skins, per 100 lbs	1 50	@	2 15
Raspberries, evaporated, 1901, per lb	24	@	25
Sun-dried, 1901, per lb	20	@	22
Blackberries, 1901, per lb	6½	@	7
Huckleberries, 1901, per lb	—	@	15
Cherries, per lb	13	@	14

FRESH FRUITS.

Apples, Duchess of O., h-p, per bbl	3 00	@	4 00
Alexander, epr bbl	3 00	@	4 50
Twenty-oz., h-pkd, bbl	3 00	@	4 00
Gravenstein, per bbl	3 00	@	4 00
Fall & York Pippin, bbl	3 00	@	3 75
Holland Pippin, per bbl	3 00	@	3 75
All sorts, h-p, com. to f'r.	1 75	@	2 50
Green varieties, hand-pkd, open heads, per bbl	1 75	@	2 50
Windfalls, per bbl	1 00	@	1 75
Pears, Bartlett, fancy, bbl	3 50	@	4 00
Bartlett, avge. lots, bbl	2 25	@	3 25
Bartlett, per keg	1 25	@	1 75
Seckel, fair to good, bbl	2 50	@	3 50
Beurre Bosc, per bbl	2 00	@	3 00
Beurre Clairgeau, per bbl	2 00	@	2 50
Beurre d'Anjou, per bbl	200	@	2 50
Other late kinds, per bbl	2 00	@	2 50
Nearby, common, per bbl.	1 00	@	1 75
Peaches, Md. & Del., car'r.	75	@	1 50
Md. & Del., per bskt	35	@	90
Jersey, per basket	30	@	1 00
Pine Island, per carrier	1 00	@	2 00
Pine Island, per basket	30	@	90
Up-river, per pony bskt	30	@	50
Up-river, per 2-bkt car'r	60	@	1 00
Up--river, full-sized bskt	60	@	90
Plums, Abundance, 8-lb. bkt.	12	@	20
Large, table blue, 8-lb. bkt.	30	@	40
Green, per 8-lb. basket	30	@	40
Common, per 8-lb. basket	15	@	25
Prunes, per 8-lb. basket	35	@	45
Grapes, up-river, Del., car'r.	50	@	1 00
Up-river, Niagara, carrier	50	@	75
Up-river, Moore's Early, c'r.	50	@	60
Up-river, Worden, car'r	50	@	65
Up-river, Concord, car'r	50	@	65
Watermelons, per carload	60 00	@	125 00
Large, per 100	14 00	@	18 00
Medium, per 100	8 00	@	12 00
Poor to fair, per 100	5 00	@	7 00
Muskmelons, W'n Md., Gem, per crate	50	@	1 00
Far W'n, good to chce, cte.	2 00	@	2 50
Far W'n, poor to fair	1 00	@	1 75

VEGETABLES.

Potatoes, L. I., er bbl	2 25	@	2 75
Maine, per bbl	2 50	@	2 62
State & Western, per bbl	2 25	@	2 50
Albany & Troy, per bbl	—	@	2 25
Jersey, per bbl	1 75	@	2 25
Sweet potatoes, So. Jersey, bbl.	2 50	@	3 00
Yellow, Va., per bbl	1 75	@	2 25
Beets, Jersey & L. I., 100 bchs	—	@	1 00
Celery, State @ W'n, doz. roots.	10	@	35
Carrots, L. I., per bbl	75	@	1 00
Corn, Jersey, per 100	50	@	1 25
Cabbages, L. I., Flat Dutch, per 100	4 00	@	5 00
Cucumbers, Jersey, per box	25	@	50
Jersey, per bbl	75	@	1 50
Rockland Co., per bbl	1 00	@	2 00
Shelter Island, per bbl	2 00	@	3 00
Cucumbers, pickles, Rockland Co., per 1,000	1 50	@	2 50
Jersey, per bbl	75	@	1 50
L. I., per 1,000	75	@	1 75
Eggplants, Jersey, ½-bbl. crate.	40	@	50
Jersey, per bbl	75	@	1 00
Lima beans, Hackensack & L. I., Potato, per bag	75	@	90
South Jersey, Potato, bag	60	@	75
South Jersey, flat, per bag	40	@	60
Lettuce, W'n N. Y., per case	1 75	@	2 75
Boston, per case	1 75	@	2 50
Onions, Southern, per bskt	1 12	@	1 25
Pickle, white, per bbl	3 00	@	4 00
Orange Co., white, per bag	2 00	@	3 00
Orange Co., red, per bag	2 00	@	2 75
Orange Co., inferior, bag	75	@	1 25
Jersey & L. I., red, per bbl	2 50	@	2 75
Jersey & L. I., yellow, bbl	2 25	@	2 50
Jersey & L. I., white, bskt	1 25	@	2 00
Connecticut, white, per bbl	2 75	@	3 50
Connecticut, yellow, per bbl	2 50	@	2 75
Connecticut, red, per bbl	3 00	@	3 25
State & W'n, yellow, bbl	2 25	@	2 50
State & W'n, red, per bbl	2 50	@	3 00
Peppers, Jersey, green, bbl	40	@	75
Jersey, red, per bbl	75	@	1 25
Squash, Hubbard, per bbl	—	@	1 00
White, per bbl	1 00	@	1 25
Marrow, per bbl	75	@	1 00
String beans, Jersey & L. I., bag.	40	@	50
Turnips, Jersey, Russia, box	75	@	1 00
Tomatoes, Hackensack, box	50	@	60
Other Jersey, Acme, box	40	@	50
Other Jersey, Grant, box	30	@	40

THE MINNESOTA STATE FAIR.

The State Agricultural Society of Minnesota has reason to be proud of the fair this year. Since the Society stopped perambulating about the State, holding the fair first here, then there, and settled down on permanent grounds at Hamline (midway between St. Paul and Minneapolis), their annual exhibition has steadily improved. Since pool selling and beer have been driven off the grounds, the fair has been a paying institution. Last year, after all expenses were paid, there was a surplus of over $18,000. This year the total attendance was 185,584, a gain of over 49,000 over last year. The weather was good during the entire week till the last afternoon, when it turned cold, and toward evening began to rain. Among the novelties noticed was a one-horse tread-power for running farm dairy separator. This power, instead of the ordinary iron wheels under the lags had all the lags fastened at each end to an endless rubber belt, which ran on an endless chain of wooden rollers. This arrangement made an almost noiseless power, and seems to be a great improvement over the old styles. The Deere Co. showed a corn planter which, instead of the common revolving plates with round holes for dropping the corn, had plates with long slots and a V-shaped slot above the openings in the plates, which caused the kernels to slide down and enter openings in the plates edgewise. Each hole or slot in the plates was large enough to hold but one kernel of corn, and the plates could be arranged by a gear to run so as to drop one, two, three or four kernels in a hill as desired.

The number of gasoline engines displayed would seem to indicate that this kind of power is becoming quite popular with the farmers. There were gasoline engines running thrashing machines, corn shredders, feed cutters, grinders, electric light plants and hay presses. The American Grass Twine Co. had a display of binders using grass twine, also carpets, rugs and chairs made from grass. This company has purchased the Woods harvester works in St. Paul, and is making binders which use grass twine instead of the ordinary binding twine. The binder is the same as the Appleby binder in common use, only that the knotter hook and twine disks are made larger to accommodate the larger twine. It is claimed that this twine will stand a strain of 90 pounds, and costs but two-thirds as much as ordinary binding twine, basing the comparison on the number of feet or the number of bundles bound.

The live stock exhibits were better than ever before. There were twice as many sheep as last year. Great interest centered in the cattle sales held daily by the Shorthorn and Hereford associations in the big tent. On Friday an imposing procession of all the prize winning horses and cattle marched around the race track. The display of fruits, grains and vegetables in the new agricultural building was nothing short of wonderful. One exhibit in the form of a fort covering a space of 20 feet square, and all made of Minnesota apples, has been engaged to go to the Exposition at Buffalo. The separate county exhibits were remarkable, and drew a good deal of attention. The fair grounds adjoin the farm of the School of Agriculture and Experiment Station, and many farmers daily took advantage of the opportunity offered them to visit the farm and grounds and school buildings. JAS. M. DREW.

BUSINESS BITS.

WE ARE in receipt of a booklet, "Piggic's Troubles," which treats of the entire category of diseases to which the hog is heir, giving symptoms and remedies. The Zenner Disinfecting Co., Detroit, Mich., will send a copy free to any swine breeder. A postal will bring it.

BLOOD tells in swine as surely as in any farm animal, and there is none in which it brings a greater profit or quicker return. Registered stock will bring more than double the price of common swine, and it costs the same to keep one as the other. Hamilton & Co., Rosenvick, Pa., offer some choice Poland Chinas, Berkshires and Chester Whites. Write for circulars and prices.

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VALUABLE FARM FOR SALE.—1,000 acres, susceptible of many subdivisions, situated on Dan River, with much river, creek and branch bottoms; nine miles from Reidsville, N. C., a town of 5,000 people, on the main trunk line of Southern Railway Company, in county of Rockingham, Piedmont section. Splendid six-room mansion, and numerous tenant settlements. JOHN T. PANNILL, Reidsville, N. C.

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We are producing something that will be appreciated by him, and are seeking its distribution along the rural routes.

THE CURRENT ENCYCLOPEDIA is a work that has been indorsed by all who have examined it as indispensable aid for all intelligent people. It appeals most strongly to readers over the country. It treats of all topics that are of interest to everybody everywhere. Besides the knowledge of the world it thus furnishes it has contributions on agricultural subjects treated by national authorities. There have already appeared interesting articles on Corn; Forestry, Kaffir Corn, the Agricultural Department (by A. C. True); Irrigation (by T. H. Newell, U. S. Hydrographer); Alfalfa and Horticulture (by Prof. L. H. Bailey); Wheat (by Prof. R. F. Falkner). Other subjects will be taken up from time to time and dealt with in the same manner.

Now is the time to arrange for Fall and Winter reading. The price of **The Current Encyclopedia** is very moderate, and as we wish to introduce it widely, we shall be glad to hear from every reader of this invitation to whom we shall give the benefit of a special offer. Write at once: THE CURRENT ENCYCLOPEDIA, 125 East 23d St., N. Y. City, N. Y.

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steel blade, buckhorn handle, fork and steel. Price, $1.90; or we will send it for a club of two new subscriptions at $1 each and $1.25 extra money, or free for a club of six at $1 each.

FEEDS AND FEEDING

NEXT WINTER it will be necessary for our farmers to study the question of stock foods. Corn, the great stock grain, will be high in price, and substitutes must be provided for it. How can these substitutes be found? Only by comparing other and cheaper foods with corn, and knowing beforehand how they will affect the animal. This comparison may be done by studying analyses, but a farmer cannot afford to spend the Winter in experimenting. He must know beforehand what others have found out. He can learn this by studying Prof. W. A. Henry's great book. Feeds and Feeding tells you just what you ought to know about foods and how to feed them. It is full and complete, and easy to read. Price, $2.

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BOOK BULLETIN

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THE CURRENT ENCYCLOPEDIA.—Those who desire to keep in touch with modern events are often at a loss to find reference works that are up to date. History moves on at automobile speed; the maps change day by day, and the obscure town or country of to-day is the spot upon which all eyes are fixed to-morrow. Economic changes are no less rapid than political. A serial reference work is really needful, and this want is supplied by the Current Encyclopedia. The August issue contains, among other valuable papers, copious illustrated articles on the Department of Agriculture by A. C. True, Director of U. S. Office of Experiment Stations; Alaska; Argentina; coinage; Congress; Nicaragua Canal; Nile dam; Oklahoma; trades unions, etc. The September issue will give first authentic statistics of the wheat crop of 1901, a full history of Venezuela, and a quantity of other timely matter.

MARKET NOTES

POOR FISHING.—From present indications prices for prime salt mackerel will be very high during the coming season. The catch of the New England fleet to date is only 58,000 barrels, 16,000 less than for the same period last year. A large share of the catch from the Maine coast has run 150 fish to the barrel, and sold as high as $15.50. Of course, these were extra large fish, as ordinary sizes run from 250 to 350 per barrel.

WHY VARIED PRICES?—A correspondent wishes to know why some varieties of beans are quoted so much higher than others on the same day. At first thought it might seem that the quality and nothing else makes this difference, but supply as well as quality has a hand in it. Now and then one will be surprised to find that on account of great scarcity of goods of an inferior grade, the price for a short time will jump above those of higher quality. It may appear strange that anyone should pay more for an inferior article than a better one, but this is easily accounted for by the tastes of individuals, and also of classes, where great crowds of one nationality are massed together in cities. There are certain varieties of cheese, for instance, which in stores and markets are securely confined under glass covers out of consideration for the traveling public, yet there are people in full possession of their senses who are extremely fond of them, and they sell for very high prices.

MORE ABOUT PACKAGES.—A few peaches come in a package which carries well but is not economical, so far as space is concerned. It consists of two eight-quart, inverted-bell baskets, fastened side by side in a frame resembling the common bushel crate. A method of shipping grapes which is growing in favor each year, particularly for early grapes or fancy sorts, is the use of an oblong carrier containing eight baskets holding between two and three pounds. This is really a diminutive peach carrier. Another size of the same style contains eight 3½-pound baskets. Most of the grape crop, however, comes in handled baskets containing four and eight pounds, respectively. The Niagara, Delaware, Salem and Catawba are put in the smaller sizes, and sell at a higher proportionate price than Concord. Just why this is so is hard to tell, unless because the Concord is so much more plentiful than the others. Certainly the quality of well-ripened Concords is not inferior to Niagara or Catawba. A great many Catawbas, however, are stored, on account of their long-keeping qualities, being sold during the holidays at high prices, and for this purpose the large basket would not be suitable. Niagara has the fault of losing its flavor under storage. I have tested specimens which looked perfect, and yet were as insipid as sweetened water. Of course, this may have been more the fault of the storage than the fruit.

BARGAINING.—The conversations heard around the retail fruit markets are often amusing. Some of the sellers indulge in the most unblushing prevarications, but, as the buyer immediately discounts them 100 per cent, no particular harm is done except to give an additional thickness to the sole-leather tan on the dealer's conscience. I recently saw a man who wished to buy a small quantity of plums, and here is the way the matter was talked over:

"How much for them plums?"

"Half a dollar."

"Be they sound?"

"Sure, every one of them. Here, just look at them," tilting the basket in such a way that the least possible light was admitted. "You ain't buying no pig in a bag. They're all right."

"Here's a rotten one."

"O, well, what do you expect? One speckled plum in a basket! That's nothing. Well, take it for 40 cents, as that's the last one. They cost me 45 this morning."

By this time the buyer had handled over the top layer and found several decayed plums underneath. He showed these one by one to the dealer, who kept saying alternately, "I tell you they're all sound," and; "O, well, what do you expect? One rotten one in a basket!" Finally the buyer concluded that they would not do, and he went on, the dealer calling after him: "If you can find any better I'll treat you." Probably that was a safe offer, as nearly all of the eastern-grown plums that I saw that day were badly decayed. At one store was a pile of 25 eight-pound baskets of what were claimed to be Green Gages, so rotten that it was doubtful whether one sound basket could have been sorted out of the whole lot. They were probably too near ripe when shipped, and had been standing around too long. The California plums, which keep so well, are packed so that every layer is separate. The fruit is not jammed in putting on the covers, and there is a circulation of air. W. W. H.

PAN-AMERICAN EXPOSITION NOTES.

LOUISIANA.—Louisiana has one of the largest as well as one of the most representative exhibits in the Agricultural Building. Almost every product of the farms of the State is shown. Perhaps the most conspicuous is that of cotton. There are bales of marketable sizes, showing the best grades of cotton, from the long staple or Sea Island to the short upland grades. Among them is a sample of brown cotton, which will doubtless be new to a great many who do not know that there is a variety of cotton which naturally has this color. There are about 50 varieties grown there. The output of 1900 was valued at about $37,000,000, which shows that it is the leading product of the State. The sugar industry comes next in importance, as it yields annually about $30,000,000. It is illustrated by photographs of the fields showing the methods of planting, harvesting, and all the other operations necessary in reducing the cane to the finished product. Samples of the cane are also shown. It may not be known to many that the tropical cane from which sugar is made does not make seed, and hence it cannot be propagated except by planting the stalks, which take root and grow, a sprout coming from each joint. A plantation lasts about three years, after which time the vitality of the stock is so low that the field has to be broken up and replanted. Rice in all its various forms is shown, from the grain in the sheaf to the product ready for market. The grain in the head looks very handsome, and is well worth seeing by those who are not familiar with it. There is also rice flour, which is used for making various kinds of baked articles, the bran has its use as stock food, and the straw for paper; in fact, all the products are put to some good use. Formerly all the rice that was grown in Louisiana was near the Mississippi River, where the water was siphoned over the levee to the rich bottom lands, but now it has been found that there is a vast area, which is mainly on the prairies of the southwestern part of the State, where there are thousands of acres already devoted to rice culture and millions more that can be so used. The industry has grown from a very insignificant stage until last year the annual crop was worth about $10,000,000, which is more than all the product of the Carolinas and Georgia, where rice was formerly grown more largely than elsewhere within the United States. A variety from Japan is now the leading one grown, and the introduction of this has been a great stimulus to the industry, because it can be milled through much more easily than the old varieties. Sweet potatoes of the very best quality are shown, and also the two grades of Irish potatoes, which are fast becoming one of their leading market crops.

Some of the best pecans in all the country are grown in southern Louisiana. Fifteen varieties are shown, and some of them so large as hardly to be recognized as pecans. They also have very thin shells, and orchards are being planted to such an extent that these choice varieties will soon make quite a showing upon the market. The display of fruit models is excellent. While the apple is not one of their leading fruit crops, still there is a very good representation of this fruit, as there is also of peaches, pears, grapes, Japan plums and persimmons and many other kinds of fruit which are shown to good advantage, and which makes it evident that no one need starve for fruit in Louisiana. Corn of the best quality is also displayed, and the cow pea is shown in a great many varieties. This latter is one of the most valuable crops grown, not only for the peas for use as an article of food, but because of the beneficial effects of the crop from the soil, especially when the vines are plowed under. Fiber plants have quite a conspicuous place, especially the native moss, which grows upon the trees in immense quantity. When the farmers or any of the laboring people run out of other employment, they can go to the woods and pull moss, put it in some pond or stream where it undergoes a process of decay and after being taken out and dried, is almost like horse hair, and has a steady market value. Beautiful specimens of jute and ramie are also shown. The former is the material which is used in making coarse bags, and the latter is almost as fine as silk and is used in making fine fabrics. The oyster farms of the State are also represented by specimens of the shells showing the different market sizes, the young spat just caught upon articles found in the water, and jars of the edible part. On the whole, the exhibit from Louisiana will fully repay the visitor quite as well as any that I have seen. A very intelligent and painstaking man is in attendance to explain all these exhibits.

NEBRASKA.—Nebraska has a small but very handsome and interesting exhibit. Perhaps the main feature is an allegorical representation of the world, which is explained in a most fitting, entertaining and instructive manner by Col. Randall, who is in constant attendance. This part of the exhibit is arranged on the wall in circular form. The outside, which is composed of grasses and grains in the sheaf, is supposed to support all the rest, especially the animal kingdom, which feeds upon them. Agriculture has been, is, and always will be a business because the consumption of the products is continuous. The farmer will never be out of a job. His work goes on in part while he sleeps, and he has this advantage over the mechanic whose income ceases when his hands are idle, while the farmer's crops grow whether it rains or shines, whether he is sick or well, excepting, of course, the crops which are neglected or some serious calamity that may befall them. The larger circle is made of ears of white corn, which Col. Randall happily says represents the white race, and it dominates the world. Inside of this are various colored ears of corn, red, brown, yellow and speckled, which represent the other nations of the earth. They are more for show than utility, so the Colonel says. The visitor will be pleased carefully to examine the Nebraska exhibit, as well as listen to the words of instruction and good advice given by our friend.

IDAHO.—Of all the State exhibits in the Agricultural Building that of Idaho is perhaps the most artistic. It is not large, but the plan and the manner of decoration are at once unique and exceedingly pleasing. The design and the carrying out of it are the work of Mr. and Mrs. Wessels, of Idaho, who are old hands at exposition work, and their efforts here have certainly been worthy of their skill. To them the credit mainly belongs. Various cereals and grasses of the State, which are many, have been used in the most effective way. There are grains shown in jars, and also some fresh vegetables, which prove what the State can produce. I think some of the onions would weigh a pound or more each, which is fully equal to those we import from foreign countries.

MANITOBA.—Manitoba has a large and handsome exhibit. Wheat, flour and cattle being their main exports they are in the foreground. The display of wheat is mainly of one variety, which is the Red Fife. It is a Spring wheat, has a hard grain, and makes an excellent grade of flour. It is said by those in charge of the exhibit to make 20 loaves of bread more to the barrel, than flour made from any of the soft wheats because it is drier, contains more gluten and will absorb more water. The native and cultivated grasses, barley and oats, of which there are 25 varieties of the former shown, are also nicely displayed. The pasturage for cattle on the native prairies, and in the woodlands to some extent, is said to be almost without limit. Very little oats or barley is exported, these grains being kept at home and fed to the stock. Flax is also largely grown for the seed, but not for the fiber, and a handsome display is made of this both in the sheaf and of thrashed seed. One notable fact that was stated by the attendant was that almost every season a part of the harvest is never gathered because of the inability to secure sufficient laborers. This year 20,000 men were wanted to help harvest the crop. From $50 to $65 per month and board were offered as pay this year, but usually from $30 to $40 is the ordinary price. Of course, this state of things exists only for two or three months during the busy season. The railway stations are watched and every one who gets off the train who is at all likely to want work is at once besieged by the farmers to engage his services.

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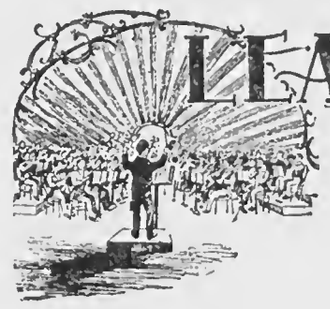

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Live Stock and Dairy

A FIELD OF RAPE.

Fig. 291 is a very good illustration of what the rape plant will do under favorable conditions. This piece of rape was sown in a portion of an old orchard that had been used for hog pasture for several years, and is generally in a very good condition as regards soil fertility. We sowed this field of rape on May 15, for the use of the lambs when they should be taken from the ewes, a little later in the season. The photograph was taken by the writer on July 14, about eight weeks after sowing. The young man in the photograph stands something over six feet tall, so the rape is easily about 36 inches high, which is what I consider a very good growth for this length of time. Of course the land was good, and the season has been sufficiently favorable, with plenty of rain, so that the crop was given a good chance; possibly better than the average farm and season might afford. But at the same time this will show what ought to be expected from the rape plant under the proper conditions.

The week following the day the photograph was taken the lambs were turned in, and now the field presents quite a different appearance. The leaves have been well eaten off for the most part, and new leaves are starting out on the old stems that will make fine pasturing later on. We have later turned some calves into this plot, and they, too, like rape, and are consequently doing well and looking plump, as though they were in clover. We have, also, been cutting an armful two or three times a day, and feeding to an old sow that is soon due to farrow, and which for various reasons we are unable to put out at pasture. The sow eats the rape greedily, and doesn't tire of it either, even after four or five weeks' feeding. Later in the season it is not improbable that we will turn the sow and litter into this rape, or a portion of it, and they will do almost as well as they would in a clover pasture. We have had a considerable experience with rape, even to feeding to milch cows in small quantities, and have found it to be a very valuable farm crop, and one that we would not care to attempt to get along without. More farmers should raise rape. It is a crop that actually the farmer cannot afford to get along without. Fig. 291, this page, shows very well what rape can be made to do plainer than either words or pen could put it.

C. P. REYNOLDS.

Shiawassee Co., Mich.

NOTE ON POULTRY DISEASES.

For many years I have watched poultry keepers and have kept poultry myself, but I have never known so many sick fowls as during the past year. We are all unable to ascertain the cause of the trouble. Many think it is because the fowls have been kept on the farms so long that the premises have become filthy, etc. This view is not clearly proven, for some of the heaviest losers are those who have been the shortest time in the business. Those who have kept fowls for years are about equally divided, some are losing and others escape. I mention this to show that even the poultry keeper, who has, by many, been supposed to be free from trouble, and only needing to gather the eggs and receive the money, may need a little sympathy at times. When a man loses from 75 to 90 per cent of his flock of hens, he forgets what a lot of money he made last year from them, and begins to say as I heard one say the other day: "If I can't have anything without hens, I won't have anything." These heavy losses of poultry which have been known in these parts for only a year or two, remind me of the reported experience of a certain eastern New York business man, who undertook to get a large flock of fowls by purchase. He engaged an experienced poultryman to take charge, and everything went well for a few months. Soon it was discovered that disease was among the fowls. Losses were heavy. Everything, so far as they knew, was done to stamp out the disease and save the flock, but before the ravages of the disease could be stopped, the flock was so far gone that it was decided to abandon the enterprise. It was also feared that the soil where the poultry had run might be contaminated and that succeeding flocks might thus become infected. What can be done when trouble comes to the flock of hens in this manner? I am not authority. I have read much and have seen the poultry keepers and tried to find out from them. Numerous remedies have been tried. So far as I can learn the best method seems to be to use substances which tend to prevent trouble. Many use sulphur, charcoal and salt in the mash, use gypsum (land plaster) on the dropping boards, and lime wherever it will answer without affecting the manure too much. There is little doubt now that a judicious use of lime is one of the best means of preventing disease that we have. These methods, together with care in feeding, which includes letting up on the amount of corn fed, and the removal to a distance of all ailing hens, and removal of droppings from birds that are affected, or better, all droppings, will be the best that one can do. Stamp out disease by "eternal vigilance."

H. M.

A FIELD OF RAPE. FIG. 291.

Value of Skim-Milk.

There has been some criticism about the dairy test at Buffalo, because no value was given to the skim-milk. The following statement has been made by the press reporter:

Skim-milk doubtless has a value, and the herd that gives the largest amount of milk would naturally have the largest amount of skim-milk to its credit; but against this should be charged the labor of handling, feeding or otherwise manipulating the same. Figures are given that set forth the total milk as well as the total solids, though it has been impossible to work up even this in detail, because of the mass of figures it would require. As a matter of fact, the value of skim-milk is of wide variation. Some judicious feeders value it as high as 15 cents per 100 pounds, while others are so careless and indifferent that the probabilities are that the labor of handling eats up all the profit. Commercially, the price of 10 cents per 100 might be considered a fair valuation. At the Pan-American model dairy, conditions have been such as to render any special record of the disposition made valueless to the farmer. During the first weeks that the dairy was in operation, it was impossible to make use of more than a small percentage of the skim-milk, while now it is being ripened, made into buttermilk and retailed over the counter at five cents a mug. Of course, these are conditions that would never apply to an ordinary farm or creamery.

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DAIRY AND FARM NOTES.

The Price of Milk.

MILK PRICES.—Is it possible to control the price of milk and its products? There are numberless factors controlling current prices. The great law of supply and demand has always been the main influence in fixing values. It always will be. Whatever man may say or do, when markets are glutted prices will go down, and when a scarcity prevails a corresponding advance will take place. This is no new argument, but it is often forgotten by over-zealous advocates of pure theory. In a limited way, demand can be created for special products. This is particularly true of many fancy soft cheeses, such as the Neufchatel, Camembert, D'Isigny, etc., and prices in the past have been to some extent controlled by the manufacturers or dealers. Each year increases the output of this class of goods, until at present it nearly or quite supplies every demand, and they have become staple products. Any effort made to control or fix the cost to the retailer or consumer is at once met by an increased output, and the price again seeks its level, a level fixed by the value of milk for butter, which is the great American milk product. Supposing for a moment that the manufacturers of Neufchatel cheese should say to the farmer: "We will give 25 cents per 100 pounds more for milk than it is worth for butter or cheese making." Would it be long before the markets would be deluged with these soft cheeses? Or, on the other hand, presuming that the farmers who are now producing milk for such manufacturers should say to their purchasers: "We demand 25 cents per 100 pounds more for our milk, because it is manufactured into fancy cheese," what result would follow? It takes only poor judgment to decide at once that the plant must be moved or operations suspended. Yes; but the farmers say: "The consumer pays for this product more than twice its net value to us in crude milk, and we don't propose to stand it." The candid observer would at once say that these farmers were unbusinesslike, and interfering with an industry that had benefited them and their locality.

COST AND SELLING PRICE.—Still another phase of the subject is presented. At this same time prices for milk at this establishment have been very near the cost of production, and the farmers say: "We cannot produce milk at these ruinous prices, and we shall demand an increase or place our product elsewhere, even though we get less for it." Not a very wise conclusion. Supposing the manufacturer has during this same period made a good profit on our milk; does it add materially to our welfare to deprive him of his revenue under these conditions? Again, New York requires from 30,000 to 50,000 packages of butter weekly, which comes from practically the same shippers. These same shippers conclude that they must advance the price two cents a pound, and propose if the rise is not met to withdraw their supplies, and make the milk into cheese or cream, or ship it in crude milk. Is this plan consistent? It appears to me that much of the scheme to control New York milk prices has been on about the same general plan. Does denouncing a great corporation like the Borden Company, which has done more for the New York State milk producers than any other single enterprise, by way of demanding conditions which are in the very nature of the case essentials to a higher price, put shekels into our pockets? No, no; the premises are wrong. There is only one throttle by which the speed of the engine is controlled. Drilling a hole into the water tank will not check the speed. The industrial life of this country has not developed through a constant warfare to increase cost, although prices have at times fluctuated, and a small increase produced great gains, yet every student of economics of whatever degree must admit that the development of every industry in the country, the dairy interest included, has been due primarily to cheapened cost of production, meaning a lower price to consumer. If every American farmer could have impressed upon his business bump this great principle of American economic law, that industry thrives only by an expanding market, made so through a better product at reduced cost, he would have laid the foundation for an acceptance, and finally as a part of a great whole, for future success and happiness.

UNPRODUCTIVE DAIRY FARMS.—I can point to many men who have yearly added to their material interests, and produced milk at low prices. Others have failed, regardless of prices, more than to make a living. The fringe of weeds and bushes around the farm grows wider; the loss of manure continues. The farm decreases in producing power. The bulk of the food comes from a farm in Iowa. A can of milk is hauled one way and a sack of feed the other, and the feed merchant gets the profit if he secures full pay. These farms must needs buy their stock. They cannot afford to raise it, and again the cow merchant brings in the fresh stock and takes out the wornout milkers. It would be most interesting to know at just what price of milk these farms would clear up and return a profit. I am of the opinion that three cents a quart would not accomplish the result. I suppose it may be charged that this is dodging the issue, and joining hands with the so-called middleman. But fortunately or otherwise, I have had some experience as a middleman, standing between the farmer and the consumer, and I know from experience that there are many rocks and shoals in handling produce that the quiet farmer does not see, and consequently does not appreciate. The demand for cheaper milk and the sbarp competition among dealers does not permit a profit beyond that secured in other business presenting an equal hazard. A comparison may be made in our locality. The small villages of Carthage and Lowville, surrounded by farmers whose whole business is milk production, are supplied by a few men who get 2½ times for their milk what is realized by the milk seller or cheese factory patron. Why not double the amount of milk and sell at half the price? Prof. Voorhees tells us that the cost of retailing equals the cost of production. The distribution of any class of goods costs as much as the manufacture. Milk is perishable property, and hence particularly hazardous. The margins must necessarily be greater than upon wheat, which can be stored and held without loss in intrinsic value.

COST OF DISTRIBUTION.—The weakest point in city distribution is the fact that each peddler must traverse a large territory daily rather than confine his efforts to a contiguous locality. Such distribution can only be possible under trust management. Competition, personal likes and dislikes, enter into the retailing of merchandise. No one butcher supplies a given locality. The success of many a man comes from catering to one's idiosyncrasies, which carry no more nourishment to the physical body, but do affect our desires, our likes and dislikes, without which we should be on a level with the lower animals. I am satisfied that the organization, be it the result of statutory enactment, the arbitrary rules of corporate interests, or the direct result of personal and united effort on the part of the farmers, will be the only one bringing any tangible benefits to the milk producer; which has for its watchword first the production of a healthful milk, not unnecessarily rich in fat and total solids, but containing not less than 3.5 per cent fat and 12½ per cent of solids, in which germ life is not permitted to develop. We should not study how far one may go in shirking duty in care and management, which I am sorry to say prevails to a degree in the producing sections. Nor are we to study continually how far one may go in giving the least return for the money, considering middlemen robbers and thieves, and I repeat it because I hear it and read it, not because I like to do so. In my judgment it is a most narrow and short-sighted conception of business and industrial development. On the other hand, we need a policy and spirit, and organized effort, which shall say to the middleman and consumer:

"We have milk to sell. The cost of production is high. We are not in business strictly for fun, but for self-support and profit. Our time must necessarily be given over to economical production of our goods. We are unable to produce, transport, sell and collect; we must needs have assistance. We know that machinery soon wears out, besides doing ineffective work if every part does not fit and work free from friction. We know also, that this great New York milk machine, handling one million quarts a day, must run without friction to bring best results. We are ready to coöperate with you in producing good milk, and in enforcing the law against adulteration after it leaves the farm. We believe that there is dishonesty among farmers and among dealers. We demand punishment whenever and wherever found. We believe that the milk business, like other industries, depends upon the volume of business done. We are therefore willing to produce at a narrow margin, knowing well that this principle means increased consumption."

Let us take the friction out of our machinery and oil the adjusted parts until milk consumption in the great metropolis shall double and treble, giving the consumer a cheaper and more healthful food than meats, and at less cost. Establish a spirit of confidence in every branch of this enterprise. Invite our dealers and city consumers to see our barns and dairies. Discuss with them and show a knowledge and study of hygiene and germ life. If anyone reads this article he may say sentiment, sentiment; we must fight to get our rights. For all I believe in a "strenuous life," I have found that merchants were human, much like farmers, and were possessed of as much moral fiber, and as ready to live up to their obligations. They have their losses and troubles, as we do. Success is due to overcoming these difficulties, and if the middleman has greater power than we, he will succeed just in that proportion. The present plan of building coöperative plants has much to commend it, and is the only outcome as yet having any possible value, but I am not sure in the long run how successful they will be. Twenty-five years' experience in factory management teaches me that in the first place margins are small, and in the second place what profit arises will go to the man who has business tact and sagacity to make things pay, whether he is the owner or under pay from a board of directors. Build creameries; it will not be a loss if wisely administered, but remember so long as milk trains run into New York City the price will be fixed by milk values for butter and cheese, with an addition equivalent to the extra expense of hauling and loss of by-products.

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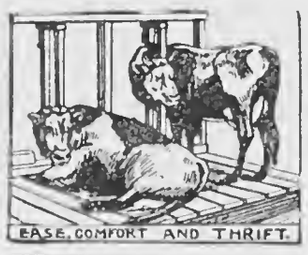

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On the pavement, moist and wretched, one need now no longer squirm,
To a haven snug and cosy one gets carted.
People often growl at fashion, but a fashion may do good,
And the trailing skirt's beneficent, I guess,
Since it aids unlucky members of the old Bacillus Brood,"
And the Bubonic Germlet said, "Why, yes!" —Rational Dress Gazette.

BARBER: "Your hair will be gray if it keeps on." Scantylocks: "Well, I hope it will keep on."—Baltimore World.

"Is this weather good for hay?" asked the green boarder. "It orter be," returned Farmer Skimpin. "It's bin rainin' pitchforks."—Phila. Record.

"WHY should a woman take a man's name when she marries him?" "Well, as long as she takes everything else she might as well take that, too."—Philadelphia Press.

CLERGYMAN (examining a Sunday school class): "Now, can any of you tell me what are sins of omission?" Small Scholar: "Please, sir, they're sins you ought to have committed, and haven't." —Motherhood.

"I AM glad," said Willie's mamma proudly, "to hear that my little boy, chose to apologize rather than to fight." "Sure," replied Willie. "The other fellow was a good bit bigger than me."—Philadelphia Record.

TEACHER: "Now, Tommie, look at this. Is this the way to spell window—w-i-d-o-w?" Tommie: "No, sir." "What is the difference between a window and a widow?" "Well, you can see through a window!"—Illustrated Bits.

NORTHERN MAN (in Arkansas): "If you are doing so poorly why don't you get more land?" Native: "It would be a right smart trick, wouldn't it, for me to git more land when I'm jest about starvin' to death on 10 acres now?"—Leslie's Weekly.

"I SUPPOSE," said the inquisitive tourist, "that the wealth of this country is in the soil." "I reckon it is," replied the poor farmer. "I don't know nobody hereabouts that ever got any out of it, so I reckon it's still thar."—Philadelphia Press.

"THIS is a remarkably healthy climate, they say," said the Easterner. "You're right thar," said Arizona Al. "F'r instance, not long ago a tenderfoot with a weak chest an' a pale face dropped inter the 'Miners' Delight,' called me a liar an' o' course I had to clean up. 'Bout two months after a big sunburnt cowboy stopped me on the street, wiped the earth up with me an' slammed me up in a tree to recuperate. Same feller. Best climate in the world, pard." —Indianapolis Sun.

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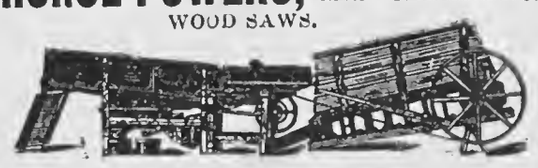
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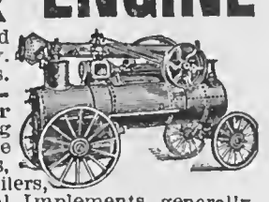
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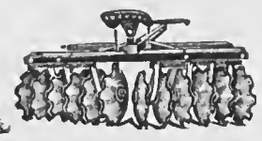
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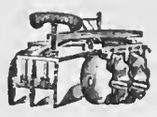
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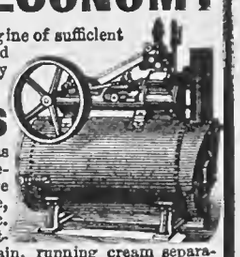
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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2696. NEW YORK, SEPTEMBER 28, 1901. $1 PER YEAR.

THE HEN AS A MANUFACTURER.

WHY SHE BEATS OTHER ANIMALS.

Making Bones Fit Her Teeth.

The hen is a small body—a few pounds of fuss framed in feathers. We consider her as an individual, and conclude that the henhouse is only a side show hardly worthy a place in the solid exhibits of agriculture. That is where many of us make a great mistake. Five years ago the American hen and her yearly product represented a value of $290,000,000. The agricultural statistics for the last census have not yet been verified, but it is safe to say that the year's value of poultry and eggs for 1900 was $350,000,000! The yearly value of the crop that passes through the hen's crop will run a close race with the total wheat crop, and probably exceed every other plant-grown farm crop except corn, hay and apples. This vast total value is only one side of the matter. All living things from a tree to a tree toad are manufacturers, which take crude or organized forms of matter, and make them over into new forms more or less suitable to man's use. It is the plant or animal that gives the widest margin of profit between what it consumes and what it produces that pays best on the farm. Some farmers have persisted in raising wheat or fattening cattle until they finally manufactured a mortgage. The trouble was that wheat and steer gave no margin, since their food cost more than it could bring as grain or meat. Other farmers learned that by growing cow peas, clover and Alfalfa they could cheapen the cost of feeding the wheat and the steer, and thus have the mortgage on Neighbor Brown's farm instead of on their own. Some crops may be easily adapted to such a change of feeding, and in times of depression will utilize what were formerly classed as wastes. The hen crop is one of the best examples of this class. Take a bushel of wheat; with a hen at fair range the 60 pounds of wheat will provide a fair grain ration for at least 300 days. The hen might use more grain to advantage, but we know from experience that 3½ ounces of wheat per day will keep the machine busy. The number of eggs obtained from the wheat will, of course, be determined largely by the breed and character of the hen, but even with a record of 75 eggs for the 300 days the hen will give better returns than any other farm animal. Feed the bushel of wheat to a cow, and get the value of the milk and butter resulting from it, or to a hog, and see how much pork he makes! In nine cases out of 10 you will find that the hen has paid a better price for the wheat than any of her competitors—including the miller. One reason for this is the fact that the egg is largely composed of water and lime—two substances which cost little or nothing. When man puts sand in his sugar, sawdust in his coffee and plaster in his flour we fine him if we can catch him at it! When the cow imitates the milkman and puts more water than the law allows into her milk we beef her, and deny her the hope of posterity. We find no fault with the hen when she packs the water inside her shell. In fact, it is as a packer that she excels, for she can put more culls into her basket and nave them turn out good fruit than any other worker on the farm. She will take a bug, a worm, a blade of grass, a weed seed, a piece of bone and a few kernels of grain, and within 36 hours make them into an egg—its shell enclosing not only that which will nourish and sustain human life, but also the promised life of another hen. There can be no doubt that the hen not only contributes a vast sum to our National wealth, but that she can turn cheap and easily-obtained wastes rapidly into human food. In this respect she stands at the head of all domestic animals—rivaling even the bee in such economy.

UNCLE SAM PICKS A BONE WITH THE AMERICAN HEN. FIG. 292.

Why dwell upon this thought? Because modern agriculture is based upon the profitable use of wastes. For 30 years or more the virgin prairie or woodland glories in its strength, and scorns the gift of plant food. Man moves his barn rather than move the manure pile, throws wood ashes or cotton seed into the river, and drains the barnyard into the creek. In half a century he will squander the bank account which a dozen centuries slowly piled up in his soil. He begins at last to use manure when Nature knocks on the bottom of the barrel, and ends by scouring the earth for waste materials. These wastes are usually food or fuel for man or beast, which Nature has locked up into insoluble forms, as though wishing to hold them until man could realize their need and devise some scheme for unlocking the food. As an illustration let us take bones. In the tough, hard animal frame Nature locked phosphoric acid, lime and nitrogen, but turned the key so that the teeth of man or plant could barely scrape the outside. For many years men burned the bones into ash which would feed their crops. This was wasting a waste, for the fire drove away the nitrogen and made the phosphoric acid nearly insoluble. Finally Liebig discovered the plan of dissolving the bones in sulphuric acid. When this was done the phosphates became available for feeding plants. With a ton of large bones buried in a single acre the wheat might languish and make barely a bushel of grain. When these same bones were cut with the acid and spread over five acres the wheat filled the granary, because the chemist had learned how to make that waste product into available food for plants.

We speak of the bones and the wheat because the American manufacturer has done much the same thing for the hen. The modern green bone cutter is changing the whole aspect of hen feeding, just as the making of superphosphates gave the older farming sections a chance to compete with the virgin soils of the West. The pictures on this page show the point clearly. For many years hen-keepers have known the value of bones as food for poultry. The strongest and most concentrated portion of the animal, of course they were useful in the production of an egg. What could be better for a hen's food, provided you can make it fit a hen's teeth? People baked them, pounded them in mortars, or with ax and hammer on a log, and ground the dry bones in mills. These methods were never fully satisfactory. The hen looked wistfully at the pile of big bones, and charged the farmer a higher price for her eggs than she wanted to until Uncle Sam took out his knife and began to chop little slices off the bone. The bone cutter does not attempt to grind or crush the bone—it slices or gouges, making pieces that create no dentist's bill for the hen. This machine does for the hen what sulphuric acid does for the wheat, and gives the hen man a chance to cheapen his hen ration and, as one man puts it, "feed bugs and worms in Winter!" Many a farm animal that would, in former years, have been hauled off to the swamp for the dogs to fight over is now cut up into food for hens and hogs. In some places the introduction of bone cutters has created a new value for bones—making such a demand that it is impossible to buy a supply at a fair price. We recognize fully the great value of cut bone as poultry food. Nothing could be better to balance a ration consisting largely of corn. A farmer should, however, use good judgment about it. We would not advise every farmer to buy a wood-burning stove, though we use one ourselves, and find it very economical. In many localities wood is scarce

and coal is cheaper. In some places there is not an adequate supply of fresh bones. The hen man should be sure of his supply, but he may rest assured that where he can get them the bone cutter will give him cheap hen food—provided he is willing to turn the crank, and that is no small job.

"THE BACK FIELDS OF CONNECTICUT."

Further Explanation of the Situation.

Since the article by Samuel Marvin was printed on page 515, we have had much inquiry about farm lands in New England. In view of the great interest manifested in the matter we asked Mr. Marvin to continue the discussion, which he does in the following article:

I have had quite a number of letters from persons in the West and South, and many from the New England States. These communications were from professional men, mechanics, farm managers, and parties owning farms themselves, all eager to change their homes and business for farm life here. I would not discourage any one of them in his desire to settle in this part of New England, and would gladly give all the information that I can, but I am not a real estate agent, neither have I the time to find out the particulars concerning farms quite a distance from here, as most of them are, which most of those writing to me wish me to do. By enclosing a stamp to the Hon. T. S. Gold, West Cornwall, former secretary of the Connecticut State Board of Agriculture, you will by request receive a printed list of farms for sale in this county, with price, and any information that can be obtained from that source is perfectly reliable.

The question that comes to me first is: Can a man unaccustomed to farm life come here and make a success of it? An acquaintance of mine residing in one of our nearest cities, seeing the article on page 515, recognized at once by the description the place where he was born. The 200-acre farm for $600, 30 years ago was sold by his father for $7,000 cash. This man thinks that prices of farm land have reached their lowest mark, and that higher wages are paid now to the wage earner than will be in the future, and he advises all who can to save a little from their earnings to invest it in these productive hill farms. For a man who has had little experience in carrying on a farm I should think it doubtful whether he would succeed. To be deprived of the advantages of living in or near a city, if one has been accustomed to it, would be a great drawback; besides, a living here must be worked out by hard untiring labor. What would a school teacher or a mechanic do here, for instance, in trying to break up some of these rough, rocky fields, with a lively team and 125-pound plow? In less than two hours he would wish that the farm and himself were in the bottom of the sea, and that the writer of the article that lured him to the place was along with them. But with a man having a general knowledge of farm life, who is naturally industrious and thrifty, I think success is sure. The foreign element has been very successful here, some owning what were once considered as very desirable farms, owned and occupied by the first "men of the town, who long since have passed to the "green fields beyond the swelling flood." I have in mind one man who lives in a neighboring town who came to this country about 40 years ago, with 50 cents in his pocket and all his worldly goods tied up in a red handkerchief, besides a wife and small children. By industry and economy after a few years he was able to make a small payment on a farm that he wanted to call his home, in one of the most desolate and rocky parts of this county. He told me that in some of his fields he had plowed and cultivated the rocks were so thick that he had to hold up his goats by their tails so they could get their noses between the rocks to find a bite of grass! He now owns a large farm, with 40 cows; good teams and tools. I think it would be a welcome day for some of these old residents to have their old forsaken farms brought back to life again; to see on a dark stormy night a light in the window of these now silent homes, where desolation and decay have commenced their destructive work. It would bring back to their memory the days long gone by, when the axes of a hundred woodmen could be heard on these hills, as thousands of cords of wood were prepared for charcoal to melt the iron ore with which these hills abound. I think success depends more on the man than the farm. The farms are surely here productive, rough and rocky; fences generally poor, and bushes galore, and a comfortable living can only be secured by hard work and patience in well doing. If professional men or those who work at a trade are desirous of owning a farm in this locality why not rent at first, with the privilege of a purchase, or find a small farm within easy driving distance of some good market, and become proficient in poultry raising, or the growing of small fruits and vegetables? I think the most to be solved is how to reclaim the pastures that are so overgrown with bushes and weeds. I am sure that sheep husbandry is the only thing to resort to, or a man might buy one of these cheap farms, keep a milk or butter dairy, large enough to meet his everyday expenses, and stock his farm with all the sheep he could safely carry. He certainly would be on the road to success. There are no sweeter pastures than Litchfield County affords, no water will better quench the thirst of man or beast than the springs that boil up from the heart of these hills, and many never fail during our severest droughts. The "head of the sheep is as gold to the land," and if throughout all New England the hill pastures were stocked with sheep we would not have to send West for our mutton, our Spring lamb, and for wool for our looms, and now where the sweet fern, the hardhack, the alder and briar are fast taking possession, the clovers and fescues would occupy the ground now going back to woodland.

It is possible in the future that the electric system of travel may be so perfected that trolley cars may wind around among these hills and valleys, which will bring the markets to our very doors. Then can we send our milk, butter and cream, our beef and mutton, our vegetables and fruit, to the city markets to compete with the farms that are near them, but which are taxed heavily for a higher valuation. I believe that the cultivation of the apple would be profitable. Fruit of all kinds grows in perfection here; we have no canker worm to eat the leaves of the apple tree, no curculio to sting the beautiful plums; no Currant worm to strip the bushes of their foliage. The iron in our soil gives a high color to the peach, a rosy cheek and a tough skin to the apple, which makes it a good shipper, and large size and sweetness to the strawberry, blackberry and other small fruits. These hillsides that slope to the west, protected from the chill and blast of the east wind, are

THE SULTAN OR OCCIDENT PLUM. Fig. 293.
See Ruralisms, Page 662.

an ideal place for the apple orchard, and with the present demand for export of choice fruit I do not see why in the future the much-neglected apple would not be a source of profit. Will these hardy tillers of the soil ever see this millenium day, when the trolley shall pass their doors, and place them on a footing with those who live in easy distance of good markets? Then indeed can they work on with new energy and vigor. The pastures will look far more green and beautiful than they do now; the crops of Summer and Fall will be gathered with a promise of better returns for their labor. The Autumn tints that make these hills so beautiful when the frost has painted the leaves in their dying colors, will shine out more beautiful than ever, and when the icy blasts of Winter bring the covering of snow on these neglected farms, with stock safely housed, and an abundant supply of this world's goods we can gather around our firesides with more thankful hearts than ever, while peace and plenty are written above our doors.

S. MARVIN.

FRUIT GROWER VS. BEE KEEPER.

The following gives the substance of a correspondence with Prof. Frank Benton, of Washington. There has been some discussion as to whether bees should be fed at the hive when their natural food is scarce:

What should be a fair statement of the proper relations between fruit growers and bee keepers?

Why, so far as I can see, that, taken all in all, each is helpful to the other; therefore their relations should be cordial, and in those cases (exceptional, I think) in which their individual interests do clash, great forbearance should be exercised.

Would it not be fair to compel the bee keeper to feed his bees at home in seasons when they would otherwise prove a nuisance to his neighbors?

Yes, if that, without a burdensome tax upon the bee keeper, would remedy the trouble. I am not at all *sure* that feeding would keep the bees at home. It would doubtless keep some at work in the hives, but probably others would go out in search of the supposed field of stores which was yielding the daily gains. When food is first given to hungry bees (or to bees that are not gathering from the fields) no matter how much they have in their combs, they are at once incited to great activity, fly out and search about. Gradually, finding nothing outside, they fly less, but still fly more than those not fed.

Would it be possible to keep bees at home by feeding them heavily?

It is possible—I am not sure—that feeding to satiety would keep bees from trying the slow process of getting honey (sugar) from the juices of fruits. But what about the cost? Take a case of 100 colonies in this section of the country. They get very little for two months in Summer—not enough to live on and keep up a little brood-rearing. They must have stores gathered before July or be fed. Now suppose, to keep them at home during this period, I fed even two pounds per colony daily. I do not believe this would suffice. The cost would be, for 60 days (really the dearth of honey-producing flowers lasts until September 10) $360—not counting time of feeding. (Sugar, two pounds at six cents, 12 cents; water, two pounds, makes feed cost three cents per pound.) This is over half the return in honey—gross return under favorable circumstances. Would it be just to make the bee keeper pay this, when very likely the cracked and rotting fruit which the bees would take from the neighbor's orchard has been produced, at least has set, because of the labors in pollination of these same bees? Not only that, but also much of the crop of good fruit which the grower was able to gather was due to the bees.

What about moving away?

The cost of moving the bees would be less than to feed them. But where should one go? Can he get away from the fruit grower? If the professional fruit grower can complain and collect damages for the fruit on his 1,000 trees the owner of one tree, and 1,000 owners of trees within two or three miles of the apiary, might collect. See where it ends: The bee keeper, with his useful insects, is driven out—finds no resting place, but is a tramp whom no one wants. "Move on," is the word! Or, what would result? He must quit the business. Now, if, fortunately, some abundant bee pasturage happens to exist a few miles away the solution is easy. But oftentimes this is of short duration; then would come another move, and so on. Or it is hundreds of miles away and uncertain. Cost to bee keeper is not in proportion to return.

Does the bee really prefer fruit juices?

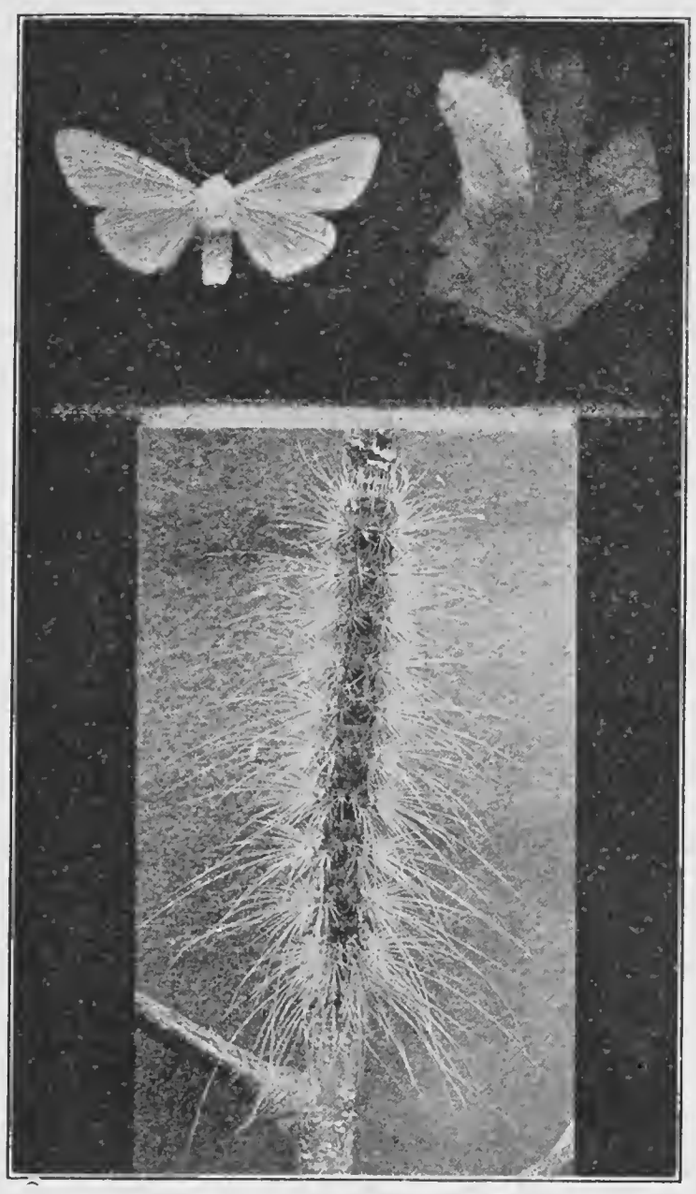
When the bee finds a fair supply of nectar in the flowers within reach of the apiary it prefers that to fruit, and few bees then attack fruit. But I am not at all sure that even liberal out-door feeding near the apiary would keep all of the bees, or nearly all of them, from trying to get fruit juices. I am, however, certain that moderate feeding during honey dearths in Summer pays the bee keeper who knows how to do it without too great expense.

Is this practice general?

In this view a very large number disagree. Few practice it. But I am convinced that the bee keeping of the future will have it as one of the prime features of good management whenever moving to pasturage or creating artificial pasturage (sowing and planting economic plants that also yield honey).

THE FALL WEB-WORM.

Many shade, forest and fruit trees are now festooned with the unsightly silken webs of an insect known as the Fall web-worm (Hyphantria cunea). One of these festooned trees, found on Cornell's Campus, is shown in Fig. 296. These nests remind one of those made by the Apple tent-caterpillar in June, but the latter insect uses its tent only as a retreat or home when not feeding on other parts of the tree, while a family of Fall web-worms extend their nest over their whole feeding grounds, thus making it serve the purpose of shelter and enclosed ranch at the same time. Thus the tent-caterpillar feeds outside its tent, while the Fall web form works inside its web, and does not go out on foraging expeditions. One of these Fall webs and its inhabitants is well shown in Fig. 295. The web worms are quite hairy, as shown in Fig. 294, but are only about half as large as a tent-caterpillar. The web-worms hatch in August from a white mass of 400 to 500 eggs laid on the leaves by dainty little white moths; a moth and an egg-mass are shown, natural size, in the upper part of Fig. 294. Soon the webs will be deserted by their wriggling, hairy builders and inhabitants, which go into the trunks of the trees or to neighboring rubbish on the ground, where they spin cocoons in which they pass the Winter. There is only this Fall crop of webs in the North, but two broods occur in a year south of New York City. The insect is a native



FALL WEB-WORM, MOTH AND EGG. Fig. 294.

American species, and is one of the most general feeders among the caterpillars, as it has been found feeding on 120 different kinds of shade, ornamental, forest and fruit trees over a wide area of our country.

Fall web-worms can be combated either by wiping or burning or cutting out the nests, one of which is usually practicable, but sometimes one does not wish to mutilate a plant by cutting or burning; then the second method of poisoning the worms may be practiced. Remember that the worms keep extending their web over new feeding grounds and, if the surrounding foliage be thoroughly poisoned, the caterpillars will sooner or later get a dose of poison in their daily menu. M. V. SLINGERLAND.

FARMING IN SOUTHWESTERN NEW JERSEY

Fertilizers to Start Stock Farming.

PART I.

At Washington's Crossing, a railroad station on the Delaware River about 10 miles above Trenton, N. J., stands a monument marking the place where Washington's army crossed the icy river on its way to surprise the Hessian soldiers. Across the cold water and up the steep bank came the ragged little forlorn hope. Desperate men, they cleared the river, shouldered their muskets, and trudged off to the south through the darkness and storm to surprise the Hessians. Every school boy knows what they did, and how that hard and desperate march changed history and put new heart into every lover of liberty. The special point of importance with us just now is the fact that Washington's army marched through a farming section. The land was well cleared, farmhouses stood along the road; in fact, it had been even then for years producing its full share of grain and meat. Today, 125 years after Washington's march, this is still an agricultural section, producing meat and grain in large quantities. In spite of more than a century of continued cropping here are farms which produce larger crops than ever. Strange, too, is the fact that here and there one finds a farm which for one reason or another has been permitted to run down, so that it is no longer profitable, and has been restored by chemical fertilizers. That is an old story to many farmers, but this is a new version of it. These farms are naturally adapted to the raising of live stock. They have little potato land, such as we find in Middlesex Co., N. J. They are stock farms, but so poor that they could not at first carry stock enough to pay expenses. By the judicious use of fertilizers on the proper crops the producing capacity of the soil has been so increased that the farms carry twice as much stock as formerly, and show a constant improvement. This use of fertilizers to start the farm into profitable live-stock keeping will seem like a strange thing to many farmers, yet it is a perfectly rational method when we come to consider it carefully. I went to Mercer Co., N. J., to see a farm owned by Ira J. Blackwell, on which this system is being worked out.

The home farm of Mr. Blackwell is close by the famous crossing. Some of Washington's soldiers doubtless marched through the orchard on their way south. Mr. Blackwell's father moved on the place in 1844, and his descendants have lived there ever since. Naturally a farm held for so long in one family has witnessed some surprising changes of agriculture. Shortly after the Civil War, when prices for all kinds of farm produce were high, these Jersey farms were very profitable. That was before the days of western competition, and grain, meat and fruit found ready sale in Philadelphia. Mr. Blackwell gave me some figures of old-time sales that will take the breath out of a modern fruit grower. In 1869 he had an acre of Smith Cider apple trees which netted $1,000, and in 1870 the same trees netted $800. In those years apples were "out of sight," windfalls bringing $4 per barrel, and hand-picked fruit $1.75 per bushel at the railroad station. In 1878 12 acres or 600 trees of Smith Cider netted $2,000, with apples then worth $3 per barrel in Philadelphia. No wonder that with this record Mr. Blackwell says there are few apples that pay better than Smith Cider. In speaking of that $1,000 acre crop Mr. Blackwell says that the hog was largely responsible for it. A drove of hogs ran in the orchard, rooting up the sod and eating the cull fruit. The hogs still run in the orchard, and good crops are still grown, but the combination of big crop and high price is now seldom known—even with the favorite Smith Cider. There have also been some very profitable seasons with pears. The Bartlett seems to lead all others in profit for this section, though the vast quantities sent from California hurt the sale of home-grown fruit. Mr. Blackwell says that New Jersey is a better State for fruit than for grain, yet all through this section most of the farms are devoted to hay and grain, which are fed to stock. The rotation followed on this home farm is probably typical of the neighborhood. The crops are, corn, followed by oats or barley; then wheat and grass for two years, with corn again after the grass.

Most of the farm manure is put on the corn, and

A FALL WEB-WORM COLONY. Fig. 295.

fertilizers are usually put in the wheat and often on the grass. The wheat is sold or traded for bran and other feed. The straw, hay, stalks and corn are fed to stock. This is naturally a good dairy section, but the Blackwells do not keep many cows—preferring stock that can largely take care of itself. Beef cattle, they think, would under their system of farming pay about as well as dairy cows. Ten to 12 Berkshire sows are kept, and all the pigs they can raise are fed for pork. These pigs run in a large orchard, and are well fed on grain, so that they average 200 pounds at seven months. The feed is wheat bran, middlings and whole corn while nursing. When the pigs are about four months old linseed oil meal is fed; a flock of 100 Southdown sheep is kept. The lambs come either very early or rather late—the latter being kept for sale in the Winter. With all this stock to consume the hay and grain, and fertilizers in addition for the wheat, it is quite easy to keep up the strength of the farm, and sell tons of pork and mutton and large quantities of fruit. It is all the easier because the farm has been for years in the hands of good farmers, who have taken good care of it. Mr. Blackwell has another farm which was to begin with "so poor that crows would fly over it without lighting." How can such a farm be saved and put into a thorough and systematic rotation? I will try to tell next week how it is being done. H. W. C.

FIXING THE WALKING PLOW FOR BUSINESS

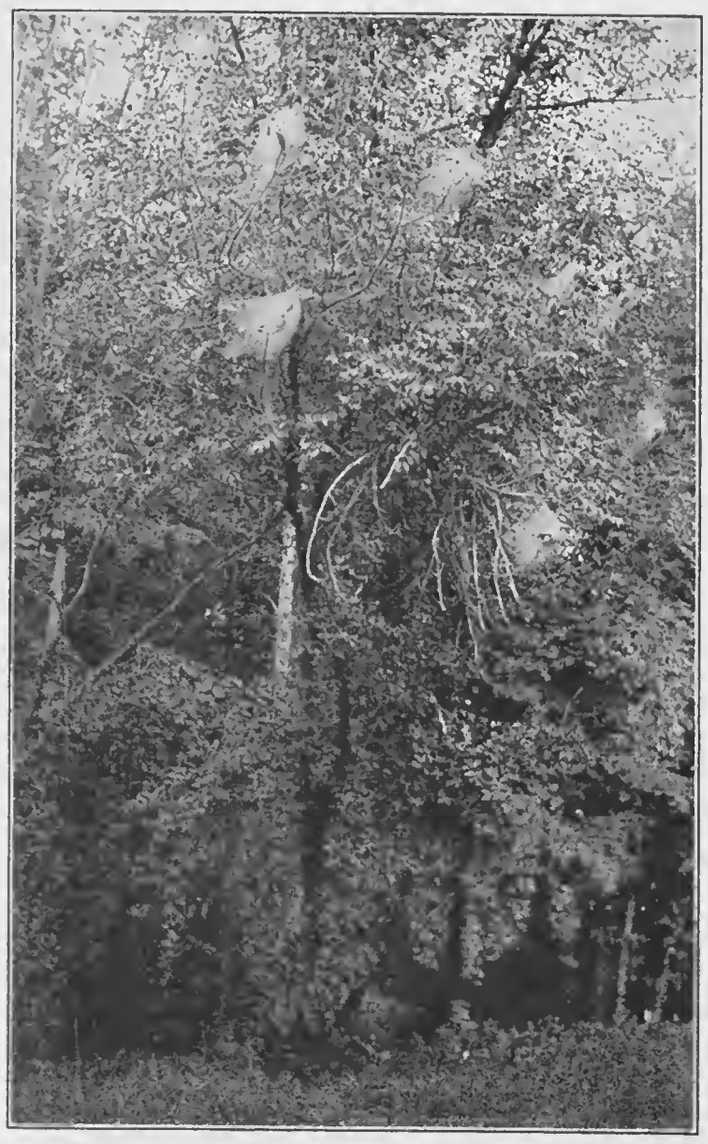
There are many plows used year after year that are not properly adjusted. Many farmers declare their plows are good for nothing, and blame the manufacturer for their troubles in trying to do a good job of plowing. However, these plow troubles can be very largely obviated, if a few sensible rules or directions for operating are closely observed. In purchasing a plow, select one that is adapted to your soil. The local dealer seldom looks after this matter, unless he is a farmer, and knows what the farmer needs in this line. The dealer or agent usually sells the plows that bring the highest commission, or one that the average farmer will buy because it is cheaper than other plows. The dealer looks out for himself, and the farmer should do likewise. The leading plow manufacturers make all sorts of plows for all kinds of soil. It is a good plan for the farmer to write each of the plow manufacturers who advertise in THE R. N.-Y. for complete illustrated catalogues. From the illustrations and accompanying descriptions it is a comparatively easy matter to select a plow properly adapted to your own soil. The style and size of bottom, size and curvature of moldboard, and width and depth of cut must be considered.

Many farmers select a so-called two or three-horse "general-purpose" plow. This has been my plan when purchasing a walking plow. Then one can use two horses in plowing oat or wheat stubble, or when necessary in heavy soil, going slow or stopping often. When using three horses, one can keep the plow moving constantly all day long. Do not try to make a plow cut wider or narrower than it will naturally run when properly set up and adjusted. No plow will work well otherwise. When set up, the general-purpose plow is naturally adapted to two horses, with the evener center hitching clevis at the end of the plow beam. If three horses are attached, walking abreast, the center clevis must be moved toward the left or land side a certain amount, until the center line of draft balances the plow when cutting the full width. I prefer the steel beam for a general-purpose walking plow, as there is no need of changing or swinging the beam and wheel, no matter whether two or three horses are attached. Such steel beams should have a combination clevis that will allow necessary vertical and horizontal adjustment to make the plow balance and run in its natural channel.

The small wheel under the beam should always be set to run exactly parallel with the land side of the plow. The hitch should be just high enough on the clevis to allow the wheel to run lightly and steadily on the ground. There should be just enough pitch to the plow point and share constantly to hold the plow down to its natural capacity, and no more. More pitch can be given to a plow, when necessary, in very dry, hard soil, by putting a thin wedge in between the top of the plow standard and beam, but it is seldom advisable, as it makes the plow run harder, and with a greater tendency to wear off the point and share. I have seen plowmen in the furrows, walking in a braced attitude, so as to push the plow handles to the right or left, to prevent their plows from tipping over, and keeping up this unnecessary "exercise," as a sort of "side issue," all day long. There is no need of this, as, with a proper adjustment of the beam, evener and clevis hitch, with lines correctly arranged, any standard walking plow, if not worn out, will work nicely and balance to suit the most exacting requirements of soil or locality.

I have properly adjusted more than a dozen walking plows that were bothering farmers whom I met in traveling in various portions of the country. It usually took but a few minutes to make each plow run properly. In several instances the three-horse evener was too long, and the horses spread out too much. The three-horse evener, including singletrees, should be of just the right length, so that the draft clevis of each horse will be exactly behind, and on a line running midway between each pair of hind legs. Any deviation will cause more or less side draft. The majority of two and three-horse eveners are too long for use on a walking plow. In the next article I will illustrate these various adjustments.

Calhoun Co., Mich. J. H. BROWN.



WEB-WORMS IN FOREST TREES. Fig. 296.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

The Lawver Apple.

G. W. G., Columbus, O.—In your issue of August 17 there was an item stating that the Lawver apple and the Delaware Red Winter were the same, and that the former was a shy bearer. I at once wrote to the persons who sold me 1,000 Delaware Red Winter trees and enclosed the clipping from your paper. I asked them whether they could furnish scions of the Stayman to top-graft my young trees as I did not want the Lawver. Their reply was that the Lawver originated in Missouri. The Delaware Red was originated at Milford, Del., by W. P. Corsa, now of the Department of Agriculture, Washington, D. C. I think this ought to be investigated, as it will make people who have purchased the Delaware Red Winter anxious, and they may not wait to inquire as I have, and at once top-graft the trees with something else.

ANS.—The confusion which has arisen regarding the Lawver-Delaware Red Winter matter has been thoroughly investigated long ago, and there is but one variety going under these names, and it is the Lawver, which originated in Missouri. There were a few trees of it found in the suburbs of New York City, and for a time it was thought to be distinct and new, but after it had been so renamed and distributed by Mr. Corsa, of Delaware, it was found to be only the Lawver. Unfortunately this apple does not bear well anywhere, so far as I have heard. It is a beautiful red apple that is of fair quality and keeps very late, and if the tree bore well it would be desirable. Stayman would probably be a very good variety to use in top-grafting the Lawver trees, as it will do well in central Ohio. H. E. V. D.

Diseased Trees; Dwarf Pears.

J. M. K., Oakland, Kan.—1. I have some apple trees, about eight years old; the bodies on the south side of the trees and part way up the south side of the trees and part way up the south limbs are dead. The bark has peeled off and the wood is dry and hard as flint. What is the cause and remedy? My pear trees are in the same fix, and yet both apple and pear are loaded on the north side with fine fruit. 2. I lost about 100 cherry trees (yearlings set this Spring). The body of the trees all round, from the ground to eight or 10 inches up the tree, turned black, bark shriveled and adhered tight to the wood. The tops lingered a while and dried up. What is the cause? The roots and body below ground are green. If they should sprout out again below the dead line, would you advise leaving them stand? 3. What dwarf pears would you advise planting for near-by market, and how would you set them in orchard? Is the Lincoln pear better than the Kieffer? Would you set dwarf pears in every alternate row, or every alternate tree in each row, and what distance apart each way?

ANS.—1. The apple trees mentioned are very probably affected by what is commonly called sunscald, which is a trouble that is not clearly understood by either scientific investigators or practical fruit growers. It is generally thought to be from the violent changes from warm to cold weather and the reverse, especially in Winter. It may be from some germ that finds its way into the vital parts of the trunk. There are cases where it is quite surely the effects of Pear blight, as that disease works in both apple and pear trees. But the fact that only the south side of the tree trunks is usually affected points to the former cause as the one most largely to blame; for the sunshine acts directly there. Wrapping the trees or tacking a board on the south side is sometimes a good preventive. 2. The cherry trees may have been damaged when they were bought, or the hot Summer may have hurt them. It has been very hot and dry in Kansas this past season, and such injury is not uncommon there, as I know by plenty of sad experience. These damaged trees are worthless. If they should sprout above the places where they were budded they would be very weak, and if below they would be of some worthless variety, probably the Mahaleb stock. 3. Angoulême is about the best pear to use in setting dwarf trees, Louise Bonne also does very fairly, and so does Bartlett when it does not blight. They should be set about 12 feet apart each way. If part standard trees were set it would be well to alternate the trees in each row at this distance, arranging them so that when the dwarfs were gone the standards would be 24 feet apart. H. E. V. D.

Disappointing Peach Trees.

C. W. P., Guilford Center, Vt.—I have a peach orchard consisting of 100 trees; Oldmixon, Early Rivers, Crosby, Waterloo, Early York and Mountain Rose. These trees are six years old, very thrifty, with heavy tops, and stand about 11 feet apart each way. This orchard has never borne more than one bushel of fruit in a season. The ground has been kept clean from weeds, and hard wood ashes used around each tree. The outside trees do not bear, which does away with the possibility of the trees being too near together. Is it possible that the orchard is worthless? If not, how can they be treated so as to be profitable?

ANS.—In my opinion, which must be formed without having seen the orchard and with only a general knowledge of its climatic and other conditions, the fundamental trouble is that Vermont is not a peach growing State. There may be sections within its limits where peaches may be grown with some degree of success, but they are certainly very limited. The varieties are not more tender than most others, and the blame cannot be laid to an unwise selection. The distance apart is too close for ordinary peach culture, but as the trees are said to be thrifty, and perhaps healthy, they are not being starved into unproductiveness. It is probable that the fruit buds are killed or seriously injured by the severity of the Winters, and this may be the principal immediate cause of the failure to bear fruit. If the trees bloom and set fruit abundantly then it is likely that it falls from some adverse condition of the climate. In my travels through New Hampshire I have rarely seen a peach tree, and it is not to be wondered at that those that are set do not prove profitable. If they did well there would be more of them.

H. E. V. D.

Crows and their Food.

Reader, New Jersey.—We have observed a good deal of damage from wireworms. In some cases, especially in the damper soils, we find large quantities of these worms at work. They eat into the face of the potato, generally beginning at one end, not spreading all over the surface, but apparently chewing away as though they meant to make a clean job of the whole thing. One day we were digging, but were unable to pick up the entire day's work, so that a number of bushels were left on the surface of the ground. This was on a back field over by the woods. The next morning, when the boys went there to pick up the potatoes, they found a big flock of crows at work, and the boys insist that every one of those potatoes had been turned over by the crows, who did not attempt to eat the tubers. Small stones were also turned over, and we conclude that these crows were after the worms. The other morning we got up early and went up to look at the cabbage field. There was a flock of 50 to 75 crows perched on the fence, with some of them down in the cabbage field. They had evidently been at work there ever since sunrise, but we were able to find but one cabbage that had been eaten at all. We concluded that they were after the Cabbage worms, and after watching them for a while, we are sure that they disposed of a good many of them.

ANS.—A few years ago the United States Department of Agriculture published an extensive report on the crow, and from this report I glean the following deductions regarding the insect food of this much-abused bird. The insect food of crows is almost exclusively composed of terrestrial species, that is, such as are found on the surface of the ground, or hide during the day at the base of plants or under the various objects lying on the surface (thus it would not be strange if the crows did turn over the potatoes left in the field); or such as live in the dung of domestic animals, in decaying vegetable and animal matter, or underground. There is not the slightest indication that crows catch any insects while on the wing, and the indications are that the birds when sitting or resting on trees or shrubs do not pick up insects. The indications are that crows preferably frequent dry pasture lands, dry meadows, or very open woods, where cattle or horses are grazing; they may also frequent the margins of ponds or streams, and the presence of white grubs and wireworms in their stomachs show that they have followed the plow of the farmer.

The crow's insect food consists only of large or medium-sized insects, with the exception of ants, which are frequently found in their stomachs. Crows appear to prefer insects with a hard covering, like the beetles, to the more soft-bodied ones, like caterpillars. A marked exception to this rule is the frequent occurrence of spiders in the stomach. It would seem that crows have a predilection for insects possessing a pungent or otherwise strong taste or odor, and as a peculiarity of very little importance, is the fact that insects of a bright, and more especially golden, color are apparently very attractive to crows and are eagerly picked up by them. Several hundred different kinds of insects have been found in the stomachs of crows. These may be placed in the following general groups: Grasshoppers, dung beetles, ground beetles, May beetles (but few larvæ or white grubs occurred in the stomachs, however), ground spiders, weevils, cutworms (but not so many as one might expect), soldier or stink bugs, ants, click beetles (their larvæ or wireworms were found in only a few stomachs), a few bees and wasps, and a few flies and crickets. The absence of the useful ladybird beetles and of the leaf-feeding beetles, including the notorious Colorado Potato beetle, was a striking characteristic of the insect fauna of the crows' stomachs examined. Some observers report that crows feed on the Potato beetle, but others state that they could not tempt their appetites with this pest. Very few of the immense host of parasitic enemies of insect pests were found in the stomachs. The absence of all Cabbage worms, excepting a solitary specimen, deserves mention, says the expert who examined the stomachs. Summarizing the writer states that among the principal insect food of the crow there are only two classes of eminently beneficial insects, namely, the ground beetles and the soldier bugs. All the rest belong to the injurious insects. The facts on the whole overwhelmingly speak in favor of the crow, and taken alone would be at variance with the prevalent opinion hitherto held and yet held regarding the economic status of the crow as an insectivorous bird. Over 26 per cent of the crow's food for the year is made up of insects; in January only about three per cent of its food consists of insects, while in April, May and June it averages nearly 50 per cent. Thus the evidence seems to be against the probability of the crows having had many Cabbage worms for breakfast that morning. M. V. SLINGERLAND.

I THINK Prof. Van Deman would better adopt Pinafore's "hardly ever" in regard to borers in plums, for one of my seven plum trees was killed by borers.

Ohio. E. S. I.

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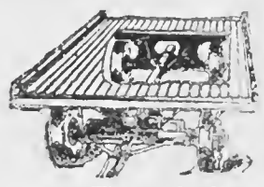

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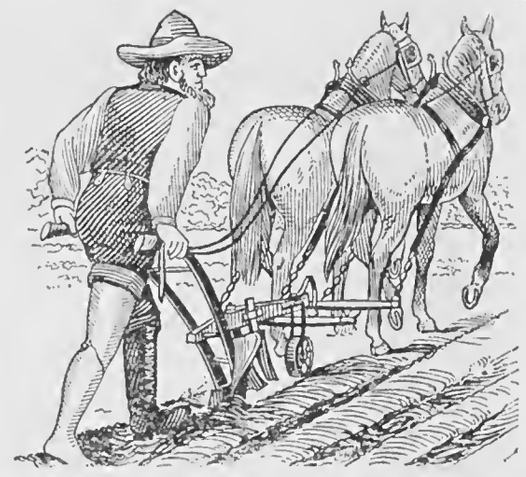

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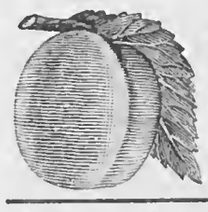

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AN ICE HOUSE WITH CELLAR.

I have used an ice house with cellar such as A. B. W., Newlin, Pa., wants to build, and fear he is planning for too much expense. Ice is very heavy stuff, and his iron beam would not only need to be a heavy affair, but his flagging stone would need to be at least eight inches thick. My cellar (10 feet inside) is covered with four heavy sleepers planked over, and I found it necessary to put posts under the two middle sleepers. It has been in use 12 or 15 years, and when it becomes necessary to rebuild I shall put in a stone arch. The cellar opens into the basement of another building with two-foot wall and doors at out and inside of wall. The outside of doors should be covered with sheets of zinc lapped over, so that water that condenses will drip off. Inside the air will be as cold as the door, with no condensation, but there will always be water on the outside in warm weather. An ice house 10 feet square, inside, with six-inch studs, boarded inside and out, and the space filled with sawdust, if made so tight at the bottom that there will be no circulation of air up through the ice, and so open at the top as to give good ventilation there, will keep ice all Summer if a mass eight feet high is put in and kept covered with six inches of sawdust. My rafters are two inches thick where they lie on the plate, and the space between roof board and plate is left open, and a triangular space 1½ foot across the base, at the gable. The posts of my house are but seven feet, so I boarded up the under side of the rafters a little way, and fill above the posts. We put a layer of straw about two inches thick over the plank floor, and two or three inches of sawdust on that, changing them about once in three years. The less filling between the ice and cellar the cooler the cellar will be, but, of course, the ice will waste faster. I hardly think A. B. W. would get much benefit from his ice through a foot of sawdust. Milk and cream will keep sweet in such a cellar, but the latter will not ripen properly for churning. Ripened in higher temperature it can be cooled to the proper temperature for churning very nicely. It will not do to put butter in prints in the cellar before marketing, as the customers cannot keep it at so low a temperature, and it gets softer than if it had never been brought so low. My cellar is absolutely dark, and we hang fresh meat and throw in radishes or other vegetables that we want to keep fresh, doing away with a refrigerator entirely. Perhaps I ought not to tell of it, but we roll a barrel of new cider in there late in the Fall and have sweet cider in the Spring. We sometimes put a few apples in the cellar in the Spring to ensure having pie apples the year round, although after strawberries come we don't eat many. If I were building anew, as A. B. W. proposes, I should certainly put another building in connection with my ice house, with basement connecting with the ice house cellar. This basement will be plenty cool for the ordinary keeping of milk and cream, and being light can consequently be made of use in many ways. R. S. H.

Connecticut.

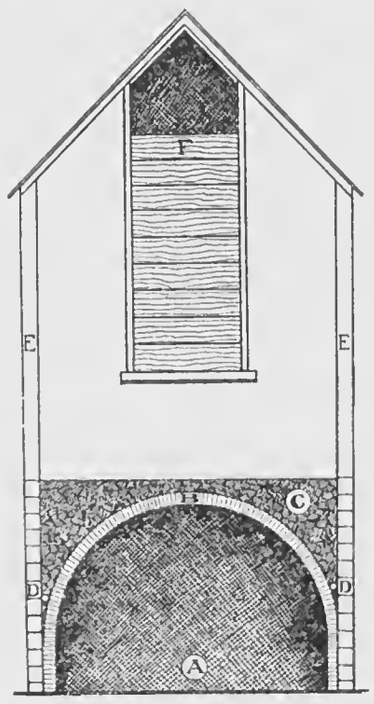
A Serviceable Ice Cellar.

Seeing A. B. W.'s inquiry on page 613 would say we have had a similar ice house in practical use for many years, and it keeps ice with a little care from ice to ice again. I think it superior to his plan, and probably less expensive. It is a double thickness of brick, in shape of arch, laid in cement, the crown being a little over six feet from cellar floor. The whole arch and sides are covered with broken or waste charcoal to about three inches above the crown, so that it will have the benefit of a non-conducting bed, and also it is non-destructible, and if not scraped off will last a lifetime. The sides should have two one-inch pipes inserted at bottom to carry off leakage, and these pipes should be carried into the ground so that they will not create a circulation of air and melt the ice. Of course they could be turned up at bottom so as to hold enough water to keep out air. I give a rough outline of our house, Fig. 297. The house is weather-boarded with cedar weather-boarding inside and out. The only care is to keep the sides and top of ice well incased in sawdust, as ice recedes from the sides. The boards are put in or taken out as required in the window, and the top is *never* closed. There should be a window at each end of building to insure free circulation of air. The secret of keeping ice is perfect drainage at bottom, free circulation of air *over top*, and perfect insulation at sides and bottom. This ice house was built by my father (Jonathan G. Williams) on his farm near Moorestown, Burlington Co., N. J., and has done and is doing good service for many years. In the diagram A is the cellar, B the brick and C the charcoal, D and E the spaces between walls, and F the door.

Philadelphia. C. W.

Doubts About the Plan.

I have had enough experience with ice houses to know that such a cellar as A. B. W. describes for the purpose wanted would be very unsatisfactory, and is impracticable. In the first place, an ice house is built to keep ice, A. B. W.'s



ICE HOUSE WITH CELLAR. Fig. 297.

plan, if feasible, would waste it. Ice cannot cool anything without melting. Again, the house with a cellar allows no chance for drainage without allowing air to get under ice, just where it is not wanted. An ice house must have good drainage. An ice house built on A. B. W.'s plan would be a very unfit place for milk; it would be damp, and would drop water from sweat forming on the stones above. My advice would be to build the house at least 15x15 feet; leave a good air space in the walls; tar paper the inside of outside boarding unless matched lumber is used, and above all allow good drainage, and plenty of ventilation above ice. Such an ice house will furnish ice enough to cool A. B. W.'s milk and cream in a tank in which he can set his cans, or any other good way. F. A. T.

Ridgewood, N. J.

DRY FODDER IN THE SILO.

Several years ago the plan of allowing corn to be shocked in the field and well dried out, then drawing and cutting into the silo, was advocated by the late Hon. Henry Tallcot, of Ohio, and Edgar Huidekoper, of Meadville, Pa., and warmly commended, the chief point of commendation being the saving of field freightage. So far as I know, the practice is not followed now, for the reason that it was found in practice that the great loss in drying the fodder (something over 20 per cent of the entire dry matter being rendered indigestible) overbalanced the saving in freight. Then it was found that there was no loss in food material by the ears being cut into the silage, rather a gain, as the experiment stations showed that the silaged grain had more nutritive substance, and gave a better feeding result than the same grain husked and ground into meal, so that the cost of both husking, grinding, and time were all lost, as against silaging the entire crop. Since then we have heard nothing about the practice of silaging dried corn fodder. Now and then a man places a "grabber" at the side of the cutter table, and grabs off from the stalks a few bushels of corn ears, and cures them out on the grass.

It is feasible to cut dry fodder into the silo, and wet it down so that it will settle, and if well tramped and packed, but little of it will mold, but this will not restore to the fodder the same feeding qualities it possessed in the first succulent state. A plant once dried can never be soaked, steamed, cooked or fermented back into its first feeding value. All that can be done is to make it easier masticated by the animal and more palatable, and the animal coaxed into eating more of it. It is advisable when filling a silo with dry fodder, to choose a time just after a rain, and then put on just as much water as you otherwise would. All the benefit of the rain is in saving wastage of leaves and fine material while drawing. It requires not far from 50 to 60 gallons of water to the ton of dry fodder, so that the water has to be hauled in either case, which means that it would best be drawn in the form of succulent fodder at the start, and save the loss of material in drying, which amounts to about 22 to 26 per cent, while in a good silo with fodder just beginning to glaze its grain, the loss should not be over 10 per cent, and in many silos last year it did not exceed four to six per cent. If fodder is to be wetted down, there is no better plan than to have a tank with hose and rose sprinkler, so fixed that the water is thrown upon the fine fodder as it comes from the knives into the carrier, and made apparently very wet, and in going up the spout and the "throw," together with the forking and tramping, the water gets very evenly distributed through the mass. To get on 50 gallons or so of water to the ton makes it look very much wetter than it should be, but when one considers that in drying corn fodder it loses about 700 pounds of moisture to the ton, the necessity of making it very wet, so to get the heating and ferment, is very apparent. If one will read Henry's Feeds and Feeding he will readily see that cutting, or any method of treating foods once dried, is simply to increase the animal's liking for it, and clean up the manger, the economy being in getting the animal to eat up the coarser parts, but the digestibility of the food has not been increased. In other words, where an animal will eat up a certain dry, coarse food like corn fodder, within 10 per cent, it will not pay to assist in any mechanical way in the feeding, like cutting, steaming, silaging or "fussing." One Winter before our silo was built, we fed the cows whole fodder, ran the rejections through the fodder cutter, piled it in heaps, wet down, and mixed in fine bran and covered with an old canvas, and when the mass became hot, fed it out to the cows for a change ration, and saved cutting about 85 per cent of the fodder, and the remainder was so small in amount, that it mixed in with the other food without perceptible change in the milk product.

Ohio. JOHN GOULD.

A SOUTHERN sportsman gives the following directions for cooking brook trout in camp: "As soon as the fish is landed, dress and put in a little butter, salt and pepper, and a small piece of bacon. Then lay the trout in a corn shuck out of which a roasting ear has been taken, smooth the leaves down and tie at the silk end; bury in the timbers, and cover with live coals. The ear of corn is to be roasted and eaten with the fish."

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THE RURAL NEW-YORKER, New York.

Ruralisms

NOTES FROM THE RURAL GROUNDS.

Our Best Cover Crops.—The excessive rains and great heat of August stimulated our cow peas to outdo all former efforts. The Early Black, which usually makes less than two feet of growth, grew until it rolled up a tangled mass waist deep, and has now dropped most of its leaves, while the ripening of the pods goes on. The tubercles on the roots are larger and more numerous than we have ever had them before, particularly on soil where the peas were grown before, showing that the tubercle germs are increasing in numbers. Other varieties, such as the Whippoorwill, New Era, Late Speckled, etc., are making phenomenal growths and blooming freely, but will not ripen seeds. The improvement of the soil by cow peas is so thoroughly established in the South, where they have been long grown, that it is never questioned, and it is only a matter of finding a sufficiently early variety to make them valued in the North. For our own purposes we grow the Early Black on our cultivated land for the purpose of choking out weeds, restoring the soil texture, and providing a Winter cover, without taking into account the value of the nitrogen stored, which all agree to be considerable. We gather a portion of the earliest pods for seed, and allow the chickens to harvest the rest at their leisure, which they do with much skill and persistence, to the evident improvement of the egg record.

While Crimson clover likes plenty of moisture when young, an unduly high temperature is not beneficial, and our stand, though thick and even from good germination, has been quite yellow and flabby. A few cool nights, however, have tinged the plants a deeper green, and started a vigorous growth which should last until the ground freezes. We sow Crimson clover in strips between small fruits and after early vegetables to hold the soil during Winter, and gain all possible fertility. Of its beneficial effects when turned under in the Spring we are fully convinced. The Rural Grounds soil had been long cultivated as a nursery before being put to its present use, and was as devoid of fiber and humus as could well be. To restore it to proper conditions meant heavy applications of stable manures or the growing of grasses. The first was objectionable on account of expense and the certainty of introducing troublesome weeds, and the latter because of the necessary loss of time. Moderate applications of good chemicals and growing nitrogen-gathering legumes was the plan adopted, and so far carried out with much satisfaction. Clover has now been induced to grow by repeated sowings on a bare and worn slope, so poor that weeds would not cover it, even in a wet year, the growth soon dying out in earlier attempts, but becoming stronger as the soil became better inoculated with the tubercle germs. We shall keep right on with the clover on this strip each season, in order to ascertain its restorative powers, when used alone. The most common objection to Crimson clover in this locality is the uncertainty of getting a good stand if the weather should remain dry after planting. The chances of winterkilling are not much considered, as the Fall root growth is reckoned as sufficient to pay for the seeding, even if it freezes out altogether. Cow peas can get along with much less moisture than clover, and rarely fail to germinate, and start off well if good seeds are sown in freshly prepared soil. The benefits of cow peas to the soil are so direct and considerable that one cannot grudge the use of the land for an entire growing season, but the commercial seeds are rather expensive, and too often of poor quality. It costs time and trouble to save one's own seed in the proper manner by hand picking and careful shelling, but it is certain to pay in the end.

The Sultan or Occident Plum.—This is one of Burbank's hybrids sent out three or four years ago. Fig. 293, page 658, shows a typical fruit sent in by J. H. Black, Son & Co., Hightstown, N. J. Many specimens are larger than the one represented, and in California it is said to grow as large as a medium-sized apple. The color is dull red, shaded with greenish yellow and covered with a blue bloom. The flesh is very firm, and dark red in color, like Satsuma. The flavor is sweet and good, only a slight astringency being perceptible under the thin, tough skin. The stem is very short, causing the plums to cling firmly to the branches like Delaware and Apple, also red-fleshed seedlings of Satsuma. The Sultan is a long-keeping plum of a quality high enough to become popular. The tree on the Rural Grounds is a healthy, vigorous grower, but too young to fruit. If Sultan and its companions should bear well and show a reasonable resistance to rot they will be useful here in the East. Burbank named this plum Sultan when sent out, but Prof. F. A. Waugh, in his Plums and Plum Culture, page 221, substitutes Occident for Sultan, as the latter name was given to an English seedling of the Domestica type about 1875. The European Sultan has probably not been introduced in this country.

A Worthy New Basket Plant.—Campanula isophylla Mayii is a new trailing bellflower that seems admirably adapted for the window garden. It has neat small foliage, a slow rambling growth, and is a remarkably profuse bloomer. The flowers are saucer-shaped and of a clear lavender-blue. Hundreds of these attractive blooms open at a time on plants small enough for a five-inch pot, presenting a continuous mass of color. They are about two inches across and last several days. The plant should be grown in a partially-shaded place, and likes well-drained soil and an airy situation. During the late hot and muggy weather our plants under glass lost most of their growth from mildew, but at once started freely when removed to a shaded porch. It is still so scarce that it has not been tried much in an amateur way, but there is little doubt it will make an important addition to the few plants really adapted to cool and half-shaded windows. When grown in pots it can be staked up a foot or more high, but it thrives especially well when allowed to trail over the sides of a deep basket. Campanula isophylla, the species from which this new variety was derived, is a native of Italy, and is often grown on shady rockeries. There is a white form that is very popular, but it is not so free in bloom as C. isophylla Mayii. W. V. F.

IMPROVING QUALITY IN SWEET CORN

The statement was recently made in The R. N.-Y. that the Sheffield sweet corn is improving in quality. As this variety was originated by Dr. Van Fleet his opinion was requested, and is given in the following interview:

In referring to the Sheffield corn a few days since a correspondent stated that this corn has improved in quality from year to year. Is it a fact that most sweet corns are improved in this way?

I think so. A very sharp watch is kept on the table quality, which is indicated to a great extent by the appearance of the cured seed. Corn having a high sugar content in the grain shrinks greatly in drying, and becomes translucent in appearance.

Do I understand then that kernels are picked out, or is the selection done entirely by the picking out of ears?

The seed to be put on the market each succeeding year is improved by selecting ears. For stock seed for improving the strains I have reason to believe that the individual kernels are selected for the necessary characteristics.

What type of ear would be selected in the Sheffield?

The ideal type of Sheffield corn is a medium-sized ear six to seven inches long, well filled to the tip with translucent kernels. It is an eight-rowed variety, and the ears should average nearly two inches in diameter.

Would the selection be made on the stalk or after the corn was dried?

For stock seed purposes the selection would be made in the field among the earliest developing ears. The stalks would be marked, and the ears not coming up to standard rejected on gathering.

The idea is, then, that the ear would naturally convey that early maturing tendency to the crop?

Yes, as Sheffield is an early corn an effort is made to accentuate that characteristic.

In selecting for quality on the average how many of those dried pointed kernels would be found on the ear, that is how close down do you cull?

As it is, of course, impossible to make a culinary test of the corn selected for seed, we must depend entirely on the appearance. In the ear approaching the ideal type about one-third of the kernels occupying the middle portion of the cob would have the desired characteristics. Chance kernels may be found on other ears not having the desired characteristics.

Do you have any idea that these kernels selected for quality would give as large yield as the others?

If a good germination is secured, there could be no doubt that the yield would be fully as good. However, the increased proportion of sugar in the seed rather favors rotting.

Does that explain why some strains of Evergreen are so hard to germinate?

Possibly it does. Nature has undoubtedly fixed a limit beyond which it cannot be induced to go. The proper balance for the nourishment of the germ must be maintained. An excess of sugar content may mean a deficiency of other ingredients, possibly a deficiency of enzyme, a ferment which renders the surplus of sugar and starch available for the assimilation of the germ.

Do most seedsmen make a double selection, one for commercial use and the other for gardening purposes?

I think they generally do so. The theory is that once the selection is made and a crop of seed grown from this selection, it will answer well for commercial growing for that season, but to propagate and intensify the desired characteristics it is necessary to make a still narrower selection.

Do they charge an increased price for these extra kernels?

A higher price would be charged, but as a matter of fact no special stock seeds are allowed to pass from the seedsman and his grower.

Is this plan of selecting these improved kernels practicable for the private gardener?

It is perfectly practicable for anyone who is willing to give the necessary care and attention, but it is very necessary that the grower should have a definite ideal toward which to work.

Is any such selection practiced in other vegetables, the beet for instance?

In the beet the root itself is tested, and seed is raised from those that have most of the desired characteristics. Of course such a test is not practicable in corn, where the seed itself is the edible part.

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HOPE FARM NOTES

PAN-AMERICAN.—I am writing these notes on the Exposition grounds. This is a long distance from home for the Hope Farm man. The Madame and the Bud could not come with me, but Aunt Eleanor came along and is now having the greatest play-time of the last 25 years. As I write we are all saddened by the news of the President's death. That seems to throw a shadow over the whole place. Saturday promised to be the greatest day of the Exposition. It was "Railroad Day," and thousands were on the incoming trains cheered by the reports from the President's bedside. As soon as it was known that death was at hand orders were given to close the gates. The fountains stopped playing, the buildings were shut, and the beautiful city stood silent as the grave. One could wander about the great enclosure with barely the sight of a human being save the soldiers and guards. The silence was most depressing on the usually noisy "Midway." All the life and spirit had dropped out of the scene, leaving only a melancholy and depressing silence. How one of those black-hearted anarchists would have enjoyed himself there!

To me the saddest part of it all is the appearance of the old soldiers who are here by the thousand. These gray-haired men who faced the storm 40 years ago, and saved the Union, now seem to be in doubt as to whether other influences have not undermined their work. Is there not a crack or a flaw in our system of government when some worthless wretch, whose life is not worth 10 cents to the community, can and will step up and shoot a man like President McKinley? It has been the boast of our people that our Government is such that any man *can* easily do such things, but our theory has been that no one *will* do it. That is where we have made our mistake. It is that thought which saddens the heart of the old soldiers—and well it may.

WHAT IT MEANS.—We suddenly wake up to find that we have many of the social and political dangers of the old world, without the strong, iron-hand d government which on the other side of the water holds them in check. My fear is that in trying to square matters and prevent the anarchists from repeating their awful work Congress is likely to go too far in preventing free speech and fair discussion. It has been my conviction for some years that Americans have, as a nation, been playing too many tunes on the prosperity and money-making strings of our National harp. The moral, God-loving strings and fiber have become too slack. Human life has been held too cheap. All lynch law, mob rule, crushing out the rights of the poor, the unpopular or the helpless, without giving them a fa r show—all these things have been sowing the seed from which grew this awful tragedy. There is and there has been too much of placing money above true morality. Congress will and should pass strict laws absolutely prohibiting treason or murderous talk. It should also export these cursed murderers—and I suggest the North Pole as a good place to cool them off. That is right, but it will prove, in the end, like painting the face of a consumptive, unless the American people themselves get some of the dollars out of their eyes. We need not only morals in public life, but more of the true God-fearing spirit of old. That is what makes it so hard to understand why a man like President McKinley should be killed in such a cowardly way. The closing of this pure and hopeful life is to my mind one of the saddest pictures in all history. His wife was herself at death's door. She has been ill for years. They have no children, and the husband has given a father's care to the wife. She did not even know how he was hurt. The thought of these sad, home feelings will go far into the hearts and souls of the common home-loving people of America. Our good President will not have died in vain if such people realize the true significance of this awful warning. And what an opportunity the new President has for strong and earnest work!

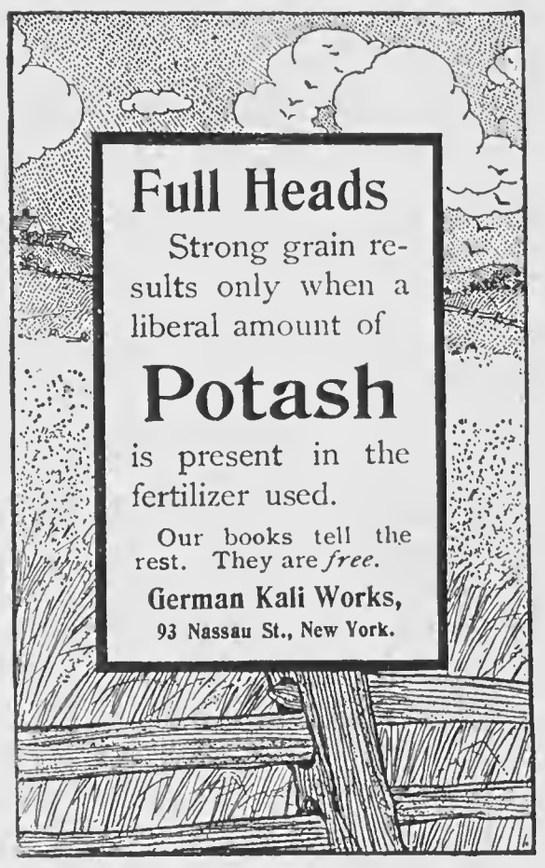
WONDERFUL FRUIT.—To pass from this dreadful affair to the living and material side of the Exposition, I have been greatly interested in the fruit show. The Horticulture Building is one of the best on the grounds. Fortunately no gallery was built around it, and the exhibits have the benefit of perfect light. As a result there was as large a crowd in this building at all times as one could find anywhere—even in the Art Building. Why should not this be so, since no human hand ever painted such beautiful colors as Nature has painted on these fruits? Nature does love an apple, and she reserves her most delicate brush for its dress. Some specimens of Clairgeau pears from Idaho struck me as the finest specimen of sun painting I ever saw until I got around to the exhibit of apples from Maine. Why, some of those Alexanders were certainly like the man they were named for—great. There were figs and dates from Arizona and California, nuts, grapes, peaches—a bewildering display. Up over the Illinois exhibition was a picture in colors taken from the drawing of Ben Davis and Miss Kieffer Pear printed in THE R. N.-Y. two years ago. They had wisely omitted the verse that went with the picture. The exhibit showed that every corner of this great country is prepared to raise fine fruit and pour it into our eastern markets. What are we going to do at Hope Farm and similar places when the rush comes? Why, plant trees on the hillsides and take good care of them! These exhibitions will educate the people. I notice that they are learning to distinguish varieties already. That is just what we want to build a discriminating market.

AGRICULTURE.—Some of the big Western States had fine displays of farm products, but I doubt whether many eastern farmers can now be induced to "go West," for the States east of the great lakes made a good showing. Our New Jersey exhibit was a good one. Some of our corn had stalks that were perfect sky-scrapers. The ears were so long that a man would be close to a donkey to think he could beat them. I had a talk with some farmers from Illinois. They were astonished at the corn we can grow. They had to admit that they couldn't beat it. When they were told what corn and other farm products will bring in our markets, and how it is impossible for any Jerseyman to get seven miles from a railroad without leaving the State, one of them could only say that the map shows that "Jersey is all corners, anyway!" That's right—it is easy to get a farmer into a corner in New Jersey, and that is just the situation in which he does his best work! That is true of most people.

THE PEOPLE.—There were all sorts and kinds—in fact, the crowd itself was the best exhibit of all. What a mixed-up citizen the American is! I sat and watched the crowd. Here were people from Maine to California, and no one could pick out any single person as the typical American. The bean-fed Yankee and the corn and bacon man from Iowa are getting to be as different in appearance and habits as the Jersey and the Short-horn cattle. To my mind the types are not coming together, but are becoming more distinct. Two things that seem to be acting as advance agents for a sort of universal democracy are the modern shirt waist and the culture of fine apples. The women show more independence and uniformity in dress than they used to, and to-day you cannot tell from her clothes where a woman is from. Too many of the men still stick to the black suit with its long-tailed coat. . . . . I was pleased to see how farmers and their wives are interested in the exhibits of household conveniences and fixtures. They ask many questions about bathroom contrivances, acetylene gas machines, heaters, etc. That is right! The farmhouse should be made more comfortable. Money that is invested in a mortgage on Neighbor Jones's farm would often pay better in securing a mortgage on home comforts. . . . . There were, on exhibition, sod houses and log cabins showing how the pioneers in wood or on prairie were forced to deny themselves comforts and even necessities. There were men and women there who faced the frost and the blizzard in just such rough shelters. Now tney came with a well-earned competence—able to purchase the blessings that go with light, heat and water. As I watched them I often wondered what their life history would have been could they have enjoyed these blessings in partnership with youth and full strength. . . . . People like to "follow the crowd." I watched the crowd around one show on the Midway. The "barker" told his story in glowing language. His voice was cracked by hard usage, but he made up in noise what he lacked in tone. I sympathized with him, for I came somewhat near that business myself once! When he finally stopped, the band struck up and a small crowd of people started in, many of the others following them. I found that there were about a dozen young men and women who drew the crowd in, and then sneaked out of a side door and acted as decoys again. They did this so well that few suspected the trick, and they led hundreds into a very poor show who otherwise never would have started. Now, on a much larger scale this same game is played again and again in human society. Sometimes people make noble uses of the decoy system by leading the people on after desirable things. . . . . There was an exhibit of real Indians that would have delighted the Graft and the Scion. These little fellows get out behind the barn with wooden guns and knives, and slaughter dozens of imaginary Indians. How they would run for shelter could they see one of these genuine redskins! This was undoubtedly the real article. Among others was old Geronimo, the old rascal who killed and thieved for many years. This old scamp is now a "good Indian." He came out and grinned at the crowd and made a speech which was about as follows—"Money, money! Give money!" Surely money seems to be a sure thing with which to tame a red man—or a white one!

I was introduced to a civilized Indian who had been well educated. He wore good black clothes and looked like a college professor. I watched him as old Geronimo passed by in review. The young man took off his black hat and made a low bow to the murderous old rascal. What do you suppose the civilized Indian saw in the brutal savage that was noble enough to commend such a salute? . . . Three Eskimos took a day off on Saturday and walked about to see the sights. Of all tough looking specimens of humanity I have yet seen they go up head. No doubt the lady looked at her husband and then at the Hope Farm man and concluded that after all she had the handsomer specimen—from her point of view—so it's all right. This lubberly citizen walked into the famous Longfellow House, and to the surprise of all sat down to the piano (over 150 years old), spread his big fingers over the keys, and played many simple tunes. Surely music is the universal language! He was taught to play far up among the ice by a missionary!

H. W. C.



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The Rural New-Yorker

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THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, SEPTEMBER 28, 1901.

IF any changes are to be made in the President's Cabinet we hope that the Department of Agriculture will remain as it is at present. Secretary James Wilson is by far the most useful man who has filled the chair of agriculture. He has won the respect and confidence of farmers, and from every consideration of business he should remain where he is.

*

THE American Pomological Society did a wise thing in finally limiting the time for reading and discussing the papers read before it. Some of these papers are altogether too long. They contain much useful information, and ought to be printed in the Society's reports, but they are not suited to public delivery, and are quite likely to send an audience to sleep. A brief and forcible synopsis is all that the audience should listen to.

*

APPLES which in ordinary seasons are not considered fit for anything but pig feed may be sold to advantage this year after being dried in the form of chops. The labor of preparing them is not great, as neither skin nor core is removed. The apple is cut in slices crosswise of the core, and may be dried either by sun or artificial heat. To bring the highest price, however, they should be bleached by exposing to the fumes of burning sulphur.

*

A FRIEND on page 665 refers to farm land in Illinois. This land produces a greater profit per acre than ever before, and yet the selling price is lower by 35 per cent. It formerly paid 10 per cent profit on its selling price, and will now pay nearly twice that on its cash value. Why is it? No wonder that question is asked, for if any other business offered such financial returns to an individual investor there would be a tremendous rush into it. What has deadened farm property?

*

"No, I want to see the trees. They are beautiful!" Thus spoke the death-stricken President to his nurse, as she was about to adjust his pillows so that the light from the window might not annoy him. These words, simple as they are, will impress themselves indelibly upon the memory and heart of every lover of trees the wide world over. How clearly and touchingly they reveal the innermost sweet unsullied nature of the dying man. Verily, the soul of any true tree lover does not wander very far astray.

*

PROF. L. H. Bailey, of Cornell Experiment Station, in a bulletin issued several years ago, claimed that "the Japan plums constitute the most important type of fruit introduced into North America during the last quarter of century," and the yearly crop of plums now being secured from the earlier planted trees well bears out the prediction. Scarcely a dozen years ago plums were a high-priced luxury only found in the markets of a few cities. Now the cottager and amateur may eat his fill of Burbank or Abundance, and the village grocer displays his boxes of plums in company with late berries and early tomatoes. The Japan plums have shown many weaknesses, and are unsparingly condemned by some growers, but it can no longer be denied that they are easily raised and give lots of good fruit. There are doubtless better plums than the Japan varieties now most generally planted, but so far as they belong to the European or Domestica type they are likely to remain of limited value on account of the restricted conditions under which they thrive. There is much hope of getting useful plums of excellent quality among the many hybrids now produced by plant breeders in various parts of the country, and in nearly every instance where real merit is evident a Japan variety is claimed as one of the parents. The time cannot be far distant when good plums will be as cheap and plentiful as grapes, thanks to this valuable introduction.

*

THE opening gun in the coming battle against oleo will be fired at the coming meeting of the Farmers' Congress at Sioux Falls, S. D. We are informed that efforts will be made by the oleo people to put this Congress on record as against the Grout bill. The honest butter delegates should go prepared to defend the interests they represent, and if any action at all is taken by the Congress it should be an emphatic endorsement of the principles of the Grout bill. What other action could be taken by a meeting supposed to further the interests of farmers?

*

THE Department of Agriculture has devised three simple and easy tests for oleo. We have already given them in THE R. N.-Y. These tests ought to form a part of the programme at fairs or farmers' institutes. There is usually present some dairy expert who is competent to show in this simple way how oleo differs from butter. It would make a very interesting exhibition and would, we believe, induce many people to try the test at home. It is of the utmost importance to educate buyers so that they will realize what oleo is and how it may be detected. The best friends of the farmers are the consumers who do not want to be deceived. Teach them the test!

*

FOR at least five minutes on the afternoon of September 19 the most complete quiet and rest fell upon the great city of New York that it has known for a century. Usually the city is never quiet. Thousands turn night into day, and labor while others sleep. The streets which through the day are crowded with those who follow trade or pleasure, at night contain groups of workmen who by the light of great flaring lamps, repair the pavement and dig sewers or ditches. So it may be said that New York never sleeps, yet for five minutes a hush like that of a rural Sunday afternoon held the great city in its gentle grasp. Not a wheel turned—not an arm was raised in labor or strife, for at that hour the body of the murdered President was being laid at rest. These brief silent moments meant more for the uplifting and truest good of this great city than the millions she has raised for charitable purposes during the past five years.

*

MUCH has been written and spoken regarding the public and private life of President McKinley. The world now knows the man as he was, and the President as he hoped to be. It is generally recognized by all that the great ambition of the President's life was to benefit and uplift his country in the way which seemed to him best. A short time before the assassination he concluded a striking speech as follows:

> Let us ever remember that our interest is in concord, not conflict; and that our real eminence rests in the victories of peace, not those of war. We hope that all who are represented here may be moved to higher and nobler effort for their own and the world's good, and that out of this city may come not only greater commerce and trade for us all, but, more essential than these, relations of mutual respect, confidence, and friendship which will deepen and endure. Our earnest prayer is that God will graciously vouchsafe prosperity, happiness and peace to all our neighbors and like blessings to all the people and powers of earth.

That of itself is the sincerest tribute which one could write. It should be the hope of all true men that the future may see this prayer answered.

*

THE writer recently ate breakfast at a hotel There was no printed bill of fare, but the waiter, after bringing the usual glass of water simply said:

"Fruit?"

"Yes, I would like a baked apple!"

"We aint got no apples!"

"What? No apples? That's a singular thing! Hundreds of people want to start the day properly, and after honest prayer there are few things more suitable to do it with than a good apple. Tell the proprietor for me that he ought to serve apples!"

A man at the foot of the table had listened to this conversation.

"I'll guarantee you belong to the Apple Consumers' League!" he said. "I've heard about that League, and it's a good thing. They will be serving baked apples here within a week!"

When we began to talk about the American Apple Consumers' League, three years ago, we must confess that the plan was partly a jest. We are glad to say that many people took it in dead earnest, and began to carry out the pledge at once. It is all very simple—we merely agree to call for apples in some form whenever we eat a meal at any public table. When apple has been omitted from the bill of fare we always call attention to it. The object is to increase the demand for this excellent fruit. We want to educate the people of town and city so that they will eat apples as freely as farmers eat them. Think what it would mean to the farmers of this country if such a course of education could be carried out! The best place to start such a reform is at the table where food is bought. The people to start it are those who buy such food. We would like to have 1,000,000 members of the American Apple Consumers' League—and have them all talk apple. The trouble is that hundreds of members say the League is a fine thing, but they are as silent as the grave when some bill of fare without even a mention of dried apple is put in their hands. We want members who are not afraid to move their Adam's apple for the benefit of their favorite fruit!

*

WE have heard good farmers say that ashes seed land to clover. Their argument is about as follows: For several years the field had no clover in it. They sowed no clover seed. The year after using ashes a fair crop of clover appeared. Where could it have come from except in the ashes? When we point out the fact that no seed could live in a fire hot enough to burn wood to ash they say: 'Well, where could the clover have come from?" Our explanation is that the clover seed was already in the soil, but the conditions were not right for its development. Seeds will live for years in this way. The ashes supplied what was needed, and the clover sprouted and grew. The ashes did not make new seed, but it gave the old seed opportunity. Sometimes a man will toil for years unrewarded and unrecognized. Then all at once opportunity comes to him and he prospers. Such a man is apt to say: "Oh, if I could only have had this chance years ago, when I needed it more!" Had it come to him then he would have failed with it. Through the hard years of toil he was unconsciously building up character and ripening judgment. Like the seed in the soil, these waited until opportunity made the conditions ready for their use.

*

STATE Master Norris, of the New York Grange, gives a good reason why the Grange grows in power and usefulness while other farm organizations flourish for a time and then decline. Most of these other organizations are built up on some political or business idea. For a time this is strong and popular, but in the very nature of the case such things must change. Something more attractive takes its place, for both politics and business shift about, and will carry an organization up or down with them. The Farmers' Alliance was strong, while what was known as Populism was a great political force. When that weakened the Alliance weakened with it. Not so with the Grange, which in spite of political changes grows stronger each year. Why? Because it is non-political, and does not depend on the whims of politicians. Instead of being based on the shifting foundation of politics it is built on the solid foundation of the farm home. It is a social organization with a place for every member of the family—from Grandmother to the baby. The common, homely things that make up the routine and aims of farm life and their solid and true development are the foundation principles of the Grange. That is why it is a constantly growing power.

*

BREVITIES.

POTASH brings in rag weed.

"SMALLER roots for planting."

HOW the pigs do like "pusley."

MUNCH a bunch of grapes for lunch.

A GOOD run often beats a bad stand.

BULKY food for the young brood sow.

SELFISHNESS makes home-groan fruit.

THE bee tells a tale with a clear point to it.

KILLING peach borers with "gas" is the latest fake.

EVERY corn grower has a right to the title of "kernel."

SHOULD die with the leaves in October—the surplus young rooster.

GET the stoves out of the shed. Beware the early Winter cold in the head.

YES, the California fruit crowds the market, but it increases the demand and doubles the fruit eaters.

THE Ohio Experiment Station finds that on poor soil heavy seeding (nine to 10 peeks) of wheat pays best.

ONE hard feature of it is that the President's slayer is an American—a distorted product of the American public school.

IN spite of the Government's low report on corn, we believe the price for this cereal is higher now than the situation justifies.

IT is said by the Vermont Experiment station that the feed bill of the State amounts to $10 for each inhabitant. Most of it is Western corn and bran—fed to cows.

THAT moth-catcher man is a very convincing talker. We will use his trap next year, and send the whole batch of captured insects to a good entomologist for identification.

Events of the Week

DOMESTIC.—An explosion in the powder works at Oakland, N. J., September 13, killed five men and injured eight others. . . . The Canadian Government, at the instance of the Imperial authorities, has disallowed two measures passed by the Legislature of British Columbia. One bill restricted Oriental immigration and the other concerned the employment of Chinese and Japanese on public works. . . . The great steel strike, which began on June 30, was brought to an end at a conference September 15, between the leaders of the Amalgamated Association and the officers of the subsidiary companies of the United States Steel Corporation. The full terms of the settlement were not divulged. . . . Crazy Snake, the Creek Indian, who led the rebellion last Spring against the Government, has been released, and is again inciting his people to rebellion. He claims to have come recently from Washington, where he ascertained that tribal rights are to be restored to the Indians. . . . Rev. Henry P. Whipple, Episcopal Bishop of Minnesota, died at Faribault, September 16, aged 79. He is known as the "Apostle to the Indians," having devoted himself both to their spiritual and material welfare in the Northwest for 40 years, and he received from them the aboriginal name of Straight Tongue. . . . A special commission has reported a resolution to the Texas House recommending that all States in the Union enact and enforce the most stringent laws for the complete suppression of anarchism.

ADMINISTRATION.—After lying in state at Buffalo one day, the remains of the late President were taken to Washington September 16, to lie in state there, the funeral being at Canton, O., September 19. . . . The official announcement of the physicians, as the result of their autopsy on the President's body, that death resulted from gangrene of the wounds, led to much discussion of the causes leading up to the gangrenous condition. It developed that Dr. Wasdin, one of the consulting physicians, and an expert of high standing in the Marine Hospital service, strongly supported the view that the murderous bullet had been poisoned, and that this was one of the moving causes of the dangerous conditions. The area of this dead and gangrened flesh was a source of much surprise to the surgeons, reaching a circumference about the size of a silver dollar about the internal wounds. The injury was fatal from the beginning. . . . Leon F. Czolgosz, alias Fred Nieman, was indicted in Buffalo September 16, for murder in the first degree. . . . The British Government has ordered 30 days' official mourning for President McKinley, and on the day of the funeral memorial services were held in St. Paul's Cathedral and Westminster Abbey, London, it being the first time such a service has ever been held in Westminster for a foreigner. All the European countries united in tributes to the dead President. . . . Concerning the new President, it may be said that he is the only man who ever rose from police commissioner to President. He is the youngest man who ever took the oath of office as President. He is the only New York City man ever in the Presidential chair. He is the only man of Knickerbocker stock who ever became President, except Martin Van Buren, of Kinderhook. He is the only Vice President with a military record who ever succeeded to the Presidency. . . . President Roosevelt announces that there will be no extraordinary session of Congress. The Constitution does not demand it, and, after discussion with those members of the Cabinet here, he decided that it was not necessary. At a meeting of the Cabinet September 14, President Roosevelt requested that the members retain their positions at least for the present, and they promised that they would do so. He also has received assurances that Secretaries Hay and Gage, who were absent, will also remain for the time being.

PORTO RICO.—It is reported that half the coffee crop has been partially ruined by the recent rainstorms, and that the banana crop has suffered serious damage. The poorer classes will probably appeal for assistance in consequence. The new railway bridge across the Anasco has been destroyed by the floods.

THE PHILIPPINES.—A force of brigands recently attacked and plundered the town of Castillina, Island of Negros, which was guarded by Filipino police. Three of the latter were killed and five were wounded. The military situation is unchanged.

FARM AND GARDEN.—The Illinois State Horticultural Society will hold its annual Winter meeting at Champaign December 10-12. A large exhibit of fruit is expected, the premium list being the same as last year. Secretary, L. R. Bryant, Princeton, Ill.

The managers of the Minnesota State Fair intend to make extensive improvements in their grounds at Hamline. It was decided that a machinery hall, a power and light plant, a permanent live stock pavilion, and addition to the grand stand, additional live stock barns and a new fence at the western end of the grounds are necessary. The necessity for a sheep barn was so evident, part of the exhibitors this year having to be contented with temporary outside pens, that the secretary was instructed to have a large sheep barn built this Fall.

The Southern Nurserymen's Association was in session recently at Asheville, N. C. By a unanimous vote it was decided to change the date of meeting to the third Monday in January each year, and Charleston, S. C., was chosen for the meeting of 1902. The following officers were elected: President, J. Van Lindley, Pomona, N. C.; vice-president, H. B. Chase, Huntsville, Ala.; secretary and treasurer, W. Lee Wilson, Winchester, Tenn. N. W. Hale was made chairman of the executive committee; G. H. Miller, Rome, Ga., chairman of the transportation committee, and S. Dougherty, Winsted, Tenn., chairman of the legislative committee.

The California State Fair was held at Sacramento September 2 to 14.

The New York Florists' Club will hold an Autumn exhibition at Madison Square Garden, New York City, October 21 to 28.

At a recent meeting of the British Columbia Fruit Growers' Association, it was decided that B. G. Stoddard, the expert fruit packer, of Portland, Ore., should give demonstrations of fruit packing during the progress of the Fall fairs at Ashcroft, Kamloops, Kelowna, Salmon Arm, and during the exhibitions at New Westminster and Victoria. A sample carload of mixed B. C. fruit was shipped to the Northwest, J. C. Metcalfe, of Hammond, traveling with the car as the representative of the Association.

TALK WITH A DRIED FRUIT MAN.

On account of the short apple crop this season an effort will be made to market in one way or another a large quantity that would ordinarily be considered fit only for hog feed. In order to learn from the dealers' standpoint what can be done in the way of drying this low grade fruit, an R. N. Y. reporter called on A. C. Worth, a dried-fruit merchant, at 51 Jay street, New York.

"Is there any demand for dried apples made from natural fruit which is so small or of such poor quality that it will not sell in the fresh fruit market?"

"Yes; such apples may be worked up into chops to advantage, which at present are selling at nearly twice last year's price."

"Would it pay to get a chop machine for making up as small a quantity as 10 or 15 barrels?"

"I doubt it. My judgment is that one should have nearly 100 barrels to make the best use of one of these machines."

"How, then, can a man who has only a few barrels of this fruit handle it?"

"He can make the chops without a machine. All that is necessary is to take a knife and cut the apple in slices crosswise the core, without peeling."

"How thick should the slices be?"

"That is not material, but, of course, the thinner and more nearly uniform they are, the quicker and more evenly they dry. They may be dried in the sun or by artificial heat."

"Is that all there is to it?"

"To bring the highest prices they should be bleached."

"How is this done?"

"By exposing them to sulphur fumes for a short time. This operation cannot be carried on very well in a living room, as the fumes would be offensive. The fruit in trays could be put into a box out of doors and the sulphur burned in the bottom. Of course, where drying is done on a large scale, special appliances are used. I am now speaking of methods that might be employed where only a few apples are being prepared."

"How long should they be exposed to the sulphur fumes?"

"That cannot be answered definitely, and can only be told by trying. The flesh of properly bleached apples is of a light cream color."

"Can windfall apples be used?"

"Yes, anything that is not rotten may be worked up into chops."

"What about the better grades that are intended for drying?"

"More care should be taken with them. They may be peeled and quartered, and, of course, should be bleached."

"Are the cores and skins of any value?"

"Yes; when dried they bring nearly as high prices as chops."

These chops and cores and skins do not look at all inviting. Of course, they are not fit to be stewed up into apple sauce, for an apple that is not suitable for food when fresh cannot be much improved by drying. It is said that a large quantity of this waste is used in the manufacture of wines. Those who attempt to make apple chops by hand would do well to go rather carefully on the start, as with a sharp knife and a few reckless moves one may find himself minus a finger-tip.

FRUIT EXHIBIT AT THE N. Y. STATE FAIR.

It was said by many that this was the finest exhibit of hardy fruits ever seen in the United States, and it certainly was much larger than any previous exhibit at this State Fair. The fine quality of fruit shown was noticeable, this being an off year for most kinds of fruit in New York State. The amount exhibited and the interest shown by the horticultural societies of the State were very gratifying. The fine collection of apples, plums, peaches and pears shown by the New York State Experiment Station of Geneva was admirable. The Station should be complimented upon the neatness and completeness of its exhibit. The exhibit of the Cornell Experiment Station, consisting of about 40 plates each of plums and grapes, was of fine quality. The exhibit of cold storage apples, crop of 1900, shown by the New York State Pan-American Commission, was noteworthy. While it is impossible to mention all of the individual exhibits of merit, I shall mention those that struck me most forcibly. Ellwanger & Barry's collection of pears and grapes was as usual of the finest quality, and occupied a prominent position. C. C. Corby, Montclair, N. J., this year, as usual, brought his collection of grapes, and size of cluster and berry being considered, they were the finest shown. S. D. Willard, Geneva, was on hand with his largest and best collection of plums, and William Palmer, Grooms, with collection of pears, apples and plums. Grant Hitchings, South Onondaga, exhibited apples alone, and I have never seen a collection of apples grown by one man that would surpass it in size of varieties, color and quality of exhibit as a whole. Mr. Hitchings advocates a new method of apple culture, and his results, as seen this year at the New York State Fair, would justify any apple grower in investigating his methods. M. F. Peck & Nephew, Albany, Ontario, Canada, exhibited a fine lot of apples, and a large number of varieties of the finest quality. David K. Bell, Rochester, showed in single plates and collections of pears, and, as usual, took a large share of the premiums. The New York State Fruit Growers' Association, which was organized about six months ago, captured the first premium for the largest and best exhibit by any horticultural society. Its members certainly did respond to the call for fruit with a will. They were handicapped by being compelled to move from a small to a larger tent, so did not have the time to arrange their exhibit in good form for the first day of the Fair. They made an exceptionally fine show in peaches and apples. The Western New York Horticultural Society's exhibit was a model of neatness, and in quality as a whole, I think was the finest of the three societies. The New York State Fruit Growers surpassed them on number of plates and number of varieties of peaches, plums, apples and grapes. In talking with some of the members of the different societies, the question was raised if it was practical to have the Society prize awarded to the society having the largest number of correctly named varieties and best quality, leaving out the largest number of plates. A very large number of duplicates was noted in the different exhibits. V. B.

THE CANADIAN CENSUS RETURNS.

The slow rate of increase is caused, to a certain extent, by better inducements to other countries, which have been a heavy drain to this country in the last 20 years. Farm lands seem to be about the same as 20 years ago, but the values have risen and fallen since then. In some localities it is no trouble to dispose of a farm, especially those having conveniences, such as being near a good market or a good road, and the income from such is, I think, equal to former years, but those away back have depreciated, as all farms situated as above stated have a certain amount of fruit which is always in demand, and those farther back have sailed in the same old boat that their grandfathers did.

Ancaster, Ont. J. F. S.

Regarding census returns, the small increase for the Province of Ontario can be accounted for on account of the migration to Manitoba and the Canadian Northwest. Also, the families of the present generation are much smaller than those of previous years, the present being only two to four against eight to 12 formerly. On the whole, the returns are not satisfactory. The values of farm lands are higher by 50 per cent than 20 years ago in the Niagara Peninsula. Farms of 200 or 300 acres have been divided and sold in lots of 10 to 50 acres for fruit growing, which has given fairly good returns to the grower. The incomes are better than in former years, from the same number of acres. R. R. G.

Hamilton, Ont.

To the patriotic Canadian farmer the late census returns are not very satisfactory, seeing there is a general decrease of the rural population in the older sections of the Dominion. It would seem that there is a general tendency to drift toward the large cities and to "go west" into the newer regions. This, of course, indicates a dissatisfaction with conditions in the older rural sections, or at least a desire on the part of many to better themselves. No doubt this same influence has induced not a few to seek their fortunes in the United States. Farm lands have depreciated in value during the last 20 years at least 25 per cent, with a firmer tendency and slight increase within the last two or three years. While this is true generally, in some cases farm lands have not only not decreased in value but have increased, especially in districts where fruit growing is the leading industry. Those farmers who are industrious and able to take advantage of the present facilities for gaining a better knowledge of the principles of successful farming, and who can adapt themselves to the varying and ever-changing conditions, receive as large an income as formerly, and I am of the opinion that in many cases of failure to make both ends meet the cause has been increased expenses rather than diminished incomes. In this locality farm lands meet a rather readier sale than a few years ago, though there are not very many farms changing hands or being offered for sale. L. E. H.

Tintern, Ont.

Farm Lands in Illinois.

I have been interested in reading the notes on farm values in THE R. N.-Y. for some time, and am at a loss to know why the property is almost universally rated at a depreciation of 25 to 40 per cent. Better to illustrate this I have in mind a farm of 185 acres, with a fine equipment of good buildings, fine water for stock and a large supply of all kinds of fruit. In 1882 the owner was offered $100 per acre for it, and refused to sell at that price; it paid a net profit of 10 per cent on the valuation. The same place, under the same management, now pays 15 per cent on the offered price, and the owner (owing to old age he wishes to sell) can't get a bid of $65 per acre for it. This land is near the Illinois Central Railroad, that furnishes the best of transportation facilities to Chicago, St. Louis, Minneapolis, Omaha, Milwaukee and other good markets, and the soil will produce the finest crops of wheat, corn, hay and all kinds of fruit and vegetables. Many acres have this year paid a net profit of $250 to $300 each in cucumbers and Gem melons, while strawberries average $75 to $100 per acre net each year. But with all this the land continues to depreciate in selling price, while the taxes are held up to the highest limit. Why is it so? G. W. E.

Villa Ridge, Ill.

Crop and Weather Notes.

There have been frosts in the upper Missouri Valley and northern California. Cool weather has checked the maturing of corn in the the Central West, yet most of it is believed to be out of danger of frost. The hop crop in Washington is suffering for lack of sunshine. Heavy rains in Texas, Arkansas and Mississippi have interfered with cotton picking, and damaged the crop. In the South Atlantic States drought is damaging crops. Plowing for Fall grain has advanced rapidly where the rains have not been excessive. Heavy winds have blown off many of the apples remaining on the trees in Illinois and Indiana.

SEPTEMBER 12.—We have had a good, heavy rain in the past week, the first of any account since July 4, although there has been plenty of rain within 10 miles north of us all Summer. Crops somewhat streaked; some places a full crop, and in others only one-half crop. Several earloads of corn harvesters have been sold at Cresco, and much corn is being cut for fodder; cutting about half done. Oats went from 20 to 40 bushels per acre, worth 30 to 35 cents. Not much wheat raised here. Flax, from five to 15 bushels, mostly sold at $1.50, now at $1.25. Hay, $6 to $8, not half crop. Hogs, about $6 for the best; no cholera reported so far this Fall. Cattle and sheep rather off in price. Pastures poor. Clover seed, where saved, turning out well. Potatoes high; have been selling all Fall for $1.50 to $1.75 per bushel. Late potatoes will be one-half crop. No apples. Land has at least doubled in value in the last 12 or 15 years, with much changing hands. Land that could have been bought 15 years ago at $10 per acre is now worth $40. Land in this vicinity is worth from $35 to $80, with some pieces close to town or with extra improvements worth more. Values have gone up $10 to $15 in the past year. W. R.

Cresco, Iowa.

Woman and Home

From Day to Day.

INTERFUSED.

We must buy and sell in the markets; we must earn our daily bread;
But just in the doing these usual acts may the soul be helped and fed.
It is not in keeping the day's work and the day's prayer separate so,
But by mixing the prayer with the labor, that the soul is taught to grow.

For if sweeping a room by God's law is a service He deigns to bless,
And mending a kettle worthily is working for Him no less
Than steering steady the ship of State, or wielding the sword in war,
Or lifting the soul of man by songs to the heights where the angels are—

Then none may deem it wasted time who stands in a humble spot
And digs and waters a little space which the hurrying world heeds not;
For the Lord of the harvest equally sends His blessed sun and rain
On the large work and the little work, and none of it is in vain.

—Susan Coolidge.

*

HOUSEKEEPERS who make their quilts or comfortables at home grow fewer year by year, but for the convenience of those who do this it is now possible to buy cotton batting in sheets the width and length of the bed. It is much easier to make the comfortable with such batting than with the narrow rolls.

*

GOOD cooks nowadays use an oven thermometer to tell whether the heat is just right for cooking. A safe guide, however, is a piece of white paper. Put it in the oven for five minutes; if, at the end of that time it is charred the oven is too hot; if dark brown it is right for small pastries and cookies; if light brown for pound cakes and pie crust; if only a dark yellow, it is just right for sponge cake, bread, and other things requiring a steady and moderate heat.

*

ADULTS often find it difficult to understand a child's literary tastes, and the following little incident gives a point of view we often overlook: In one of the large city libraries, with a well equipped juvenile department, a little girl recently asked for "a good book," and, when offered one by an author whose specialty is believed to be child-delineation, firmly shook her head. "I had it last week," she said. "It isn't a children's book." "I thought it was," apologized the librarian. "Well"—somewhat relenting—"it's a kind of a children's book. It's not a children's children's book, that's all!"

*

WE saw a highly interested class in nature study over in City Hall Park recently. Half a dozen small boys clustered together, deeply absorbed in their researches, and displaying enough enthusiasm to put a halo around Cornell. We had noticed one eight-year-old, whose appearance certainly suggested that he was made from the dust of the earth, groping about the edges of a flower bed, whence he had rescued the exhibit which gathered them together.

"Get on to his Blackwell Island stripes," observed a small and slightly damaged naturalist with a fading black eye. "Gee whiz! Look at them legs—he's got six!" observed another.

"He aint," objected a small pessimist on the outer edge of the group, whose visible attire consisted of two very well ventilated garments. "Bugs only has four legs, same as dogs and cats."

"Aw, you don't know nothin' about it," haughtily observed the boy in the middle. "Some has more'n a thousand legs—I seen 'em," and just then we got close enough to see what they were studying. It was a serious and corpulent Potato beetle, which, having lost its way, possibly in an effort to escape from New Jersey to Long Island, had become stranded in City Hall Park. Just think of a pernicious Potato beetle becoming an object of respectful curiosity! We don't know whether the discussion threw any new light on the moral attributes of the Potato beetle, but it gave the boys a healthy interest for a few minutes, so one of those six-legged pirates, at least, did not live entirely in vain.

*

A HOUSEKEEPER who has been annoyed by fading rugs and curtains says she now remedies this trouble very satisfactorily. She selects some good dye of the color desired, mixes a little with cold water in a cup, and applies this to the faded surface with an old tooth-brush or nailbrush. Faded rugs are rubbed over, a little at a time, until the surface is the same color as the pile underneath, and the same process is used to restore gimps, cords and bindings, which often grow shabby while the upholstery they edge is still fresh. Such a process will be found useful in renovating many house furnishings.

*

WE are asked how to mix a boiled mustard sauce. Here are two simple methods: Beat well together three tablespoonfuls of mustard, three tablespoonfuls of sugar and one egg. Beating well means in this instance that the mixture must be well blended and every little lump must have disappeared before the beating ceases. Now add one cupful of vinegar. Put the mixture in a saucepan and cook until it boils. Then add one teaspoonful of butter and beat again until smooth. Or, to follow the other method, mix together two tablespoonfuls of mustard and one tablespoonful of flour. Mix one-half cupful of vinegar with one-half cupful of water and stir into the flour and mustard. Cook this as you would for a boiled custard. Add one teaspoonful of sugar, one tablespoonful of butter and a little ground celery or celery salt.

AN ISLAND PICNIC IN MICHIGAN. FIG. 298.

Rural Recipes.

Sweet Pickled Gherkins.—Make a brine of coarse salt and water that is strong enough to bear an egg. Gather your small cucumbers each day; when they are dry wipe them well and put them into the brine; cover them with cabbage, grape or horseradish leaves; place a weight on top to keep them under the brine. When you wish to have fresh pickles take as many as desired from the brine, wash and soak them in cold, fresh water for two hours, changing the water once or twice, according to how long they have been in the brine and their size. For 50 cucumbers take two quarts of best cider vinegar; add an ounce of pepper corns, half an ounce of mustard seed, an ounce of green ginger sliced, half an ounce of mace, a small root of horseradish sliced and a cupful of sugar; a few bay or tarragon leaves improves them. Tie the spices in muslin bags; boil all together for 15 minutes and then pour over the pickles. The pickles will be more brittle if they are not scalded, but not so green. If you desire you can green them in the following manner, but do not use alum or brass or copper vessels; line your kettle with cabbage leaves, bottom and sides, and put in the vinegar and pickles after they have become cold; cover the top with the green leaves and let them heat gently; if the first scalding does not make them green enough, repeat, adding fresh leaves.

Tomato Mustard.—Slice half a bushel of ripe tomatoes, bruise half a dozen small red peppers and add to the tomatoes; boil for one hour, then rub through a coarse sieve, add two tablespoonfuls of black pepper, two ounces of ginger, an ounce of allspice, half an ounce of cloves, eighth of an ounce of mace, quarter of a pound of salt; boil gently for an hour. When cold stir in two ounces of mustard, two of curry powder and a pint of vinegar.

Okra Soup.—Cut in slices a quarter of a pound of bacon, put it in a frying pan, fry gently for a few minutes and add a sliced onion and one quart of green okra pods cut into small pieces. Put the lid on and fry the okras for 30 minutes. At the end of this time take out the bits of bacon, the okra pods and onion, and add three tablespoonfuls of flour to the fat in the pan and let it get a rich brown. In the meantime put the okra and onions and bits of bacon in a saucepan with two quarts of stock; add the fat to this and simmer gently for three hours. Then strain through a fine sieve, season with a teaspoonful of salt and a quarter of a teaspoonful of paprika and a pint of cold diced chicken meat. (If the cold chicken is not on hand, the soup is quite delicious without.) Simmer for 20 minutes longer, and serve either hot or cold.

Peach Cups.—Beat two eggs without separating until light; add them to a pint of milk. Measure 2½ cupfuls of sifted flour; add half a teaspoonful of salt and two tablespoonfuls of baking powder and sift twice again. Make a well in center of the flour, pour the liquid in gradually, stirring it into the flour until you have a thick batter; add two level tablespoonfuls of melted butter and mix well. Grease small custard cups or muffin tins; drop in a spoonful of the batter, then half a ripe, yellow peach pared and stone removed, placing the hollow side of the peach up. Cover with another spoonful of the batter and dust with powdered sugar. These can be either steamed half an hour or baked in the oven for 20 minutes. Serve with orange sauce.

German Coffee Cake.—One cake compressed yeast, one quart sweet milk, one cupful sugar, one cupful raisins, one-half cupful butter, a saltspoonful of nutmeg, grated rind of lemon, a scant teaspoonful of salt, flour sufficient to make a soft dough. Allow milk to come to a boil and then cool until just warm; break yeast into one cupful of the milk and allow it to dissolve; then stir in sufficient flour to make a batter; when light, mix in remainder of the milk, sugar, raisins, butter, salt, nutmeg and lemon rind; then stir in sufficient flour to make the consistency of bread (care must be taken not to get in too much flour) and mold with your hands for about five minutes; set in a warm place to rise again; when light, divide into four equal parts, roll out on breadboard and place in shallow pans; allow it to rise once more, then put dabs of butter on top of it, and sprinkle sugar and cinnamon over the whole; bake in moderate oven 25 minutes.

German Pancake.—Sift and then weigh half a pound of flour. Beat three good-sized eggs until light, make a well in the center of the flour and gradually work the eggs into flour until you have a smooth batter free from lumps. Add a tablespoonful of powdered sugar and gradually half a pint of cold milk. Beat the batter again until very smooth and light. Heat a frying pan and when it is hot brush it well with melted butter and pour in the batter. Cover with a pint of preserved pineapple or preserved apples and set in a hot oven for 12 or 15 minutes or until the batter is thoroughly cooked through under the fruit. Then slide it carefully out of the pan on to a hot plate. Sift powdered sugar over it and serve at once.

Butter Rolls.—Dissolve two tablespoonfuls of butter in one pint of scalded milk. When cool add one scant teaspoonful of salt, one tablespoonful of sugar, one-half of a yeast cake dissolved in a little warm water and enough flour to make a soft dough. Knead lightly for five minutes and set aside to rise. When very light make into small rolls and let rise again; then bake in moderate oven 20 minutes.

Vienna Puffs.—Crumble one-half yeast cake into one cupful warm water, add one-half teacupful sugar and set in a warm place until it rises to the surface. Add to it one pint flour, one tablespoonful of butter, one-half teaspoonful salt, one tablespoonful sugar, and one egg. Mix well, cover and let rise till morning, butter gem pans, fill half full and bake quickly.

A Michigan Picnic.

One of our friends in Michigan, F. Hodgman, of Owosso County, sends us the picture of a farm picnic, shown at Fig. 298. It is a happy-faced and intelligent group, and there is no reason to ask any of them whether they enjoy the day's outing, for they show their condition of mind very plainly. Mr. Hodgman celebrates the festival in the following verses:

When the hay is safely gathered
And the grain is in the stack—
When the hurrying time is over
And the work is getting slack—
Then we join with friends and neighbors,
Bringing chicken pie and cake,
And we have a little picnic
On the island at the lake.

When the days are getting shorter,
Ere the seeding time has come,
And the puffing traction engine
Makes the busy thrasher hum,
When it's time to go a fishing
Or a little outing take,
Then we have our little picnic
On the island at the lake.

Then we harness up the horses
And we hitch 'em to the rig—
And we tumble in the babies
All the little folks and big—
All the good things and the fixings
And it's then the road we take,
Gaily going to the picnic
On the island at the lake.

It is safe to say that everyone who participates in the day's outing is the better for it, in mind and body, and better able to take up plain duty again. That is our ideal of a picnic—not a big, noisy excursion among strangers, but a happy and rational day, spent with friends and neighbors. Such a gathering would be an admirable feature for any rural community.

Women Exhibitors at Agricultural Fairs.

As the season for agricultural fairs draws nigh it is a wise plan to think the matter over practically, with a view to making them a source of profit as well as pleasure. All enterprising farmers' wives and daughters should make it a point of exhibiting specimens of their work at any county fairs possible, not only with the intention of helping the societies, but because it will yield a good revenue for the trouble and expense entailed. Nor are county fairs the only places where a person can successfully exhibit, for frequently the display of fancy work is much inferior at the State fairs to those of the county. The vegetables, flowers and anything pertaining to manufactory display are always exceedingly fine, but the hand needlework, or paintings, and culinary display often fall short of the ordinary county fair, while the premiums are much larger. The year of the World's Fair at Chicago a woman of my acquaintance living in New York State, in a small country town, paid expenses—somewhere in the neighborhood of $100, for this trip, with her premium money for exhibits at two adjoining county fairs. Another energetic young woman whom I know usually depends on her premium money for a Winter's wardrobe, besides many other small luxuries which would not otherwise be indulged in. Still another woman devotes her premium money to the purchasing of handsome articles of tableware or furniture, each year getting one very nice article, which she can keep as souvenirs of her own individual labor. Solid silver spoons, forks and other articles of like description are not to be despised as practical mementoes.

The first requirement for preparing for a fair is to utilize common sense; I frequently hear a skeptical ill-natured woman sarcastically remark: "There is no use of my entering anything at the county fair; I couldn't get any premiums if I did. Only just a few of the favorites get those, and I do not belong to that set." There are no favored few at any local fair I ever came in contact with. The officers are appointed, and strictly honorable, upright men are chosen to fill the places, with by-laws and regulations governing each society, which are strictly and conscientiously carried out. The judges are appointed afresh each year, and usually from neighboring towns. As no names are permissible on the entry cards attached to each article, they know nothing whatever of those who own the goods, and favoritism is not easily indulged in, even if a judge felt so disposed. But looking into this matter and reviewing a list of the prize winners it is often found that some win many more premiums than others, while new exhibitors receive very few, or frequently none whatever, though their articles are far superior to the prize-bearing ones. This is literally true. Many very beautiful specimens of needlework will not be awarded a premium, when a much inferior article will win one. This mistake is unjustly laid to incompetent judges, favoritism and anything but the rightful cause; it will invariably be found that the article in question was not entered in the class in which it belonged, and the judges were unable to prevent this.

There are always catalogues issued annually in advance of each county fair. A would-be exhibitor should procure one of these little books for each fair she contemplates exhibiting at, and follow out the rules there inscribed accurately. No trouble will follow if every article is properly labeled, and correctly entered in the class in which it belongs, with the entry card securely fastened so it cannot come off. Judges are frequently sorely tried by several loose entry cards, which are often replaced on the wrong articles. This trouble arises in every department of the exhibition, not only in the domestic hall, which is usually devoted to needlework, but in the hall containing canned goods, cooking, etc., it is still more trying; there are few articles more addicted to losing their entry cards than cups of jelly, jams or preserves, and when there are several hundreds of these, each an exact fac-simile of its neighbor, it is not at all surprising that mistakes arise, and more or less dissatisfaction is felt at the non-appearance of the coveted red and blue tickets. It is always

3919 Fancy Waist,
32 to 40 Bust.

the new exhibitors whose carelessness causes the trouble. A person accustomed to making fair entries, has bought her experience and rarely makes blunders, and thereby usually secures numerous premiums, and is accused by less fortunate ones of being shown undue favor. In reality she has only been careful, exhibiting no better articles than her less fortunate neighbor.

I heard a very successful exhibitor say in reference to fair work: "I always commence at the first of the season, and put up a little of each kind of fruit, with the intention of exhibiting at the county fairs the following Autumn, making it of a superior quality for this purpose. There is no use entering inferior articles to compete with better ones." As strawberries come first, a few cans, and a small quantity each of jam, jelly and preserves were made with this end in view, and so on, taking each fruit as it came, storing the work by itself, so it would not get mixed with the other fruit. As she said, the actual expense was very trifling in comparison with the premiums she received, compensating her fully for the work it created. All of the fruit could be used in the family after exhibiting, and only the canned fruit required reheating; no harm came to other preparations. There is no need to add that she always won many premiums; for the same systematic rules were followed out as for any other well-organized business.

There is something else to be remembered; do not enter articles which are not listed in the catalogue, expecting to receive premiums. Occasionally they will be awarded a special premium, but this is an exception, not the rule, and they are more frequently passed over, only those included in the premium list receiving attention. Many beautiful things not specified are entered each year, adding much to the display as well as giving new ideas, which may be of use in constructing the catalogue of premium lists the following year. A failure is often the forerunner of success. Refrain from making sarcastic remarks over either real or fancied injustice; bear your disappointments Spartan-like; for it does no real good to complain, and only makes others pronounce you disagreeable. I once heard a fair official wearily remark: "It is surprising how much rancor the loss of a 25-cent premium will bring out in some people." Even if you know you have been unfairly dealt with, next time you will be sure to succeed as a reward for your forbearance. The week before the fair takes place carefully make out your list of articles intended for exhibition; take or send it to the secretary of the society, and get your entry cards, which are securely fastened on the articles at home, correctly without any worry, which will inevitably accrue if this is left until you reach the fair grounds. There is much less danger of mistakes being made, both with you and with those who make your entries. Being a successful exhibitor is really only a matter of care and forethought.

SARAH RODNEY.

The Rural Patterns.

Waists buttoning down the back remain in favor, and the model shown is especially pretty because of the fullness allowed by the groups of tucks. The original is of louisine silk, with cream guipure lace, and is made over the fitted lining, but all waist and gown materials are suitable, silk, wool and cotton, and the lining can be omitted whenever desirable. Silks and wools are better and more serviceable made over the foundation, but washable fabrics are preferable unlined. The fitted foundation is snug and smooth and closes at the back, together with the waist. The fronts proper are tucked to yoke depth and gathered at the waist line, but the backs are plain across the shoulders and show only slight fullness at the belt. The lace is applied over the material on indicated lines, the scalloped edge making an admirable effect over the plain waist. The sleeves are in bishop style, with pointed cuffs, and the neck is finished with a plain stock, to which are attached turn-over portions of lace. To cut this waist for a woman of medium size, 3½ yards of material 21 inches wide, three yards 27 inches wide, 2½ yards 32 inches wide or 2⅛ yards 44 inches wide will be required, with 1½ yard of lace 7½ inches wide, and ⅜ yard of narrow edging to trim as illustrated. The pattern No. 3919 is cut in sizes for 32, 34, 36, 38 and 40-inch bust measure; price 10 cents from this office.

The tendency of all the latest skirts is to extreme snugness at the upper and pronounced flare at the lower portion. No style contributes to that end so perfectly as the habit back and the circular flounce, and the two combined make a marked feature of advance models. The model shown is admirable in every way. Being cut in five gores it suits the great majority of figures and allows for

3920 Five-Gored Skirt,
22 to 30 waist.

remodeling the skirts of last season when so doing is desirable. The original is made of novelty material, in shades of brown and tan, with trimming of narrow brown braid over light tan, and includes the graceful and becoming flounce; but this last can be omitted and the skirt used plain; or, again, the material can be cut away beneath and the flounce seamed to the lower edge. The five gores are carefully shaped and fitted without fullness at the belt, and provide just the snugness required by fashion. The flounce falls in soft undulating folds and widens as it approaches the back, forming admirable lines. The placket can be at the center back or left front seam as desired, but in either case, should be provided with an ample underlap and an abundant supply of hooks and loops, that there may be no danger of gaping. To cut this skirt for a woman of medium size, 13 yards of material 21 inches wide, 10½ yards 27 inches wide, 8⅞ yards 32 inches wide, 7¼ yards 44 inches wide, or 6¾ yards 50 inches wide will be required when flounce is used; nine yards 21 inches wide, seven yards 27 inches wide, 6½ yards 32 inches wide, 5½ yards 44 inches wide or five yards 50 inches wide when flounce is omitted. The pattern No. 3920 is cut in sizes for a 22, 24, 26, 28 and 30-inch waist measure; price 10 cents from this office.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

AN ounce of cheerfulness is worth a pound of sadness to serve God with.—Fuller.

IT is often said that God condemned men to work. This is absurd. God condemned man to live, and gave him work as a mitigating circumstance.—Legouve.

To be gentle and humane to every creature of God is the duty of every man, but more especially of every Christian man who claims to be a follower of One who went about doing good.—Father Ducey.

A Go-to-Church Lantern

The Dietz Junior Lantern is just the right one for this purpose, also for any other purpose which calls for a light weight, convenient lantern, giving a fine bright light. The farmer's wife will especially appreciate it. We send one by express, prepaid, for $1.00, and we give your money back if it doesn't suit you. That's fair enough. Circulars free.

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Girls can get this beautiful Life Size Doll absolutely Free for selling only four boxes of our Great Cold & Headache Tablets at 25 cents a box. Write to-day and we will send you the tablets by mail postpaid; when sold send us the money ($1.00) and we will send you this Life Size Doll which is 2½ feet high and can wear baby's clothes. Dollie has an Indestructible Head, Golden Hair, Rosy Cheeks, Brown Eyes, Kid Colored Body, a Gold Plated Beauty Pin, Red Stockings, Black Shoes, and will stand alone. This doll is an exact reproduction of the finest hand painted French Doll, and will live in a child's memory long after childhood days have passed. Address,
NATIONAL MEDICINE CO.,
Doll Dept. 134J, New Haven, Conn

MARKETS

THE WEEK'S QUOTATIONS.

WHOLESALE PRICES.

NEW YORK, SEPTEMBER 21, 1901.

GRAIN.—Heavy frosts in the corn belt have raised the price 2½ cents.

Wheat, No. 1, Northern Chicago.	—	@	77¾
No. 1, Northern Duluth	—	@	77¾
No. 2, red, elevator	—	@	75¾
Corn, No. 2, mixed, elevator	—	@	64¾
Oats, No. 2, mixed, elevator	—	@	38¾
Rye, No. 2, W'n, f. o. b., N. Y.	—	@	60
Barley, feeding	—	@	58
Malting, new crop	62	@	68

BEANS.

Marrow, choice, per bushel	—	@	2 75
Fair to good	2 50	@	2 70
Medium, choice	—	@	2 35
Pea, barrels, choice	—	@	2 35
Red kidney, choice	—	@	2 45
Common to good	2 10	@	2 40
White kidney, choice	2 25	@	2 30
Black turtle soup, choice	1 90	@	2 00

FEED.

Spring bran, coarse	17 00	@	17 75
Winter bran	17 50	@	18 00
Red Dog	18 40	@	19 50
No grade flour	—	@	22 00
Unsound wheat, per 100 lbs.	67	@	70
Linseed meal, ton	—	@	29 50
Cottonseed meal, ton	—	@	25 00

HAY AND STRAW.

Hay, No. 1	—	@	85
No. 2	75	@	82½
No. 3	60	@	70
Clover	50	@	60
Clover, mixed	60	@	70
Straw, rye, long	50	@	75

SEEDS.

Clover, per 100 lbs.	10 00	@	11 25
Timothy, per 100 lbs.	5 00	@	5 50
Flaxseed, whole, per bu.	6 50	@	6 75
Millet, per lb	2	@	2⅛
Rape, German, per lb	3¼	@	3½
Sunflower, per lb	3	@	3½

MILK.

New York Exchange price at stations $1.31 per 40-quart can. This is the gross price, and from it must be taken the cost of transportation and fees at receiving stations where such charges were made.

BUTTER.—Receipts are lessening and price has gone up one cent.

Creamery, extra, per lb	—	@	21
Firsts	19	@	20½
Seconds	17	@	18
Lower grades	15	@	16
State dairy, tubs, fancy	19	@	19½
Tubs, firsts	17½	@	18½
Tubs, seconds	16	@	17
Tubs, thirds	14	@	15
Tins, etc.	14	@	18
W'n imitation creamery, fcy.	—	@	17
Firsts	15	@	16
Lower grades	14	@	14½
W'n factory, June, fancy	—	@	15½
June, good to choice	14½	@	15
Current packed, best	14¼	@	14½
Fair to good	13¾	@	14
Lower grades	12½	@	13½
Renovated butter, fancy	17	@	17½
Common to choice	13	@	16½
Packing stock	12	@	14

CHEESE.

Full cream, colored, small, fcy.	—	@	9½
Colored, small, choice	9⅛	@	9⅜
White, small, fancy	—	@	9¼
Small, white, choice	9	@	9⅛
Small, good to prime	8½	@	8⅞
Colored, large, fancy	—	@	9
Colored, large, choice	8¾	@	8⅞
Large, good to prime	8¼	@	8½
Common to fair	7	@	8
Light skims, small, choice	—	@	8
Large, choice	7¼	@	7½
Part skims, prime	6½	@	6¾
Fair to good	4½	@	6
Full skims	1½	@	2½

EGGS.—The market is firm. High grades are scarce and sell promptly.

QUOTATIONS LOSS OFF.

State & Pa., avge. prime, doz.	19	@	20
W'n, fresh-gathered, chce, doz.	—	@	19

QUOTATIONS AT MARK.

Nearby, State & Pa., fresh-gathered, fancy selected, dz.	21	@	22
Prime to choice	18	@	20
W'n, fresh-gathered, N'th'ly sections, candled, selections.	17½	@	18½
Regular packings, N'n sec's.	14	@	17½
Graded, Southerly sections	15	@	15½
Regular packings, S'th'ly sec's.	13½	@	14½
Fresh-gathered, dirties	10	@	13
Checks	10	@	11
Refrigerator, per doz	15	@	17

LIVE STOCK.

Veal calves	4 50	@	8 00
Sheep	3 25	@	3 60
Lambs	4 00	@	5 25

COUNTRY-DRESSED MEATS.

Calves, veal, prime, per lb	—	@	10
Fair to good, per lb	9	@	9½
Common to medium, per lb	7	@	8½
Buttermilks, per lb	7	@	8
Grassers, per lb	5	@	6
Pork, country-dressed, light, lb.	8¾	@	9
Country-dressed, medium, lb.	8	@	8½

LIVE POULTRY.

Spring chickens, per lb	—	@	12
Fowls, per lb	—	@	11
Roosters, per lb	—	@	8
Turkeys, per lb	8	@	10
Ducks, avge. W'n, per pair	50	@	60
Average Southern, per pair	40	@	50
Geese, avge. W'n, per pair	1 00	@	1 25
Average Southern, per pair	80	@	1 00
Pigeons, mixed, per pair	—	@	15

DRESSED POULTRY.

FRESH PACKED—ICED.

Broilers, Phila., over 4 lbs. to pair, per lb	18	@	20
Phila., mixed sizes, per lb	14	@	16
Penn., fair to good, per lb	11	@	15
Western, dry-picked, per lb	—	@	12½
Western, scalded, per lb	—	@	11½
Small, dry-picked or scalded, per lb	10	@	11
Fowls, W'n, dry-picked, prime.	—	@	11½
Western, scalded, prime	—	@	11½
S'th'wn, dry-picked, prime	—	@	11½
W'n & S'th'wn, poor to good.	10	@	11
Old roosters, per lb	6½	@	7
Ducks, Spring, L. I. and other nearby, per lb	13	@	13½
Western	7	@	9
Geese, Spring, Eastern	12	@	14
Squabs, choice, large, dark	2 25	@	2 50
Mixed, per doz	1 75	@	2 00
Dark, per doz	1 25	@	1 50
Culls, per doz	50	@	1 00

GAME.

Grouse, per pair	1 00	@	1 25
Partridge, per pair	1 50	@	2 00
Woodcock, per pair	—	@	1 50
English snipe, per doz	—	@	2 50
Golden plover, per doz	—	@	2 50
Grass plover, per doz	1 50	@	2 00
Wild ducks, canvas, per pair	2 50	@	3 00
Red head, per pair	1 50	@	2 00
Mallard, per pair	75	@	1 00
Teal, blue wing, per pair	60	@	75
Teal, green wing, per pair	40	@	50
Common, per pair	25	@	30
Rabbits, per pair	30	@	35
Venison, saddles, per lb	—	@	30

DRIED FRUITS.

Apples, evaporated, 1900, fancy, per lb	9¼	@	9½
Evaporated, 1900, choice, lb	8¾	@	9
Evaporated, 1900, prime, lb	8¼	@	8½
Evaporated, 1900, common to good, per lb	5	@	8
Sun-dried, 1900, per lb	4½	@	5¾
Chops, per 100 lbs	1 50	@	2 25
Cores and skins, per 100 lbs	1 50	@	2 15
Raspberries, evaporated, 1901, lb.	24	@	25
Sun-dried, 1901, per lb	20	@	22
Blackberries, 1901, per lb	6½	@	7
Huckleberries, 1901, per lb	15½	@	15¾
Cherries, per lb	13	@	14

FRESH FRUITS.

Apples, Alexander, per bbl	3 00	@	4 00
Jonathan, per bbl	3 00	@	4 00
King, per bbl	3 00	@	3 50
Greening, per bbl	2 50	@	3 00
Twenty-oz. hand-pkd, bbl.	2 50	@	3 50
Gravenstein, per bbl	3 00	@	3 50
Fall and York Pippin, bbl.	2 75	@	3 25
Holland Pippin, per bbl	2 75	@	3 25
Pound, sweet, per bbl	2 50	@	3 00
Fall varieties, fair to good.	1 75	@	2 50
Ord'n'ry hard, late sorts, bbl.	2 00	@	2 50
Windfalls, per bbl	1 00	@	1 50
Pears, Bartlett, fancy, bbl	3 50	@	4 50
Bartlett, avge. lots, bbl	2 00	@	3 00
Bartlett, pme. to fcy, keg.	1 25	@	1 50
Bartlett, inferior, per keg.	60	@	75
Seckel, fancy, per bbl	3 50	@	4 00
Seckel, fair to prime, bbl	2 00	@	3 00
Beurre Bosc, per bbl	1 75	@	3 00
Beurre Clairgeau, per bbl.	1 75	@	2 50
Beurre d'Anjou, per bbl	1 75	@	2 25
Sheldon, per bbl	1 75	@	2 50
Other late kinds, per bbl	1 75	@	2 00
Nearby, common, per bbl.	1 00	@	1 50
Peaches, Md. & Del., carrier.	75	@	1 25
Md. & Del., per basket	25	@	80
Jersey, per basket	25	@	80
Pine Island, per carrier	1 00	@	1 50
Pine Island, per basket	25	@	75
Up-river, pony basket	25	@	40
Up-river, per 2-bskt car'r	40	@	75
Up-river, full-sized bskt	50	@	75
Ohio & Mich., bu. bskt	1 00	@	1 75
Plums, Abundance, 8-lb. bkt.	12	@	20
Large, table blue, 8-lb. bkt.	40	@	50
Green, per 8-lb. basket	35	@	45
Common, per 8-lb. basket	20	@	25
Prunes, per 8-lb. basket	35	@	50
Grapes, up-river, Del., car'r.	50	@	1 00
Up-river, Niagara, carrier.	50	@	75
Up-river, Moore's Early, c'r.	50	@	60
Up-river, Worden, car'r	50	@	65
Up-river, Concord, carrier.	50	@	65
W'n N. Y., Del., small bkt.	13	@	15
W'n N. Y., Niagara, plain, per small basket	10	@	12
W'n, N. Y., black kinds, per small basket	8	@	9
Watermelons, com. to good, per carload	60 00	@	125 00
Fancy, large, Balt., 100	18 00	@	23 00
Other large, per 100	12 00	@	15 00
Medium, per 100	8 00	@	10 00
Poor to fair, per 100	6 00	@	7 00
Muskmelons, far W'n, good to choice, per crate	1 75	@	2 00
Far W'n, poor to fair	1 00	@	1 50
Cranberries, Cape Cod, fcy, dark, per bb	—	@	6 00
Cape Cod, med. color, bbl.	5 00	@	5 50
Cape Cod, light color	4 00	@	4 50

VEGETABLES.

Potatoes, L. I., per bbl	2 25	@	2 62
Maine, per bbl	2 12	@	2 37
State & Western, per bbl	2 12	@	2 25
Albany and Troy, per bbl	2 12	@	2 25
Jersey, per bbl	1 75	@	2 25
Sweet potatoes, So. Jersey, bbl.	2 25	@	2 50
Yellow, Va., per bbl	—	@	1 75
Beets, Jersey & L. I., 100 bchs.	—	@	1 00
Cauliflowers, per bbl	1 00	@	2 50
Celery, State & W'n, doz. roots.	10	@	40
Carrots, L. I., per bbl	75	@	1 00
Corn, Jersey, per 100	75	@	1 50
Cabbages, L. I., Flat Dutch, 100.	4 00	@	5 00
Cucumbers, Rockland Co., bbl.	1 00	@	2 00
Shelter Island, per bb	3 00	@	3 50
Albany, per bbl	1 00	@	1 50
Western N. Y., bu. basket	—	@	1 00
Eggplants, Jersey, ½-bbl. crate.	50	@	75
Jersey, per bbl	1 25	@	1 75
Lima Beans, Hackensack & L. I., Potato, per bag	1 00	@	1 50
South Jersey, Potato, per bag.	1 00	@	1 50
South Jersey, flat, per bag	75	@	1 00
Lettuce, W'n N. Y., per case	1 00	@	1 75
Boston, per case	1 00	@	1 50
Onions, pickle, white, per bbl.	3 00	@	4 00
Orange Co., white, per bag	1 00	@	2 50
Orange Co., red, per bag	1 75	@	2 25
Orange Co., yellow, per bag.	1 75	@	2 25
Orange Co., inferior, per bag.	75	@	1 25
Jersey & L. I., red, per bbl	2 25	@	2 50
Jersey & L. I., yellow, per bbl.	2 00	@	2 25
Jersey & L. I., white, bskt	1 25	@	2 00
Connecticut, white, per bbl	2 75	@	3 50
Connecticut, yellow, bbl	2 25	@	2 75
Connecticut, red, per bbl	2 25	@	2 50
State & W'n, yellow, per bbl.	2 00	@	2 25
State & W'n, red, per bbl	2 00	@	2 50
Peppers, Jersey, green, bbl	40	@	75
Jersey, red, per bbl	60	@	80
Squash, Hubbard, per bbl	—	@	1 00
White, per bbl	75	@	1 00
Marrow, per bbl	—	@	1 00
String Beans, J'sy & L. I., bag.	40	@	50
Turnips, Jersey, Russia, box	75	@	1 00
Canada, Russia, per bbl	1 00	@	1 12
Tomatoes, Hackensack, per box.	60	@	75
Other Jersey, Acme, per box.	50	@	65
Other Jersey, Grant, per box	30	@	40

CONSUMPTION CURED.

An old physician, retired from practice, had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all Throat and Lung Affections; also a positive and radical cure for Nervous Debility and all Nervous Complaints. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all who wish it, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail by addressing, with stamp, naming this paper, W. A. Noyes, *847 Powers Block, Rochester, N. Y.*

BUSINESS BITS.

THE Keystone dishorning knife, which is the invention of the late A. C. Brosius, is now manufactured and sold by M. T. Phillips, Pomeroy, Pa. Mr. Phillips has ample facilities for manufacture, and all orders will be filled promptly. A prejudice which is fast wearing away is the thing unfavorable to universal dishorning, and we bespeak a larger use of the dishorner from year to year. If interested write the manufacturer for full information and prices.

THE advantages of having a constant supply of water always before the cows are too well known to need argument. With Chency system of basins, a constant supply of fresh water is assured to each animal, and each basin is replenished from the *tank;* water cannot flow from one basin into another, thus avoiding the danger of contagion. Anyone building a wooden cow barn or remodeling an old one should consider well the advantage of the individual watering basin. Write to S. Cheney & Son, Manlius, N. Y., for prices and full information.

Hubbard Squash for Canners.

One of our readers in Maryland was offered $6 per ton for Hubbard squash delivered at the factory of a local canner, and he thinks of trying two acres. He wishes to know whether the price, $6 per ton, is a fair one. What would be a good yield under what might fairly be considered favorable conditions in growing this crop?

Six dollars per ton for this squash I should consider a death and destruction price for the grower. He could hardly expect (in ordinary farming) to raise over five or six tons to the acre. Ten dollars per ton is as low as I have ever known squash sold for canning purpose. J. J. H. GREGORY.

Massachusetts.

Marrow squashes are quite largely grown in south Jersey for canners at $6 to $8 per ton. They are quite frequently grown on land as a second crop after early potatoes, peas or other crops. We do not know of the Hubbard being grown locally for this purpose, but should think it fully as prolific as the marrows, though probably not as quick in growth nor as early fruiting.

Pennsylvania. E. D. DARLINGTON.

As to yield here it is measured by the barrel. A yield of 50 barrels (4½ tons) per acre is called a fair yield, although occasionally we have had as high as 80 barrels (7½ tons) per acre. They weigh about the same as potatoes per barrel, or 180 pounds. One of our largest growers thinks no man could afford to grow at $6 per ton. He usually gets from $1.25 to $1.50 per barrel; the prices vary. He planted last June, 12x14 feet; has much work to hunt the borer, etc.

Long Island. N. HALLOCK.

Wants, For Sale or Exchange

Farm Managers, Gardeners, Buttermakers, etc., always on hand. No charges to employers. Write us Rural Science Agency, Durham, N. H.

VALUABLE FARM FOR SALE.—1,000 acres, susceptible of many subdivisions, situated on Dan River, with much river, creek and branch bottoms; nine miles from Reidsville, N. C., a town of 5,000 people, on the main trunk line of Southern Railway Company. In county of Rockingham, Piedmont section. Splendid six-room mansion, and numerous tenant settlements.
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Residence or Business Property may be obtained through me. No matter where located. Send description and selling price, and learn my successful plan. W. M. Ostrander, North American Bldg., Phila., Pa.

Money-Making Farms

BORDER the Kennebec Valley lakes; dairy, sheep, stock, fruit, poultry; near railroad, schools, churches; comfortable buildings, shady lawns, fine fishing and boating; $10 an acre; fare by boat, $1.75 from Boston. Particulars free.
E. A. STROUT, 9 Scott Street, Augusta, Me.

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One hour from New York City by Central Railroad of New Jersey. In close proximity to a growing town. No malaria. Good society. About 110 acres, in two farms, mostly in grass. This year's first crop 235 large two-horse wagon loads of hay; second crop very promising. Home market. Modern buildings. Chance for speculation in building lots. Owner having taken up his residence in Europe, will sell this place below value. For circular address owner
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This time of the year we make a specialty of handling shipments of apples and pears, and are now prepared to handle consignments to the best possible advantage. Write us at once for information regarding shipping, etc.; also for stencils.
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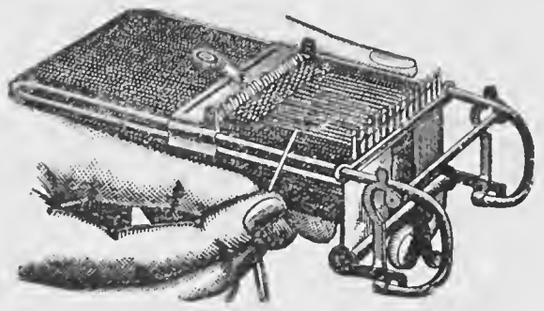

by any other way. Full directions accompany each machine. When a lady has once used this little machine, she would not do without it for any consideration. We will send it postpaid for $1, or for two new yearly subscriptions at $1 each. All money returned if not satisfied.

4 Dolls FREE

Every little girl loves a doll. How delighted she would be with a whole family of big dolls with which to "play house." These dolls are nearly two feet high, have rosy cheeks, beautiful hair, heads that will not break, eyes that will not fall in, nor suffer any of the mishaps that dollies are likely to encounter. They are the 20th Century model of the old fashioned doll that Grandma used to make, and would make Grandma open her eyes in wonder. They are made of extra heavy satteen that will not tear, and are dressed in bright colors that will not fade. They are very durable and will give a child more real pleasure than any doll made. We will give these four beautiful dolls absolutely free for selling only five boxes of our Laxative Stomach Tablets at 25 cents a box. Write to-day and we will send the Tablets by mail postpaid. When sold send us the money ($1.25) and we will send you the four dolls same day money is received. Address,

NATIONAL MEDICINE CO.,
Premium Dept. 134 J, New Haven, Conn.

FEEDS AND FEEDING

NEXT WINTER it will be necessary for our farmers to study the question of stock foods. Corn, the great stock grain, will be high in price, and substitutes must be provided for it. How can these substitutes be found? Only by comparing other and cheaper foods with corn, and knowing beforehand how they will affect the animal. This comparison may be done by studying analyses, but a farmer cannot afford to spend the Winter in experimenting. He must know beforehand what others have found out. He can learn this by studying Prof. W. A. Henry's great book. Feeds and Feeding tells you just what you ought to know about foods and how to feed them. It is full and complete, and easy to read. Price, $2.

Sold by THE RURAL NEW-YORKER, NEW YORK.

PROF. W. A. HENRY'S GREAT BOOK.

AMERICAN POMOLOGICAL SOCIETY.

The Convention at Buffalo.

PART I.

The convention was opened by an address by President C. L. Watrous, of Des Moines, Iowa. He gave a brief history of the Society and spoke of the great progress which has been made in 50 years, in methods of conducting meetings, and in exhibits, nomenclature, etc. Since the organization of the American Pomological Society, a great revolution has been made by the use of better implements for the culture of fruits, and controlling insect pests. Prof. Macoun, of Ottawa, Canada, next discussed orchard renovation. He said that the best work at the Ottawa Experiment Station has been testing varieties, and finding the ones best adapted to our climate. They are also sowing clover in their orchards—the common Red clover—early in the season; this makes a cover crop the next Winter. The following Spring, it is plowed under to add humus and make plant food for the trees. We are now practicing pruning and spraying to a greater extent, and with satisfactory results. He advised spraying trees with lime as a protection from Oyster-shell bark-louse.

Prof. L. R. Taft, of the Michigan Agricultural College, followed in the discussion of the same subject. He advocated spraying, pruning and fertilizing as the means of renovating orchards. He recommended wood ashes applied to the soil, as a remedy for the Woolly aphis. Prof. Corbin applies tobacco dust, six feet from the trunk of the tree, making a circle, with good effect. Prof. Alwood, of Virginia, observed good effect from scraping the trees with a hoe as far as one can reach, before spraying with lime for Oyster-shell bark-louse.

Prof. Craig, of Cornell University, spoke of college extension work. He said the amount of farm products has been multiplied by 20 in 50 years, and the labor to produce it has only been multiplied by four. This progress will bring the trend of population back to the farm, if we make the farm work attractive and interesting. This is the work undertaken by the university extension college course—to bring education and inspiration to the young people on the farm who cannot go to the university. The correspondence course in agriculture is reaching thousands. In four years, the people reading the course have increased over 25,000. Reading clubs are being formed in all parts of the country, and the work is made easier in this way.

Charles W. Garfield, of Michigan, read a paper on Quality and the Market. The thought of the paper was catering to the markets, so as to suit demands of individual tastes, learn what the market demands, and supply it. Many people are willing to pay well, if they can get what they want. Fruits are planted, because they are hardy and productive, without giving due attention to quality. The consumption of fruit could be largely increased, if you can give them something that is good to eat. The poor fruit remains too long on the table of the hotel-keeper, and because more is not eaten, the consumption is not larger. Prof. F. A. Waugh, of Vermont, discussed the same subject. He said that the main qualification by which to judge fruit, is its table quality, if you wish to reach a private market. The public needs to be educated to recognize quality. This market may be enlarged. First we need quality in the man, then we can get better fruit.

Prof. L. H. Bailey, of Ithaca, N. Y., gave an address on Some Contrasts of the Pomology of the Atlantic and the Pacific Coasts. He found commercialism in fruit growing on the increase on the Pacific coast. He found fruit growing newer and more provincial, with the idea that theirs is the only region in the United States adapted to it. The climate of California is distinguished by its rainfall. The rainfall is conserved by the most thorough system of tillage. In one year it is less than 30 inches. The very large fruits are grown only where irrigation is practiced. The climate is salubrious for those who are constituted to enjoy it, but to many eastern people, it would be too monotonous. The man is the most happy who believes that the place where he lives is the best in the world. There are fewer high-bred types of fruits and flowers than in the East. Large areas and wholesale methods are practiced. If you like the eastern climate, and especially, if you have small means, do not go west. Your opportunities are better in the east. Successful growing is not so much a matter of soil and climate, as a matter of men. Fruit growers are better organized in California, which is an advantage in marketing. He can control railroad and commission rates. Western competition is going to force us into special lines of fruit growing. R. R. Morrill, of Michigan, spoke of the value of dust mulch in the orchard in times of drought. The cheapest irrigation is what has been called "horse-leg" irrigation. Speaking of renovating orchards he said that the best way is first to renovate the men who own them. L. B. Pierce, of Ohio, said that only a small quantity of fruits can be marketed at the time when they are in best condition for eating. Ripe fruit cannot be kept, when ripe, to ship. Prof. Webster, of Ohio, concluded the afternoon session with a paper on Some Experiences in Orchard Spraying and the Results. He said that very much depended on the manner of spraying or applying the mixtures. Few men can be hired to do the work in a way that gives good results. A man needs special training for the work. In every instance spraying orchards has proved profitable when well done. W. H. J.

REPORTS FROM POTATO GROWERS.

Potatoes are one-fourth crop; worth 75 cents. Two months of hot, dry weather caused the trouble with the potato crop.

St. Charles, Minn. R. E. M.

The crop is is almost an entire failure. There is nothing to rot. The early varieties are best so far. The late ones are almost nothing. D. R. A.

Green Valley, Minn.

Late potatoes are a very light crop, almost a failure. Early ones about one-half to two-thirds of a crop in our neighborhood. Our nearest market is Indianapolis; carloads about $1.05 on track; $1.20 from store; retail at $1.40 to $1.60. W. H. F.

Greenwood, Ind.

The heavy rains which came in July drowned out about one-quarter of the crop. I judge the yield will be about 60 per cent if the frost holds off 20 days. Potatoes are now (September 17) just in blossom. There seems to be no rotting at present. E. L. L.

Bancroft, Mich.

I cannot give you a definite answer at this writing about the late crop, as none is dug yet, but the majority of the crop as it stands looks very poor. There is once in a while a good piece of potatoes, but they are failing to put on many tubers. There have been many acres entirely eaten up by the bugs. Early potatoes have not been a half crop in this section. I should not estimate the late crop to be over 50 bushels to the acre, and a short acreage at that. We have not been troubled with any rot yet. M. O. F.

Ada, Mich.

The potato crop in Jersey Co., Ill., is a total failure. We do not know of a farmer who has raised enough to serve him until next crop. A few have had enough for immediate use, but we have heard numbers of them say that they planted more seed than they raised potatoes. We are at present selling Northern stock for $1.60, but prices will be lower later, we think. Last year farmers had more potatoes than they could use, and we had no trouble in buying plenty for our trade. Usually we get a car from the North. Oats a total failure. Hay crop very short. Early planted corn will make from five to 20 bushels. Later planted will yield 20 to 40 bushels. Blackberries, strawberries and raspberries a small crop. Most of them dried on the bushes. Orchards are very much damaged by flat-headed borers. Peach and apple crops good. Extra fine wheat yield, and all grades No. 2. E.

Grafton, Ill.

Cut and Shredded.

PENNSYLVANIA FARMS.—In my idea the farm land of Butler and Sugarloaf valleys is worth more. Of course, some farms are about the same, but take the farm of the alive man, and it exceeds 20 years ago by at least one-third. The surrounding towns are rapidly increasing; consequently making a better sale for the product of the farm. Farms are in more ready sale to-day than 20 years ago. It seems that doctors, lawyers, merchants and coal operators are taking more interest in them, and going back for a country home.

Drums, Pa. S. R.

THIS season has been a very curious one. Oats were a failure, and potatoes, the early ones, were in the same boat with the oats. Late potatoes, like Chas. Downing and American Wonder, are looking very fine as far as vines go, and I think there will be a fair crop. Corn is not as good as usual, but will be very good, considering the season. Buckwheat is well filled, the Japan better than the Little Grey. Apples are a light crop. I had a postal to-night from a firm in Boston that I have shipped to, saying that they were selling for $2.50 to $4 per barrel, but it is not time to pick Winter apples yet here. G. W. H.

Columbia Co., N. Y.

THIS has been an ideal Autumn so far, with just enough rain to make corn ear well; rather dry for potatoes, with no signs of frost as yet, September 6. Corn is good; Mecosta County never had better. It has eared the best I ever saw it. Cutting has commenced. Wheat did not turn out as well as it promised; the insect did some damage and the dry weather in June caused some shrunken kernels; oats a failure, about one-half crop. Apples one-third crop, and nearly all wormy; too wet to spray last Spring. Beans are a good crop; they are taking the place of potatoes here. Potatoes are about two-thirds of the usual acreage, and one-half of them eaten up with bugs. We are bugging them yet, something I have never done before at this time of year. Rye was about three-fourths of usual yield; is selling at 50 cents per bushel.

Mecosta Co., Mich. W. B.

MARKET NOTES

DECEPTIVE PACKAGES.—Retail buyers are often disgusted to find in peach or other fruit baskets a false bottom stuffed with paper. The ingenuity displayed by those who fix up these fake packages is remarkable. The Chicago Sealer of Weights and Measures is making war on these frauds, and heavy fines are imposed on those found guilty. A favorite scheme is to twist a lot of cornucopias of stiff paper, into each of which a peach is set, rosiest side up, one layer filling a basket which should contain twice as many peaches.

GAME ILLEGALLY STORED.—Last Spring reference was made to the fact that the State Game Warden had seized a large quantity of game held out of season in a cold storage house in this city. The case is to be tried in October; and, if the full penalty allowed by the law should be inflicted, the fines would amount to $1,197,000. Game laws are of no account unless enforced, and certainly wholesale violators are not entitled to any more consideration than the man who shoots one bird out of season. It is to be hoped that this test case may clear up matters that have been somewhat obscure, and put all who catch or handle game on the same basis.

FRUIT NOTES.—Peaches are very plentiful. Jersey and other nearby stock is coming in rapidly, and there is a large quantity that are small and inferior. Many are half covered with rusty green spots, which give them an uninviting appearance. Some of these sell as low as 25 cents per 16-quart basket. The western peaches that are coming in bushel baskets are also inferior. Plums are scarce this week. On account of the large receipts of under-grade apples, the market for anything except fancy is weak. Watermelons, while the best of the season, are selling low, as the weather is too cool for any great demand.

INVOLUNTARY FIRE CALL.—Probably one of the strangest false alarms ever sent in to the fire department was given recently in the heart of the wholesale grocery district in this city. A heavy truck struck and upset a post containing a fire alarm box. The electrical apparatus being so violently stirred up started into business at once, and in a short time five fire engines and several hose trucks and hook and ladder trucks were on hand. It is a finable offense to send in a false fire alarm, but in this case no one seemed to be to blame unless perhaps the city authorities for permitting an alarm box to be placed where it could be upset by a truck.

EXPORT NOTES.—During the eight months ending August 31, 1901, there were shipped from all ports of the United States 122,521,206 bushels of wheat, 91,017,144 of corn, 22,337,645 of oats, and 12,716,867 barrels of flour. The total value of all breadstuffs exported was $192,860,604, and of other provisions $150,590,779. Gulf and other southern ports have been successful in diverting to those points considerable of the western export wheat formerly shipped from New York. During August, 1901, New Orleans shipped 500,000 bushels more than New York, and Baltimore the surprising quantity of 6,715,174 bushels, more than twice New York's shipments for that period. Other ports in order of quantity shipped were Galveston, Philadelphia, Boston, Chicago, Newport News, Duluth, and from Pacific coast points Willamette and San Francisco.

MARKET TERMS.—A reader wishes an explanation of some of the abbreviations and technical terms used in market quotations. In speaking of fruit, d.-h. barrel means double head, to distinguish it from the open or cloth-covered barrel sometimes used. Checks are slightly cracked eggs. They are always cheap and, of course, have to be used at once. F. o. b. means that goods thus quoted are delivered free on board the cars or boat or whatever means of transportation may be used. Thus, if a man buys feed f. o. b. cars Jersey City, he would not have to pay for delivery from the mill to Jersey City, but would have to meet the freight charges from there to his station. Large lemons run about 300 to the box, and the smaller ones 360. Hence the quotations, fancy 300s or 360s. The same rule is applied to the better grades of pineapples, and thus we have 24s, 30s, 36s and 42s, referring to the number in the crate. The cheaper pines are numbered two, three, four, etc. Bananas are figured at the number of hands to the bunch, seven and eight being common sizes. The hands refer to the form in which they grow on the bunch, the single cluster and stem resembling the fingers and wrist of a hand. W. W. H.

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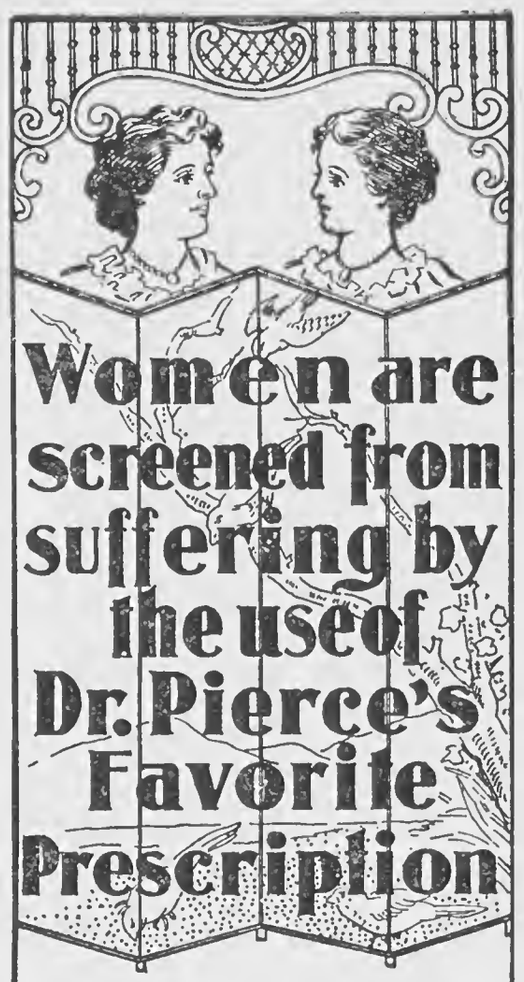

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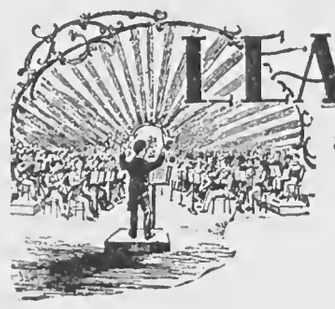

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THE RURAL NEW-YORKER, NEW YORK.

Live Stock and Dairy

WHEAT BRAN OR MIDDLINGS.

Do Cows Need So Much Protein?

PART I.

At the suggestion of several readers in Connecticut we sent the following letter to Prof. T. L. Haecker, of Minnesota. His answer will doubtless interest many Eastern readers:

"Some of our subscribers in Connecticut heard you talk on the dairy cow last year or the year before. Among other statements, they say that you advocated the use of coarse bran in the place of middlings. One man says he heard you say that you would not take middlings as a gift, or words to that effect. A vast quantity of middlings is fed to cows in Connecticut, and you have stirred these feeders up with your statements regarding bran. Will you tell us just why you consider bran so much better than middlings? If these men are wrong in feeding middlings, they want to know it."

What I said on the subject of feeding during my visit in Connecticut was based upon the generally accepted feeding standard suggested by the German scientists, though I have no recollection of making the statement quoted in your letter. We are fortunately learning something, and it is quite likely that if I were to speak to Connecticut farmers at any time in the future on the feeding problem, I would treat the subject differently. In all our agricultural literature bearing upon feeding, it is claimed that a cow needs daily at the rate of 2.5 pounds of digestible protein per 1,000 pounds live weight; that of this amount .7 pound is needed to support the body, and that the remainder is for the production of milk. Since the establishment of American experiment stations the feeding standard suggested by Dr. Wolff, a German scientist, has been in common use, and, indeed, has been the basis upon which advanced methods of feeding have rested.

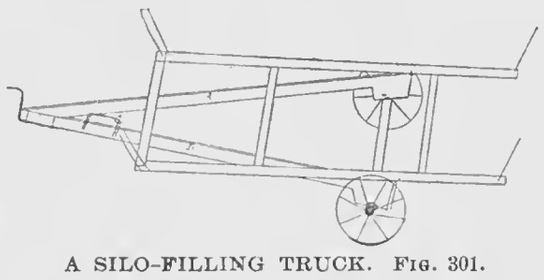
With a few exceptions, the dairy herd at the Minnesota Experiment Station has been fed on what is termed a balanced ration since its establishment, 10 years ago, and, judging from the results obtained in amount of milk and butter fat yielded by the cows, and the cost of production, the balanced ration was followed by a far greater return than was obtained by haphazard methods of feeding. During the Winter of 1894-'95 several feeding experiments were carried on, which happened to cause a deviation from the feeding standards. The first instance was in the Autumn of 1894, when the grain ration for the dairy herd was ground wheat only. This was followed by an experiment covering 84 days, comparing ground barley and corn with ground wheat; and then followed another covering 70 days, comparing Timothy with prairie hay. This last experiment closed April 21, or only two weeks before the cows were turned out to pasture. While there was no real definite information obtained in comparing the different foodstuffs, incidentally some very valuable data was obtained bearing upon the protein requirements of dairy cows. This data and that obtained from the herd during the last Winter is published in Bulletin No. 71, just issued from the dairy division of the Station. The data included all work done in 286 days, and show that the cows at the Station need less protein than is claimed in the feeding standards. To show the daily consumption of protein by each cow, the yield of milk, its average of butter fat, and the average yield of butter, we present the following table, which is for the last period, or 70 days, ending April 21, 1895. The figures represent pounds and decimal of a pound:

Cow.	Protein daily.	Milk daily.	Per cent fat.	Butter fat.
Beckley	1.68	13.17	5.6	.736
Countess	2.40	41.80	2.5	1.061
Houston	2.14	24.88	5.4	1.340
Lou	2.21	31.46	3.7	1.154
Olive	1.67	21.20	4.1	.884
Reddy	1.69	14.49	5.2	.755
Belle	1.76	19.38	4.1	.808
Lydia	2.26	27.98	3.6	.999
Quidee	1.85	25.81	3.5	.902
Sweet B.	2.21	26.09	5.3	1.379
Topsy	2.59	40.82	3.7	1.492
Tricksey	1.56	15.73	5.3	.840
Average	2.00	25.23	4.1	1.029

The table shows that there was only one cow in the herd that used as much as 2.5 pounds of protein daily, that one received 1.56 pounds, that the herd received an average of two pounds, and yielded daily a little over 25 pounds of milk and one pound of butter fat.

A SILO FILLING TRUCK.

Several years ago I built a silo, and to obviate so much labor loading the corn in the field, I built a truck after my own ideas, one that I think serves the purpose as well and better than any I ever saw, for several reasons. First, it is low, being only 26 inches from the ground to the top of the skids that carry the load; second, it cost very little, is strong, and will last until the axle wears out. The two pieces, A and B, are 3x6 oak, about 14 feet long, 12 inches wide where they rest on the axle. The axle and wheels are an Osborne binder truck. The pieces are beveled on the inside at the front, so they fit together nicely, and bolted together with two half-inch bolts. A piece of four-inch tire is then used. Split one end 12



A SILO-FILLING TRUCK. FIG. 301.

inches back, open the two pieces until they fit under the two pieces A and B, and punch two holes in each piece of iron to bolt under the end of A and B. Then bend iron up and forward, leaving upright portion 12 inches, and forward long enough to go over axle tree of wagon, same as forward end of coupling pole works, and punch hole for body bolt to pass through. This iron should be one inch thick, as it carries more than half the weight of load. Put an eye bolt in back end of A and B, and hook in each skid, so the load may be dumped if necessary. Skids are 3x6 oak also, and 12 feet long, with three or four pieces framed in to keep them on their edge, and also furnish rests for three or four boards which should run lengthwise to serve as a bottom to prevent corn falling through.

In back end of skids bore inch holes, and put in three-quarter-inch iron rods three feet long for standards. Nail two pieces of six-inch board on in front to serve same purpose. The back ends of pieces A and B are fastened to truck by ⅝-inch bolt passing down through, and nut underneath. C is a piece of iron ⅝x 1½ inch, bent and bolted to A or B for slide-bar of wagon to work through, to hold up the tongue. This truck can be used behind the front wheels of any wagon, and coupled or uncoupled as readily as the hind wheels. To dump load, tie the two ends of a rope to the back ends of skids, before loading begins. Lay each rope along bottom of wagon to front, and make fast while loading. To dump, carry the double of rope back over load and fasten to a rope or chain that must be tied to a post or stake in the ground. When tied drive team up and let skids dump. Put your double rope back on skids, and go for another load while that one is being cut. A load is about one ton. H. S.

Glendale, Md.

DORSET SHEEP AND DOGS.

The pugnacity of the Dorset depends altogether upon the object. I do not find them cross or quarrelsome toward men, women or children, nor do they fight much among themselves. A lot of rams turned together will fight a few battles until they have settled among themselves the question of precedence, and after that they will live peaceably, whereas Merinos, I think, never cease their battles. The fighting of dogs is rather more a characteristic of the Dorset ewe than of the ram, and no doubt she is emboldened to defend her offspring by the fact that nature has provided her with weapons, and that with her two little horns she can strike quite an effective blow. I think perhaps this warlike spirit comes from her exceedingly strong maternal instincts, these instincts being stronger perhaps among Dorsets than among any other sheep. Yet it is true that they will make a bold stand against dogs when they have no lambs with them at all. The Dorset is not "dog-proof," and I have known of a number of instances of their being killed by dogs; rather I should say I have read of such instances. In our own experience our Dorsets, living among hundreds of worthless curs (I live near a darky settlement) have never suffered the least damage from dogs, although now and then a sheep has disappeared bodily from the pastures. I think the truth is, that if a sheep will stand and make a show of fight the dogs are too cowardly to attack, although in the case of old sheep-killers, I cannot doubt that they would destroy even Dorset sheep.

Eight years ago I was first attracted to the Dorset sheep by the claims then made that they were "dog-proof," and I did not then dare to stock the farm with any other kind of sheep. I was so anxious for the "dog-proof" qualities that I would have been willing to have taken sheep if they had had almost no other good attributes, but the more I have become acquainted with the Dorsets the more prominent the other good qualities have become, and the less I think of their "dog-proofness," although I still consider that a very important point. I have never observed any battles among the ewes, although sometimes one will bunt another two or three times for fun. But I have observed that it is not a good plan to have yearling ewes running in the barn with older ewes and their little lambs, for if the little lamb should get in the way of the yearlings, especially about the racks or troughs, it might get a knock that would cripple it. I have not known older ewes to hurt the little things, but the yearlings are as yet unacquainted with maternal solicitations.

JOSEPH E. WING.

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How much cream (by measure) will a separator take from one gallon of new milk? What ought the cream to sell for when the whole milk sells at six cents per quart? How long does it take to separate the cream from eight to 10 gallons of milk? What sized separator would be required for 10 gallons of milk at a milking? What would the size required cost, and what make would you recommend? T. S. G.

Wilsonburg, W. Va.

The amount of cream will depend upon its fat content. We shall have to guess, as one has to in most cases where questions are so indefinite. Assuming that the milk contains four per cent fat, and the cream contains 25 per cent fat, 100 pounds of milk, or 46 quarts, will make 16 pounds of cream or about eight quarts. Test your whole milk and find out how many pounds of fat, then reduce it to the desired consistency, and measure it. If for butter making, I would not run less than 30 per cent fat, and even a richer cream is desirable. If for commercial purposes then the buyer will fix the standard. There are no laws controlling the fat content of cream; it is simply a question to be settled by the buyer and seller. When four per cent milk sells for six cents a quart a pound of fat is worth 70 cents, placing our figures on a basis of 100 pounds of milk, which would be worth at six cents a quart $2.80. If 25 per cent cream is made we should have as previously mentioned eight quarts, worth $2.80, or 35 ents a quart. Understand, however, that these figures may not represent to the owner a full net comparative value, because at six cents a quart milk must be retailed, and the whole product is gone, while in cream the labor of selling may be reduced and the skim-milk remains to offset the expense or separating and cost of machinery. As a rule, the cream trade is a very satisfactory one, because the skim-milk can be kept at home.

Hand separators are made to handle from 250 to 1,000 pounds of milk per hour. The question calls for 100 pounds. The cost of these machines will be from $65 to $200, according to size and kind. I shall not advise the purchase of any make, because several of the standard machines work well in the hand sizes. My experience has been with De Laval, of the power sizes. A bit of general advice is all that is wise to give in purchasing a separator. Be sure that you are guaranteed close skimming, as low as .05; that is the first essential. Next, get a guarantee that 40 per cent cream can be made if necessary, and secure close skimming; then buy the machine that will cost the least money. I do not mean cheap goods; get quality always first, but get it as cheap as possible. Secure some cheap power to turn it if any quantity is to be run. See that the machine is run according to directions; kept oiled, and always well balanced. Much unnecessary trouble with hand separators is from lack of a good foundation; run by some one who has no mechanical ability trouble follows. Let me add that a Babcock test is a necessary adjunct to a separator. Know surely what the result is at least once a week, and if butter is made it will serve a double purpose in testing buttermilk.

H. E. COOK.

SHREDDED VS. CUT SILAGE.

Having had no experience with shredded silage, I have no information on this subject. I see no reason why shredded fodder should not keep as well as the unshredded. I should also suppose that animals would tend to eat more of the shredded than of the unshredded fodder, since the coarser parts of the stalks would be better fined, and mixed with the more palatable parts.

I. P. ROBERTS.

Cornell Exp. Station.

It is only where one has a shredder and is without the cutter that it would be desirable to use it in filling silos. Shredded corn at the right stage of maturity for filling silos will keep satisfactorily under ordinary conditions, but not better than when cut in the ordinary way. So far as I have been able to learn, the quality of the silage is not materially affected by the method of cutting. But where the silos are shallow, and especially if the corn is a little dry, the packing of the silage from the shredded corn is not likely to be quite as close as when cut short with the ordinary silage cutter. Some shredder heads which are used on combined machines simply split the stalks, leaving them in quite long pieces, and where this is the case cattle do not eat the material quite as closely as when cut in the ordinary way. Of course more power is required to run the shredder than the cutter when that is in good condition. F. H. KING.

Wisconsin Exp. Station.

We have used a shredder in a general way at the Indiana Station a great deal for about seven years. So far as shredding dry stalks is concerned, the process has been entirely satisfactory, and the stock has seemed to eat the shredded forage more completely than the cut. The former is also more easily handled in our experience. On two different years we filled the silo with shredded green corn. One year it was put in a square, and another in a round silo. In neither case did the silage keep satisfactorily. Moldy spots were common through it, and there was much waste. This silage was each year tramped and spread uniformly level while filling. Yet the loss was too great to be permitted in profitable management. I do not wish, however, to condemn shredding for the silo. Occasionally I have learned of persons who shred, and with great success. I do think it, however, most desirable to have a silo of considerable depth, with very tight or close sides, and a minimum exposure to air. I further believe, as based on experience, that corn cannot be shredded into the silo with the success that attends cutting, using like care in storing. The shredded will retain much more air than the cut, and will not pack so closely as that which is cut. The shredded silage, however, should be preferable to the cut, if well preserved. As to whether there is any difference in the feeding value of cut and shredded silage, so far as I am aware no experiments have been reported in this direction. I should not look for any material difference, and do not believe there would be.

C. S. PLUMB.

FAT HENS AHD EGGS.

There will probably be some hens that will get too fat to lay well fed on a balanced ration, while others will lay well. I think one will always find some poor or indifferent layers in all flocks. A hen fed entirely on corn until too fat to lay would no doubt lay if changed to a balanced ration, but would better be starved a little for a few days to make her hunt for something to eat, which would give exercise, and that is what they all need. I think corn part of the time a good grain for hens even if they do get a little fat on it. Who ever saw a poor hen lay? Of course some breeds put on fat more readily than others. I do not think that it would do to feed Light Brahmas all the corn they would eat, as they would get "lazy" and fat, and sit around waiting for more corn. An excellent feed for Light Brahmas part of the time is wheat in the straw; they will hustle around to get the grain, and lay right along. Another breed that I find takes on fat readily is Plymouth Rocks, while White Wyandottes will keep in good condition and shell out eggs with a feed of lots of corn. The Leghorns and Minorcas, with unlimited range, could be fed almost wholly on corn, and would do well and lay nearly all of the time. D. A. MOUNT.

I have always thought that pullets properly cared for and fed on well-balanced rations would usually commence laying before getting too fat. Yearling hens, especially Asiatics, have a tendency to take on fat, but that can be easily controlled by feeding less hearty food. J. RANKIN.

Value of Corn Ears and Stalks.

1. Will 600 ears of green corn fatten hogs as well as 600 ripe cured ears? 2. If a shock of cornstalks 18 x 18 sells for 10 cents, can one buy more good corn fertilizer for 10 cents than the rotted stalks will bring? B. J. N.

Elmo, Ky.

1. No. The water in corn has no real feeding value, consequently the greener it is the less valuable it is compared with dry corn. It is the *dry matter* in corn that furnishes nutriment, and this dry matter contains protein or muscle-making or lean meat food, and carbohydrates and fat, which so largely assist in creating fat in the body. One could not tell what the feeding value of the 600 ears would be, unless chemical analysis was made, or a feeding trial made. 2. Just what weight a shock consisting of 18 hills square will be depends altogether on the number of stalks per hill, the variety, general richness of soil, season, etc. In the Middle West such a shock would weigh about 500 pounds, and would contain in the form of corn stover about five pounds of nitrogen, 1½ pound of phosphoric acid, and seven pounds of potash. If one had to buy this as fertilizer it would cost in the vicinity of $1. So you can easily see that when one sells that amount of cornstalks at 10 cents he is pursuing a rather expensive policy. He would better be a buyer than a seller. Of course of 500 pounds of stalks, not all of it would find its way back to the soil under ordinary conditions, but enough of it would to make it important to save the stuff rather than sell at such a low price. C. S. P.

Shotes Wanted in Canada.

On page 585, issue of August 24, in notes from Indiana by E. H. C., may be read: "Three months ago everyone was hunting shotes at from five to six cents. A sow and pigs sold at fabulous prices. Now the trouble is to find a place for shotes. It is quite possible that it would be a blessing if every pig one has could die before morning." Here in central Ontario on September 6 the condition is just the reverse; abundance of feed but a scarcity of pigs. Farmers here would be very glad to get some of the pigs that Indiana has to spare. You would be doing both parties a good turn by making the facts more widely known, and thus open the way for the one to get rid of the shotes he does not know what to do with at a good price, and for the other to obtain the shotes that he needs to convert his abundant supply of feed into pork. The corn crop here will be extra one. Then, too, there is a quantity of barley that was damaged by the rain at harvest time that must be utilized as feed. Light hogs are quoted here at $6.75 per 100. W. O. E.

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TWYNN: "Poor Rickett's death resulted from his fondness for tobacco." Triplett: "I heard that he was killed by an explosion." Twynn: "Well, he opened a keg of powder with a lighted cigar in his mouth."—Melbourne Leader.

"BY jing, if I'd 'a' knowed the girls would 'a' played all the time this way I'd 'a' got an organ instead of a piano." "But I thought you didn't like organ music." "No more I don't, but an organ has a few stops to it."—Baltimore American.

"YOU," said the angry customer to the clerk, "said this cloth was fast color, and it faded out within two weeks after it was made up." "Well, madam," replied the clerk, "I don't think you ought to have expected it to fade any faster than that."—Pittsburg Chronicle-Telegraph.

WILLIE (aged five): "Papa, didn't you tell me that if I took care of my pennies my dollars would take care of themselves?" Papa: "Yes, my son." Willie: "Then, why didn't your dollars take care of themselves the other day when you lost your pocketbook?"—Chicago Journel.

SQUIRE JONES: "I suppose you farmers are greatly benefited by the seeds that are distributed by the Department of Agriculture?" Farmer Harrow: "They are all right as far as they go, but why in time don't the Government send out weedless seeds if it wants to help the farmers?"—Boston Transcript.

PAPA: "Didn't I tell you, Willie, if I caught you playing with Tommy Jink again I would whip you?" Willie: "Yes, sir." Papa: "Then why were you playing with him?" Willie: "Well, I got lonesomer than I thought a lickin' would hurt, so I just went over and played with him, that's why."—Detroit Free Press.

FARMER KRICK: "Henry writes for more money; says he wants to take fencin' lessons." Mrs. Krick: "Well, fer goodness sake, send it to him, Hiram! It's the fust useful thing he's wanted to study sence he went to college. When he comes home ye kin jes' set him to work puttin' a new fence in front o' the house."—Judge.

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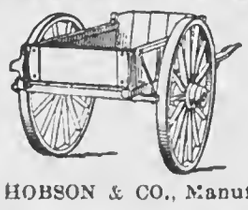
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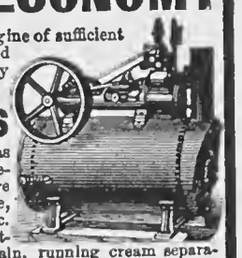
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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2697. NEW YORK, OCTOBER 5, 1901. $1 PER YEAR

OCT 5 1901

THE GOOD OF A GRANGE.

DIRECT AND INDIRECT BENEFIT.

Money Saved and Moral Sentiment Gathered.

"What is the good of a Grange anyhow?" This was said to me by a neighbor a few years ago, when I asked him to join the Grange. And this is what THE R. N.-Y. wants to know; what good the Order has done, and is now doing both to the farmers and their families who belong to it, and to the farming community in general. Now, "the good of a Grange" is made manifest in two ways; in the financial benefits and in the general uplifting of the farmers and their families in educational, social and moral lines. And as the farmers are really the breakers between the trusts and corporations on one hand and the mob on the other, or in other words, between capital and labor, the farmer representing both, anything that elevates the farmer helps the whole country. As to the money saved by the Grange, the insurance is generally thought to be the largest saving. In a county with a large membership like Monroe, N. Y., the insurance only costs us 50 cents for $100 for five years and $1 to the director who writes the policy. The Monroe County Patrons' Fire Insurance Association has made but three small assessments in its lifetime of nearly 25 years, has always paid all losses promptly, and is stronger to-day than ever. The State Grange makes arrangements with houses in the different cities of the State by which we can obtain a discount on almost anything we want to buy for cash, and as to selling our produce we can correspond with Granges in other sections who might need something we have to sell. This part of the subject has not been worked up as much as it deserves to be, and no doubt will be in the future.

The Grange years ago broke down the price of farming tools, etc., when it was booming in 1873, 1874 and 1875. Then came a dull time with the Order, but for the last 10 years it has made a steady growth both in numbers and influence. So much for the direct money benefits, but the greatest good the Order is doing to-day is in instilling a love for farming and country life into the minds of boys and girls and young farmers. I have always said that the man who sees nothing in farming but the money he can get out of it, has no real love for farming, and will in the long run not get as much money out of it as the one who loves farming and country life with such a deep and abiding love that no bad seasons or low prices will ever be an inducement to leave the farm for a more lucrative pursuit. This is just what the regular meetings of the Grange do, by bringing together, twice a month generally, the old and young, boys and girls, farmers and their wives, to hold a short conference in the business of their lives. Our own particular troubles seem lighter when we hear what our brothers and sisters have to say about their failure. While we all need the Grange meetings, the women and boys and girls need them even more than we do. It breaks up the routine and monotony of their lives, and gives them an outlook over a larger world.

This has been the great objection to farming, its isolation and loneliness. But the true farmer feels more lonely in the crowd and tumult of a great city than in his own quiet fields if he has any sympathy with Nature in her various moods. It is impossible to imagine how many young farmers have been led to read and think from what they learned in the Grange; to improve their farms, to study the habits of weeds and insects, and how to subdue them. Discussions on religion and politics are not allowed, but temperance has always been advocated in our meetings; in fact, it is the best temperance society I know. But, says a practical farmer: "What do you do in your meetings, anyway?" Well, we take in new members and initiate them as fast as we can. In a new Grange this takes a good deal of time. We receive valuable information from State and National Granges, which the secretary or lecturer reads. We sometimes correspond with other Granges East or West. Last Fall our Grange (Wheatland Grange No. 890) ordered the secretary to get the addresses of secretaries of western Granges, and get information regarding the apple crop. They very kindly responded. The result was our members held their apples a while, and received more for them. Then the question box gives those who do not feel like speaking a chance to get any subject discussed that they are interested in. If we should fall short of business (which we never do) we could have the lecturer read one of the many bright and up-to-date articles from THE R. N.-Y. The truth is that we do not have time enough in the Summer evenings to do all we would like to do in our Grange. In the Winter we hold the meetings afternoons, and take more time.

THE DAILY "SEWING CIRCLE" AT HOPE FARM. FIG. 302.

Caledonia, N. Y. S. W. COX.

R. N.-Y.—Another thing about the Grange is the fact that it educates farmers in the theory of organization. Wherever there is a good Grange you will find the people working and thinking together, and always along helpful lines. The farm institute managers know that wherever there is a good Grange they are sure to have a good institute. The organization helps advertise the meeting, and the farmers have formed the habit of getting together for consultation. So, too, with the work of the experiment station and agricultural college. Wherever there is a live Grange, boys go to the college, and there is a large circulation of farm literature. All these things have an indirect bearing upon farm education and contentment. The Grange has also been of great service to the older men and women on the farm. Many farmers' wives, past the days of youth, "with lives broken on the hard wheel of labor," have found in the Grange opportunities for mental and social pleasures which were denied them by any other social organization.

FACTS ABOUT GRAPE JUICE

HOW IT SHOULD BE PREPARED.

For Home Use or for Sale.

During the past few years the business of preparing and selling grape juice has assumed large proportions. We have had so many questions about it that the following notes from an experienced vineyardist are printed:

How to Prepare the Juice.

Some of the correspondents desire information for domestic use and others for commercial ends. I would impress on the reader that the two are distinct, and the domestic method cannot be developed into the commercial with profit. This is an age when the household cannot compete with the well-equipped factory—at least in most things. Sixteen cents per gallon for juice gives a fair price for our Concord grapes. There is a wide difference between that price and 50 cents for a quart bottle with a fancy label. The expense involved from the press to the druggist's counter is more than the inexperienced will likely credit. The manager of a concern having an investment of at least $50,000, and a number of years of experience, tells me that the price of bottles is a greater factor in his profits than is the price of grapes. This statement may be surprising to us who have bottles under foot and consider them rubbish. As with some other things the selling is more than the manufacturing. Theoretically, there are large profits in the business, and no doubt the long-established and well-managed concerns find good compensation on the investment, but the inexperienced person should count 10 before entering the commercial class.

I unreservedly urge the preparation of grape juice for home use. The principles for preservation are essentially the same as for canning fruit. The greatest variation is the temperature. Fruit is often brought to boiling point before sealing. This would give grape juice a "cooked" flavor. A temperature of 175 to 180 degrees is as much as can be given. Keep the juice at this point long enough to heat the whole evenly.

In making wine, culls and partially rotted grapes can be used for the reason that the wine can be "doctored." Any "doctoring" of grape juice will impair its flavor, and therefore only good and well-ripened grapes should be used. With us in the Chautauqua grape belt Concord is the variety commonly taken. Pick the fruit from the stems and crush into a pulp. Heat the pulp from 175 to 180 degrees. If one wishes the clearest juice regardless of economy of grapes, let the juice drain from the pulp. If one wishes the greatest amount of juice regardless of quality, squeeze the pulp. Be certain that the juice is of above temperature before sealing the bottles or fruit jars. Fill so the juice will come as near as possible to the cork. Dead air space may contain germs that will cause fermentation. Cover the cork with wax. Jugs, if well glazed, may sometimes do, but glass is more certain.

Commercial establishments use large glass flasks or carboys for storage until ready to place the juice on the market, at which time the juice is siphoned from storage to the size of bottles required by the trade. The juice is reheated, and the canning process repeated. The market requires the juice to be as clear as possible. The sediment is the alloy. The siphon permits the clear juice to be drawn off without disturbing the muddy "settlings." This second bottling is not strictly necessary for domestic use, provided

small packages are used. Like canned fruit, juice will not keep long after being opened. The sediment can be largely retained in the bottle if carefully poured. Pressed pulp gives more sediment than drained pulp. JOHN W. SPENCER.

Chautauqua Co., N. Y.

Grape Juice for Vinegar.

Will juice from ripe grapes make good pickling vinegar? If so, please give process. How long will it take to make it? L. L.

Broad Ripple, Ind.

Grape juice will make vinegar. Speaking in a broad way, I would say that all grapes raised east of the Rocky Mountains contain a small amount of sugar as compared with the grapes of Europe or the Pacific coast. To promote development of acetic acid about 10 pounds of cheap sugar would better be added to a 50-gallon cask of grape juice. Give exposure to air by open bung and with same temperature development will be similar to cider vinegar. The color of grape juice vinegar is very attractive for table use. It is very strong and will bear some dilution. It contains some free tartaric acid, which makes pickles soft. I know of no way of elimination available to the average farmer. This tartaric acid is one of the sources of supply of cream of tartar used in baking.

J. W. S.

Hauling Juice for Wine.

I have a vineyard eight miles from town. Will the wine be affected by extracting the grape juice on the farm and hauling in barrels to the city before fermenting? Will several (two or more) kinds of grapes make as good wine mixed as if kept separate? G. H. K.

Knoxville, Tenn.

G. H. K. can haul his grape juice the eight miles with no probable interference with later fermentation. In answer to the second question I would say that I am not an expert in wine making. If I were I should feel obliged to ask the gentleman to go with me out back of the church under the horse sheds where I could whisper the little I know. I should do this out of deference to the strong temperance views of the senior editor of the R. N.-Y. Yes, *some* kinds of grape juice can be mixed to advantage in quality of the wine but not *all* kinds. Experts call it "marrying." Makers of champagne and past masters in wine making claim to have it down very fine. It is a kind of matrimony of which I know only by hearsay. J. W. S.

The Business Side of It.

I would like information from some one who knows about the manufacture of sweet grape juice (unfermented wine). The size of plant required to use two to four tons of grapes per day, expenses for help, expense of bottles, method of keeping the juice, etc. J. T. M.

Forestville, N. Y.

I would advise you to visit the establishments of Gerey Reckman, Brocton, N. Y.; the Fenner Grape Juice Company and the Welsh Grape Juice Company, Westfield, N. Y., and the Gleason Company and F. N. Randall, Ripley, N. Y. You will find that some of the above companies have investments of over $50,000 in plant and stock. I think you will find that selling is more than manufacturing. Unless you have ample capital and good executive ability, you will be like a village wagon-maker in competition with a wagon factory. You may think there is a big margin between a gallon of grape juice at 12 cents and 14 cents, which would make a fair price for our grapes, and 40 cents for a quart bottle as is paid when passed over the counter of a drug store. So there is, and no doubt some one finds the business profitable, but is is a question if a novice would find it so during the first year, and perhaps not the second in the business. I doubt if any of our present day manufactures can be adequately described by pages of information that will lead to profitable results without personal experience. The above establishments are 15 to 22 miles from your home, and a visit to them will give you more live information than a volume of THE R. N.-Y. If I wished to engage in the business I would either spend a year in the employ of one of the most successful firms, or go into partnership with some reliable man who had. J. W. S.

A WORM THAT "HAS WORMS."

I send a worm that I picked from my tomatoes; it is covered with some kind of moth. Will you explain what it is? F. K.

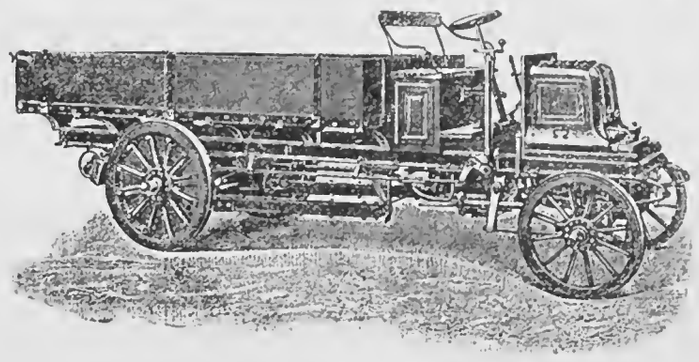
Bates, N. Y.

Although we told the story of one of these worms that "have worms" in THE R. N.-Y. several years ago, as it is an interesting story that all ought to know, and as we succeeded in getting the fine picture, shown in Fig. 303, of the specimen sent in by F. K., for these reasons we will briefly repeat the story, and hope the picture will help to impress it on the reader's mind: The caterpillar is one of those large, formidable-looking but perfectly harmless green Tomato worms. It looks as though it had been rolled in rice which had been coated with glue, and the kernels had adhered to its back. Naturally these caterpillars have a sickly gait, and well they may. These white objects projecting from the skin of the caterpillar are not eggs or seeds, as some have supposed; but each one is a cocoon within which there will be found a white maggot developing into a tiny four-winged fly!

How did the cocoons get into such a curious position? It happened in this way: When the caterpillar was about half grown, one of these minute flies espied it and, hovering over it, darted down upon it, and at each dart, inserted a minute egg through the skin of the worm. Each little fly is supplied with 100

A WORM THAT "HAS WORMS." FIG. 303.

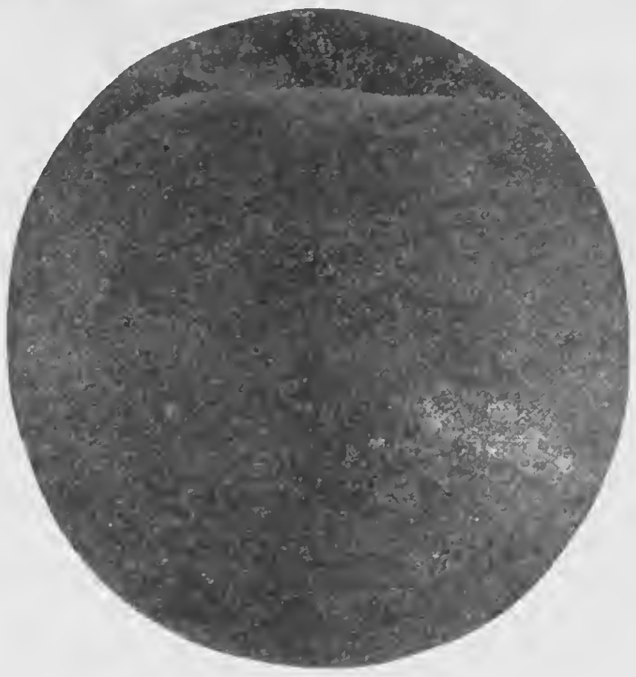
or more eggs, and usually she does not stop until the poor, defenseless worm has received nearly the whole stock. The worm doubtless wriggles as each egg is pricked through the skin, but it can do nothing to prevent the deadly work. In a short time these tiny eggs hatch into white maggots, which thrive and grow fat at the expense of their host that is all the time eating ravenously. And how can the poor worm grow much with 100 or more greedy little mouths



A FARM AUTOMOBILE. FIG. 304.

at work within its body, absorbing the food as fast as it is assimilated?

Right here comes in one of those mysterious things in nature that we so frequently meet among insects. The little maggots working inside the body of the caterpillar, understand perfectly well that, if they should attack a vital organ, their host would die, and consequently their food supply would be cut off. Hence, the maggots or parasites feed entirely and



THE NEW PEACH, MISS LOLA. FIG. 305.
See Ruralisms, Page 678.

only on the juices and fatty tissues of the body, allowing the vital functions of their host to go on undisturbed until his death. In every case, the parasitic maggots get full grown before the caterpillar has become so weakened that death ensues. The full-grown maggots then work their way through the skin on the back of their host, and at once spin around themselves the white cocoons. It is a very interesting operation to watch one of these parasites spinning its cocoon about itself. The cocoon finished, the parasite transforms within through a pupa stage to the minute fly, like its parent, which laid the eggs in the worm. When the fly has become fully formed, and is ready to escape from the cocoon, it deftly cuts around the upper end of the cocoon, and then pushes off the end, which opens like a little door, usually hinged at one side. The caterpillar usually lives but a short time after the parasites emerge from the cocoons. It is a curious sight to see one of these worms walking about with these cocoons attached to its back, as shown in Fig. 303, and one should never destroy such an afflicted worm, for it is carrying latent destruction for many more caterpillars. Nearly 150 of the parasitic flies have been found on a single Tomato worm, and it seems strange that the parasites do not check the pest to a greater extent than they do. Perhaps they, in turn, have their enemies. Such things often happen in the insect world.

M. V. SLINGERLAND.

AUTOMOBILES FOR FARM WORK.

The London Market Gardener gives a description of what it calls a "petrol lorry," which has been used for hauling farm crops to market. A picture of this vehicle is shown at Fig. 304. This machine does the work of six horses and will carry a load weighing 4,500 pounds. On one occasion this machine carried two tons of tomatoes 16 miles to market, leaving home at three o'clock. This load was taken off, then the machine ran home and hauled a second load and reached home after 64 miles of travel as soon as the horse wagons, which left the farm at eight the previous evening and made only one trip. The actual cost of fuel for these two trips was 75 cents.

The machine shown at Fig. 304 is 17 feet long, four feet nine inches wide, with a space available for loading of 11x6 feet. A steel frame can be used which will carry three tons if desired. It ran 16 miles, carrying 2½ tons in 2½ hours, part of the journey being up hills which required an extra horse on the wagons. The engine uses petroleum for fuel, and 10 gallons will run the loaded machine about 100 miles. The owner of this machine thinks that it will prove a great help to farmers in reducing freight and express rates for short distances. In one case he carried a load of 280 baskets of grapes to market at a total cost of $3.75. The regular railroad rate for the same distance was 12 cents a basket! It is quite likely that where the roads are smooth and the grades easy such machines will surely compete with the railroads successfully. In this country the roads are not all suitable for such machines, but near the large cities they could doubtless be run so as to carry farm products quickly to market. The French and the English are ahead of us in this respect, but it will not be long before Americans will take the automobile away from the city, and put it at work upon the country roads.

TRAPS FOR THE HESSIAN FLY.

On page 611 was printed a letter from S. W. Wadhams, of Niagara Co., N. Y., in which he gave his experience in sowing "trap crops" of wheat to attract the Hessian fly. We feel sure that our readers will be glad to know what Mr. Wadhams is doing this year, and so we print the following letter from him—dated September 14:

I am using the trap strip again this year, and the object lesson, that the farmers in this neighborhood had from my experiment on last year's crop, has so convinced them that they sowed their trap strips and are very willing to follow the suggestions of the experiment stations. We sowed two widths of the drill all around a 22-acre field, and two widths across the middle of the field August 20. The wheat is now four inches high, and is being rapidly covered with the eggs of the fly, which are plainly discernable under a glass. I find that some of the eggs are evidently being destroyed by some parasite. I also find that the eggs are being laid on oats sown as a cover crop following the early potato crop, and I believe it will pay to plow them under the same as the trap strips. We shall sow our regular crop October 1, and plow the trap strips under just before the last sowing appears above the ground. I emphasize plowing, since some of my neighbors have the idea that cultivating the trap strip up and resowing will answer the purpose. I do not agree with them, for I know that it is very essential thoroughly to bury the young plants, covered as they are with the eggs of the fly.

We shall resow the trap strip, using a forcing fertilizer, as we found by experience last year that it was equally as good as the rest of the field. We are giving the wheatfield very thorough shallow cultivation, thus giving us a compact seed bed with mellow surface conditions, and shall use a high-grade wheat fertilizer in connection with a top-dressing of barnyard manure spread with the Kemp manure spreader, thoroughly cultivated in. As I intimated in my letter to Prof. Roberts, we shall plow the trap strip under at night, believing that by so doing we shall be able to destroy millions of the fly that will be still laying eggs at that time. From my observation and experience I am led to believe that no wheat is fly proof, but some is more resistant than others, on ac-

count of stiff hard straw, but as a general thing these are of an inferior milling quality, and therefore undesirable. We shall sow No. 6 the same as last year, as there is a great demand for it by the shredded wheat biscuit manufacturers as well as for general milling purposes. I practice heavy fertilizing, but do not believe that we can push the wheat out of reach of the fly, since one of the most complete failures in this neighborhood followed a heavy top-dressing of manure and a heavy application of phosphate.

Monroe Co., N. Y. S. W. WADHAMS.

FARMING IN SOUTHWESTERN NEW JERSEY

Fertilizers to Start Stock Farming.

PART II.

Last week I mentioned briefly the system of farming followed on the home farm of Mr. I. J. Blackwell. Here we have land that for nearly 60 years has been well cared for. Such a farm will carry many head of stock, and, since only fruit, meat and wool are really removed from it, and, besides the hay and grain, both fertilizers and feed are added, it is comparatively easy to keep up the rotation. In order to carry out a definite rotation successfully the soil of a farm must be even and in good heart.

But what of a farm that has not been well cared for? What can be done with it? Mr. Blackwell has another farm of 107 acres, with about 12 acres taken up by timber and brook, which has begun to answer this question. By common consent this farm was "so poor that crows would fly over it." That expresses just about the depth of agricultural poverty. Two former tenants had failed to make expenses. Mr. Blackwell says that this farm represents a cost of $3,500, while the highest offer he could get for it was $1,500. Here as elsewhere the value of farm land was reckoned on the basis of the products it would turn off. As the chief farm products of this section are meat, milk or wool, when this farm failed to produce grass and grain its value ran down.

What can be done with a farm in a stock country which will not produce stock food? In such sections the argument is that live stock will increase the fertility of the land, but farm animals restore land only through what they eat, and this farm could offer them nothing. Should manure be hauled from other farms? No, for it was needed at home. Few farmers ever think it wise to haul manure from one farm to another. Should grain and fodder be hauled from outside and fed on the farm? That might be done, but it would be a slow and expensive way of restoring a farm under a tenant system.

Mr. Blackwell decided to start at once with fertilizers, believing that in this way he could quickly increase the amount of grain and fodder and thus work this poor farm into a profitable rotation. So he began at once with the Mapes fertilizers on wheat, grass and corn. The old sod was plowed and fair dressings of the fertilizer used. The farm was too wet in places to raise good crops, and considerable draining has been done. In starting the acreage of corn was large—that is, more of it was planted than there will be after a full rotation can be carried out. That was wise, because corn gives more stock fodder in one season than any other plant in the rotation, and also does well on sod with a fair dressing of fertilizer. This year's crops cannot be given yet, but last year's statement was about as follows:

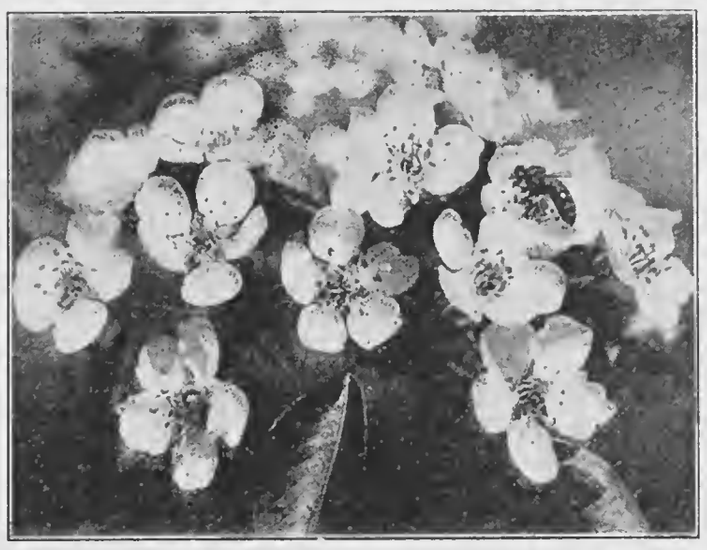
200	bushels of	wheat	$130
800	"	" corn	400
600	"	" oats	150
	Total		$680

In addition to this grain, there were about 30 tons of hay, while the stalks from the corn gave an immense amount of fodder. This was only the second year of using fertilizers, and it must be remembered that two years before the tenant was told that he would surely starve. It will take two years more to complete the rotation—that is, get fully over the farm with clover and chemicals. Each year increases the production of straw, grain and grass. All this is fed to stock, so that each year the number of animals will be increased and still more manure put on the corn.

Of course the rotation has not yet been fully worked out, but enough has been done to show the possibilities of this plan of restoring run-down land by means of fertilizers. Few potatoes are grown here, but the great object is to increase the crops of stock food, for when a farm can carry its full force of stock and all their manure is well saved and used the question of farm fertility is pretty well settled. On his home farm, which has for years carried its full share of stock, Mr. Blackwell still finds that it pays him to use fertilizers on the wheat and oats. He says that even after years of good tillage, and manuring he can always tell, in the wheatfield, where the fertilizer was shut off. The story of this poor farm is a striking one, showing as it does that there are conditions under which a bag of fertilizer may be made to grow into a manure pile. In this case the fertilizer was cheaper, quicker and more effective than purchased grain and fodder would have been, and I have no doubt there are many places where much the same methods could be followed to advantage. H. W. C.

GASOLINE ENGINE FOR USE ON THE FARM.

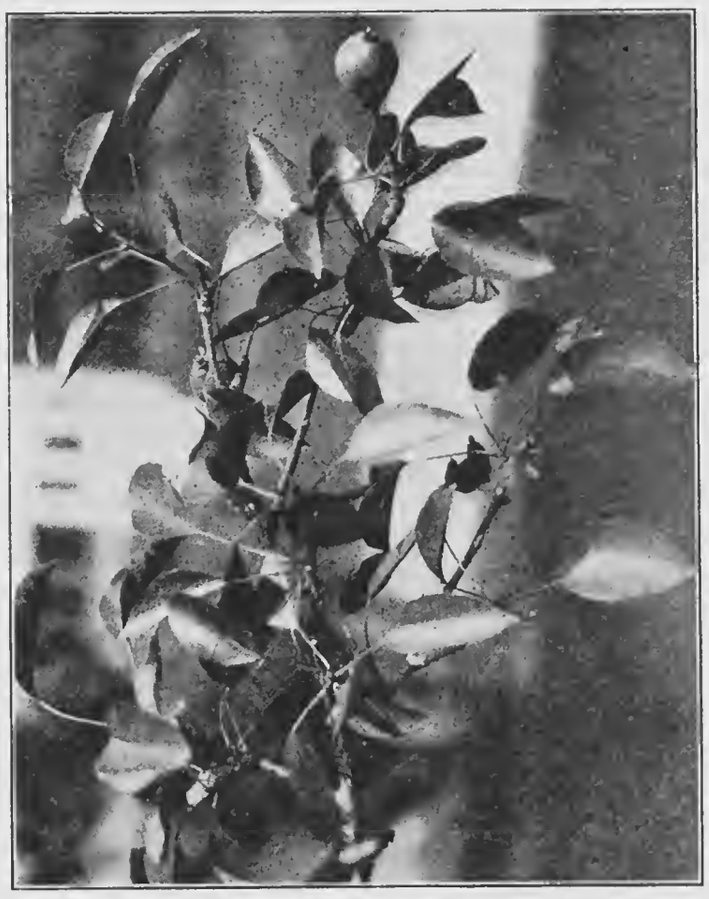
The question of power is ever a very important one on the farm, when it has not been solved satisfactorily. We all need mills to grind our feed, together with corn shredders, feed cutters and the like, and to operate them successfully we need a good



THE EARLY SPRING PROMISE. FIG. 306.

power. Horse power, be it tread or sweep, will not answer all purposes, neither is it the most economical power. It may do for a corn crusher, when the farmer's time doesn't count for much, or when he does his own work, but when labor is employed and there is considerable work to be done, we need something that will push the work along rapidly.

On the farm steam power is not what is wanted. Unless one is an expert engineer, it is very dangerous to operate, and to buy fuel and hire an expert every time we want to operate machinery makes it expensive. Then it is not a convenient power in Winter, for boilers must be filled and emptied every time the engine is started, and in spite of everything pipes are freezing and bursting, and something is out of order nearly every time we want to run. Machinery that is heavy enough to turn off work expeditiously can't be run economically with horse power. The farmer needs an engine or power equal at least to six horses, if he would have his work done satisfactorily. After an experience of 20 years with most all kinds of powers we can say that nothing equals the gasoline engine for convenience, economy and expedition of work. We have had a six horse-power engine in use for five years. It is always ready for work, and can be started in two minutes when needed. We knew nothing at all about this kind of engine when it was



HOW THE PROMISE FAILED. FIG. 307.

See Page 677.

bought, but with the printed directions for operating and keeping engine in repair we have run it up to this time without a cent out for repairs. We frequently hear it said that a gasoline engine is a complex machine, and liable to get out of repair, and this may be true of some makes for aught we know, but this has not been our experience. We operate it at an expense of a little less than 10 cents an hour. The fuel to run a steam engine will cost considerably more than this, to say nothing about an expert to operate it. We run corn crushers, bone grinders, fodder shredders and feed cutters at all times of the year, and our engine has never failed to do its duty, when the battery was in good condition. It costs about $4 a year to renew the battery, but we have had batteries to last a year and a half.

We wouldn't advise anyone to buy less than a six horse-power engine, and always have it mounted on trucks. You frequently need to shift it around from place to place in the barn, or from one barn to another. In almost any neighborhood the farmer can make good wages shredding fodder or running machinery for his neighbors. In fact, if we were so minded we could operate our engine in this way a good portion of the year. When a farmer doesn't feel able to buy an engine himself, he can usually find some of his neighbors who are willing to join with him and use it together. It is quite convenient to have heavy machinery in partnership, as a few farmers living close together can help each other in handling crops, and save a considerable outlay of money, which the larger farmer pays out when he owns and operates his own machinery. Farmers are beginning to realize what the corn fodder crop is worth when it is properly handled early in the season, but it is rather expensive to hire outfits, as they go about through the country, to do the work. The only remedy we know of is combination, and when power is needed secure a gasoline engine. It is no longer an experiment, and you run no risk in putting your money in one. W. W. STEVENS.

Indiana.

SKIM-MILK AND LIME PAINT.

One of the chief methods for improving the appearance of buildings, is by painting, which is expensive, and soon fades. It costs quite a sum to cover buildings with two coats of lead and oil, when planed boards are used, and is beyond the poor man's means when buildings are old and rough boarded. The worst of it is that paint is not durable. A few years ago I paid about $60 for patent prepared paints, and in two years but little remained on the house. A painter acquaintance told me the trouble was with the paint, and advised the use of lead and oil, to be mixed at home. The best white lead I could get was bought, a supply of oil obtained, and a first-class painter secured. Then my troubles began, for the painter insisted on mixing small quantities at a time, claiming it should be put on soon after mixing. Three-quarters of his time was spent mixing paint, and no two batches were exactly alike in color or texture, but then it was all "hand painted"; nothing cheap about it, and I dared not complain, for painters are too scarce to take any back talk. The space covered with paint each day was but little larger than the bill for the work. This preparation has lasted better than prepared paint, but cost enough more to make up the difference, and after a few years begins to show considerable wear.

This experience clearly demonstrated the fact that a poor farmer could not afford to keep barn and hen houses of unplaned boards painted with such paints, and I was induced to try "government whitewash," which nearly every paper in the country has given a free advertisement. It made a paint easily put on, and came off as easily as it went on. It cost quite a good deal for material, required some time to make it, and was money thrown away, as it did not last a year. It covered up everything it was put on, leaving the surface so white and dazzling that the glare hurt the eye, and no defect could be seen for the short time it remained. I imagine it is the kind used in investigations, and derived its name from that source.

Thirty years ago a building was painted with skim-milk and stone lime and looked quite well—traces of that mixture still remain, and the boards have been well protected. In the Spring of 1900 I used a milk and lime mixture which is wearing well, and is very cheap in both material and time required in putting on. We used sweet skim-milk, water lime colored with yellow ocher, using Venetian red for the doors. The mixture must not be too thick with lime, for it will form a crust, instead of penetrating, which will crumble off after a freeze or a hard jar. When right it will show the grain of the wood through it and cannot be rubbed or scraped off. There is too little of it to crack off, and a pretty shade of color is obtained by using the ocher. The shade can be varied to suit the taste, and to secure uniformity a large quantity should be mixed at one time, using a large tub or barrel to mix in. Measuring both milk and lime also aids in getting satisfactory results. The durability does not seem to be affected by the amount of rubbing in given, and where we used an old half-worn broom it seems to stay as well as where we spent more time, with ordinary paint brushes. It looks a little smoother on close inspection, but not enough 10 feet away to pay for extra time required. I would use brushes four to six inches wide, and slap it on lively, keeping the contents of the pail well stirred, as some of the lime will settle to the bottom.

Compared with other paints, this mixture, which really looks well, costs so little one could afford to put on a coat each year, but I think from present appearance it will last many years. The effect of a straw-colored building with red doors, as seen through the green of the plum trees, is pleasing, and as this mixture sticks to any old board it can be used on fences, hen parks, and small buildings, at a very slight expense. There are none so poor they cannot afford to paint and beautify their premises with this mixture. The color should be added to avoid monotony, and is more pleasing than the universal white buildings and fences of Delaware, or the red barns and white windows of central New York. Do not put it off, thinking it a big job, for it is easily and quickly mixed, and a man can paint a large building in one day. The entire cost of painting a good-sized barn need not exceed $5. C. E. CHAPMAN.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Connections for Lightning Rods.

J. D., Stanton, N. J.—In putting lightning rods on buildings, is it necessary to have more than one ground connection to each rod?

ANS.—One good ground connection is all that is needed, but it should go down to permanent moisture. Many good systems are rendered ineffectual by grounding in dry, non-conducting soil.

Lime Wash for Borers.

W. W. S., Hightstown, N. J.—A friend has heard that the application of a hot thick wash of lime to the infested parts of a peach tree will kill the borer. He is informed that such a wash is successfully used in Maryland. Does any reader know of the success of such application?

ANS.—Such a lime wash would probably destroy any small borers and eggs with which it might come in contact, but could have little effect on those buried in the wood. The knife is about the only cure for infested trees, but lime and gas tar washes are useful as preventives.

An Old Soldier and a Pension.

E. W., Lanoka, N. J.—Can you tell me how to apply for a pension? I have an old man helping me who served in the Civil War. He was drafted at the close of the war, was in the last engagements, doing active service over a year, and was honorably discharged. Now through misfortunes he has lost his papers. Is there not an official record kept of the soldiers serving in the war, their names, honorable discharge, etc., and where shall I make application for the same?

ANS.—We wrote to the War Department and find that, in order to secure a certificate to take the place of lost papers, a blank furnished by the Department must be filled out, signed and attested and sent to the Chief of Record and Pension Office, War Department, Washington, D. C. The certificate will then probably be made out, and then application for the pension itself must be made to the Commissioner of Pensions, Washington, D. C.

Covering Bush Fruits in Cold Countries.

T. E. B., Whitewood, S. D.—I would like a little information in regard to Winter covering for dewberries. I covered mine two Winters with earth; in the Spring they came out bright, but in about 10 days I would find them dead, almost to the ground. Last Winter I left them without cover, and as usual have no berries. I have a strong healthy growth this year, and would like to save them if possible. Our Winters are mild and dry. What snow falls, until near Spring, blows into holes and low places, so that the ground is bare most of the Winter. The mercury seldom falls lower than 20 below zero, and then for a short time only. Fruit is scarce and high in this country and we like to save all we can.

ANS.—A thick soil covering is considered most effectual, and is in common use in northern blackberry plantations. A covering of hay or straw, held down by brush, might save the berries, but dry winds and a temperature of 20 degrees below zero are too searching for most cultivated members of the Rubus family. We should try covering with earth again, covering the whole with straw and brush.

Small Shoots of Asparagus.

A. L. J., Chateauguay Basin, Canada.—An asparagus field that did not cut its average this past season, has lately sent out young green shoots among the dark green growth. It is very noticeable, and some one remarked that it was a "sign of weakness." Is that so? It may be injured by frost before maturing. What is the best to be done for such a field? It was slightly rusted last year.

ANS.—Without some knowledge of previous conditions it is considerable guesswork to answer. If we reason from the normal growth of asparagus, which throws up shoots in late June quite large if allowed to grow, then smaller in July, and in the last August growth about the same, only fewer, it would indicate that a suspension of July normal growth had taken place from some cause, and the late August growth of small shoots was excessive. But as the rust is letting up this year, it may be from that cause. One thing is certain, that from whatever cause next year the bed will cut small shoots, as the growth is too late to perfect large buds for next year's cuttings; that requires a long growth of top.

New Jersey. E. BEEKMAN.

Copperas for Peach Trees.

J. M. R., Cornwall, N. Y.—Has copperas any specific chemical action that would lead you to think it useful to peach trees attacked by yellows? Early last Spring I applied eight pounds to each of two peach trees that were very sick with this trouble, and mixed it with the earth by a shallow hoeing. I also poured several pails of liquid manure from stable around them. Within six weeks the trees looked green and healthy. Was it the copperas or the liquid that worked the cure? If in your judgment it was copperas, would it be effective in the apparently similar disease that attacks raspberry vines? I have lately applied copperas to two young peach trees; I have omitted fertilizer. Still, the result, if failure, may be due to application at wrong season and therefor not conclusive.

ANS.—It is not likely that the copperas, which is simply sulphate of iron, had any effect in restoring the vigor of your peach trees. Many cases of supposed peach yellows are simply starvation of the tree from lack of food supply within reach of its roots. The liquid manure you supplied and the subsequent cultivation are sufficient cause for the improvement noted. Possibly an abundant feeding or manuring would have a similar beneficial effect on your raspberries. The application of the copperas might in the end be beneficial to the trees by supplying iron in the soil, though its immediate effect might be supposed to be injurious to the young rootlets.

Holding Peach Trees Over Winter.

J. L. H., Crosswicks, N. J.—Will some one tell me the best way to care for young peach trees the Fall and Winter previous to planting them, and why it would not be just as well to let them stand in nursery rows until planting time, especially if they were planted early?

ANS.—Unless the coming Winter may be very severe, I think peach trees almost anywhere in New Jersey would be just as well or better off standing in the nursery row, where they now are, than dug up this Fall and stored until Spring. I have often treated them both ways with good success, and in Kansas I found it the safer plan to dig them up in the Fall and bury them root and branch in moist earth until early Spring, when the time came for planting. It is a common practice now for nurserymen to put trees in storage houses over Winter, which enables them to get at the trees earlier in the Spring than it would often be wise to disturb them in the open ground, because of its very wet or frozen condition. H. E. V. D.

The Uplands of Virginia.

W. P. S., Grove, Va.—Would it be a profitable venture to plant an orchard of peaches, pears and apples on the "uplands" of the peninsula of Virginia? Which one of the three fruits named would pay best?

ANS.—By the "uplands of the peninsula of Virginia" I do not know what is meant, as there are only two counties of that State on the lower end of the Chesapeake peninsula, which lies just north of Cape Charles and between the Atlantic Ocean and Chesapeake Bay. The highest ground anywhere in this part of Virginia is only 43 feet above sea level, and I hardly think it would be proper to call any part of such a flat country "uplands." As I have repeatedly been all over this region I may say that many kinds of fruit do well there, but not so well in a general way as farther west, and especially in the fruit hills of the Blue Ridge country. However, there are a few small apple orchards there, and some of peaches and pears, which are doing quite well, and, I think, orchards of these fruits might be made to pay. I think of the three fruits mentioned the apple would pay the best because Spring frosts are quite common there, and the peach and pear crops are more likely to be cut off from that cause. H. E. V. D.

The Vermont Beauty Pear.

L. C. S., Garrettsville, O.—Can you tell me anything about the pear called Vermont Beauty? I have quite a collection of pears, including Wilder, Clapp's Favorite, Bartlett, Flemish Beauty, Howell, Anjou, Angoulême, Lawrence, Kieffer and Idaho, the last named blights badly. Am favorably impressed with the description of Vermont Beauty, but I do not want any kinds that blight easily. Any information in regard to this or the prevention of rot in plums will be gratefully received.

ANS.—Vermont Beauty is one of the newer pears. It seems to be well liked so far as it has been tried. It is of medium size, yellow with a very handsome red cheek, and of very good quality. It ripens in the Fall when pears are usually very plentiful, but it may find a place either for market or family use, and possibly for both. It is not accused, so far as I know, of being especially affected by blight. The Idaho is so bad in this respect as to be practically worthless, although the pear itself is very good. As to rot in plums; this can be in a large degree prevented by spraying in the early part of the season, and up to the time the fruits get about full grown, with Bordeaux Mixture.

H. E. V. D.

Peaches; Use of Potash.

C. B., Berkeley, N. J.—1. Is the Willett peach a good bearer? Is there any good yellow peach one week or so later than the Late Crawford? 2. When is the proper time to apply kainit to peach trees that have borne a good crop this year? The trees have grown well this year. They are about six years old.

ANS.—1. The Willett is a yellow, freestone peach of about the same size, color and general character as the Crawford Late, but is a week or 10 days later than that variety. I think it would perhaps answer the desired purpose. Chairs is another peach of the same character, except that it is only a few days later than Crawford. Where the two are planted together it seems to prove somewhat the better. 2. It matters very little what time of year kainit is applied to the soil of a peach orchard. As the potash which constitutes about 12 per cent of its weight is the valuable part, the rest being mostly common salt in a very crude form, the manurial part, that is the potash, will become dissolved in the course of time and will be a great benefit to the trees. However, I think muriate of potash is much better, because it contains about four times as much potash, and will not put the fruit grower to the necessity of handling so much salt, which, of course, is of no value whatever as a manure.

H. E. V. D.

I HAVE been very much interested in your published experiments on Alfalfa. There are large quantities of it raised here, yet few seem to realize the feeding value of it. I cut mine when in full bloom. Mow in the morning, rake in the afternoon and haul to barn on stack, from windrow, the following day, if weather permits. In a lower altitude, with greater humidity, it might have to stand longer before being stacked. Rain is delaying stacking and thrashing in this vicinity; something very unusual in this part of the country.

Whitewood, S. D. T. E. B.

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PROMISE AND FULFILLMENT.

What a beautiful sight a fruit tree in full bloom is! Each one of the thousands of blossoms is bright with promise of fruit to come. The busy hum of bees shows that they are eagerly carrying the pollen from flower to flower, thus doing their part to insure the fruitage. Why should not each flower fulfill the promise it now makes? Many mishaps may befall these flowers before they become fruit. In spite of the busy work of the bees many flowers fail to become pollinated and so quickly drop away. In the cluster shown at Fig. 306 every flower seems perfect. Bees came to visit them frequently, though not as often as to clusters higher in the tree. I have often noticed that the very nicest fruit is generally found at the top of the tree, but it never occurred to me before that one of the reasons may be because the bees did their work more thoroughly there. Experiments have shown that a liberal supply of pollen often adds to the quality of the fruit. Fig. 307 shows how much the promise has dwindled at midsummer, so much like our own promises and expectations oftentimes. Two little rusty pears are left, only one of which is on the immediate part photographed in flower. Even these are having a hard battle with the scab fungus, which has disfigured the surface and may ruin the fruit altogether, causing it to crack open or to fall before ripening.

It is interesting to draw down the branches of an apple tree in Summer and note the scars about the spurs, showing where blossoms were borne in the Spring. What tragedies are written there! Many dropped very soon; others persisted for a time, then succumbed to the attack of some insect or other enemy, while only a few remain. The story of their struggle is told by the size of the scars which are left. Only one out of many becomes a perfect fruit. The rate of mortality among children in cities is carefully watched. Whatever promises to reduce it is strongly urged and put into practice if possible. We might well inquire what can be done to reduce the mortality among the growing fruits upon the tree. One of the most important things is to encourage the bees. Imperfect pollination is probably the greatest source of loss with many kinds of fruit. Do not spray the trees while in bloom. This may kill the bees, and kill many of the flowers as well. It may even be wise to keep bees on the farm if there are few in the neighborhood. It is also wise to plant different varieties of the same fruit together. Many varieties do not set well unless they receive pollen from a different variety. This is well recognized among plums, pears, apples and grapes. I have found it equally true among bush fruits. Some varieties seem to thrive well alone, but many do not. Intermingling kinds which bloom at the same time will add much to the value of the work of the bees.

Plenty of plant food in the soil will also help to carry through a larger proportion of the fruits to a successful ripening period. To grow well they must be fed, either from food already stored up in the soil or from that applied. Not only must there be food in the soil, but grass and weeds must be kept from robbing it away from the tree. Good tillage is even more important than a liberal food supply. Many young fruits fall or fail to develop from lack of moisture. Thorough tillage will do much to obviate this. I read to-day how Roland Morrill, of Michigan, tilled his peach orchard during last year's drought, going over the whole of 100 acres every day, and finding that it paid. He added that under such tillage the "June drop," so commonly expected in peaches, cut no figure.

Some one will say that too many fruits often set anyway, and that to do these things which will add to the number is unwise. This is sometimes true, but it is not easy to control matters aright by allowing Nature to do her own thinning in this way. We cannot always foresee what the outcome is to be. The worst of the matter is that when Nature thins she weakens all the fruits in getting rid of part of them, so that the ones which remain are not in condition to improve their opportunities as they should do. Thinning fruit is expensive where it must be done by picking off individual fruits, but it permits the most perfect specimens to be left, and does away with the competition from excessive numbers and from those which can never make perfect fruits under any conditions. It is important that the thinning should be done before the fruits grow so large as to call heavily upon the available food supply. Nature cannot be depended upon to take them off at the right time.

FRED W. CARD.

EVERYBODY'S GARDEN.

UNSIGHTLY THINGS.—It is surprising how much rubbish and how many unsightly things have accumulated in and about the yard during the Summer. To rectify this, the girls, outside of school hours, are making themselves useful in gathering up the litter to be burned. The bonfires made of the trash largely compensate them for the labor, and we do not forget to teach them that there is also much satisfaction and pleasure in enjoying the better order of things. Then they assist in gathering the flower seeds as they mature, and help prepare them for use next year, and also in clearing the ground of matured stalks. Teaching them also to keep a sharp lookout for a place to plant either a useful or ornamental tree or shrub, is developing them along the lines of home beautifying and attractive surroundings.

WORK FOR THE BOYS AND GIRLS.—The work above referred to will, if carefully arranged, afford a very interesting and useful field for the boys and girls. It may be easily managed so as to be a pleasure rather than a drudgery, and we want every boy and girl reader of THE R. N.-Y. to start now and see what can be accomplished before the Winter begins. As you go over the yard or grounds, tidying up and clearing off the rubbish, look about to see where a nice flowering shrub or a forest or nut tree might be planted. A nice Sugar maple, elm, ash or basswood will greatly beautify some barren or unsightly spot; or a hickory, walnut or butternut tree will not only add beauty and shade, but by and by the nuts will follow, and usefulness as well as beauty will be the harvest of the future.

When the plans for planting are decided upon, the next thing will be the selection of the trees or shrubs. Nearly all varieties of shrubbery and ornamental trees, evergreens excepted, as also most of the nuts and fruit trees, barring the peach and apricot, may, if properly done, be planted in the Fall. As soon as the frost nips the leaves so that they fall readily, the trees or shrubs should be carefully taken up, removing all useless limbs and broken roots. The root pruning should be done with a sharp knife, cutting from the underside and outward, leaving a long clean-cut bevel. The holes should be dug large and deep enough to admit of filling in to some extent before setting in the tree with rich surface soil, setting the trees a little lower than when in the natural state. Bank up the soil around the trees sufficiently to prevent the water from settling around the roots, and a heavy mulch of well-rotted manure to protect from too severe freezing, will also be helpful. No disparagement to the Stringfellow method is intended, but the boys and girls are my special congregation this time, and doubtless the old methods will be safest for them.

This is in part the work which I want THE R. N.-Y. boys and girls to begin this Fall. Make the home dooryards just as clean and beautiful as possible, but do not stop at this. Appoint a meeting at the schoolhouse, and be sure to attend it. Clean up the school grounds and make them tidy and homelike. Set out some trees this Fall and plan for flowers and lots of them in the Spring. Make your schoolhouse and grounds attractive and beautiful and your teachers will surely appreciate it and assist you. Our country schoolhouses are towers of strength, so guard and cherish them sacredly, and when you hear talk of abandoning them and carting you off to the central school, sit down on it so hard that it will not be mentioned again in your hearing.

J. E. MORSE.

Michigan.

Hydrocyanic Acid Gas for Rats.

W. F. C., Turner Center, Me.—We have a poultry house, containing 1,750 cubic feet, thoroughly overrun with vermin. It was so when we came here, and we haven't been able to clear them out so far. Would not hydrocyanic gas do the work? Would the formula quoted by you in THE R. N.-Y. some time ago—one-fourth gram cyanide, three-eighths sulphuric acid and three-eighths water—be the proper proportions for such work?

ANS.—Our cats have cleared the rats and mice from the farm buildings. We think that several good cats fed only on skim-milk, and confined in that building for a while, would clean it. A ferret with a man who knows how to handle it would go down into the holes and drive the rats out. The hydrocyanic acid gas will kill any breathing thing that gets a whiff of the fumes. The rats must be induced to come up into the house in order to make this plan effective. Prof. W. G. Johnson tells of killing a large number of rats in an old smoke house. They placed the jar of acid and water in the house and hung the cyanide on a string over the jar so that it could be lowered from the outside. Then they threw corn inside the house and shut the door. The rats came out of their holes to eat the corn and, while a drove of them were fighting and squealing, the cyanide was lowered from the outside. In using this gas first find the cubic contents of the house or room. For each 200 feet one ounce of cyanide of potash is required. For every ounce of the cyanide use two ounces of water and 1½ ounce of sulphuric acid. For example, in the house mentioned, containing 1,750 cubic feet, you will need nine ounces of the cyanide. Put 18 ounces of water and 13½ ounces of sulphuric acid into a deep jar. Put this jar inside the room near the door. Wrap the cyanide in paper. Tie it to a string so that it will hang just over the jar and be sure to fall into it. Pass the string through a hole outside the house, so that it can be quietly let down. Throw corn or other food inside and shut the door. Night will probably be the best time for the job. Wait till the rats come out of their holes and then gently lower the package of cyanide into the jar. The gas will be instantly generated, and whatever breathes it will be killed. It would not be effective against the rats and mice to start the gas in the empty house, for it would not penetrate into the holes so as to kill the pests there.

Turnips for Green Manuring.

J. C. Q., Hickory Grove, Pa.—Some time ago I read an article in your paper stating that turnips plowed under for manure were superior to clover used for the same purpose, inasmuch that the turnip seed was surer to catch, and the crop was so much earlier to plow under than the clover. What is your opinion about it, and which is the best turnip seed to buy for the above purpose?

ANS.—Turnips will "catch" and grow on soil too poor to grow clover. They will make a quick growth and can be plowed under before rye seeding in the Fall. In no other respects are they superior to clover, and, unless you can use fertilizer of some sort with them, they will benefit the ground but little. Turnips as a green manure crop are at best only a makeshift and not to be considered where the clovers will grow. Our experience with the Cow-horn turnip this Fall is favorable.

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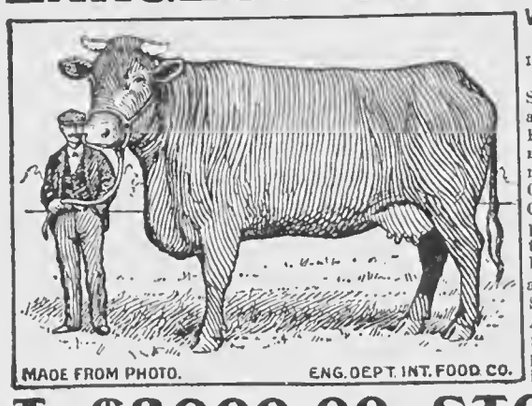

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Ruralisms

NOTES FROM THE RURAL GROUNDS.

WORTHY AMERICAN CANNAS.—The Canna thrives everywhere during warm weather, if given rich soil and plenty of moisture, but the floral effect is most brilliant in sheltered situations where the great trusses of bloom are measurably protected from brisk winds. Although extensively used for massive bedding effects about the breezy coast resorts, making a distant show of tropical luxuriance and glowing color unequaled by any other plant, one must go to some quiet place in the interior to find large masses of blooms in good condition throughout the day in average weather. The writer lately visited the Canna fields of the Conard & Jones Company, West Grove, Pa., for the purpose of comparing varieties. The Canna seems to find just what it needs in the clay loam soils covering the limestone slopes of this locality, and nowhere can more deeply tinted foliage nor livelier colors in the blooms be seen. Nearly eight acres are planted to Cannas, this splendid plant being an especial favorite with Antoine Wintzer, manager of the grounds, who has worked for years in the line of Canna improvement with a single-hearted interest very rare among horticultural originators. Seedlings and hybrids to the number of 20,000 and upwards are raised every year, and selections carefully made for future comparison. The practice is to inter-cross the finest varieties of diverse specific parentage, with the definite end in view of producing types specially adapted for American conditions. The range of color is being constantly extended and diversified, and the habit of growth and finish of bloom brought nearer perfection. The color effects of the immense blocks of favorite varieties was almost overwhelming in intensity, and made a startling contrast with the deep green of the surrounding woodlands. Among the many new varieties of special merit not yet disseminated are several with bright orange or scarlet flowers on deep mulberry foliage, the first dark-leaved Cannas we have seen bearing first-class blooms, a new white-flowered variety, very vigorous and profuse in bloom, and some very beautiful striped and flamed sorts of dwarf growth.

The following varieties, originated by Mr. Wintzer, are now in commerce, and have been repeatedly tested on the Rural Grounds. They are reliable and among the very best of their respective colors:

Pillar of Fire; six to seven feet; erect truss; early bloomer; brilliant scarlet.

Philadelphia; three to four feet, rich, shining intense crimson.

Duke of Marlborough; three to four feet, dark maroon crimson.

Black Prince; four to five feet, large, deep maroon.

Maiden's Blush; three to four feet, light, peachy pink.

West Grove; three to four feet, deep coral pink, very vigorous and free blooming.

Martha Washington; three feet, deep rosy pink, large flowers carried in dense heads.

Betsy Ross; two to three feet, bright, clear pink, probably the finest of its color.

Buttercup; three feet, deep golden yellow, very constant and reliable.

Coronet; 3½ to four feet, light pure yellow.

Queen Eleanor; two to three feet, yellow, thickly spotted with brownish-red.

Admiral Schley; one to 2½ feet, scarlet mottled and edged with yellow.

Niagara; two to 2½ feet, crimson, much mottled and very broadly edged with deep yellow flowers of great substance.

Mt. Ætna; three to four feet, dark purple foliage, large crimson scarlet flowers.

Alsace; four to five feet, large trusses of creamy-white flowers, deep-green foliage; very good for masses.

Queen of Holland; three feet, dark bronzy marbled foliage, large well-formed flowers, bright clear orange.

Pennsylvania; six to seven feet, immense dark green foliage, flowers five to six inches across, pure bright scarlet. A product of Rural Grounds hybridization, disseminated by this firm. It is a dilute hybrid of Canna flaccida and apparently the best of the type.

The handsomest foliage Canna seen here, and probably the best in cultivation, is Black Beauty, which originated several years ago in Washington, D. C. It is probably a seedling of the old Canna discolor, and is certainly no better in bloom, but the rich dark plum-colored foliage gracefully fluted at the edges makes it very attractive at all times. Black Beauty needs good culture to bring out its full beauty, and though before the public for several years has not become common owing to its slow propagation. The blooms are so insignificant that tney are best cut away as soon as they appear.

THE GOLDEN "BLEEDING HEART."—The beautiful Japan bleeding heart, Dicentra spectabilis, so commonly grown in old gardens, is one of the most familiar and useful of hardy herbaceous plants. Most country people are aware that two near relatives of this attractive plant grow naturally in rich woodland throughout eastern North America. They are popularly known as squirrel corn, D. Canadensis, from the maize-like little tubers, and Dutchman's breeches, D. cucullaria. Both have handsome, finely cut foliage and nearly white flowers, the first tipped with rose and the latter pale yellow. D. eximia, from the mountains of Virginia, has large rose-colored blooms and richly cut foliage, probably the handsomest of all our hardy plants. All the above are in commerce, and may be had from most plant dealers, but the golden-flowered D. chrysantha of California is seldom cultivated. Seeds were procured through the kindness of Carl Purdy, Santa Rosa, Cal., who stated that they were gathered from plants growing on dry hills, in localities where there was little hard frost. They remained a year in the soil before germinating, but grew rapidly after starting, making stout-branching plants about 14 inches high. The foliage is bluish green and very handsomely cut. The flower spikes began to appear in July, and a little group of nine plants has not been without bloom up to the middle of September. The flowers are of the usual heart shape, bright golden yellow with an orange-brown blotch. They are very small, however, compared with the common bleeding heart, and the racemes stand quite stiffly erect, not bending with the graceful curve associated with the garden species. As many as 50 blooms are sometimes produced in a panicle, but the effect is not as showy as one would expect from the fine color. Mr. Purdy thinks D. chrysantha will prove of doubtful hardiness in the East, but an effort will be made to carry our plants over with good protection.

NEW EARLY PEACH, MISS LOLA.—Fig. 205 represents a good specimen of the new early peach, Miss Lola, received from J. H. Black, Son & Co., Hightstown, N. J. It is a round white-fleshed peach with a clear pink and white skin, and a slight clingstone, which seems to become more marked in wet seasons. Messrs. Black say that the tree is a good grower and bears well. It comes in before Early Rivers, and just after Greensboro. The quality of the specimen illustrated was very good, better in fact than either of the two varieties above-named. The Messrs. Black regard it as about the best of its early season.

W. V. F.

For the land's sake, use Bowker's Fertilizers. They enrich the earth.—*Adv.*

FINE QUALITY IN PLUMS.

A remark in the paper of Mr. Garfield, of Michigan, presented at the recent meeting of the American Pomological Society, while not new, is worthy of serious consideration. His remark in the form of a query was: "Are we encouraging the consumption of fruit by growing and selling in quantity Ben Davis apples and Kieffer pears?" Is it not a shortsighted policy to continue the cultivation of this type of fruit to the exclusion of others which, though probably less productive, are much finer in quality? It has been conceded on all sides that the introduction of the Japan plums has proved a great boon to fruit growers and fruit consumers in America. While the fruit is exceedingly handsome, and the trees are productive, yet in a fruit-sampling expedition in which I was engaged a day or two ago, I could not help thinking after testing many of these Japan plums, that after all, when one wanted something really delicious and something which would stimulate the appetite rather than cloy it, one had to select a variety of the Domestica type, such as Coe, Washington or Green Gage. A Chabot or a Burbank did not arouse a keen desire for more of the same kind, but the case was different with Reine Claude and Jefferson.

It has been frequently stated that if the Japan type did not prove in itself to be exactly what we wanted, it had in it the qualities which would make it valuable in crossing with our native species. This may be so, but we have little so far as I have seen to strengthen the truth of this assertion in the many hybrids which have already been produced. On the Cornell Experiment Station grounds there are fruiting at the present time a large number of Normand's hybrids, which are crosses between the Japans and varieties of Chickasaw. The trees are intermediate in habit, are fairly productive, and the fruit is usually handsome in appearance, and combines in quality the piquancy of the Angustifolia with some of the solidity of flesh of the Japan, but the combination so far as flavor is concerned cannot be said to be desirable. There is an insipidity to the flavor which we do not like. The skin is also so thin that it obviates the possibility of these fruits having any special commercial value. After testing these hybrids I am led to the opinion that a more profitable line of experiment would be to cross the Japan with the American strain. Possibly by doing this a firmer skin and a higher flavor might be secured. A few crosses of this kind are already on trial, and appear to warrant the assumption that greater success will follow this line than the Chickasaw combination. We, at this stage, need quality, and it seems to me that quality and flavor should form one of the principal characteristics considered in selecting new varieties. We should not forget that eventually such fruit is to be eaten, and that if it is not palatable it will fail ultimately, however useful it may be for decorative purposes.

JOHN CRAIG.

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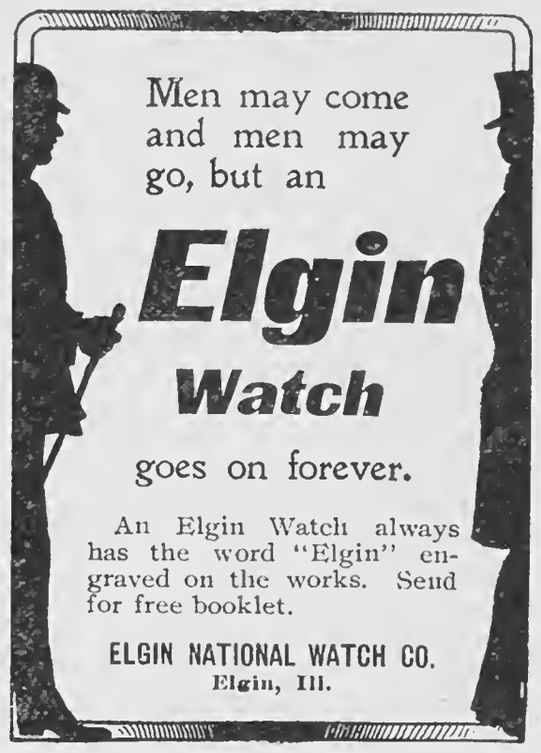

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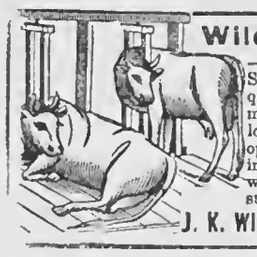
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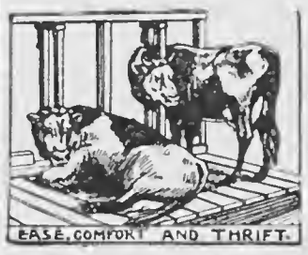

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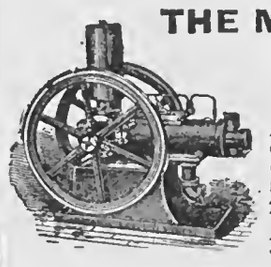
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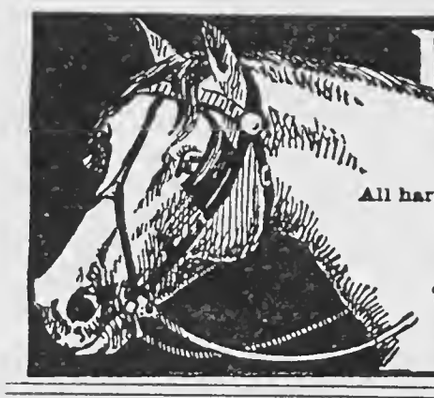
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HOPE FARM NOTES

A SEWING LESSON.—The picture shown on the first page is a familiar one to the Hope Farmers. On every pleasant day Grandmother and the little girls may be seen out under the grape arbor with their needlework. Jack caught them with his camera one day in August. The two little girls, Bud and Scion, are quite expert with the needle. The Bud has nearly finished a large quilt and her great ambition is to be able to "sew a button on Father's coat!" We mean that the little girls shall learn to be really helpful. I have heard people tell what a wonderful thing the typewriter has been for woman, since it has given her a fair chance in business. That is all true enough, but some of these same business girls would make bad business of the family health if they were put into the kitchen to prepare meals! I hope our little girls will learn how to sew and bake and sweep and wash and do all the homely and domestic things that make the housekeeper as useful to the country as the house builder. Grandmother knows the value of all these homely things. She lived in the South during the war, when people were put to all sorts of snifts in order to live comfortably. It will be noticed that the little girls are barefooted. That is the way our children run all through the Summer. We are told that it will make their feet large! Will some one please tell me what disadvantage that will be to strong and earnest people who have their share of the world's work to do? I fear that the Bud has good-sized feet in her pedigree, anyway.

SCHOOL DAYS.—The Madame has started her little school. The Bud and Graft and the two Scions and three little folks from a neighbor's make a nice little school of seven. It's remarkable how these little minds absorb and retain what the children hear. It was a touching sight to me last Sunday afternoon to see the little Bud out on the piazza with the old Bible, which my mother gave me over 25 years ago when I went to Colorado to work on a ranch! That little forefinger traveled across the page as the child slowly spelled the words. I had no idea she could read it. When the Madame took the three other children into her school she thanked their mother for the confidence she showed in turning "her precious babies" over to another! I taught school years ago, and I am now ashamed to think that my main object in doing it was to get my salary. I do not say *earn* it, for I did not then realize the great responsibility one assumes when he undertakes to guide the mind and form the character of children. Too many people regard school teaching as they would a "job" at sawing wood or "holding down a chair." I do not want my children to go near any such teacher if I can help it. Let the Madame have charge of their habits until they are 12 years old and they will at least start right.

LIVELY CORN.—Hope Farm will have to take a back seat on the corn question when the following report from Connecticut comes in:

I noticed in "Hope Farm Notes" that corn planted July 6 is already making tassels. I can beat that, as I have sweet corn, "Kendall's Giant," planted July 8, from which I picked roasting ears to-day. September 12. W. L. H.

I did not refer to sweet corn, but to our Rural Thoroughbred Flint, which we sowed after rye for fodder. I did not expect any grain, but wanted to show that a good crop of horse or cow feed can be grown after cutting rye and removed in time for seeding to rye or wheat again. I do not know of any crop that will displace more hay in the same time. That is certainly lively sweet corn. I regret to say that the wind has blown our fodder corn down, so that cutting is almost impossible without leaving a good part of the stalk on the ground. That's the worst of sowing corn for fodder. It should be drilled and given a chance to stand up.

SOY BEANS.—The following question is from Ohio:

We raised about one-fourth of an acre of Soy beans this year. Will the Hope Farm man tell us how to get the most feed out of them? We never raised any before, or saw any growing—something new in this part of Ohio. G. S. P.

I am not able to answer from personal experience. Last year we cut the Soy beans before the pods were fully dry and fed vines and all to the hogs. They cleaned up the whole plant. Our cows did not care for the vines and only one horse would eat them. In Kansas, I am told that they cut and cure the vines about like clover hay and thrash out the beans, which are ground with corn and oats—about two parts each of corn and oats to one of the beans. This meal is said to be a good mixture for hogs, cattle or work horses. The straw or vine is fed to sheep or cattle. If I had any of it I should run it through the shredder with cornstalks and feed the mixed fodder. I shall not raise any more Soy beans, for cow peas have given us better returns.

FALL MANURING.—The following questions from Canada are hard to answer positively:

Would you advise sowing bone meal and muriate of potash in a peach orchard this Fall? Soil is level, a rather light sand, a soil which always responds quickly to manures, but which needs a good deal of feeding. Shall I sow and plow under this Fall or wait until Spring? Please answer the same question applied to wood ashes and barnyard manure. F. T. L.

On such level land as you mention I would be willing to sow the bone and potash this Fall. I have done the same thing on the lower part of the farm, but saw no advantage in it except that the job was done at a time when little other work was pressing. My own farm is so rough and hilly that I use all the manure on the fields close by the barn. We use soluble fertilizers only, and like to get them as close to the growing crop as possible. We haul manure on the level fields of the lower farm in Winter, not because it will do more good then, but because the work is easier to do at that time. Wood ashes and lime are, I think, best when put close to the crop they are expected to benefit. I would therefore use them after plowing and just before harrowing for the seed bed. In level orchards I doubt if it makes much difference when bone and potash are used, provided we can prevent surface washing.

LOSS BY DRAINAGE.—No one would think of using nitrate of soda in Fall or Winter. It is as soluble as sugar and the nitrogen will leach away through the soil and escape in the drainage water. Yet muriate of potash is as soluble as nitrate, and so is the phosphoric acid in dissolved rock. These things being so why is it safe to use potash in the Fall and not safe to use nitrate? Because nitrogen is one of the hardest of the elements to make chemical combinations. I may call Miss Nitrogen a "born old maid" with mighty little "affinity" for lime, iron or the other young fellows who innabit the soil. On the other hand, potash and phosphoric acid have a great liking for those other elements and are easily induced to remain with them. Thus when nitrogen is dissolved in the soil, if there are no roots of living plants to run after and catch her, the chances are that she will glide past the other lazy elements in the soil, and pass on to explore brook, pond, river and ocean. Needless to say that such voyages bring little benefit to man. Potash and phosphoric acid when thus started, rush to some other element and make a new chemical combination with it. In other words, they go to housekeeping right in the soil and stay there for the benefit of the next crop. Of course, when put on the surface of a hilly field the potash might be washed off and lost, but when once in the ground it is safe, while soluble nitrogen is not unless there are growing crops to utilize it.

THOSE LAZY HENS.—When the milk of human kindness sours we may expect a tragedy; but from the following note it appears that sour milk makes the hen's life such a sweet song that she continues to sound her lay without stopping to feather up:

O. J. H., on page 615, complains that his 15 hens refuse to lay and wants to know what to do about it. H. W. C., the Hope Farm man, tells him that there is nothing for it but patience. Now, we happen to have just that number of hens, and the way those bipeds turn out the eggs is certainly something remarkable, and they are only mongrels, too. We attribute it to our habit of feeding them thick skimmed milk. They have a pailful of it always before them in addition to other food, corn, etc. Nothing can be better for hen food than milk, as it contains all the ingredients necessary for egg and feather making. Too much gadding or freedom is not, we take it, conducive to egg production, so we keep them shut in till noon, and they have formed the good habit of making their egg deposits mostly before that hour, and the material required for making eggs is not diverted by long rambles, and they just have to stay in and eat milk and lay eggs for all they are worth, whether they have any feathers on them or not. They get all the exercise, grass, bugs and things they need during their afternoon run, and get back early to roost and rest in preparation for the next day's biz. J. Y. P.
Hudson, N. Y.

There is no doubt as to the value of skim-milk. That is just why we do not give it to the hens. We feed quarts of it to the children. Suppose our friend had a nice little milk trade at six or eight cents a quart and four lively little folks who clamor for milk five times a day. Would it ever be possible for any of the milk to get thick enough for those 15 hens? Not by a good deal! Better thicken the children than thicken the milk. The ecstacy which a child can get out of a cup of sweet milk beats the eggs which a hen can skim out of sour milk. We can sell or drink all the milk our cows give, and therefore the hens must get along on cut bone, meat or oil meal. You are right in saying that "too much gadding" will ruin the best efforts of any two-legged worker that ever walked the face of the earth!

GHOST OF OLD ADVICE.—Some years ago I read the story of a man who told how to get rid of stones. He said he took a big swivel plow, turned as deep a furrow as he could and then raked all the big stones he could into the furrow, plowed another over them and so on all through the field. Then he seeded to grass and had a fine smooth field! I regret to say that in those days your humble servant often looked through a smoked glass at a plausible story. My joints were rather more limber too, and I jumped *at* some conclusions instead of *on to* them as should have been done. At any rate, I regret to say that I talked that system of plowing. "Verily they have their reward!" In fitting one of our back fields for wheat we struck about an acre where some former owner had evidently tried that plan! Oh! but it was awful! Between Frank's sore shoulder and Charlie's sore ribs it was the toughest job that has yet been tackled on the farm. Charlie will tell you that the plow hit every one of those stones and then went back and hit some of them the second time. These old hard-heads kicked and fought against being turned up to the sun once more. "Why do you come and disturb us?" they said. "We went in here easily because the farmer told us we would not be disturbed! Now we will fight against being thrown out!" That's just it! It is easy to start some of these new things. Nature likes to try experiments, but how she does fight when you have to go and tell her that the experiment must be plowed out! You can't make her think that it was some other fellow who did the first job. If grass would only live forever on top of these stones it would be all right, but grass, like dogs and everything else, has its day, and must be started again. It's a tough job to pick the stones by hand, but once picked they stay where you put them Still, if my Stringfellow trees do well, this scheme of plowing under stones ought to work. H. W. C.

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THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, OCTOBER 5, 1901.

PURE grape juice! We are glad to see the business of making unfermented wine growing. If the juice could be sold cheaply on every block of this great city we believe it would prove one of the most effective temperance agencies ever started.

*

PROVIDENCE, R. I., was receiving peaches from 10 different States at once recently. Think of one local market reaching out for supplies from Connecticut to California! What would the big western States do without the little eastern States and their markets?

*

THE counsel for the wretched murderer Czolgosz could find no word of argument for his client. He did, however, make a strong plea for a fair trial before the law. Among other things he said that there is more danger in lynch law and mob rule than there is in anarchy, and we believe that he voiced the sentiments of the great majority of the American people when he said so!

*

SOMETIMES a farmer works hard to seed down a piece of ground. It may be tough and sticky and stony, requiring twice the time and labor to prepare it that would answer for another field. Under such circumstances one would think that the farmer would aim to keep that land in grass as long as possible, since nature seems to have designed it for sod. Yet, some farmers proceed deliberately to shorten the life of the grass. They give it but little more preparation than they do the even and easily worked fields. They use but little seed, only a pinch of fertilizer or manure, and worst of all, they turn in the stock after mowing to gnaw and tramp the grass out of sight. No wonder the field gives out after two years' cutting, when with good care and judgment it ought to give good crops for five or six years.

*

AT the meeting of the American Pomological Society Prof. M. V. Waite gave some interesting facts about bees and Pear blight. His experiments seem to show that the germs of this disease may be and are carried from tree to tree by bees. Grant that, and still the bees have a credit on the books of the fruit grower. Kill off and banish the bees, and while there might be less blight there would certainly be much less fruit. We feel certain that any fair-minded man who will really investigate the matter will be led to admit that bees are the true dry nurses for the baby fruits. Without them the flowers would most certainly not be fertilized. Prof. Waugh, of Vermont, covered 2,586 apple blossoms so that insects could not get at them. As a result there were only three apples, even on the varieties which are thought to be perfect flowered!

*

WE have received the following excellent suggestion:

May I be permitted to suggest one way in which your readers may appropriately honor the memory of President McKinley? In the cities people gather to hear addresses; they drape the buildings in mourning, pass resolutions and publish them in newspapers, and do such other things as will tend to keep in mind the goodness and greatness of the deceased President. In the country his memory may be most fittingly perpetuated by setting out useful trees. Almost every family may do this, and this is peculiarly a favorable season for it.

Hartford, Conn. J. LINCOLN FENN.

We endorse this suggestion heartily, and hope that our readers will plant thousands of McKinley trees. Let them be planted on the most prominent places on the farm, where they may stand for years, telling to coming generations the story of a noble life. It is true that town and city show more of the outward evidences of grief—yet such sorrow is often short lived. The struggle for life is hard and bitter in the town, and there are hundreds of things which quickly draw the public attention. In the calm, quiet life of the farm noble memories remain longer in mind. It has been said that about all the patriotism we have left in this country is found among farm freeholders. By all means let us have McKinley trees.

*

WE still think that the corn is not short enough to warrant higher prices for the grain. Through the districts where silos are numerous the growth of stalk has been very heavy, and all through the West we learn that thousands of acres of stalks have been cut—ready for dry shredding. All this use of the stalk will leave more of the grain free for sale, and these conditions must be considered as well as the decrease in the actual grain crop. We believe that the present high price of wheat bran is not warranted by the market conditions, since the wheat crop is one of the largest ever known, while the exports of bran to foreign countries is considerably less than last year.

*

IN Germany large quantities of cheap alcohol are made from potatoes. The Emperor has offered a prize for the best stationary engine capable of using alcohol as fuel, the object being to stimulate the demand for potatoes for this purpose. The heavy tax imposed on all alcohol in this country puts it out of the market for fuel or similar industrial uses. Considerable of this potato alcohol finds its way into the lower grades of wines and liquors, so it is quite possible for a man to become drunk from the product of this innocent-appearing tuber. The Germans are wise to encourage the use of alcohol as a fuel. In France it is largely consumed as drink, and this different use is given as one reason for the fact that France lags behind Germany.

*

A CAMPAIGN of education, which might well be imitated, is that inaugurated by the British Columbia Fruit Growers' Association, in sending an expert to the Fall local fairs, to give practical demonstrations in fruit packing. We have often referred to the need of careful and attractive packing; it is a matter that the fruit grower must necessarily study. Many, however, still err from lack of knowledge; they are willing and anxious to pack their product in the best manner, but they lack the manual dexterity which accompanies the "know how." To them the work of the expert would be an object lesson of great interest and value. Such practical demonstrations never fail to hold the attention of an audience, and would form an educational feature in any agricultural or horticultural gathering.

*

THE following letter is sent us from the State of Washington. Snohomish County is far from headquarters, but THE R. N.-Y. must travel far to get away from its friends:

As a child I read THE R. N.-Y. As a girl I read it, and as soon as we were on a piece of Uncle Sam's land that we could call our own I subscribed for it. I am 43 years of age, and though only a woman can say I have loved and read THE R. N.-Y. since I was nine years of age. This morning the better half was sick, and I was in a hurry to build a fire. The first paper I picked up was a R. N.-Y., but I couldn't find a page I wanted to spare; took up another; it was again the same. Then I picked up a daily paper and put it in use at once.

When the housekeeper starts to build her morning fire the ticks of the clock mark precious time. There is a busy, working day ahead of her—all too short for the many duties that crowd the waking hours of a farmer's wife. We feel that when such a woman will stop and examine THE R. N.-Y. page by page and decide that no part of it should be used for kindling, that the paper has received about the highest compliment that can be paid it. It ought to be the ambition of every editor to write and print words that are strong enough to live—to kindle ambitions rather than kindle fires!

*

LAST week we had something to say about the American Apple Consumers' League. There are some faint-hearted League members whose throats become as dry as a Ben Davis apple, when a mellow word might help their country. For the benefit of such nerveless people we give a bit of history. Two years ago we received the following note from the proprietor of a first-class restaurant in New York:

I have been particularly interested in your frequent writings on apples, so much so that I have introduced them in my restaurant, and am working up quite a demand for them. The trouble that I experience, however, is in finding those delicious apples about which you write. Can you recommend to me some man or men from whom I could obtain a fine eating apple that has a name, and one that I could get right along during the season as I want them? I am not particular about the price, if I could get the quality.

Of course we told our friend at once that Spitzenburg is the king of baked fruit and named some men who ought to supply the apples. Then came the following:

After receiving your letter I sent to the commission man and bought a barrel of Spitzenburg apples at $6 and used them for baking, and as you assured me, they were fit for a king. The only trouble was that they were too small; two served on a plate seemed like a small portion, and three would take away most appetites. I never could get but one lot, as they did not have them. I then wrote to the other parties but got no reply. So I fell back on Rhode Island Greenings. Why don't some of the apple growers advertise in THE R. N.-Y.? What is this Apple Consumers' League about which you write?

Now here was a man willing to pay almost any price for Spitzenburg apples, but unable even to hear from those who ought to have them. There are thousands like him right here in this great city, who want good fruit, and are ready to pay for it. They will go and buy the California apples because they come nicely packed in *boxes*. The Apple Consumers' League is doing a good share of this—are you helping?

*

SUPPOSE that from the first the manufacturers of oleo had been content to make and sell their mixture for just what it is without any effort to counterfeit the color and appearance of butter! By this time they would have secured a good market at a fair profit. They would have saved the vast sums of money which they have paid for defending suits and "influencing" legislation, while the moral effect upon the trade would have been marked. There is and always has been a fair profit for the manufacturers in selling oleo for just what it is—a mixture of fats, all of which are cheaper and less delicate than the fats of milk! Let it be remembered that the conflict and trouble to-day is the fault of the oleo men rather than the dairymen. If the oleo men had not attempted to counterfeit a genuine market product it is not likely that a sound case could have been made against them.

*

BREVITIES.

I used to blow the organ in a good old country choir,
I kept the bellows crowded full and never used to tire;
I seemed to catch a vision of the promised happy land,
When that old organ thundered underneath the player's hand.
Now here's the point I'm making—please to notice "where I'm at."
That wind was *raw material*, and mighty raw at that;
But when it came a-rushing that old organ's piping through,
It then was *finished product*, way up on its finish too.
I did the hard, *raw* labor—pumping in the wind, you see.
The organist did better—a skilled worker, sir, was she;
A hundred boys could handle my pump job at any day;
The church was minus music when that woman stayed away.
And so, in early childhood, I pumped out this settled law.
To dodge old competition just quit handling the *raw*
And learn to make *skilled products*; you will live to find your fill,
Of good things will be greater as you cultivate your skill,
The folks who at the organ stay there ever pumping wind
Have hardly cause to grumble when they tag along behind
Those folks who learn to handle every pedal, stop and key,
That lets the wind from prison in a flood of harmony.

YOUR dearest idol is probably *I*.

WORDS without work make wind.

HELP spread the baked apple habit.

SOFT pencil and soft paper make a hard job for the printer.

WE are having a hard race with Jack Frost for the corn crop.

NOTICE how Keiffer pear is taking a back seat? Ben Davis apple will follow.

WHAT have you in your performance or in your pedigree which will justify you in putting on airs?

No man has any right to strike hard blows unless he is ready to take equally hard ones without flinching.

WHAT is the most profitable form of charcoal for poultry? Probably that obtained from burning up the scrub fowls.

A MAN may have his arm or leg paralyzed and still live so as to benefit the world, but when the paralysis strikes his conscience—bury him!

SOME of the new "hotels" and boarding houses at Buffalo are perfect tinder boxes. Oh, but how they would burn if a little flame started!

ONE of the hardest things for farmers to understand is the fact that soils derived from limestone often need air-slaked lime before they will produce a full crop.

THE Kansas Experiment Station people find that wheat straw with ground wheat added will keep cattle through the Winter. That is important to know where people are selling stock for lack of feed and burning straw stacks to get rid of them.

THE fight against mosquitoes has been reduced (or raised) to a science on Long Island. A "mosquito map," covering many square miles, has been prepared, showing every body of stagnant water, and even the various "breeds" of mosquitoes. Having mapped the mosquito we hope our Long Island friends will now proceed to wipe him off the map.

Events of the Week

DOMESTIC.—Frank Idings, the man who said in a Cleveland, O., saloon that he belonged to a society that would pay $50,000 to any man who would kill President Roosevelt, was, September 18, ordered turned over to the Board of Managers of the Ohio State Penitentiary. Idings was identified as a paroled convict. He was sentenced to the penitentiary in March, 1898, to serve five years for burglary and larceny, and was paroled in December, 1899. As a result of his recent utterances Idings will serve at least two years more in the State prison. . . . . The assassin Czolgosz, when brought into the dock at Buffalo, refused to answer the indictment. He is believed to be shamming insanity. His counsel entered the plea of not guilty, and asked permission to call in alienists to examine the murderer's mental condition. He was pronounced entirely sane, and was declared guilty September 24. . . . . A misplaced switch caused a collision between express and freight trains at Brocton, Mass., September 18, in which six passengers were killed and 25 injured. . . . . Forest fires are causing great damage in Boulder Co., Col. September 19, 35 square miles of timber had been burned near Eldora, and the town was threatened. . . . . The report of the engineers who have been examining the great Brooklyn Bridge shows that it is now loaded to the limit, and a few more tons massed at one point would make the structure dangerous. The experts recommend a new outside truss and other repairs which would cost $1,000,000. . . . . The steamer Hudson, with crew of 25, was lost off Eagle River, Lake Superior, during a gale September 19. . . . . A gas explosion in the department store of A. M. Rothschild & Co., Chicago, Ill., wrecked a huge wall September 19, causing a loss of $250,000; several persons were injured, but none killed. . . . . The State Insane Asylum at Norfolk, Neb., was destroyed by fire September 23; two lives lost. The damage reaches $150,000. . . . . The Governor of Texas has signed the "Blind Tiger" bill, which imposes severe penalties and imprisonment for shipping intoxicating beverages into local option communities.

THE LATE PRESIDENT.—Thursday, September 19, the remains of President McKinley were interred, after simple and impressive services, at Canton, O. Memorial services were held and public mourning displayed all over the country. In British India, memorial services were held in all the central cities, and September 19 was observed as a day of public mourning. The British Channel Squadron and the land batteries at Gibraltar fired a salute of 21 guns. In France, many emblems of mourning appeared among the decorations displayed in honor of the Czar's visit. . . . . Tests by chemists and bacteriologists prove conclusively that Czolgosz did not poison his bullets, as was suspected by Dr. Wasdin. . . . . The expense incurred by the death of the President, including medical attendance and funeral, will be met through a special provision of Congress. Aid will also be given Mrs. McKinley. .. ..

PHILIPPINES.—Gen. Hughes has expelled a number of English traders from Samara for aiding the insurgents by buying hemp and other supplies. . . . . The new Philippine tariff, as approved by the War Department, was enacted into law by the Philippine Commission September 17, to take effect November 15. Governor Taft has cabled the War Department asking that printed copies of the new tariff in both English and Spanish be sent at once, in order to reach the Philippines on the date when it goes into effect. If the copies cannot reach there at that time it will be necessary to postpone the date when the tariff goes into effect until December 1. All the important features of the new tariff have been made public heretofore.

GENERAL FOREIGN NEWS.—The British torpedo boat destroyer Cobra struck a rock in the North Sea September 19; an explosion followed, and she sank immediately; 55 lives lost. The Cobra held the record as the fastest vessel in the world. . . . . An explosion in a powder factory at Ripault, France, September 19, killed 11 persons, and seriously injured 17 others, most of them fatally. . . . . There is a renewal of activity among the Boers, and there is no sign of settlement in South Africa. It is said that President Kruger will appeal to President Roosevelt for intervention. . . . . England has been celebrating the millenary of King Alfred the Great.

FARM AND GARDEN.—The first snow of the season fell at Grand Forks, N. D., September 17. It was very light and came at the end of a slight shower. The weather is very unfavorable for thrashing. Thousands of acres are still in shock, and there is some anxiety lest the farmers should be unable to finish.

Frost occurred in western Missouri and eastern Kansas September 18, an earlier date for the first frost than for many years. Vegetables planted after the breaking of the drought, in the hope of raising a crop before frost came, were damaged.

T. S. Gold, of West Cornwall, has retired from the secretaryship of the Connecticut Board of Agriculture, after long and efficient service. His successor is Col. J. F. Brown, of North Stonington.

A severe frost was experienced through northern and central New York September 19. Ice formed on shallow water and truck farm products were injured.

Prof. C. C. Georgeson, in charge of the Alaskan experiment stations, has reported to the Department of Agriculture that he has found good gardens all along the Yukon Valley in the cold interior region of Alaska. The report says that, although the season was unusually late this year, Prof. Georgeson found new potatoes, cabbages, cauliflower and beets and other vegetables ready for the table before the middle of August, and lettuce, radishes and turnips grown in the open had been in use for several weeks. Flower gardens containing a large variety of annuals grown from seed furnished last year were in full bloom. Similarly encouraging reports are given for Spring-seeded barley and for oats and wheat.

October 10 is set as National Grange day at the Pan-American Exposition. An interesting programme has been arranged, including addresses by many prominent workers in the Order. All Patrons of Husbandry and farmers generally are invited to visit the Exposition at that time.

It is believed that the Oregon hop crop will not exceed 60,000 to 65,000 bales, which is less than was anticipated, but the quality is good.

THE CANADIAN CENSUS RETURNS.

I hear very little said about the census returns by farmers here. I have been living here more than 40 years, and I think that the population is increasing as fast as it ever did. The land in general here is rough, and not all suitable for farming, so the increase in population goes to other parts of Canada. A good many have gone from here to Manitoba, and have done well. The incomes from land are better a good deal than in former years. J. H.

The Ridge, Ont.

I am not in a position to give you any information that would be reliable. My own opinion, from reading the newspapers, would be that it had been taken in a very careless fashion, which might account for so small an increase. Concerning farm values here, farms are dear, taking productiveness into consideration, so much so that I am selling and going to the New England States. I am just home from there, and can buy a farm for $2,500 that would sell for $3,500 here. I do not understand it, but the fact remains. I am 30 miles from Montreal; in the eastern townships farms are much cheaper than 20 years ago, and farmers are not making so much, but prospects are a little brighter now, as stock of all kinds is selling much higher than two years ago. F. P. R.

St. Sophie, Quebec.

While it is a fact that the census returns show a very small increase in the population of Canada for the past 10 years, and to a person not acquainted with the matter it would appear that the population of this country is increasing very slowly, at the same time it is very evident to one living in this country, who understands the matter, that the increase in the population for the past three or four years has been very great. Until within the last three or four years a very large per cent of the young men went to the United States to seek their fortune, and were, I am glad to say, successful, and a large per cent of the immigrants to Canada only stopped here for a short time before they went to the United States also. This was a great drain on Canada at that time, but I am happy to say that has all changed now; the people of this country have great confidence in their own land, and are mostly prosperous and doing successful business in their different trades. The young men are now remaining in Canada, and the immigrants stay here. Therefore you see it has taken a very large per cent of the increase for the last four years to make up what the country lost in the six previous years. Farm lands in Ontario are to-day about the same value as they were 20 years ago. The reason for their not increasing in value is owing to the great western part of Canada opening up (which commenced about 20 years ago); the eastern expensive lands cannot compete with the cheap western land in growing grain, and the probabilities are that farm lands in eastern Canada will not increase in value to any great extent until the very choice lands of western Canada become all taken up and settled. I was through western Canada a few weeks ago, and after a person takes a trip through that part of the country, and sees the wonderful opportunities which are offered for all branches of agriculture, it does not surprise one that farmers go west and take up land (which only costs $10 and homestead duties for 160 acres) instead of purchasing the expensive eastern lands on which it takes a lifetime to make enough to pay for.

Picton, Ont. A. M. T.

The Canadian census returns, on the whole, were somewhat disappointing. As regards Ontario observing persons were not expecting the census returns to show much of an increase for the following reasons: The tendency is to increase the area of the farms through the older settled portions of this Province. The more progressive and wealthier farmers have been gradually buying up the small farms adjoining them; 40 years ago a large proportion owned 50 and 100-acre farms. The families on each of those farms then were more numerous than now. It was not uncommon then to see families of eight to 12 children. Households of that size are now very scarce, having apparently gone out of fashion. Those large families, as they grew up, moved to newer countries, where land was cheaper, mostly to the Northwest, quite a number crossing the line and swelling the population of our Uncle Sam. Farm help consequently became scarce, and machinery of all kinds came into use. The same set of implements doing the work on a 200-acre farm that would be required on 50 acres, the tendency has been to increase the size of the farms and decrease the population. The farm which I own consists of 316 acres; was originally owned and occupied by five separate parties, each having good-sized families, with occasionally families of laborers occupying vacant houses. Two of the adjoining farms have been made up in the same manner. This, I think, is a fair sample of most of the older-settled parts of Ontario. When I went to our district school we had an average attendance of over 60 pupils. Our average now is about 20, while there is more land worked in the same district, better tilled and more productive. Thirty-two years ago I bought the 50 acres that I now live on for $32 per acre; can sell it to-day for $70. My impression is that farm lands in this county (Oxford) are worth one-third more than they were 20 years ago, with no trouble to sell, the incomes of the farmer being much larger than they were at that time. Then a large quantity of grain was sold from the farm, a great part of our barley going to the United States, and some of our other grains, but our protective walls stopped that, and we sought other markets, and gradually changed our products. We now feed most of our grain at home, turning it into cheese, butter, beef and bacon, and find that this method improves our farms and is more remunerative. Incidentally I may say that I favor free trade. G. A. M.

Embro, Ont.

DELIGHTFUL weather; finished marketing peaches today; large crop. Potatoes small, $1 per bushel. Very few apples, $2.50 per barrel at home; 40 cents per 100 for cider apples. Corn gathered; fair crop. Buckwheat, a large crop, 55 cents a bushel. Pasture good. L. T.

Ulster Co., N. Y.

Crop and Weather Notes.

The past week has been unseasonably cool in nearly all sections east of the Rocky Mountains, with more or less frost in the Central and Atlantic States. Late corn has been nipped by frost in North Dakota and the northern portions of other States in the corn belt, also on low lands in Ohio and Indiana; but most of the crop east of the Mississippi is matured, and cutting is well under way. Heavy rains in California have damaged grain, hay and grapes, and cotton in the South Atlantic and East Gulf States has suffered from the same cause. Open cotton has been discolored and beaten out, and sprouting and rotting are also reported. Most of the tobacco crop is housed and in good condition. Early-sown wheat in the central valleys is coming up well.

General Crop Notes.

WE have had dry and hot weather during July and August. First frost September 18, killing green potato tops. Corn nearly all ripe, one-half crop. Wheat good. Oats medium. Hay an average crop. Clover seed one to four bushels to the acre. Early potatoes scarce, late potatoes not dug yet; will not be more than half crop, no rot yet. Fruits, except apples, a fair crop. T. C. K.

Butler, Ind.

C. I., of Rochester, N. Y., wishes to know if any of the readers have sown rye after potatoes and plowed under for oats. We sowed rye after potatoes this Spring; we plowed half under for oats. We waited until the rye was 10 or 12 inches high. My stepson entered one peck each of the oats and rye at the Suffolk County Fair and took first premium on both the first day of fair. We plow under rye for most all of our crops, potatoes, corn and cabbage. The cabbage for seed next season is looking very fine. Potatoes and corn are good.

Calverton, N. Y. O. J. L.

The Clover Seed Crop.

The clover seed crop in this vicinity is a total failure, caused by the protracted drought. I don't believe there will be 10 bushels thrashed in the whole county.

Hillsboro, Ill. L. D. O.

As to the clover seed crop, I think there will be very little here. There were very poor stands secured from the sowing in 1899 and 1900. The young clover at present looks fine. J. E. D.

Steel, Ohio.

The crop of clover seed in this section is shorter than it has been for years, few farmers raising enough for their own seeding. I am told that the quality is not No. 1. N. W. W.

Knightstown, Ind.

There is not over half a crop of clover, and the seed is very light, owing to extreme drought this Summer. The corn crop will be about one-third of a crop. The wheat is also very light. The entire region has suffered from drought the past Summer. W. F. T.

Hanover, Ind.

I got nine bushels of clover seed from about nine acres. A neighbor of mine, John Jones, hulled 35 bushels of seed from 50 acres; Wm. Douglass got 60 bushels from 15 acres. John Cadwallader's 16 acres of clover yielded him about one-half bushel per acre; Thos. Johnson got two bushels from eight acres, Wm. Brann got two bushels from five or six acres. These yields are a fair sample of how it is hulling out. Mr. Douglass got a remarkably big yield for the season. It is generally yielding about one bushel or less per acre. Owing to the severe drought we had the clover plant was very short and the heads small. It was all hulled before the rains came on it, consequently the quality is very fair, but the seeds are smaller than usual. It is worth $5 per bushel here. The chaff, after hulling, sells for about $5 per ton. The yield is less this year than common. J. L. C.

Bushnell, Ill.

The Potato Crop.

Potatoes only about one-half a crop of former years; have heard of no complaint of rotting. J. S.

Illinois.

I should think the yield less than for the past few years, but there seems to be a fair crop. Not many are harvested yet. There is no rot that I have heard of.

Dryden, Mich. F. B.

The potato crop is extremely short in this vicinity this year. Late potatoes are still growing with plenty of rain now. Not one farmer in 10 will have enough for his own use. I have 25 rows 30 rods long on the best of new ground, which I judge will go one and one-half to two bushels to the row, of potatoes about the size of hen's eggs. M. M. M.

Caledonia, Ill.

The yield of early potatoes was about an average one compared with former years. I think 100 bushels would be a fair estimate per acre. Quality good. Price started at $1, fell to 70 cents, then continued to advance until now they are selling at $1 to $1.10. The late crop in most places is not yielding above one-half crop. Some rot in center of tubers, and in the R. N.-Y. No. 2, I find some with black at stem ends. I do not know how prevalent this will be, as they are not ready yet to be dug. I hear of some that have been pitted of the earlier varieties rotting in the pits, but cannot say at this writing how general it is. E. B. M.

Bloomington, Minn.

A short time ago the Vermont Experiment Station at Burlington sent out word that the Potato blight and rot threatened to do serious damage in Vermont this Fall. Later reports from the same source say that the fears of trouble were all realized, and that there has been in fact a considerable amount of loss already to potato growers. The rot follows the late blight and comes from the same cause. Those who have late blight in their fields, therefore, are bound to have rot; and in all such cases special care ought to be taken in sorting and storing the potatoes for Winter. The experiment station still insists that proper spraying, backed up by proper cultivation, will protect the potato crop from these diseases. Continued experiments and practical field tests covering a period of 10 years, or more, have proved this beyond the possibility of doubt. Even now, in the latter part of September, when most potato vines are dead, and many fields of potatoes already dug, the experiment station potato fields are as green as any time in July or August; and the potato expert claims that they are making potatoes now at the rate of 25 to 30 bushels a week for every acre.

Woman and Home

From Day to Day.

FROM THE "AMEN CORNER."

[Prof. Triggs, of the Chicago University, has created considerable diseussion by elaiming that most of the hymns are "doggerel."]

They say the hymns is dogg'rel—that they ain't fine enough;
That all the time we've sung 'em they've been nothin' else but stuff;
They say they need revisin'—we must make 'em more pollte,
"On Jordan's Stormy Banks I Stand" is not eonstructed right;
But, just the same, perfessor, you had better let 'em be—
The Lord—He understands 'em—so they're good enough for me.

I s'pose there's nothin' finer than that good old "Beulah Land,"
And when our Lizzie slngs it you ean see the glorles grand;
When "Roek of Ages" rings out from the hallelujah shore,
I tell you this old sinner ain't a goin' to drift no more;
And when they strike "Amazin' Grace," eaeh feller singin' free—
The Lord—He understands it—so it's good enough for me.

It isn't what you're singin'; why, I oftentimes forget
And praise the Lord to musie with the good old alphabet,
Untll I strike the words again, and I don't think it's wrong—
It isn't what is in it, but the soul behind the song.
So I tell you, perfessor, you had better let 'em be—
The Lord—He understands 'em—so they're good enough for me.

—Baltimore Amerlcan.

*

HANDSOME souvenirs of New York which are now offered are tall slender pewter tankards, with raised scenes on the outside, showing places of interest—Grant's Tomb, the Metropolitan Museum, etc. They cost $1 and upwards. Pewter is now a fashionable ware, and anyone who has platters, cups or jugs of this metal may display them with pride.

*

A NEWSPAPER note tells us that cigarette smoking has become a positive mania with both boys and girls in Iceland, and the municipal authorities of Reykjavik are considering an ordinance which, if adopted, will permit any adult, man or woman, to box the ears of a juvenile offender, annex his or her weed, and impound the stock of cigarettes. This ordinance sounds like Mrs. Carrie Nation, but a good many of us never ee a cigarette smoker of tender years without wishing that law or custom empowered us to proceed upon exactly the same lines.

*

THE New York Sun recently quoted the following as a form of prayer prepared by a school of Christian science:

Forgive us our sins In that we have this day talked about our backaches, that we have told our neighbors that our food hurts us, that we mentioned to a visitor that there was a lump in our stomach, that we have wasted our valuable time, whieh should have been spent in Thy service, in worrying for fear that our stomach would grow worse.

Without considering the quotation from a religious standpoint, we think that a good many people should pray for grace to refrain from inflicting their aches and pains upon others, in just such fashion. A witty woman once asserted that she gained her reputation for wit by abstaining in conversation from the three D's—dress, domestics and diseases. We don't mind owning that we can endure a certain amount of dress talk without visible impatience, but when the second D is reached we feel like the woman at a club meeting who complained that she felt lonely and isolated, because she was the only woman in the room who hadn't been having trouble with her servants, and a free discussion of the third makes us feel as though we were developing symptoms of every known disease, from anemia to zymosis.

*

A VERY pretty waist of white flannel was made with a broad box pleat, tapering a little towards the waist, down the center of the front, and one narrow pleat, also shaped, on each side. The center pleat was about four inches wide at the top, tapering gradually to the waist. Flat pearl buttons were set down this in groups of two, with an intervening space. Pearl buttons, both black

3921 Misses Sailor Waist, 12 to 16 yrs.

and white, are freely used on the new flannel waists, seeming to take the place of the perpetual military gilt of last Winter. Corduroy is to be very popular, both in shirt waists and skirts. It comes in all colors, and in white, makes really beautiful waists. Corduroy skirts are usually either gray or brown, made walking length, with a gored flounce. They look particularly well with a red waist.

*

IT is an excellent idea to make Fall and Winter shirt waists with a separate lining; that is, make an underwaist of soft-finished cambric, percaline or double-faced waist lining, with long sleeves and high neck, to wear under woolen shirt waists, which should be unlined. There are many advantages in this plan. An unlined flannel waist may be washed readily, without the fear of the outer fabric shrinking unevenly from the lining; it may be pressed more readily if wrinkled, and, in the prevailing style, is likely to fit better in front, for it is often difficult to avoid some clumsiness at the fastenings. An unlined flannel waist is often a decided convenience between the seasons, in our uncertain climate. For a white Winter waist, nothing is more serviceable than one made of fine white flannel, such as is used for underskirts, not twilled. The twilled flannel thickens much more than this does, which may be washed over and over again. It should, of course, be made with the separate lining.

The Rural Patterns.

The shirt waist with sailor collar, and shield of contrasting color is, and will be, a favorite for young girls both for school and afternoon wear. For the school the materials chosen are cheviot, linen, madras, flannel, cashmere and the like, for the more fancy waists silk of simple sorts, embroidered and plain cashmere in light colors. The foundation is a fitted lining, on which the waist proper is arranged when silk and wool fabrics are used, but which can be omitted when washable materials are selected. The lining closes at the center front, and fits snugly to the figure, but the waist proper is drawn down in gathers at the waist line and blouses slightly at the front. The shield is attached to the lining, when it is used, to the waist beneath the collar, when the waist is unlined, and is attached permanently at the right side, hooked into place at the left. The sailor collar is seamed to the neck of the blouse and the tie ends are attached beneath its points. The sleeves are in bishop style with narrow pointed cuffs. To cut this waist for a girl of 14 years of age, 3½ yards of material 21 inches wide, 2½ yards 27 inches wide, 2¼ yards 32 inches wide or 1⅜ yard 44 inches wide will be required, with ¾ yard for shield, stock collar, tie and cuffs, and one piece of velvet ribbon to trim as illustrated. The pattern No. 3921 is cut in sizes for misses of 12, 14 and 16 years of age; price 10 cents.

The fancy blouse may be made with stock or V neck, long or elbow sleeves. The foundation is a fitted lining that closes at the center front. Both back and fronts of the waist are stitched in groups of four fine tucks, then arranged over the lining. The waist proper closes beneath the center group of tucks, but the yoke is attached to the right front only and hooked into place at the left shoulder. The elbow sleeves are tucked to within a few inches of the lower edge, where they fall free to form frills, but the bishop sleeves are plain, finished with narrow cuffs. To cut this waist for a woman of medium size 3¼ yards of material 21 inches wide, or two yards 44 inches wide will be required with two yards of lace insertion, three yards of narrow and 2½ yards of wide velvet ribbon to make as illustrated, 3¾ yards 21 or 27 inches wide, or 2¼ yards 44 inches wide to make with bishop sleeves. The pattern No. 3913 is cut in sizes for 32, 34, 36, 38 and 40-inch bust measure; price 10 cents from this office.

Grocery Suggestions.

In using canned goods put up in tin, says the Woman's Home Companion, once the can is opened the contents must be taken out immediately. If there

3913 Fancy Blouse, 32 to 40 Bust.

is more than is needed at the moment, put what is left in an earthen dish. When there is time, open the can an hour or so before it is to be used, and turn the contents into a dish or bowl. Before using peas, beans or asparagus turn them into a colander, and rinse with cold water. Many fruits and vegetables are put up in glass jars. They come higher in price, but there is no fear of corrosion, as sometimes happens when tin is used. In no case must the sun shine for any length of time on tinned goods. In buying canned goods there is quite a saving if they are bought by the box or even by the dozen.

In addition there are dried and evaporated fruits of all kinds. These need only to be soaked for a few hours before they are cooked. Kept in a dry place one buying will answer for a long time. Prunes, apples, peaches and apricots are the most desirable of the dried fruits. Prunes should be used frequently; cooked with apricots they are much better than when cooked alone. Lemon should be cooked with prunes if apricots are not used.

There are many jelly powders from which for 10 cents one can make a moldful of very palatable jelly. By the addition of the juice of a lemon, fruit juice or other flavoring it can be made really delicious. Boiling water is poured on the powder, and it is ready for the mold. It cannot be said that these jellies are the equal of those made with fruit and gelatine and the expenditure of much time and trouble; but for those not epicures, and for plain, workaday people, they form admirable little desserts. This is one of the many interesting and excellent ways by which modern commercial science is helping families of moderate means.

With the Procession.

STOP looking for trouble, an' happiness 'll look fer you.—The Advance.

SHALLOW men believe in luck; wise and strong men in cause and effect.—Emerson.

OLD age is a tyrant who forbids, at the penalty of life, all the pleasures of youth.—Rochefoucauld.

To be faithful in darkness, that is the supreme test to which the human spirit is subjected.—George S. Merriam.

THE man who prefers his dearest friend to the call of duty will soon show that he prefers himself to his dearest friend.—Frederick Robertson.

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My name on every one.

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A Housework Girl.

"Folks are dreadful provoking sometimes, but I don't know when I ever was so discouraged about anybody as I was when Cousin Cynthia Mason's daughter Ella come to stay with me a spell. Your speaking of your girl not liking to do housework, Miss Drake, makes me of it.

"When Cynthia died, it left Ella pretty much alone in the world, but she had lots of friends in the city and I knew she'd had advantages, so I thought of course she'd get along as nice as could be.

"Well, it went on for a year or so, and then one day I got a letter from her saying she'd like to come and stay with me for awhile. She said that everything was so crowded in the city there wasn't no chance for a girl, but she thought she might do something in a country town. I told her to come along and I'd do the best I could for her.

"Well, she hadn't been with me 24 hours before I see what was the matter with her. She was a pretty girl and had nice manners. She had a pleasant voice and had took lessons, and could sing, and play on the piano considerable. She had gone to a business college for one term and knew a little about bookkeeping. She could draw and paint quite nice, and when her mother died she was planning to be a kindergarten teacher. She stayed with me a fortnight, and I did my best to get work for her, but nothing come of it. Her clothes kept getting shabbier, and her money kept getting lower, and she was dreadful blue.

"At the end of two weeks I said to her one night after supper: 'Ella,' I says, 'I'm going to have a good plain talk with you. I s'pose it'll hurt your feelings, but things have come to such a pass that I've got to speak right out. I mean it for your good, and I'm going to help you all you'll let me. To begin with, I'm going to tell you why you don't get any work. It is because you haven't got anything to sell. This is a little country town, but the folks here ain't fools. When they hire a bookkeeper they want one that knows her business; they don't want to have to teach her how to do the work they pay for. It's the same way with music; lots of the young girls here in town can sing and play bettern you can, so you ain't competent to give 'em lessons. You can't paint or draw as well as the regular drawing teacher that teaches in the schools.'

"By this time she was looking at me as though I'd insulted her. 'Aunt Asenath,' she says, 'if I had enough money to pay my car fare, I'd go back to the city to-night.'

"'I expected you'd get mad,' I says, 'but s'pose you wait till I get through talking. I haven't got money to spare to send you to business college or to music or drawing teachers, I don't doubt you've got the ability to succeed in any of those things; you lack the training, that's all. Now there is a training that I can give you, and I'll do it gladly. It's something you and every girl ought to know how to do, and if you'll learn you'll be able to earn your living and be independent.'

"'Well,' she says, when I stopped, 'what is it?'

"'It's housework,' I says.

"She just sat and stared at me. Then her face begun to grow red. 'Housework!' she says with a sniff. 'Housework!' Then she laughed. 'I'm not quite so poor as that, yet,' she says, and she got up and would have gone out of the room, but I called her back and made her sit down again.

"'I guess you can wait till I get through,' I says. 'What I propose is this: I'm going to have some boarders next Summer, and I shall have to hire extra help. If you will stay with me I'll teach you how to do housework, and when you get so you are worth it I will pay you wages. Your mother made a mistake in not teaching you to do housework, but I know she thought she was doing what was best for you. If you'd known even a little about it there's lots of situations I could have got for you. I know of two or three nice old ladies you could have been companion for, and there are small families where you could have had a good home and fair wages.'

"'You think you are too good for housework,' I says, to end up with, 'but have you thought how that sounds to one who is doing housework for you? It's honest work, and it takes brains just as much as anything else, and it's something every woman ought to know how to do, I don't care who she is.'

"Ella stood up and looked at me. You never see anyone look so offended. 'I will think over your proposition,' she says as stiff as could be, 'but I don't *think* I shall accept your very generous offer. The idea of my being a housework girl!' and she laughed a real unpleasant laugh and went off to bed.

"'I think you'll come to it, my young lady,' I says to myself, 'and pretty soon, too, if you haven't got 45 cents to your name.' I don't deny I was considerable riled. I take pride in doing my work well, and to have her act as though I'd insulted her did make me feel kinder hard towards her for a spell. Then I reasoned that she wa'n't to blame, and that 'twas all on account of her bringing up, so by the next morning I felt as kind as ever to her, and her stiff, dignified ways only amused me.

"Things went on for most a week, and I declare! I most began to think she would get work, she was so busy hunting for it every day. One day I was in the sitting room looking over the paper, and I heard Ella come in. She went to her room and stayed there for quite a spell. She was so quiet I most forgot she was there, when all of a sudden her door flew open, and she came running across the room and threw herself down in front of me with her head in my lap. She cried there softly, for awhile, then she quieted down some and says, 'I'm at the end of my resources, Aunt Asenath. I spent my last cent for an advertisement four days ago, and nobody's answered it. Now I'm ready to do anything you say.'

"I patted her on the head. 'That's a good sensible little girl,' I says, 'and now the first thing is to come and help me get supper.'

"Well, I thought I'd seen something of green girls before, but when I took Ella in hand I found out different. I was pretty near discouraged with her sometimes, but I was bound I wouldn't give up, and along towards Spring I could see she'd begun to improve a little.

"One day she says to me, 'Do you know, there's quite a good deal to housework, after all?' and then I knew she was on the road to recovery, as you might say. After that her remarks got more and more interesting.

"'I believe housework agrees with me,' she said another time. And she did look a sight better than when she come.

"'It's as healthy work as there is for a woman,' I says.

"'I think you are right,' she says, 'and actually I don't know but I like it better than anything else I've ever tried.'

"She got so she did her work as nice as could be, and before the Summer was out I paid her $3 a week, and she earned it, too. She'd been planning all through the Summer that when I got through needing her in the Fall, she'd go to the city and take lessons in cooking and try to get to teaching it.

"She was real happy making her plans, and I let her talk, but I had a feeling all along that she wouldn't go. You see there was John Winslow who lived just a little ways from us, and I had an idea that maybe he'd have something to do with Ella's plans.

"After my boarders was gone she helped me with my canning and the housecleaning. When that was done there wa'n't nothing to hinder her going to the city, but somehow she didn't seem in any great hurry to start, and finally one day she come to me all kinder blushing and smiling, and says, 'I've changed my plans a little, Aunt Asenath. I'm not going to the city after all, but I've got a chance to start a kind of housekeeping kindergarten right here in town.'

"Now John Winslow had two little sisters he was trying to bring up, so I see right off what she was driving at, but I pretended not to understand and looked as puzzled as I could, so she had to go on.

"'I'm—I'm going to have a partner in the enterprise,' she says, blushing harder than ever. 'Why, Aunt Asenath! I believe you must be stupid not to understand.'

"I had to laugh at that. 'You little goose,' I says, 'of course I understand, and I'm real glad you ain't going to the city.'

"Well, after she'd been married a year or two, she was kinder talking things over with me, and she says, 'It was the best thing that could have happened to me—my coming here and getting all out of money. Suppose I had found some work here and then had married John, not knowing a thing about housework?

3912 Infant's Petticoat, One Size.

3906 Infant's Slip, One Size.

Why,' she says, 'I firmly believe we'd have been divorced by this time, although John has got a lovely disposition and would put up with a good deal. As it is, I think I make a pleasant home for him and the children.'

"'That you do,' I says, 'and John is a lucky man.'

"And so, Miss Drake, if I was you, I'd make that girl of yours learn all about housework. She'll get to like it by and by, and it may save her from the divorce court later on."

SUSAN BROWN ROBBINS.

Rural Recipes.

Cider Apple Sauce.—Apple sauce made from sweet apples and cider is delicious. Pare, core and quarter the apples, cover them with hot water and stew gently until tender. The water should by this time be quite well boiled away. Now add either sweet cider or a mixture of boiled cider and water, together with as much sugar as may be necessary. Cook 15 or 20 minutes, then cool and keep in covered jars.

Apple Jam.—Use equal amounts in weight of sour apples and sugar. Pare, core and chop the apples fine, and make a clear syrup of the sugar. To this syrup add the apples, the juice and grated rinds of three lemons and a few pieces of white ginger. Boil until the apple looks clear and yellow. For the jelly, the apples need only be wiped clean and sliced, the skin and seeds being left in place. Cover the fruit with cider and cook until soft. Strain through a cloth. To every pint of juice thus obtained add one pound of sugar and boil a few minutes. We like to flavor our apple jelly with rose geranium leaves, using about three leaves to a quart of juice. The result is a delicate, scented flavor, suggesting an idealized combination of several fruits.

Deviled Mushrooms.—Peel and cut into quarters one pound of wild mushrooms and stew them gently in 1½ cupful of water 10 minutes. Then add one-half cupful of cream, a tablespoonful of browned flour and a saltspoonful of mustard, rubbed smooth with a tablespoonful of butter, a half-teaspoonful of salt and half a saltspoonful of paprika. Simmer three minutes, add one tablespoonful of grated horseradish and two tablespoonfuls of tarragon vinegar. Mix quickly. Serve at once.

Cream Peach Pie.—Peel, stone and halve ripe peaches. Line a deep pie-plate with puff paste and lay the peaches in this. Sprinkle with half a cupful of sugar and fit on an upper crust. Have ready a cold cream sauce made as follows: Scald one-half pint of milk and thicken with a tablespoonful of cornstarch rubbed smooth in a little milk (cold). Add two tablespoonfuls of sugar and the frothed white of an egg. Boil together five minutes and cool. When the pie is done carefully lift the top crust and fill to overflowing with the cream sauce. Replace the crust and set in a cool place. Sprinkle with powdered sugar and eat very cold.

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MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

MARKETS

THE WEEK'S QUOTATIONS.

WHOLESALE PRICES.

NEW YORK, SEPTEMBER 28, 1901.

GRAIN.—All varieties are down one-fourth to one-half cent.

Wheat, No. 1 Northern, Chicago	—	@	75⅞
No. 1, Northern Duluth	—	@	76¾
No. 2, red, elevator	—	@	75¼
Corn, No. 2, mixed, elevator	—	@	64¼
Oats, No. 2, mixed	—	@	38½
Rye, No. 2, W'n, f. o. b., N. Y.	56	@	57
Barley, malting, new crop	54	@	60

BEANS.

Marrow, choice, per bushel	2 70	@2	75
Fair to good	2 50	@2	65
Medium, choice	—	@2	25
Pea, barrels, choice	2 25	@2	30
Red kidney, choice	—	@ 2	45
Common to good	2 10	@2	40
White kidney, choice	2 25	@2	30
Black turtle soup, choice	—	@1	90

FEED.

Spring bran, coarse	17 00	@17	75
Winter bran	17 50	@18	00
Red Dog	20 50	@21	00
No grade flour	—	@22	00
Unsound wheat, per 100 lbs	67	@	70
Linseed meal, ton	—	@29	50
Cottonseed meal, ton	—	@25	00

HAY AND STRAW.

Hay, No. 1	85	@	90
No. 2	80	@	82½
No. 3	65	@	70
Clover	50	@	60
Clover, mixed	60	@	70
Straw, rye, long	50	@	75

SEEDS.

Clover, per 100 lbs	10 00	@11	25
Timothy, per 100 lbs	5 00	@ 5	50
Flaxseed, whole, per bu	6 50	@ 6	75
Millet, per lb	2	@	2⅛
Rape, German, per lb	3¼	@	3½
Sunflower, per lb	3½	@	4

MILK.

New York Exchange price 2¾ cents per quart in 26-cent freight zone.

BUTTER.—The better grades are up one cent. There is some accumulation of qualities selling at 18 to 19½ cents.

Creamery, extra, per lb	—	@	22
Firsts	20	@	21½
Seconds	18	@	19½
Lower grades	15	@	17
June, extras	21½	@	—
June, firsts	20	@	21
State dairy, tubs, fancy	20	@	21½
Tubs, firsts	18½	@	19½
Tubs, seconds	16	@	17½
Tubs, thirds	14	@	15
Tins, etc	14	@	19
Western imitation cr'y, fancy	17	@	18
Firsts	15	@	16
Lower grades	14	@	14½
Western factory, June, fancy	—	@	15½
June, good to choice	14½	@	15
Fresh, firsts	—	@	14½
Fresh, seconds	14	@	—
Lower grades	12½	@	13½
Renovated butter, fancy	17	@	18
Common to choice	13	@	16½
Packing stock	12	@	14

CHEESE.

Full cream, colored, small, fcy.	—	@	97⅛
Colored, small, choice	95⅛	@	9¾
White, small, fancy	95⅛	@	9¾
Small, white choice	9⅜	@	9½
Small, good to prime	9	@	9¼
Colored, large, fancy	—	@	9⅝
Colored, large, choice	9⅜	@	9½
White, large, fancy	9½	@	9⅝
White, large, choice	9¼	@	9⅜
Large, good to prime	8¾	@	9
Common to fair	7	@	8½
Light skims, small, choice		@	8¼
Large, choice	7½	@	7¾
Part skims, prime	6¾	@	7
Fair to good	5	@	6¼
Part skims, common	3	@	4
Full skims	1½	@	2½

EGGS.—On account of the scarcity of fresh receipts considerable refrigerator stock is being worked out.

QUOTATIONS LOSS OFF.

State & Pa., avge. prime, doz.	22	@	23
W'n, fresh-gathered, chce, doz.	—	@	22

QUOTATIONS AT MARK.

Nearby, State and Pa., fresh-gathered, fancy selected, dz.	24	@	25
Prime to choice	21	@	22
W'n, fresh-gathered, N'th'ly sections, candled, selections.	20½	@	21
Regular packings, N'n sects.	18	@	20
Graded, S'th'ly sections	18½	@	19
Regular packings, S'th'ly secs.	17	@	18
Fresh-gathered, dirties	13	@	15
Checks	12	@	12½
Refrigerator, per doz	15	@	18

LIVE POULTRY.

Spring chickens, per lb	—	@	12
Fowls, per lb	—	@	12½
Roosters, per lb	—	@	8
Turkeys, per lb	8	@	10
Ducks, average W'n, per pair	50	@	60
Average Southern, per pair	40	@	50
Geese, average W'n, per pair	1 00	@1	25
Average Southern, per pair	80	@1	00
Pigeons, mixed, per pair	—	@	15

DRESSED POULTRY.

FRESH PACKED—ICED.

Turkeys, Spring, dry-picked, lb.	10	@	12
Scalded, per lb	8	@	10
Broilers, Phila., over 4 lbs. to pair, per lb	18	@	20
Phila., mixed sizes, per lb	14	@	16
Penn., fair to good, per lb	12	@	15
Western, dry-picked, per lb	13	@	13½
Western, scalded, per lb	—	@	13
Small, dry-picked or scalded, per lb	11	@	12½
Fowls, W'n, dry-picked, prime	—	@	12½
Western, scalded, prime	—	@	12½
S'th'wn, dry-picked, prime	—	@	12½
W'n & S'th'wn, poor to good	10	@	12
Old roosters, per lb	7	@	7½
Ducks, Spring, L. I., and other nearby, per lb	—	@	14
Western	7	@	10
Geese, Spring, Eastern	12	@	14
Squabs, choice, large, dark	2 25	@2	50
Mixed, per doz	1 75	@2	00
Dark, per doz	1 25	@1	50
Culls, per doz	50	@1	00

COUNTRY-DRESSED MEATS.

Calves, veal, prime, per lb	11	@	11½
Fair to good, per lb	10	@	10½
Common to medium, per lb	7	@	9
Buttermilks, per lb	7	@	8
Grassers, per lb	5½	@	6
Pork, Jersey, dressed, light, lb.	9½	@	10
Jersey, dressed, medium, lb.	9	@	9¼

GAME.

Grouse, per pair	1 00	@1	25
Partridge, per pair	1 50	@2	00
Woodock, per pair	—	@1	50
English snipe, per doz	—	@2	50
Golden plover, per doz	—	@2	50
Grass plover, per doz	1 50	@2	00
Wild ducks, canvas, per pair	2 50	@3	00
Red head, per pair	1 50	@2	00
Mallard, per pair	75	@1	00
Teal, blue wing, per pair	60	@	75
Teal, green wing, per pair	40	@	50
Common, per pair	25	@	30
Rabbits, per pair	30	@	35
Venison, saddles, per lb	—	@	30

DRIED FRUITS.

Apples, evaporated, 1900, fcy. lb.	9¼	@	9½
Evaporated, 1900, choice, lb	8¾	@	9
Evaporated, 1900, common to good, per lb	5	@	8
Sun-dried, 1900, per lb	4½	@	5¾
Chops, per 100 lbs	1 50	@2	25
Cores and skins, per 100 lbs	1 50	@2	00
Raspberries, evaporated, 1901, lb.	24	@	25
Sun-dried, 1901, per lb	20	@	22
Blackberries, 1901, per lb	6½	@	6¾
Huckleberries, 1901, per lb	16	@	16½
Cherries, per lb	13½	@	15

FRESH FRUITS.

Apples, Alexander, per bbl	3 50	@4	50
Wealthy, per bbl	3 50	@4	50
Jonathan, per bbl	3 00	@4	00
King, per bbl	3 00	@3	50
Greening, per bbl	2 75	@3	50
Twenty-oz., hand-pckd, bbl	2 75	@3	50
Fall and York Pippin, bbl	3 00	@4	00
Holland Pippin, per bbl	3 00	@4	00
Pound Sweet, per bbl	2 50	@3	00
Fall varieties, fair to good	1 75	@2	50
Prime hard, red sorts	2 50	@3	00
Ordinary hard, red sorts, bbl.	1 50	@2	00
Windfalls, per bbl	1 00	@1	50
Pears, Bartlett, fancy, per bbl.	4 00	@5	00
Bartlett, average lots, bbl	2 50	@3	50
Bartlett, prime to fancy, keg.	1 25	@1	75
Bartlett, inferior, per keg	75	@1	00
Seckel, fancy, per bbl	3 50	@4	00
Seckel, fair to prime, bbl	2 00	@3	00
Beurre Bosc, per bbl	1 75	@3	00
Beurre Clairgeau, per bbl	1 75	@2	50
Beurre d'Anjou, per bbl	1 75	@2	25
Sheldon, per bbl	1 75	@2	50
Other late kinds, per bbl	1 75	@2	00
Nearby, common, per bbl	1 00	@1	50
Peaches, Md. & Del., carrier	1 25	@2	00
Md. & Del., per basket	50	@1	00
Jersey, per basket	50	@1	12
Pine Island, per carrier	1 50	@2	25
Pine Island, per basket	50	@1	12
Up-river, per pony basket	40	@	65
Up-river, per 2-basket carrier	75	@1	25
Ohio & Mich., per bu. bskt	1 00	@2	00
Plums, l'ge, table blue, 8-lb. bk.	40	@	50
Green, per 8-lb. basket	35	@	50
Common, per 8-lb. basket	20	@	25
Prunes, per 8-lb. basket	35	@	50
Grapes, up-river, Del., carrier	50	@1	00
Up-river, Niagara, carrier	50	@	75
Up-river, Worden, carrier	40	@	50
Up-river, Concord, carrier	40	@	50
Up-river, Del., small bskt	13	@	14
Up-river, Black, small bskt	7	@	8
W'n N. Y., Del., small bskt	13	@	15
W'n N. Y., Niagara, plain, per small basket	10	@	12½
W'n N. Y., black kinds, per small basket	8	@	10
Muskmelons, far W'n, good to choice, per crate	—	@1	50
Far Western, poor to fair	1 00	@1	25
Cranberries, Cape Cod, fancy, dark, per bbl	—	@6	00
Cape Cod, medium color, bbl	5 00	@5	50
Cape Cod, light color	4 00	@4	50

GINSENG.—A fairly satisfactory trade and steady market at $5 to $6.25 per pound for Northern and Western and $4 to $5 for Southern.

HONEY.

N. Y. State, clover, comb, fcy, per lb	15	@	15½
Fair to good, per lb	12	@	14
N. Y. State, buckw't, comb, lb.	9	@	11
California, extracted, per lb	6½	@	7½

VEGETABLES.

Potatoes, L. I., per bbl	2 25	@2	50
Maine, per bag	2 12	@2	25
State & Western, per bbl	2 12	@2	25
Albany & Troy, per bbl	2 12	@2	25
Jersey, per bbl	1 75	@2	12
German, prime, 112-lb. bag	—	@1	50
Sweet potatoes, S. Jersey, bbl.	2 25	@2	50
Yellow, Va., per bbl	1 75	@1	87
Beets, Jersey & L. I., 100 bchs.	1 00	@1	25
Cauliflowers, per bbl	1 25	@3	00
Celery, State & W'n, doz. roots.	15	@	35
Carrots, L. I., per bbl	75	@1	00
Corn, Jersey, per 100	75	@1	50
Cabbages, L. I., Flat Dutch, 100.	3 00	@4	00
Cucumbers, Shelter Island, bbl.	3 50	@5	50
Albany, per bbl	1 00	@3	00
W'n N. Y., per bu. basket	1 25	@2	00
Eggplants, Jersey, ½-bbl. crate.	50	@	75
Jersey, per bbl	1 25	@1	75
Lima beans, Hackensack & L. I., Potato, per bag	1 00	@1	25
South Jersey, Potato, bag	1 00	@1	25
South Jersey, flat, per bag	—	@	75
Lettuce, W'n N. Y., per case	1 00	@1	75
Boston, per case	75	@1	25
Nearby, per bbl	75	@1	25
Onions, pickle, white, per bbl	3 00	@4	00
Orange Co., white, per bag	1 00	@3	00
Orange Co., red, per bag	1 75	@2	50
Orange Co., yellow, per bag	1 75	@2	00
Orange Co., inferior, per bag	75	@1	25
Jersey & L. I., red, per bbl	2 25	@2	75
Jersey & L. I., yellow, bbl	2 00	@2	25
Jersey & L. I., white, bskt	1 50	@2	00
Connecticut, white, per bbl	3 00	@3	75
Connecticut, yellow, per bbl	2 25	@2	50
Connecticut, red, per bbl	2 25	@2	75
State & W'n, yellow, per bbl	2 00	@2	25
State & W'n, red, per bbl	2 00	@2	75
Peppers, Jersey, green, bbl	40	@	75
Jersey, red, per bbl	60	@	80
Squash, Hubbard, per bbl	1 25	@1	50
White, per bbl	1 00	@1	25
Marrow, per bbl	—	@1	25
String beans, Jsy & L. I., bag.	40	@	50
State, per basket	40	@	75
Turnips, Jersey, Russia, box	1 00	@1	25
Canada, Russia, per bbl	1 00	@1	12
Tomatoes, fancy, Acme, bu. bx.	65	@	75
Acme, fair quality, bu. box	50	@	60
Common, per box	35	@	50

THE feature of the Summer meeting of the Wisconsin Horticultural Society this year was the "picnic" day. The young people were delighted, of course, while the old fellows showed plainly that a holiday was an unusual occurrence with them. When we arrived in Madison, after our moonlight boat-ride, all seemed anxious to pour out thanks to some one for the pleasures they had experienced. One man told me that it was the first real holiday he had had for 18 *years!* R. C.

BUSINESS BITS.

THE farmer who has roots this year to supplement his grain ration can be considered either lucky or possessed of a great deal of foresight. Of course it is dangerous to feed roots without cutting them, and no one can afford to spend the time and energy to do it by hand. Better look into the merits of the Banner root cutter. O. E. Thompson & Sons, Ypsilanti, Mich., manufacture it, and will send full information on request.

A JET of steam will kill more microbes than any other agency. Nowadays dairymen consider steam one of the necessities to insure cleanliness. A steam engine has this very strong advantage over all other kinds of power, and, of course, is equal to any other for all kinds of farm work. If you want to know all about steam engines and what they will do, write to James Leffel & Co., Box 101, Springfield, O.

"FOR Cream-of-the-Earth Folks" is the title of a neat booklet issued by the U. S. Butter Extractor Co., Bloomfield, N. J., setting forth the advantages of the Empire cream separators. Certainly the hand-power cream separator deserves to rank as one of the most important labor-savers and money-makers ever invented for the farmer, and the Empire separator has achieved great popularity as an easy-running, close-skimming machine, extremely simple in construction and easily cared for.

WE have been glad to notice in recent years an increasing tendency on the part of people to get back into the country, leaving the crowded cities and towns. Life is likely to be longer, as it certainly will be happier, where there is an abundance of pure air and sunlight, with unrestricted views of hill and vale, river and sea. We feel that the country at large is indebted to everyone who is making any effort whatever to aid this movement. The W. F. Allen Land & Improvement Company, Salisbury, Md., was organized to place on the market good home properties in Maryland and elsewhere. Mr. Allen, who is at the head of this institution, has long been known, and favorably, too, as a strawberry culturist, which brought him face to face with the fact that the cities are crowded with those who are needed by the country, and for whom a country life can do so much. Address W. F. Allen Land & Improvement Company, Salisbury, Md.

Seventieth Fair of the American Institute.

One could scarcely realize the generally disastrous character of the season from a view of the fruits, flowers and vegetables at the seventieth annual fair of the American Institute, held in the Berkeley Lyceum Building, New York, September 24-26. The display was more extensive and of much better average quality than for several years past. Grapes were shown in great perfection and variety by Ellwanger & Barry, Rochester, N. Y., and C. C. Corby, Montclair, N. J. The latter had bunches of native varieties rivaling in size and beauty some of the best glass-grown foreign grapes, but as they were the product of special amateur culture they did not represent the normal character of the varieties as well as the Rochester exhibit. Campbell's Early showed up extremely well, in good flavor as well as size and appearance. Ellwanger & Barry had their usual large assortment of pears and apples. The pears were very fine, while the apples, though well developed, generally lacked color. Some good plums were shown by M. L. Bell, Sparkill, N. Y.; Wickson and Chabot seemed to be the best, though some of the largest plums labeled Wickson were evidently Kelsey. Cornell University had some novel fruits, among which were well-fruited branches of the Buffalo berry, Shepherdia argentea, and a collection of varieties of the European medlar. Smith's Hybrid pear was noted in this exhibit. It is of Chinese Sand pear origin and resembles Garber, but is uniformly smaller. There were no peaches, and but a little prominence was given to Kieffer pears.

The vegetable and farm crop display was notably good. Probably no finer vegetables have ever been shown in the long series of fairs held by the Institute. A large exhibit from F. G. Bourne, Oakdale, L. I., was splendidly staged, the rich colors of the squashes and other cucurbits with the brilliant tints of tomatoes and peppers in variety made an effect but little inferior to portions of the flower section. But little was to be seen in the way of new varieties, though all the standards had been grown to great perfection. More good orchids and foliage plants were staged than we have seen before, and the competition in Dahlias was closer and more extensive than in previous years. A very pleasing feature of the decorations was the large number of dwarf Flame flower, Kniphophia Pfitzerii, from J. L. Childs, Floral Park, L. I. The extreme brilliancy of the compact spikes of this fine variety make it always a conspicuous object.

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409 Pearl St., New York.

MARKET NOTES

ROOTS AND HERBS.—Several readers wish to know where they can sell the various roots and herbs which are used for medicinal or commercial purposes. Nearly all of the wholesale druggists buy small quantities of these herbs for their trade, but there are botanical druggists who are always in the market for anything in this line. One of these dealers is George A. Elwood, 279 Pearl Street, New York. Those having this stuff to sell should write to the regular dealers, giving full particulars as to quality and quantity.

FOREIGN GRAIN PURCHASES.—On September 23 910,000 bushels of corn were bought by exporters. The heaviest sales were in Chicago, but it is understood that most of the grain will be shipped from the outports. No unusual amount of ocean freight accommodation appears to have been engaged for this large purchase of corn, and it will probably be stored at eastern ports and worked off at about the same rate as for the past few months. It is quite likely that this movement is merely an effort to get as much benefit as possible from the cut rates (from 10 to 30 per cent), which most of the railroads from Chicago are said to be making to eastern points. Export oat shipments have been very light for some time. The Russian black oats have been monopolizing the European markets to some extent, as they could be sold at a figure which particularly appealed to the cheaper class of trade. The largest recent foreign sale of American oats was 800,000 bushels for the English army in South Africa.

PROSPECT FOR A BEGINNER.—A reader who has had two years' experience in handling produce in country towns wishes to know what are the opportunities for commencing business in this line in New York City. If he has had no experience in selling stuff in the city he would better go very slowly for a time. If he does know something of the way in which trade is carried on here, has tact in handling buyers, and is willing to work hard and long, he ought to get along fairly well. He must expect sharp competition, and will run across some of the meanest people on the face of the earth as buyers. For a man without knowledge of city trade the better plan would seem to be to work for a time as helper in an established concern. By keeping his eyes open he would get a great amount of experience, with much less cost and worry than if in business for himself. Handling produce in the city markets is a trade just as much as carpentry, steam engineering or shoemaking. There are men in the business here who have been at it 25 or 30 years. They have the advantages of an established trade, and the knowledge gained from long observation of the markets under all conditions, and are thus often able to sell stuff more quickly and for better prices than a new man could get. However, these things should not discourage a beginner. There is a great amount of produce to be sold here, and a new man who will handle his shippers and customers with consideration stands a fair chance of working up and holding new trade. This produce commission business has been so overrun with scamps and scalawags that shippers who have suffered in this way more than ever appreciate a city agent who will handle their produce with reasonable care and make them honest returns. A man of this stamp who will start carefully and master the business will surely make a permanent place for himself. W. H. H.

PROVIDENCE (R. I.) WHOLESALE FRUIT AND PRODUCE MARKET.

BUSINESS FACILITIES.—There are 10 or 12 large houses here; several of the leading dealers have been long in the business, and are able to handle heavy shipments. We have ample service by rail from the South and West and to all parts of this State, and those sections of Massachusetts and Connecticut that are supplied by this city; also direct lines of steamers from New York, Philadelphia and Baltimore, and local boats to all shore places on Narragansett Bay. The trolley lines are now introducing express freight cars, and as the lines are reaching out in all directions, they will be of great service for quick delivery of fruit and produce.

FRUIT PEDDLERS.—Our city fathers recently decided to put a tax on all peddlers as follows: Wagons, $25; sidewalk stands, $15; baskets, $10. It was at first thought that the tax would drive many peddlers out of the business, but there are already over 600 licenses issued. These peddlers afford an excellent outlet for fruit and vegetables, and the bulk of our perishable fruit is sold to them.

PEACHES.—This popular fruit is absorbing attention in the market, and the season is now at its height; while they last other fruit must wait awhile. From 3,000 to 5,000 baskets a day are now being handled by the wholesale dealers here. Prices are somewhat depressed at present, on account of heavy receipts, but have averaged very well for the season on nice, sound, well-packed fruit. The most popular peaches here are white, but extra yellow sells well, while medium to poor yellow drags. This market prefers the 16-quart, round open basket, although the six-basket carriers have been used extensively this season, mostly with peaches shipped here from the South and West. The area from which peaches are sent to this market has greatly extended the past few years, owing largely to the use of refrigerator cars. During the past few weeks, peaches have been received here in carload lots from 10 States, viz: Georgia, Kentucky, Arkansas, Missouri, California, Michigan, Maryland, New Jersey, Delaware and Connecticut, besides those brought here from towns in this State. Up to five years ago the crop of peaches in New England was so small that it cut no figure in this market, but thousands of peach trees have been planted in this State and Connecticut, and many of them are now bearing, and as the quality is good, they are bound to increase. Formerly this city looked to Delaware and New Jersey for its peach supply, but this is now fast changing, as the quality in those States has been poor of late.

FRUIT OUTLOOK.—Grapes will soon follow peaches as the leader, and already there is some demand for them. Several carloads are now en route here from western New York, and some are arriving from the Hudson River section. Concord, Niagara, Delaware and Catawba, in the order named, are the popular kinds. More Concords are sold than all others. The package known as the "pony" basket is the favorite, although the eight-basket carriers are sent here to a limited extent. Apples are scarce; prices will be high. Potatoes are a short crop here; market touched $5.25 a barrel for a short time, but has sagged to $2 on account of farmers all digging now. Prospect good for prices. Onions are firm; market already advanced to 75 and 85 cents a bushel. Indications are for high prices the coming Winter. L. C. E.

Providence, R. I.

AMERICAN POMOLOGICAL SOCIETY.

The Convention at Buffalo.

PART II.

The evening session was a joint meeting with the National Association of Bee Keepers. Fermentation of Fruit Juices by Control Methods was the subject of a paper by Prof. Alwood, of Virginia. He described the different forms of bacteria, and told how they caused fermentation in fruit juices. Control methods consist in selecting cultures which produce proper fermentation. Scientists have already accomplished much working along this line; cleanliness, exclusion of air, and sowing strong cultures, are the means we have of controlling fermentation. Prof. Fletcher, of Ottawa, Canada, followed with a paper on Bees as Fertilizers of Flowers and Fruits. Bees carry Pear blight. Prof. Waite, of Washington, said that he had proved that bees convey the germs of Fear blight, by carrying them to the blossoms in the process of pollenization. Prof. S. A. Beach, of the Geneva Experiment Station, next gave his experiments in spraying trees in bloom. After many experiments he thinks it is not necessary to spray at this time, and does not recommend the practice. H. W. Collingwood read an address on The Pomologist and the Bee Keeper.

Development and Needs of the North American Fruits was the subject of an address by L. Wolverton, Grimsby, Ontario. One trouble, he said, in making up shipments for distant markets, is a multiplicity of varieties. Standard varieties of known quality, in large shipments of a single variety of such fruits, have proved generally profitable. Transportation companies have not always provided the best facilities for transportation. The cold storage has often been defective. Fruit needs to be graded according to some established standard, and then placed in suitable packages. He had good success in shipping choice pears in half-bushel boxes, and apples in one-bushel boxes, to supply a demand from special trade. Prof. Geo. T. Powell, of Briarcliff Manor, N. Y., continuing the discussion of the subject, said that no class of buyers will pay as much for fine fruit as the English, and no others are so critical. One cause of unsatisfactory shipments of apples is allowing them to lie in piles too long in the orchards. Picking at the right time, correctly grading and honestly packing them in cold storage of the right temperature, will solve the problem of getting a profit in shipping fruit. Senator H. M. Dunlap, of Illinois, said he had visited Europe, and had observed the demand for American fruits, of best quality and honestly packed. Especially is this true in France. Maintain the reputation of our fruits, and we have the market. Charles Forster, exporter from New York City, reported a considerable growth in the apple export trade. Our apples are coming in favor in nearly all foreign markets. Grading and packing are the main essentials to success, in shipping all kinds of fruit. Fancy fruit should be packed in boxes of 50 pounds. Steamship companies are studying the subject of cold storage in transportation, and will do all they can for shippers. He told how one shipper had sent Duchess pears in boxes to Liverpool, which sold at $1.43 per half-bushel box, and realized $1,000 per carload.

Lessons from the Fruit Exhibit was the subject of general discussion, and it was the opinion of the majority of the members that five was the best number to place on the plate in exhibiting apples, pears, peaches and the large fruits, while for the smaller fruits, as plums and cherries, 10 was the best number, also three bunches of grapes. Prof. L. C. Corbett, of Washington, D. C., gave an account of apple growing in West Virginia. Prof. Green, of Minnesota, gave an account of fruit growing in Minnesota. He said that after many trials of Russian and other varieties, "We have found a few which are desirable, adapted to our climate. We have a new horticultural building covering more than one acre. We have the largest horticultural society in the United States. We have proved that fruit of suitable varieties can be successfully grown in a locality where the temperature often goes 40 degrees below zero."

The remainder of the session was taken by reading the reports of committees and transacting business. A motion was carried—after a long discussion—that hereafter the papers read at a society meeting should be limited to 10 minutes and discussions to five minutes. The Society's fruit exhibit was displayed in Horticulture Hall at the Pan-American Exposition. The session Thursday afternoon was at this place, and the time was mostly spent in examining the large and excellent exhibits of the Society and the exhibition exhibits.

The officers were reëlected as follows: President, Chas. L. Watrous, Des Moines, Iowa; vice-president, Thos. Meehan, Philadelphia, Pa.; secretary, Wm. A. Taylor, Washington, D. C.; treasurer, L. R. Taft, Michigan Agricultural College. W. H. J.

WE have had a few trees of very fine Burbank and Ogon plums which we sold from our market stand at a good price. We received an average of one cent for three plums all the way through—selling them in one-quart berry baskets. A fine crop of Imperial Gage and Lombard plums (50 trees) is just approaching maturity. I am engaging them at $2.25 per bushel.

F. H. B.

IT is said that ex-Governor Eaton, of Colorado, will receive this year $500,000 income from his farms. He bought 16,000 acres 40 years ago from the Union Pacific Railroad for $1 per acre. This has been improved by irrigation, and is leased to farmers who pay a rental or work the land on shares. There are 5,000 acres in wheat, 4,000 in Alfalfa, and 4,000 in potatoes.

DURING the first six months of 1901, India and Ceylon exported 42,423,250 pounds of tea. This is one-fourth more than for the same period last year. Prices are very unsatisfactory on the common and lower grades, of which there is a large accumulation on the market. Under these conditions it would seem to be useless to attempt to raise tea in this country, where labor is much more expensive than in the East.

Symbols of Success

A vacant chair and a portrait on the wall—strange symbols of success! Yet, in many a home these are the symbols of the success of the man who did not find time to care for his health, or neglected the increasing warnings of disease which Nature gave him. When the stomach is "weak" and food is imperfectly digested and assimilated, it is only a question of time until the break-down comes. The stomach is the very center of vital power and must be kept in health if sickness is to be avoided. Doctor Pierce's Golden Medical Discovery cures diseases of the stomach and other organs of digestion and nutrition. It increases the supply of pure, rich blood, and gives the body strength to withstand the strain put upon it by the struggle for success.

"I was a sufferer from what the doctors called indigestion, but after trying several eminent physicians failed to get a cure," writes Mr. Frank Mericle, of Independence, Jackson Co., Mo., Box 473. "Some of my symptoms were soreness in pit of stomach, fullness, tired feeling, constipation; sometimes soreness would extend to bowels. Some one recommended me to take Dr. Pierce's Golden Medical Discovery, which I did, and after taking only a few bottles of 'Discovery' and your 'Pleasant Pellets' can say I derived more benefit from them than any other medicine I ever tried. I began to gain flesh from the start. Have recommended it to others and will continue to do so."

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Live Stock and Dairy

VALUE OF PEDIGREED STOCK.

In 13 years of breeding Jersey cattle and Chester White hogs it has paid me to have them pedigreed and registered. To most intelligent breeders it is an advantage to know the lines of breeding, especially if they wish to rear their young stock to replenish the herd, which is assuredly the cheapest and best way to procure a profitable working herd at the least possible cost. If we have our stock registered we can trace them back to different blood lines, and know which ones have been producers of profitable offspring, which is one of the most essential points in breeding. But when your stock is not registered, you do not know what to expect when breeding, because you have no direct knowledge of their ancestry.

In breeding, the theory is that "like produces like," or the image of an ancestor; then the more noted animals you have in a pedigree the more valuable the offspring, provided the sire and dam are good individuals. All animals are sold entirely on their merits as individuals. If it were possible for two animals to be alike in conformation then the one with the best pedigree of noted ancestry would be the most valuable on the market as a breeder. The price then would be in accordance to the individual or the breeding to back it up. As regards the difference of price of animals registered or not registered, when we first began breeding Jerseys in 1888, we had but a few registered cows and one sire, and a number of grades which were bred to this registered Jersey bull. The calves that were subject to registry I could sell for more than twice as much as the calves that were not, although they were sired by a registered bull. By all means I would say, if you wish to breed cattle, keep them registered, so you know their ancestry, and breed with some intelligence.

J. ALDUS HERR.

Lampeter, Pa.

WHEAT BRAN OR MIDDLINGS.

Do Cows Need So Much Protein?

PART II.

The herd, during the period of lactation, which included the Winter's work referred to, gave on an average 7,514 pounds of milk and 360 pounds of butter. This clearly indicated that an average of two pounds of protein per day during the Winter was ample for cows yielding 360 pounds of butter per year. Taking the heifers and the cows in the herd doing light dairy work, and giving the daily protein consumption, and the milk and butter yielded during that period of lactation, none exceeding a calendar year, we have the following:

	Protein.	Milk.	Butter.
Beckley	1.68	5,189	330
Belle	1.76	5,763	332
Olive	1.67	6,317	305
Quidee	1.85	7,420	296
Reddy	1.69	3,908	233
Tricksey	1.56	5,252	314
Average	1.70	5,758	301

This showed that 1.7 pound of protein daily was enough to supply the needs of cows that yielded on an average 5,758 pounds of milk and 300 pounds of butter per year. This naturally suggested two questions: First, did the cows receive more protein than they needed? Second, how much protein does the average common cow need to do her maximum work, both as regards quantity of product and cost of production? The work for the Winter of 1900-1 was planned to throw light on these points. The herd was divided into groups of five cows each, but the results of only four groups are published, because in two of them normal conditions were disturbed. Group 1 received the amount of protein usually prescribed, while Group 5 received corn, barley and oats equal parts, with fodder corn and corn silage for roughage. The other groups were fed intermediate between Groups 1 and 5. Group 5 returned the largest yield of milk, and produced more for the food consumed than did any of the other groups. The experiment shows that with the high protein content in the roughage grown on our fertile farm lands grains furnish ample protein for cows doing ordinary dairy work. The bulletin referred to gives in detail the methods and results upon which these surprising conclusions rest.

To illustrate a point that was brought out very clearly in another experiment immediately preceding the one commencing on February 11 and ending April 21, beginning on November 19 and ending February 10, I submit a table giving the average weight of the cows, the daily protein consumption, the calculated amount of protein needed daily for body maintenance, the average amount of protein available daily for product, the daily average yield of milk, its fat content and protein to a pound of milk yielded, the figures being the average of 84 days' work when the cows gave their maximum yield of milk.

Name.	Wgt. lbs.	Protein daily. lbs.	Protein for product. lbs.	Milk yield. lbs.	Per ct fat.
Betty	870	1.70	1.09	10.03	6.7
Dora	877	1.87	1.25	15.02	6.1
Beckley	839	1.63	1.04	13.44	5.6
Tricksey	783	1.70	1.19	16.78	4.9
Houston	918	1.98	1.34	25.00	5.6
Sweet B.	1,063	2.25	1.51	30.81	4.8
Olive	794	1.63	1.08	27.26	3.
Topsy	1,170	2.64	1.82	44.39	3.7
Lou	1,143	2.14	1.34	38.01	3.7
Quidee	830	1.90	1.82	25.55	3.5
Lydia	1,048	2.39	1.66	32.02	3.4
Countess	1,169	2.38	1.56	45.27	2.4
Average	970	2.06	1.38	29.85	3.9

Betty and Dora are omitted from average.

T. L. HAECKER.

HOUSING AND HANDLING HENS.

Can you give me directions for the interior arrangements of a henhouse to contain 50 to 75 hens? They will have plenty of range in Summer, but of course will be confined in Winter.

H. H.

French Creek, N. Y.

What amount of land is necessary for 500 laying hens? What amount of house room will they require for best results?

Coxsackie, N. Y. H. V. S.

I judge that H. H. is a farmer, residing where a northern climate reigns; that he wishes his fowls housed comfortably and a generous egg yield during the season of high prices. To reach these ends the shelter must be constructed along the best known lines of true economy in time and money. (By "true economy" is meant that which pays best in the long run.) Our farmers are too apt to crowd their henhouses, especially in Winter, notwithstanding the universal verdict of experts, that small flocks are much more profitable; that from 25 to 30 fowls in a flock is enough, and that each lot should have a separate house.

The 75 fowls kept by H. H. will require a floor capacity of about 26x13 feet; a south front seven and a back five feet high. It can be built of 13-foot lumber and under one roof cover at each end a house (6x13), and in the middle their two respective scratching sheds (7x13). The expense of thus dividing the flock is but a trifle extra, and the health of the fowls and their egg yield (other conditions being favorable) will be greatly improved. We favor a ground floor, as the birds seem healthier there, and freer from scabby legs and lice. Clovernook's record is, that this Spring we put 16 Plymouth Rocks in an earth floor 12x12 house. There they have been kept (except on occasional short runs at night), and are perfectly healthy, showing no signs of lice. Their egg record of 80 and 36 eggs per week, without a break since April 1 to September 15 is remarkable for fowls so closely confined and given such slight care.

For a rat-proof house, the following device is highly recommended: Build the frame on posts set a few inches above the ground, the sills (2x4) spiked on after leveling. An inch below its upper edge, nail on six or eight-inch boards. It is claimed that rats have never been known to eat their way under these boards. But one-inch mesh wire netting a foot deep nailed to edge of sills and run down into the trench dug for it, then filled in and the dirt packed down firm makes a still better, cheaper and more durable defence against these and other pests. The entire floor space should be filled in up to tops of sills with earth and packed hard, the end rooms then covered a few inches with sand and the scratching sheds with hay, straw or leaves. An inexpensive covering and a durable one for roof and sides over the boards, is a good grade of tar paper. We used a brand known as "extra heavy felt" seven years ago, and it shows no signs of giving out. The end rooms would best be entered from the scratching shed, a six-pane window on the south end. The droppings board should be about a foot from the floor; nest boxes underneath and roosts above should all be on the north end, where the roof is lowest. A lining of stout building paper for the inside of these end rooms (where boards or plaster are deemed too expensive) adds much to their warmth. We whitewash over the paper. Also add a curtain of matting, old carpet or other thick goods fixed with rings on a rod to slip across the front of roosts on a cold night.

Board up the back and front of scratching shed, about three feet, and from that to the roof inside line with cotton cloth to keep out the snow, and outside with one-inch mesh wire netting. A good but slightly more expensive method is to tack the cloth on frames that on warm, sunny days can be taken out, or swung up against the roof inside. The entrance to the building should be on the south side of the center shed.

If the flock under discussion were from 50 to 500 birds, as suggested in H. V. S.'s inquiry, would advise dimensions of buildings to be 7x32 feet, using 16-foot lumber, for each 50 fowls. (Well-seasoned hemlock answers very satisfactorily and is comparatively cheap.) A good size for outside yards to connect with these houses is 30x130 feet. For a straight, egg-yielding plant of 500 fowls the colony plan and a good-sized farm is undoubtedly the most economical and profitable method of poultry keeping. That is, portable houses for 25 inmates each, and free range. But in our cold climate it is difficult to make them warm, portable and cheap, and so our large plants find stationary buildings for all the year most satisfactory.

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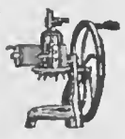

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DAIRY AND FARM NOTES.

I read much in your paper about silos and I mean to have one another year, but a good many farmers and other people are very much opposed to silage, for they say it will make the milk taste, and that it will not keep sweet as long and is not wholesome. They call silage rotten stuff. I would like the opinion of some of the readers of your paper. W. A. W.
Whallonsburg, N. Y.

After an experience dating back to 1883 it seems almost a waste of space to speak of silage and its value. The number of silos that are yearly being built should be sufficient evidence of their success, and yet this one question is still uppermost: Will silage injure the cows, and will their teeth get loose? Will it make the milk, butter and cheese taste, and other kindred questions. I remember a very prolonged discussion in southern Wisconsin, where good crops abound. W. H. Bradley, who was conducting the meeting, made an exhaustive argument, backed by years of feeding. The writer took a hand by telling of his limited experience in feeding 150 animals upon this food, but without a thorough conversion of the multitude. To be honest, I don't know that we made a single convert. I gave them an experience with an old cow that had just attained her majority, having eaten silage for 15 years, and was then a lively old veteran with teeth, having lost only the front teeth in the upper jaw, an accident in youth! It is an old saying that where there is so much smoke there must be some fire, and I know that poor, improperly grown and stored silage will flavor milk. So will any food with a pungent odor. It is to obviate this trouble that our experience profiteth, and the sour odorous stuff is as unnecessary as rotten or decomposing hay and grain. I have observed many times the effect in a locality of such a silo. The whole neighborhood would condemn the system from a single unfortunate experience.

These criticisms and experiences come from the northern latitudes, where a large variety of corn is not easily grown and matured. The questioner is above 44 degrees, about 20 miles north of my home in Lewis County, and unless he lives very near Lake Champlain I should say that the seasons would not be longer than with us. To attempt to grow the large southern varieties, unless he is an expert, would be useless, first from the poorer quality of silage, and secondly from the labor of handling water and indigestible crude material. The greatest amount of feeding value in the least tonnage should be our aim. Corn growing is not a question of latitude alone. I have seen a line fence only divide a large fine growth, uniform throughout the whole acreage, well eared and matured, from a field of uneven growth and maturity not worth one-half the former. These two farmers were 500 miles apart in latitude in corn maturing. I have only to repeat what I said on page 591; that when the corn contained too much water, as ours does this year, the quality of the silage may be improved by drying out some of the surplus moisture, not enough so that air will take the place of water, and thus produce heating and white mold, but enough so that the leaves will rattle. We may have to give it up, however, this year, on account of continuous and excessive rains. At present writing, it looks as though we should be fortunate to get corn into the silo wet or dry. The corn harvester will mire on high land and we are forced to discontinue cutting.

Will silage injure all milk products? I know from a long experience that if of good quality it will not only not injure butter and cheese, and milk for use in its crude form, but the butter and cheese will be as good or better. It is saying a good deal to proclaim that wheat bran, cornmeal and oats, with clover and mixed hay, can be improved upon as a butter ration so far as the effect upon quality is considered, and the same may be said of cheese. But, mind you, the foods above mentioned are not found upon every cow table, and when otherwise, then, in my experience, the silage will give to the milk that peculiar flavor which comes from the grasses in Summer. As to its effect upon the animal, even when fed the first-mentioned ration, I consider it has a special value in keeping the system well lubricated and in a condition more easily to assimilate dry foods.

We have sent all of our butter for a number of years to one firm, and never a pound has been sent without silage in it, yet not a pound has been rejected on account of foods. At the same time we have had to use care that the quality of silage was good. In milk production, our experience is the same for New York shipment, no fault with silage milk; on the other hand, the milk was acknowledged as very satisfactory. The firm which bought has asked for the first privilege of securing the same dairies again this Winter.

If I considered it necessary, evidence of a similar nature could be produced both from our own farm and factory experience, coupled with the experience of practical dairymen the country over. There is another phase of the question, however, upon which my mind is somewhat uncertain, viz., the effect upon condensed milk and soft cheese, that is, Brie, Neufchatel, square creams, etc. It is not necessary to mention firm names, but the correspondence and personal interviews I have at hand. The result of these inquiries is against silage milk. I am writing no new thing when I speak of the position taken by the condenseries, but soft-cheese manufacturers have in some cases objected to it. One of the largest manufacturers in this country, and a very close personal friend, who would have no object in any but honest representation and criticism, writes me: "I don't see why it should be injurious in cured cheese, though I am inclined to think that it is not the right kind of milk for Neufchatel, inasmuch as condenseries condemn it on account of affecting the keeping qualities." I know a private dairyman, a recognized authority, who has made a most perfect Neufchatel cheese from silage milk, selling to a most fastidious New York trade. We have therefore this conflicting testimony from certain manufacturers, from which I am able to draw but one conclusion. Not every farmer has succeeded in producing a perfect silage, and one bad mess injures the whole batch. Business men with more or less capital invested, together with the cost of the raw material, are not inclined to take chances, and so we find them arbitrary and unyielding in their rules, and I am inclined to respect and consider their judgment. I have had some experience as a manufacturer, and I know how easily he suffers loss from milk imperfections.

This question has come to be a serious one from the institute platform. In sections where silage is not permitted, advice has been given from the platform to boycott these factories and force them to use it. I believe this principle wrong, repeating again as I have done before, that our teaching should be the methods that would produce only perfect silage, and when this had been secured, there would be no trouble in using it as a food for all milk products. Yes, my friend, build a good silo, tight walls; if solid and unyielding the form will not matter; fill it with ripe corn in the glaze, and you will not regret your expense. H. E. COOK.

BRIEF DAIRY FARM NOTES.

We are quite in favor of barley and peas for late sowing. They are not killed down by early frosts, and they seem to grow well both in dry seasons and wet. Sow as soon as convenient after haying, using a sprinkling of manure or commercial fertilizer. We get the best results by thorough tillage for a week or two before sowing. Harrow the ground from three to 10 times over before sowing, and the seed will grow all the better for the extra tillage. Last year the Pea louse destroyed the peas, but we are not so badly afflicted here with the louse as to deter us from sowing peas again this year, and I am expecting to save them. Of course they may be sown earlier for early feed, but we use them to feed in the Fall after the frost would have killed the corn. Small use to try to cure them then, but for green feed we like them very much. We get considerable protein into the feed that way, too.

In speaking of one-horse farming on a two-horse farm, I mean no disparagement to the farmer. On the contrary, there seems to be, in some instances at least, much wisdom in the idea. In places where land is as cheap as it is here, hired labor appears to be the most expensive item the farmer has to contend with. The phrase, often quoted, that no one can afford to *pasture* land worth $100 an acre, may be true, but how about soiling on land worth $10 to $15, with labor at $1 a day plus board, and milk worth 65 to 70 cents per can? Manifestly conditions must alter methods, and the institute speaker who insists, as many of them do, that soiling, silaging and feeding purchased grain to balance these carbonaceous foods, is best for all, no matter what the cost and condition of land, or the wages of hired labor, is mistaken, if nothing more.

Those thistles seemed entirely out of place in the oatfield when we were harvesting, and the boys didn't like them when we thrashed the oats. The fact is, I haven't found a convenient place to raise thistles. They will grow though in places, and I purpose keeping an eye on those spots, and when we seed them, sow oats and peas and cut early with a mowing machine and handle with a fork. Cattle eat them well as soon as they are wilted, and this saves their seeding. By the way, oats and peas are proving a very good crop with us. We grow more of them every year, and less oats. The cost of harvesting is less, and the thrashing bill is saved; besides, their worth for feeding is greater, if I am not mistaken.
Delaware Co., N. Y. H. H. L.

Pork-Making in Kansas.

The majority of stock feeders, that is those who feed a great amount of stock, raise but a small proportion of the grain they feed, but raise all they can, and depend upon buying of those farmers who grow feed and grain to sell. The stock feeder expects to buy more or less grain each year. Corn is the main food, with the aid of flaxseed meal, but they sometimes use cotton-seed meal, which is becoming quite popular among feeders. There is no corn sold from a stock farm unless by mere chance there is more than needed. These remarks pertain to the beef feeder almost entirely. The beef feeder, to be successful, aims to have at least 1½ head of swine per steer to follow his cattle to utilize the waste. While swine do not do well on cotton-seed meal alone, if a small ration is used they do not get enough of it to hurt them. A great many feeders buy all of their feed. They aim to feed about all the grain the cattle will eat each day, with plenty of roughage, such as good fodder and hay. We find that good Alfalfa hay is a great aid in producing beef and mutton, as it seems to be a good flesh-producer, and is relished by all stock, swine included. Some beef feeders grind or crush their corn with good results, and labor well paid for.

In feeding swine for the pork barrel, I have found that it paid to give a small quantity of mill feed, such as ship or shorts, made into a slop, and to shell the corn and soak it from 24 to 36 hours in salt water; feed in clean troughs and on platforms or floors. A stone floor would do if it could be kept clean. The stock raiser and feeder is the one who keeps ahead, while the farmer who raises grain to sell has hard work to make ends meet. To feed swine for breeding purposes I find that they should not be fed heavily on corn, but have plenty of Alfalfa pasture, with ship slop and a light diet of corn. Corn is too heating and concentrated; does not produce bone and muscle enough. Corn-fed sows will not produce as nice, large, healthy litters as those fed on a lighter combination of food. R. S. COOK.
Wichita, Kan.

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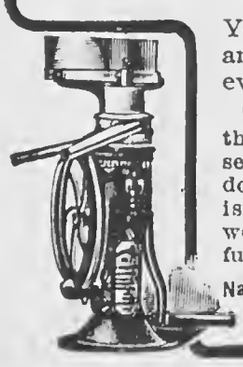
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HUMOROUS

When I was 23 I knew
Miss Sere, and she was 32;
But now I'm 32, and
How strange!—is or[illegible].
—Melbo[illegible] Leader.

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LAWYER: "As your h[illegible]nd left no will, you, of course, wil[illegible]t a third." Widow: "Lor', no! He w[illegible]ny fourth!"—Boston Herald.

TOMMY: "Pop, what [illegible] it mean to walk with a measured [illegible]?" Tommy's Pop: "A foot at a ti[illegible] suppose."—Philadelphia Record.

WILLIE: "Pa, why do they call our language the mother tongue?" Pa: "Sh! It's because your father never gets a chance to use it."—Tit-Bits.

LITTLE ELMER (inquiringly): "Pa, what is optimism?" Professor Broadhead: "Optimism, my son, is a whitewash for the blues."—Puck.

"I SEE, my dear, that the potato bug has invaded England." "Isn't it lucky that they've got Paris-green so close at hand?"—Cleveland Plain Dealer.

WHAT a queer name for a horse. Why do you call him 'Circumstance'?" "Because he's a Circumstance over which I have no control."—Harper's Bazar.

HE: "Be mine, darling. You are the lamp that alone can light my existence." She: "Yes, dear; but papa doesn't think you are a good match for me!"—Woman's Life.

"I HAVEN'T seen you at Sunday school of late, Johnnie. Last year you used to come regularly with your sister." "Yes, sir. Last year she could whip me."—Harper's Bazar.

"I CAN'T understand," said the mud-turtle, "why you fellows wear scales." "Well, you see," replied the black bass, facetiously, "when some fisherman hooks us we want to get a weigh immediately."—Philadelphia Press.

PROFESSOR: "Heat ascends and cold descends." Pupil: "Not always, does it?" Professor: "Yes, sir; invariably." Pupil: "Then how is it when I get my feet wet the cold always goes up and settles in my head?"—Philadelphia Press.

"IT is sad to see this mercenary spirit so flagrantly manifested in politics," said the earnest citizen. "Yes," answered Senator Sorghum. "I have fought against it all I could, but it's no use. I can't get people to vote my way without payin' 'em."—Washington Star.

"THE male sex," she exclaimed, in strident tones, "is all alike, wherever you find it. Look at the rooster. When the hen lays an egg he crows louder than the hen does!" "Perhaps, my dear," timidly spoke Mr. Meeker, "he does it to show how proud he is of the hen."—Chicago Tribune.

"YOUR late master," said the man with the notebook, "was a Positivist, was he not?" "I—I think so, sir," hesitatingly replied the old housekeeper, not fully understanding the meaning of the question, "exceptin' when his wife was around. She was generally a good deal positiver than he was."—Chicago Tribune.

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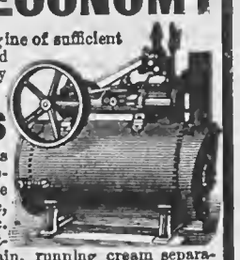
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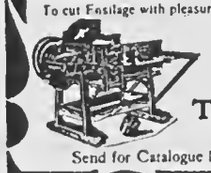
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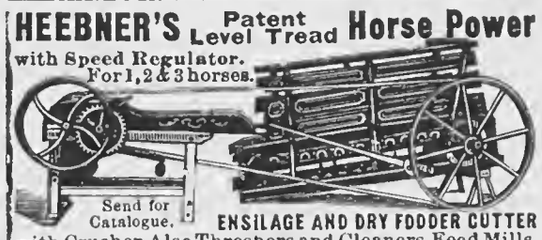
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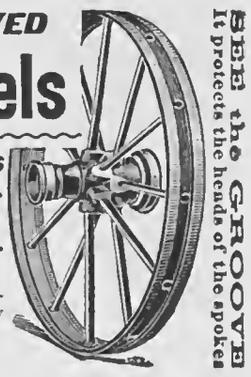

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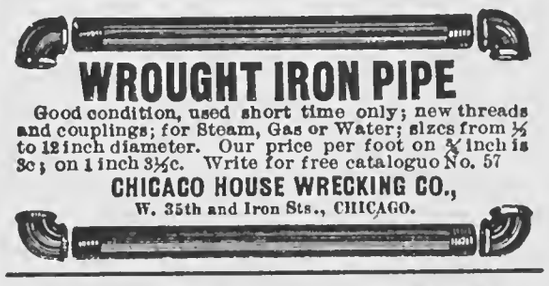
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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2698. NEW YORK, OCTOBER 12, 1901. $1 PER YEAR.

THE GREAT PAN-AMERICAN DAIRY TEST.

THE GUERNSEYS STILL LEAD.

What the Figures Show.

The test of dairy cows and breeds at the Pan-American Exposition is still going on, and the interest is increasing. As will be seen from the table printed below, the Guernseys are still leading so far as actual profit in butter is concerned. It seems likely now that they will win the full test, but the margin is still close, and the Jerseys or the Ayrshires may make a final spurt during October and come in ahead. The picture, Fig. 314, page 691, shows how the cows are stalled during the test. They are made comfortable in every way, and a heavy wire screen behind them prevents handling or annoyance. While the question of butter profit has been made the leading one in this test, there are many other lessons that are to be learned from it. When the records are all made up with actual performance and cost of food for each animal, we shall have the basis for a good many valuable facts about dairy cows.

One thing of great importance that the test has already demonstrated is the value of what we may call *performance* in the history of a cow. As a rule, a cow with a good pedigree, and showing in her color and shape what we may call the regular *type* of the breed, is likely to be a good one. Sometimes, however, such a cow is beaten by another that is "off" on type, yet whose mother and sisters are known to be good, rich milkers. An instance of this may be seen among the Guernsey cattle in this contest. When the final selection was made there was a choice between two animals. One had a black nose—a fatal defect in the "scale of points" or pure type. Yet this black-nosed cow came from a family known to be rich and deep milkers. She was one of the best milkers in the barn, yet she was rejected because she was not typical of what breeders claim the breed should be. Had she been selected the Guernseys would now have a far greater lead in the race. Should the Guernseys lose it will be because this grand performer was turned down—largely on account of her black nose!

Again, the Dutch Belted cattle illustrate the mistake of neglecting *performance* for external qualities. It would appear that these cattle have been selected for years with a view to fixing the handsome belt of white which surrounds their bodies. Naturally, with this end in view, a cow with superior milking qualities, but with black spots on this white belt, would be rejected—as was the case with the black-nosed Guernsey. By making this white belt the standard the number of superior milking cows is limited. No man can hope to select his stock with a view to keeping up this *outside* belt and at the same time hope to win any belt on the *inside* performance of the cows. The Dutch Belted cattle are close to the tail of the race, while their cousins, the Holsteins, with black and white mixed all over them, but with the blood of their best cows well mixed inside, are near the top.

The Ayrshires, too, are doing surprisingly well in this test. As butter producers they rank with the Jerseys and Guernseys, while as milkman's cows they are considered by many as equal or superior to the Holsteins, for they give a quart of good milk for little money. Here comes the question of *performance* again, for these Ayrshires trace back to herds where for many years breeders have been quietly but carefully selecting their breeding stock, not by color and shape alone, but by the report of the scales and the Babcock test. This thing crops out again and again as the pedigrees of these cows are investigated. The good ones are from working families, with mothers and sisters known to excel at the pail. Most of these superior cows follow closely in their shape, color and general exterior what the breeders call the true type of the breed, but not always. The test seems to demonstrate that for most American farms the smaller cattle are to be preferred. The Brown Swiss cattle make a comparatively poor showing; in fact, it is hard to say just where and under what conditions these big cows would be likely to pay better than others. The Holsteins take high rank in the test, but they are tremendous eaters, and it is necessary to handle a large amount of their milk in order to obtain a pound of butter. The big animals have been praised because they are able to turn over large quantities of coarse roughage, and make milk and butter out of a cheap ration. In this test, however, their grain bill has been very high, and the figures seem to show that the medium-sized cow of good breeding will make a more profitable use of both fodder and grain. The Red Polled cows are, in the opinion of many good judges, the nearest approach to the true general-purpose animal that we have in the country. They give a good mess of fairly rich milk, and turn off a fine carcass of beef when required to do so. Their performance in this test has surprised many farmers who did not know what this breed is capable of doing. They extract from their food a good proportion of butter fat without laying on too much of what we may call butt fat.

AN AMERICAN TREKKING OUTFIT. FIG. 311. SEE WOMAN AND HOME, PAGE 699.

Mr. Van Alstyne, the superintendent of this test, was asked what cow seemed best adapted to the needs of what we may call the ordinary dairy, and the fixtures and conveniences found there. He said that the facts developed show that the Channel Island cattle, Guernsey or Jersey, are best.

"Why is that so?"

"Because the butter from cows of these breeds is harder, firmer and of better natural color than that from others. This hard butter, of naturally good grain, is easier to make and keep under the conditions which prevail in the ordinary dairy, where frequently the most improved fixtures and apparatus are not to be found. It is an advantage, too, in such small dairies to have rich milk. This requires fewer pans or cans, and much less time is required in milking or handling the milk and cream."

The picture of the cows in their stalls, Fig. 314, page 691, shows how comfortable they are. Several years ago Prof. H. M. Cottrell, who was then superintendent of the Ellerslie stock farm, said that to get high profit out of a good milch cow he would turn her into a large, roomy box stall, feed and water her there, keep her clean, and not let her out until her

years of service were ended. Her calves would be born and her milk produced right in that comfortable stall or room. At the time some practical cow keepers were inclined to laugh at such an idea, but it is now coming to be understood that a cow does not need as much exercise as a prize fighter in order to fill her pail.

Breeds.	Milk, lbs.	Butter, lbs.	Value of butter.	Cost of feed.	Profit.
Holstein	30849.8	1151.61	287.85	123.55	164.84
Short-horns	20747.9	1043.99	260.99	123.66	137.33
Freneh-Canadian	20025.7	907.86	227.07	87.90	139.07
Guernseys	22213.4	1169.51	292.37	105.30	187.07
Ayrshires	26370.1	1124.53	281.13	107.06	174.07
Polled Jerseys	16479.5	884.44	221.11	84.04	137.07
Jerseys	21736.4	1135.87	253.95	104.42	179.53
Dutch Belted	19628.0	771.94	192.98	100.45	92.53
Red Polls	23403.6	1070.91	267.72	106.18	161.54
Brown Swiss	25163.6	1049.15	262.29	114.11	148.18

H. W. C.

FRUIT VARIETIES FOR PENNSYLVANIA.

I eontemplate buying 15 or 20 aeres of land near here, that is within five or six miles. I would like to set it out to such apples, plums, peaehes, pears and quinees, of good quality, growth and bearing, as will in eight or 10 years furnish a net ineome of $400 or $500 per annum in ordinary seasons. I should expect to rent it free to a man in return for its care the first few years. Will you advise as to the suitability of the following seleetions? 1. Would the following be a good seleetion of apples, one-third to be Summer and Fall and the remaining Winter sorts: Starr, Red Harvest, Melon, Delieious, Missouri, Grimes, Stayman, Commeree? 2. Can you tell me whether the following kinds of apples are good growers, bearers and generally desirable and reliable: Champion, Senator, Blaek Ben Davis? 3. Are there more desirable apples of the same season? 4. Is the Florenee erab a good one? 5. Would the following varieties and suecession of cherries be a good one? If not, what ehanges would you suggest? Riehmond, Montmoreney, English Morello. 6. Would the following pears be likely to do well in the vieinity named below: Koonee, Boussock, Fame, Garber, King Karl. Krull? 7. Would the following plums be likely to do well: Amerlean Eagle, Red June, Lombard, Gold, Wickson? 8. Are the Van Deman and Missouri quinces good?

Easton, Pa. READER.

It is not unreasonable to expect an annual net income of $500 from 20 acres set to orchards of good fruits. In renting land set with young trees to tenants it is almost certain that they will not properly care for the trees unless there is a very carefully planned contract made to cover this point, and constant supervision to see to its enforcement. The tenant usually looks out for his part of the profits, which is the growing crop, and the growth and protection of the trees is a secondary matter with him. The owner should have such provision made as will secure the trees the first and chief attention, no matter what emergency may arise. During the rush of Summer work there are likely to be times when something may have to be neglected, and it should not be the trees.

1. Replying to the question of varieties of apples suitable to plant in Pennsylvania, and particularly those mentioned, it may be said that one-third of the number of Summer and Fall kinds seems to me far too great a proportion for a commercial apple orchard. Early apples rarely pay so well as the Winter kinds. Starr is a fairly good but only a second early apple. It is quite large, greenish yellow, and of fair quality. Red Harvest I have never heard of under that name, but Red Astrachan may be meant, which is an early kind of fairly good quality and popular in market. Melon is a very good Fall apple. Delicious is too new to say much about, for it has not been tested except in a very few places. Missouri is an excellent kind for the regions where Winesap succeeds, which is mainly in the Central and Western States, and it may be all right in Pennsylvania. It is a very early bearer, keeps well, is bright red, and of fair quality. Grimes is one of the very best in quality of all apples, is rich yellow, of fair size, keeps only until late Fall or early Winter, and bears well. For family use or fancy market it is excellent. Stayman is a new variety that is superior to Winesap in size and in habit of tree, but otherwise almost identical with that old standard. It is worthy of trial in Pennsylvania. Commerce is a new kind that is but little known; York Imperial is an apple that I would surely plant there. 2. All these varieties have other names which have been approved by the pomological authorities instead, but they have not yet been sufficiently tested to warrant any definite decision as to their value generally, except the last one named, which is thought by most fruit men to be the same as Gano. It is about the same as Ben Davis, except that it is a deeper and more suffused red color. The other two have been fruited but little outside of the region in Arkansas where they originated. I would not think it wise to plant them more than experimentally until they are better known. 3. Yes, there are certainly other apples that are far safer to plant in Pennsylvania, and perhaps they are far better in several respects. York Imperial is one, as has already been said, and so is Stayman. Jonathan is another which I would prefer. Rome Beauty is also very desirable. 4. Florence is a good crab apple, ripening about mid-season.

5. Yes, they would be very good, because Richmond is very early and a dependable bearer, Montmorency is a little later, and English Morello quite late. All are good sour cherries. Of the sweet cherry class the Tartarian, Napoleon and Windsor would be among the best. 6. Yes, so far as I know them I think the pears named would be good. Koonce and Krull are both rather new, but Boussock is an old and well-tested Fall pear of high quality. Garber is another rather new kind that is much like Keiffer in tree and fruit, but earlier in ripening by over a month. It is not high in flavor, but is a sure bearer. Fame and King Karl I do not know.

7. Yes, all of the plums mentioned will succeed in Pennsylvania. American Eagle is one of our native

A WESTCHESTER CO. (N. Y.) CORNFIELD. Fig. 312.

kinds, and is very hardy and productive. Red June is of the Japan type and very early, but not high in quality. Gold is a new hybrid of Burbank's origin, having both American and Japan parentage. It is a fairly good plum, but nothing extra, being only of fair flavor and very watery, but is handsome yellowish-red when fully ripe. Its size is medium and almost round in shape. Wickson is also of Japan type, and is rather large, heart-shaped, handsome red and of good quality. Lombard is an old standard of the European type, that rarely fails to bear. 8. The Van Deman quince is one of Burbank's new creations that has been tested but little, and, I fear, it is not going to prove so early and valuable as the Orange, which is our old standard. Missouri is a good variety, but not superior to the Orange, as I have seen them both.

H. E. VAN DEMAN.

ROOT-PRUNED TREES IN MEXICO.

On page 482 of The R. N.-Y. Mr. Stringfellow takes exception to my statement that the success of root pruning is "merely a question of latitude," and says: "It is simply a question of moisture, not latitude."

SOME BACKYARD PRODUCTS. Fig. 313. See Page 693.

As proof, he gives the failure of his 3,000 trees, due to drought, and the success of the trees at Hope Farm and other places in the North. That, however, doesn't disprove my statement, but only proves that moisture is absolutely necessary for the success of root-pruned trees. It further proves that this is a weak point in the system of root pruning. Mr. Stringfellow closes his article by saying: "So don't be discouraged if root-pruned trees do not do as well the first year as you think they ought to." Here he admits, that under certain conditions (and such conditions are not unusual in the North), the root-pruned tree may not do well the first year. Such being the case, what is to insure the tree against winterkilling, should a severe Winter follow? Certainly the addition of water will not, and therefore Mr. Stringfellow's statement that the success of root pruning is "simply a question of moisture" is too narrow.

Anyone who has ever traveled from the North to the tropics cannot have failed to notice how much more readily and abundantly vegetation grows the farther South one gets. This is not due to an increase in moisture (although that may also be a factor), but to climatic conditions better suited to luxuriant growth, leaving out of consideration, of course, places which, on account of high altitude, etc., cannot have climatic conditions normal to the latitude wherein they lie. Bearing these facts in mind, it is not difficult to see why a root-pruned tree, robbed, as it is, of a large part of its vitality, will grow better in a locality with favorable climatic conditions, than in one subject to conditions inimical to the growth of the tree. I therefore think that I am entirely justified in saying that the success of root pruning is "merely a question of latitude." Certain it is that that statement is much more comprehensive than Mr. Stringfellow's.

To show to what extent root-pruned trees are set out here in the tropics, I will give a few figures concerning the work done on one of the plantations. The object of this plantation is to plant 500,000 coffee trees and about 150,000 rubber trees. The coffee trees are being put in at the rate of 150,000 a year, and in order to accomplish this, the manager bought up all the old coffee nurseries he possibly could. The trees in these nurseries varied in age from two to five years, and when prepared for transportation were pulled up and cut off so as to leave about six inches each of trunk and root. When these stubs arrived at the plantation an additional two inches was cut off from either end, leaving about four inches of trunk and four inches of tap root free from fibers. These stubs were then planted in holes driven by a pointed stick. Not only did the stubs grow well, but they made trees superior to those grown from unpruned nursery stock, because they branched low, a very important feature in a coffee tree. Rubber trees, though much more delicate and unable to stand much transportation, were successfully planted in the same way.

Now when apple trees in Canada can be set out in a manner similar to this, even though the rainfall be supplemented by rational irrigation, then will I be ready to accept Mr. Stringfellow's statement that the success of root-pruned trees is "simply a question of moisture." I do not mean to say that root-pruned trees cannot be planted in the North, but I do say that such a system is more hazardous in the North than is the old system. H. L. TROTT.

Coatzacoalcos, Mexico.

WORK OF THE 17-YEAR LOCUSTS.

Several weeks ago a writer in Virginia inquired about protecting a young peach orchard from the Cicada, or Seventeen-year locusts. I have seen these locusts on the wing five times on the same farm. In 1846 I planted an apple orchard. As the locusts appeared that year they began to deposit their eggs in the trees. I cut a lot of green rye straw, and set it up around the trees, and held it in place by tying with twine. Two trees were set in an old orchard, and left unprotected with straw. It was several years before they recovered from the damage done by the locusts. From my observations I learn that peach trees and all other trees that exude gum are not much harmed by the locusts. The peach grows so rapidly that the young locusts are in danger of being shut in by the gum, and new growth of wood. The young locusts emerge from the twigs of the trees in about six weeks. I have seen them as they came forth from trees; they are very small. It is now four years since their last visit here; they are not yet large enough to be seen without close examination. In about seven or eight years their body will be as large as a grain of wheat. With us they come from the ground the first week in June, or about the time the lightning bugs appear on the wing. I have examined them when dead; while some of them are filled with a substance resembling dry ashes others are hollow with no internal substance. The English sparrows destroy them in vast numbers. A correspondent of another farm paper, living in Athens Co., O., observed an orchard that had some woodland near it. The locusts made frequent efforts to fly from the woods to the orchard; the sparrows met them half way, and took them on the wing. The observer said he did not see a single one reach the orchard. S. B.

Crescent, O.

I doubt whether the rye straw would afford any protection to young trees from the deposition of their eggs by Seventeen-year locusts, but the notion regarding the exudation of gum from peach trees is a sensible one. It has also been recorded several times that the English sparrow eats the locusts. On the whole this correspondent's observations are interesting and valuable. M. V. SLINGERLAND.

A TWO-STORY CORNFIELD.

Harnessing the Old Sod.

On September 14 I saw on the farm of Heman Clark, Port Chester, N. Y., a three-acre field of corn averaging 12 feet in height. There were many stalks 14 feet high. Fig. 312 shows a small portion of this field. The man standing by the stalk is six feet tall. The apparently short stalks showing in the background were in a hollow about 15 feet in the rear.

Mr. Clark has made a study of corn for many years. He has spent considerable time in the West in railroad building and the construction of irrigation plants, thus meeting farmers in the great corn sections, and having an opportunity to observe many varied methods of handling the crop. To travel through this cornfield was like going into the woods. While the stalks were enormous, both as to height and size, there was something still more interesting, the large ears which hung over into the row, and would have made walking difficult if they had not been so high as to be out of the way of a man's head. I saw very few stalks which did not have one fair-sized ear.

The land about Port Chester is far from being prairie. It is rough and hilly, quite like much of western Massachusetts and Connecticut. The process by which Mr. Clark turns one of these old fields into such a forest of corn is an interesting one.

"This field must have been in fair condition before being plowed for corn?"

"It was an impoverished meadow, no longer producing hay enough to be profitable. It was what is known as 'run out,' although there was a thick, heavy mat of sod."

"When was it plowed?"

"Late in the Fall. From the middle to the last of October is the proper time. We plowed it about nine inches deep."

"How was the field handled in the Spring?"

"First we put on a dressing of well-rotted stable manure. That three-acre piece alone had about 20 loads thrown on broadcast. Then we planted the corn."

"Without replowing, disking or harrowing in any way?"

"Yes; what we consider a very important part of our system is letting the soil entirely alone until midsummer, when the sod yields well to the cultivator. We leave the furrows just as they lie when turned over in the Fall. Of course the field is well plowed, so as to be reasonably smooth. A line was drawn across the field as a guide in planting. The hills are four feet apart each way. If this variety of corn is planted any more closely the earing will be inferior. We try to put the hill as nearly as possible at the edge of the furrow, where it laps over on to the next one. The rains wash more plant food from the manure down into the soil at these points than at others, thus getting it within easy reach of the young corn roots. The corn is planted about three inches deep, and a little earlier than under the system of Spring plowing and harrowing. There is but little danger of the corn rotting in the ground on account of cold rains. It does not stand in the water, as the furrow lies up loosely, and there is good drainage underneath."

"How many times did you cultivate?"

"Only twice each way, first when the corn was about eight inches high and next when half way to the horse's back. If further cultivation is done, the corn roots, which by this time cross the rows, will be damaged."

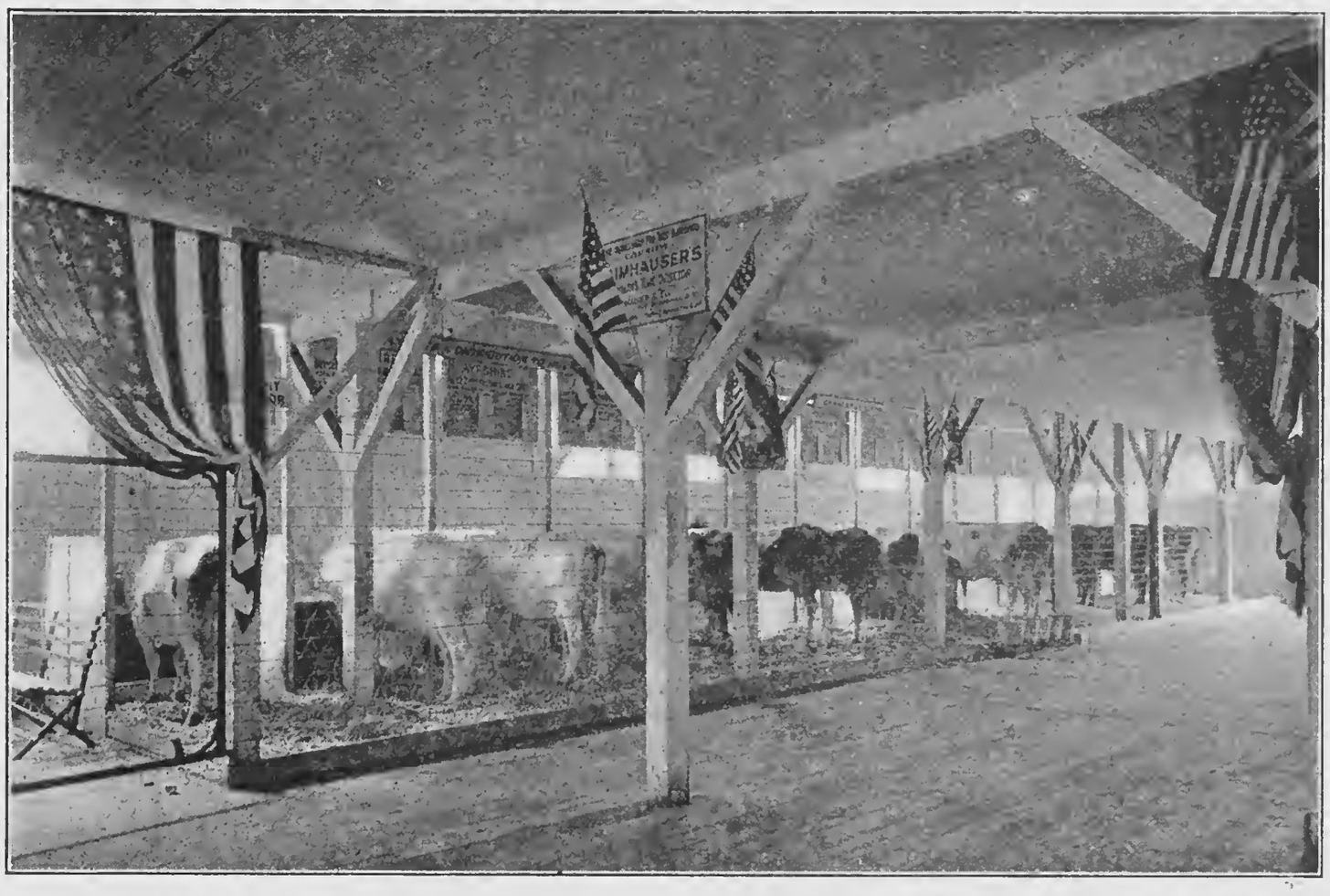
"What variety of corn is this?"

"It originally came from the West. By selecting the most desirable ears for seed for 10 years we now have a variety which, although growing very large, is earlier than many eastern native sorts, and yields from 80 to 100 bushels of ears per acre."

The ground, although so little cultivated, was free from weeds. In fact, such a swamp of corn is a discouraging place for weeds, as it treads on their toes and shuts out all sunshine. As the corn was fit to cut by the middle of September, it would appear to be early enough for ordinary seasons. It often happens that the whole month of September passes in this locality without severe frost.

Mr. Clark has kept separately a plot of half an acre, a fair average of the field. This will be husked and shelled by itself, and the exact yield given in THE R. N.-Y. later. The stalks will be turned into hay by being run through a shredder. This operation will be something like shredding cord wood, and certainly thoroughly test the machine. After the corn is removed, rye will be sown, and the field seeded to clover and Timothy, receiving a light dressing of manure, while another run-out sod field is being plowed for next year's corn. Mr. Clark says that he has not seen in Kansas any finer corn than some crops he has raised on old sod fields under this system. He would not attempt it on anything except sod, however. Unlike many plans for raising large crops there is in this no heavy fertilization, and less work is done than where the corn is handled in the ordinary way.

The essentials of this method are: Fall plowing; a top dressing of rotted manure in Spring; early planting, and moderate cultivation. Horses and heavy wagons are kept off the field as much as possible. Every time a plowed sod field is tramped over with a team the sod is packed down harder on the bottom of the furrow. This is particularly true of the heavier lands. The surface may be made mellow by harrowing, but, five inches below, the soil becomes packed down harder than before it was plowed. When corn is allowed to grow in the soil as the plow leaves it the roots find plenty of mellow earth below, and feed on the decaying sod, which, lying loosely, stores up moisture and plant food better than it otherwise would. These are some of Mr. Clark's arguments for this method of corn culture. The keynote of it all seems to be that the decaying sod is handled, or rather left without handling, so that the corn roots get the full benefit of it. This looks reasonable, and the large yield of corn and fodder backs up the argument strongly. As no extra labor and expense are required, the plan is certainly worth trying, at least on a small scale, by those who have sod fields to plow and are interested in corn growing. W. W. H.



WHERE COWS IN PAN-AMERICAN DAIRY TEST ARE KEPT. FIG. 314. SEE FIRST PAGE.

MOLES AND SQUASH BUGS.—I have just been reading in THE R. N.-Y. about ground moles, and having had a good deal of sad experience with them, I cannot refrain from telling how I rid my garden of them whenever they appear. One Summer my garden was suddenly overrun with them, and my vines were being killed by their digging under searching for worms. I take small bits of lean raw beef, cut half way through, and in the slit place arsenic powder half the size of a grain of wheat, then fold the meat together again and put it in holes where the moles come up to the surface, or open their runway and drop a bit in, letting the earth fall back over it to prevent cats or birds getting the meat. The moles are both killed and buried. I find this a much easier and quicker way than a trap, and it was and is perfectly successful. Another thing I notice in this same paper, and that is, reference to Squash borers. I have found that a handful of wood ashes, with or without a little Paris-green, thrown down at base of plant will effectually keep out the borers. If they get in before anything is done, cover the joints of the vine with earth, and new roots will then form, and sustain the plant. Not a bad thing to do when a vine begins to run anyway. L. B.

Michigan.

CATCH OR COVER CROP.

Oats and Canada Peas; Experience With Rape.

THE R. N.-Y. desires me to tell of my experiences with the different sorts and kinds of cover crops to act as a Winter mulch, and afford humus for the succeeding crop. In reply I would say that these experiments have been going on a dozen years, and with many kinds of crops, and while I have learned some things, not all of the trials have proved satisfactory. In a measure rye is the surest crop that I have tried on the corn stubble, but, like all other crops, the weather in the Fall is the greatest factor in the problem, for it is the Fall's growth that makes a success or failure. For two years past the dry Fall has about prohibited the growth of anything, being far from satisfactory before Winter, and as I want corn land plowed early so to Spring-fallow the land, and kill out weeds before planting, it does not usually give the rye much chance to start in the Spring before plowing. I have had two unpleasant experiences with large rye plowed under for corn. Dry Summers and the rye made a "joint" in the soil by its refusing to decay; it shut off the moisture supply, and both crops where the rye was used were far inferior to other sections where there was no rye and the same tillage. Then I think rye is a great consumer of soil moisture, and as a consequence when the time comes to plow the land is very hard and lumpy, and difficult to get into good tilth. As the substance of rye is mostly water and starch, it is far from the best crop for green manuring. Oats and Canada peas when the Fall is favorable, make a fair crop to cover with, and stand lots of cold and freezing weather before they succumb; as many have noticed about the volunteer oats in the Fall wheat. The peas will live—many of them—through the Winter. When the season is favorable, and the oats and peas can be got in by September 20, they will make a fine growth, and fill the soil thickly with their roots, and one will find a large amount of vegetable matter besides the roots to plow in in the Spring, but if the Fall is dry the crop will be small, often very small.

For a midsummer crop nothing equals the cow pea, and its growth in 40 days is wonderful, especially if 200 pounds of S. C. rock are used per acre. Last year our experimental plot grew in 45 days as large as we could well plow under. Three years ago our late July cow peas were plowed under in September, and the land sown to rye, which in turn was plowed under in April, and it proved to be one of my best cover crops, but it is difficult to get much growth out of them after the corn is cut and cool nights are the rule. With us Crimson clover is little if any better than Red clover sown among the corn, with the chances that more of the Red will live through. Last season we experimented with dwarf rape, and got some good stands on the experimental plots, and shall repeat them on a much larger scale this Fall. The rape, whenever sown, made a fine growth, and the last sowings grew to be nearly two feet high, but where the rape is sown late after the corn, it will do no harm, but probably it would be better to sow nearly double the ordinary amount of three pounds per acre. That which we sowed last at the rate of six pounds (42 cents worth) made a mat as dense as heavy clover, and mostly lived through the Winter, sprouted up from the roots, and when plowed under, made a great mass of humus. Where the silage corn is growing on its remains the corn is a dark green, and is fast outgrowing any other section of the field. Owing to the 32 days of heavy rains in June, this plot was not planted until July 3, and it is now fully eight feet high, and has not heard that a drought is seriously interfering with corn growth, and the other pieces on the rape are making fine and rapid growth, all of which convinces me that rape may be made to play an important part in making a strong and vigorous plant to cover our soils, that would be otherwise left naked during the Winter, a serious matter in our semi-rigorous Winters, where rainstorms are quite as common as the snows. What pleases me with the rape plant is its deep-rooting habit, and where it is sown thickly, it completely fills the soil with good, strong, and well-fibered roots. What it might do on the sandy lands I cannot say, but I was so well pleased last year, that a bag of rape seed is now on hand, and will be duly sown on the stubble lands this Fall. JOHN GOULD.

Northern Ohio.

Farmers' Club.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Top-working Crab Apples.

G. H. B., Gasport, N. Y.—Would it be advisable to top-graft Whitney crab apple trees to standard apples, such as Baldwin, etc.? I am told that they are a poor tree to graft into. I bought a place on which an orchard of Whitney crabs was set a year ago. What would I better do with them?

ANS.—I am of the opinion that the Whitney crab apple would grow too slowly for such kinds as Baldwin, and that the union made by grafting would not likely be very good. Why anyone would be foolish enough to plant a lot of trees of this variety in western New York is more than I can understand, as it is only desirable for the northern prairie States, where a very hardy tree is necessary. The fruit is considerably larger than the ordinary varieties of crab apple, but it by no means takes the place of a good apple. If the trees are not planted too close together it might be well to graft them to Oldenburg or some other very early-bearing variety. They would soon be profitable, and between them plant other good trees, in the end cutting out those that are already there. H. E. V. D.

Some Troubles With Fruit.

J. Y. P., Hudson, N. Y.—1. Wilder Early pear a few years ago was much lauded as a prolific bearer, fruiting young. With me it grows tremendously, but has never blossomed. Four-year-old top-grafts have never shown a flower. Is it any good? 2. Can you tell me anything about the history or value of the Sterling pear? With me it bears every year profusely, but I fail somehow to market it to advantage. 3. Is it a fact that York Imperial apple is always injured by cold storage causing scald? 4. Have had Bismarck apple several years waiting patiently for the promised wonderful returns. This year I had one miserable little apple. Is the thing any good? 5. The Koonce pear will not grow for me. What is the matter with it? 6. What about the Van Deman quince?

ANS.—Our friend J. Y. P. seems to have a multitude of troubles, but this is really nothing wonderful, because nearly all of us have similar experiences. Some of our fruits will not bear, and others, when they do bear, are disappointing in one way or another. I hope others who may read this will add something that will be a benefit to all of us. 1. The Wilder Early pear I have seen growing in a number of places. It has nearly always proved productive at an early age, and I am inclined to think that J. Y. P. may not have the true thing. However, it sometimes occurs that trees or grafts may grow so vigorously that they will not bear early. Under such circumstances cutting back in midsummer is likely to produce fruit buds. 2. The Sterling pear I have never fruited and do not know from observation about its bearing qualities. It originated in Livingston Co., N. Y., and the tree is said to be upright and vigorous in habit of growth. The fruit is of medium size and rather flat or round in shape, much like the Sheldon, but is only very slightly russeted, and usually has a crimson cheek. The flesh is rather coarse, but juicy and sweet, and may be properly considered a good pear. Its season is about the first of September in New York. 3. The York Imperial apple is not always injured by barrel scald when put in storage, but it is faulty in this respect, and I have heard cold storage men within the last few months speak quite discouragingly of it. However, it is an excellent apple all things considered. 4. There are conflicting reports about the Bismarck apple. Some say that it is a most excellent bearer, and that the apple is large and of fair quality; while others think it is very poor. I am inclined to that belief from what I have seen of it, although I think it bears well. 5. This is the first complaint I have heard of the Koonce pear being a poor grower. It may be that this is more common than I am aware of, and I should like to hear from others about it. 6. The Van Deman quince is a new variety originated by Luther Burbank, of California. It has only been tested for a few years, but, so far as I know, it is a good grower and fruits at an early age. The fruit is not so early in ripening as that of the Orange quince, and not so good, I fear.

H. E. V. D.

Peaches for South Jersey.

G. A. L., Vineland, N. J.—I intend to set a peach orchard this Fall, and would like advice concerning varieties that are highly praised by a certain nursery company, but are not catalogued by other companies. Would the Alton, Carman and Mamie Ross be better than the Mountain Rose for early? Would Worth be as good as Elberta for medium and Poole as good as Chairs for late?

ANS.—The Alton peach I do not know, but the Carman and Mamie Ross are both excellent varieties, and I think they would do very well in southern New Jersey. In fact, they are both growing in a number of the Northern States, although they originated in Texas. They are better in quality than Mountain Rose, and of about the same season of ripening, and I think them fully as good, if not better than this variety. Worth is another peach which I do not know, so I cannot make any comparison between it and Elberta. Poole is a good peach, but I have never seen it tested beside Chairs, hence I cannot tell whether it is better than that variety. However, I may say that Chairs is a most excellent peach, ripening shortly after Late Crawford, although in some cases it seems to ripen almost exactly with that variety. If a yellow cling peach is desired Henrietta will be found very good. Of the white flesh varieties I know nothing which is superior to Heath Cling for a late family variety, unless it is Ringgold, which is also sometimes called Wilkins. This latter is a seedling of Heath Cling, and is somewhat larger, but otherwise it is almost a reproduction of the old variety. If a freestone is desired Cruthers is one of the very best. The only thing against it so far as I know is that very few of the nurseries as yet have it in stock, but they ought to be urged to get it.

H. E. V. D.

Fruits in Southern New York.

M. K., Liberty, N. Y.—1. I am contemplating the setting of a small orchard. Would you advise Fall or Spring as the best time for setting? I think of setting for family use and also for market. 2. I want three rows of pears, eight trees in each row. Taking our location into consideration, what three kinds do you think would be the most desirable, as I had thought to set three kinds only, and eight trees of each variety—24 trees in all? 3. Do you think peaches would succeed here? If so, what kinds would you advise planting? 4. I also think of setting a few plums, cherries and quinces, perhaps 10 or 15 of each. What varieties of each one would you advise for our section? 5. What do you consider the best strawberry to grow for market? I think I could market most of them here, and am four miles from the village.

ANS.—1. I think Fall planting would be very good in the region mentioned, but perhaps not better than if it were deferred until Spring, unless there should be a better opportunity to do the work at one time than at another. I like Fall setting of trees wherever the climatic conditions are favorable to it, because the ground is usually in better condition than early in the Spring. The roots get well settled into the ground, and often callus over and make tiny rootlets ready for an early start in the Spring, and sometimes the trees can be bought more cheaply in the Fall than in the Spring. 2. In choosing three varieties of the pear I think the Bartlett should be one, the Seckel another, and for the third I would choose Bosc. The latter should be top-worked on some strong-growing kind like Clapp or Kieffer. 3. Although I have no personal knowledge of the conditions in Sullivan Co., N. Y., yet I feel quite sure that most varieties of the peach will do very well there. I would recommend M. K. to try Mountain Rose, Elberta, Champion, Chairs and Heath Cling. These varieties would give a reasonably good succession for family use. 4. Of plums I would suggest Abundance and Burbank of the Japan type. Fellenburg, Yellow Egg and Monarch are very good of the European kinds. Among the damsons French and Farleigh are among the best. As to cherries, the Richmond, Montmorency and English Morello are among the best of the sour kinds. If sweet cherries are desired Tartarian, Napoleon and Windsor are good. The best of all the quinces, so far as I know, is the variety called Orange. 5. Local conditions such as soil and climate have so much to do with the behavior of the different varieties of strawberries that it is almost impossible to say just what one is best. Indeed, sometimes one variety is good one year, and the next another is better. There are very many good varieties, and I would not suggest the planting of only one kind for market, and certainly not for family use. In a general way it may be said that Beder Wood, Warfield, Marshall and Gandy make a very good succession. H. E. V. D.

Peaches and Pears for Long Island.

What kind of peach and pear trees have proved most satisfactory on the south shore of Long Island? To what extent should peach trees be pruned? After 15 years' satisfactory yield, will it avail anything to endeavor to get further results from a tree? I know that Mr. Hale has accomplished some very wonderful work with old trees in Connecticut, and I am very desirous of applying the most intelligent methods possible.

ANS.—Although about all of the good varieties of the peach and pear do very well in the southern part of Long Island, the Elberta is one of the best peaches for general use there, and the Bartlett is about the same among pears. Blight is the only serious fault of the latter. Peach trees should have their young wood cut back very severely every year in order to keep it fresh and healthy, and that the trees may be close headed, and not with long and straggling branches that bear only at their extreme ends. Very old peach trees have sometimes been benefited by severe cutting back, high manuring and thorough tillage. If the trees mentioned are not in very bad condition they might be profitably handled, for 15 years old is not too great an age, provided borers and neglect have not ruined them. H. E. V. D.

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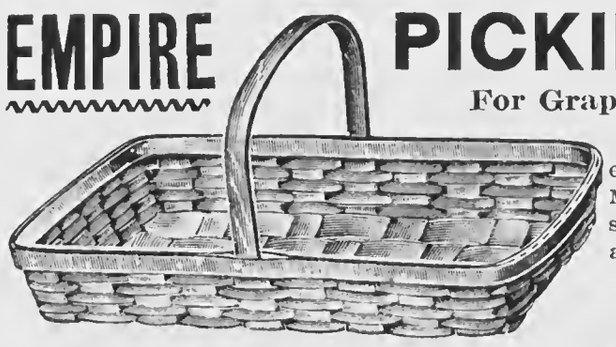

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Reader.—Will you print the agreement used on blanks issued by tree agents who do business for nurserymen?

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IN CONSIDERATION of the delivery of stock named below, I promise to pay to .....the sum of..... dollars in cash. Any stock omitted to be deducted from amount specified. All stock leaving the nursery guaranteed to be in a thrifty and healthy condition. All claims for allowances must be made within one week after delivery. Any agreement made between purchaser and agent must be written on the face of this order. This order not subject to countermand. If any of the varieties ordered should be exhausted in the nursery, you may supply others ripening at or near the same time, considered by you equally desirable.

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Various Fruit Questions.

C. W. F., Wayville, N. Y.—1. Will Rome Beauty and Sutton apples succeed well on rich sandy and gravelly loam, well underdrained and well air-drained. Good elevation in southeastern part of Saratoga County, N. Y. Would York Imperial be a profitable apple here? Baldwin and R. I. Greening succeed well here. 2. What is the average life of profitable bearing with first-class care for the Red June, Abundance, Arch Duke, Fellenburg and Monarch Japan plums? 3. In hybridizing, is the individual fruit which is produced from this process a hybrid, and will it show all the characteristics of the fruit which would be produced from its own seed, or do we get results only from the seed of crossed specimens? 4. What makes my Montmorency cherry trees, now four years old, crack lengthwise, excepting the very thin outside bark, which partially covers the opening?

ANS.—1. I think that both Sutton and Rome Beauty apples will succeed very well in the soil and locality described. York Imperial would be an experiment there, but I believe it is worthy of trial. As yet we do not know just how far north this variety will prove profitable, but I am inclined to believe that it will do reasonably well wherever the Baldwin and Rhode Island Greening flourish. 2. There has not been sufficient experience up to date with any of the Japan plums to enable us positively to know their age of profitable bearing, but indications point to their not being equal in this respect to the European or American varieties. They seem to begin to bear at a very early age, and are usually so productive that they exhaust themselves. I am inclined to the belief that 10 or 15 years is about their limit. Archduke, Fellenburg and Monarch are all of the European species. There are now profitable orchards of Fellenburg that have been profitable for as much as 20 years, and while the other two just mentioned are newer varieties it is probable that they will do as well. 3. This question brings up the old contested point of the immediate effects of pollenization upon fruits of various kinds. Many have contended that they have seen fruits changed in character by having been pollinated by other varieties, but, upon close questioning in almost every instance, this has either been disproved or made exceedingly doubtful. There have been several series of carefully-conducted experiments for the special purpose of thoroughly putting this to a test, and in every instance so far as I know they have failed to prove it correctly. For instance, as in the case of the flowers of the Bartlett pear having been pollenized by the pollen of the Seckel and numerous other varieties, the particular characteristics of the others have not appeared in or upon the fruit of the Bartlett, but the seeds have been materially affected, and the varieties thus produced have proved this to be true. The effect of pollenization is upon the seeds and not upon the frult, so far as the transmission of the peculiarities of the male parent are concerned. 4. There are a good many complaints from various parts of the country regarding the body of cherry trees being injured, and there is nothing strange in the experience with the Montmorency mentioned. It seems that the violent changes of temperature in the Winter time and probably the evaporation of sap, cause the cracking of the trunk, often killing the bark and tender wood beneath it, especially on the south side of the trunk. In California and other places where the climate is quite warm, cherry trees flourish splendidly and have very little of this trouble, but I have always believed this was due to the freedom from violent changes. The most trouble in this respect is in the region of the great plains of the Prairie States, where the ground, and often the trees as well, dry out to a very remarkable degree in Winter time. In New York there is no very serious trouble of this kind except occasionally. The preventive measure to be used is thorough cultivation, which will enable the tree usually to maintain its full vigor.

H. E. V. D.

A Grapevine Beetle.

F. T. B., Nunda, N. Y.—I send you specimens of bug found on grapevine in my garden. I found seven of them close together, but did not observe that they had done very much damage to foliage, but upon being confined they ate grape leaves ravenously.

ANS.—This grape pest is the large beetle known as the Spotted Pelidnota. While the beetles sometimes occur in considerable numbers on grapevines, they rarely do noticeable damage by eating the leaves. Usually the few that appear can be hand-picked and destroyed. The grub from which this beetle transforms, lives in rotten stumps or logs, eating only decaying or rotted matter. M. V. SLINGERLAND.

Seed-piece Left in Soil.

E. P., Hartford, Conn.—I dug two hills of late-planted potatoes from my garden and, although the vines were not dead, was much surprised to find the seed pieces (one-half of a fair-sized potato) perfectly sound. The yield was fair. It seems to me rather unusual, and if I have anything unique I don't want to cat them all up when some specialist might like to experiment with them.

ANS.—No, there is nothing very unusual about it. We have seen much the same thing, particularly where sulphur was used on the seed piece. The sulphur seems to prevent rotting. What is this "seed piece"? One or more "eyes" or buds and a portion of the tuber. The reason we use anything more than the "eye" is that we want to provide food for the bud or tiny plant until it can send shoots above ground and roots below to absorb food in its natural way—from the soil. The starch and other matters in the piece of potato feed the nursing plant, just as the food in a kernel of wheat or corn will feed the little germ until it can care for itself. In a good-sized piece of seed potato there is more food than the little plant requires, and in a favorable season the plant will leave most of the seed piece when it begins to feed direct from the soil. We have known these rejected seed pieces to dry up as hard as a piece of cork, or where sulphur is used, to remain in a natural condition.

EVERYBODY'S GARDEN.

BACK-YARD PRODUCTS.—These, of course, must vary according to circumstances. All locations will not favor fruit growing entirely, while again vegetables or flowers exclusively may be objectionable. A fruit tree or grapevine planted here or there will often utilize and beautify an otherwise unsightly or useless spot. The capacities of even a small back yard are never fully appreciated until thoroughly put to the test, and the results of intelligent management are often surprising. Careful planting of trees or vines, and thoughtful selection as to rotation of vegetables and flowers will develop prodigious capabilities in even a few square feet of space. The picture at Fig. 313, page 690, shows some of the possibilities of a back yard.

STORING WINTER VEGETABLES.—At this season of the year it is necessary to provide for the storage of such vegetables as are to be sold through the Winter, or held over until Spring. The later market prices are nearly always much higher than those obtained in the Fall; but to offset this, is the loss by natural shrinkage and decay, with added cost of extra handling. The contingencies of both methods of handling are pointed out, leaving each individual to adopt whichever plan seems best suited to personal surroundings.

POTATOES, whether stored in cellars or pitted should be thoroughly dried (but not greened by the sun) before storing permanently. If to be pitted, high ground should be selected and but little, if any, excavating should be done. Care must be taken to secure perfect drainage. Pile the tubers snugly and cover with perfectly dry, bright straw; do not use litter or rubbish of any sort, but just clean straw; and cover this with not less than six to eight inches of soil; firming sufficiently to turn any rainfall, however heavy, which may come. As colder weather approaches a second covering, the same as the first, may be made, only this time any kind of straw, or not too coarse litter may be used. Over this a covering of manure may be put on, and the crop will be secure from any degree of cold likely to occur.

CABBAGE.—The high prices for cabbage usually prevailing in the Spring are a strong temptation to carry over a portion of the crop, notwithstanding the usual losses. The principal safeguards against loss are dampness (not wet), and low temperature, with as little change as possible. A satisfactory practice is to put two rows together, inverting the heads and leaving the roots on. Cover with six to eight inches of soil, making the heap wedge shape; as cold weather comes on cover with straw or litter. The heap should be trenched at east side to make sure of good drainage. Parsnips and salsify for the Spring supply should be left standing in the rows. Cabbage, turnips and rutabagas should never be stored in the house cellar, as the odors are strong and offensive. All root crops for family use hold their freshness and flavor far better by putting in loose soil, allowing it to sift through as much as possible. Cover sufficiently to avoid freezing, with manure, litter or anything convenient, but let the loose soil come directly on to the vegetables. J. E. MORSE.

Michigan.

THE Wisconsin Horticulturist tells the following: "In Cooper's famous novel, 'The Spy,' a man is described as tying his horse to a locust. The book was translated into French, but the translator had never heard of a locust tree, and rendered the word 'sauterelle,' which means grasshopper. Feeling that this needed some explanation, he appended a foot-note, explaining that grasshoppers grew to a gigantic size in the United States, and that it was the custom to place a stuffed specimen at the door of every considerable mansion for the convenience of visitors, who hitched their horses to it."

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THE RURAL NEW-YORKER, New York.

Ruralisms

NOTES FROM THE RURAL GROUNDS.

THE AUSTIN OR MAYES DEWBERRY.—The following note is self explanatory. It would seem that Mr. Austin had the right to name this valuable berry if Mr. Mayes, who first brought the variety into cultivation, did not avail himself of his privilege. As a matter of fact, more novelties are named by disseminators than originators, though the latter have undoubtedly the first right to designate their productions. Unfortunately the name of Mayes has been adopted in most trade publications, and is given preference in Prof. Card's Bush Fruits, which may be regarded as about the highest authority on the subject. It will take much time to undo the mischief.

On page 614 you say: "We want more light on dewberry varieties." It seems that you and Mr. Holmes are both confused about the name of a dewberry you call the Mayes. You have been misled by some one, so I make the correction. Its name is "Austin's dewberry." It was brought to my notice first in 1889 on the Mayes farm here, near Pilot Point, Texas. Mr. Mayes gave me permission to name it, which I have done, and it is grown in many parts of the world as Austin's dewberry. Some other persons in Texas by might instead of right called it Mayes one year, but they know better now. The rules of nomenclature give the originator the first right to name a fruit and the introducer the next. Mr. Mayes did not want to name it, but gave his permission to me; and I being its original propagator and introducer, had a double right to name it. There has probably been more discussion over the name of this berry in Texas Farm and Ranch than any variety of fruit in any paper in America, besides thousands of circulars issued in defenee of the right of its introducer. The first year after being on my grounds 90 select berries filled a quart box, then 64 and later 53 berries; the same time it took 347 selected Early Harvest blackberries to fill it. When I began growing this berry in 1889 I had never seen an article on dewberry culture; our State horticultural societies or State Experiment Stations had paid no attention to them, but in 1894, when I sent a crate of them to Texas Farm and Ranch, they exclaimed that 53 filled a quart box packed in layers like peaches. J. W. AUSTIN.
Pilot Point, Texas.

WATERMELONS FOR HOME USE.—Excellent watermelons were formerly grown in Monmouth Co., N. J., in large quantity for the New York and New England markets, but since the irruption of the Georgia product they have generally ceased to be profitable. The idea that melons require newly-cleared ground is very prevalent, and the results of planting in soils badly infested with disease germs would often seem to bear out the claim, yet melons of high quality may be grown for home use on any well-prepared light garden soil if early-maturing varieties are selected, and the plants well fed from start to finish. Large shipping kinds of the Kolb's Gem type do not, as a rule, develop sufficiently to compare with the southern product, but early ones, such as Cole's Early, Fordhook First and Kleckly Sweet, ripen up perfectly during August, and far exceed the southern kinds in table quality, though the rinds are too brittle for shipment to distant markets. A well-ripened Kleckley Sweet is the most delicious of all watermelons in Rural Grounds estimation. Cole's Early is also very good. Fordhook First is the earliest to mature, and while not up to the others in sweetness, is generally better than melons bought in the market at the same time.

MORE ABOUT THE SULTAN PLUM.—The following note concerning Sultan plum, illustrated on page 658, is from J. H. Black, Son & Co., Hightstown, N. J.:

The plums of Sultan grew on grafts set two years ago. It is a strong grower, and has the beauty of the Satsuma and size of it also, and the good quality of the Delaware, than which there is no better. We like it very much. The only plum that did not rot with us outside of the Sultan was the Shiro, which had a tremendous crop, and carried them until they were overripe.

We can add further testimony to the good quality of the Delaware. It is a most excellent keeper, ripening gradually if picked while still firm, after full development. The solid, meaty, dark-red flesh is sweet and of better flavor, from our standpoint, than any of the Domestica varieties. The trees, however, are rather deliberate growers, and do not seem inclined to bear profusely at this early stage, having been set four years. Prof. John Craig, of Cornell Experiment Station, says, on page 678, that he does not like the quality of the Japan plums and their hybrids as well as the European varieties, but he does not mention Delaware or Sultan in comparison. The flesh of the hybrids between plums of the Botan type and native sorts is somewhat washy, but where Satsuma or Prunus Simonii enters into the combination the flavor is excellent, as far as we have been privileged to test them.

THE NEW GIANT MONTBRETIA GERMANIA.—This new large-flowered Montbretia was sent out last Spring by Henry A. Dreer Inc., Philadelphia, Pa., and our corms were received from that source. The plants grew nearly three feet high, and produced spikes of brilliant scarlet flowers, about three inches across. The base of the broad petals shades to bright orange, and the throat is blood red. We are told that this fine variety is the result of a cross between one of the new profuse-flowering hybrid Montbretias and the splendid Crocosmia aurea imperialis, which we have grown for many years. Imperialis has immense flowers for this species, usually more than four inches across, bright orange in color. It is somewhat erratic in growth, sometimes reaching four feet or more in height, but is rather difficult to carry over Winter, the tuber-like corms not keeping well. Germania, from its intense color and profuse blooming habit, will doubtless become a great favorite, and make a permanent addition to our short list of Summer-flowering bulbs. Several years ago numerous crosses were made between Crocosmia imperialis and various Montbretias on the Rural Grounds, and many brilliant, large-flowering varieties resulted, some of which we are still growing, but none have quite the intense orange scarlet of Germania, combined with a dwarf leafy growth. The colors are much varied, however, some of the markings being almost as diversified as among the Sparaxis. Montbretias and Crocosmias unfortunately are not always easy to Winter well, as the corms dry up if kept too warm in the cellar, and are seldom able to endure the frosts of Winter outside without the protection of a frame. We find the best method is to take up the clump just before the ground freezes and Winter them in the cellar in boxes of dry sand, without removing the tops. W. V. F.

MULCHING THE APPLE ORCHARD.

The exhibit of apples at the New York State Fair was a remarkable display, and the finest of all was the fruit shown by Grant M. Hitchings, of Onondaga Co. We have mentioned this fruit before. Mr. Hitchings says his orchard has not been plowed or cultivated for years. While the best authorities in the State have been urging farmers to plow and cultivate, Mr. Hitchings has gone exactly contrary to their advice. He lets the sod remain in the orchard and hauls in straw, manure or other vegetable matter, which is spread as a mulch all over the ground. He is even growing Alfalfa for this purpose. The Alfalfa is grown outside the orchard, cut and hauled in to spread under the trees. Little if any fertilizer has been used, but with this system of heavy mulching the trees keep strong and vigorous and bear regularly—while the fruit is very fine. Mr. Hitchings is a fruit farmer, and says he keeps only one cow and a work team. The experts go to see his orchard, and many of them admit that they cannot grow finer or more fruit even with the extra work of constant cultivation. Still, they do not feel like recommending this mulching plan for general adoption, for they say that there are probably special conditions of soil and location which make the plan best for Mr. Hitchings. They ought to make a careful study of these conditions and tell us just when and where the mulch will pay. On my own farm there is a hillside field where the rock comes close to the surface. I notice that in a dry time this thin layer of soil will bake hard even when the top is kept well cultivated. When there is a thick mulch of grass, weeds or leaves on the surface, I observe that this baking does not occur, but that the soil is always cooler and more open. In fact, on such a soil I am satisfied that a mulch of straw, grass or leaves will be far more useful than a "dust mulch" so-called—which means the upper soil well pulverized with harrow or cultivator. While Mr. Hitchings was explaining his plan of mulching, an old farmer stood near by listening carefully. At last he broke in about this way:

"I can take hemlock boards and lay them down on the ground close together so that the soil will all be shaded. Let them stay there a year or all through the Spring and Summer. Then work up the soil and plant any crop, and you will get as good a yield as you will on ordinary soil that has had a fair lot of manure. Some years ago the scientific men talked nothing but culture: culture!! Now, they are talking 'cover crops' stronger yet, which leads me to think that they now realize that they have overdone the culture advice, and burned up too much of the humus or cooling material in the soil." H. W. C.

Munson's Grapes in Louisiana.

I was much interested in that account of Prof. Munson's new grapes by G. L. Tinker, M. D. Twelve years ago I planted an acre to Concords mostly, some Wordens, Moore's Early and a few vines of several other varieties. Concord and Worden did fairly well, ripened unevenly some seasons; some varieties rotted at the start. Finally, the vineyard seemed to become so infested with both black and brown rot, and some vines died out, that I dug up the whole lot four years ago. Last year I planted a few vines of Prof. Munson's, the Carman, Presley, Brilliant, Delago, Wapanuka, Beacon, Fern Munson. Last Spring I added one vine each of Manito, R. W. Munson and Husmann. I don't expect all those varieties to do well down here, and I may have omitted one or more varieties that would, so should any readers of THE R. N.-Y. have tried any of Prof. Munson's new varieties of grapes in about this latitude (54 miles north of New Orleans) I should like an account of them. I had a few bunches of the following: Carman, Presley, Wapanuka, Delago, Beacon, Fern Munson, and the fruit was just as described in THE R. N.-Y., but the Fern Munson did not ripen evenly. The Carman is the most promising. R. J. M.
Hammond, La.

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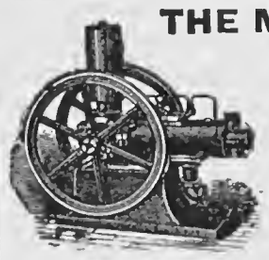

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HOPE FARM NOTES

TAIL HOLDERS.—A few weeks since we had a question regarding a horse that gets his tail over the rein and holds it down. Here is a remedy that seems sensible:

A few weeks ago I noticed you mentioned the fact that "Old Major" annoys you by getting the lines under his tail and clinging to them, and that you know of no way to break a horse of this troublesome habit. I have known horses that took this method of getting a chance to run, and I have broken them of it by this simple arrangement: Wind the crupper to several times its usual size, with cloth or leather. This prevents a horse from being able to cling to the line if it gets under the tail, and after being driven in this way a few weeks, letting him get the line under frequently to convince him he can't hold it, you can take the wrappings off the crupper and he will have forgotten about his old habit. I hope Old Major is not too old to learn. B. E.
Warren Co., Pa.

Of course, with the crupper made so large the horse cannot get a clinch on the reins. Old Major is an expert at the business, and his tail is almost like a fifth leg. Too old to learn? Well, it depends upon the teacher and the method of instruction. You take a horse or a human that is old enough to be a grandfather, and not much of anything short of absolute prohibition well rubbed in will cause him to shed a bad habit!

RACING WITH FROST.—Our corn was very late, but as it was mostly at the top of the hill I took chances with the frost and did not begin to cut until September 23. On September 24 we woke to find a cold wind blowing down the valley, and all the old farmers shrugged their shoulders and said:

"That means frost surely!"

It did feel like it. I would not have cared so much for a still cold, for at such times the cold air rolls down our steep hills carrying frost to the valleys. When cold comes in this way we frequently have two weeks of growing weather after all tender plants have been killed in the valley two miles away. When frost comes with a wind, however, we lose this advantage, because the air is all stirred up together, and the colder waves or layers cannot drain away. That was why I feared for the corn, but after noon the wind died down, the air grew still, and the mercury went but little lower than 40 degrees all night. It was a closer call than we like, though the boys made the corn knives fly, for those stalks will have to be both bread and meat for the horses this Winter.

WHAT IS FROST?—Old Jack poked his nose so close to our faces that we heard his teeth snap. What is this thing that jumps upon us without warning, and ruins our tender crops in a single night? As a matter of curiosity I began to ask people to tell me what frost is. Most of them had never thought of it before, though all had suffered more or less from cold.

"Frozen dew!"

That was the best answer I could get. When dew collects on plants at a time when the temperature is below the freezing point we have frost.

Where does dew come from?

I find that people who have brushed through the dew for many years have but a vague idea as to what it is. Fill a pitcher with cool water and set it in warm air. We all know how a little film of moisture will form on the outside. I have heard people argue that this proves that the pitcher was porous, so that the water came through it. The truth is that the air around the pitcher contained water vapor. When this warm air came in contact with the colder pitcher this vapor is condensed into little drops of water which gather on the sides of the pitcher, until it becomes quite wet. This condensing of water occurs when a warm substance containing water vapor meets another substance cool enough to condense the vapor, and the dew comes from the warmer substance. During the nights, when dew is deposited, contrary to general belief, the soil is several degrees warmer than the air!

WHAT JACK DOES.—I had a field of fodder corn growing on the lower part of the farm. Had the mercury continued to fall I should have left the corn on the hill and cut the fodder, throwing it flat on the ground. The soil being warmer than the air would have prevented severe freezing, and the stalks would have thawed out slowly if they had frozen.

What good would that do? Are not frozen plants ruined?

As I understand it, the thawing is usually more destructive than the freezing. As we all know, the living plant is made up of little cells which contain water. Cold drives the water from these cells, and it may be frozen on the surface of the plant or among the cells, inside. When this frozen water thaws these little cells try to take it up again, and if they succeed in doing so the plant may actually live and go on growing slowly. When the thawing is very slow the water is presented no faster than the cells can use it. When the thaw is rapid the water returns too fast for the cells. They are overworked and die. I understand that gardeners sometimes save plants that are frosted, by dipping them in ice water, thus making them thaw out as slowly as possible. We would not think of dipping a frosted finger, nose or foot into *hot* water, but would rub it in snow or dip it in *cold* water.

HOUSE NOTES.—The stoves were not up by October 1, which is later than usual. We have had a wood fire in the open grate several times, but take it all around September was milder than last year. . . . We are now considering a bath room for the house. I hold that such a room is even more useful in the country than in the city. Since we have the water works we shall try to get the fixtures. I find that this season the room can be fitted up for about the price of 125 bushels of potatoes! The price of most things we must buy is pretty well fixed, while the price of what we sell jumps up and down like a school girl skipping rope. The great trouble we experience is finding a good place for drainage. The house is crowded close to the road on the lower part of the farm. We shall have to use a cess pool, since we cannot drain into the lower land across the road—for that belongs to a neighbor. Out by the barn is an old cistern which was used for stock water before we drilled the well. We may be able to dig this deeper and thus get fall enough from the house. If we use it we shall have to pump it out frequently either directly upon the soil or on to the manure pile.

PIG MATTERS.—We won first on Berkshire sows at the local fair. The little boar we sold in the Spring was also exhibited, and he won a first. I like the Berkshires more and more as I have a chance to observe them under all conditions. They suit our conditions exactly. . . . We have two little pigs that present a hard conundrum for the breeding expert. They are full sisters—their mother a grade Berkshire of fair breeding. They ran with the family and have had an equal chance in all respects. Yet, when one weighed 47 pounds the other weighed but 19! Now was the little thing a born "runt"—doomed from its birth to carry a stunted frame and a system incapable of assimilating food? It was not a question of breed or feed, but apparently some defect in the little fellow's vital makeup. We have put her by herself for an experiment in full feeding, but she will never pay. Out of three litters of 23 pigs there were four poor ones—this little dwarf being the worst of all. . . . The local butcher has offered me 10 cents a pound for two large hogs dressed. It just happens that right now pork is scarce, but within a week or two prices will tumble. I have noticed for several years that pork is short in our local market for a few weeks around October 1. Farmers do not like to kill until after a heavy frost. Within a short time now pork will be rushing in almost too fast to sell well.

FARM NOTES.—As I have explained, our chicken yard is in two parts. One part is used as a garden—the hens occupying it during Fall and Winter. We have just turned them in to clean out the weeds. The other side will now be plowed and sown to rye. . . . We are watching the growth of the Cow-horn turnips with much interest. Above ground they look much like the ordinary strap-leaf varieties, but below ground they make a long tap-root going down into the soil farther, with us, than the yellow turnips do. By the middle of September some of these tap-roots were nearly a foot long. We did not sow them in hard, tough soil, but in well-worked ground. It is claimed that they will dig down through the hard subsoil and not only open it up, but "pump" up fertility. I doubt whether these tap-roots do much more than bring water to the plant. Still, I should judge from the present appearance of the Cow-horns that they will help the soil if plowed under. . . . Our rape is quite satisfactory this year. We cut it and feed green to the hogs. Rape and corn fodder constitute seven per cent of the food of our breeding sows just now. . . . Poets and others tell of various perfumes to be found on the farm. One of the most satisfactory smells I know of is that which fills a cornfield a day or two after cutting. Those shocks as they slowly dry give out a solid and substantial perfume that is both sweet and sensible. That's the stuff for a farmer's handkerchief!

KNOWLEDGE IS KING.—Two weeks ago a friend punched me up a little because I gave advice. Here is the result of a little of that same advice given five years ago:

It may be of interest to you to know that the writer is a fruit grower now, most agreeably situated, with a splendid orchard two years old last March, as a result of advice given by you in June, 1896. He was then a bookkeeper to whom office work was very intolerable at Pine Bluff, Ark. I wrote to you for advice as to adopting agriculture. You replied: "Go to Cornell University for a year or two." I wrote to Prof. Roberts; he said: "Come." I landed there July 10, 1896, remained something over a year, and came to Georgia during 1898 to look up its advantages. I liked what I saw of the country and the prospect for peach culture, and so located here. Will say that I went to Cornell to study agriculture and registered for the agriculture course, but after attending Prof. Bailey's lectures in addition to regular course, horticulture seemed so much more attractive that I adopted it. My only regret is that I had not done so sooner. S. R. C.

I had forgotten the circumstance. A young man with fair capital and a desire to live in the country cannot do better than to spend a year or two at a good agricultural school. When I was a young man I went through an agricultural college, but in those days the college itself was trying to learn how to be really useful to farmers. I was part of an experiment which boys of to-day may profit by. At that time Prof. Bailey was a student—the best in the college—but few thought he was an educational bud destined to unfold into the representative of a new system of teaching. Why do I advise all young farmers to go to an agricultural college? I do not so advise—not by a good deal. Some are so situated that they cannot go. It might not do them any good if they did. I am frank to say that I nearly starved to death while I was trying to forget some of the things I learned, but other things have been of great benefit to me, and I would not give them up for twice the struggle they cost. At one time I felt like helping any young man who thought that he wanted to get an education. I am out of that business now, for I find that some folks do not know what they do want. To rush at an education as one would at a "fad" is bad business for all connected. When a boy wants a thing bad enough to get down and dig for it, and deny himself, he will usually get it and make good use of it, too. H. W. C.

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SATURDAY, OCTOBER 12, 1901.

SEVERAL States have passed laws prohibiting fruit growers from spraying trees while in bloom. The object was to protect the bees, for if poison were put on the flowers the visiting bees are likely to be poisoned. We doubt whether these laws have ever proved of much benefit to bee keepers except in an indirect way. They have probably stimulated the investigators to demonstrate that spraying during bloom injures not only the bees, but the flower and fruit also.

*

WE want all the information we can get regarding the behavior of cow peas in the North.

When were they planted?

What varieties made seed?

How were they planted—alone or with some other crop?

What is a fair statement about them?

We want to know how these peas have prospered in the North. Give us bad reports as well as good ones—tell us the whole story.

THERE has been no intimation yet that any changes are to be made in the President's Cabinet. It would be strange if all the members remain, since it must be evident that Cabinet members are more or less personal advisers. In any event we sincerely hope that Secretary Wilson will remain at the head of the Agricultural Department. This Department is not old enough yet to make it a great compliment to say that Mr. Wilson is the best Secretary we have ever had. The truth is that he is doing a helpful work for the American farmer, and should be permitted to finish it.

*

The NATIONAL Farmers' Congress, in session at Sioux Falls, S. D., denounced the fraudulent trade in oleo, the Ship Subsidy bill and the scheme for National aid for irrigation. G. L. Flanders, of New York, was elected president. The oleo people made a strong effort to secure an endorsement for their product, but the dairy interests were too much for them. Some of the agricultural papers were disposed to sneer at the work of the dairymen in trying to control this Congress! It is no time to stay at home and sneer when our ex-Secretary of Agriculture goes to this Congress and fights hard for oleo. We favor going to every hole and corner where the subject is discussed with an argument for honest butter.

*

THERE are large deposits of gypsum or land plaster in Kansas, and efforts are being made to encourage its use as a fertilizer. Prof. E. Haworth, of the Kansas University, is reported as saying, among other things:

> It is used most extensively in old countries where fertilizers of all kinds are most in demand. It constitutes one of the main materials for enriching the soil to-day throughout Canada, New England and the central and southern Atlantic States, and its extensive application is gradually moving westward.

About 30 years ago that statement would have been more correct, but throughout these Eastern States plaster as used directly on the soil is a most decided back number. It is still used as an absorbent in stables or in manure piles, but seldom as a fertilizer. There are two good reasons for this. Formerly it was evident that certain crops were helped by an application of plaster. The reason for it was not very clear, but farmers judged by the effect. Reasons for the good results from plaster were given, which are now known to be absurd, the truth being that the plaster set free potash in the soil that otherwise might not have been available. After some years plaster lost its effect on crops, because it had set free all the potash it was able to work upon. With the knowledge of these facts came the general understanding that the first consideration of soil fertility is the presence of *available* nitrogen, phosphoric acid and potash. Experience showed that it was cheaper and surer to buy the potash outright rather than to try to make that in the soil more available by using plaster. Thus the use of plaster has been discontinued, and the direct fertilizing materials have taken its place. Plaster was really a kindergarten teacher in the school of fertilizers, and so it will be with its use in Kansas. The use of plaster will in time lead Kansas farmers to the direct application of potash and bone or dissolved rock.

*

MOST men realize how hard it is to state their exact meaning in a brief letter or printed article. There is no chance to discuss or explain, and the reader must think out for himself something of what lies between the lines. If reader and writer could come face to face and discuss the question there might be a much better understanding. Here lies the great value of a farmers' institute meeting above all other agricultural education, and this is really all that holds it together. Men meet face to face, and so have an opportunity thoroughly to understand each other if they will. One drawback to this is the fact that some farmers hesitate to get up before the audience and ask a question. During the intermissions they will come to the speaker and talk freely, so that some of the most helpful work of the institute is often done in these informal talks.

*

Now and then the Treasury Department at Washington, D. C., receives remittances in unsigned letters from people who in one way or another have defrauded the Government, usually through the short valuation of imports or the dodging of internal revenue taxes. These amounts are deposited in the Treasury in what is known as the "Conscience Fund." One of these letters recently received from New York contained $6,150 in large bills, and read as follows:

> After much thought I have been convinced that duties were not fully paid as desired, difference estimated at about two per cent. The wish now is to rectify what was done during some years ago, and amount is being sent which it is felt must be paid to the United States Treasury to discharge those duties and do the right. Above has been great grief.

This adds new emphasis to the fact that honesty is the best policy if one cares to keep on good terms with his conscience.

*

THE trekking outfit illustrated on the first page recalls the prairie schooners which carried American agriculture beyond the Mississippi and opened up an outlet for eastern energy in the Far West. The less settled portions of the country still see "movers," no longer pioneers, who find advantages in a similar mode of travel, but few now journey in that way here in the East, save for a leisurely vacation. The Trek to the South, of which a first installment appears on page 699, will, we are sure, be of peculiar interest. The travelers, a practical farmer and his wife, looked at the changing scenes through which they passed with intelligent interest, and their experiences are sure to be valuable and suggestive to others. Railroad speed has made us look with disfavor upon old-fashioned modes of travel, but the trek is not without its advantages, and, in the case under discussion, it was an abiding pleasure. For one who wishes to study the country, such a journey is a prolonged educational course.

*

HON. J. Sterling Morton, who was at one time Secretary of Agriculture, is opposed to the principle embodied in the Grout bill. In referring to what he calls "class" lawmaking, he is reported to have said:

> Persisted in this system of class lawmaking must logically spawn industrial strife and result at last in civil war. It sets up one citizen against another citizen. It arrays one industry against another industry. It formulates prejudice, selfishness, envy and malice into statutes.

The object of the Grout bill is to prevent the fraudulent sale of oleo as butter. Other methods have been tried and have largely failed, since the counterfeiting is skillfully done and there is a great profit in the business. It is now proposed to try the plan of taxing the colored oleo at the factory where it is made. Surely Mr. Morton would not have us stand still and see an honest business injured by fraudulent practices? The Grout bill does not "array one industry against another industry," but it seeks to compel 19 oleo manufacturers to be honest in their competition with 6,000,000 dairymen and 25,000,000 consumers of butter. When we stamp out a fraudulent business and compel counterfeits and substitutes to pass for just what they are, and no more, we do not "spawn" civil war—we prevent it!

THE success of associated dairying in both butter and cheese making warrants the trial of coöperative or centralized laundries and bakeries for the accommodation of farmers. Associated dairying, especially butter making, was opposed by many, especially by the farmers' wives, when it was first brought up, these people saying that nobody but a woman could make good butter; that the mixed milk from different farms would not make a satisfactory product, etc. These objections have all been conquered, and now associated or coöperative dairying is extensively practiced throughout the dairy districts of the United States. If farmers' wives would push the matter, coöperative bakeries and laundries could probably be established in the country, but the matter will largely rest with them. There seems no good reason why such laundries should not, in time, prove popular in many farm communities. One would think that the busy farmer's wife would be delighted to see her tub and washboard take a vacation. One can understand why she opposed the creamery system of butter making, for that took from her many a dollar of "pin-money" which was hers by both right and usage. The coöperative laundry will take nothing but dirt and hard work away from her, both of which she can easily dispense with.

THE following note comes from a girl in a New England country neighborhood:

> Seeing many helpful things in THE R. N.-Y., I now write to ask you whether you know of any work I could do at home. I am 20 years old, live on a farm, and I am staying at home to help Mother with the work.

There in a few lines we have a whole story of self-sacrifice and anchored ambition. This girl stays on the farm to help her mother. There are dozens of things which an ambitious young woman desires, and which can be procured only with cash. How can she earn money? The miserable "Work at Home" frauds take advantage of just such cases, and offer glowing promises of money-making. Several years ago we investigated many of these concerns. They were all "fakes"—their chief and only business being an effort to secure a "fee" or cash advance from people in need of a job. Our first advice would be to let these rascals who offer to set you up in a paying business entirely alone. What then can be done to earn cash in an ordinary country neighborhood? It ought not to be necessary to leave the country in order to obtain money with which to gratify a few simple and honest desires. This is a question of such wide and general importance that we will turn it over to our readers for discussion. How can a young country woman earn cash at home? Is there not some one among the great rural family who can help this girl? Please do not give us any theory—or what she ought to do. Tell us what you know *has been done!*

*

BREVITIES.

JONATHAN TO JOHN.

We used to have our battles on the sea
With ball and powder to decide the game;
You got some straight, hot shot, old boy, from me.
If 'twouldn't hurt your feelings I could name
A dozen cases where we pulled your flag—
The Chesapeake? And "Don't give up the ship?"
Of course, you know I'm not disposed to brag.
And now and then I made a little slip.
But what's the use of ball and powder now?
Our ships are iron teapots that can toss
A cannon ball aside—and, anyhow,
It's far more sport to have you come across
And try to "lift the cup"—we fight with wind
And find it hard, sometimes, to raise a breeze.
But, wind or powder—you are still behind
And once again your cherished hopes must freeze.

DON'T overfeed the sows.

A TWO-STORY man—the liar.

FROST has been kind to us this Fall.

BETTER be a toiler than a despoiler.

A $20 bill will not pay many of the old scores.

IT is claimed that crows will eat Tomato worms!

SOME new facts about fumigating trees next week.

IF you must throw bouquets at yourself—throw nettles.

THERE is little heard from the beet-sugar factories this year.

DON'T forget that the most important factor about truth is fact.

WE wish that some speakers would be as broad as they are long.

THE oft-repeated story of the big fish that "got away" becomes a grew some tale.

YES, sir, the cow makes milk with her heart and lungs—not with hide and horns. Look inside for performance.

THE creamery took a lot of pin money from the farmer's wife, added to it and made it spike money for the whole family.

Now it is thought that a fungous disease which means death to the Cotton worm has been discovered, and experiments will be made with spreading it in the field.

PROF. Slingerland states that in the Hudson River Valley many of the caterpillers of the Fall web-worm have died from the effects of some disease. We have observed the same thing on our own farm.

Events of the Week

DOMESTIC.—Emma Goldman, the anarchist lecturer, who was arrested in Chicago on suspicion of being concerned in the President's assassination, was released September 24, after two weeks' imprisonment, there being no evidence to hold her. . . . . The steamer Oregon arrived at Port Townsend, Wash., September 24, from Nome, with 474 passengers and $750,000 in gold. The steamer was long overdue, provisions were low, and the passengers had to be put on short rations. . . . . September 24, lightning struck a schoolhouse at St. Cloud, Minn., wrecking the building, and stunning the teacher and 36 pupils, three of whom were badly burned. . . . . Lieut. E. P. Bertholf, who was sent to Siberia last Winter by the Government to secure reindeer for the Alaskan stations, arrived at Port Clarence on August 28, with 254 of the animals. He secured the reindeer 1,000 miles north of Irkutsk, the present terminal of the Siberian Railway, and arrived with them at Orla after a journey hemmed in with inconceivable difficulties. . . . . Leon F. Czolgosz was sentenced at Buffalo, September 26, to be executed in Auburn prison during the week beginning October 28, 1901. The only statement made by the prisoner in court was a reiteration of his claim that he had no accomplices. . . . . The explosion of a gas tank at Newark, N. J., September 26, caused the death of six men. . . . . A cloudburst near the head waters of Alameda Creek in Presidio County, Texas, September 25, caused the death of 13 prospectors. . . . . President McKinley leaves an estate valued at about $225,000. It is left entirely to his widow, during her life, subject only to an annuity of $1,000 to be paid to Miss Helen McKinley, sister of the deceased. At Mrs. McKinley's death the entire estate is to be divided among the brothers and sisters of the testator. . . . . The city council of Grinnell, Iowa, has adopted an ordinance which makes it unlawful for two or more persons to congregate and buy one another drinks. It is held that "treating" promotes drunkenness. . . . . A fire and explosion in the Wellington colliery, British Columbia, October 1, caused the death of 17 miners. . . . . The teamsters' strike in San Francisco continues with violence. September 30, four special policemen fought with 200 strikers and sympathizers. Seven men were shot, one of whom will die. Regular police arrested 30 of the mob, all of them heavily armed.

ADMINISTRATION.—The appeal recently received from the District Attorney at Nome, Alaska, to have a Government vessel sent there to bring back to the United States indigent miners has been unfavorably acted upon by the War Department, to which it was referred by the Department of Justice. A similar request preferred one year ago was given favorable response, and an army transport was sent to bring back the "indigents." The anxiety manifested by the District Attorney at Nome is attributed to a desire on his part to get rid of a crowd of the more lawless characters rather than to aid people who are supposed to be in distress. At the War Department it was explained that there will be no necessity for persons having pecuniary means to remain in Northern Alaska during the Winter. There will be three or four merchant steamers touching at Nome before the close of navigation, so that those who desire to leave will have the opportunity to do so. . . . . Official estimates for the fiscal year beginning July 1, 1902, which Postmaster General Smith will submit to Congress at the opening of the session, call for an aggregate of $6,250,000 for rural free delivery service throughout the country, an increase of $2,750,000 over the current year. The total for the free delivery service proper, operated in cities, is $18,745,000, an increase of nine per cent. The grand aggregate for the entire postal free delivery service, including free delivery and rural free delivery, is $24,995,000.

CUBA.—General Leonard Wood, Governor of Cuba, September 27, promulgated an order of the War Department, making a reduction of 50 per cent in the duty on all machinery for making sugar and brandy, and for agricultural purposes, imported into Cuba during the past year. The same order repeals the special rebate of $3.40 per 100 kilos allowed on coffee coming into Cuba from Porto Rico. This provision was found necessary owing to the fact that Brazilian coffee was being shipped from New York to Porto Rico, and reshipped to Cuba for the purpose of avoiding the regular duty. A special provision allows the entry of railroad material at five per cent ad valorem for one year to come.

PHILIPPINES.—A company of the Ninth Infantry was attacked by Filipinos at Balangiga, Samar, September 28, and of the 72 men, only 24 escaped, 11 of these being wounded. The others were reported to have been killed. The rebels, who attacked the Americans while they were breakfasting, captured stores, ammunition and rifles. . . . . The municipal authorities of Manila have passed an ordinance doubling the size of the gates of the walled city in their part of the fortifications. The military authorities may object. . . . . Juan Cardona, who until recently was presidente of Geron, Province of Tarlac, and who was appointed secretary of the Tarlac provincial government, has been arrested on a charge of accusing people of crimes for the purpose of extorting money from them. More than 50 persons assert that they have been robbed by him, some declaring that they have even surrendered title deeds to property. Cardona had been considered one of the most reliable natives holding pro-American views. An examination of his record, however, shows that for several years he was a bandit, and that he served two terms of imprisonment, aggregating five years.

GENERAL FOREIGN NEWS.—Miss Stone, an American missionary in Turkey, is being held by Bulgarian bandits for a ransom of $125,000. The State Department advises buying her freedom and punishing the bandits when her safety is assured. . . . . Rio Janeiro has been officially declared infected with bubonic plague.

FARM AND GARDEN.—By recent changes in the Department of Agriculture, Prof. G. H. Powell, lately of Newark, Del., goes to the Pomology division as Assistant Pomologist, succeeding W. A. Taylor, who becomes Pomologist in Charge of Field Investigations. Prof. A. P. Close, of Utah, formerly at Geneva, N. Y., succeeds to Newark, Del.

Consul General Hurst reports from Vienna that the consumption of horse meat in the Austrian capital as an article of food is rapidly increasing. In 1899, 25,646 horses and 58 donkeys were slaughtered for food. This was over a thousand more than in the previous year, and about 3,000 more than in 1897.

The manager of the International Live Stock Exposition at Chicago, to be held the first week in December, announces that according to the regulations relative to the limit of time for making entries, it has been generally stated that no entries would be received after October 15. Now an important exception is noted. All entries will positively close October 15. Animals purchased at sales from that date up to and including November 7 will be admitted only by a supplemental entry which must be made immediately on purchase. The most pronounced interest is manifest in all parts of this country and many European live stock centers in the coming exhibition, and the finest of cattle, swine, sheep and horses ever shown in the United States or elsewhere is promised in the entries already made or assured.

H. H. Groff, of Simcoe, Ont., has been awarded a gold medal and 13 first prizes at the Pan-American Exposition for his exhibits of new hybrid Gladiolus.

The West Virginia State Horticultural Society, the State Sheep Breeders' and Wool Growers' Association, the State Poultry Association and the Virginia Live Stock Association met at Point Pleasant, W. Va., October 8-12; secretary, J. B. Garvin, Charleston.

A census bulletin issued September 30 shows that there is a total of 3,895 commercial floricultural establishments in the United States, with land and buildings valued at $33,000,000. Of the total Pennsylvania has 734 establishments valued at $6,837,808 and the value of the flowers and foliage plants raised in 1889 was $2,043,124. Of the States in which this industry was enumerated Pennsylvania was only eclipsed by New Jersey. That State had 494 establishments valued at $4,633,105, and an output in 1899 valued at $2,622,899.

A delegate convention of the Association of American Agricultural Colleges and Experiment Stations will be held at Washington, D. C., November 12.

The fifth annual meeting of the Continental Dorset Club was held at the Pan-American Exposition, Buffalo, September 24. There was a representative attendance. The secretary reported a year of unusual activity in his office; a large number of registries and transfers having been made, and a number of new members being received, among them Hon. John A. McGillivray, Canada's largest breeder, and a famous showman and importer. J. Fremont Hickman, who has served faithfully as president for four years, declined reëlection, and Jas. L. Henderson, of Washington, Pa., was made president. J. E. Wing was reëlected secretary and treasurer. John Hunter, Wyoming, Ontario, and W. G. Appleby, Bennington, Vt., were added to the executive committee. The following additional vice-presidents were chosen: Samuel Drumheller, Walla Walla, Wash.; S. B. Wright, Santa Rosa, Cal.; G. S. Lindkohl, Keswick, Va.; John A. McGillivray, Uxbridge, Ont., and Chas. G. McLain, Ringgold, Pa.

Dr. F. H. King, now Professor of Agricultural Physiology in the University of Wisconsin, has been appointed Chief of Division in the Bureau of Soils, Department of Agriculture. Dr. King is familiar to readers of THE R. N.-Y. through his discussion of various farm problems.

The legislative committee of the National Grange, Aaron Jones, E. B. Norris and N. J. Bachelder, have prepared a memorial to be presented to the Fifty-seventh Congress setting forth the demands and attitude of this great body on many questions of National import. The memorial sent out by Mr. Bachelder, of Concord, N. H., asks legislation as follows: 1. Further extension of rural free mail delivery. 2. Submit an amendment to the Constitution granting the power to Congress to regulate and control all corporations and combinations of capital of a monopolistic nature, thus preventing the use of their corporate power to restrain trade or arbitrarily fix prices. 3. Establishment of postal savings banks. 4. Pass a pure food law. 5. Completion of the Nicaragua Canal by the United States. 6. Grant additional powers to Interstate Commerce Commission. 7. Elect United States Senators by the people. 8. Opposition to the Ship Subsidy bill. 9. Prohibit fraudulent sale of colored oleomargarine.

Peaches in the Hudson Valley.

Last year there was a short crop, but this season the yield has astonished the natives, every old scrub of a peach tree growing wild among the weeds, as well as the well-kept orchards, being weighted down with loads of fruit. Notwithstanding the fact that everyone knows the necessity of thinning, not many paid any heed to this requirement, and the consequence was that quantities of small peaches were hawked about the streets of the local towns for 20 cents per basket. Despite the glut good peaches brought good prices. Not enough of first-class fruit could be furnished to supply the demand, the best selling freely for $1 to $1.25 a basket. The Triumph peach is coming to the front as an early variety, but its appearance is not prepossessing, and the fact that it is not entirely a freestone but rather a semi-free, is also against it. The tree is a good grower and prolific, and the quality of the fruit is very satisfactory for pie making, dumplings, peach cake and canning. It has been claimed that it is not subject to rot, but with us the rot started with this variety, and bushels of fruit and twigs were removed, but the deadly rot could not be controlled. We were obliged to ship rather prematurely, and doubtless thereby hurt the reputation of the peach in the section where the fruit found a market. Greensboro is a large, fine-looking early peach. The flesh is white. Though growing near the Triumph, it was not affected with rot. The foliage is luxurious and has a peculiar lustrous blue-green hue. This variety will carry to maturity and good marketable size without much thinning more peaches than any other sort we have seen, and through every gale it hangs on as well as the Elberta. The Elberta stands at the top as the best paying peach. Possessing many points of excellence it is not celebrated for its high quality. The shipping requirements have not allowed many of us to know it at its best, and we may have thus been led to judge it harshly, classing it with the big tasteless sorts that come to us from California. This year we let several fine specimen Elberta peaches get fully ripe upon the tree, and can now testify that when thus ripened, they are delicious. Score another point for this beautiful daughter of the sunny southland! Chairs Choice with us this year heads the list for beauty, uniform large size and highest quality, bringing the best prices, the dealers greedily calling for more even when plenty of other sorts were on hand. We shall plant more of it and have top-budded to this variety quite a lot of trees of less desirable sorts. Think it would be profitable also to set out some more Champions. They make a beautiful appearance when grown in the sunshine, the brilliant crimson contrasting admirably with the velvety white upon which it is overlaid. J. Y. P.

Hudson, N. Y.

General Crop Notes.

The clover in this part of the country is not so good as it was last year. We have about 60 per cent of a crop. What big clover we have is good, but the little clover is not so good. A. Y. S.

Cutler, Ind.

I believe that the amount of clover seed raised in the county will be an average crop. That raised on land that was pastured till June 1, or was clipped with the mower about that date, gave good yields of first-class seed. I have lived here since 1854, and never knew as large yield per acre (in some instances five or six bushels. The seed that was raised on land mowed for hay, will grade No. 2; yield light. Cause, excessive heat and drought. W. T. C.

Albion, Ind.

The drought still continues in this section of Christian County, though only a few miles distant there have been quite heavy showers. The roads are inches deep in dust, and traveling them is extremely unpleasant. Pastures have long been eaten up, and many farmers have been feeding their cattle for six weeks and more. Corn is down quite badly, and the yield will be cut still further thereby. Because of the high price of hay and the long feeding season ahead, everybody is preparing to cut up more corn than usual. In consequence there is a great demand for the twine-binding corn harvesters, which the factories are unable to fill. One local agent told me that he had sold seven, and and was obliged to refuse orders for twice as many more, as he could not get them. Owners of corn harvesters seem to have more than they can do cutting for their neighbors at 75 cents to $1 per acre, owners of corn furnishing twine. It seems to require from 1½ to three or four pounds per acre, at eight to nine cents per pound. I see and hear nothing of the sled cutters, used a few years ago. They would hardly work in the present corn crop anyway. Oats seem to be yielding better than was expected, running from 25 to 40 and 50 bushels per acre. Both oat and wheat straw are being baled more than common, and will undoubtedly be used much in place of hay. I also hear some talk of shredding and baling corn fodder, which some expect to sell at $7 or $8 per ton. On this place we are using a corn binder for the first time, and with the greatest satisfaction. It takes up the corn, which is badly down, and ties it up in good shape for shocking. It requires three common horses to go right along with it, and will cut eight or nine acres per day with one team. It has come to stay. Now we need a shredder that the individual farmer can afford to own. Corn is our great crop here, but I believe we do not get more than half the profit from it that we might.

Rosemond, Ill. G. W. B.

Southern Garden Truck

In a pamphlet just issued by the United States Department of Agriculture on the transportation of garden truck the following story is told:

In the Winter of 1847 No. 14 fire engine of New York had its headquarters on Church Street, between Fulton and Vesey. Fire engines in those days were manned by citizen firemen. If I mistake not the commission men were 14's main support. Next door to the engine house the boys rented a loafing parlor, and it goes without mention that toddies and the stiff mixtures were always in season. A clerk on one of the Charleston boats, which then landed at Pier 4, North River, front of Morris Street, was a guest, and while taking something, remarked the drink was nothing compared with the mint julep of the South, "such a one as I had a few days ago." The boys received the reference as a yarn, for where could mint be got in the middle of Winter, they having no personal experience of any other climate than that of New York? The clerk promised to prove his statement upon his next trip North. He left the boys, accompanied by a commission merchant, and in later conversation added that he would bring not only mint, but lettuce, radishes and strawberries as well. At this the merchant was doubly doubtful, and challenged the statement with a treat. Upon the return of the steamer the clerk proved the truth of his assertion. In a second-hand champagne basket he brought lettuce, radishes, mint, and, within an inner basket, were two quarts of strawberries. The strawberries, the first ever seen in New York in Winter time, were placed in a store window as a curiosity, where they were visited and examined by hundreds. This is said to be the beginning of the present vast trade in southern-grown produce.

Government Crop Report

The conditions of the past week have been favorable throughout most of the country east of the Mississippi, with but few damaging frosts. Stacked grain in the Dakotas has been damaged by heavy rains, while Illinois, Indiana and southern Michigan need rain to fit the soil for Fall plowing. The Pacific coast has been cool and wet, with severe frosts in Oregon and Washington. The corn crop is now nearly harvested, and out of the way of frost. Rain has hindered cotton picking in some sections of the belt, but in the central and western districts the work is progressing rapidly. Early-sown wheat in the lower Missouri Valley is coming up in excellent condition. Apple reports from Kansas and parts of Missouri, Arkansas, Illinois and West Virginia are encouraging, but no improvement over previous reports is noted in other sections.

Woman and Home

From Day to Day.

WHEN JOHNNY SPENDS THE DAY.

When Johnny spends the day with us, you never seen the beat
O' all the things a-happenin' in this ole house an' street.

Ma she begins by lockin' up the pantry door an' cellar,
An' ev'ry place that 's like as not to interest a feller.
An' all her chiny ornyments, a-stickin' 'round the wall,
She sets as high as she can reach, fer fear they'll git a fall.
An' then she gits the arnicky, an' stickin' plaster out,
An' says, "When Johnny 's visitin' they're good to have about."
I tell you what, there's plenty fuss
When Johnny spends the day with us!

When Johnny spends the day with us, Pa puts his books away,
An' says, "How long, in thunder, is that noosance goin' to stay?"
He brings the new lawn mower up, an' locks it in the shed;
An' hides his strop, an' razor, 'tween the covers on the bed.
He says, "Keep out that library, whatever else you do,
Er I shall have a settlement with you, an' Johnny, too!"
Says he, "It makes a lot o' fuss
To have him spend the day with us!"

When Johnny spends the day with us, the man acrost the street
Runs out an' swears like anything, an' stamps with both his feet;
An' says he'll have us 'rested 'cause his winder-glass is broke,
An' if he ever ketches us it won't be any joke!
He never knows who done it, 'cause there's no one ever 'round,
An' Johnny, in perticular, ain't likely to be found.
I tell you what, there's plenty fuss
When Johnny spends the day with us!

When Johnny spends the day with us, the cat gits up and goes
A-scootin' c'rost a dozen lots to some ole place she knows;
The next door children climb the fence, an' hang around for hours,
An' bust the hinges off the gate, an' trample down the flowers;
An' break the line with Bridget's wash, an' muddy up the cloze;
An' Bridget she gives warnin' then—an' that's the way it goes—
A plenty noise an' plenty fuss,
When Johnny spends the day with us!

—Elizabeth Sylvester in Century.

*

CHICAGO is to have a School of Domestic Arts and Science. This school will continue the work formerly conducted at Armour Institute, which was crowded out there by other departments. The school has been started by an organization of women, who recognize the good work which was done at Armour Institute. Cooking, sewing, dressmaking, millinery and nursing will all be taught practically, and the school is expected to be self-supporting.

*

A FRIEND in New York State asks how to make the old-fashioned watermelon rind preserve, which was a decided green in color, and cut into fanciful shapes. We have never made this sweetmeat, but recently met with the recipe for it. It improves and gains richness with keeping, and is exceedingly pretty. Cut up the rind in fanciful shapes. Place in strong brine and cover with grape leaves. After three days remove from the brine and soak in fresh water until all the salt taste is gone. Cover with cold water in which pulverized alum is dissolved, in the proportion of four tablespoonfuls to one gallon of water. Cover with grape leaves, and let simmer for about half an hour; again soak in fresh water to remove the taste of alum. Make a syrup of two quarts of water, two pounds of sugar, half a pound of ginger root, sliced very thin, and one ounce of mace; this will require half an hour's boiling or more to make a thick, rich syrup, and this proportion is for about 10 quarts of the rind. Pour the syrup over the rind, which must always be kept completely covered. From time to time add more syrup if necessary.

*

JUST what constitutes an educated man is generally regarded as a difficult definition. Our standards vary, nor is it safe to regard real education as intellectual training only. Here is a definition given in Munsey's Magazine by Prof. Butler, of Columbia College, as to the requirements which entitle a man to be termed educated:

1. Correctness and precision in the use of the mother tongue.
2. Those refined and gentle manners which are the expression of fixed habits of thought and of action.
3. The power and habit of reflection.
4. The power of intellectual growth.
5. Efficiency, the power to do.

*

HERE is a chicken story from Hindustan related by Mrs. Isabel Savory in her book, "A Sportswoman in India," which was related to her by a man whom she knew well in that country:

He had a henhouse and a hen that was sitting, but unluckily for her hatching operations a cobra got through a chink in the henhouse. The cobra made a fine meal of well-warmed eggs, but when it essayed to retire by the same hole through which it had entered it found those eggs in the way. It was much too large to get out, so it stuck in the hole, half in the henhouse and half outside. There it was discovered the next morning in a surfeited condition. It paid for its greediness with its life, and then it paid back the eggs it had stolen; for when the body of the snake was opened the eggs were all found unbroken and warm. They were replaced under the hen, and in due time were hatched, none the worse for their peculiar incubation. The strange fact that the cobra could swallow whole an egg much bigger than its own head is accounted for by the peculiar construction of that head. The head and jaws of the cobra are loose, and can be enormously stretched and distorted.

*

SOME time ago one of our readers in a western State told how she and her neighbors met on mending days, working together while one of their number read aloud. The gathering made toil a pleasure; work progressed rapidly, and the reading was a blessing to many a busy housewife who felt, ordinarily that she never had time to pick up a book or magazine. We hear of the same plan being carried out by other western women, who have formed a darning club, which gives them the opportunity of exchanging ideas, and listening to good literature, while they finish the week's mending. It is a good idea to plan such meetings now, before the Winter begins; a surprising amount of wholesome pleasure may be secured from it. There is one thing to be remembered, in planning such meetings; if any refreshments are served, they should be of the simplest character possible, like English afternoon tea. Elaboration destroys the character of such a gathering, and imposes an undue burden upon the hostess.

*

WE are told that the coming Winter is to see an extensive use of velvet, both in millinery and dress trimmings. Straps and rows of ribbon velvet are used a great deal on woolen waists. Where straps are used, the ends are pointed and often finished with tiny buttons. In some cases lacings of fine cord cross the straps, being fastened at each side with little bead-like ornaments. On the whole metal trimmings will not be used so much as last Winter, and the tinsel belts in such favor a year ago have now dropped quite out of sight. Some of them did rather suggest comparison with a brass band. In general trimmings, up-and-down lines and stripes hold favor; this effect is given by tucks and straps on the waists. Horizontal tucking seems out of favor, even on the sleeves. Although the coat sleeve is seen on outside wraps and plain cloth gowns, the tendency is still for decided fullness below the elbow, the bell sleeve or large pear-shaped puff appearing very frequently. The puffed undersleeve follows the outline of the bell shape, the puff being long, and decidedly full.

Pickling White Onions.

Can you give me a tested recipe for pickling small white onions? J. H. R.
Bridgeport, Conn.

First pour boiling water over the onions, to loosen the skins. As soon as cool enough to handle, begin to peel, dropping the onions, as peeled, into salt water (not brine) to prevent them from being discolored. Make a strong brine, heated to the boiling point, and pour over the onions. Leave them in the brine 48 hours, then drain. Spice vinegar according to the taste, which differs much with different persons, heat to boiling point, and pour over the onions. Set away for two or three days, then pour off the vinegar, heat it again, and cover the onions for the second time, put in the jars in which they are to be stored, tie up the covers and put away. To keep the onions white they should be pickled in white wine vinegar, but we prefer cider vinegar, because we are more sure of its purity, and it is more convenient. The onions take a yellow tint, but their flavor is unimpaired.

THERE are men who have never believed enough to doubt. There are some who have never thrown their hopes with such earnestness on the world to come as to feel anxiety for fear it should not be true. But every one who knows what faith is, knows too what is the desolation of doubt.—F. W. Robertson.

Business Methods in Farming

Farming that pays large dividends. How to get good workers and foremen. By S. W. Allerton. Reprinted from a recent number of THE SATURDAY EVENING POST and will be sent to any address, together with a three months' trial subscription to THE SATURDAY EVENING POST, on receipt of only twenty-five cents. THE SATURDAY EVENING POST is a handsome weekly magazine, beautifully printed and illustrated. Established by Benjamin Franklin in 1728, and published regularly every week for 173 years, and now has a circulation of 315,000 copies weekly, and ought to have a million.

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Publishers of The Ladies' Home Journal

A Trek to the South.

PART I.

"Fred thinks he would like to trek it in the Spring to North Carolina."

The words were spoken quietly and the odd Transvaal term held a ring of amused and sorrowful self-importance, as they fell from my sister's lips. To me, the little sentence sounded like the crack of doom.

I knew that the old homestead, bearing for many generations the family name, had through no fault of the husband and wife passed from them; that they were living on, but no longer owned it; that gradually the decision was crystallizing to seek and make a new one in a different atmosphere and milder climate. Still, the gentle finality in her words found me all unprepared for the severing of life-long ties and a closer and more dependent intercourse than is usually given near relatives so late in life.

"Fred thinks he would like to trek it in the Spring to North Carolina," might, to those unacquainted with the two, sound as if open to discussion. I knew too well their perfect unity of thought, to doubt for a moment that North Carolina was the point of destination, trekking the method of transit, and Spring the date of departure. Yet—

"Why trekking? Why North Carolina? Why Spring?"

In the leisure moments that fell on us through the busy days that followed these rebellious questions found patient and painstaking answer. They both felt the need of a long rest and change; never were away together during their 17 years of married life, and proposed to make this a kind of a silver wedding journey. Railroad travel always made them ill, and afforded no enjoyment. If they took their team, when arrived, they could drive about and decide on locating better and more independently. The expense would be no heavier than the railroad charges for themselves and team. As for North Carolina, Fred for many years had been much interested in the State; they "read it up" exhaustively, and believed that they would find, in one of its three belts, a congenial home and occupation. Spring was the season selected for starting to avoid the Fall rains, give two or three pleasant months for travel, and time at the end of the journey to rest and settle before cold weather. Lena finally summed up the situation in private.

"I really don't think, dear Hawk, that you need fear but what we will get along all right. There are so many things that Fred is good at. For instance, his general knowledge of farming, both as to raising crops and caring for stock; then his understanding as he does about fruit—the picking, packing, grafting, etc. Also he has his tinsmith's trade, and we are thrifty and careful."

As she talked there came to me a realization of their beautiful, unselfish lives and the promise to those who walk uprightly, and as time passed, I grew more than reconciled to their going. By the middle of April the best of their furniture and household wares were packed and stored, subject to orders, and the rest auctioned off with the remaining stock. The harnesses were then thoroughly repaired and a new first-class spring three-seated carriage purchased with waterproof curtains and a good brake. It was drawn to Clovernook's side door, the two back seats taken to the storehouse, and the packing began.

Under the carriage Fred swung the "emergency box," a rather long, shallow affair, containing ax, oil can, pincers,, wire, bolts, rope, etc. It is painted black, like the carriage, and is very clever and complete. Under the front seat were stowed the medicine chest, oil stove, box of cooking utensils and tool box. Two trunks occupied the back end, and bags of oats, meal, box and basket of provisions, the intervening space, with small hamper of bedding and light mattress on top. Valise with changes of linen, toilet articles, dusters, waterproofs, odds and ends handy; and at last all was in, tidily covered with a rubber blanket, and ready for departure; 1,500 pounds in all. Regarding the horses, they are of Canadian Messenger and Normandy stock. Owing to good care and handling they are very young horses for their years; Gray being 15 and Lady 20. They weigh about 1,000 pounds each. The last member of our trekking party to be mentioned is McKinley, a beautiful purebred black and tan collie, in the prime of life, and one of the best mannered and most intelligent of dogs; quite worthy of the honored name he bears. Because of our cold, rainy weather in May they remained till June 6, at about two o'clock in the afternoon, when the carriage pulled out of the yard, swung around into the road with its precious burden, and in the sweet clear air and sunshine—blue overhead and all the soft, tender grasses under foot—swiftly they rounded the curve and were gone.

The line of travel planned two points for stop-overs; Northfield, Delaware Co., N. Y., and Winchester, Va., the final destination being Pittsboro, N. C. Between these points at the start there was no very definite route mapped out, except to drive somewhat back in the Adirondacks (instead of following down the lake shore) owing to better roads and a more direct line, as the crow flies. Their plan was to camp out when weather and environment were satisfactory and at other times secure hotel or private board. If ever people felt the truth of Mr. Holmes's saying, "The world has a thousand roosts for man, but only one nest," they did before their journey's end. It was, especially at the start, a rather crowded "nest," and the "roosts"were many and varied; but they had each other, and that meant "home" to both.

For the first 16 miles they drove along the "State road," that in the old staging days connected Albany with Montreal. Over this same road in September, 1812, the "Britishers" marched through our little hamlet to join the naval force on Lake Champlain, at

3937 Woman's Jacket,
32 to 40 Bust.

Plattsburgh. And here, on Clovernook's hillside our forebears, intrenched behind breastworks, watched the long line of hated redcoats, with flashing bayonets and tossing flags, sweep like a resistless river into their country. And here, two days later, they stood boldly up and shouted derisively as the same long line of men, with "defeat" written on drooping heads and trailing flags, wended their way back over the border, eight miles distant, into Canada. But between those times and these methods of travel have changed, and it's many a day since the prairie schooner or trekking outfits have slipped their burdens along over the breast of the old road, and little is left of the wild forests with their occasional clearings. The Champlain Valley now holds comfortable homes and smiling, undulating fields of grain or meadow land; with, on the one side, the distant tips of the Adirondacks, and (as you travel south) on the left, the calm, beautiful lake, and beyond, sharp up against the sky, the Green Mountains of Vermont. Our trekkers must have felt heartened, as they wended their way through the lovely scene, and my sister writes:

"Lots of people stopped us and wish-

3934 Girl's Costume,
8 to 14 yrs

ed us 'good luck,' and I feel yet the strong, kind clasp of our dear minister's hand. Just after we had left the village we met a lot of gipsies. They were all dressed up and their wagons were draped with lace curtains. I told Fred we must go back and get ours. Fred drew down the corners of his mouth and said 'No!' A shower fell when about half way to Plattsburgh, and Fred put up the rubber boot and we were safe as at home. When it had passed, we got out and examined everytning and all was right and dry; so it will take a very hard rain to hurt us. Just before we reached Plattsburgh we caught that hard thunderstorm, but drove under a shed, had our supper and waited till it passed, so when we finally reached town the electric lights were swinging, and the cars spinning along, and everything glittering and wet.

"McKinley's thoughts were, 'My, I have had a good time!' The horses' were, 'My, but I'm all discouraged!' Fred's eyes were full of tears and I could guess his thoughts, too. Mine were, 'God be with us till we meet again,' so I sat up closer and slipped my hand in his. We put up at the hotel and next morning had a good time buying everything we wanted, till at last Fred said, 'I cannot get any more duds in the wagon; you must not buy another thing!'

"It is fun to see the different ways people take life. The thing that troubled our aunt about our trip was, 'How can you get your washing done?' I tried every way I could think of to cheer her up, but could not. At last I said, 'Aunt, we have lots of clothes; why Fred has six flannel shirts.' Well, that calmed her down. If he had all that, why he could keep clean for a while, anyway.

"The next morning we started off in the cold, and all day watched the mountains get nearer and nearer. I wanted to go through Poko-moonshine Gap, and Fred said we would. Au Sable is a lovely place, and we passed through the best part of it. The gardens are on the hillside, in the sand, and everything growing fine. The river there is also lovely, and we drove by its banks a long time. At last we reached Keeseville, and looking off from the top of a hill, what did we see but our Hotel Champlain and our dear old lake!" F. E. W.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

The Rural Patterns.

Short jackets are always in style, and the model shown has a novel look with its applied yoke. It would be appropriate either in a suit, or as a separate garment. The backs fit snugly to the figure, being cut with side backs and under-arm gores, but the fronts are loose fitting and include single darts only. The yoke is applied over the cloth, but can be omitted when preferred and the little coat left plain, as shown in the small cut. The neck is finished with a regulation coat collar and lapels, but the velvet facing is applied in a novel manner, the edge being cut in the vandyke points that appear in the newest designs. The sleeves are in bell shape and flare over the hands. To cut this jacket for a woman of medium size 2 7/2 yards of material 44 inches wide, or 2⅛ yards 50 inches wide will be required when yoke is used; two yards 44 inches or 1¾ yards 50 inches wide when jacket is made plain. The pattern No. 3937 is cut in sizes for a 32, 34, 36, 38 and 40-inch bust measure; price 10 cents.

The girl's costume shown, consisting of gored skirt and blouse, is made of Napoleon blue cheviot with strappings of the same, collar of blue velvet and chemisette of blue tucked taffeta. The blouse is cut with a plain back, drawn down snugly at the waist, and slightly loose fronts that droop over the belt. The neck is finished with a roll-over round collar, and the chemisette, or shield, renders it high at the neck. The sleeves are in bishop style with narrow pointed cuffs. The skirt is cut in five gores. The fullness at the back is laid in inverted pleats under which the placket can be finished, or the pleats can be stitched flat as illustrated, and the opening made invisibly at the left front seam. To cut this costume for a girl 10 years of age five yards of material 27 inches wide, 2⅞ yards 44 inches wide or 2⅜ yards 50 inches wide will be required. The pattern No. 3934 is cut in sizes for girls of 8, 10, 12 and 14 years of age; price 10 cents.

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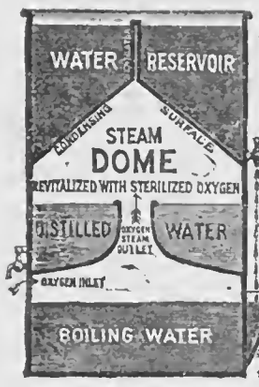

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MARKETS

THE WEEK'S QUOTATIONS.

WHOLESALE PRICES.

NEW YORK, OCTOBER 5, 1901.

GRAIN.—Wheat and corn down one to two cents. Foreign trade quite active.

Wheat, No. 1 Northern, Chicago	—	@	74¾
No. 1, Northern, Duluth	—	@	75
No. 2, red, elevator	—	@	74
Corn, No. 2, mixed, elevator	—	@	62⅝
Oats, No. 2, mixed	—	@	38½
Rye, No. 2. W'n, f. o. b., N. Y.	—	@	60
Barley, malting, new crop	59	@	62½

BEANS.

Marrow, 1900, choice, per bu	2 70	@	2 75
Fair to good	2 45	@	2 65
Medium, 1900, choice	2 15	@	2 20
Pea, barrels, 1901, choice	—	@	2 25
1900, choice	2 15	@	2 20
Red kidney, 1900, choice	—	@	2 45
Common to good	2 10	@	2 40
White kidney, choice	2 25	@	2 30
Black turtle soup, choice	1 85	@	1 90
Italian, medium	1 90	@	2 00
Other foreign, medium	1 75	@	1 85

FEED.

Spring bran, coarse	17 00	@	17 75
Winter bran	17 50	@	18 00
Red Dog	—	@	22 00
No grade flour	—	@	22 20
Unsound wheat, per 100 lbs	67	@	70
Linseed meal, ton	29 00	@	30 00
Cottonseed meal, ton	—	@	25 00

HAY AND STRAW.

Hay, No. 1	85	@	90
No. 2	80	@	82½
No. 3	65	@	70
Clover	50	@	60
Clover, mixed	60	@	70
Straw, rye, long	50	@	60

SEEDS.

Clover, per 100 lbs	10 00	@	11 25
Timothy, per 100 lbs	5 00	@	5 50
Flaxseed, whole, per bu	6 50	@	6 75
Millet, per lb	2	@	2⅛
Sunflower, per lb	3½	@	4
Rape, German, per lb	3½	@	3⅝

MILK.

New York Exchange price 2¾ cents per quart in 26-cent freight zone.

BUTTER.—A little extra creamery has been sold at 22½ cents. Firsts and lower grades are selling slowly in buyer's favor.

Creamery, extra, per lb	22	@	22½
Firsts	20	@	21½
Seconds	18	@	19½
Lower grades	15	@	17
June, extras	21½	@	22
June, firsts	20	@	21
State dairy, tubs, fancy	20	@	21
Tubs, firsts	18½	@	19½
Tubs, seconds	16	@	17½
Tubs, thirds	14	@	15
Tins, etc.	14	@	19
Western imitation c'm'y, fancy	17	@	18
Firsts	15	@	16
Lower grades	14	@	14½
Western factory, June, fancy	15½	@	—
June, good to choice	14½	@	15
Fresh, firsts	14½	@	14¾
Fresh, seconds	14	@	14¼
Lower grades	12½	@	13½
Renovated butter, fancy	17	@	18
Common to choice	13	@	16½
Packing stock	12	@	14

CHEESE.

Full cream, col'd, small, f'n'y.	—	@	10¼
Colored, small, choice	9¾	@	10
White, small, fancy	—	@	10
Small, white, choice	9½	@	9¾
Small, good to prime	9¼	@	9⅜
Colored, large, fancy	—	@	9⅝
Colored, large, choice	9⅜	@	9½
White, large, fancy	9½	@	9⅝
White, large, choice	9¼	@	9⅜
Large, good to prime	8¾	@	9
Common to fair	7	@	8½
Light skims, small, choice	8½	@	8¾
Large, choice	7¾	@	8
Part skims, prime	7	@	7½
Fair to good	5	@	6¼
Common	3	@	4
Full skims	1½	@	2½

EGGS.—There is some accumulation of medium and under grades, and the market is not so firm as at last report.

QUOTATIONS LOSS OFF.

State & Pa., average prime, doz	21	@	22
W'st'n, fresh gth'd, choice, doz	—	@	21

QUOTATIONS AT MARK.

Nearby, State and Pa., fresh gath'd, fancy, selected, doz	—	@	24
Prime to choice	20	@	21
Western, fresh gath'd, Northerly section, candled, sel'ted	—	@	20
Regular packings, Northern sections	17½	@	19½
Graded, Southerly seetions	17½	@	18½
Regular packings, Southerly seetions	16½	@	17½
Fresh gathered, dirties	13	@	14½
Cheeks	12	@	12½
Refrigerator, per doz	15	@	18

COUNTRY DRESSED MEATS.

Calves—Veal, prime, per lb	—	@	11
Fair to good, per lb	10	@	10½
Common to medium, per lb	7	@	9
Buttermilks, per lb	7	@	8
Grassers, per lb	5½	@	6
Pork—Jersey, dressed, light, lb	9¼	@	9¾
Medium, dressed, per lb	8¾	@	9

LIVE POULTRY.

Spring chickens, per lb	—	@	10
Fowls, per lb	—	@	10½
Roosters, per lb	—	@	6½
Turkeys, per lb	8	@	10
Ducks—Average W't'rn, per pair	50	@	60
Average Southern, per pair	40	@	50
Geese—Average W't'n, per pair	1 00	@	1 25
Average Southern, per pair	80	@	1 00
Pigeons, mixed, per pair	—	@	15

DRESSED POULTRY.

FRESH PACKED—ICED.

Turkeys—Spring, dry-picked, lb	10	@	12
Scalded, per lb	8	@	10
Broilers—Phila., over 4 lbs to pair, per lb	18	@	20
Phila., mixed sizes, per lb	14	@	16
Penn., fair to good, per lb	12	@	15
Ohio & Mich., scalded, per lb	11	@	11½
Other W'n, dry-picked, per lb	11½	@	12
Other W'n, scalded, per lb	—	@	11
Poor to fair, dry-picked or scalded, per lb	10	@	10½
Fowls—W'n, dry-picked, prime	—	@	12
Western, scalded, prime	—	@	11
Southw'n, dry-picked, prime	11¼	@	12
Western and Southwestern, poor to good	10	@	11
Old roosters, per lb	—	@	7
Ducks—Spring, L. I. and other nearby, per lb	—	@	14
Western	7	@	10
Geese—Spring, Eastern	12	@	14
Squabs—Choice, large, dark	2 25	@	2 50
Mixed, per dozen	1 75	@	2 00
Dark, per dozen	1 25	@	1 50
Culls, per dozen	50	@	1 00

GAME.

Grouse, per pair	1 00	@	1 25
Partridge, per pair	1 50	@	2 00
Woodcock, per pair	—	@	1 50
English snipe, per dozen	—	@	2 50
Golden plover, per dozen	—	@	2 50
Grass plover, per dozen	1 50	@	2 00
Wild Ducks—Canvas, per pair	2 50	@	3 00
Red head, per pair	1 50	@	2 00
Mallard, per pair	75	@	1 00
Teal, blue wing, per pair	60	@	75
Teal, green wing, per pair	40	@	50
Common, per pair	25	@	30
Rabbits, per pair	30	@	35
Venison, saddles, per lb	—	@	30

HONEY.

N. Y. State, clover, comb, fancy, per lb	15	@	15½
Clover, comb, fair to good, lb	12	@	14
Buckwheat, comb, per lb	9	@	11
California, extracted, per lb	6½	@	7½

DRIED FRUITS.

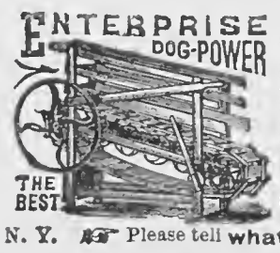
Apples—Evaporated, 1901, prime	—	@	8½
Evaporated, 1901, poor to good	6	@	8
Evaporated, 1900, fancy, per lb	9¼	@	9½
Evapora'd, 1900, choice, per lb	8¾	@	9
Evaporat'd, 1900, prime, per lb	8¼	@	8½
Evaporated, 1900, common to good, per lb	6	@	8
Sun-dried, 1901, per lb	4½	@	5½
Chops, per 100 lbs	1 50	@	2 25
Cores and skins, per 100 lbs	1 50	@	2 00
Raspberries—Evap'ated, 1901, lb	23½	@	24
Sun-dried, 1901, per lb	20	@	22
Blackberries, 1901, per lb	6½	@	7
Huckleberries, 1901, per lb	16	@	17
Cherries, per lb	14	@	16

FRESH FRUITS.

Apples—Alexander, per bbl	3 50	@	4 50
Wealthy, per bbl	3 50	@	4 50
Jonathan, per bbl	3 00	@	4 00
King, per bbl	3 00	@	4 00
Ben Davis, per bbl	3 00	@	3 50
Greening, per bbl	3 00	@	3 75
Twenty-oz., hand-picked, per bbl	2 75	@	3 50
Fall and York Pippin, p bbl	3 00	@	4 00
Holland Pippin, per bbl	3 00	@	4 00
Pound Sweet, per bbl	2 50	@	3 00
Fall varieties, fair to good	1 75	@	2 50
Ordinary hard, red sorts prime	2 25	@	2 75
Ordinary hard, red sorts, inferior	1 50	@	2 00
Windfalls, per bbl	1 00	@	1 50
Pears—Bartlett, fancy, p bbl	4 00	@	—
Bartlett, average lots, p bbl	2 50	@	3 50
Bartlett, inferior, per bbl	1 00	@	2 00
Bartlett, prime to f'n'y, keg	1 25	@	1 75
Bartlett, inferior, per keg	75	@	1 00
Seekel, faney, per bbl	3 50	@	1 00
Seckel, fair to prime, bbl	2 00	@	3 00
Beurre Bose, per bbl	2 00	@	3 00
Beurre Clairgeau, per bbl	2 00	@	2 50
Beurre d'Anjou, per bbl	2 00	@	2 50
Sheldon, per bbl	2 00	@	2 50
Other late kinds, per bbl	1 75	@	2 00
Nearby, common, per bbl	1 00	@	1 50
Quinces—Per bbl	2 00	@	3 00
Peaches—Md. & Del, per b'k't	60	@	1 00
Jersey, per basket	60	@	90
Pine Island, per carrier	1 25	@	1 75
Pine Island, per basket	50	@	85
Up-river, per pony basket	35	@	50
Up-river, per 2-b'sk't carrier	50	@	1 00
Ohio & Mich. per bu basket	60	@	1 75
Plums—Large, table blue, per 8-lb basket	40	@	50
Green, per 8-lb basket	35	@	50
Damson, per 8-lb basket	40	@	45
Common, per 8-lb basket	20	@	25
Prunes—Per 8-lb basket	40	@	50
Grapes—Up-river, Del., p car	50	@	1 00
Up-river, Niagara, per car	50	@	75
Up-river, Worden, per car	40	@	55
Up-river, Concord, per car	40	@	55
Up-river, Del., p small bkt	11	@	12
Up-river, Black, p small bkt	7	@	—
W'n N. Y., Del., p small bkt	11	@	13
W'n N. Y., Niagara, s. bkt	8	@	12
W'n N. Y., blk kinds, s bkt	—	@	8
Wine, black, per ton	25 00	@	30 00
Muskmelons—Far W'n, good to choice, per crate	1 75	@	2 25
Far W'n, poor to fair	1 00	@	1 50
Cranberries—Cape Cod, fancy, dark, per bbl	5 75	@	6 00
Cape Cod, medium col, p bbl	5 25	@	5 50
Cape Cod, poor to fair	4 00	@	5 00

VEGETABLES.

Potatoes—Long Island, per bbl	2 25	@	2 50
Maine, prime, per bag	2 00	@	2 12
Maine, inferior	1 25	@	1 75
State & W'n, prime, p bbl	1 87	@	2 00
Albany & Troy, prime, p bbl	1 87	@	2 00
State & Western, inferior	1 25	@	1 75
Jersey, per bbl	1 50	@	2 00
German, prime, p 112-lb bag	—	@	1 50
German, com., p 112-lb bag	1 00	@	1 12
Scotch, Magnum, p 168-lb s'k	1 25	@	2 00
Sweet Potatoes—South Jersey, per bbl	1 50	@	2 00
Yellow, Virginia, per bbl	—	@	1 25
Beets—Jersey & L. I. p 100 bchs	1 00	@	1 25
Brussels sprouts, per quart	6	@	12
Cauliflowers—Per bbl	1 00	@	3 00
Celery—State and Western, per doz, roots	15	@	35
Carrots—Long Island, per bbl	75	@	1 00
Corn—Jersey, per 100	50	@	1 50
Cabbages—Long Island, Flat Dutch, p 100	3 00	@	5 00
Cucumbers—Shelter Isl. p bbl	6 00	@	7 00
Western N. Y., per bbl	3 00	@	5 00
Cucumber pickles, Western N. Y., per 1,000	2 00	@	4 00
Eggplants—Jersey, per half-bbl crate	75	@	1 25
Jersey, per bbl	1 50	@	2 50
Lima Beans—Hackensack and L. I., Potato, per bag	75	@	1 00
South Jersey, flat, per bag	60	@	75
Lettuce—W'n N. Y., per case	1 25	@	2 00
Boston, per case	75	@	1 25
Nearby, per bbl	75	@	1 00
Onions—Pickle, white, per bbl	3 00	@	4 00
Orange Co., white, per bag	1 00	@	2 50
Orange Co., red, per bag	1 75	@	2 25
Orange Co., yellow, per bag	1 75	@	2 00
Orange Co., inferior, per bag	1 25	@	1 75
Jersey & L. I., red, per bbl	2 25	@	2 75
Jersey & L. I., yel., per bbl	2 00	@	2 25
Jersey & L. I., white, per klt	1 50	@	2 00
Connecticut, white, per bbl	2 50	@	4 00
Connecticut, yellow, per bbl	2 25	@	2 50
Connecticut, red, per bbl	2 25	@	2 75
State & W'n yel., per bbl	2 00	@	2 30
State & W'n, red, per bbl	2 50	@	2 75
Peppers—Jersey, green, per bbl	40	@	80
Jersey, red, per bbl	75	@	1 00
Peas—Va., per half-bbl basket	1 25	@	2 25
Squash—Hubbard, per bbl	1 00	@	1 25
White, per bbl	1 00	@	1 25
Marrow, per bbl	—	@	1 00
String Beans—Jersey and Long Island, per bag	50	@	75
State, per basket	50	@	65
Southern, per half-bbl basket	50	@	65
Turnips—Jersey, Russia, p box	—	@	1 00
Canada, Russia, per bbl	90	@	1 00
Tomatoes—Faney, Acme, p bu box	50	@	60
Acme, fair quality, p bu box	40	@	45
Common, per box	35	@	40



For full information about this, also best Horse-power, Thresher, Clover-huller, Fanning-mill, Feed-mill, Rye Thresher and Binder, Saw-machine (circular and drag), Land-roller, Steam-engine, Ensilage & fodder Cutter, Round-silo. Address, **Geo. D. Harder,** Cobleskill, N. Y. ☞ Please tell what you wish to purchase.

BUSINESS BITS.

A NEW style of basket is offered this week by Coles & Co., 109-11 Warren Street, New York. This is specially designed for picking fruit, and will meet the wants of a great many fruit growers. This company makes baskets of every description.

FOR out-door lamps and lanterns the name "Dietz" is standard from one end of the country to the other. R. E. Dietz & Co., 87 Laight Street, New York, probably make more of these lamps than all others combined. If your dealer does not keep Dietz goods write direct for free catalogue and special prices delivered to you

OUR readers frequently ask us questions which are answered every week in our advertising columns. If anyone wants to know anything about horse carts we would ask him to read the advertisement of Hobson & Co., 19 State Street, New York. It's a small advertisement but a good cart, and any size you want.

THE nursery of Stephen Hoyt's Sons has been established for more than 50 years, and it is one of the good nursery houses that we never hesitate to recommend to our readers. The stock is at all times faultlessly cultivated, and great care is exercised that no disease shall get a foothold. The conditions at this nursery are perfect, and any reader needing trees of any kind will do well to write this firm. The address is New Canaan, Conn.

WE would direct the attention of our readers to the advertisement of the O. S. Kelly Manufacturing Company, of Iowa City, Ia., which appears elsewhere in this issue of our paper. Many of our readers will remember the Kelly people as the manufacturers of the Kelly duplex grinding mill, which has been so long and favorably known as a superior grinding mill. The mill is thoroughly good and reliable, and its use will help out wonderfully in this season of short feed. Write them for their latest catalogue.

SINCE reading of Mr. Lewis and his five-field system of potato growing I have adopted same, though I use sheep instead of cows, and plant potatoes about June 15, using second crop-seed. U. H. B.
Easton, Md.

A BUFFALO, N. Y., milkman, while in a saloon in that city, made a remark which was interpreted to mean that he thought it was a good thing for the country that President McKinley had been killed. What happened immediately after is thus told in the New York Sun: "Instantly the crowd went for the man. He was thrown to the floor, kicked, beaten, stamped and crushed. Chairs were hurled at him and he was in danger of being torn to pieces when some one picked him up and threw him through the door. He was able to crawl to his home. Several of the man's ribs were broken and it will be some time before he will recover. This does not include all his injuries, for his customers who heard of his alleged remarks discontinued buying milk from him."

WHEN you write advertisers mention THE R. N.-Y. and you will get a quick reply and "a square deal." See our guarantee 8th page.

CATARRH CAN BE CURED.

Catarrh is a kindred ailment of consumption long considered incurable; and yet there is one remedy that will positively cure catarrh in any of its stages. For many years this remedy was used by the late Dr. Stevens, a widely noted authority on all diseases of the throat and lungs. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all sufferers from Catarrh, Asthma, Consumption & nervous diseases, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail by addressing, with stamp, naming this paper W. A. Noyes, 847 Powers Block, Rochester, N. Y.

Oldest Commission House in New York. Established 1838. Butter cheese, eggs, pork, poultry, dressed calves, game, &c. E. B. WOODWARD, 302 Greenwich Street, New York.

Apples and Pears

This time of the year we make a specialty of handling shipments of apples and pears, and are now prepared to handle consignments to the best possible advantage. Write us at once for information regarding shipping, etc.; also for stencils.
ARCHDEACON & CO., 100 Murray St., New York

Wants, For Sale or Exchange

WANTED—Farmers and Dairymen, $30 to $50, with house or board. Only competent men with good references. The Rural Agency, Durham, N. H.

Farm for Sale in Litchfield County, Conn., 55 acres; 10 minutes walk to schools, churches, post-office, stores. Best of markets.
Address X. and Y., care of Rural New-Yorker.

Farm and Summer Boarding House

Twenty rooms, overlooking city one mile distant. 68 acres—1,000 young fruit trees; grand location. Established business; everything favorable. Will sell on easy terms or rent for term of years to competent responsible tenant. Chance for speculation in villa sites. Address: 383 Bryant St., Buffalo, N.Y.

"I OWN MY HOME."
That's what puts nerve and backbone into a man. We sell them on the easiest terms. More than a hundred to choose from in our Illustrated Real Estate Catalogue Mailed free Write to-day.
W. F. Allen Land & Imp. Co., Salisbury, Md.

FOR SALE—Gentleman's Farm. One hour from New York City by Central Railroad of New Jersey, close by growing town. No malaria. Good society. About 140 acres, mostly in grass. This year's first crop, 235 large two-horse wagon loads of hay. Second crop 100 large two-horse wagon loads of hay. Home market. Modern buildings. Chance for speculation in building lots. Owner having taken up his residence in Europe, will sell this place below value. For circular address owner
FREDERICK LOESER, Personal,
484 Fulton Street, Brooklyn, N. Y.
Real Estate Agents please enclose their card.

GLENN RANCH,

Glenn County, California,

FOR SALE IN SUBDIVISIONS.

This famous and well-known farm, the home of the late Dr. Glenn, "the wheat king," has been surveyed and subdivided. It is offered for sale in any sized government subdivision at remarkably low prices, and in no case, it is believed, exceeding what it is assessed for County and State taxation purposes.
This great ranch of 40,000 acres runs up and down the western bank of the Sacramento River for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.
The river is navigable at all seasons of the year, and freight and trading boats make regular trips.
The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.
For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,
F. C. LUSK,
Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, of Chico, Butte County, California.

PAN-AMERICAN, BUFFALO, N. Y.

Those expecting to attend the Fair can secure rooms in a private dwelling by addressing me. On a direct car line to Exposition, Niagara Falls and down town. Rates reasonable.
MRS. R. E. STARR, 325 Rhode Is. St.

For Sale 100 bbls. Hickory Wood Ashes in lots to suit. $1.25 per bbl
WM. STOKES, Packing House, 18 Jay St. N. Y. City

WE PAY $20 a week and expenses to men with rigs to introduce POULTRY COMPOUND. International Mfg. Co., Parsons, Kan.

100 Visiting Cards, 30c., latest style; 125 Envelopes with paper printed & delivered $1 cash. Samples for 2c. stamps. H. SEDGWICK, Cornwall Hollow, Conn

Free Write at once for valuable free booklet entitled "How to Secure Just the Position You Want." N. C. A. S., 115 Heed Building, Phila.

FARM PAPER FREE! Send ten cents to pay cost of mailing also names and addresses of five of your farmer friends and we will send you the Missouri Valley Farmer one year free. Regular price 50c. It is one of the best farm papers in the west and will tell you more about agriculture and live stock conditions in the great southwest than any other publication. It is filled with western stories and up-to-date articles in the breezy style of the west. **Missouri Valley Farmer, Topeka, Kansas.**

October At The Pan-American.

Less than thirty days remain before the gates of the Pan-American Exposition are closed forever.

During the crisp cool days of October Buffalo is at her best, and those who have delayed their visit until now will have the most delightful weather of the year in which to enjoy the wonders of the Rainbow City.

The same low rates are in force over the Lackawanna Railroad as during Midsummer. At this season a daylight ride over the Lackawanna System is a journey long to be remembered. Through the Delaware Water Gap and over the Blue Ridge ranges the woods are radiant in their autumnal coloring while the agricultural region of Western New York is mellowed by the wonderfully rich tones of the Fall harvest time.

Six solid vestibuled trains are run daily between New York and Buffalo; with daily through service between New York and Chicago and New York and St. Louis. Observation cars, dining cars and Pullman sleeping cars offer every comfort for the trip.

A beautiful guide, profusely illustrated telling about the Exposition and its features, will be sent on receipt of two cents in postage stamps. Write for one to T. W. Lee, General Passenger Agent, Lackawanna Railroad, New York.—*Adv*

BOOK BULLETIN

FOR SALE BY THE RURAL NEW-YORKER

How to Know the Wild Flowers, by Mrs. W. S. Dana; 346 pages; 110 illustrations; and 48 full-page colored plates. Can be used to advantage by those who have no knowledge of technical botanical names. A large number of wild flowers are described and illustrated so as to be identified easily. This book will add a decided pleasure to country life, in teaching one where to look for many of these beautiful but uncultivated flowers, which hide away and escape the notice of most people. Price $2.

Cut-price Books.—Any of these 20-cent pamphlets sent postpaid for 10 cents:

Fruit Packages.
Memory Training.
Country Roads.
Fertilizer Farming.
Chemicals and Clover.
My Handkerchief Garden.
Canning and Preserving.
How to Cook Cauliflower.
Milk Making and Marketing.
Tuberous Begonias.

THE RURAL NEW-YORKER,
409 Pearl St., New York.

MARKET NOTES

AN ARTISTIC FISH MAN.—His shop is near the Fulton Fish Market, and he has a show window usually well filled with fishy decorations. During the yacht races he added extra ornaments. Eel, cod, haddock, salmon and flounder patriotically carried little flags and yachting ensigns mounted on sticks. In the center of the window was a platter, the edge of which was fringed with alternate rows of shrimps and scallops, while lengthwise in letters made of minnows an inch long was the name of the yacht which he hoped would win.

COTTON NEWS.—The crop reports are not favorable, yet there is no prospect that the extreme prices of last year will be duplicated this season. At present speculators are doing but little, and European spinners appear to be taking only just enough for current needs. Many consumers have an idea that the planters will have to come to their terms anyway, yet conditions in the South are much more favorable than for a long time, and many growers who formerly had to sell at once are now able to hold their crop for some time if desired. The first killing frost is a feature that always stirs up the cotton market, and is usually expected in the cotton belt about the last of October. If it should come sooner, so as to cut any large quantity of the late crop, buyers would at once become active, and prices would advance at least temporarily.

CHANCE FOR COUNTRY BUYER.—A correspondent in Onondaga County, N. Y., says:

"I would like to act as buyer for a responsible concern in the city that desires a representative in the country to buy tobacco, apples, cabbages, potatoes, etc., by the carload, on commission; they to furnish the money. I could give bond for any amount intrusted to me."

Many city produce dealers could use such an agent to advantage, but he would not be able to make any definite arrangements in these lines until he had shown himself to be a competent buyer, that is, well acquainted with qualities and values of the stuff he is to handle, and with that peculiar sort of tact so necessary in dealing with those from whom he buys. This does not mean that he should always get the "best of the bargain" or ever resort to the sharp methods which make it unsafe for him to try to buy twice from the same man. If he expects to continue in business, he certainly must deal fairly. There is only now and then a man who has the natural qualities to make a permanent success of this business of going about the country and buying produce. Many of the people he will meet have most unreasonable ideas of the value of what they have to sell, and he must know how to stand his own ground and yet avoid giving offense. There are men of this stamp who have worked up an excellent business of this sort, and they are of decided service in a farming section.

FRUIT NOTES.—The season for peaches is drawing to a close, though the later varieties, such as Late Crawford and Morris White are now at their best. Many of the street fruit peddlers are selling California peaches. These are practically indestructible, and not likely to suffer from handling or to spoil on the vendor's hands. He dusts off their woolly rinds several times a day with a whisk broom, and arranges them on his cart fairest side up. They look fine, but are spongy and tasteless, and it is difficult to see how anyone would care to buy them the second time. Grapes are plentiful and selling well, though at somewhat reduced prices. Niagara and Delaware retail at 15 cents for four-pound baskets. Concord goes a little below this, although comparatively few Concords are sold in small baskets, while Salem brings 20 cents. Salem is a variety not well known. It is not grown to any great extent, as it mildews badly in some sections, and this scarcity is probably the chief reason for the high price. The berries are large reddish-brown; pulp separates readily from seeds; and flavor is decidedly peculiar. Plums are scarce. Most that I have noticed recently have been of prime quality and brought high prices. A large quantity of the apples coming in at present are of undesirable kinds, which sell at irregular prices. There are still plenty of the western-grown muskmelons, which sell for $1.50 to $2.25 per bushel crate. Receipts of cranberries have been in excess of the needs of the trade, and dealers are hoping for cooler weather, which always stimulates the demand for this fruit.

W. W. H.

PACIFIC SLOPE FRUIT GROWING.

In Southern California.

Orange culture is of greater importance in this part of southern California (Redlands, Highlands, Riverside) than any other horticultural industry. The trees yield abundantly, and the quality of the fruit is of the finest. There are few diseases. The most destructive insect, the White or Cottony cushion-scale, threatened a few years ago to become a serious if not a fatal enemy. This scale is now, however, under complete control of a parasite imported from Australia. Owing to the dry air, Summer heat, and absence of fogs, the other insects, such as Red, Black, Purple and Brown scales are easily kept under subjection. At certain intervals officers employed by the county go through the orchards and destroy, at the owner's expense, such scale as may be found. The tent and gas treatment is the method employed; appliances furnished by the county. Most of the orchards are held by small owners; five, 10, 15 and 20 acres each. A few growers have 100 acres or more. A number of orchards are owned by non-residents. In many cases the small orchardist does all his work of irrigating, cultivating, pruning, etc.; others are engaged in business in town and employ a man to do such work. Large orchardists have a superintendent or foreman, who employs the necessary help. Non-residents place their groves in the hands of men who make a business of such work. One man may have 30 to 60 acres under his care.

Redlands, Cal. B. R. S.

As Done in Oregon.

Very little grafting has been done on a large scale in this section. Generally some person in the community has the "knack" of making grafts grow, and gets the work of the neighborhood. Of spraying we are past masters. About 10 years ago some enterprising Californians made a thorough introduction of San José scale all through Oregon and Washington on nursery stock, and we have been vainly trying to exterminate it ever since. It can be kept in check, and almost exterminated, but not quite. Salt, sulphur and lime are most generally used as a spray, and a most vile compound it is. Two pounds of material to three or four gallons of water is the strength, and to the person using it the wonder is that any scale escape, for with that strength it is very corrosive, eating the hands wherever they are kept moist by handling the rods. I don't know of a single orchard where the scale has become well established that has successfully got rid of it. The State has very stringent laws against selling any fruit infested with scale, and as it is almost impossible to keep some very slightly infested fruit from being packed, and as the commission man will claim that the whole lot is condemned and a total loss, it makes the grower hesitate to ship from such orchards. This scale first came into notice in California, but has long since ceased to be the terror it once was, as some natural enemy has kept it in check there for a number of years, and this enemy is following it up in its new haunts. A grower in Jackson County, Oregon, writes me that the scale has entirely left his orchard of 160 acres, that was once badly infested.

Every man owning an orchard of any size has a spraying outfit of his own, and I don't know of a single instance of an outfit spraying orchards by contract, except in town, where an owner will have only a few trees. A good outfit for spraying consists of a 300-gallon tank on a low-down broad-tired wagon, and two leads of hose, 20 feet long, and a good strong pump made almost entirely of brass, all metal valves. Such an outfit will cost $125. One grower has a small gasoline engine to do his pumping, and four leads of hose, and sprays 1,200 trees a day. He claims the gasoline engine was the best investment he ever made, and as a result of eight sprayings for Codling moth his orchard turned out 98 per cent of apples free from worms, and he is now getting $1 per box f. o. b. for apples in the greatest apple year we ever had. He recently shipped 15 carloads in one day to England. Pruning is done very much as spraying, the owner superintending the work. Almost any person of average intelligence can do the work with a little practice. The expert traveling through the country is to be avoided, because he generally has a theory about pruning, and I never knew it to work in practice. One damaged me $1,000 or more in one season. S. D. E.

Cleveland, Ore.

THE MICHIGAN STATE FAIR.

Our first State fair was held in Detroit 52 years ago, in what is now Grand Circus Park, just a short distance north of the present business center of the city. This year's fair, the record-breaker of the entire series, was held in Pontiac September 23 to 27 inclusive. A veteran fair-goer remarked at Pontiac that the farm machinery on an ordinary farm nowadays, exceeded the entire exhibit in that line at the first State fair. The exhibits in every line were full to repletion, and doubtless exceeded those of any other fair in the history of the State. Space forbids any detailed account, but some exhibits, and notably that of western Canada, deserve special mention. This consisted chiefly of grain and forage grasses, very extensive as to proportions and beautifully arranged, showing up to fine advantage the wonderful resources of that country.

Our State experiment sub-station at Chatham, Upper Peninsula, although but two years of age, is an exceedingly lusty infant. Between 40 and 50 varieties of fruits, vegetables, grains and forage grasses, as fine as the earth produces, were exhibited from there, fully demonstrating that the Upper Peninsula has a great agricultural as well as mining future before it. Alpena County carried off the honors in county exhibits, and this was a matter of no little personal interest. In 1874 I made a business trip to Alpena, then a hole scooped out of the vast pine forests surrounding Thunder Bay, and reaching back westward "to be continued." Said hole in the pine woods consisted of sand, sawdust and about 3,000 inhabitants, without, so far as I could learn, a cleared farm in the entire county. There was lumber and lumber, and nothing else. During my visit there a load of turnips was hauled into town, which created as much excitement as a circus, and enquiring the cause of all this ado, I learned that that load of turnips was the first load of home-grown produce ever brought into Alpena. In 1901 the county came down to the annual tournament with her fruits, grains and vegetables and captured all first premiums on county exhibits in these classes. With an ideal climate, and soil producing such fruits, grains and vegetables, with good roads and home markets and plenty of land at from $2 to $5 per acre, it would seem that many of the tired city dwellers might find a haven of rest.

The thought indelibly impressed upon the mind of the careful observer at the Fair is that agriculture is the foundation upon which rests all other human industries, and that the farmer's brains are the motive power that keeps all other parts of the machinery in motion. Another thought also comes; that while these great State fairs are the educators of the comparative few, the local fairs are the training schools for the many. Boom the local fairs!

J. E. MORSE.

Germs of Typhoid Fever.

Typhoid fever, though such a widespread prevalent disease, would appear to be one of the most readily preventable of infectious diseases were the method of its propagation and the means for counteracting it generally understood and practiced. The germs that are the sole cause of the disease are taken in by the way of the mouth, sometimes perhaps with the food, but more commonly in the drinking water, or in milk that has been contaminated by infected water. These germs multiply enormously in the system, and are discharged mostly in the evacuations. From a consideration of this simple fact it will be evident that if the thorough disinfection of all the discharges of typhoid-fever patients was strictly attended to the disease might be very greatly limited, if not quite stamped out. Those unacquainted with the history of the disease are apt to think that the safest way to dispose of the discharges is to dig a hole in the garden, or somewhere outside, and bury them, while the truth is that it is really the worst way possible, with one exception, namely, putting them in the well, because these germs when so buried retain their vitality for a long time, and so may gradually by percolation through the soil get into the well. *All the discharges should be disinfected without delay.* As good a way as any is to use a solution containing 80 grains of corrosive sublimate, and four times that much of blue stone to the gallon of water. By adding a cupful, say, of this mixture to the discharges and allowing them to stand for a couple of hours before being emptied all danger from this source may be prevented. The length of time these germs, when not so treated, may retain their power to do mischief and the distance they may travel in the soil are well-nigh incredible.

W. O. H.

SUNNY WOMEN.

Who has not known the woman whose disposition is described by that one word "sunny?" There's always a laugh lurking on her lips. Her cheeks are ever ready to dimple in smiles. Her household influence is as brightening and stimulating as the sunshine. Nothing can be crueler than to have this sunshine blotted out by disease. But this is a common cruelty. The young wife who was the sunshine of the home becomes its shadow. Every young wife should know the value of Dr. Pierce's Favorite Prescription in the protection and preservation of the health. It promotes regularity, dries the drains which enfeeble body and mind, and cures inflammation, ulceration and female weakness. It nourishes the nervous system and gives to the body the balance and buoyancy of perfect health. It is a strictly temperance medicine.

"I can say that your medicine cured me," writes Mrs. Maud Pearce, of Stoutsville, Fairfield Co., Ohio. "I had suffered about twelve years from female weakness and I had almost given up, thinking there was no cure for me. Then I heard about Dr. Pierce's medicine and thought I would try it, and can say that seven bottles of your 'Favorite Prescription' made me well. I am now able to do my own housework. I took about twelve bottles in all of Dr. Pierce's medicines. Took some of the 'Golden Medical Discovery,' 'Favorite Prescription' and some of the 'Pleasant Pellets.'"

Dr. Pierce's Pellets cure constipation.

BEFORE BUYING A NEW HARNESS write for our 200 Page Illustrated Catalogue giving full description and prices of all kinds of single and double harness and save 25 per cent.
King Harness Co. 510 **Church St., Owego, N.Y.**

$10.40 BUYS this 55 gallon **Food Cooker**
complete with cover, elbow, pipe and damper. Kettle is polished and smooth. Jacket made of heavy steel. Burns any kind of fuel. Flues distribute heat all over. Boils 50 gallons in 20 minutes, cooks anything. Handy for butchering and a hundred other things on the farm. Other sizes, 18 to 75 gals., at reduced prices. Send for large free Catalog giving prices on 15,000 articles.
Marvin Smith Co., 55-59 N. Jefferson St., Chicago, Ills.

WHY GUESS?
WHEN YOU CAN BUY
WAGON SCALES.
FOR SO LITTLE FROM
JONES (HE PAYS THE FREIGHT).
BINGHAMTON, N. Y.

WROUGHT IRON PIPE
Good condition, used short time only; new threads and couplings; for Steam, Gas or Water; sizes from ¼ to 12 inch diameter. Our price per foot on ¾ inch is 3c; on 1 inch 3½c. Write for free catalogue No. 57
CHICAGO HOUSE WRECKING CO.,
W. 35th and Iron Sts., CHICAGO.

In time of need — for Granulated Scratches or Grease Heel, just developing or in the chronic state—turn to

Veterinary Pixine.

It absorbs inflammation, penetrates to the bottom of sore, stimulates and builds up new cellular tissues, counteracts effects of impure blood, softens the fissures and sloughs off proud flesh. It is the most natural, scientific and vital healing ointment made. Money back if it fails to cure any sore, case of speed cracks or skin disease no matter how aggravated, what the cause or how long standing.

It is an antiseptic, soothing ointment of marvelous penetrating healing power.

2 oz., 25c.; 8 oz., 50c.; 5-lb. pkge., $4.

At all druggists and dealers or sent prepaid. Money back if it fails.

TROY CHEMICAL CO., TROY, N. Y.

Live Stock and Dairy

WHEAT BRAN OR MIDDLINGS.
Do Cows Need So Much Protein?

PART III.

I desire to call especial attention to the quality of the milk yielded by the different cows and the amount of available protein charged to a pound of milk yielded. Betty gave milk containing 6.7 per cent fat, and is charged with .109 of available protein to a pound of milk yielded. What I mean by available protein is that which is left after deducting the amount supposed to be needed daily for maintenance of the body, assuming that the requirements for this purpose are at the rate of .7 of a pound per 1,000 pounds live weight. Dora gave milk that tested 6.1 per cent fat, and received .083 of available protein to each pound of milk yielded. But these two cows were not under normal conditions, because the former had aborted and the latter was nearing the close of her period of lactation, and for this reason were not in the experiment which followed this one. Beckley gave milk testing 5.6 per cent fat, and received .077 of a pound of available protein to a pound of milk yielded. During this experiment she received daily 1.63 pounds of protein, while during the experiment referred to in the first table she received 1.68 pounds of protein, and returned a pound of milk to .082 of protein, showing that she received more protein than she had use for. The heifer Tricksey gave milk containing 4.9 per cent butter fat, and when receiving a ration containing 1.70 pounds of protein returned a pound of milk to .071 of protein, and during the first experiment she received daily 1.56 of protein and returned a pound of milk to .061 of protein, clearly showing that at least during the first experiment she was receiving more protein than she needed for the work she was doing. This is also indicated by the record of Houston, that was giving milk containing exactly the same per cent of fat. Houston received 1.7 pounds of protein daily, and yielded a pound of milk testing 5.6 per cent fat and returned a pound of milk to .053 of a pound of protein. Sweet Briar that gave milk testing 4.8 per cent fat returned a pound of milk to .049 of available protein. Topsy's milk tested 3.7, and she gave a pound of milk to .041 of a pound of protein, and Countess, whose milk tested 2.4 per cent fat, returned a pound of milk to .034 of protein. While it is evident that some of the cows received more protein than they needed for the work they were doing, the table gives evidence worthy of serious consideration that cows require protein not only in proportion to the quantity of milk that they are yielding, but that the quality must be taken into account as well. With the fact that the herd maintained a wonderful uniformity in flow all Winter, that they never in the history of the herd did any better, it would be idle to contend that they did not receive enough protein to do their maximum amount of work. It is barely possible, however, that even during the Winter of 1895-6 they all received more protein than they needed.

The Wolff-Lehmann standard ration prescribes 1.6 pounds of protein daily for a cow yielding 11 pounds of milk daily; two pounds when yielding 16.6 pounds of milk; 2.5 when yielding 22 pounds of milk, and 3.3 when yielding 27.5 pounds of milk. The theory upon which the Wolff-Lehmann formula is based is that after deducting the .7 of a pound of protein needed daily for body maintenance she required .081 of protein to a pound of milk yielded. The record covering 154 days stall feeding, when all the feed was subjected to chemical analyses, and every ration was carefully weighed and tested twice a day separately, shows that the cows received only .047 of protein to a pound of milk yielded; that when the herd gave milk testing 3.9 per cent fat it returned a pound of milk to .046 of a pound of protein, and when it gave milk testing 4.07 per cent fat it returned a pound of milk to .048 of available protein. In the light of such evidence I may be pardoned if I hedge just a bit on what I may have said when I took the generally-accepted feeding standard as my text. When a daily protein supply of 2.5 pounds suffices for cows yielding 500 or more pounds of butter per year, and when cows receiving 1.7 pounds of protein average 301 pounds of butter per year, the query arises what shall we prescribe for farmers' cows that average 132 pounds of butter per year, as is the case with the 335,000 cows that are contributing milk to Minnesota creameries? T. L. HAECKER.

TAMING AND TRAINING A HORSE.

The following note was received from a good friend at the time our frisky mare, Nellie Bly, was given to shying and dancing at sight of bicycles. She has now reformed—yet the advice is, as we believe, very sound.

I wish to say to the Hope Farm man that in my opinion it is not enough for a woman to be able to harness and unharness a horse to make her a safe driver, if she is to drive a spirited animal, and I believe that the well-bred, intelligent kind horse is much the safest for women to drive, even if he is a lively one. If he has been properly trained he will be perfectly safe when he has once become acquainted with his driver. You say that Nellie Bly is a little too frisky for the Madame to drive. Now, if the Madame loves a horse and has a desire to drive Nellie Bly, I will tell you how she can do it safely. Turn the mare loose in a large box stall or other convenient place, let the Madame take with her a good whip and also some oats or other grain in her pocket. Go alone into the stall; be calm; do nothing in a hurry. Speak kindly but with firmness. Command Nellie to come to you; if she obeys pat her and give some oats. If she turns from you use the whip quickly, and again give the command to come. If she does it feed her a little, but never give any feed until she does as you want her to. By kind and firm treatment teach her that when she obeys you are her best friend. She will soon come at your command; then ask her to follow you about the stall. Be careful to have her understand what you want before you punish her for not doing it. Teach her just one thing at a time, and never leave it until she does it well; then take up another lesson. One lesson in a day is enough; don't be in a hurry. Work with her until she is under your control, and will obey you promptly. Teach her to obey the word "Whoa" whenever she hears it, and to stand until told to go. Do this in the barn. Now, when you have taught her to obey and also that you are the best friend she has in the world, you may harness and drive her with safety.

One word about driving. When ready to start get into the wagon, fix the robes, etc., but do not pick up the lines until ready to start, then give her the word. Always in stopping use the word and not the lines. When driving, if she is inclined to go faster than you wish, use the word steady, or some other, but always the same one; she will soon learn to slacken her pace at the word. Use the lines simply to guide her when necessary. Teach her to drive with slack or tight line as you wish. Never use the whip when in the harness, except as a gentle reminder of her duty. After you have taught her to drive as I have indicated money wouldn't buy Nellie Bly. D. R. P.

New York.

FEEDING BRAN WITH SILAGE.

What per cent of protein in silage; also in what proportion should wheat bran be fed with it? G. E. W.

Pennsylvania.

Prof. Henry in his work "Feeds and Feeding," gives the following analysis of corn silage, the average of 99 samples: Water, 79.1; ash, 1.4; protein, 1.7; crude fiber, 6.0; carbohydrates, 11.0; fat, 0.8. This does not materially vary from other tables which are considered standard. An animal would therefore need 150 pounds a day to get enough protein for a full flow of milk, or 2½ pounds of protein, which is not far from the profitable amount, provided the cost is not excessive. The ration maker so often overlooks the cost of the food, when perhaps, to make the ideal ration, the extra cost would more than balance the extra gain. For instance, in our own locality many farmers have such an abundance of corn that they are feeding excessively of it, and the cows are doing well, but it is not an ideal ration. The wheat bran to balance it is worth $19 per ton, and I am satisfied from experience under such conditions that $19 would not produce $19 worth of milk above present production. I am not making a plea for less food, nor necessarily for less grain food, but clover aftermath and corn are not with us marketable crops; especially is this true when it rains nearly every day. We are turning an unmarketable crop into milk, which has a ready cash value, saving the purchase of expensive grain foods If bran is to be fed, we will assume that the cow will eat 50 pounds a day of silage. At this season of the year, or until October 20, she will get a small amount of grass each day, which will not affect the ration, because it is nearly balanced. The corn silage will contain .85 pounds protein, and to assume that the grass eaten will make it one pound, we shall have to supply a pound to 1½ pound of protein with the bran, which will call for seven to 10 pounds, an expense of seven to 10 cents a day. Other protein foods may be substituted for a portion of the ration, when economy in cost warrants it. In other words, digestible protein wherever found, if palatable, will have about an equal value for milk production. H. E. C.

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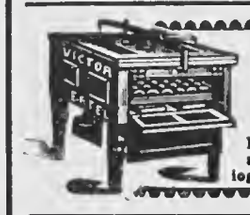

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THE WINTER CALF.

I have seen many a Winter calf which at once excited my sympathy. Tied by a short rope to a post on the barn floor, or more commonly in one corner of it, under foot a mass of nasty straw, there it stands, shivering in the breeze which comes through the cracks in the siding; back humped up, tail hugged down, utter wretchedness depicted in every feature. Twice daily it is given a mess of milk which is usually either too hot or too cold, and in quantity either too much or not enough. Surely that calf will be glad to see Spring come—for it rarely dies after all. What a delight to be free, to kick up its heels in the warm air, and to nip the tender blades of grass; that is, what few there are between the burdocks and Mayweeds with which the average calf pasture is thickly strewn.

The Winter calf needs a box stall, or a place where he may be allowed his liberty, and room to turn around and kick up his heels and play. It should be warm and dry. Building paper will make a stable warm very cheaply. Straw is plentiful this year, so let that calf pen be well littered, and cleaned out frequently. Did you ever notice how the little things play and kick up when you put in fresh bedding for them? They enjoy it, and tell you as plainly as they can how thankful they are for it. A pig will do the same thing. Just carry in a forkful of nice, clean straw, and see what a lot of monkey shines they will cut up!

The young calf needs to be fed carefully, or it will not be thrifty. Overfeeding with milk will ruin it as quickly as underfeeding. The milk should be always of the proper temperature, not so hot as to burn the mouth when the eager little fellow dips his nose into it. In quantity no rule can be laid down, but it is better to err on the side of too little than too much during the first few weeks. A successful feeder has said that he keeps watch of the calf's sides as it drinks, and when they are just flush with the hip the milk is withheld. Overfeeding causes indigestion, and this more easily with some calves than with others. The dainty little Jersey cannot stand the ration which would be none too much for the sturdy Durham. If the bowels become loose it is an indication of too liberal a milk ration. Cut this down and give three raw eggs twice a day. These are strengthening and healing to the inflamed bowels, and are cheaper than drugs, besides being always at hand. We have cured scours in calves with eggs when disease had resisted every other known remedy. Just break the shell, hold up the calf's head and down it goes. They soon learn to like it.

When the calf is two weeks old it will begin to eat hay, and a little should be placed within reach. Turn it over every day, so the fresh spears will be outside, or give it to an older animal and put fresh in its place. After a few weeks finely-cut corn fodder will be eaten to quite an extent. Our calves had no hay last Winter. They seem to like the cut feed, and it is far cheaper and more plentiful than hay. In feeding calves we find a little grain beneficial. Bran comes into use here, as the best we can give. Formerly it was fed in the milk, but now we feed it dry, and prefer the latter method. The milk is fed first in the morning; then we go around with a bushel basket of the cut fodder, and give them their ration of this for the day. The pails from which the milk is drank are cleaned out by this time, and a handful of bran and ground oats is dropped into each. They get no grain at night. This ration varies with the age of the calf, but it is measured out only by the hand. We aim to get big paunches on our heifer calves, and encourage them to eat all the roughage possible.

Under the conditions named, warm, dry quarters, sunshine when possible, just enough milk at the right temperature, hay or cut corn fodder to pick at, and a little bran or ground oats, you may have a better calf out of the one dropped in Fall or Winter than the one dropped in Spring or Summer. In raising calves the same as with any young stock, the point is to furnish enough suitable food to keep them growing thriftily. In addition to this they must be kept warm and dry. Damp, foul stables are a menace to the health of any animal, but most of all to those which are young. W. C. R.

Michigan.

Acorns as Food for Pigs.

A man in Connecticut wishes to know about feeding acorns to pigs. He has been told that too many acorns will injure his hogs, and that this food will make pork soft and oily. At Tuskegee Institute, Alabama, a large number of pigs were fed on acorns, and with success. In reporting on this feeding in the first bulletin from the Institute, Prof. Carver says that it is desirable to give some laxative along with the acorns, as they have a very constipating effect, and so injure the pigs where fed in large quantity. Roots or any green feed will act as a laxative. They also found that acorns produced a soft, spongy flesh, with an oily-like lard, that hardened with great difficulty, and frequently not at all. This, however, was readily overcome by feeding corn for two or three weeks before butchering, which resulted in the hardening of the flesh. Many people in the South, it is said, sell pigs that have been largely fed on acorns, and that are not finished off on corn. The policy, however, is not a good one. C. S. PLUMB.

Breeding Hornless Cattle.

Prof. C. S. Plumb some time ago criticised my statement in regard to crossing cattle with a little Polled Angus blood, and said that he could see no possible benefit to come from such breeding. I would like to ask him whether he thinks there is no advantage in having the horns bred off? I failed to specify this in particular, and also that I added possibly hardihood. These benefits *only* I claim. J. L. B.

Falls, W. Va.

I do consider it an advantage to have hornless cattle. This has been so fully demonstrated in western feed lots that now large numbers of cattle come into Chicago market from which the horns have been removed at some time, or from which they have been bred off in this or some other generation. Such hornless cattle inflict much less injury on their mates than do horned ones, and a larger number may be fed together, than of horned stock. It is not necessary to use a hornless male to secure hornless cattle, because the horns on young calves can be easily destroyed by applying a little caustic potash to them when in the immature stage. To be sure a mulley bull will accomplish the result just as well and with less trouble. In this respect the use of an Angus bull might be justifiable.

My original discussion in THE R. N.-Y. was on the crossing of Short-horns and Aberdeen Angus, using the latter for the sire. These two breeds represent our very best beef types. The average Angus is perhaps more hardy than the average Short-horn, but it will not be difficult to secure plenty of Short-horns equally hardy with the Angus. I still adhere to my original proposition, that it is not desirable to cross these breeds as breeds. If one wish the mulley type, and of a hardy class, then select the straight Angus, or a mulley Short-horn. And if one is to keep only grade Short-horns, then I should advise the use of a hornless, purebred Short-horn bull, with a rib, skin and heart-girth that would guarantee a hardy constitution. Such a bull would produce no violent cross, should improve the type, and give more uniform offspring than the direct cross. C. S. PLUMB.

Bumble Foot on Fowls.

What is the disease that has got into my flock of chickens? The foot swells badly on the bottom. In the center of this swelling is a round hard scab. When I take this off and probe the sore a great amount of thick blood comes out. The same thing comes on the joints, but I cut these right off and they got well. Is it a bad case of scaly legs? What can I do to cure it? J. M'L.

Romeo, Mich.

The trouble with these chickens is surely bumble foot, although it seldom affects but a few in a flock, and I think comes from bruised feet. The only cure is to open and wash out with some antiseptic. J. E. S.

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And everywhere that Mary went
The birdie went along.

She did not keep it in a cage,
There was no need of that;
The birdie couldn't fly a
'Twas fastened on her
—Chicago Re Herald.

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"WHAT was poor Jerk 's malady?" "Oh! Heart troubl d a complication of doctors!"—Pu

THE CHEMIST: "What is terrible complaint that is causi u to lose your hair in handfuls?" e Patient: "My wife, sir."—Pick-M .

CASTLETON: "Do you know, that baby of yours never noticed me at all?" "No. It always takes some bright object to attract its attention."—Brooklyn Life.

BILL: "I see Illinois is organizing a $50,000,000 plow trust." Jill: "I thought this trust business would be run into the ground after a while."—Yonkers Statesman.

BING: "Yes, that's Spriggins. Half-a-dozen doctors have given him up at various times during his life." Wing: "What was the trouble with him?" Bing: "He wouldn't pay his bills."—Tit-Bits.

CALDWELL: "What is 'food for thought?' Kidder: "Some of the hash we have at our boarding house. It keeps you thinking about its ingredients for hours after you eat it."—Philadelphia Record.

"WHAT does the word pedigree mean, John?" "It means descent." "Write a sentence on the blackboard containing that word." And John went up and wrote: "We pedigreed down the hill."—Boston Herald.

HOBSON: "Wonder why it is that my wife always turns around to look at Mrs. Preener after she has passed?" Dimmick: "I suppose it is because everybody says Mrs. Preener puts every dollar she can get on her back."—Boston Transcript.

"ALL those stories the papers are printing about you are lies," said the politician's friend. "Why don't you make them stop it?" "I would," replied the politician, "but I'm afraid they'd begin printing the truth then."—Philadelphia Press.

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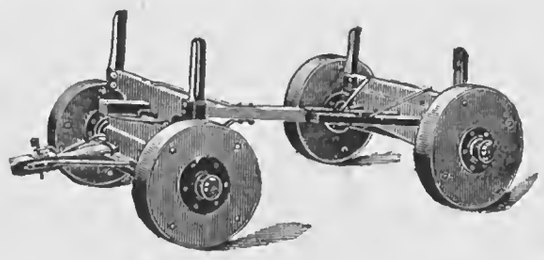
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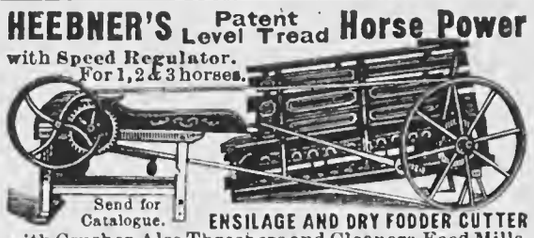
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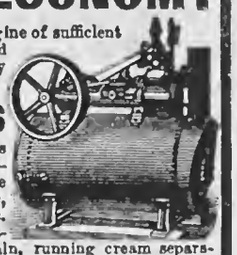
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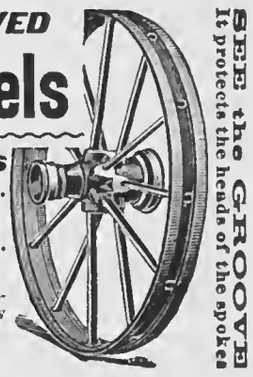
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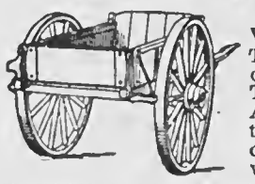
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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2699. NEW YORK, OCTOBER 19, 1901. $1 PER YEAR

WORKING THE WIND DOWN HILL.

HARD JOB AT LIFTING WATER.

Is an Engine Necessary?

We have the following question from a reader in Pennsylvania:

A large spring is located near the foot of a steep hill. Wind is not available near the spring, but is at the top of the hill. From the spring to a point where the windmill would stand is 200 feet of about 100 feet rise. The hillside is nearly straight, ascending at an angle of about 45 degrees. Is it feasible to locate a windmill at the top of this hill, and pump the water to a soil reservoir near it? If so, what form of pump should be used, how large a pipe, and what gearing should be used on the mill?

Oscillating Rods on Pump.

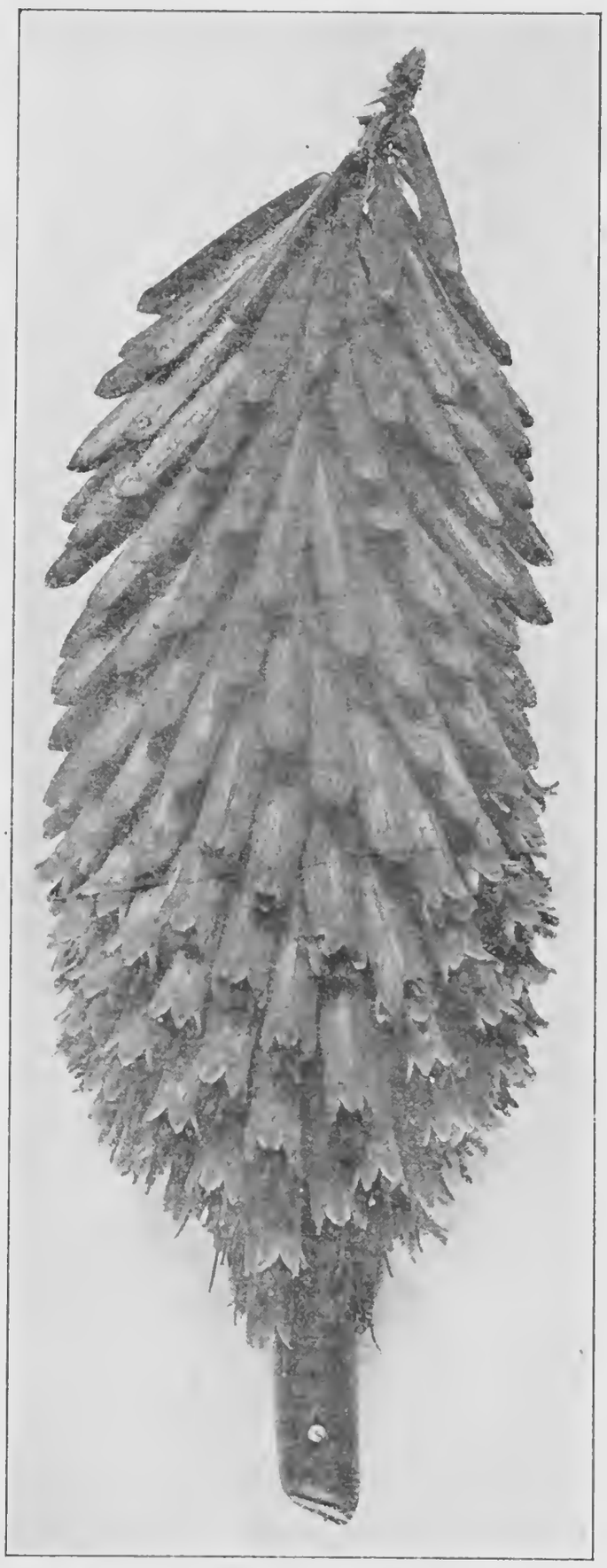
It is entirely feasible to locate a windmill on top of a hill, and by appropriate attachments operate a pump at the spring at the base of the hill 200 or more feet away. Probably the best means of transmitting the power from the windmill to the pump will be the device generally known as the oscillating rods, see Fig. 318. The actuating rod of the pump is connected with the horizontal arm of a T, to the two ends of which wires are attached. These wires extend from the tower to near the pump, where they are connected to similar arms on another T, the horizontal arm of which is connected with the pump. Thus the motion of the actuating rods on the mill is communicated to the piston of the pump; the wires pulling alternately on the upper and lower arms on the Ts. A pump to be suitable for forcing water to a height of 100 feet must be strong and well-made. It would seem wise to submit a statement of the work to be done to the makers of the windmill that it is expected to use, and they will be able to recommend the style and size of pump, the size of pipe, and the connecting apparatus that will be best suited to accomplish the work required. The writer of this has frequently seen power transmitted to longer distances than that mentioned by our correspondent, but he has not observed a case where the water was raised to the same height and is therefore not prepared to state upon his own experience and observation just the style of pump best suited for this work. J. L. STONE.

An Engine at the Spring.

The only way to accomplish this is to force the water from the spring into the reservoir on the top of the hill by some mechanical arrangement that will be easy, simple, effective, and always ready for work. As a matter of economy the source of the force must be near the work, so that waste of power is avoided. The force, too, must be always under control. The windmill suggested would evidently not fill the requirements, for the power must drive, it cannot under the circumstances draw the water, taking advantage of the air pressure, and it would make it necessary to convey the power by some means from the hill to the spring, and then make it work there. Now it will be evident that there will be a loss of power and an increase of expense in thus doubling the work. It follows then that the force must be applied where it will do the most good, and this is at the spring. The question then is, what will be the best means of getting this force? I think there will nothing better be found for this work than a small gasoline engine, set up in a sufficient shed at the spring and a force pump attached, with whatever pipes may be required to carry the water where it is wanted. As the elevated ground will be a good place for the cistern it should be placed there, and the water may then be distributed by gravity wherever it is needed. The required engine I find is described in the business columns, to which reference may be made. It might be suggested that as the capacity of the spring is not mentioned, if it is not sufficient to keep the supply for the pump up to the requirements of the pipe, which should not be less than one inch in diameter—and 1½ would be better on account of less resistance to the flow by friction—it might be desirable to have a cistern at the spring to collect the water during the intervals of pumping, and thus economize the use of the engine. H. S.

He Finds Another Spring.

Some weeks after the first question was asked we received the following letter from the farmer who



KNIPHOFIA (TRITOMA) PFITZERII. FIG. 317.
See Ruralisms, Page 710.

asked it. This shows that it pays to investigate our home resources:

"I think that an arrangement could be worked by wires as is sometimes done, though it might cause some annoyance. Still another method would be to run the water farther down into the valley, where wind could be had and force it from there to the hilltop. However, I think I found a better solution than either, after sending the problem to you. There is another spring back in the center of the farm, but I was afraid it would not furnish water enough, it apparently being much smaller than the one referred to. Last year was an unprecedented drought in that region, so that it was a good time to examine it. There was only a little water running from it, and it is so conveniently located that it cannot well be spared where it is, for we can use almost any field for pasture, and still give the stock access to this spring. I took a shovel and pick and a pail one day and went up there. I took out the stone which had been laid around it, and dug out some of the mud and gravel which had accumulated in it. I then dipped it out and went on cleaning it out still more with the shovel. In about 10 minutes I dipped out 30 gallons more. I waited about five minutes and dipped out about 20 gallons, and in five minutes more I dipped out another 20 gallons. Of course there was nothing accurate about the amount, but it was near enough for practical purposes, and I concluded that even in that very dry time the spring would furnish more than 5,000 gallons a day. A fine stream ran in, but in the condition it was in most of it leached away below the surface. I knew that this spring was high enough to run to the buildings, but I was astonished when I came to test it with a level to find that it is at just about the same height that a reservoir would be on top of the hill, where I had thought of pumping the other spring. I never would have believed it without the level. The water is not so cold as that in the other spring, but is clear, pure and soft. It will only take about 800 feet more of piping than the other spring, and the ditching, rod for rod, will be much less expensive, with no need of a windmill or pump. There is considerable interest in prospecting for oil in that immediate vicinity now; much of the land is leased and several wells have been put down about four miles away, but I believe that I was as much delighted to find that spring in the condition that I did as I should have been to find an oil well on the premises. A lack of water has always been one of the great drawbacks of the place, but a little outlay will give all the advantages afforded by city water, and from a much better source than city water usually comes from. The worst trouble is to find money enough to do all these things that are needed."

A GOOD WORD FOR WINDMILLS.

Your correspondent, W. W. Stevens, page 675, advises farmers to use gasoline engines for power in grinding feed, cutting corn fodder, etc. The gasoline engine is a good and cheap power all right, but I have a windmill that is cheaper than gasoline, and quite as efficient in a *good* breeze. Mine is a 12-foot, galvanized steel mill, mounted on my barn. It is capable of grinding feed and cutting stalks at the same time. It is found that by taking advantage of the wind, when it is "on tap" that it will do all the work required by simply letting the mill swing into the wind. I should hesitate to put a gasoline engine in my barn or advise my neighbors to do so. The gasoline is too much like gunpowder; tolerably safe in careful hands, but dangerous to the careless. "A good servant, but a hard master."

I use a gasoline engine to supplement a windmill for pumping water from the Niagara River, for use at the barn and general purposes. This engine and mill are located near the river. The engine is used only occasionally, when the wind is weak or "contrary," and the reservoir is exhausted.. I am not advertising windmills of any kind or description, but when I have a good, willing servant, economical and safe, I think it well to say a good word for it. It is not necessary to mount the mill on the barn, it might preferably be on a steel tower contiguous to the barn, where the power is wanted. This power is not portable, of course, but my neighbors avail themselves of it for grinding grain. W. H. W.

Youngstown, N. Y.

R. N.-Y.—We know of gasoline engines which have been run in the barn with perfect safety.

A REVIEW OF "CHEMICALS AND CLOVER."

Is Stable Manure Absolutely Necessary?

I have been reading the pamphlets on "Chemicals and Clover" and "Fertilizer Farming," and would ask whether you still maintain the same positive position that you took at the time of writing those articles? I have somehow obtained the impression that you have modified your ideas as to the ability of chemicals to maintain fertility without barnyard manure. I have not been a subscriber to THE R. N.-Y. a year yet, so do not know what you may have published on this question during the eight or nine years past, but in the three or four other agricultural papers of which I am a pretty thorough and constant reader, and in the considerable number of different books—modern publications—by prominent agricultural writers, which I have bought and read, I do not find this plan of depending upon chemicals alone advocated. But I do notice the advocacy of the keeping of stock to increase the fertility of the land by almost all our leading writers to-day. This matter interests us very much, because we own large areas of naturally good land which are too far removed from our barns and stock to think of carrying stable manure to them—much better land in fact than on the home farm, and we would be glad to see some of it cultivated. We do not feel it practicable to put up barns one, two and three miles from home just to make manure for those lands. This year we have put in a number of acres of corn on one of these isolated tracts, and used simply acid phosphate and murlate of potash; also potatoes with chemicals along. All the crops are looking fine—all on land which has for the most part been used for pasturage and probably not plowed in the past 15 or 20 years. Our programme is to sow rye or wheat this Fall on all this ground, stock with clover in Spring, and cut rye or wheat for hay or soiling, the same as we have done this year on last year's corn ground, but the question in our mind is, can we keep this thing up and maintain the productiveness of the land or improve it? We don't find encouragement that we can do so for long, from the many writers in the agricultural press of to-day. If the plan set forth by you in 1892 was correct, why has it not been tested and proven so by our many experiment stations, and advocated by them also? A. G. T.

Willimantic, Conn.

We feel just as confident as ever that the plan of farming outlined in "Chemicals and Clover" is practical. Since the original articles were printed we have had considerable experience with Crimson clover and cow peas—two crops specially useful in connection with chemical farming. We have also come to realize the great necessity of utilizing the feeding value of the cornstalks by means of the silo, or the dry stalk shredder. This will mean more live stock than was contemplated in the original plan.

For the benefit of newer readers let us briefly review "Chemicals and Clover." The farm described was that of D. C. Lewis, at Cranbury, N. J. It was, and is now, conducted on a five-year rotation. The sod is plowed for corn, the season's accumulation of manure being spread on the sod before plowing. Under the old system the corn land lay bare through the Winter, and in the Spring was plowed and planted to potatoes with a heavy application of a complete potato fertilizer. Now Crimson clover is sown at the last cultivation of the corn. This gives Fall pasture and may be plowed under for potatoes. Early varieties of potatoes are grown, and they are dug in time to seed the ground to wheat with Timothy grass—Red clover seed being added in the Spring. Frequently more fertilizer was used on the wheat. The grass following the wheat is cut twice, and then plowed for corn, thus bringing the rotation around in five years. The keynote of this rotation was the crowding of all the manure upon the corn, and all or nearly all the fertilizer upon the potatoes—the wheat and grass being expected to grow upon what was left in the soil by those two most important crops. This rotation was highly successful, and results clearly demonstrated the fact that a high-grade fertilizer in connection with the roots and stubble of grain and grass will make a complete substitute for stable manure. There are plenty of cases where little manure is available, and yet year after year good crops are grown.

But does not Mr. Lewis now keep more live stock and thus use more manure on his farm?

Yes, he has six or eight more cows now than when the "Chemicals and Clover" articles were first written.

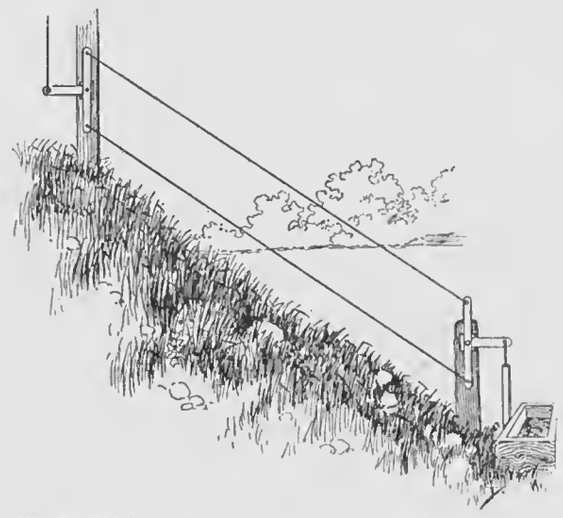
Does not this prove then that the chemicals were found wanting—that stable manure was necessary after all?

No, because Mr. Lewis did not increase his herd of cows for the sake of the extra manure, but because he felt that it was good business to save the feeding value of the cornstalks. When we first wrote about the farm these stalks were regarded as more or less of a nuisance. Some were fed whole, and many were thrown into the barnyard to be trampled down by the stock. The wheat, the corn, the hay and the potatoes were all salable at fair prices, but the stalks were not a cash product. The cows were kept to give value to the stalks, because it was found that in farming, as well as in every other business, success means making the cash sales as large as possible. When the stalks were put in a silo or run through a shredder when dry, they formed the roughage for a cow's ration and with bran and cotton-seed meal added, made milk for the creamery. We have described this change in the disposal of the stalks as it came about, and this has led some readers to say that the theory of "Chemicals and Clover" has broken down in practice. That this is a mistake may readily be seen when we reflect that the only addition to the manure supply is the grain now bought for the cows. The cornstalks and wheat straw are now cut fine and fed, while formerly they were mostly used for bedding, or tramped into the mud. This will make it clear that it is not because the chemicals failed that the extra cows are kept. Hay and grain can usually be sold for a fair price, and it is often good policy not to try to feed them out at home. The selling price of cornstalks rarely equals their feeding value, and where corn is necessary in a rotation it will usually pay well to cut or shred them for feeding. We regard shredded stalks as nearly equal in feeding value to Timothy hay, yet, if they could be sold for half the price of the hay we do not believe that Mr. Lewis would ever have built his silo.

The plan you mention of growing crops on fields so far from the barn that manure cannot profitably be hauled to them is, in our opinion, a reasonable one. It is the plan we are following on the back fields of our own farm. Reasons for believing that these fields may be maintained with chemicals and green crops will be given next week.

A CHAT ABOUT COVER CROPS.

This orchard cover crop business interests me immensely. It is of greater importance to the fruit tree than is realized by the fruit grower. We have much to learn. We cannot generalize on this subject as much as on many others. A cover crop good for apples may not suit pears, and may be away off for peaches. A cover suitable for sandy soil may not catch well on clay. Some plants are shade-enduring, while others in deep shade give up the struggle and the ghost without a kick. One thing is clear to my mind, the orchardist who neglects cover crops is losing money, either through unfavorable soil conditions engendered, and weak tree conditions induced, or, on the other hand, in the purchase of barnyard fertilizers which are imperative under the system which does not employ them. To my mind again, the introduction of green manures into the orchard is bound to bring about a change of ideals respecting distances of setting the trees. In a recent trip through western New York, the two best orchards, bearing the best apples seen this Autumn, were standing, so that at 40 years of age one could drive comfortably between the rows, without dodging to avoid switchings or scratches. One was 60 feet apart, the other 50, both Baldwins. No cover crop with which I am acquainted succeeds in dense shade—well, I ought to except chickweed, and I am not sure but it is a friend of the fruit grower. It grows late into Autumn and begins business early in Spring, but like "pusley," it is mostly water.



WORKING A PUMP WITH A WIRE. FIG. 318.
See First Page.

Regarding the relative merits of the various plants suitable for cover-crop purposes, I do not feel competent to express definite opinions. Cow peas usually do better the second year than the first. Often the first year's cover is uneven. Perhaps the soil lacks the particular microbe necessary to their full development. Certainly the cow pea is one of the surest crops for midsummer sowing. I have seen many fields during the past two weeks, which were sown with cow peas in July or early August, now covered with a dense mat of vegetation at least a foot thick. Last night's frost left the Cornell plots shivering under bare stalks. The leaves drop, and are mostly collected by the stems, to be sure, but some loss of vegetable matter will undoubtedly occur before plowing time next Spring. The cow pea is an excellent plant to begin the work of soil regeneration with. Its germination is reasonably certain and growth rapid, but it does not love shade, and it is not partial to heavy clay. With the ground in a good state of tilth, which implies the presence of humus in reasonable quantities, I believe other cover crops may be used with greater advantage. Hairy vetch does not make much of a showing at first—it may even be quite obscured by weeds—but when the frost cuts the interlopers the vetch looms up and sticks to the business of growing right along whenever a favorable opportunity occurs. It has done better this year on sandy loam than on stiff clay.

By far the most striking orchard cover I have seen this year was secured by sowing Alfalfa on heavy sandy loam the first week in August at the rate of 22 pounds per acre. This was in the western part of Monroe County. Growth was exceedingly uniform and the plants averaged a foot in height. The growth was weak beneath the trees, but the plants were there in great numbers. The ground is to be "ganged" early next Spring so that no trouble will be experienced in clearing the ground. Good catches of Crimson and Mammoth clover were noted in orchards in several places. Some enterprising man should set to work and grow a lot of vetch seed. It is now scarce and high-priced. When a fruit grower obtains a start with this plant, he can easily grow his own seed by maturing and harvesting a part of his cover crop each year. Finally, it is true economy in sowing cover crops to be generous in the amount of seed sown rather than niggardly. JOHN CRAIG.

Cornell University.

EXPERIENCE WITH MELON DISEASE.

I note with interest the article on fighting Melon blight on page 611, and I am prompted to tell my story, for we grow a melon or two here—or try to. Last year our Rocky Fords were strictly No. 1. We could warrant almost every melon, and we sold at a good price all we had. The seed was good, from Colorado, and the stock true. We also grew Emerald Gem and Miller's Cream, but being red-fleshed melons they were grown some distance away from the green-fleshed Rocky Ford. Brown spot first appeared in the Millers just as they were coming into ripening, and, of course, "fixed" them. Most of the Rocky Fords had already been picked and sold, but a second planting was just coming on. The blight spread from the Miller to all the rest. Now these first Rocky Fords were far and away the finest melons we had had in some years, and seed was saved from specimens of *perfect* quality and type for the next season's use. We and our friends eat a great many melons right here at home, and the refuse goes—or did last year—into our compost or manure heap. In this way hundreds of bad melons, Miller's Gem and Rocky Ford, went into that compost.

When this season opened various people began to ask if we were going to grow melons this year. We thought we saw a "snap," and laid out for some thousands of them. We prefer a good compost for melon growing; a big shovelful in a shallow hole a yard across, and thoroughly worked into the soil with a fork and covered up. That compost of last season was the melon manure for this season. Is there any connection? The seed was planted, and came up every one, and as they grew were carefully cared for, but from the start they were an obstinate lot. On good melon soil they ought to have thriven—but they didn't. When quite small the plants developed a curious yellowish edging on the leaf, sometimes occupying one-third of the leaf, and the leaf had a harsh, stiff look and feel. Dry and hot June might be accountable for a part of this, but it did no better when rain came July 3. Downy mildew kept working at them, and a thorough spraying with 1-to-12 Bordeaux seemed to check that, but still that harsh, yellow, unthrifty look. Some of them were given a good dose of fertilizer high in nitrogen (on part clear nitrate of soda), but it did not help materially. They grew, mostly covered the ground, set melons, and we picked them—some of them—but not an eatable melon in the whole batch. August 20 brown spot, or Alternaria as I suppose, appeared, and August 24 saw the whole lot a brown blasted mess. There were four kinds of melons in the field—Norfolk Button, Shipper's Delight, Rocky Ford (our own seed), and a few Emerald Gem (our own seed). The Gems were the best in quality (?), the rest—squashes. Most of them are on the lot yet.

Now then! Did the blighted melons last year in the compost have anything to do with the unsatisfactory growth this year? A watermelon patch touching them on one corner—and by the way, watermelons have usually blighted with us badly and early—planted on manure from another pile, and free from all bad melons, is a shining success, and on September 20 was green and thrifty. Summer squash, 200 hills, and about 500 hills Hubbard and Faxon, planted on that same old compost were a flat failure—behaving just like the melons—the only failure we ever had with Summer squash. Spraying did them no good whatever. This year we were just a little careful where the waste muskmelons went to—they are *not* in the compost heap. There hasn't been a really good muskmelon grown in this section this year to my knowledge, and many are still on the ground. Did the growers "inoculate" their manure as I did?

Milford, Conn. GARDENSIDE.

HOW TO MAKE A FUMIGATION HOUSE

So as to Distribute the Gas.

PART I.

In THE R. N.-Y. for January 6 and February 3, 1900, appeared two excellent articles by Prof. W. G. Johnson concerning the use of hydrocyanic acid gas for the fumigation of nursery stock in fumigation houses, and for use in the greenhouse. These articles clearly show the value of such fumigation, and the reader is referred to them concerning the details of the operation. The fact that a certain strength of gas (25-100 gram per cubic foot) will kill the San José scale upon nursery stock in the fumigatorium, rests upon the observation of various entomologists that at that strength it will kill practically all the scales on an orchard tree fumigated with that strength under a tent. In the fumigation of greenhouses it has frequently been observed by various parties that plants here and there are more injured by the gas than others of the same kind and character, and it has been supposed to be due to the "banking" of the gas in certain places, caused by the slow and incomplete diffusion of the gas. This has never to my knowledge been definitely demonstrated to occur in greenhouses, but it seems a plausible explanation of the different amount of injury in different parts of a house. If such a lack of diffusion occur in a greenhouse it would lead one to question whether complete diffusion of the gas is ordinarily secured in a fumigation house when packed full of trees. During the past year the chemist of this station, C. L. Penny, and I have made some experiments upon this matter which throw some light upon the manner in which the gas diffuses, and the necessity for more care in the construction and management of fumigation houses.

A large room approximately 20x20x11 feet was fumigated with 25-100 gram potassium cyanide per cubic foot, and after allowing the gas to remain for different lengths of time, samples were drawn off from various parts of the room. The position of the vessel in which the gas was generated was also changed to show the difference of diffusion caused by its position. Three samples of the gas were drawn off at once, one from the ceiling of the room and two from points on the floor. Without going into detail concerning the procedure and results, the experiments showed the following facts: If the generator were placed in one corner of the room it required from 30 to 60 minutes for the gas to become thoroughly diffused throughout the room. After 20 minutes a sample taken next to the generator contained but 27 per cent of the normal amount of gas, whereas a sample taken one foot below the ceiling at the center of the room contained 87 per cent, and one taken on the floor at the corner opposite the generator 94 per cent. At 30 minutes the amount of gas at the last two points was about the same, but near the generator was found 51 per cent of the normal, or nearly double that at 20 minutes. As the gas is generated it is seen to rise to the ceiling, and pass toward the opposite corner of the room, and the analyses show that this is the course of its diffusion, for 10 minutes after the gas was generated the amount next to the generator was a mere trace, less than one per cent. When the generator was moved to the center of the floor, the intakes remaining at the same places, after 10 minutes there was found 75 and 88 per cent in the two corners and 123 per cent in the center of the ceiling, which is in general agreement with what was found before, the greater part of the acid vapor rising to the ceiling. At this rate with the generator in the center of the room, the gas would probably become completely diffused in from 20 to 30 minutes. With the generator placed in the corner, and taking samples from the middle of the room after 20 minutes, one sample from the floor, one midway to the ceiling, and one at the ceiling, it was found that practically the same amount of gas occurred at the ceiling and the middle point, but only about one-third as much at the floor.

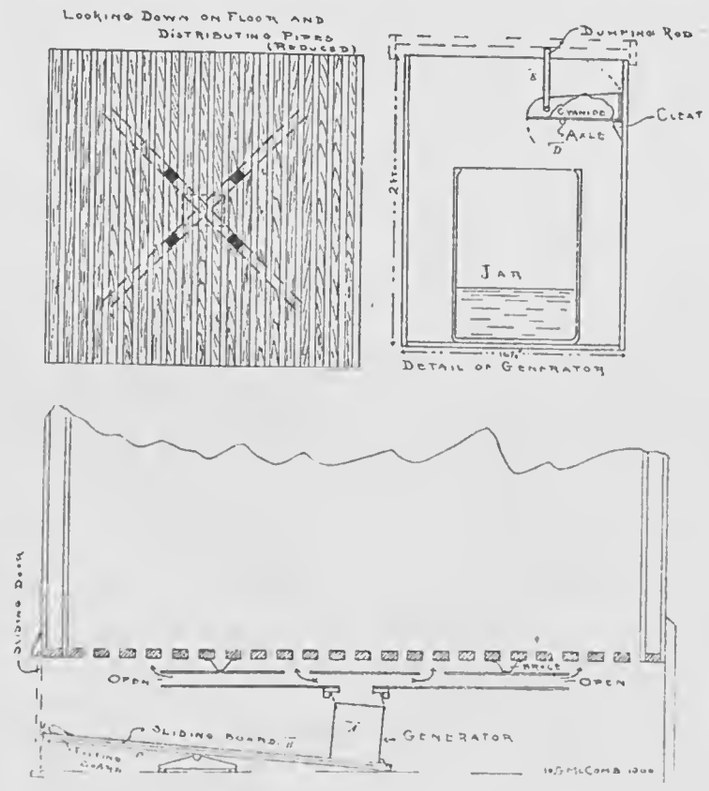
These facts seemed to indicate that some method whereby the gas might be set free from several points would greatly aid in its ready and complete diffusion. To accomplish this a tin hood with a pipe leading from either side was placed over the generator. The generator was placed two feet from the middle of the south wall, and the tubes reached three-fifths of the length of that side of the room. The tube was open at each end and was punctured by two holes equidistant from the ends and each other, thus giving four apertures for the escape of the gas, at equal distances along one side of the room. With this arrangement the gas was perfectly diffused in 10 minutes—possibly sooner than that, for that was the soonest samples were taken. The more perfect diffusion with such a distributing apparatus was strikingly shown by the difference in the effect of the gas upon guinea pigs. With the generator placed in the southeast corner a guinea was placed on the floor about the middle of the east wall. The animal did not die until 37 minutes after the generation of the gas, which showed very clearly the imperfect diffusion of the gas. When the generator was placed at one side of the room and covered with the hood and distributing tube as described above, a guinea pig was placed in a cage in the northeast corner of the room, and about seven feet above the floor. This animal commenced to feel the gas about two minutes after the generation and died 15 or 20 seconds later. At the same time a guinea pig and a rabbit were placed near the middle of the east wall (the generator being at the middle of the south wall). The guinea pig lay on its side for five minutes and was dead 10 minutes after generation, while the rabbit was unconscious in 30 seconds and died four minutes later—the difference in time being due to the physiology of the animals.

Delaware Exp. Station. E. DWIGHT SANDERSON.

BUGS AND BLIGHT ON LONG ISLAND.

F. A. Sirrine, entomologist at the Jamaica, L. I., branch of the New York State Experiment Station, recently gave a R. N.-Y. representative the following facts from his observation of insects and plant diseases during the present season:

ASPARAGUS CONDITIONS.—The rust has not been so bad as usual this year on the cutting fields. It started in new-set beds in June, and in most cases it has continued, but on the cutting beds conditions were such that it did not get started, and they remained green until the latter half of September. This is probably due to the excessive rains just after



APPARATUS FOR FUMIGATING WITH HYDROCYANIC ACID GAS. FIG. 319.

the cutting season, which prevented the spores of this disease from getting a hold on the foliage of these beds. Damp and foggy weather are favorable for the spread of rust, but by its mechanical effect heavy rain washes off the spores. The old, exhausted beds are not going to recover very much, but seedling and newly-set beds that escaped the rust last Spring are making a vigorous growth. The fields at Mattituck in which for two seasons alternate rows were sprayed and left unsprayed show a slight difference in the foliage. The yield on the sprayed rows was double that on the unsprayed, although the product of the whole field was less than formerly, on account of the decrease in the unsprayed rows. A farmer near Mattituck, by careful cultivation and spraying for two years in succession with resin Bordeaux Mixture, harvested the present year from one acre 2,000 bunches, bringing him about $450 in excess of cost of fertilizer. Nearly all asparagus growers on the Island who spray use the resin Bordeaux.

CABBAGE WORMS have not thus far done so much damage as usual in the cauliflower section. They appeared in the latter part of August, and quite a number have been spraying with arsenicals, most of them using the dry-powder gun. I have noticed that in a section where Cabbage worms are so thick that the growers lose nearly all their late cabbage, this section may be comparatively free the next year, while on the margins and in adjoining districts the worms are very destructive. This is because where the worms are thickest the parasite enemies are most numerous, and the scattered worms on the margins are those that escape and produce next year's crop. The Fall web-worm has done considerable damage at the western end of the Island this year, but the parasites are active, and the English sparrow is also getting after them rapidly as they leave the webs. These sparrows are great consumers of the Pea louse.

CAULIFLOWER ROT BLIGHT.—We have not succeeded in finding any effective treatment for this troublesome disease. It shows first on the edges of the leaves in a papery appearance, especially around holes that have been bitten by worms. It works from the leaves to the shank, after which it spreads upward into the center of the head, and frequently is not seen until the head is cut open and the black spots are found inside. This is a bacterial germ, and the treatments we have tried have been spraying, and picking and destroying the diseased leaves.

MELON BLIGHT.—I heard the other day from Holmes Bros., of Ypsilanti, Mich. They sprayed their plants this year before transplanting, and continued to spray every week after transplanting. They have had but little blight, and report that even the last settings of melons are maturing properly. The muskmelon crop on Long Island was an entire failure on account of blight. From the study of the disease in this section I am convinced that the so-called Alternaria is not the cause of the blight here, but a secondary disease which occurs on leaves which have become weakened from other causes. The destructive disease which cuts the plants down so rapidly is the Downy mildew of the cucumber. Spraying with Bordeaux Mixture is the only means of prevention that we know of.

SAN JOSE SCALE.—We have made numerous experiments in spraying with crude petroleum, but the results have not been generally satisfactory. In one test of crude oil on pear trees sprayed in April before the buds showed signs of swelling, both fruit and leaf buds were killed, and the trees had to develop latent buds. This was true where both the 25 and 50 per cent mechanical mixture of oil and water were used. In case of the 25-per-cent application a few flower and leaf buds survived the treatment. We find it difficult to hit all of the scale, particularly under the edges of the buds. A peach tree sprayed with a 25-per-cent mixture in December was killed outright, while another sprayed in the same manner in April was not hurt. Probably the reason for this is the fact that, when the tree is dormant in Winter, the wood absorbs the oil, while, when the sap is flowing freely in Spring, the wood is resistant to the oil.

CO-OPERATIVE LAUNDRIES FOR FARMERS.

In many ways customs and conditions pertaining to the farm home have revolutionized the past quarter of a century. Important changes for the better have been made along many lines. As regards the household wash, however, but small progress has obtained. About the same unpleasant conditions prevail as did 30 years ago. True, nearly every home has numerous machines of various designs intended for affording help, but in the main, they are all discarded and the bulk of this important work is done in the old disagreeable way.

Is any remedy possible? We think so in many instances. Many rural districts have coöperative creameries. These with their power and conveniences do, on a grand scale, a work that was very disagreeable to do, on the individual farm. So done, such work is exalted, dignified as a business enterprise, and ceases to be disagreeable. Why not add a laundry department and apply business principles to raise another important work from the drudgery it now entails? The creamery and laundry plants possess many essentials in common, viz.,—steam power, water supply, drainage and a system of collection and distribution of product. Provide each creamery wagon with an elevated (omnibus) deck, for the long, narrow, deep, household laundry baskets, and but little extra expense will ensue for distribution. That every creamery add a laundry department is not essential. Where a township or neighborhood has several, a laundry at one, centrally located, will probably suffice. The neighboring ones can act as distributing stations for the laundry output to advantage. For obvious reasons it may be well that as many of the patrons of the laundry as possible own stock in it. An important aim is to do enough business at each laundry established to reduce cost of work to the minimum. The solution of this question will aid materially in solving another serious problem that pertains to rural households, viz.,—the hired girl question (the city servant girl is the "hired girl" in the country). By eliminating laundry work from the household the equilibrium between supply and demand, regarding such help, will be restored in two ways. Many households that now require girl help can then dispense with it, and girls who now object to such service will have less cause for objection.

As to the practicability of such an undertaking as here outlined the future must determine. Personally, we are not familiar with the detail work of the steam laundry, basing our opinion wholly on the principle that work is more economically done with proper facilities, and on a large, rather than a small scale. That some attempt along these lines will be made in the near future we feel reasonably certain. No doubt, some localities are more favorably conditioned for starting such work than others. Success will depend largely upon the farmers themselves, their willingness to unite in coöperation and skill in organizing on a proper scale. FRED. J. FROST.

Portage Co., Wis.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Shredding Cornstalks.

F. C. C., Sandy Creek, Mc.—We have an acre of yellow corn. The fodder being valueless to us, as we keep but one horse, I am anxious to know whether it would pay to purchase a shredder to work these stalks up for the horse, and then market our hay. What proportion of the shredded corn could we feed? I think I could hire a gasoline engine. How long does it take to shred an acre?

ANS.—The shredders that really do effective work are quite expensive, and it would hardly pay to buy one for a single acre of corn. Some of the hand power machines split and crush the stalks, but the work is not by any means equal to that done by the large machines which run rapidly by strong power. Our stock eat all the lighter parts of the shredded stalk—leaving the pith and some of the tougher part of the butts. The length of time required to shred an acre of stalks will depend on the size of the corn and the way the stalks are dried. Well-dried stalks work through slower than the greener ones. We can handle 3,000 pounds an hour and not push the machine.

Storing Cabbage.

A. G. L., Auburn, Ind.—Will you inform me as to the proper way of storing or burying Holland variety of cabbage? I have quite an amount. Will the recent frosts we have had injure its keeping qualities?

ANS.—Our way is to cut the heads off the plants in the field, leaving no more leaves about the heads than if they were to be used or sold at once. They are then drawn and put into trenches made as follows: A sheltered place having very good drainage is selected. Trenches about three feet wide and one foot deep are made. Into these the cabbage heads are dumped about 15 inches deep. The earth is then plowed or thrown back upon them to the depth of eight or 10 inches. No straw or other covering is put on before the earth, as it causes rot. Should the cabbage freeze solidly it will not injure them, as the moist earth will draw the frost out nicely. Cabbage can be kept nicely in a cold cellar provided ventilation from below is given. If placed in bins with slatted bottoms about six inches from the floor they will often keep well, but are likely to dry out and weigh much less than when kept outside in contact with the moist earth. In some large cabbage-growing sections they lay the heads, cut from the stem as described, tops up, close together, one deep, and cover with straw or leaves. A well-sheltered piece of sod land is best for this method. A friend of mine uses a large compact orchard. The Holland or Danish cabbage will many times freeze solidly without damage. Freezing seems to improve the flavor. F. G. TICE.

Manure or Fertilizer for Strawberries.

L. R., Harwinton, Conn.—I wish to know how to handle a certain piece of land for strawberries. The land is a good deep soil which was plowed from turf last Summer; was given a fair coat of manure, but a large crop of corn was taken from it. I wish to set it to strawberries next Spring, but am afraid it is not rich enough. I shall not have any manure for it until Spring unless I buy it, and I wish to know which would be the better or cheaper, to buy manure at a fair price, or to use commercial fertilizers? Will any kind of manure do, whether made by hogs, hens, or the product of the barnyard? Would it pay me to sow rye now, to be plowed in in the Spring? When is the best time of the year to fertilize strawberries and raspberries, after being set?

ANS.—If we had that piece of ground we would plow it at once and sow rye. In the Spring we would plow the rye under early, and roll the ground after plowing. Then, with a light cultivator or harrow, keep the upper surface thoroughly fined until you are ready to plant. We would use a fertilizer—as heavily as we could afford. The fruit and vine mixtures made by the leading manufactures are good, or you can use a mixture made of one part (by weight) nitrate of soda, one part muriate of potash, one part fine bone and two parts dissolved rock. We would scatter this along the row before planting in a strip about 18 inches wide, and work it well into the soil. Then set your plants and keep them well cultivated. During the latter part of August use more of the same fertilizer, put about six inches from the rows, and well worked into the ground. We prefer chemical fertilizers for strawberries. So far as we know all forms of manure are suitable for growing the fruit, though horse manure is usually preferred. The fruit buds of the strawberry are formed during the late Summer and Fall, and the best time to use fertilizer is when the plants are set, and when the fruit buds are forming.

Short Course in Agriculture.

The Rhode Island Agricultural College at Kingston, R. I., will try an experiment this year in a short course of six weeks on "Farm Practice." The course will begin November 11, and end December 20. The following statement shows what the course will cover:

Soils and Fertilizers.—Origin, constituents and classification of soils; minerals and rocks of importance in agriculture; chemistry of manures; mixing, application, and use of agricultural chemicals; calculation of fertilizer formulas.

Soil Management.—Tillage, texture, moisture-content, humus, rotations, cover-crops.

Field Crops.—Management of representative farm crops.

Fruit Growing.—Location, site, planting, pruning, marketing.

Vegetable Gardening.—Market-gardening methods in field and under glass.

Live Stock.—Principles of feeding and breeding.

Agricultural Physics.—Weather, storms, frosts, atmospheric drainage. Mechanical laws applied to farm practice.

Drainage.—Principles of tile-drainage.

Plant Life—The plant and its environment; structure and functions of root, stem and leaf; reproduction; parasites. Laboratory work, including a microscopic study of injurious fungi.

Insect Life.—Types, transformations and habits of representative orchard and garden insects.

Woodwork.—Bench-work, joint-making; the use, care, and sharpening of tools.

Ironwork.—Forging, farm-blacksmithing, pipe-fitting.

Sanitary Science.—Heating, ventilation, plumbing, water supply, and sewage disposal.

Farm Business.—Farm accounts, letter-writing and general business methods.

Prof. F. W. Card will have charge of the instruction, which will be careful and thorough. We feel confident that any person of average intelligence will be able to understand fully what the college has to offer in this short course. It will occupy only six weeks in the early part of Winter and will be followed by a short course in poultry keeping. It is, of course, difficult to learn just what to try to teach during this short period. The college is trying to find out, and it seems to us that the course outlined above is an excellent one. We commend it to young men or old men who desire to know more about the "why" of agriculture.

The Cost of Clark Grass.

W. C. M., Grange, N. C.—Many R. N.-Y. readers, like myself, would be glad to know the financial side of Mr. Clark's grass experiment. That yield was wonderful, and an annual "cost" account would be most interesting. No doubt Mr. Clark keeps an itemized expense account, and would he not be obliging enough to furnish a condensed table of annual costs?

ANS.—Mr. Clark sends us the following figures, which, he says, is a statement of all the expense and income for seven acres of grass during 12 years. Part of the grass has been seeded for several years, but we understand that the $129 represents more or less work on all the land. As Mr. Clark uses 14 quarts each of Red-top and Timothy in seeding down, the 196 quarts of each seed represent the seeding of 14 acres. According to this it cost $9 to fit an acre as Mr. Clark wants it fitted. He used $1,314.50 worth of fertilizer in the 12 years, or $109.54 each year, or $15.75 per acre:

Labor intensely to cultivate the soil	$129.00
196 qts. Timothy seed	17.50
196 qts. recleaned Red-top	19.60
Sowing grass seed	14.00
3½ tons Fall dressing, $36 per ton	126.00
28½ tons Spring dressing, $41 per ton	1,168.50
Total cost of production	$1,474.60
Total product, 588 tons at $12 per ton	$7,056.00
Less total cost	1,474.60
Total profit in 12 years	$5,581.40

Mr. Clark figures the hay that he sold at $12 per ton, though he says that his average price has been $16. Referring to this year's total crop of hay Mr. Clark says: "I have previously given you the result of my first crop of hay, 1901, which was 79,490 pounds. I now have the second crop in the barn, which is 23,460 pounds. The total from the two crops this year from the seven acres is 102,950 pounds; an average of 14,721 pounds per acre. Certainly more than seven tons of well-dried hay per acre for the year. The total cut in 12 years from the seven-eighths-acre field is 96 tons 339 pounds. I could now get more hay by sowing new seed upon this section, but think that I shall continue another year or more to see how long Timothy and Red-top can be kept going with once seeding when each crop is fed with bone, potash and nitrate of soda."

Many a distressed sufferer from Lung or Throat trouble, who had lost hope under the false idea that his disease was incurable, has been restored to perfect health by Dr. D. Jayne's Expectorant.—*Adv.*

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When you weigh on a Jones 800-lb. Scale.
PRICE, $8.00. FULL PARTICULARS.
JONES (HE PAYS THE FREIGHT), BINGHAMTON, N. Y.

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stretches evenly, fits perfectly, lasts a lifetime. All styles; six heights. Sold everywhere. If your dealer hasn't it, write to
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See our Bulb Offer in last week's paper. Send list of wants for estimate. Price-list free. Buy of Furnas and get what you order. Horticultural advice free.
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Vegetable Plants
CABBAGE AND LETTUCE.
Leading Varieties. Cheap in large lots.
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Onion Sets!—No more of them. Sow my hardy White Onion. Pound, $3; ounce, 25 cents; package, 10 cents. Send for testimonials. BEAULIEU, Woodhaven, N. Y.

Seed Potatoes—Sir Walter Raleigh, Smith's Six Weeks. 30 kinds. Descriptive Cir. free. Smith Potato Farm, Manchester, N.Y.

GINSENG Buy Plants at Headquarters, and save 50 to 200 per cent.
Best Book of instructions published, 10 cents.
HARLAN P. KELSEY, Tremont Bldg., Boston
Farm in North Carolina Mts. Mention THE R. N.-Y.

Raspberry Plants $5 per 1,000. STRAWBERRY PLANTS, $3 per 1,000. Set plants this Fall; you may not have time next Spring.
A. B. KATKAMIER, Macedon, N. Y.

FREE Illustrated Catalogue of Choice Evergreens, Shrubs, Fruit and others Trees, Roses, Water Lilies, etc. Prices low. Beautify your home at small expense.
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450,000 TREES
200 varieties. Also Grapes, Small Fruits etc. Best rooted stock. Genuine, cheap. 2 sample currants mailed for 10c. Desc. price list free. LEWIS ROESCH, Fredonia, N. Y.

GRAVES New Early Yellow FREE STONE **PEACH**
Price list free. W. J. GRAVES, Originator, Perry, O.

Woodview Nurseries
guarantee safe arrival of trees. Get them now and plant them or heel them in, to plant in the Spring when you would otherwise be waiting for them. Buy now and get the best. Our prices work wonders. BOX 100, URIAH, PA.

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Grown in the famous Delaware fruit land. Free from disease; true to name. Fruit Trees, Berry Plants, Asparagus Roots. Try our prices on two-year Kieffer Pears. DOVER NURSERIES
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Fruit Book Free. Result of 76 years' experience.
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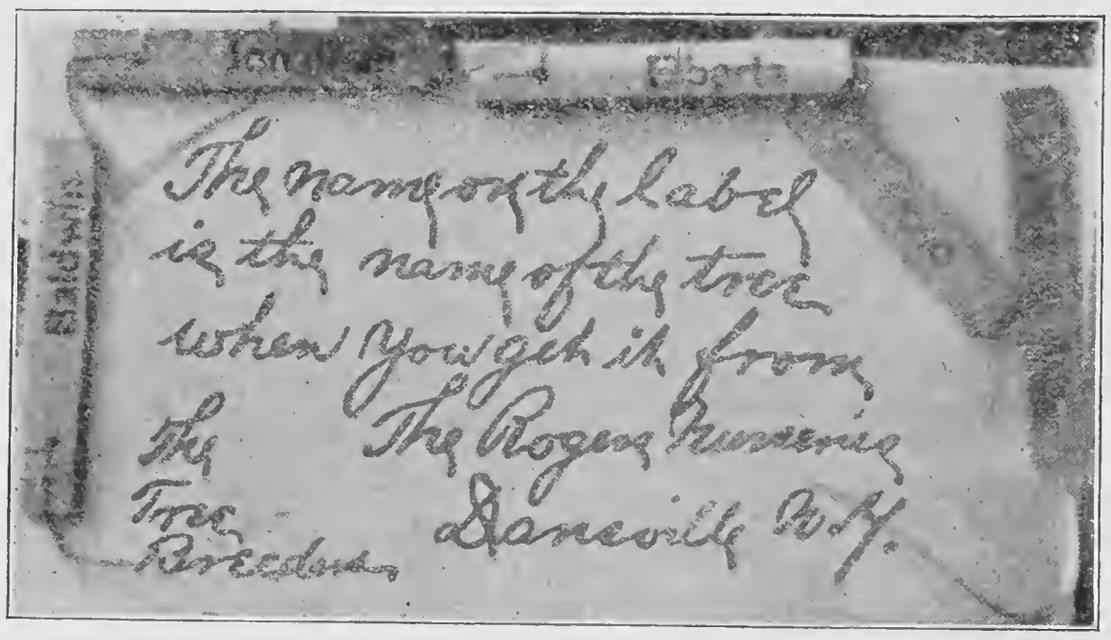
TREES Fruit and Ornamental Shrubs, Plants, Seeds.
Best by 18 years test. Try us. Direct deal will save you money. Catalog free. Satisfaction guaranteed.
STORRS & HARRISON CO., Painesville, Ohio.

OUR FRUIT TREES
Ornamental Trees, Vines and Plants
are grown on the banks of the Hudson River, where with favorable climatic conditions, a perfect season, rich soil and thorough cultivation, we have matured the finest and most complete list of stock ever grown in the Hudson Valley. Quality always our first aim; personal inspection invited. Fall planting gives best results. Our Summer and Autumn Catalogue free to all readers of THE R. N.-Y. Ask us for information you may need on horticultural matters, and you will have answer in next mail.
T. J. DWYER & SON,
Orange Co. Nurseries. Box 1, Cornwall, N. Y.

TREES $8 PER 100—APPLE, PEAR and PLUM, 3 to 5 feet high. HEALTHY and TRUE TO NAME. Best varieties. We sell all kinds of trees and plants at lowest Wholesale prices. Don't buy until you get our Catalogue, which is free, or send list of wants for special price. We Fumigate. Address RELIANCE NURSERY, Box 10, Geneva, N. Y.



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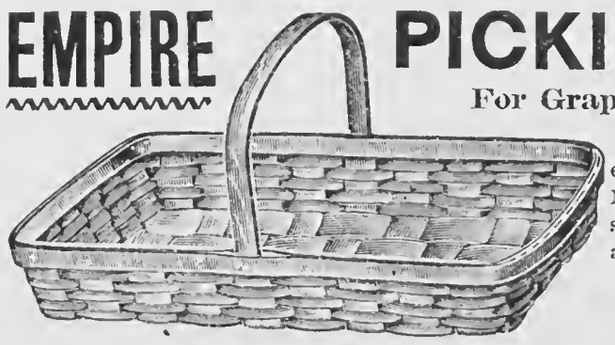
For Grapes, Currants, Berries, etc.

STIFF HANDLE. SIZE 22x14x3½
Our Empire Picking Baskets are now used extensively by all large growers of Fruit Made very smooth and neat of selected ash splint with oak handle, very strong and durable and pronounced "just the thing."
COLES & COMPANY,
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Nos. 109 & 111 Warren Street, New York.

Reducing Bones; Warming the Henhouse.

D. R., Hardy, Del.—1. How much sulphuric acid is required to dissolve 100 pounds dry animal bone, and can it be done in ordinary wooden barrels? How long would it requlre? 2. Is it considered profitable to heat a henhouse with stove, using wood as fuel, and thus keep hens warm in cold weather? Wood as fuel on the stump is worth about 40 cents per cord here.

ANS.—1. We do not advise the use of sulphuric acid on the farm. It is very dangerous to handle, and unless the bones are first crushed quite fine 40 pounds or the acid will be required for 100 pounds of bones. The manufacturers have expensive machinery for steaming and grinding bones, and can do such work far better than the farmer can. 2. We doubt whether it would pay to warm a Delaware henhouse with stoves. In Canada this is sometimes done, but even in that cold country there is some question about the profit.

The Use of Hydrocyanic Acid Gas.

G. E. S., East Prospect, Pa.—I intend to fumigate my nursery stock. My room is 7 x 11 x 18 feet. Will you give me the amount of chemicals required?

M. B., Paterson, N. J.—I notice your article on hydrocyanic gas for rats in the issue of October 5. Have you any experience in the effectiveness of this gas, similarly used to clear a building that is alive with water bugs; that is, to kill the eggs and young bugs? I do not know how long it takes to hatch their eggs, but the building could remain closed up.

ANS.—The article on page 677 tells how to use the cyanide of potash. Your building contains 1,386 cubic feet. With one ounce of cyanide for each 200 feet you will need seven ounces. This will call for 10½ ounces of sulphuric acid and 14 ounces of water. The gas will probably not destroy the eggs, but it will kill all the insects that it reaches. As the water bugs stay or crawl into small cracks and crevices it is doubtful whether the gas will kill them all.

The English Lime Tree; Apples.

J. U., Los Gatos, Cal.—Give a description of the lime tree of England. Is there a tree in this country of the same kind but having another name? Also give me a short list of apple trees with low wide spreading tops.

ANS.—The lime tree of England is the common European linden, which is closely allied to our native linden tree, which is also called basswood, and is found in most of the Central and Northern States in the native forests. The European linden is a smaller leaf and has a more dense top, making it very nice as a shade tree. It is not so robust in its habit of growth as our native species. Among the varieties of the apple that have very widespreading and rather drooping branches are the Winesap, Minkler, Willow and Tolman Sweet. These varieties will all do very well in the Central and Western States.

H. E. V. D.

Making Manure from Muck.

T. B., Toronto, Canada.—I send a sample of soil taken from the bed of a pond near a wood, and would like to know whether it would be sultable as a fertillzer and under what condltlons. Should it be mixed with any manure, and if so, would you give directions for composting?

ANS.—We have no facilities for making an analysis of the muck. The Canadian Experiment Station at Guelph will doubtless analyze it for you. The sample looks like a good one, and we should use it freely. Bulletin 74 of the Maine Station (Orono) contains much information about muck. Mucks or peaty soils result from the slow and imperfect decay of vegetable matter—water plants and forest leaves. As they are but partly decayed they are sour, and the plant food is mostly insoluble. Prof. Woods, of Maine, examined 22 samples of muck taken in various parts of the State. When taken from the swamps or ponds some of them contained 86½ per cent of water, which is within one per cent of the water in milk! When thoroughly dried out these mucks varied all the way from one-half of one per cent of nitrogen to 2.85 per cent. The phosphoric acid varied from a mere trace to nearly two per cent, and the potash from a trace to nearly one per cent. This will show that the safest thing to do with muck when any large quantity is to be used is to send a sample to the experiment station and have it analyzed. The chief value of muck lies in the nitrogen it contains. This nitrogen is usually not available as plant food, and must be "cooked" or fermented before using as manure. In the bulletin already mentioned the following good advice is given:

> Some mucks ferment of themselves when thrown into heaps, and such kinds serve well as manures without weathering, fermentation or any kind of preparation. But the kinds most common in Maine are well-nigh useless as manures unless they have been rotted or fermented. In view of these differences it is not strange that farmers frequently deem mere exposure of muck to the air to be a sufficient preparation of this material. While this is the case with some mucks, the safest and surest way of obtaining good results with muck is to ferment artificially in the compost heap. Experience teaches that in many situations, a large proportion of the useful ingredients of dung and urine can be saved by composing with muck. It is equally certain through such composting the unavailable plant food of the muck is made available. The ferments are present in such amounts in farm manures that left to themselves they suffer by the fermentation, and most mucks are so deficient in ferments that by themselves the fermentation necessary to render their inert organic matter available will not take place.
>
> In the preparation of muck composts, dung or fish are the materials commonly used to excite fermentation. Most farmers prefer to make composts in heaps. A common plan is to lay down a bed of muck six to eight feet wide and a foot or so thick, and cover it with a layer of dung of somewhat less thickness, followed by another layer of muck and so on. Different farmers use very different proportions of muck. The ordinary practice seems to vary from one to five parts of muck to one part of dung. Rich dung from stall-fed cattle will ferment more muck than that from animals less highly fed. The practical rule is to use no more muck than can be thoroughly fermented by the manure. In the case of sour muck the addition of small amounts of lime or wood ashes will correct the acidity and hasten fermentation.

EVERYBODY'S GARDEN.

POSSIBILITIES OF THE SMALL GARDEN.—It is often very difficult for the owners or occupants of small grounds to see that anything in the way of flower or vegetable growing can be accomplished, and chiefly for the reason that their grounds are small. Hence it is that the back yards of so many suburban and village homes are merely grass plots, or worse still, only weed and rubbish patches. If these idle yards and vacant spaces were only devoted to the useful and beautiful, if the boys and girls were encouraged and carefully taught how to make them thus, the parents would be spared many heartaches. Heartaches over the waywardness or vicious habits of their children who are thus, simply because they are actually starving for something to do.

Now what can be done with the small yards? One instance of what has been done may perhaps solve the problem for many others. In 1892 our home was a six-room cottage on a lot 32x105 feet with shed 16x20 feet occupying the rear end of the lot. The entire space between the house and shed was 32x45 feet, with a brick walk 2½ feet extending the whole length, and a grass plot 14x20 feet, which must be deducted. Exclusive of potatoes and sweet corn, that space, what little there was, furnished the entire vegetable supply for a family of three adults and considerable company as well, for the entire Summer, besides much given away and considerable more put up for Winter. Did we eat anything? Well, the male gardener always managed to tip the beam at over 200 pounds, while the female florists never went hungry longer than to prepare a meal, and as to visitors, they ate and returned, and "further, deponent sayeth not."

WHAT WAS GROWN.—In vegetables, we had onions, radishes and lettuce to eat and give away; beets and cabbage, peas, two varieties, both to eat and cheer our neighbors with; Lima beans, a plentiful supply for use while green, and some to store for Winter; sage and parsley in abundance; Fordhook squashes, and tomatoes for the Summer, and the entire Winter supply for canning. Upon taking possession of the place, we found already growing one large clump of lilacs, one two-year-old peach tree, six currant bushes just coming into bearing, and a strawberry patch from which 12 quarts of berries were picked. In vines, we had cinnamon, wild cucumber and morning glories in profusion. In flowers (perennials) were ferns and wild flowers, Sweet William, larkspur and hollyhocks. In annuals, Phlox, Petunias, Salvia, mignonette, Asters, balsams, nasturtiums, pansies, Ageratum, sweet peas, candytuft and pinks.

The shed, with runway on the common, was used for the hens, from which came the egg supply, and two sittings sold at $2 per sitting, and 13 finely-bred chicks. This may seem a fairy tale, but it was actual experience, and not theories figured out on paper as possibilities. Much of the work was done in a hap-hazard sort of way, with hardly a thought as to what might be accomplished. Much more might have been done, with careful attention to rotation, the help of a hotbed, and the idea of keeping every foot of ground constantly occupied and at work. The results are given not boastingly, but simply to encourage and help others to do as well or even better than we did. I was a man, at least, in years and stature. My wife and sister, though neither of them very large, were nevertheless women. The boys and girls with proper encouragement and a little practice can do equally as well. They are the ones I am after, and I want the help of the fathers and mothers to get hold of them.

THE HOME SCHOOL.—Just here I must be pardoned for referring to the little school at Hope Farm, mentioned on page 679. As I write I wonder whether the parents of the other "little folks" fully appreciate their privilege? I hope so. While reading of the little school, my wife remarked that she fairly coveted a home down by Hope Farm that our two little girls might bring the number up to nine. She said she would go down on her knees to the Madame for the *privileye* of placing our little ones under the careful eye of a Christian mother and teacher during the hours they were absent from us. I said "Amen" with a very strong accent, for such schools and such teachers are rare and hard to find. The baby's first steps—whither do they tend? The seed sowing in the first few years—what shall the harvest be?

J. E. MORSE.

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Ruralisms

NOTES FROM THE RURAL GROUNDS.

THE KNIPHOFIA OR FLAME FLOWER.—There has been much activity among German plant breeders looking to the improvement of the Flame flowers, usually catalogued in this country as Tritomas, but more correctly known as Kniphofias. About 10 species are recog-

ONE TYPE OF ABNORMAL DEVELOPMENT.
FIG. 320.

nized, all natives of Africa and the Island of Madagascar. They look much alike when growing, and differ chiefly in hardiness and stature, though two species, K. Leichtlini and K. comosum, from tropical Africa, have yellow blooms instead of the usual orange red or flame color. They are among the least hardy and useful of the genus, however, as they can only be grown successfully with glass protection in the North. The best known species is K. aloides, much advertised with us as Tritoma uvaria. It is the Red-hot poker plant of old gardens, and now comes in many varieties and named sorts, which generally turn out to be very similar when bloomed. We have squandered much time and money on these so-called novelties with very little result. The coloring varies from brick-red, through the typical flame color to dingy straw yellow. Some of the flower heads are bunchy and ill-formed, and others twist badly during development. The best of all the new kinds, and a very desirable garden plant in every way, is Kniphofia Pfitzerii, shown on first page, Fig. 317. The cut shows an average flower spike of this excellent variety, one of six produced consecutively over a period of as many weeks, from the middle of August to October 1, on a young plant of this season's growth. No other Flame flower in our experience blooms so profusely or possesses such a neat and compact habit. The coloring is very fine, and may be defined as brilliant orange scarlet, shading to rosy salmon on the immature florets. They are very fine for cutting, and are now being used with increasing frequency by florists. None of the Kniphofias may be considered hardy north of Philadelphia without careful protection, but the clumps are easily carried over in the manner of Cannas by lifting them and storing in a box of sand or dry earth in a frost-proof cellar. The lifting may be much facilitated by planting in rough baskets made of poultry netting, as the meshes hold the soil well together, making the ball very easy to handle. The fleshy roots preserve their vitality well if not allowed to dry out too much. The best variety of the old type is generally sold as Tritoma uvaria grandiflora, and will grow under favorable conditions five or six feet high, with an immense flaming spike as startling as a sky rocket when seen unexpectedly, but it yields few blooms as compared with the variety illustrated The Kniphofias are very ornamental additions to our gardens from their glowing colors and pointed outlines, and it is a pity that they are not quite suitable to our climate. Of the various species we have tried K. Tuckii proved the hardiest, enduring several Winters without protection. The flower spikes were yellow and red, about six inches long, produced late in the season. A very dwarf variety sold as Corallina blooms quite freely for a long time, but is not as bright as Pfitzerii, which will grow from two to four feet high, according to local conditions. It may be had from dealers for 25 cents, and plants started in the Spring should bloom the same year, and increase greatly in strength by the next season.

GRAPE NOTES.—The hot and rainy Summer was hard on grapes in this vicinity. More mildew and rot was seen than for many seasons past. The showers were so numerous that fungicides, with the exception of powdered sulphur for leaf mildew, had little chance. The application of sulphur and Fungiroid in equal proportions from a dust gun was always followed by a perceptible lessening of the trouble. The black grapes under trial came through the adverse season better than the light-colored varieties, with the exception of Nectar or Black Delaware, which succumbed almost entirely to rot. Concord, Worden and Moore's Early all ripened fair crops in good condition. Campbell's Early and McPike perfected a few bunches on

ABNORMAL FLOWER DENUDED OF PETALS.
FIG. 321.

young vines. The former grew to large size, and developed a sweet and excellent flavor. McPike is the strongest grower, and has the best foliage of any variety yet tried. It ripens here at least two weeks after Campbell's Early, and resembles extra fine Concord, but is more juicy and has less acid pulp. We regard these new varieties as showing much promise under local conditions, and the development of the young vines will be watched with much interest. The difference in season of ripening is sufficient to make both desirable in the same planting. The largest crop from any one vine is 75 pounds borne on a five-year-old Isabella, planted in a favorable situation at the southwest corner of a dwelling, and trained on the south wall and a small trellis on the west. These grapes were well ripened and of good flavor by October 1. For a porch or trellis grape where an extended run can be had, nothing exceeds the Isabella in this latitude, though it is usually a failure if confined to close limits. Moore's Diamond produced the best "white" grapes, and from its dense bloom is better entitled to this designation than most of the green sorts. Niagara is reliable and an excellent cropper, but its quality is too low for a home grape. Salem ripened some good bunches, but was handicapped by mildew early in the Fall. Brighton is usually our best red grape, and seldom fails, but it does not amount to much this year. W. V. F.

SOME EFFECTS OF HYBRIDIZING THE ROSE.

In the season of 1892 Prof. Hansen and Prof. Budd made 1,300 crosses of the rose. The cross was made principally upon the Russian type of Rosa rugosa, which is said to vary slightly prove the ordinary type of Rosa rugosa. The best results of their work were obtained from plants upon which they used the pollen of General Jacqueminot. The results of their cross have proven very interesting, both from a botanical and horticultural standpoint. In the notes of the first season they record the fact that the hybrid seedlings grew more vigorously and taller than pure Rugosa seedlings, and that they showed the widest variation of foliage, some of them closely resembling the Rugosa in leaf, and others showing no rugosity of leaf.

Of the seedlings resulting from their cross 11 were thought to be worthy of preservation and naming, and are described in Bulletin 36 of the Iowa Experiment Station. We still have a number of these hybrids, and the illustrations, Figs. 320, 321 and 322, show the very peculiar effect that has been produced in some cases. The abnormal development of the sexual organs has been so great as entirely to destroy the value of the flower. In Fig. 320 is shown the abnormally developed receptacle pushing far up into the flower and the petals just enclosing it; Fig. 321 shows a flower from which the petals have fallen, uncovering the receptacle which, upon examination, shows the center broken up into many abortive flowers. Fig. 322 shows a most pronounced case of the attempt to break up into a compound flower. The little flowerlets all show their individual calyx and corolla and essential organs. To the practical horticulturist the flowers are useless, but as an illustration of the deformities that may result from hybridizing when a violent cross is made it stands as a striking example. H. C. PRICE.

Iowa Exp. Station.

TOMATOES IN TEXAS.—I am now shipping tomatoes from my Fall planting, set just as I began to ship early tomatoes, about May 25. This is a crop that stands our dry Summers almost as well as the cotton plant, and if planted on land that has never been cultivated it is as sure as cotton. I began shipping August 30, and will continue until frost, and if that does not come on me too suddenly will gather what I have, spread them out in some dry and well-protected place, and possibly ship for a

AN ATTEMPT TO FORM A COMPOUND FLOWER. FIG. 322.

month longer, or until about December 15. One of my neighbors shipped Christmas week last year. This crop requires very little work, and pays often over $100 per acre. They are netting at present about 65 cents per four-basket crate, which is two-fifths of a bushel.

Swan, Texas. C. F. P.

EMMER WHEAT.—During the past few years much has been said about "Speltz." Seedsmen have boomed the grain, and we have received many letters from readers who have been tempted to sow it quite largely. Farmer's Bulletin No. 29 describes this grain. It is an Emmer wheat—useful on the semi-arid regions of Nebraska, Dakota or farther west. It may also be useful in breeding new varieties of grain, but cannot be recommended for general cultivation.

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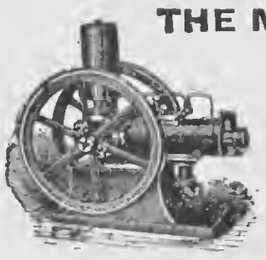

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HOPE FARM NOTES

BEATING THE FROST.—In the race with Jack Frost, Hope Farm finally came out ahead. The corn was all cut in time. I am told that on the track, when they wish to crowd an extra second out of a trotting horse, they put a running horse in a sulky and run him hard behind the trotter as a pace-maker. In the race our boys made against frost Uncle Joseph acted as pace-maker!

Who is Uncle Joseph?

"Uncle" has a wide meaning at Hope Farm. The children have formed the habit of calling every man who comes close to the family "Uncle." "Mister" seems pretty cold to such warm-hearted little folks, and we do not believe that children should form the habit of calling grown people by their first names. Uncle Joseph has no connection with the Hope Farmers except that he reads THE R. N.-Y. and is a farmer. He came all the way from Oregon, where he had a little fruit farm. I tell the story of how he came to act as pace-maker in the race with Jack Frost because it shows how people all over this country are strung together on invisible threads.

THE MAN FROM OREGON.—He came into THE R. N.-Y. office one day to see some of the people who make the paper. He was on his way to his old home in England, which he left nearly 40 years ago. He went to Oregon 20 years ago, and took up some wild land which he had developed into a good fruit farm. This he had sold at a good figure, and so he was ready to go back and see the old country. The bank in New York found it necessary to send back to Oregon to verify a draft before paying him money, and so he had some idle days on his hands. A man along in years, without wife or children, who has worked hard all his life, soon gets tired of tramping about the great city. While sitting in the office he heard me say that corn cutting was rushing us, so he stepped right up and said that he would like to go and cut corn at Hope Farm while he was waiting for that money. The final result was that he came out, put on his old coat, and fairly shocked the corn by the way he went at it. He said he wanted to work for his board, but he kept at it so well that the Madame took me off one side and said:

"Tell him not to work so hard—board doesn't cost much!"

I fear the Madame wouldn't make much of a success as the boss of a gang. She doesn't realize that to a man like Uncle Joseph, who has worked all his life, fair labor through the honest working hours is far sweeter than play or idle ease. At any rate, take it from any view you will, he gave us a good lift with the corn, and we were glad to have him at the farm. I did not realize before how Hope Farm and THE R. N.-Y. can stretch hands far across the country.

GRAIN SEEDING.—We have over seven acres of wheat well seeded with grass, and expect to have about 10 acres of rye. We took our time putting in the wheat because we wanted it done as nearly right as possible. The ground was plowed well. When the soil was so wet that it bunched up in a ball when squeezed in the hand, we kept out of the field. The fertilizer was spread on the rough furrows, and then the Acme was run three or four times until the surface was mellow and smooth. The grain was then put on with a Cahoon seeder and worked in with the Acme—with the teeth out flat. Then the grass seed was put on and the job finished with the roller. . . . We used five pecks of wheat to the acre, with 10 quarts of Timothy and seven of Red-top. That is lighter seeding than Mr. Clark recommends, but it is enough for our soil, I think, when seeded with grain. I hope this is the last time we shall ever have to seed down these stony back fields. I intend to set trees in them on the Stringfellow plan, and if they succeed there will be an end to plowing and cultivating. . . . We hope to cover the corn and potato fields with rye. In the corn fields we scatter the rye on the ground and work it in with cultivator running both ways. This is no way to get an ideal stand of rye, but all we want is to cover the ground, prevent washing and have something growing next Spring which can be plowed under or left to mature—just as seems best. Had I done this last year I should have been at least $150 better off, as several acres stood idle through the season, while had they been seeded to rye in this way the straw and grain would now be for sale. . . . It must be understood that we are not sowing grain on the lower part of the farm, near the house. The fields I speak of are far over the hill—a long distance from the barn. I want these distant fields in crops which require no cultivation and few visits. We haul all our manure upon the few fields close to the barn, and there we expect to grow small fruit.

FARM NOTES.—Our ice gave out before September 1. I was afraid of it after the wet April and May. Looking back at it I think our mistakes were in not making the house perfectly tight at one side where it came close to the barn, and in neglecting proper ventilation at the top. . . . We have more trouble from crows in Fall than in Spring. By tarring the corn we prevent their pulling it, but in Fall after cutting they come to the shocks and get some grain.

Shoot them?

We haven't such a thing as a gun on the place. Why should we keep one? Those crows worked for us all through the season. My notion is that they averaged several times their live weight of insects. Now don't you think it would be rather small business after they have served us all Summer to turn in and kill them? . . . The cows broke out last week, and Julia and old Jersey filled up on apples. Happily we got at them in time. It's hard to kill Julia—these kickers die hard—but the old cow bloated until you could play the bass drum on her side. Three years ago an overdose of apples made her helplessly drunk, and brought great scandal upon me. This time we prevented that. She was fed cornmeal and given doses of cooking soda and a homeopathic remedy. . . Our late-planted corn made excellent fodder, but the grain is not a full yield. No use talking, it is impossible to obtain a full yield of grain unless the crop is planted by May 20 in our latitude. The month of June is the proper time for the baby plant to get out of its cradle and shed its long dress, and no later season can quite make up for the loss of June days.

SCHOOL NOTES.—We are doing our best on the farm to start the peach trees right. Hugh brags about the pure blood in the hogs, and Charlie believes that the colt will make Father Time take the dust. These things are all very well for the bread and butter side of life, but, inside the house, the Madame is training a crop which, after all, is worthiest to carry the Hope Farm brand. The little school is doing well. I am no hand to brag up our own little folks, for I know that few of their good qualities come from my side of the house, but I feel that we have four as pure and sweet little chunks of humanity as any family need call for. That they are so is due to the fact that the Madame has had them constantly under her control. Off here among the hills, on this farm, she is able to keep them from influences which corrupt and spoil many a child in town. It means hard work and a good deal of self-denial to conduct a home school, yet what better crop can one grow on the farm than boys and girls of strong and earnest character? Sometimes I look at my little Stringfellow peach trees and become nearly discouraged. They are still such little things, and have made such a slow growth above ground this year. It seems as though one could take one of these little stubs and pull it out with one hand. But try it! Take both hands, and grunt and strain, and the roots of your back will give before the tree will come. Why? Because these roots have gone down deep and firm into the soil. The growth this first season has been mostly below ground—where it ought to be. Stem, branch and bud will come all in good time. So it is with our little folks. I have no doubt that plenty of children from the public schools can "recite" all around them. That doesn't disturb me in the least. The Madame is their day teacher and their Sunday-school teacher, too. They are putting the roots of character down deep into the soil, and I hope they will never be pulled out.

HORSE FEED.—The following question is asked by a New York State man:

I am at present feeding my farm horses rye ground with bran. Is that a good ration? Compared with oats, four quarts per feed, how much rye and bran should I feed? I had about 650 pounds of rye ground with 500 pounds of bran. Would cow pea or common bean hay be good horse feed, that is a balanced ration? If not, how much grain should be fed?

A good deal of rye is fed in our section, but mostly to hogs and work horses. It will not take the place of oats for a driving horse. It is now pretty well known that oats contain a principle called "avenin," which gives spirit or "good feeling to a horse. My experience with rye is that it has a sluggish or constipating effect upon animals. For that reason bran would be a good grain to mix with it. I would mix the two grains half and half. This would make a good feed for horses that are at good steady work where no great speed is required.

Do we feed it?

No, for we think it pays us best to sell both the straw and grain of rye. We have been feeding a mixture of about equal parts of ground oats and corn and bran. Oats cost more than we can afford to pay, and we shall now feed ear corn and wheat bran.

As to cow-pea hay, I do not make any, nor do I advise northern farmers to expect hay from the crop. I would use it for green manuring or for pasture only. At the South there is better weather when the cow pea is ready for cutting and considerable hay is made there. I have heard of horses being well wintered on pea hay alone, but I did not find the small amount I made four years ago a full ration, and fed corn with it.

H. W. C.

Some Laws of Trees.

The Christian Endeavor World gives the following:

"In planting his orchard a farmer placed one row of trees close to the fence which divided his land from his neighbor's. While the trees were small they caused no trouble; but, when they grew large, the branches extended out over the neighbor's land and became a source of annoyance to him. One Fall, when the trees were loaded with fine fruit, the neighbor's boys commenced to take apples from the overhanging branches; and the wife of the owner of the orchard, being a hasty woman, scolded the boys and said some mean things about the neighbor's family. This started a very bitter quarrel. A few days after scolding the boys the woman crossed the division fence for a basket of apples, and was ordered out. Upon learning this her husband went to an attorney, and was told that, although the apples belonged to him, by crossing the fence to get them he made himself a trespasser; so the fine fruit fell off and rotted on the ground.

"The next Spring, the neighbor, while plowing under the overhanging branches of the apple trees, scratched one of his horses badly. This made him angry, and he sawed off all of the offending branches, straight above the fence. Then the owner of the trees again sought advice, but learned that he had no remedy. The trees looked very unsymmetrical, with the branches on one side all gone, but the neighbor had only exercised a legal right."

Unlawful Feed.

Prof. C. W. Woods, of the Maine Experiment Station, says that the law designed to prevent the sale of adulterated stock food works well. Formerly considerable adulterated cotton-seed meal was sold in the State but now a sample of this poor stuff is seldom seen. Not long ago a sample of this meal was sent for analysis. It had a bright color and was of good mechanical condition, but when analyzed it was found that some coloring matter had been mixed with it to conceal the ground hulls. The dealer was notified that this was the poorest sample of meal seen in the State for many months. This is what he had to say:

"The cotton-seed meal was sent to us by a New York party who wished us to handle the product of the mill. We requested, for the first thing we did, to send us the analysis of it, which they failed to do, but they still kept trying to make arrangements with us to handle their meal. We at last requested them to send us a large sample, which we immediately sent you for analysis, and now that we have found it so poor, we certainly shall not handle any of it, and shall make sure that none of our competitors does."

Prof. Woods says that this shows that the dealers are being educated so that they realize the difference in value of good and poor samples of feed, and this is largely the result of this law.

WHEN you write advertisers mention THE R. N.-Y. and you will get a quick reply and "a square deal." See our guarantee 8th page.

For the land's sake, use Bowker's Fertilizers. They enrich the earth.—*Adv.*

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THE

POULTRY-HOUSE

ROOFING

As a water-proof covering for Poultry-Houses, RUBEROID has no equal. Keeps the houses cool during the warm weather, and warm in Winter, and the chicks dry and comfortable. The sun cannot melt it.

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LIME FERTILIZER.

Special preparation giving splendid satisfaction. Correspondence solicited THE SNOW FLAKE LIME CO., Bowling Green, Ohio.

THE MERIT of YEARS

attaches to this roofing. It is known and used in every section of the whole country.

FIRE, WIND and WATER PROOF,

durable and low in price. Being soft and pliable, it is easy to fit and lay. Exposure makes it as hard as slate. Send for Sample and Circular.
THE A. F. SWAN CO., 114 Nassau St., NEW YORK.

Cider Machinery.—Send for catalogue to Boomer & Boschert Press Co., 118 West Water St., Syracuse, N.Y

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Veterinary Pixine.

It absorbs inflammation, penetrates to the bottom of sore, stimulates and builds up new cellular tissues, counteracts effects of impure blood softens the fissures and sloughs off proud flesh. It is the most natural, scientific and vital healing ointment made. Money back if it fails to cure any sore, case of speed cracks or skin disease no matter how aggravated, what the cause or how long standing.

It is an antiseptic, soothing ointment of marvelous penetrating healing power.

2 oz., 25c.; 8 oz., 50c.; 5-lb. pkge., $4.

At all druggists and dealers or sent prepaid
Money back if it fails.

TROY CHEMICAL CO., TROY, N. Y.

The Rural New-Yorker

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Name and address of sender, and what the remittance is for, should appear in every letter.
Remittances may be made in money order, express order, personal check or bank draft.

THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, OCTOBER 19, 1901.

ONE reason for printing the answers to the questions about the spring on the first page is the fact that they show what comes from studying our home resources. Suppose our friend had not examined the second spring, but had carried out his first plan of pumping water to the top of the hill. It would have meant a useless expense—money that should be used for some other purpose. It always pays to hunt out all the natural ways of doing a thing before we spend money for artificial methods.

*

THERE are dozens of good arguments in favor of a coöperative laundry. Mr. Frost gives some of them on page 707. Why, then, is it so hard to find such a laundry in actual operation? One reason is that it means a slight expense. The creamery means an income to the farm. The laundry takes work away from the wife or daughter, and means a cash payment. If it is to be established it must be done by the women folks. They will have to push it along. If these laundries were to save the labor of men rather than that of women there would be one in every neighborhood within a short time!

*

A PLAN is now on foot to attempt to raise the level of Moosehead Lake in Maine by two feet. By means of a series of dams and embankments the water of the lake may be piled up higher, so as to hold back a larger volume for use when the natural supply would run dry. This is becoming necessary, since greater use than ever before is being made of water power on the Maine rivers. It was once thought that steam had displaced the water power in New England, but with the coming of electricity these powers go into use again. Better develop the waters where people now live before going to "Arid America."

*

A FARMER of Chenango Co., N. Y., was on trial last week for selling "bob veal." His lawyer claimed that the law prohibiting the sale of such veal was repealed by the Legislature of 1901. The judge decided that in any event the case before him referred to a violation before the laws of 1901 were enacted. The farmer was found guilty and fined $25, with $25 more as costs. That made pretty expensive veal. There was never any intention on the part of the Legislature to repeal the "bob veal" law. Through a clerical error one section of the law was omitted, but those who feel inclined to ship the "bob" article will find it a very expensive business.

*

FROM the numerous trolley accidents which are reported it is evident that many who are employed as motormen are incompetent for this work. On lines running through country districts cars often make high speed—20 miles an hour is not unusual—and there are steep hills and sharp curves. No man is allowed to run a steam engine, either locomotive or stationary, without examination to test his knowledge of its construction and skill in handling it. Yet a trolley car containing 40 or 50 passengers is often put in charge of a man who has only a vague idea of what he is handling, and who gets his first points on hills and curves when the car runs away and upsets. Locomotive engineers go through a long schooling as firemen. They learn thus the momentum that a heavy train acquires at various rates of speed, and are able to run it safely around curves and down grades. A motorman certainly ought to have a fair knowledge of forces, speed and curves, as applied to his special work, and should have sufficient education and mechanical gumption to command twice as much salary as the man who collects the fares. Trolley companies would naturally object to being compelled to hire high-priced men, but we do not know any reason why they should be permitted to put the lives of passengers in danger, as is the case at present.

*

THE State of Mississippi owns and operates, with convict labor, the largest cotton plantation in the country. The object is to provide work for the convicts and raise money to defray State expenses. In other States convict labor is either leased or directly employed in manufacturing. Reports from Kansas indicate that that State will also enter into competition with farmers. A large creamery will be started at the Agricultural College, and the products are to be sold to help pay the expenses of the dairy school. While a single creamery or a single farm thus operated may not hurt the business of the private farmer, there is danger in any extension of this principle of public competition with private enterprise!

*

WE sometimes meet people who find fault because certain wealthy men are spending a good deal of money in buying and testing automobiles. There are two sides to this matter. The automobile is a new thing—with great possibilities both for country and town use. Before it can be put to a practical use in the country much time and money must be spent by some one in experimenting with different forms of power and different types of vehicles. This ought to be evident to all, for it is the history of most new and revolutionizing machinery. If the rich care to give their time and money to this work, we think it a good thing, even though they do it for their own pleasure. They will help make the automobile popular and profitable, and that will benefit all.

*

THE exhibit of apples made at the Pan-American Exposition by the Maine Pomological Society made a very effective display. The Society tried to show the commercial apples of Maine, and made no effort to collect abnormal specimens. This business-like exhibit showed all the color and beauty of the fruit from the Far West, with far superior flavor and keeping quality. Specimens of the crop of 1900 were in excellent condition—one barrel of last year's Baldwins opened September 18 showing 87 per cent perfect fruit! We have never been able to understand why the people of Maine are so modest about showing their magnificent apples. The display at Buffalo attracted much attention, but the Pomological Society ought to have had 50 times as much money as they did have for showing their fruit. As it was, there was nothing finer in Horticultural Hall.

*

THE Legislative Assembly of Victoria, Australia, is considering some sweeping amendments of a former law, concerning plants infected with insects or disease. Under these amendments no person may sell or expose for sale any tree, plant or vegetable in any way diseased, or affected by insect attacks. The law covers fungus, whether dead or alive, and insects, whether dead or in any stage of living existence. Inspectors are empowered to examine stock exposed in markets, and to advise the eradication of disease noted, but may not destroy the things condemned without higher authority. The Australian attitude towards diseases and insects affecting fruit and vegetables is similar to that of the Pacific coast. As an Oregon correspondent recently stated, these statutes do much to keep infected fruit out of the markets. They are certainly a great safeguard against carelessness in the orchard.

*

A READER of THE R. N.-Y. sends us the following clipping from a Syracuse paper. As printed the note had a big double head:

Cortland, Sept. 26.—Farmers in the village and town of Scott have become aroused over the great amount of intoxication among laborers in that vicinity, and as the men employed on the farms have not visited places where liquor is sold, the cause has been a mystery. One enterprising farmer has at last solved the mystery. At this season of the year the farmers are busily engaged in filling their silos, and in doing this the corn is cut up, saturated with water and packed in tight buildings erected for this purpose. This corn, uniting with the water, causes a fermentation, and the juice settles to the bottom of the silos. It appears that laborers engaged in filling the silos have found that this juice, after it has fermented, was good to drink. They accordingly bored holes in the sides of the silos, near the ground, and by attaching a spout to the hole drew out the juice into pails.

We have had experience with these "fake" stories, and know how they grow. Several years ago we had a cow that ate too many apples. The newspaper men solemnly stated that she gave a good quality of milk punch, and one man in Kentucky actually wrote offering any price for a calf from this cow in case the punch story was true! There is just about as much truth in this story of the silo juice. We doubt whether there is any more alcohol in silage than there is in new bread. There is not enough in it to enable any man to get drunk on the expressed juice. We know that men will sometimes crawl through very small holes, and pull their character after them, in order to gratify their thirst for intoxicating liquor. The silo is not a distillery or a brewery. It is far too useful ever to be saddled with such a reputation, even in sport. Is it not a shame that the papers will print such idle and foolish tales in their largest type, while a report of some worthy though humble effort to improve or dignify labor may go into the waste basket—or the smallest type in the office?

*

THE Hope Farm man said recently that he nearly starved to death while unlearning some of the things picked up at an agricultural college. Now a reader born with an interrogation point in his mouth wants to know what these things were! The most important one was the idea which some students get that just because they have finished a college course the world should rush and offer them a light job well ballasted with heavy pay. A college course gives many boys and men a bad case of what is well called the big head. Instead of rushing to load honors and cash upon the college graduate, the busy, practical world is inclined to distrust him, and will surely make him work for his place. Knowledge is power—but it is not machinery. It is more like a mighty waterfall—grand and inspiring, but of little real service to the world until it is harnessed so that its force may be applied to some useful machinery with a point to it. A man may obtain power and force from books or from spoken words. Others may fit and tighten the belt that connects that power, but the man himself must build and place the machinery that will enable him to bore into the world and fasten a handle there.

*

BREVITIES.

"Man's life means
Tender 'teens,
Teachable twenties,
Tireless thirties,
Fiery forties,
Forcible fifties,
Serious sixties,
Sacred seventies,
Aching eighties,
Shortening breath,
Death,
The sod,
GOD."

—Joseph Cook in Christian Endeavor World.

TURN your Oh, dears! into ideas!

THE bee uses a sweet-toothed comb.

A "SOFT SNAP" means a hard pull for somebody.

MAINE apple growers are enjoying a "boom" just now.

THERE are six Chinese voters registered in New York.

NO, sir! It is not likely that Corn smut will kill a cow.

WE have some chickens which we wish would act like bad debts—go home to rest!

A WESTERN man says that a horse's idea of Heaven is to be owned by a woman.

THE French are now said to be making a new butter substitute known as "vegetaline" from dried cocoanut.

IT is said that the Genesee River water is being stored so carefully that Rochester will be second only to Buffalo in water power.

"I DISLIKE the law as much as you do rum and tobacco," writes a Vermont reader. What would lawyers do if that idea were universal?

AMERICAN shingles are being ordered for South Africa. Dame Britannia has worn out several shingles over the Boers, and still they make faces at her.

THE ladybird beetle was brought to California to kill the destructive scale insects. It did the job well, but now a parasite has begun to kill the ladybirds.

CHINCH bugs did considerable damage in Maine last Summer. The experiment station recommends burning over infested places, spraying with kerosene or plowing.

IT is said that there are practically no pumpkins in western New York this year. The season has been bad for them, and they interfere with the work of the corn harvesters.

A GRAND ARMY post has "resolved" never to mention the name of the President's murderer. After one or two efforts to pronounce this name we think most people will make a similar resolve.

Gov. Odell has been asked to have the President's murderer buried at sea, so that not even his bones "may rest in American soil!" Better bury him and plant some useful tree by his grave!

AMATEUR photographers have a chance to get out their tools and see what interesting and attractive pictures they can make for the benefit of the women folks. Note the prize offer in the Woman and Home Department.

WE care little who first advised northern farmers to sow cow peas for green manuring. THE R. N.-Y. has tried to do its share of such advising. The more nitrogen traps we set in otherwise wasted fields the better.

WASPS have caused enormous damage to the English fruit crop, and it is advised that local horticultural shows offer prizes for wasp nests. This was done at a recent show in Essex, the boys of the district collecting a large number of the nests.

DURING the year 1900 no case of rabies was found in England or Scotland, and it is believed that the disease is entirely eradicated there. A stringent muzzling law exists, and no dog can be taken into the country without a satisfactory health certificate.

Events of the Week

DOMESTIC.—The first snow of the season for that section fell at Warsaw, Ind., October 3. This is the earliest fall there for 30 years. Two inches of snow fell in Miami Co., Ind., October 3. . . . . Fire in the Pittsburg Clay Pot Works, Allegheny, Pa., October 6, damaged the plant to the amount of $280,000. . . . . The native population of the Aleutian Islands is rapidly disappearing, the people succumbing to disease, measles being particularly virulent among them. . . . . A fire among warehouses at the north side of the Chicago River, on the lake shore, October 6, caused a loss of $90,000. . . . . The Amerlean Mission Board, supplemented by the Government authorities, has matured plans that insure the freedom of Miss Stone. Nearly $60,000 in cash and pledges for the ransom is in hand, and of this sum $35,000 has been transmitted to Constantinople by Kidder, Peabody & Co., through the State Department, where it has been placed in the hands of an agent for the brigands by the United States Consul. The extension of time for the full payment of the $110,000 demanded by the brigands will afford ample opportunity for carrying out the negotiations. The State Department is moving diplomatically in the case of Miss Stone, and, should it be proven that Bulgaria is implicated in the plot, a claim for damages will be made against her government. . . . . October 9 a boiler explosion at Erie, Pa., wrecked a brass foundry and a hotel annex; nine persons were injured, two fatally, and the property loss was $50,000. . . . . The State of Texas is starting prosecutions against fraudulent oil companies. More than 100 of that class sold millions of dollars of worthless stock during the early stages of the oil excitement. The suits will be tried at Austin.

ADMINISTRATION.—A new Isthmian Canal convention between the United States and Great Britain will be signed next month, at Washington. It will abrogate the Clayton-Bulwer treaty, declare the neutrality of the projected waterway, and concede the right of the United States to protect her own interests in time of war. . . . . Both parties to the Venezuela asphalt controversy have declined to enter into the arrangement for an amicable settlement, the foundation of which was laid by Minister Bowen, at Caracas, recently. . . . . School-book publishers have asked the Treasury Department for relief from the seizure of several thousand arithmetics by the Secret Service. These arithmetics were printed for use in the schools of the Philippines, and contained pictures of American coins. As any printed fac simile of an American obligation is in violation of the counterfeiting laws, the arithmetic was suppressed The publishers contend that a wrong has been done, as the pictures were educational to the Filipinos and necessary to the information of the children in the schools. The question will be taken up by Secretary Gage on his return to Washington.

PHILIPPINES.—Steamship advices say the Island of Panay, which has been affected by the plague, is now suffering from famine. One hundred and thirty deaths from starvation are reported to have occurred at Capiz alone. . . . . To prevent the spread of plague, Manila has inaugurated a war against rats, and is paying 2½ cents for each rodent delivered to the board of health. . . . . Major Morris C. Foote, of the Ninth Regiment, who was in Balangiga the day before the disaster at that place, says Captain Connell had been fully warned, and had taken what he (Major Foote) considered every necessary precaution. Major Foote had heard from a priest that the natives meant to attack the garrisons at both Balangiga and Basey and that the Basey garrison was to be attacked from a cock-pit behind the barracks. Orders were immediately given to demolish the cock-pit, and extra guards were stationed. He cannot understand how 48 Americans were killed at breakfast. . . . . General Smith sailed from Manila October 9 for the relief of the Island of Samar. He will take command of Samar and Leyte so as to enable General Hughes to devote himself to the Island of Cebu, where trouble is possible unless strong measures are adopted.

GENERAL FOREIGN NEWS.—A violent gale prevailed over northwestern Europe and Great Britain October 6-7. A cyclone and waterspout were reported in the English Channel, and much damage was done to shipping. . . . . The Ameer of Afghanistan died October 7. He was educated and progressive, and a strong ally of Great Britain. . . . . The Russian government has barred American miners out of Siberia; they will not be allowed to take up claims or to work for wages. Next Spring the treasury department of the Russian government will patrol the Siberian coast with revenue steamers, whose duty it will be to see that no trading is done with the natives except by persons acting under permits from the Russian government.

FARM AND GARDEN.—The Illinois State Horticultural Society will meet at Champaign, December 10-12. A fine display of fruits and vegetables is expected, liberal premiums being offered, and an excellent programme, including many well-known speakers, is assured. Secretary, L. R. Bryant, Princeton, Ill.

The Florida State Fair will be held at Jacksonville November 19-22; general manager, G. S. Henly.

An interesting display of French fruit was shown at the Pan-American Exposition September 24, being sent by the Syndicat Central des Primeuristes Francaise. It was the desire of the senders that the fruit should be shown at the meeting of the American Pomological Society, but it did not arrive in time. The fruit consisted of five distinct lots and comprised nine varieties of grapes, three varieties of apples, nine varieties of pears, five varieties of peaches and one variety of muskmelon. It was shipped by mail from Paris, September 12, leaving Havre by steamer Aquitaine, September 14, reaching New York September 21. The time consumed in transit —11 days—was, unfortunately, too long for the requirements of melons and thin-skinned grapes, and these fruits consequently arrived in bad order. Certain thick-skinned grapes, including Black Alicante, Boudales, Angelino and Director Tisserand, and all the pears and apples, came in excellent condition, and were found to be very fine examples of their respective varieties.

The dates for farmers' institutes to be held in New York State the coming Winter are now being arranged by the director. About 1,200 applications are on file, and while this is more than three times as many meetings as can be held, there are still some sections of the State from which no applications have been received. If our readers care for meetings in their respective localities, and will send an application at once to F. E. Dawley, Director Farmers' Institutes, Fayetteville, N. Y., the application will be considered, and if there is an opportunity for holding the meeting it will be placed. Quite a number of new speakers have been placed on the list this Winter, and the present outlook points to a most successful series of meetings.

The Kansas State experimental creamery plant at the Agricultural College, heretofore operated only in the Winter, will after November 1 be operated the year round and the product sold on the market. The Continental Creamery Company has consented to remove its skimming station from Manhattan and so give the State a monopoly of that territory. The object of the State's plant, of course, is the instruction of students in the art of making butter, and this can only be done by running it all the time. The profits of the plant will pay the expense of maintenance, and so the State will be out nothing.

The National Cattle Show, to be opened at Kansas City, Mo., October 21, is expected to excel all previous shows there. The fact that there is to be a combination exhibit and sale of the three famous breeds of cattle—the Herefords, Short-horns and Galloways—is to a great extent responsible for the interest shown this year, although the success of the combination show of Herefords and Short-horns last year also had something to do with it. The entertainment to be provided for the visitors this year and the accommodations for the cattle will be superior to what they were. The new $10,000 show barn, where the thoroughbreds are to be stabled, has been completed. The cattle will be shown and judged in a large tent near the sale pavilion, but the public will also be admitted to view the animals in their stalls in the new show barn.

An alarming disease has made its appearance in the potato fields of France, according to a report received from Consul Covert, at Lyons. It causes the leaves of

GEORGE L. FLANDERS. FIG. 323.

the potato to dry up, while the stem becomes thin and covered with yellowish spots, and finally dies. The veins of the leaves fill with a gummy substance, and are infested by bacteria. The disease first attacks the roots, and then invades all parts of the plant. The bacteria is said to be identical with that which once attacked tomatoes and egg plants in the United States.

GEORGE L. FLANDERS.

President-elect of the National Farmers' Congress.

At Fig. 323 is shown a good picture of Geo. L. Flanders, the newly-elected president of the National Farmers' Congress. Mr. Flanders owes his election to the fact that he has defended the dairy interests of this country with great ability, having devoted many years to an exhaustive study of the legal aspects of the oleo cases. He is a successful farmer, as well as a good lawyer, and First Assistant Commissioner of Agriculture. He is especially useful in this position, since he has made a careful study of constitutional law as it applies to the police powers of a State, and inter-state commerce. This is of great importance in handling the oleo question owing to the former conflict of State regulations.

Mr. Flanders is a native of St. Lawrence Co., N. Y., and is now in the prime of life. He entered the State's service in 1884 as assistant to Dairy Commissioner Brown. At that time the present department had not been created, but large sales of oleo were made and the adulteration of milk had grown to be a great abuse. Mr. Flanders did his share in the work of organizing the fight against these evils. This work was done so thoroughly and well that now no oleo is made in the State, and but little of it sold. Pure milk, with the exception of some partial skimming by creamery men, is the rule. To show the growth of this police work for pure food we may say that in 1893 the present department was created, and now there are 20 articles under its supervision instead of only two as formerly. It is a strong tribute to the ability of Mr. Flanders to say that he has held his position through at least five different administrations—both Republican and Democratic. We believe that he has always been true to the interests that he represents. It is safe to say that no influence would cause him to hesitate in the performance of his duty as he saw it, and his official duties are not made secondary to the furthering of personal or political ends. It is a good thing for the dairymen of this State and country that a man like Geo. L. Flanders is in a position which enables him to strike commanding blows at the oleo fraud.

IMPORTED POTATOES.

Imported potatoes come from Canada, New Brunswick and Nova Scotia. The kinds are similar to those grown in the States, except those from Nova Scotia. There the main crop is Blue Mercer. From across the ocean, Scotland, England, Ireland, Germany, Belgium, Italy and France have all had small trial shipments here this year. In no case this season have the shipments been a financial success. The stock from Great Britain is usually liked in this market, and consists of Magnum, Favorite and Bruce. The potatoes from the Continent are usually too small to suit the trade, and are not handled as well, nor are they properly sorted.

New York. FURMAN & PAGE.

Regarding imports of European potatoes, our information would lead us to say now if the market gets to $1 per bushel here that there will be large imports. It is generally supposed that Glasgow sends the best stock. Potatoes have come to this country from Scotland, England, Germany, Belgium and a few from Holland. The freight figures about 15 cents a bushel, duty, 25 cents, other expenses, five cents; which would make an expense of 45 cents. We understand that they are glad to sell potatoes on the other side at 40 cents a bushel, which would make them cost delivered in this country, say 85 cents. We are told they have a good quality and good quantity this year. Buyers on this side have shunned them somewhat because the potato was black-skinned, showing it had been grown in black soil, but they cook well, and are mealy, which is the prime requisite for a good potato in the United States. The name of the variety of which most come here is Magnum. There have been many letters sent to this side regarding shipments of potatoes this year. They all hang upon how high our market will be. It is our individual opinion that next January, February and March a good many potatoes will come across. We have some doubts about our market getting to $1 this side of January 1. If the decay we hear so much about is as represented potatoes are bound to advance. We are told that Wisconsin and Minnesota have enormous crops. Maine, as you are aware, has a good crop. The trouble seems to lie in New York State. PATCH & ROBERTS.

Boston.

The Canadian Census Returns.

The farmers through this portion of the country take but very little interest in the returns given by the last census; it is a matter which one will scarcely ever hear discussed. By the bulk of the people the taking of the census is looked upon as a useless piece of work, and one which is undertaken merely to give jobs to the enumerators and other officials; consequently, when the returns are made public, no interest is taken, whatever, by them. There are some, however, who take more interest in all public affairs, but by these, for the most part, the matter is viewed with a party bias. The supporters of the present government claim that the census of 1891 was stuffed, and that therefore the gain in population is much more than is apparent, while the supporters of the opposition claim that it is owing to Liberal misrule that the people have been obliged to go elsewhere in order to gain a decent livelihood. It is not at all probable that the returns of 1891 were stuffed to any extent, as had this been the case, the matter would surely have been found out before this.

In the Province of Ontario, and possibly in many other portions of the Dominion, the birth rate is very low. Many of our young men are in the habit of seeking new homes, and what they consider better opportunities across the border. The competition of the large factories has driven most of the rural industries out of existence. These three things are the principal factors, I believe, to be considered in accounting for the small increase in population. Farm lands in this locality would not bring one-half as much as they would 20 years ago, and what is the case in this locality is probably that of most other portions, although there are, of course, exceptions in some places. Farm lands are not of easy sale, many farms being in the market for years before a buyer is found for them. Many live and up-to-date farmers are making as much or more from their farms now as in the past, but the great bulk of the farming community is not making nearly as good an income as in former years. F. H. P.

Smithville, Ont.

DISEASED CATERPILLARS.—I have just returned from a short trip up the Hudson River Valley and found there that the Fall web-worm had been a serious plague. But an interesting phase of the question presented itself: I found hundreds of the caterpillars had crawled up on to weeds and grasses and had then died from some fungous or bacterial disease. Their stiff and life-like corpses were very common in the fields, so that Nature seems to have arranged to take care of many, perhaps a large majority of this year's crop, so that they will not transform into moths for a next year's crop of eating caterpillars. It was a very interesting and instructive sight. M. V. SLINGERLAND.

COW PEAS IN WAYNE CO.—We had no frost here up to October 5 even to injure our cow peas or melons. The piece of cow peas sown in the apple orchard July 9 is now going down. A very rank growth, some of the stalks four feet long and all tangled up. Those sown in the vineyards July 25 and 26 are now about one foot high, and are still growing nicely. The Hairy vetch sown in apple orchard July 9 is now growing much better, and in open spaces between the trees is forming a thick mat. Some of the vines are three and four feet long, and well branched. The Alfalfa sown in apple orchard July 16 is knee high in the open spaces. So far I like the cow peas best, although the clover and vetch are gaining on them. B. J. CASE.

Sodus, N. Y.

Woman and Home

From Day to Day.

JOHNNY'S QUESTIONS.

Johnny's strapped his books and slate, and started off to school;
He's enjoined to study well and mind the teacher's rule;
He's advised to con his books and every lesson learn,
So that he may thrill the land when it comes his turn.
That is why his father has a most important task—
He must find the answers for the questions John will ask.

"Why don't water run up hill? Why don't scarecrows fly?
When was Julius Cæsar born? How'd he come to die?
Give a list of Presidents. Where is Reykjavik?
How is it that seven days only make a week?
How do you spell phthisis, Pa? Who was in the ark?
Where does all the daylight stay while we're in the dark?

"Why do pickles make boys sick? When was Moses born?
Pa, how many kernels is in a grain of corn?
Pa, who was it held the pass at Thermopylæ?
Was it like a circus pass? What is Labor Day?
Pa, what does a oyster eat? Do they live in beds?
Does the little oysters' mas have to comb their heads?

"What is germs? The teacher says they're on pencils, and
Must be antisepticized 'fore they touch our hand.
She says they must be removed, or 'twill never do.
Are they like us little boys—chew the pencils, too?"
Then his Pa will drop his book, and in accents deep
Say: "It's time that boys like you were in bed asleep."

—Baltimore American.

*

OUTSIDERS often find it hard to understand the enthusiasm of the artist or scientist for his specialty. The late Professor Riley, State Entomologist of Missouri, used gleefully to recount an experience he once had while investigating a locust and grasshopper plague in the West. He overheard a station lounger say to another, in contemptuous tone: "There was a long-legged loon here to-day who rushed about like mad, ketchin' grasshoppers, and holdin' 'em up by the legs, an' lookin' at 'em through a round glass like he never seen a grasshopper afore. I could git him a bushel ef he wanted 'em, an' they wouldn't cost him a cent."

*

Two of the new blues to be fashionable during the coming season are Napoleon and Baltic, the latter a little lighter than the Russian blue so popular last Winter. Among the reds, coquelicot is simply poppy; automobile a vivid shade that is neither cerise nor magenta, yet with a vague suggestion of both; phloxine a deep dahlia tint. Delft is a pale purple, not blue, as the name implies; bishop a deep purple, lobelia a soft lilac, and cyclamen a delicate heliotrope. Java and marron are two popular browns, the latter being merely chestnut under its French name. It is said that green will be a leading color, and it appears in an infinity of shades, from palest Nile to deep chasseur and myrtle.

*

POMPONS on the Fall hats are growing larger and larger, fatter and fluffier; it is hard to say where they will stop. A great many colored feathers are used in them, but the very smartest are still of black, white or black and white. White flaked with black chenille is very popular, and is the favorite trimming on a white or mode felt outing hat. Sometimes the pompons are of stiff feathers, sometimes of hackles tightly curled, but the most popular style is of ostrich feathers. Of course they are not cheap. Lace pompons are seen with jetted centers. We also see large stiffly wired lace flowers with jetted centers and yellow silk stamens, which will be used to trim Winter hats of velvet and fur. These flowers are made in both black and white lace, the white ones sometimes having a border of fine black chenille. It seems odd to combine lace flowers with velvet and fur, but the effect is good in black and white. Combinations of black and white have been very fashionable all through the season, and promise to continue in vogue.

*

WALKING dress at the present time is so sensible that one would think it difficult for any woman who follows prevailing modes to make herself deliberately uncomfortable or unsuitably dressed. Yet it often appears as though the greatest enemy to woman's progress and advancement is woman herself, just because she doesn't seem to realize the eternal fitness of things. When she knows enough to wear a short skirt on a rainy day, she ought to realize that a frilly, lace-edged white petticoat is not the thing to wear under it, yet every wet day we see this combination. She ought to know, too, that openwork stockings and patent leather ties with three-inch French heels do not harmonize with the rainy day costume, but she insists on wearing them. Madame Midas sets the fashion with a brooch formed of a costly miniature portrait encircled with diamonds, and as a consequence all sorts and conditions of women are now wearing libelous photographs framed in tallowy mock brilliants. Turquoise matrix, its veins and splashes set in rough gold, became the fashion, and thousands of silly women pinned their belts, their collars and their untidy back hair with tawdry metal set with something that suggests blue china door knobs. We have outgrown a good many foolish and ugly customs in dress; there is really no excuse for unbecoming

3924 Girl's Apron,
4 to 12 yrs.

clothes, however inexpensive they may be. Our future development, therefore, must be in the line of personal taste, and sense of fitness.

*

A WRITER in the American Kitchen Magazine for October discusses children's work in the home, giving answers received from a number of sources as to instruction given to children, and the help required of them. The most satisfactory response received was the following:

From the time I was five to 14 years old the work given me was for my training. It was regularly assigned, small in amount, and *always inspected*. If it was poorly done, it had to be done over again. It consisted at first in sewing. At 11 years I had made five quilts and had hemmed towels, napkins, etc. From 11 to 14 I learned to cut and make underclothes, and I made a cambric dress alone the last year. Then cooking. I commenced at 10 or 11 years. At first I learned to prepare vegetables, then meats, bread and cake making followed. From eight to 11 years I was taught the regular work in the care of the home: (1) dusting the sitting room; (2) care of the front stairs; (3) making beds; (4) lamps; (5) cleaning the lower cupboards in the pantry on Saturday; (6) cleaning the clothes closets at house-cleaning time. I occasionally wiped dishes.

That outlines a model course of home instruction. Any system of education which keeps a girl too busy to learn

3927 Child's Dress,
6 Mo. 1, 2 and 4 yrs.

anything about housekeeping during the formative period of her life is a failure in fitting her for the career she is most likely to follow.

The Rural Patterns.

Plain woolen Winter frocks cause a demand for little white aprons, either for school or home wear. The pattern shown is a very simple and pretty style. To cut this apron for a girl eight years of age, 2¼ yards of material 32 inches wide will be required, with 2½ yards of edging, 2⅜ yards of insertion, and ⅝ yard of additional material for sash ends. The pattern No. 3924 is cut in sizes for girls of 4, 6, 8, 10 and 12 years of age; price 10 cents from this office.

Pointed yokes, with bretelles falling over the shoulders, are exceedingly becoming to the little folk, and make a charming effect. This dainty frock is made of sheer Persian lawn, with all-over tucking and trimming of Valenciennes lace, but the design is suited to all fabrics used for children. The yoke is square at the lower edge and to it is attached the full skirt portion. The bretelles are shaped and slightly full; falling in soft folds. The sleeves are in guimpe style with frills falling over the hands, and the neck is finished with a straight hand or narrow collar. To cut this dress for a child two years of age 2½ yards of material 32 inches wide will be required with ¼ yard of tucking and 3⅞ yards of insertion to trim as illustrated. The pattern No. 3927 is cut in sizes for children of six months, 1, 2, and 4 years of age; price 10 cents.

A Photographic Competition.

PRIZES FOR PICTURES OF HOUSEHOLD SUBJECTS.

THE R. N.-Y. numbers many amateur photographers among its readers, and we receive, from time to time, interesting and novel pictures, which are reproduced in our columns. But there is one class of subjects which seems to receive very little attention, and that is the domain of the women folks. The picture makers like to take a shot at the new raspberry patch, or the barn, or the cow, but the comfortable storm door, the pantry that saves steps, or the way the boys help Mother when she has had an extra hard day, is neglected. To encourage this neglected field the Woman and Home Department offers the following prizes for the best pictures illustrating domestic subjects:

First Prize, $7.00.
Second Prize, $5.00.
Third Prize, $3.00.

The subject should illustrate, preferably, some idea or convenience, comfort, or saving of labor, but domestic episodes which form effective pictures will be considered. We desire photographs that show something, but that will also make attractive pictures. The prize winners will be asked to furnish descriptive notes to accompany the illustrations. The competition will be open until December 1. In addition to the prize-winners, other pictures which, though failing to receive a prize, are still considered worthy of use in illustrating, will be paid for upon use at our regular rates. Address all matter relating to this to the Woman and Home Department of THE R. N.-Y.

LIVE in a thankful spirit, and you will find more and more to be thankful for. Begin by resolving not to forget your mercies, and you will gradually come to feel the thought of them a constant inspiration to happiness.—Brooke Herford.

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The Rummage Sale at Crooked Creek.

When the Rev. Mr. McPherson, pastor of the Crooked Creek Immanuel chapel, announced from his desk that the Woman's Missionary League would hold a rummage sale, and that he hoped that everybody would contribute to it generously, a rustle of interest spread through his congregation. It is to be feared that during the remainder of the morning's service the topic of rummage sale was uppermost in the minds of the people, and that when church was out rummage sale, not sermon, formed the subject of discussion. Now, first to be settled, what was a "rummage sale?" Those in ignorance were enlightened by the better informed. A rummage sale—why, it was just what the term implied. The Crooked Creekers were expected to dig and to delve in garrets, and closets, and clothes-presses, and collect all their cast-away clothing and donate it to the sale, to be disposed of to the poor and needy.

The idea was deemed excellent. It took violently. The good housewives of Crooked Creek zealously devoted themselves to it, and long-forgotten depths, many a dark and slumberous corner, were ruthlessly invaded. What strange relics were unearthed in the eozoic strata of attic and of dusty trunk! Trousers and coats, hats and stockings for male and female, shoes, neckties, underwear, bandanna handkerchiefs, etc., ad infinitum, blinking at the day, and mutely protesting, no matter how spruced up, at thus being exposed, were conveyed to the chapel until it resembled the old curiosity shop, or a portion of a ghetto.

One of the most active promoters of the plan was Mrs. Riggs—popularly referred to as Mrs. *Deacon* Riggs. Unfortunate woman, at best the material she had available for the sale was scant indeed. Mrs. Riggs, as every one knew, was obliged to wear and wear and wear her clothes; and when finally she discarded them they made pretty hard picking for even the most greedy. In short, Deacon Riggs, her husband, was as close-fisted a man as ever existed in fact or fancy. He squeezed a dollar so that the whole household shared in the eagle's suffering. Like numerous other women similarly environed, Mrs. Riggs, repressed in her own home by an unsympathetic spouse, was fain to seek relief elsewhere. Her waters of human kindness and of benevolence, effectually walled and sealed by the deacon, found outlets at a distance. To her the rummage sale came as a comforting opportunity.

But what could she do? Little enough, she sadly ascertained, inasmuch as among the family garments not in actual use, was hardly one which she was not quite ashamed to send. Patched and darned, dyed and "turned," alas, a sorry collection. Nevertheless, by spirit of well-doing she tried to atone for lack of results, and she bent herself to trim a venerable hat, which had been new when she was a bride and which, in various guises, year after year through two score changing styles had done duty almost up to the very present. Although it was entitled to uninterrupted retirement she now dragged forth the battered frame, and proceeded to rehabilitate it. She was determined that at least *this* donation should be worthy, and not plainly something miserable and unserviceable. The poor have their self-respect, and it should be heeded.

She grew enthusiastic over her task; and her nimble fingers, accustomed, heaven knows, to making over and over fairly surprised her. The reward was a really decent bonnet, and Mrs. Riggs felt deservedly triumphant. To be sure, no amount of ribbons and buckles and what-nots could conceal the fact that the hat was extremely passé. Still, beside the other articles it was not unattractive. Indeed, it shone. Satisfied with her success, and vastly relieved at bidding good-bye forever to the bonnet, Mrs. Riggs hastened to send her contribution to the chapel.

The sale opened gloriously, and drew not only the people for whom chiefly it was designed, but many in addition who were impelled by curiosity, or by the purpose to secure a piece of apparel suitable for rough and soiling work—felt thereby they might help along the cause. Plenty of stock for all was in sight. As befitting a leading member of the congregation, mingling with the flow of customers and of spectators was Deacon Riggs, his furtive eyes twinkling, and his pursed lips occasionally expanding into a smile. A town character was Deacon Riggs; not a boy but at whom he had wrathfully shaken his stick, not a citizen but had, some time or another, been incensed by him. Now he strolled down the main aisle, peering right and left, as prodigal with his greetings as he was penurious with his pennies. At the end of the aisle he brought up in front of the hat booth. Here he hesitated, ere going farther on his tour of investigation.

"Bunnits, hey," he said, casually, addressing in a general way the proprietor.

"Yes, Deacon, take your choice," responded Mrs. Shaw, inside, with a smile of invitation.

The Deacon awkwardly fingered the headgear within his reach, acting as does the average man when confronted

3857 Box Coat, 32 to 40 in. bust.

3859 Girl's Three-quarter Coat, 4 to 12 yrs.

by a display of millinery. To the Deacon all hats looked alike.

"Humph!" he uttered, in a ruminative chuckle.

"How much for that there contraption?" he inquired, pointing with his cane.

"Only $4," promptly answered Mrs. Shaw. "It's real tasty, too."

"Purty high," mumbled the Deacon, with a disapproving shake of his white hairs.

"Why, Deacon Riggs!" remonstrated Mrs. Shaw. "That hat, if bought in a store, would cost you at least $10."

"Humph!" grunted the deacon.

"It's altogether too nice for such a sale," continued Mrs. Shaw. "See!" and she displayed it to more advantage, smoothing a ribbon in one spot, and encouraging a bow in another.

"Four dollars the best you kin do?" queried the deacon.

Mrs. Shaw, suspecting that he was in a jocular mood, fell in with his humor.

"The very best—yes, indeed," she asserted. "Want to try it on? There's a glass."

"Not much," retorted the deacon. He puckered and repuckered his thin lips. "I dunno," he resumed, reflectively, "but what you might ez well wrap it up for me, and I'll take it along. Pay you tomorrer."

Mrs. Shaw narrowly escaped fainting at the sudden termination, and one entirely unexpected of her efforts.

"Like ez not I'll find some pusson to give it to," said the deacon, as if in apology; "and it's boostin' the church a leetle, at the same time."

Without ado Mrs. Shaw, fearful lest the purchaser should weaken and change his mind, precipitately delivered the hat.

When the deacon had returned home that noon he went through into the kitchen, where Mrs. Riggs had been busy all the morning.

"Here, Marier—I've fetched you a sort of present," he announced, extending to her a bunchy, unsubstantial appearing package.

Mrs. Riggs eagerly grasped it. She loved surprises of a pleasant nature, and she rarely had them.

"Seems like you've been sayin' you needed a new bunnit," said the deacon, while his flushed wife fumbled at the pins, "and I've been holdin' off until money was a bit looser; but this mornin' I come acrost somethin' down town, and I says to myself, says I—."

Mrs. Riggs had removed the wrappings. The contents were exposed.

"There!" exclaimed the deacon, complacently. "Suits ye, doesn't it?"

His wife turned red, then pale. The deacon attributed her emotion to pleasure.

"Try it on, try it on," he urged, heartily.

The hat rolled to the floor. Mrs Riggs, stifling a strong desire to kick it, stooped and lifted it, with none too gentle a hand.

"No, not just now," she answered faintly. "I—I must get dinner. But thank you—very much, Saul."

Did a shade of sarcasm manifest itself in the concluding words, or did it not? At any rate the deacon, grandly moving on his way to the sitting room, was oblivious of it. Left alone in the kitchen, Mrs. Riggs slammed—yes, slammed—the hat—her hat—this hat which she had trimmed only 24 hours previous, and which she had fervently hoped never to see again—upon the cluttered pine table.

"Darn!" ejaculated Mrs. Riggs, in a sob, to her own great astonishment, and the scandal of the tea-kettle.—Edwin L. Sabin, in What to Eat.

Rural Recipes.

Vienna Apple Pie.—Peel and core five large apples; boil them in a little water till soft enough to press through a sieve; sweeten with three tablespoonfuls of sugar and flavor with half-teaspoonful of pistachio; beat the yolks of two eggs and add to the apples. For a Vienna apple pie use a lower crust only; bake it; fill with the apple; beat the whites of three eggs and one tablespoonful of sugar to a stiff froth; spread evenly over the top and brown slightly in a moderate oven. Eat cold.

Chocolate Boiled Icing.—Boil one cupful of granulated sugar with one-third of a cupful of water until it will thread when dropped from a spoon, remove from the fire and add two squares, eighth of a pound, of grated chocolate; add a teaspoonful of vanilla extract and then beat it slowly into the whites of three eggs which have been whipped to a froth. Spread over the cake at once.

Corn Biscuits.—Boil two cupfuls sweet milk; when cold stir in one cupful cornmeal; add one-half cupful soft yeast, two cupfuls wheat flour. Set to raise over night. In the morning add three well-beaten eggs, one cupful white sugar, one-half cupful melted butter, two-thirds cupful flour, one teaspoonful salt; set in a warm place to raise. When light stir in 1½ cupful flour, roll into biscuits, set to raise as before; when light bake in a moderate oven.

Cream Pie.—One cupful thick sweet cream, one cupful sugar, one small tablespoonful flour. Stir all together, add the whites of two eggs well beaten the last thing; flavor to suit the taste, and bake in one crust.

Wine Jumbles.—One cupful sugar, one cupful lard, one cupful molasses, one cupful currants, two teaspoonfuls soda stirred in molasses, one teaspoonful cinnamon, one teaspoonful cloves, one teaspoonful ginger, one teaspoonful salt, a little pepper, one cupful sour milk, one egg. Stir stiff with flour, drop on tins, sprinkle with sugar, and bake.

Dutched Red Cabbage.—Remove the outer leaves from a fine head of red cabbage and chop or shred; cover with cold water and let stand for an hour. Drain, and for each quart allow one tablespoonful of butter, one heaping tablespoonful of finely chopped onion, one-half of a teaspoonful of salt, a pinch of mace and two tablespoonfuls of vinegar. Cover and cook slowly until tender, adding one teaspoonful of sugar when half done.

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MARKETS

THE WEEK'S QUOTATIONS.

WHOLESALE PRICES.

NEW YORK, OCTOBER 12, 1901.

GRAIN.—Wheat trade is dull. The movement of the crop in the northwest is hindered by rains. Corn is one cent down from last report.

Wheat, No. 1, N'thn Chicago..	—	@	75⅛
No. 1, Northern Duluth.....	—	@	75¾
No. 2, red, elevator.....	—	@	74⅛
Corn, No. 2, mixed, elevator....	—	@	61⅜
Oats, No. 2, mixed.....	—	@	38¾
Rye, No. 2, W'n, f. o. b., N. Y..	—	@	60
Barley, malting, new crop.....	59	@	62½

BEANS.

Marrow, 1900, choice, bu.....2	65	@2	70
Fair to good.....2	45	@2	60
Medium, 1900, choice.....2	05	@2	10
Pea, bbls., 1901, choice.....	—	@2	15
1900, choice 2	07½	@2	10
Red kidney, 1900, choice.....2	45	@2	50
Common to good.....2	10	@2	40
White kidney, choice.....2	25	@2	30
Black turtle soup, choice.....1	85	@1	90
Italian, medium 1	90	@1	92½
Other foreign, medium.....1	70	@1	85

FEED.

Spring bran, coarse.....17	00	@17	50
Winter bran 18	00	@18	50
Red Dog 22	00	@22	50
No grade flour.....	—	@22	20
Unsound wheat, per 100 lbs...	67	@	70
Linseed meal, ton.....29	00	@30	00
Cottonseed meal, ton.....	—	@25	00

HAY AND STRAW.

Hay, No. 1.....	82½	@	85
No. 2	75	@	80
No. 3	62½	@	65
Clover	50	@	55
Clover, mixed	60	@	70
Straw, rye, long.....	55	@	75

SEEDS.

Clover, per 100 lbs.....10	00	@11	25
Timothy, per 100 lbs..... 5	00	@ 5	50
Millet, per lb.....	2	@	2⅛
Sunflower, per lb.....	4	@	4½
Rape, German, per lb.....	3½	@	3⅝

MILK.

New York Exchange price 2¾ cents per quart in 26-cent freight zone.

BUTTER.—The recent advance of one-half cent for extras has not been sustained except in exceptional cases. Trade in under grades is dull.

Creamery, extra, per lb.....	—	@	22
Firsts	19	@	21
Seconds	17	@	18½
Lower grades	15	@	16
June, extras	21	@	21½
June, seconds to firsts.....	18	@	20½
State dairy, tubs, fancy.....	18	@	19
Tubs, seconds	16	@	17
Tubs, thirds	14	@	15
Tins, etc.....	14	@	20
W'n imitation creamery, fancy.	17	@	18
Firsts	15	@	16
Lower grades	14	@	14½
W'n factory, June, good to ch.	14½	@	15
Fresh, firsts	14½	@	15
Fresh, seconds	14	@	14¼
Lower grades	12½	@	13½
Renovated butter, fancy.....	17½	@	18
Common to choice.....	13	@	16½
Packing stock	12	@	14

CHEESE.

Full cream, col'rd, small, fancy.	—	@	10¼
Colored, small, choice.....	9¾	@	10
White, small, fancy.....	—	@	10
Small, white, choice.....	9½	@	9¾
Small, good to prime.....	9¼	@	9⅜
Colored, large, fancy.....	—	@	9¼
Colored, large, choice.....	9	@	9⅛
White, large, fancy.....	—	@	9¼
White, large, choice.....	9	@	9⅛
Large, good to prime.....	8½	@	8¾
Common to fair.....	7	@	7¼
Light skims, small, choice.....	8½	@	8¾
Large, choice	7½	@	7¾
Part skims, prime.....	6¾	@	7¼
Fair to good.....	5	@	6¼
Common	3	@	4
Full skims	1½	@	2½

EGGS.—Offerings suitable for the highest class trade are scarce. Many of the arrivals are badly mixed with defective stock.

QUOTATIONS LOSS OFF.

State & Pa., avge. prime, doz..	—	@	23
W'n, fresh-gathered, choice, dz.	—	@	22½

QUOTATIONS AT MARK.

Nearby, State and Pa., fresh-gathered, fancy, selected, dz.	24	@	26
Average best lots.....	—	@	22
W'n, fresh-gathered, N'th'ly sections, candled, selected..	—	@	21½
Regular packings, N'n sects..	18	@	21
Granded, Southerly sections..	19	@	20
Regular packings, S'th'ly secs.	16	@	18½
Fresh-gathered, dirties	13	@	15
Checks	12	@	12½
Refrigerator, per doz.....	15½	@	18

COUNTRY-DRESSED MEATS.

Calves, veal, prime, per lb.....	—	@	10
Fair to good, per lb.....	9	@	9½
Common to medium, per lb....	6	@	8
Buttermilks, per lb.....	7	@	8
Grassers, per lb.....	5	@	5½
Pork, Jersey, dressed, light, lb.	9	@	9¼
Jersey, dressed, medium, lb..	8¾	@	9

LIVE POULTRY.

Spring chickens, per lb.....	—	@	9
Fowls, per lb.....	—	@	9½
Roosters, per lb.....	—	@	5½
Turkeys, per lb.....	8	@	10
Ducks, avge. Western, pair.....	50	@	60
Average Southern, per pair..	40	@	50
Geese, avge. Western, pair.....1	00	@1	25
Average Southern, per pair...	80	@1	00
Pigeons, mixed, per pair.....	—	@	15

DRESSED POULTRY.

FRESH PACKED—ICED.

Turkeys, Spring, dry-picked, lb.	10	@	12
Scalded, per lb.....	8	@	10
Broilers, Phila., over 4 lbs. to pair, per lb.....	18	@	20
Phila., mixed sizes, per lb.....	12	@	15
Penn., fair to good, per lb....	10	@	14
Ohio & Mich., scalded, per lb..	10	@	10½
Other W'n, dry-picked, lb....	10	@	10½
Other W'n, scalded, lb.....	—	@	10
Poor to fair, dry-picked or scalded, per lb.....	6	@	9
Fowls, W'n, dry-picked, prime.	—	@	10
Western, scalded, prime.....	—	@	10
Southw'n, dry-picked, prime..	9½	@	10
W'n & S'thw'n, poor to good.	6	@	9
Old roosters, per lb.....	6	@	6½
Ducks, Spring, L. I., and other nearby, per lb.....	14½	@	15
Western	7	@	10
Geese, Spring, Eastern.....	12	@	15
Squabs, choice, large, dark.....2	75	@3	00
Mixed, per doz.....1	75	@2	00
Dark, per doz.....1	25	@1	50
Culls, per doz.....	50	@1	00

GAME.

Grouse, per pair.....1	00	@1	25
Partridges, per pair.....2	00	@2	50
Woodcock, per pair.....	—	@1	50
English snipe, per doz.....	—	@2	50
Golden plover, per doz.....	—	@2	50
Grass plover, per doz.....1	50	@2	00
Wild ducks, canvas, per pair....2	50	@3	00
Red head, per pair.....1	50	@2	00
Mallard, per pair.....	75	@1	00
Teal, blue wing, per pair.....	60	@	75
Teal, green wing, per pair....	40	@	50
Common, per pair.....	25	@	30
Rabbits, per pair.....	30	@	35
Venison, saddles, per lb.....	—	@	30

HONEY.

N. Y. State, clover, comb, fcy, per lb.....	15	@	15½
Clover, comb, fair to good, lb.	12	@	14
Buckwheat, comb, per lb.....	10	@	11
California, extracted, per lb....	6½	@	7½

DRIED FRUITS.

Apples, evaporated, 1901, fancy, per lb.....	—	@	10
Evaporated, 1901, choice.....	—	@	9
Evaporated, 1901, prime.....	8½	@	8¾
Evaporated, 1901, poor to good.	6	@	8
Evaporated, 1900, fancy, lb....	—	@	9½
Evaporated, 1900, choice, lb...	8¾	@	9
Evaporated, 1900, prime.....	8¼	@	8½
Evaporated, 1900, common to good, per lb.....	6	@	8
Sun-dried, 1901, per lb.....	4½	@	5½
Chops, per 100 lbs.....1	50	@2	25
Cores and skins, per 100 lbs...1	25	@2	00
Raspberries, evaporated, 1901, lb.	23½	@	24
Sun-dried, 1901, per lb.....	20	@	22
Blackberries, 1901, per lb.....	6¾	@	7
Huckleberries, 1901, per lb.....	16	@	17
Cherries, per lb.....	13½	@	15½

FRESH FRUITS.

Apples, Alexander, per bbl....	3	50	@ 4 50
Wealthy, per bbl.....	3	50	@ 4 50
Jonathan, per bbl.....	3	00	@ 4 00
Snow, good to choice, bbl..	3	00	@ 4 50
King, per bbl.....	3	00	@ 4 00
Ben Davis, per bbl.....	2	50	@ 3 50
Greening, per bbl.....	3	00	@ 4 50
Twenty-oz., hand-pkd, bbl..	3	00	@ 4 00
Fall and York Pippin, bbl..	3	00	@ 4 00
Holland Pippin, per bbl.....	3	00	@ 4 00
Pound Sweet, per bbl.....	3	00	@ 3 50
Fall varieties, com. to fair..	1	75	@ 2 50
Baldwin, prime, per bbl.....	3	00	@ 3 50
Ordinary hard, red, fair to prime, per bbl.....	2	25	@ 2 75
Ordinary hard, red sorts, inferior, per bbl.....	1	50	@ 2 00
Windfalls, per bbl.....	1	25	@ 1 50
Pears, Bartlett, fancy, bbl....		—	@ 4 00
Bartlett, average lots, bbl..	2	50	@ 3 50
Bartlett, prime to fcy, keg..	1	25	@ 1 50
Seckel, fancy, per bbl.....	3	50	@ 4 50
Seckel, fair to prime, bbl...	2	00	@ 3 00
Beurre Bosc, per bbl.....	2	00	@ 3 00
Beurre Clairgeau, per bbl...	2	00	@ 2 50
Beurre d'Anjou, per bbl.....	2	00	@ 2 50
Sheldon, per bbl.....	2	00	@ 2 50
Other late kinds, per bbl....	1	75	@ 2 00
Nearby, common, per bbl...	1	00	@ 1 50
Quinces, per bbl.....	2	25	@ 3 25
Peaches, Pine Island, carrier.	1	75	@ 3 00
Pine Island, per basket.....		50	@ 1 50
Up-river, per pony basket..		40	@ 75
Up-river, per 2-bkt. carrier.		75	@ 1 50
Ohio & Mich., bu. bkt.....	1	00	@ 2 25
Grapes, up-river, Del., carrier.		75	@ 1 00
Up-river, Niagara, carrier..		60	@ 1 00
Up-river, black, carrier.....		40	@ 50
W'n N. Y., Del., small bkt..		12	@ 14
W'n N. Y., Niagara, sm. bkt.		9	@ 14
W'n N. Y., black kinds, s. b.		7	@ 8
Wine grapes, black, per ton.30		00	@33 00
Wine grapes, Del., per ton..38		00	@50 00
Wine grapes, white, per ton.35		00	@40 00
Muskmelons, far W'n, good to choice, per crate.....	2	50	@ 2 75
Far Western, poor to fair..	1	50	@ 2 00
Cranberries, Cape Cod, fancy, large, late varieties, bbl...	6	25	@ 6 50
Cape Cod, Early Black, fancy, dark, per bbl.....		—	@ 6 00
Cape Cod, med. color, bbl..	5	50	@ 5 75
Cape Cod, poor to fair.....	4	50	@ 5 25

VEGETABLES.

Potatoes, L. I., per bbl.....2	25	@2	50
Maine, prime, per bag.....2	00	@2	12
Maine, per 180 lbs.....2	00	@2	12
Maine, inferior 1	25	@1	75
State & Western, prime, bbl...1	87	@2	12
Albany & Troy, prime, bbl...1	87	@2	12
State & Western, inferior....1	25	@1	75
Jersey, per bbl.....1	50	@1	87
German, prime, 112-lb. bag...1	40	@1	50
German, common, 112-lb. bag.1	00	@1	25
Scotch, Magnum, 168-lb. bag..		—	@2 00
Sweet Potatoes, So. Jersey, bbl.1	50	@2	00
Yellow, Va., per bbl.....1	12	@1	25
Beets, Jersey & L. I., 100 bchs..1	00	@1	25
Brussels sprouts, per qt.....		6	@ 12
Cauliflowers, per bbl.....1	25	@3	00
Celery, State & W'n, doz. roots.		15	@ 30
Carrots, L. I., per bbl.....		75	@1 00
Corn, Jersey, per 100.....		75	@1 75
Cabbages, L. I., Flat Dutch, 100.3	00	@4	00
Cucumbers, Shelter Island, bbl.5	00	@6	00
Eggplants, Fla., per bbl.....3	00	@4	00
Lima beans, Jersey & L. I., Potato, per bag.....	75	@1	25
Jersey, flat, per bag.....	60	@	75
Lettuce, nearby, per bbl.....	75	@1	25
Onions, pickle, white, per bbl..3	00	@4	00
Orange Co., white, per bag...1	50	@2	50
Orange Co., red, per bag.....2	00	@2	50
Orange Co., yellow, per bag..2	00	@2	25
Orange Co., inferior, bag.....1	00	@1	75
Connecticut, white, per bbl...2	00	@3	50
Connecticut, yellow, bbl.....2	25	@2	50
Connecticut, red, per bbl.....2	50	@2	75
State & W'n, yellow, bbl.....2	00	@2	40
State & W'n, red, per bbl.....2	50	@2	75
Peppers, Jersey, green, bbl.....		50	@ 75
Jersey, red, per bbl.....1	00	@1	25
Peas, Va., per ½-bbl. basket....1	00	@2	50
Squash, Hubbard, per bbl.....		—	@1 00
White, per bbl.....1	00	@1	25
Marrow, per bbl.....		90	@1 00
String beans, J'y & L. I., bag..		50	@ 75
Southern, per ½-bbl. basket..		50	@ 60
Turnips, Jersey, Russia, box...		—	@ 90
Canada, Russia, per bbl.....		85	@ 90
Tomatoes, fancy, Acme, bu. bx.		60	@ 75
Acme, fair quality, bu. box...		40	@ 50
Common, per box.....		35	@ 45

WANTED—A trusty girl for general housework in New York City. Plain cooking. Must be pleasant with children. Send references with particulars, age, experience, etc A good home for worthy person. Wages, $20 per month. Address EMPLOYER, care THE R. N.-Y

BUSINESS BITS.

THE Standard Paint Co. cites instances where the P. & B. paper after being eight years in use, has been removed and found to be practically as good as when first put on. It is much used in the construction of poultry houses, stables, barns, etc., where its airtight and waterproof qualities make it invaluable. If your dealer does not keep it write to Standard Paint Co., 100 William St., New York.

AMONG the very first of the incubator and brooder concerns of the country to advertise in our columns was the "Reliable," of Quincy, Ill. The Reliable goods are reliable in works and results as well as in name, and those of our readers who contemplate the purchase of machines of this class can do no better than to buy the time-tested old Reliable. Their 20th Century Catalogue is, as usual, a work of great value. Write them to-day for a copy. Address Reliable Incubator & Brooder Co., Quincy, Ill., and mention this paper.

NEW conveniences are making farm work easy. Low-down metal wagons and the wooden-geared wagon with metal wheels are the greatest boon of recent years. They reduce weariness of both men and teams, and maintain the meadows, pastures and public roads in good condition. The Havana Metal Wheel Co., Havana, Ill., has patented a grooved metal tire, the superiority of which is acknowledged. This large factory turns out immense numbers of these grooved wheels, offering the best to all users of farm wagons with any sized skein. Their free catalogue gives much information and will be sent from Havana on request.

THE secret of the almost endless variety of dishes which the skilled chef can produce from a few ingredients, lies in the fact that he utilizes every scrap of material. In his skillful hands left over, and to the average cook, waste food is transformed into the most savory dishes. The ordinary housekeeper lacks the experience of these past masters of the culinary a but modern ingenuity has made the same results possible in every home. The Enterprise food chopper minces fish, meat, fruit or vegetables to any degree of fineness and will make nut butter. The Enterprise Manufacturing Company of Penna., Philadelphia, are the makers of this machine, but they are sold by all hardware and general stores everywhere. "The Enterprising Housekeeper"—a valuable culinary help—containing 200 choice recipes will be sent to any one sending the company four cents in stamps.

DANBURY (CONN.) FAIR.—The thirty-third annual fair and cattle show of the Danbury Agricultural Society was held from October 7 to 12 inclusive. This exhibition has long been the chief fair of western New England, and unlike most local fairs, it grows from year to year. The exhibits and attendance were larger this year than ever before, notwithstanding the partial failure of the fruit and vegetable crops in this part of New England. The main building was filled with vegetables and fruits. A feature of this building was the exhibit of honey by I. J. Stringham, of New York, and G. W. Hatch, of Brookfield, Conn. The implement tent was well filled as usual. The wire fence men were out in full force. The poultry and pet building is one of the chief attractions of the fair. The dog show is considered one of the best in the country. The cattle department was well filled but showed but little if any improvement over previous years. The Hood Farm exhibit of Jersey cattle and Berkshire swine was an important feature of the cattle department. The attendance exceeded all previous records. J. H. G.

Wants, For Sale or Exchange

WANTED—Farmers and Dairymen, $30 to $50, with house or board. Only competent men with good references. The Rural Agency, Durham, N. H.

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Real Estate Agents please enclose their card.

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Glenn County, California,
FOR SALE IN SUBDIVISIONS.

This famous and well-known farm, the home of the late Dr. Glenn, "the wheat king," has been surveyed and subdivided. It is offered for sale in any sized government subdivision at remarkably low prices, and in no case, it is believed, exceeding what it is assessed for County and State taxation purposes.
This great ranch of 40,000 acres runs up and down the western bank of the Sacramento River for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.
The river is navigable at all seasons of the year, and freight and trading boats make regular trips.
The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.
For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,
F. C. LUSK,
Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, of Chico, Butte County, California.

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Envelopes, p'd, 500 $1.50; Letterheads, same, 125 ea., $1; Tags, 500, $1, deliv'd. Cards with stock cuts 50c. 100 up. Sam. 2c stamp. H. Sedgwick, Cornwall Hollow, Ct

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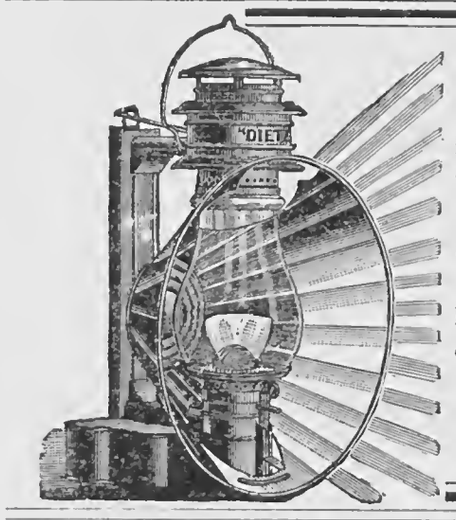

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The lamps are strongly made, perfectly safe and very economical to use. They burn kerosene (coal oil), and very little of it considering the fine light they give. To introduce, we offer to send one of either size, freight prepaid, at a reduced price.
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FEEDS AND FEEDING

NEXT WINTER it will be necessary for our farmers to study the question of stock foods. Corn, the great stock grain, will be high in price, and substitutes must be provided for it. How can these substitutes be found? Only by comparing other and cheaper foods with corn, and knowing beforehand how they will affect the animal. This comparison may be done by studying analyses, but a farmer cannot afford to spend the Winter in experimenting. He must know beforehand what others have found out. He can learn this by studying Prof. W. A. Henry's great book. Feeds and Feeding tells you just what you ought to know about foods and how to feed them. It is full and complete, and easy to read. Price, $2.
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409 Pearl St., New York.

MARKET NOTES

STREET ARTISANS.—The traveling knife grinder has been mentioned in this column. Another of these street mechanics often seen about the markets is the saw filer. Almost anyone can hold a knife on a grindstone, but considerable skill is required to sharpen a saw properly, and a greenhorn can easily spoil the tool. His vise is fastened to a light frame which can be carried about and set up where desired. Constant practice makes him an expert at the business, and it is surprising to see the speed with which he can handle the file, even on the fine teeth of meat saws. On saws that require setting he uses a small hammer, hitting every other tooth a light blow; then turning the saw over and going through the same operation on the other side. Another street genius goes about the up-town residence districts. His outfit is more extensive, as he has a horse and covered wagon with tools for doing all kinds of household mending. Leaky pans, broken umbrellas and disabled chairs are speedily put in order at a reasonable price.

POTATOES.—For the past two or three weeks prices have been on a decline. There appears to be no well-grounded reason for believing that the crop is much larger than was expected earlier in the season. The large receipts at present are accounted for by the fact that just now a great many people are digging, and it is a custom with some to sell at digging time, when a fair price is to be had, rather than take the risk of Winter storage. There is considerable said about foreign potatoes, and imports are rather large at present. Buyers, however, do not take hold of these foreign receipts very readily, as size and quality are rather under the average of home-grown stock. In one bag of German potatoes that I examined the tubers would not average one inch in diameter, and some were but little larger than buckshot. Just why such a lot of culls should be shipped such a distance is a mystery. Sweet potatoes are considerably under Irish in price, and are being used to some extent as a substitute.

HONEY.—The yield this year appears to be above the average. It is thought that California will ship nearly 300 cars, about four times last year's output. Prices are slightly lower all around, but the most noticeable reduction is in extracted. There is seldom any excess of the better grades of comb in the New York market, and the price will probably continue high. On account of the difficulty in transporting comb honey any great distance, a large part of the California and West Indian product is extracted and shipped in casks. It is doubtful whether much adulteration is done at the shipping points, as the honey itself is there worth but little more than the adulterants that might be used. The dealers here, however, take it from the casks, melt and doctor it up, and doubtless many of them work in low-grade syrups. Still by buying of responsible dealers it is possible to get a fair quality of extracted honey which is nearly pure. Of course, it cannot be expected that the extracted goods, though entirely pure, will equal in flavor that put up by the bees in air-tight cells, which are not broken until they reach the table of the consumer.

EGG NOTES.—"Yes," said an extensive egg man, "strictly fresh eggs are offered for sale in New York, but in reality very few have any right to that name. For 20 years I lived in the city, and did not know the taste of a really fresh egg until I moved out where I could keep hens myself. Any quantity of eggs that are put into the refrigerators in good condition, especially April receipts, are, after several months' storage, taken out and sold as fresh. Even the best groceries that cater to the fancy trade, handle them, and most people don't know the difference. There is one purpose, however, that they will not do for, and that is poaching. If at a hotel you get a poached egg that does not break and holds its shape well, you may be reasonably sure that it is fresh. Dealers often come to me for eggs that will poach, and I have to refuse them, for I know that even the best of held eggs will not be satisfactory. I have been amused at moderate-priced hotels and restaurants to see a customer ask for poached eggs, and get them fried or scrambled. The waiter is very sorry, but understood the customer to give the order in that way, and in most cases the man will not care to send them back and wait for another order. The trouble was that the cook did not have any eggs that would poach properly."

W. W. H.

FARMERS' NATIONAL CONGRESS.

THE DELEGATES.—The twenty-first annual session of the Farmers' National Congress was held in Sioux Falls, S. D., the first week in October. There has been some criticism of the personnel of this Congress. It has been claimed that it did not fairly represent the farmers' views and interests. No such criticism could fairly be made of the present body. As far as I was able to learn every delegate owned and operated a farm, though some of them had other interests also; but more important is the fact that they were a clear-headed, intelligent, and fair-minded body of men. The different propositions received deliberate consideration. The farmer's position was brought out with great clearness, and his rightful interests were supported in every contention. I have attended farmers' meetings for 20 years. Never in that time did I meet a more representative class of farmers, and never were the agricultural interests more clearly separated from the deceptive contentions of other enterprises.

SUBJECTS OF DISCUSSION.—The important commercial interests discussed were: Ship subsidy, the Nicaragua Canal project, the irrigation of arid lands and oleomargarine. How the friends of the Subsidy scheme got before the Congress no one seemed to know. It was introduced in a paper read by F. B. Thurber, of New York. He had not proceeded far when it was apparent that there was no sympathy with his proposition, and his resolution favoring the scheme was promptly turned down in the committee. It was the first emphatic rebuke to those who would use the influence of the Congress to further ends of the farmers' enemies. The proposition to irrigate the arid lands of the West received less support than I had anticipated. Some of its advocates are willing to concede that the necessity for it does not exist at the present time, and most of them are content for the present if they can prevent the lease or grant of them under any terms to syndicates, who would control them, to the exclusion of actual settlers. The importance of the Nicaragua Canal to the farmers of the Southwest was ably discussed in a paper by Hon. Harvie Jordan, of Monticello, Ga., agricultural editor of the Atlanta Journal. He was entirely familiar with the subject, and the sympathy of his hearers was with him from first to last. His resolution favoring the early construction and control of the Canal by the National Government was promptly approved.

THE OLEO QUESTION.—This developed considerable interest. Chas. V. Knight, of Chicago, opened the subject in a paper entitled "The Truth About Oleo." He told the truth and apparently the whole truth. He showed by letters from manufacturers to dealers that the retailers were incited to violate the law governing its sale, by assurance of unusual profits, and protection in case of prosecution. These letters had guaranteed to imitate any color of butter produced by the farmers in the retailer's neighborhood, and assured them that the oleo, which costs nine cents a pound to manufacture, could then be sold as butter for 25 cents a pound, the then prevailing price of butter. He also showed that the talk about its being the poor man's butter is a cheat, because the poor man always thinks he is getting butter, and pays butter prices for it. The value of the trade to the cotton grower and live stock grower was shown to be insignificant, if indeed it is of any value to them at all. He also showed that taking the statements of oleo makers they could get but 75,000,000 pounds of oleo oil from the animals slaughtered in this country, while they require 166,000,000 pounds for their products as reported. Hence, the 91,000,000 pounds must come from sources which oleo makers are not inclined to reveal. Hon. J. Sterling Morton, ex-Secretary of Agriculture, took up the oleo side. He had a hopeless task. The facts were against him; also the sympathies of the audience, and the strongest champions in the country of honest butter. He rested his case on the plea that cornstalks are about to be utilized for the manufacture of paper, and the assumption that coloring of steer and hog fat was on the same principle as coloring the corn pulp for different tints of paper. The point was far fetched, and the argument was weak. Most of us were disappointed that he had not put up a better argument for oleo. Mr. Knight had apparently laid all the planks in the anti-oleo platform, and as Mr. Morton did nothing to disturb them there seemed nothing left to do; but ex-Gov., Hoard proceeded to nail them down tight, which he did with sledge-hammer blows. The ex-Secretary came forward to disturb them again and a most lively running fire resulted between himself and Messrs. Hoard and Knight. This was interrupted by Hon. Geo. L. Flanders, First Assistant Commissioner of Agriculture of New York State, who turned the platform upside down and clinched the ex-Governor's nails down so tight on Mr. Knight's planks that the attempt to disturb it further was abandoned, and when the resolution came up demanding the early passage of the Grout bill by Congress, there was not a voice raised in opposition to it, and it was voted as the unanimous conclusion of the Farmers' Congress that the fraudulent oleo made in color of butter should be taxed 10 cents per pound, while that not colored need pay only one-fourth of one cent per pound. I was pleased and edified by the position of the western, southern and southwestern farmers on this subject. As soon as they saw that the dairy interests were asking only to legislate the fraud out of oleo, as Mr. Flanders put it, they realized the justice of our contention at once, and expressed their sympathy and assurance of support. "If we cannot carry on our industries," one man said, "without helping to perpetrate a fraud on another agricultural industry, then we should and must take up some new line of production." That seemed to express the feeling of all. It confirmed my faith in the native honesty and abiding justice of the American farmer.

TOPICS TALKED ABOUT.—There were several papers on practical farm subjects that were both interesting and instructive. They embraced "The Present Status of Wool Growing," by J. R. Dodge, Washington, D. C., and "The Rice Industry," by J. B. Foley, Foley, La. Neither of them was able to be present, but their papers were read and both proved interesting subjects for discussion, especially that on rice. The use of rough rice—rice with the hull on—as an egg-producing food for chickens seemed to be a new suggestion to many. Dr. Andrews, of the University of Nebraska, read a scholarly paper on "How to Make the Farmstead Beautiful." It applied particularly to the prairie farms of the West, and Prof. H. W. Campbell, of Kansas, read a most valuable paper on the subject of storing water in the soil, and preserving moisture in the semi-arid lands of the West. All told, it was nothing more or less than the surface cultivation that has been advocated in the East for the last 12 or 15 years, and practiced by many for several years. Prof. Campbell predicts great possibilities in this culture in the West, and I do not think he has over-stated the possibilities. Two papers of great interest were "The American Girl and the Home," by Mrs. Bertha Dahl Laws, of Minnesota, and "The Farm Home Life," by M. F. Greeley, of South Dakota.

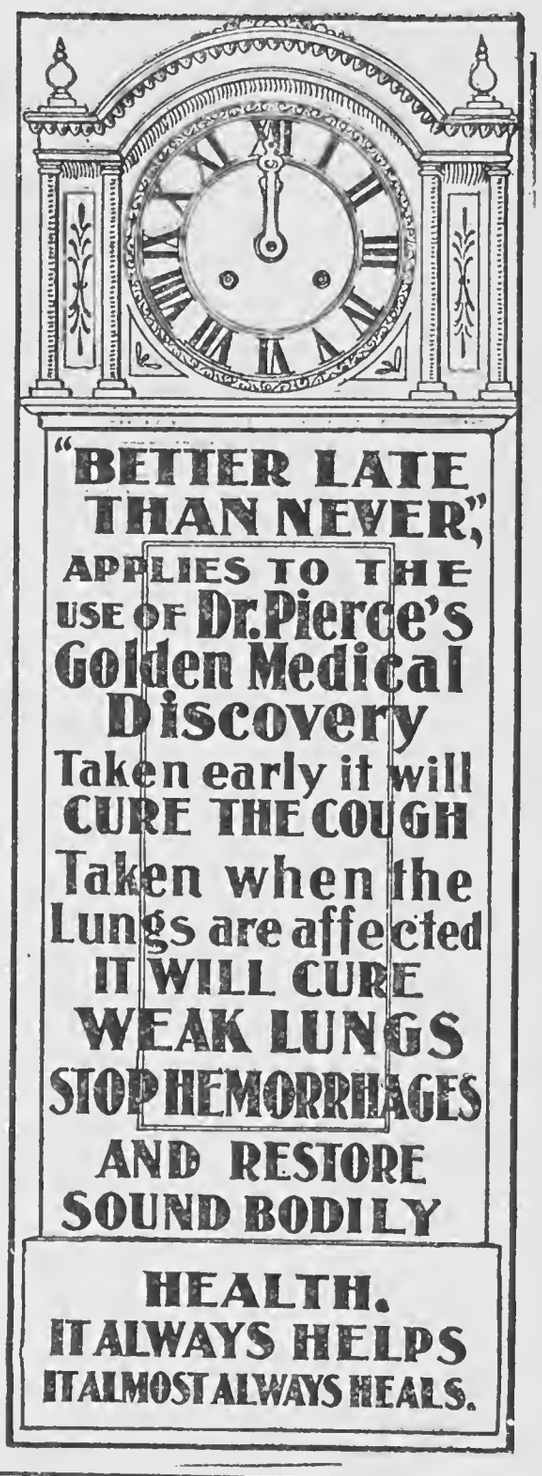
THE ELECTION OF OFFICERS.—This was for the ensuing two years, and created considerable interest. Geo. L. Flanders, of New York, was unanimously elected president. The other officers elected are as follows: First vice-president, Col. Harvie Jordan, Georgia; second vice-president, Col. B. Cameron, North Carolina; secretary, John H. Stahl, Illinois; first assistant secretary, E. A. Calahan, New York; second assistant secretary, Geo. M. Whittaker, Massachusetts; third assistant secretary, Joel M. Roberts, Nebraska; treasurer, Dr. J. H. Reynolds, Michigan. Executive committee: Col. B. F. Clayton, Iowa; Col. Wickey, Missouri, and W. L. Ames, Wisconsin. The people of Sioux Falls gave us a cordial welcome. The propriety, simplicity and effect of the decorations in the auditorium surpassed anything of the kind I ever saw. It was all accomplished by use of the grains, grasses and fruits that grew on the farms in the vicinity. The accommodations of the Cataract Hotel were ample, and the proprietor did everything to make his guests comfortable. I know no eastern hotel that sets a table with such an abundance of fresh, well-cooked food at equal rates. The local committee, the people of the town, and the local farmers all showed a kindly interest in the visitors, and succeeded in making them feel welcome. It is true that one of the local committee lost his balance and became offensively personal in a debate on the election of an officer, but the good sense and forbearance of the one attacked made this a trivial incident, and the offender was promptly rebuked by a vote of nearly two to one in the defeat of his candidate, a man who, under other circumstances, would have received a unanimous vote. We left Sioux Falls with admiration for the sturdy northwestern farmers, with a kindly feeling for the cordial people and gratitude for their hospitality.

J. J. D.

GOOD POTATOES.—Last Spring I wrote you asking your advice in regard to sprouting seed potatoes, etc. In my letter I suggested my purpose to try the Cornell method of culture, and in your kind answer you said you would be glad to know how it came out. I have just harvested over 200 bushels (early varieties) from not quite an acre. In view of the fact that my neighbor's early potatoes were almost a total failure this year, I think mine did very well.

F. B. D.

New Hampshire.



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Live Stock and Dairy

DAIRY AND FARM NOTES.

CHEESE NOTES.—Central and northern New York has just experienced a loss of $25,000 to $30,000 due cheese factory patrons for a single shipment, or two in some cases, by the failure of R. McAdam & Sons. The main cause primarily is said to be due to gambling by one Higham, the sales agent and confidential clerk for the firm, who resided in New York. The loss is so widely spread that with one exception no great hardship will be felt. I mention the fact in these notes on account of the terms of settlement which have been accepted by a majority of the creditors so reported, of 25 cents on the dollar, and no effort made to punish Higham. To permit an agent of a firm to steal the money of hard-working farmers, and be permitted by the firm itself to go scot free, should receive some attention, and cheese salesmen should see to it that the fellow is punished. The custom in northern and central New York is to buy, on the regular sales days, Saturday and Monday, and pay the following sales day, or sometimes two weeks hence. This permits the large buyers to carry several thousand dollars of farmers' money. Really I do not see how an immediate cash payment system can be easily inaugurated. The whole business world is built upon confidence. Business soon stagnates when there is so little confidence that regular 10, 20, or 30-day credits are not given. But when a trusted agent goes wrong under this system, punishment should follow as a warning to others. The only safety to our cheese producers, in fact, to all wholesalers of dairy products is to get their pay, and that promptly. The prices paid for these staple goods is always upon a close margin over cost of production, and the loss of a single week's money means the profit of perhaps a half year's business. I am not speaking of this instance because we are losers by the failure; we had no dealings with the firm.

THE HOME TRADE.—This leads to a thought in regard to selling butter and cheese. We have sold to every class of trade, from the private family who bought as small a cheese as five pounds all along the list, grocer, wholesale grocer, jobber, exporter and the local dealers who buy regularly. The home trade is coming to be the most reliable, and all things considered, the wholesale grocer or a jobber who stands in the same relation to the trade is the most satisfactory customer. It would seem that a trade direct with the retailer should be a higher-priced trade. Often it is, but they are not as prompt payers unless one can meet them from week to week. We furnish in our local towns to those dealers who are prompt, and all goes well. The private family trade has not proven satisfactory as a whole—people do not like to write for stuff; they seem to prefer to buy of some one they can meet, and the cost of transportation on small quantities quite handicaps the trade. Express charges are uniformly one cent a pound gross weight, making 1¼ cent on the net weight of the package, and freight charges on less than 100 pounds are about the same as express. We have therefore sought out and worked for a reliable class of dealers who sell to the retailer, and all seems to work well. Our arrangements are such that we manufacture almost wholly upon orders. When the cheeses are ready for shipment we know just where they are to go.

SILO NOTES.—We are to-day (October 5) completing the silo filling. Excepting the mud, which has caused some trouble with the harvester, we have housed about 600 tons with the least friction and annoyance in my experience. I feel that corn handling has reached nearly perfection. A heavy pair of horses and a McCormick harvester, with a careful man to run it, has done work that it would hardly seem possible could be done by a machine. Wet land and a hard wind tangled the corn in all shapes, yet this machine would, human-like, take every stalk not absolutely flat on the ground, straighten it up, and tie it. Men quite object to handling unbound corn, and I don't blame them. Another year's experience with a blower adds to my satisfaction. We tried a Canadian machine last year which worked well. This year we bought in conjunction with two neighbors a No. L 14 Blizzard. While I have no desire to give any machine free advertising, this certainly does not need it, but the work has been so completely and perfectly done that I feel like speaking of it. The corn is almost cut to a pulp, every kernel cut from the cob, mixed with stalk and leaf, and elevated 40 feet without a half bushel on the ground. My appreciation of the blower is shown by letting a good chain elevator machine stand idle. I have just halted between two opinions; 50 tons of corn was to remain after filling one silo. Should we stack it, pile it, shock it, or what? We had a small bay which was cleaned out, and the corn, as I write, is going into it. I shall level it down, keep the top and edges wet, and expect to have more net food value than by any other means. It is so finely cut that I feel sure it will pack and keep. If it does not I will report the result. We tried a quantity several years ago in this way, but it was immediately fed out. This will not be fed for a month or six weeks. H. E. COOK.

THE HOLSTEIN COW MARGARET LINCOLN 2D DEKOL. FIG. 326.

A GOOD HOLSTEIN COW.

Margaret Lincoln 2d DeKol, the cow shown at Fig. 326, is owned by Mr. Goodell, president of the Goodell Manufacturing Company, Antrim, N. H.; established her first record the week she was three years old by producing 16 pounds 11 ounces of butter. At the New England fair at Portland, Me., 1896, she won first prize for a three-year-old and at the last New England fair, 1900, she was a leading member of the herd, winning the first prize at the same place, also winning first prize in the 24-hour butter test at the same time. Mr. Goodell breeds Holsteins as a pastime, but like many other good business men, he has seen the necessity for good blood and good performance, and has thus secured some fine specimens of the breed. Just now interest in the Holsteins is reviving. At the Pan-American dairy test the black-and-white cattle were for a long time behind the Guernseys, Jerseys and Ayrshires in actual profit from butter. Now, at the wind-up, they are gaining, as the following report will show:

"In the Model Dairy at the Pan-American Exposition one of the noticeable features is the manner in which the Holsteins have maintained their large flow of milk. They have, in fact, shown the least inclination to decrease as the season advances of any breed in the stable. A study of the rations fed to these cows will in a measure account for these results. At the time green feed was first furnished the herdsman in charge of these cattle cut hay entirely out of his rations and also reduced very materially his grain feed, making the bulk of the Holstein rations from green feed. Now, when the time has come that no green feed is given and dependence must be had on silage, by returning to the amount of grain that he fed in the beginning of the season, he has been able not only to keep up the flow of milk, but to advance his herd above the position that they occupied during the Summer, thus again demonstrating the fact that excessive grain feeding for a long period is not always conducive to profit or production, particularly in combination with green forage crops.

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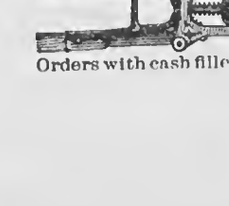

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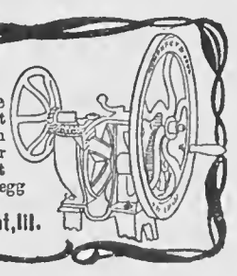

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SOMETHING ABOUT AYRSHIRES.

We have a dairy about one mile from Catawissa, Pa. We have mostly Jersey and Holstein cattle. On reading your account of the Pan-American dairy test I notice that the Ayshires stand well in both butter test and also in milk. Would you advise me to get a couple of those cows in my herd? Would any of the readers of THE R. N.-Y. give me some information on the subject? Where could I get some young stock? Are they good milkers? There are no cattle of the Ayrshire breed in this section. W. J. E.

In southwestern Scotland is a county of much prominence known as Ayrshire, and here this breed of cattle has flourished for a century or more. Its origin is more or less obscure, but probably Short-horn and Dutch cattle assisted in the development and improvement. In Ayrshire to-day this is about the only breed, and here one sees many magnificent specimens. It has long been the opinion of the writer that the Ayrshire is one of the most uniform, well-developed dairy breeds of cattle, and this is mainly due to the persistent and consistent policy of the Scotch to produce a medium-sized type with the desirable points well developed. A standard weight for the Ayrshire cow of mature form in Great Britain and the United States and Canada is 1,000 pounds, while the males range from 1,200 to 1,500 pounds or larger. The colors are brown and white, usually more or less mixed in varying degrees. In Canada white I judge to be the most fashionable color, while in the United States the more sober brown with less white is most usual. In Scotland brown is also very prevalent, generally speaking, however, with some white.

The best type of Ayrshire is a broad-backed, deep-bodied, short-legged sort, with an udder of superior shape, being well extended in front, and carried up behind with a good curve. According to my observation no breed in America to-day will show more high-class udders, if as many, as will the Ayrshire. This perhaps is due to the fact that the breed is not so indiscriminately bred as are some breeds of wide distribution. The Ayrshire in America is usually kept in Canada and the northeastern United States, there being but few in the West. It is a breed of hardy character, and seems well suited to the more rugged portions of our country. This not a general-purpose breed, but is rather essentially a dairy type, capable of considerable milk production. A record of 7,000 pounds of milk a year is quite common, and many of this breed have produced 9,000 and 10,000 pounds. Princess Aldine produced 13,400 pounds, which is the largest Ayrshire milk record to my knowledge. In 1888, Mr. J. D. W. French published a catalogue of his herd, in which he gave some records, covering 14 years. During the year 1885 he milked 20 cows, and their average yield was 6,037 pounds. The milk of this breed is of average richness, containing about 3½ to four per cent of fat. The Vermont Experiment Station has for years kept a dairy herd, in which Ayrshires have a prominent place, and in their 1897-98 report, they make the following statement: "As in past years, the Ayrshires rank high in yield and in economy of production of milk, and relatively low in economy of production of butter." In the Model Dairy at the Pan-American Exposition, for the week ending September 24, the total milk yield for the different Ayrshire cows was in round numbers, 245, 204, 189, 248, and 216 pounds, and the fat per cent in the milk averaged four per cent; 3.5, 4.2, 3.85 and four for the yields given above, in the order given. The Short-horns in the test gave about 25 pounds less than the Ayrshires, while the total butter fat per cent was almost identical in amount. For general dairy purposes the breed ranks high, and will undoubtedly give back satisfactory returns for its keep and care. Its hardiness, easy-keeping qualities and ability to produce milk abundantly commend it to dairymen. So far as I know, it has never been ranked as a general-purpose breed, but the cows would be more salable as a rule to the butcher than would Jerseys, being of somewhat more scale and rather capable of more flesh production. Ayrshire veal should also sell at a fair price. Milk of this breed is of high enough grade to command a place in the city milk trade.

The person soliciting information on this subject, further says: "Would you advise me to get a couple of these cattle in my herd." The writer believes in stability of purpose. The proposition now is, will it be advisable to add Ayrshire blood to a herd at present containing both Jersey and Holstein individuals? The two latter breeds represent rather extremes in dairy type. The Ayrshire is a sort of middle ground. Perhaps this would be a good breed to compromise on. Yet the main thing to be sought for, is profitable production. I have no hesitation in saying that I believe that good specimens of either one of these breeds will pay a satisfactory profit on the investment with good management. An Ayrshire bull on Jersey cows will add somewhat to the Jersey size, and perhaps add to the milk yield, but the butter per cent in the milk would no doubt be lessened. Ayrshires on Holsteins would be likely to reduce the milk yield considerably, add no doubt to the quality of the milk, and give a smaller type of cattle. Really the wisest plan in my judgment, would be to stick to one breed and have uniformity in type and character and results. This will pay best in the end, no matter which breed is selected. There is an American Ayrshire Breeders' Association, and a letter to C. M. Winslow, the secretary, at Brandon, Vt., will no doubt secure further Ayrshire literature. The person who requested this communication lives in Pennsylvania, and asks whether "there are no cattle of the Ayrshire breed in this section." There are Ayrshire breeders in Pennsylvania, and if a letter is sent Mr. Winslow on this subject, he will be likely to forward some addresses of Pennsylvania breeders. C. S. PLUMB.

VALUE OF A TON OF SILAGE.

Last year in THE R. N.-Y. for December 8 was an article on Value of Hay and Silage, by G. E. Scott, which, if not erroneous in some of its statements, is certainly very ambiguous and misleading. The following analysis of feed stuffs was given:

	Protein.	Carbohydrates.	Fat.
Corn silage	1.7	11.1	.8
Timothy hay	5.9	45.0	2.5
Clover hay	11.5	33.1	3.3
Green clover	4.4	13.5	1.1

Mr. Scott has taken the percentage of protein, carbohydrates and fat from the chemist's analysis, but as Prof. Henry says: "The value of gold ore is not rated by the total amount of gold contained, but rather by that portion which can be recovered by practical processes; so with our feeds, only those portions which can be digested and utilized by the animal are really valuable." So if Mr. Scott will compare corn silage and hay on the basis of the *digestible* protein they contain he will arrive at more definite results. The percentage of *digestible* nutrients in the feed stuffs named is as follows:

	Protein.	Carbohydrates.	Fat.
Corn silage	1.2	11.8	.6
Timothy hay	3.0	43.9	1.2
Clover hay	6.5	34.9	1.6
Green clover	2.9	14.1	.7

As the carbohydrates (fat makers) are always in excess of our needs in all home-grown feed stuffs, it follows that the amount of protein in any given feed does determine its comparative value for feeding dairy cows. In order to determine the money value of corn silage as compared with clover hay when the price of hay is given it is only necessary to put the proposition in the form of an equation in ratio and proportion as follows: 6.5: $10:: 1.2: $3.38½. That is, the percentage of protein in clover hay is to the price to clover hay as the percentage of protein in corn silage is to the required price. Now the product of the means is equal to the product of the extremes, and in order to ascertain one term of the equation when the other three are given, we multiply the means together and divide the product by the other extreme, or vice versa, as the case may be. By applying this rule we find that if clover hay is worth $10 per ton corn silage is worth $3.38½ per ton on the basis of the digestible protein contained in each. By making an equation with Timothy hay in the same manner we have the following: Three per cent protein in Timothy is to its price, $10, as 1.2 per cent protein in silage is to $4. Assuming that Timothy hay is worth the same price per ton, we find that corn silage has a comparative value of $4. With us the market price of clover hay is about $8 per ton, and an equation would read as follows: 6.5 per cent protein in clover hay is to $8 as 1.2 per cent protein in silage is to $1.48, showing that corn silage is worth $1.48 per ton as compared with clover hay at $8 per ton.

At $10 per ton for clover hay three tons of corn silage are just about equal to one ton of clover hay on the basis of the digestible protein they contain. I think Mr. Scott is in error when he says that a ration of 20 pounds of clover hay would furnish 2¾ pounds of protein per day. Figured on the total amount of crude protein contained in 20 pounds clover hay, it would be less than two pounds, and of *digestible* protein only 1 1-10 pound. Perhaps Mr. Scott figured on 20 pounds of absolutely dry hay, which would be rather bulky for a practical ration. The 20 pounds of clover hay would only contain 16.94 pounds of absolutely dry matter, and that is what we have to base our calculations on.

Michigan. C. D. WOODBURY.

Drying Off a Cow.

We want information about cows going dry. We have a young Holstein due with her second calf shortly. She is giving five quarts now per day, and it looks as if she might give milk nearly if not quite up to calving, unless we take pains to dry her off. We have been told by several that she ought to go dry six weeks or two months. Is that the right way? She has two quarts of bran and about a pint of meal a day, with all the hay she will eat.

READER.

It has been my usual custom to milk a dairy heifer from time of first calving up to the second calving if may be. The purpose in this is to establish a retentive or strong milking habit if possible during the first period of lactation and in after milking periods. This is also in accordance with the policy of many breeders with whom I have talked. After having her second calf and before the birth of the third, it is my desire that the cow shall go dry for eight weeks or so. She will during this period have a resting spell, and also provide better for the forthcoming calf. During this dry period but very little grain need be fed, if good pasture or hay is plentiful, and of the concentrated feed, bran with a little oil meal answers the purpose best. When not on pasture, then silage or roots offer a most desirable food for the pregnant cow. Two quarts of bran and a pint of meal daily certainly would not be misspent on a dry cow of high class soon to come fresh. Bran is especially recommended, as it aids in keeping the bowels open and active, and promotes a vigorous condition of the system. C. S. PLUMB.

STARTING THE HENS.

The first thing in this part of the country, if you want pullets to lay in the Fall, is to begin to hatch the chicks so that they will mature before the cold weather comes on. I find that a chick hatched four weeks too late in the Spring is from 12 to 15 weeks behind when it becomes Winter. As the cold weather approaches in the Fall I begin to feed a little more generously. I do not believe in feeding stimulants to poultry except meat meal, oyster shells and grain. If a person had but a few hens, perhaps nothing would be better than ground raw bone and meat, but for a large number of hens (if you have to turn the crank yourself) the prepared meat meal comes in quite handy. I know of no other way to get 200 eggs from a 150-egg hen, poultry paper advertisements to the contrary, notwithstanding. V. E. H.

Lakeport, N. H.

I feed my pullets so as to give all the growth I can while young. I feed cracked corn, wetted with sour milk, for the first three months; after that I keep corn before them (or buckwheat) all the time. If hatched in April, by November they are generally ready to lay. For Winter, my feed in the morning is a wheat mash with some of the prepared poultry foods mixed with it, and also some oats or buckwheat at night. In cold weather I always feed whole corn, also keep plenty of warm water before them. I am not a poultry fancier, but with this plain method of care from the start my pullets and old hens lay well. After they begin to lay, they keep it up most of the time until they are dressed for the table, as I kill off all the yearling hens as soon as the pullets begin to lay. I also keep oyster shells ground before my poultry at all times of the year. G. W. H.

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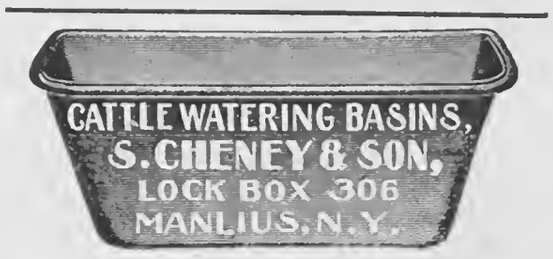

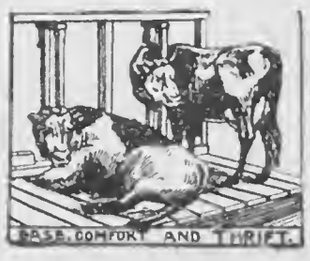

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—Philadelphia Record.

"Do you call that painless dentistry?" asked the irate patient. "Certainly," replied the dentist. "It didn't hurt me at all."—Chicago Post.

TEACHER: "What is an antonym?" Bright Boy: "It's a word you can use in place of another one when you don't know how to spell the other one."—Troy Times.

MRS. CRIMSONBEAK: "Don't the big fish in the sea eat the little ones?" Mr. Crimsonbeak: "Yes; they, like us, are taught to love one another."—Yonkers Statesman.

"EDMUND, what made you so late?" "My dear, I came up in my new automobile, and passed the house five times before I could manage to stop."—Illustrated Bits.

"MOTHER is always telling me not to bolt my food," said a small boy, "and now she has gone and bolted up the cupboard that has got all the victuals."—Woman's Life.

JAGGLES: "I notice that many of our millionaires claim that they don't know how to do good with their money." Waggles: "I guess that's true. If they had been accustomed to doing good they would not be millionaires."—Judge.

"No, sir," exclaimed the loud-voiced drummer in the smoker, "I'm proud to say that no house in the country has more men pushing its line of goods than ours." "What do you sell?" asked a curious one. "Baby carriages."—Syracuse Herald.

"WHAT is the nature of this new fangled malady which they call the 'golfing spine'?" "That," responded Cynicus, "is easy. 'Golfing spine' is what the old man used to have after a hard day's plowing, but he called it the backache."—New York Times.

THE lesson had been about the prodigal son, and the entire Sunday school had been properly impressed. The superintendent asked: "Now, my little friends, who stood by, objecting to this proposed banquet to the prodigal?" And a voice in a far corner answered, "The calf."—Australasian.

SHE: "You know, John, you promised me a seal-skin wrap, and—" He: "And you promised to keep my stockings darned and you haven't done it." She: "Well, you don't mean to say you'll break your promise on that account?" He: "Well, it's just this: You don't give a darn and I don't give a wrap."—Philadelphia Press.

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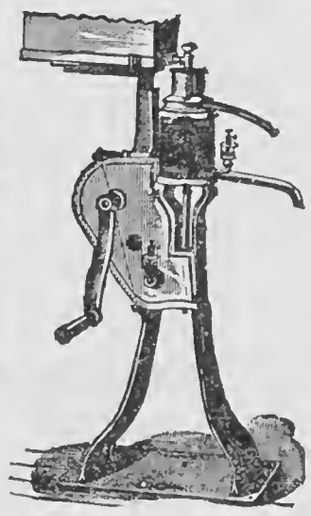
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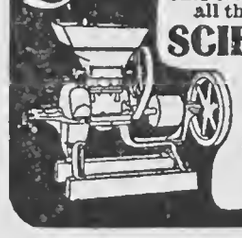
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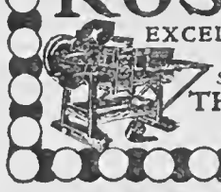
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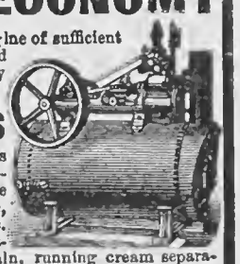
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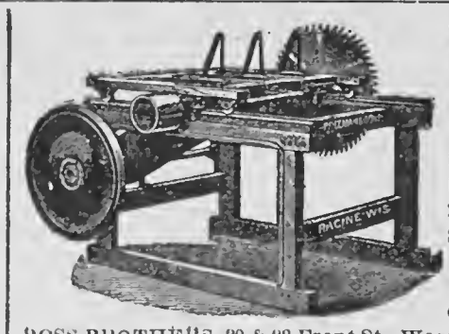
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THE RURAL NEW-YORKER

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VOL. LX. No. 2700. NEW YORK, OCTOBER 26, 1901. $1 PER YEAR.

A REVIEW OF "CHEMICALS AND CLOVER."

Is Stable Manure Absolutely Necessary?

PART II.

We repeat part of the question that was asked last week with further comments on the plan outlined:

This matter interests us very much, because we own large areas of naturally good land which are too far removed from our barns and stock to think of carrying stable manure to them—much better land in fact than on the home farm, and we would be glad to see some of it cultivated. We do not feel it practicable to put up barns one, two and three miles from home just to make manure for those lands. This year we have put in a number of acres of corn on one of these isolated tracts, and used simply acid phosphate and muriate of potash; also potatoes with chemicals along. All the crops are looking fine—all on land which has for the most part been used for pasturage and probably not plowed in the past 15 or 20 years. Our programme is to sow rye or wheat this Fall on all this ground, stock with clover in Spring, and cut rye or wheat for hay or solling, the same as we have done this year on last year's corn ground, but the question in our mind is, can we keep this thing up and maintain the productiveness of the land or improve it? A. G. T.

Willimantic, Conn.

We consider that experience has amply demonstrated that this plan is entirely practical. In many situations at the East it is the only sensible plan for working distant fields. Some of these fields are long distances from barns, and are higher than the home place, with poor roads between. On our own farm we have fields at some distance over a steep hill. Our horses can haul nearly twice as much corn or hay from these fields down the hill as they can of manure up the hill. There is every argument why manure should, if possible, be hauled to the fields reasonably near the barn.

There are few more exacting crops than well-grown fruit. Orchards demand the most skillful feeding, for they must produce yearly crops of fruit, and also make a fair growth of wood. It will be easy to find hundreds of fine orchards that have not received an ounce of stable manure for years. These orchards are cultivated through the Spring and early Summer and well fed with chemical fertilizers. When the crop is fairly well matured a "cover" crop like cow peas, clover, vetch or rye is sown in the orchard, and holds the ground through the Fall and Winter. It is plowed under the following Spring, when the process is repeated. This goes on year after year with full success, the chemicals supplying most of the plant food, and the cover crops providing the humus or vegetable matter. If this can be done with an exacting crop like fruit, who can doubt that it will also prove successful with crops like corn, potatoes, grain and clover, provided you supply the plant food that is needed?

We do not believe the plan you have outlined will succeed for long, because you are not using any nitrogen. We understand that you intend to use only muriate of potash and acid phosphate on your corn, evidently expecting the clover, which is to follow, to supply nitrogen. We believe you will be disappointed in this, and that these outlying fields will never prove fully satisfactory until at least fair dressings of nitrogen are used. In the Mississippi Valley, on some of the heavy clay lands, good crops of wheat, corn and clover are grown by the use of dissolved phosphate rock and small quantities of potash. Such soils are naturally strong, and well adapted to the growth of clover. The phosphate supplies the element most needed on clays, and also renders more or less of the potash available, and a large growth of clover results. Some of these results with acid rock alone have been published as though they were suited for general application on all soils when, really, they are true only of the heavy clays. The soils of New England are deficient in potash and nitrogen, and have been in cultivation nearly 100 years longer than the western soils which require only acid phosphate and clover. On some of these distant fields corn is the best crop that can be grown. Haymaking so far from home is not always satisfactory. We have been able to grow good crops of corn year after year by sowing a mixture of rye and Crimson clover at the last working of the corn. This will make a good growth through Fall and Winter, and may be plowed under the following Spring for another crop of corn. The stalks and grain may be hauled home through the Winter, and if a corn harvester is used the job of cutting is greatly simplified. When the rye and Crimson clover are plowed under we would always use a corn fertilizer containing at least 2½ per cent of nitrogen. The general proposition that average New England soils can be made to produce good forage crops, and slowly improve by the use of chemical fertilizers and "catch crops" with roots and stubble of grain and clover, is sound enough, but you cannot do it satisfactorily without using a fair amount of nitrogen, and occasionally plowing in a full crop instead of cutting it for hay. H. W. C.

WHOLESALE BUSINESS IN FARMING.

The picture on this first page, Fig. 327, shows how land is worked in some sections of California. It is taken from a bulletin on wheat growing, just issued by the Department of Agriculture. Here we have an immense traction engine, three sections of disks (24 in all) behind it, and thus covering an enormous amount of land in a working day. This soil is chopped and fitted for wheat. A combined broadcaster and harrow follows, so that in a single day two men may sow more wheat than an eastern farmer with small fields and single team tools could handle in a month. Of course the land must be level and smooth to enable these traction engines to operate. No one expects that the 1,000-acre field will be as carefully fitted as the 15-acre field on the 90-acre eastern farm. Along the river near Stockton, Cal., are islands which were once large flats covered with water and weeds. They have been drained and reclaimed for wheat growing. The soil is soft and full of cracks, so that horses cannot be used. Hence, great traction engines, like the one shown in the picture, with the tires broadened out into great drums, are used for plowing, seeding, and harvesting. Does not this wonderful system of farming mean death or bankruptcy to the eastern farm? Is it possible to compete with steam power on level land? Perhaps the following notes of conversation from C. E. Chapman will give the other side. Just now there is much discussion as to whether

REPLOWING WITH STEAM OUTFIT IN THE GREAT VALLEY OF CALIFORNIA. FIG. 327.

a farmer should go East or West if he desires to change. The cheap eastern lands are closer to markets, while the richer western lands cost more.

Eastern and Western Farming Compared.

Just as we passed Caledonia, N. Y., a tired-faced, middle-aged man looked eagerly from the car window and remarked: "That looks like home." "Where is that?" said I. "Out in Iowa." We were passing through a level section, fresh and green; large, broad level fields—a beautiful picture, but *small*, as I told him. "When I passed through your country, I grew so tired of the monotony; one level field after another for hours, that I would not look out of the window. There was no *view*, no hills to curve around, bringing new, unexpected scenery to rest the eye, Your country is *too flat*." My reply seemed to amuse him, as he replied:

"It gives me the backache to think of climbing those hills; to work among the stone; to do business on a small scale. You are not in it."

"No, not in the mud, as some of your people are most of the year. You would like our stone to harden your roadbed. Crushed stone makes a good bed for wagons, as well as for railroads. We made that last mile in 48 seconds, and you can hardly feel a jar."

We compared notes, and I found that land would cost from $10 to $30 per acre more there than here; that corn and oats were the principal money crops, and yielded but little if any more per acre than mine does; that the price for grain is less with him, and he has farther to haul to the car than the average New Yorker. The cost of labor is greater in his State than in mine, and there is no nearby good market for the thousand and one things—incidentals—which aid us, like a bushel of apples, pears, potatoes, eggs, small pigs, etc.

"Now, why should any young, poor man go West to engage in farming?" I asked.

"Because he can accomplish so much more work on our level farms, with our machinery and soil."

"What good to accomplish more work if you do not get pay for it? You say you get 40 bushels of oats per acre, and 25 to 30 cents per bushel. Can you make any money on high-priced land at those figures?"

"No! I guess not. We have just kept even for a number of years."

Last Winter I was associated at our institutes for several weeks with a man from Minnesota, and the number of our small towns, villages and cities was a constant source of surprise to him. "Why," said he, "you have a market for everything at every four corners. You have a wonderful and I fear unappreciated opportunity to make every moment valuable, growing something outside of the main crops." Right here in central New York is as good a place for a pleasant and profitable home as in any Western State, be you either rich or poor. C. E. C.

High-Priced Land in Iowa.

Recent letters in THE R. N.-Y. concerning comparative prices of farm lands have been interesting, though it is disappointing to note only one from Iowa, and that a very conservative statement of the situation here. As a matter of fact, it is very strong. Speaking roughly, prices have appreciated here at about the rate they have depreciated in the East, as indicated by the general tone of your correspondence. This improvement is, however, of recent date, occurring mainly within the last two years. For example: A friend who bought an 80-acre farm in January, 1900, at $60 per acre, has lately refused $85, and would not care to sell at $100. That is a typical case of the better class. Good farms in central Iowa can no longer be bought at $50 per acre. Sales generally are at $60 to $80, while many are held and some sold at $100 and even higher. The increase being mostly contemporary with better prices for corn and its chief products, beef and pork, indicates the principal cause. It seems, too, that there is a fairly well defined, though not clearly explainable, wave of comparatively high prices for farm lands that has slowly but steadily crept west, like the center of population, and is now far outreaching that and approaching flood tide in Iowa. The good qualities of adjoining States but emphasize the fact that Iowa is the center of the best—the agricultural hub of the United States. "Nothing succeeds like success," and there are, probably, more farms than ever before held as investments by men who do not themselves work the land. In some respects this is unfortunate, for many of our most thrifty farmers—the enterprising young fellows who want to gain homes—are leaving for the lower-priced lands of Dakota and Oklahoma. Personally, I should like to raise Winter wheat (if it would bring at least 20 cents per bushel more than it has averaged for several years) and your eastern theories about "home markets" and "finished products" sound well, but in 50-cent corn and six-cent hogs, we are "confronted with a condition" that makes their production the most fashionable occupation in this section of country. If it continues a year or two, first-class Iowa land will easily bring $100 per acre, and the farmers may be seen with their overalls creased and turned up at the ankles. W.

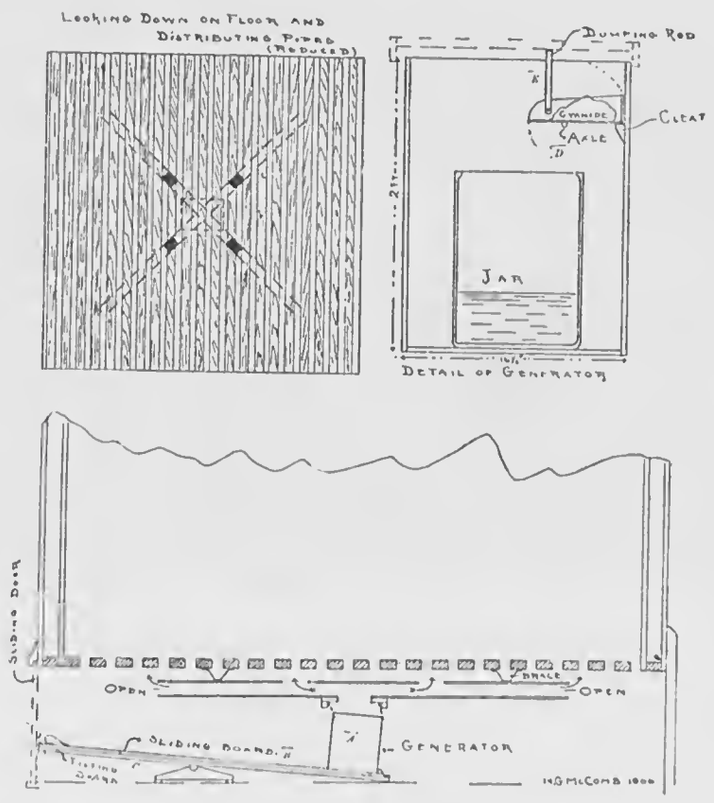
Marshalltown, Iowa.

BRIEF NOTES FROM THE FARM.

Not long ago I chanced to meet two dairy farmers residing in the same town, both of whom have made a success of dairying. They have, however, worked along quite different lines. One buys all his cows, keeping them a year or two, or in some instances longer, then selling off to replace them with others.

WICKSON PLUM. FIG. 328. SEE RURALISMS, PAGE 726

He changes whenever he thinks he can get a cow that will pay him better than the one he has. The other farmer hasn't bought a cow since the first dozen or so that he began with, about 35 years ago. So far as I know neither method has any advantage over the other, only as the individuals differ. One of these men is a good buyer, and a good judge of cows. He is well posted regarding prices, and localities where he can buy and where he can sell to advantage. He does best to buy, and never lets a thoroughly good cow escape him if it is for sale at any reasonable price. The other farmer understands breeding, and has a pedigreed sire for his herd. His dairy has steadily improved under careful selection. No doubt each of these two men manages the best way for himself. The one who buys his cows gets good ones, and gets them rather cheaper than the other man gets his, but the other man probably could not get them that way so well. He raises his at a trifle more cost. He may or may not get better ones. It depends upon the man, his preferences and characteristics. No one can prescribe positively for another. One man produces



APPARATUS FOR FUMIGATING WITH HYDROCYANIC ACID GAS. FIG. 329.

Winter milk, and by so doing gets the largest returns per cow of any man who patronizes the creamery. He makes money by his method, although he buys a good deal of grain. The other man produces about one-third as much milk in Winter as in Summer, and makes the year's milk at a less cost, buying less grain, and gets less for his milk. He makes a profit. There is no way that is best for everybody, much depends upon the cost of land, the price of labor and the price of milk.

As the cool October nights come on we keep the cows over night in the stable, feeding barley and peas and fodder corn. Sometimes we keep them up earlier in the season, and some neighbors have done so this year. Of course, more manure is saved to apply when it is wanted, but so long as the cows can get a good bite in the fields they will give more milk on the choice pasture grasses containing considerable protein, than they will when fed the more carbonaceous fodder corn. The corn must be had for most seasons though, because the pasture grasses become too dry and too scarce for a full feed. No crop can take the place of corn in such cases, at least in respect to quantity. We always feed a good deal of sowed corn, but really it needs a little bran to go with it.

To-day, on a farm of some note, I found one item of good management carried out better than I ever saw it elsewhere. One man was at work, as he evidently had been some days before, with paint and brush, painting everything that can be benefited by the application of a coat of paint. Wagons and sleighs and sleds, plows, mowing machines and other implements, and even whiffletrees and neck yoke came in for a share. It looks so much better to have them painted; besides, it pays, for the tools last so much longer. Then, too, these beautiful October days form a very good time to do the work, not so cold as to hinder the workman at all, and work not crowding so much as to make it unwise to leave it for this purpose. Yes, let's apply the paint, and while about it make any needed repairs, preparatory for next season's work.

This season, the growth in our meadows since haying has been quite rapid. Many are turning their cows into the meadows, and are getting a nice flow of milk as the result. The question as to the wisdom of this course has been answered both ways. We find, usually, that feeding off a part of a rank growth does not unfavorably affect our meadows, or at least we think it does not. One year we left a fine growth of rowen, and as a result got almost nothing the following year. In that instance mice spoiled the field. A lot by the side of it that was mowed did nicely the next year. Where the growth is tall enough to allow cutting a good swath, mowing seems to be the best plan, but usually there is only a part that can be mowed anyway. If that is mowed and cattle are then turned into the field the place that was mowed starts up fresh, and the cattle are likely to eat it too close. Usually this is not an advisable course. Another difficulty is on a new seeded piece. There, too, is where cows are likely to stay the greater portion of the time. In other words cows will eat too closely just the places that you want them to leave, and so long as they can get a fair bite elsewhere, they do not care for the places where the growth is such that you want it eaten off. Our practice is to turn into the meadows where the growth is good, and there is not too much new seeded that will be injured. Sometimes we find it advisable to string two or three strands of wire around a newly-seeded field, and let the cows run over the remainder. A light sprinkling of stable manure over a field needing protection will suffice usually, and is most excellent in its results. We do not let the cows stay long enough in any one field to eat it down close to the ground.

I have been watching quite closely a small lot of beets this Summer. It comprises 35 square rods of land. As I was driving past yesterday I saw the owner at work harvesting. He has an even 100 bushels, or three tons of roots. This is at the rate of 13 5-7 tons per acre. Sugar beets are worth $5 per ton, when sold to sugar makers, and many think them worth as much to feed. These beets are "half sugars," but I do not know whether that makes them more or less valuable for feeding. They will be fed this Winter to a herd of new milch cows. Mr. Pearsall, the owner, says six days' work is all he has done on the lot, where he gets the three tons of roots. There is the use of the land, the seed and fertilizer besides. H. H. L.

REMEDIES FOR THE ENGLISH SPARROWS.

Last year I was much annoyed by English sparrows. Not only did they eat more food than the fowls, but aligned themselves on the fence at every meal time waiting for the feast. As I am somewhat averse to shooting them, I used only gentle means to prevent their depredations, but they seemed to have found a harboring place with me, and multiplied until there were hundreds. They also consumed grain and seeds from the neighbors' farms and soiled the ground under my trees. Finally, they took possession of my porch. This nuisance has continued for several years. At last I noticed that their numbers were diminishing, and I endeavored to learn the cause, being very much puzzled until I saw a small hawk sitting near a tree containing sparrows. At night a little screech owl seemed also to have considerable business near my house.

Only the large hawks are destructive in the poultry yard. In Winter there are no very small chicks on farms. Hawks and owls destroy mice, and the owl consumes night-flying moths, while both the owl and hawk are partial to grasshoppers, and all kinds of insects. While farmers are holding conventions to consider how to destroy the sparrow they are also keeping the hawk and owl at a distance with the shotgun. The sparrow remains near the dwellings, and the way to get rid of them is to give his natural enemies the same rights and privileges. I never shoot a hawk or owl, yet I have never lost a chick by hawks. I keep my fowls closed at night, hence the owl cannot get at them. Instead of shooting these friends I am even willing to share a portion of my poultry with them if they will continue the work of annihilating the sparrows, which consume more of my produce and foods than the fowls. P. H. JACOBS.

FERTILITY AND FROST.

Resistant Effect of Vigorous Growth.

In a recent visit to a large nursery I saw two most striking examples of the effect of vigorous vegetable growth in counteracting frost. Part of a field of cow peas, planted as a cover crop, was green and making some growth, while in the other part but few living plants could be seen, nearly all having been killed by a recent heavy frost. The nurseryman told me that the space covered by the green peas had been heavily manured just before planting time, and that the rest of the field had received no enrichment. The second illustration was even more marked. A large block of young apples, two years from the graft, had on one side several acres of rather weak-growing trees; on these there were but few fresh green leaves, nearly all having been browned by frost. On the remainder of the block the trees had made a good Summer growth and were full of vigor; the foliage of these was green and almost unharmed, especially on the strong-growing upper shoots. In this case the less vigorous plants were on land from which trees had been removed but two years previous, and which had not recovered from the depletion of fertility by this former crop. The more fertile part had gone through the usual nurseryman's rotation of several years without trees. In both instances the land was flat; where elevation or air drainage could have had no effect, and where there were no forests, or water, or changes in soil, or other apparent factors, that could have brought about the differences mentioned.

A number of similar examples along the same line which have come under my observation could be given. I call to mind a field of celery at Kalamazoo in which soil fertility seemed to offset a hard frost. In a forestry experiment in Utah I noticed two successive seasons that the upper leaves and shoots, which we usually speak of as "tender tips," and which, of course, are best nourished and most vigorous, kept green after the lower leaves were badly frostbitten. This test was a good one, as there were 20 acres of young trees of many varieties growing under uniform conditions. In fields of grain we often see green oases late in the season—always the richest soil. The vegetation in barnyards, and dooryards, spots of great fertility, keeps green until snow. Winterkilling of grains is most common on poor soils. Vitality in plants varies with the fertility of the soil. Not only are heat, drought and disease counteracted by increased vitality through good nourishment, but frost as well, and to a considerable extent, a fact not fully appreciated, and one which could be made of no little service in our climate.

U. P. HEDRICK.

Michigan Agricultural College.

THE FARM CAT.

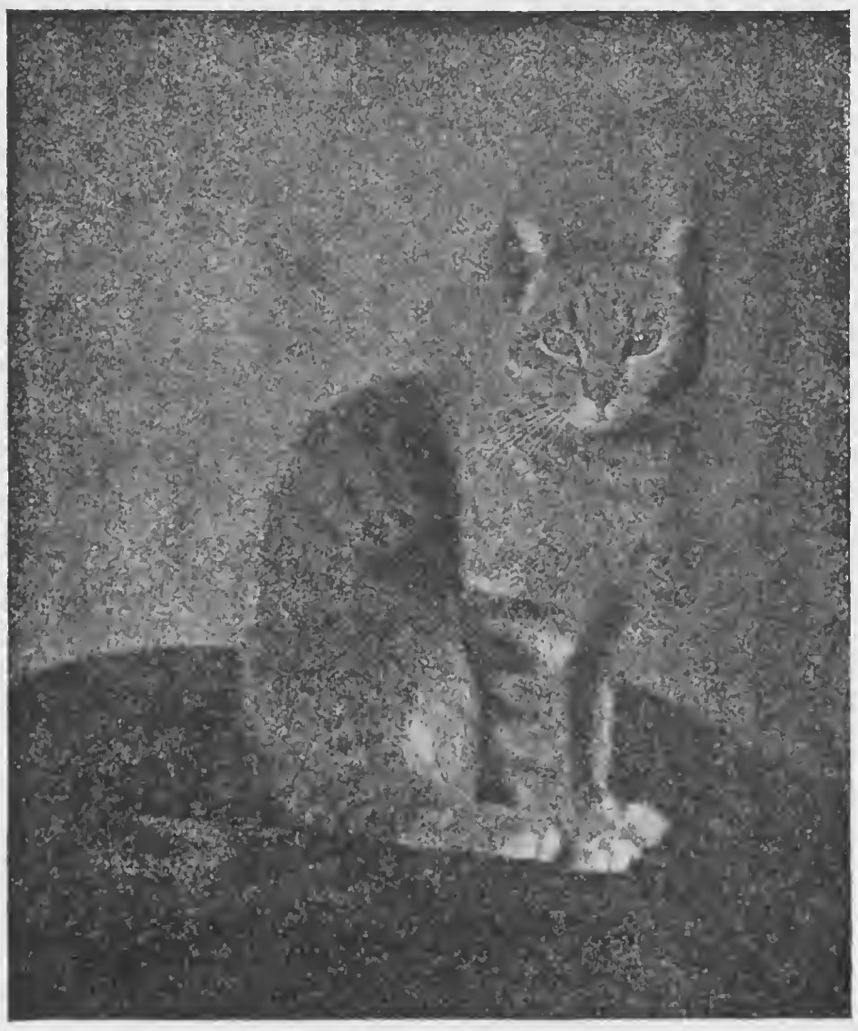
Very often cats are merely tolerated about the farm because the children like such pets; they are looked upon as decidedly inferior to the dog, and possessed of no special rights. We forget that we are responsible for the happiness and well-being of any animal we take into our charge; it is our duty to act as its special Providence, and thoughtlessness that results in needless suffering is quite as reprehensible as deliberate cruelty. Children and kittens seem born to harmonize; nothing is prettier than the human and feline baby gamboling together, but the child must be taught gentleness with its playfellow. Too often, when a rough squeeze causes the kitten to unsheath its needle-like claws, the child receives no admonition for his carelessness, the cat alone being punished.

Cats, like all other pets, are influenced by their environment; they are gentle, affectionate, and intelligent, in accordance with their surroundings. Contrary to a current impression, a cat kept on short rations is not the best hunter, because its senses are not so keen as when in good physical condition. A well-fed (not overfed) cat is likely to be the best mouser. Raw meat or fish is not advised; the food should be well cooked, and liberal in vegetables. Food vessels should always be kept clean, and conveniences for drinking should be supplied, as cats suffer severely from thirst. Grass is necessary to keep them in good health; this they find for themselves in the country, but in the city it is well to sow a little wheat or rye in a box, for the cat's comfort. Catnip is, of course, a luxury to them.

People who do not care for cats assert that they are not so intelligent as dogs. Personally, we are inclined to the contrary opinion; the dog, however, has the advantage of close human association, and of breeding intended to intensify certain lines of intelligence. It would not be difficult to adduce instances showing memory, reason, gratitude and affection on the part of the cat. The thoughtful tabby shown in Fig. 330 is reproduced from a leaflet entitled "Only a Cat," published by the Humane Education Committee, Providence, R. I., which gives, in compact form, instructions for the proper care of such animals.

CLOTHING A DESERT ISLAND WITH TREES.

A good illustration of the peculiar public benefit to be obtained from scientific agriculture is given in the efforts to plant trees on Sable Island. This barren place lies about 90 miles off the coast of Nova Scotia, or 155 miles from Halifax. It is about 21 miles long, and lies in the shape of a crescent, without harbor or sheltered landing place. The Island is low, and dangerous shoals abound. In time of fog or storm it is really impossible to see the low sand bars of the Island and many a good ship has been dashed in pieces on its treacherous coast. Wrecks of vessels are to be seen all around the shore. The Canadian government determined to do something that would make the Island a clearer mark for the mariner's eye, and after much discussion it was decided to plant trees in the hope that the dark foliage would show above the water. Prof. William Saunders, of the Canadian Department of Agriculture, went to Europe and made a study of tree planting along the drifting sands of the French coast. Of course special varieties are required for such a barren, wind-swept place as Sable Island. Selections were made from tested French varieties, and also from those which have done well in Canada. In all, 81,600 little trees were taken to the Island for planting. An idea of the labor involved in this enterprise may be had when we understand that



A WELL-KEPT FARM CAT. Fig. 330.

the Island is visited only twice a year. The only way to reach the land is to ride in with the boat on the crest of the breakers and then wade or ride on a stout man's shoulders through the shoal water. In this slow and tedious way the planters were landed with their trees. It was necessary to select the best sites for the planting, but finally 10,000 were planted and the rest left for the lighthouse keepers to handle.

It is not known yet how the trees have behaved during the Summer. Prof. Saunders writes us that he heard from the Island three weeks after the planting. At that time the pines, maples, willows, poplars and arbor vitæ were looking well, with fair prospect for success. This experiment will be watched with interest, for the problem of reclaiming and saving the thin lands along the sea coast is an important one. The farmer and forester in a case of this sort are called upon to save human life by erecting a living danger signal far out at sea on this sandy bar. It is the chief business of the farmer to nourish and maintain life, but here his science and experience must be used to warn the doubtful crew of the danger that confronts them.

The season now closing has been the most profitable to the farmers of Maine that I can remember. Our hay and grain crop was excellent, and the barn of every thrifty farmer is well filled. The corn crop, both sweet and yellow, was never so good. On June 16 I planted a lot of the old-fashioned 16-rowed flint corn for the silo, and am now husking 100 bushels of nice sound corn per acre from this late-planted crop. Our apple crop in central Maine is not large, but of good quality, and will bring a good price. Buyers from Boston and New York are here, and offering from $2.50 to $3 per barrel. Hay to press is selling at the barns for $10 per ton. Potatoes are a fair crop and good quality. A good driving horse sells here for about $150, and a good Jersey cow for $40. Beef and working oxen are high.

S. W. G.

Skowhegan, Me.

HOW TO MAKE A FUMIGATION HOUSE

So as to Distribute the Gas.

PART II.

These results have considerable practical bearing upon the construction of the fumigation house and the process of fumigation. Until recently almost all fumigation houses have been built with solid floors, and the gas generated from a vessel which should be placed in the center of the room. Where the house is so constructed that a load of trees can be brought in and left on the wagon, a vessel can be readily placed under it in the center of the room, but where the trees are unloaded and packed in the room, it is decidedly inconvenient to leave a place in the center for the generator, and, as a matter of fact, I suspect—basing my suspicions upon observation and information from nurserymen—that but few of them do so, but merely leave a space near one corner near the door, and there place the generator. It is true that in a fumigation house packed full or partly full of trees the gas surrounding them would be much stronger than were the same amount generated in the same space empty, so that the manner of diffusion of the gas of a given strength in an empty room would not necessarily apply to it when full of trees. But on the other hand, it must be evident that the diffusion of a gas will be much slower where the currents of gas and air are impeded by the room being packed full of trees, so that these two considerations more or less balance each other. It must be evident then that if the gas generated in one corner of a room requires 37 minutes to kill a guinea pig, it will not kill the San José scale, or other scale insects, which are much harder to kill, in 30 minutes, which is the time often allowed by nurserymen when rushed, and it is exceedingly doubtful whether it would do so, under such conditions in 45 minutes.

Prof. Webster was the first, I believe, to note the possibility of incomplete diffusion with a solid floor, and recommended the use of *a slat floor* on which to place the trees, and devised an apparatus for dumping the cyanide into the generator *placed under the center* of this slat floor. Recently, Prof. Johnson has also recommended the use of a slat floor. The utility of this arrangement is readily seen from the above account of the poor diffusion of the gas when the generator is placed on a solid floor in the corner. Prof. Webster informs me that most of the fumigation houses in Ohio are so made, and certainly all new houses should be so constructed to insure proper distribution of the gas. Indeed, old houses might be easily fitted with a slat floor above the present one, merely leaving room enough between for the generator. In addition to a device for dumping the cyanide into the generator under the center of the floor, I have devised a hood and tubes extending from it, as shown in Fig. 329, which necessitates the gas coming into the room from eight different apertures placed almost equi-distant beneath the slat floor, thus insuring an almost immediate complete diffusion. Underneath the slat floor run smooth wooden tubes, three inches square, along the diagonals of the room, and opening into a hood placed at the center covering the generator. These tubes, each of which extends from the center two-thirds of the distance to the corner, are open at the ends, and also at points one-third from the center, thus affording eight points for the escape of the gas. The bag of cyanide is placed on the shelf, and the vessel containing water and acid is placed in the box A, at the end of the sliding board B. This board is then pushed down the incline C, and when under the hood the outer end is pushed down and held in place by a tightly fitting sliding door. The shelf on which the cyanide is placed, rests on a pivot, D, and projecting upward from it is a rod, E, thus forming a trap; so that when the box is thrown up beneath the hood this shelf is tipped and the cyanide dumped into the generator. This device is simple, easily made, and cheap, and it is believed will be found to add very considerably to the effectiveness and safety of the use of hydrocyanic acid gas in the fumigation house.

E. DWIGHT SANDERSON.

Delaware Experiment Station.

EXPERIMENTAL shipments of Bartlett pears to Europe were made by the Government last Summer. Prices for fine stock were good, but the best way to pack and handle for this long shipment has not yet been learned.

IT is predicted that America will ship 600,000 barrels of apples to Europe this season, though where they are to come from is a mystery. Canada will ship nearly half of this. "Kings" are now selling at $5.50 per barrel in Liverpool.

My white beans have turned out well, over 20 bushels per acre, but I do not think they will average over 15 bushels in western New York. Red kidneys are a very short crop all over.

C. A.

Orleans Co., N. Y.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Good Plums; Bosc Pears.

W. J. B., Medina, N. Y.—1. I have about 90 Niagara plum trees, but the fruit rots so badly that I get no profit from them. Would prunes do well if grafted on them? If so, what variety would be best? 2. I wish to graft some Angouleme (dwarf) pear trees to some good late variety. Is Bosc a good one, or is there some better kind for profit?

ANS.—1. Fellenberg is one of the best of the prunes, and is much less liable to rot than the Niagara plum, which is properly called Bradshaw. This makes a very fair stock for the Fellenberg or any of the other prunes. 2. Bosc is one of the very best of the late Fall pears, but it is a poor grower and does much better when grafted on some thrifty stock. Although I have never seen it grafted on the Angouleme I believe it will do well, and the fruit will surely bring a better price. It is one of the best of market pears. It also has the good point of hanging well to the tree. All things considered, I know of none that would be better grown in New York. H. E. V. D.

Fruit Questions.

H. B., Clyde, O.—1. I have some Wragg cherries set among European plum trees that are badly affected by leaf spot as well as the plums. They have all been sprayed several times according to directions for leaf spot, and yet are badly affected. The plums are in their fifth season, and have made a very stunted growth on good soil. The leaf spot has held them back so every year that parts of some of them begin to die in spite of spraying. Other kinds of cherries than Wragg, not among the plums, are not much affected by leaf spot. Is the Wragg more liable to leaf rot than other cherries? 2. The Wragg cherries are also knotty. Does the fungous affect the cherry, or what is the probable cause of this trouble? 3. I have had no fruit on any of 200 plum trees of different varieties of European type, so I tried grafting a lot of them early last Spring to Burbank, but did not get a scion to live. A neighbor had the same experience. Where I grafted Japans on Japans they grew nicely. The Japans are not affected much by leaf spot, and if I could work the tops of those Europeans over some way to Japans, I could get something out of them perhaps. Do you think I could bud them in the top, and if so, at what time? 4. Should I bud on to last year's wood? 5. Should I cut buds from this year's wood? 6. Do you think that the Burbank is the best "business" plum? 7. I would like to set an orchard of Windsor and Dikeman cherries for commercial purposes. Do you think that advisable on land worth $150 per acre?

ANS.—1. Yes, this variety is very easily affected by leaf spot and other fungus diseases, and perhaps more so than any other variety with which I am well acquainted. There is difference of opinion among fruit growers regarding the name of this variety, most of them claiming that the true name is English Morello, and Wragg only a synonym. 2. Knotty cherries are usually caused by the Plum curculio. It is a very difficult thing to contend with, and no kind of spray seems to stop its ravages. 3. I can see no good reason for the failure of the grafts of Japan plums on European plum stocks. It has been done frequently with good success. The scions should be cut very early, and put in a cool place, where the buds cannot start until time to do the grafting, because the Japan plums start very early, and if the scions are not held back they are likely to be damaged from this cause. Budding can be done to change the trees, but it would be more tedious than grafting, because the work would have to be done on smaller branches, and more of them. The time to bud is in August and early September. 4. Buds are nearly always set under the bark of wood that is in its first year's growth, but they will grow on older branches. 5. Buds are taken from wood of the same year's growth in which the work is done. 6. Burbank is one of the very good kinds of Japan plums, and is thought by most of those who have tried it to be one of the most profitable of that class for market. 7. Dyehouse is a cherry of almost if not exactly the same character as the Richmond, and where one variety is profitable the other will be. Windsor is a much later kind and of the sweet type. Both are good for either market or home use, and will probably be as profitable as any others. To yield a net profit on land worth $150 per acre we would first have to know what better crop might be got off the land. No ordinary farm crop is very likely to do it without great labor, nor will other fruit crops be more likely to do it than the cherry, where the markets are easy to reach, provided the land is suitable. H. E. V. D.

Spring Budding for Peaches.

G. H. K., Knoxville, Tenn.—Last Summer we had a long dry spell, and my peach seedlings did not make much growth. This and press of other work prevented me from doing all the budding. Can this stock be budded next Spring? Describe fruit and wood buds, so we can get proper buds. How should we save buds for Spring budding, if it can be done then?

ANS.—Spring budding may be done on peach stocks, but my experience has not been nearly so successful as with Fall budding. Scions should be cut as soon as the leaves have fallen, and at once carefully labeled and tied in bundles with willow twigs, because they will not rot, as strings are apt to do. Place them in damp cold storage, wrapped in moistened cloths or moss. Keep them so until the bark will peel freely in the Spring, when the budding should be done. There need be little difficulty in telling the peach buds that will grow from those that will only bloom. Where there are two buds side by side at the base of the leaf one is sure to be a growth bud and the other a fruit bud. If there are three buds together the central one is a growth bud and the others are fruit buds. Many of the single buds are such as will only bloom, and they are usually larger and plumper than the growth buds, but by setting only the double and triple buds there is no possibility of making a mistake. I always prefer to set them. Single buds on scions cut from young nursery trees are much less liable to be fruit buds than those on scions cut from bearing trees. H. E. V. D.

Pruning and Feeding Bush Fruits.

J. H. R., Middle Island, N. Y.—What is the best time to prune raspberries and blackberries, and how? What is the best fertilizer for above? What fertilizer for peach, apple and pear? Is there likelihood of profit in the cultivation of the Mammoth Japan chestnut and Japan walnut?

ANS.—Raspberries and blackberries are best pruned in early Spring. Cut out all dead and weakly canes, allowing one to three of the strongest to each plant, and top off to about three feet high, shortening all branches back to three or four buds. Successful pruning can only be learned by observation and experience, as the variety and manner of growth has much to do with the amount of wood to be cut away. Moderate applications of stable manure, 10 to 12 tons per acre, will grow good berries, particularly if reinforced by 200 or 300 pounds muriate of potash, or one ton of wood ashes applied separately. Any good chemical fertilizer containing three to four per cent of nitrogen, eight of potash and 10 of phosphoric acid applied at the rate of 600 to 800 pounds per acre should be sufficient. Peach trees thrive best when plentifully supplied with potash either in the form of wood ashes or muriate of potash, otherwise stable manure or chemicals as above would be suitable. The modern plan is to apply manure or fertilizer in early Spring, cultivate until July, and then sow Crimson clover or other cover crops to hold the soil during Winter and add fertility when plowed down next Spring. There is not much likelihood of profit in growing Japan chestnuts and walnuts, but they are interesting trees to plant.

However bad the Cough, relief will come through a judicious use of Dr. D. Jayne's Expectorant and in the great majority of cases, a permanent cure will follow.—*Adv.*

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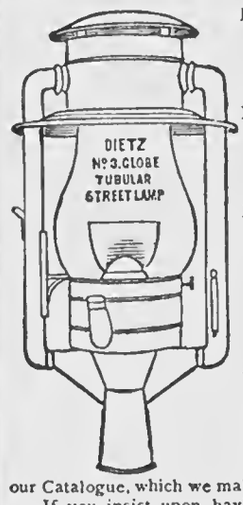

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Those of our readers who are desirous of buying the BEST Fruit Trees that can be grown at reasonable prices, should send to Call's Nurseries, Perry, Ohio, for Price list. A large number of our leading Fruit Growers say, the BEST Trees they ever received came from these Nurseries. Call is now introducing the new Seedling Peach ARCTIC. It is the hardiest peach known, producing a full crop where all other varieties fail. It is a large Yellow Freestone of the Best Quality, ripening about the first of October.

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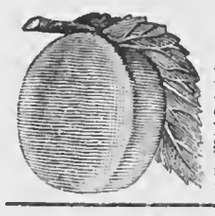

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EVERYBODY'S GARDEN.

DESTROY THE VINES.—The best possible disposition that can be made of the melon, squash and cucumber vines is to pull them up and, when sufficiently dry, pile and burn them. Left upon the ground they become the shelter and breeding place of the next year's crop of beeties, and their value for manure will in no way compensate for the damage accruing if left upon the ground. Better attend to it at once.

PREPARATION FOR WINTER WORK.—The radishes, lettuce and early tomatoes will need to be started long before the frost is out of the ground next Spring, and soil for the hotbeds should be secured this Fall. A convenient way is to pile the soil in a large cone-shaped heap, firmed down to avoid wasting by the rains or melting snow; protect with litter or straw, hold on with a few boards, to avoid too much freezing, and then it will be accessible at any time. Very satisfactory results may be obtained in the hotbed with lettuce, radishes and cucumbers for the late Winter market. The greenhouse, while very desirable, is not a necessary adjunct of the work, and simple directions for successful work will be given in ample time for all localities.

RHUBARB.—Make sure that the rhubarb roots are in condition for the best possible results for the Winter forcing. Try forcing enough for home use at least, so few fresh fruits are obtainable at that season, and apples will surely be scarce and high this year. For sauce and pies the rhubarb will prove the most acceptable substitute for apples, and the medicinal virtues constitute a factor not to be overlooked. Better spend money for sugar to sweeten plenty of apple and rhubarb sauce than paying the long bills of the doctor who prescribes the same remedy, disguised as medicine, while your good money will pay for the fresh fruits his family enjoys.

NOW IS THE TIME.—Just now is the time to select the garden ground for next year. So many neglected this last Fall that many, very many garden operations, went by default for this season. Let us as far as possible make amends for the past by thoughtful preparation for the future. Select the warmest, sunniest spot possible, especially for the first early sowings. If nothing but wet ground is available, make it as dry as possible, either with surface or under drains. Where the ground is not liable to wash, the Spring operations may be hastened by plowing or spading some portions of the ground this Fall. In this case, however, a dressing with manure or litter which is entirely free from weed seed is advisable. In this way more attention can be paid to thorough surface preparation of the seed bed. By whatever method it is accomplished, be sure that some portion of the ground is ready for very early sowing, as onions, beets, the smooth varieties of peas, etc., will thrive if sown as soon as the surface will admit of working. The plan with many farmers is, that they can buy their vegetables much more cheaply than they can grow them. In many instances, this may be true; but in so far as my observation extends they usually do without them to a very large extent at least. The real truth is, that quality and condition, with the convenience of having just what you want and just when you want it, taken into account, they can be grown upon the farm more cheaply than they can be purchased.

CARE OF TOOLS.—Gather up all the tools no longer required for use, and after thoroughly cleaning, apply a liberal coating of axle grease to all iron or steel parts, or resin and lard in the proportion of one to three in the order named. Melt over a slow fire and apply when warm enough to spread easily. Stored in a tin box or can it will keep for any length of time. Store the tools carefully, and next Spring see if it was not time well spent. J. E. MORSE.

Advertisers and Their Catalogues.

I would like to see discussed the ethics of the catalogue business. There are catalogues of all kinds—of seeds, nursery stock, vehicles, implements, merchandise and nearly everything under the sun. Most of these are sent on receipt of a postal card request, and many of them are quite expensive, including the necessary postage. Now the point is this, is it right for one to send for these catalogues unless he expects to order something from them? It is true that I have very frequently sent for a catalogue with little or no expectation of ordering anything from it, and yet on looking it over have found something I wanted and sent in an order. Still, it seems to me that one should not send for an expensive catalogue unless he has something of an expectation that he will order something from it. I suppose that those who issue catalogues look at it as being a necessary adjunct to their business, just as other houses send out traveling men for the same purpose. They set aside a certain sum for this purpose, and this is added to the selling price of their goods. I recently purchased a vehicle, and found just what I wanted in the sixth catalogue that I sent for. I suppose I paid for that catalogue and others that the firm sent out, and from which no return was received. If this advertising expense could be eliminated goods could be sold cheaper, but it is difficult to see how many kinds of business could be carried on without it. The question that I wish to see answered is, whether it is morally right for me to send for any catalogue that I desire, if I comply with the terms upon which it is offered?

Petersburg, Ill. O. J. B.

Cow Feeds Compared.

K., Kutztown, Pa.—Which contains the more protein, a ton of wheat bran or a ton of middlings? Which is the better feed for milch cows, middlings or an equal mixture of rye and oats (ground?)

ANS.—In Feeds and Feeding Prof. Henry gives the following analyses of digestible matters in Spring bran and middlings:

	Protein.	Carbohydrates.	Fat.
Bran	12.9	40.1	3.4
Middlings	12.8	53.	3.4
Rye	9.9	67.6	1.1
Oats	9.2	47.3	4.2

We consider middlings a better food for milch cows than ground rye and oats. Rye gives a softer butter than the wheat feeds. We do not like to feed middlings alone, as they make a pasty mess. We would rather feed bran mixed with them.

Tame Grass for Idaho.

E. E. O., Harrison, Idaho.—I have about 300 acres of meadow land lying along the Cœur d'Alene River. During the Winter and also in May and June, the water backs up from the lake and covers this land to a depth of from six to 10 feet. The meadow grows a natural joint or "rush" grass, which makes a very good feed for cattle, but is poor for horses, and unsalable. We cut our hay from July 25 to September 10. What tame grass can I grow on this land, and what method will be best to get it started? I do not believe that the meadow gets dry enough to plow.

ANS.—The only grass to be advised as a "tame grass" that will grow under the conditions that E. E. O. describes is Phalaris arundinacea, commonly known as Reed Canary grass. This grass is a rather coarse perennial, native to the northern parts of this country and Europe, and is somewhat cultivated on very wet soils. The seed of this grass can be secured of leading seed dealers in this country, but at present is rather high priced, owing to the small demand. This species makes a hay of very good quality if cut before the seeds are ripe; later than this the stems become hard and woody, and stock does not eat it readily. It is extremely doubtful whether even this species would thrive under the conditions stated, although it is a grass that is adapted to very wet soils.

ELMER D. MERRILL.

Killing Wild Morning-Glory.

A. H. C., Covert, N. Y.—Have any of the numerous readers of THE R. N.-Y. had any experience in eradicating the wild morning-glory? If so, will they give the most effective remedy? I have a small patch on low rich soil; have tried salt and smothering with straw a foot or more deep, and it still thrives.

ANS.—The wild perennial morning-glories or bindweeds are often troublesome pests, very difficult to eradicate. They can be killed out only by persistent cutting as fast as they appear above ground. The main thing is not to allow a leaf to expand, and the roots will become exhausted in time. They penetrate so deeply that salt and other weed-killers have little effect, and are able to send up shoots through a very thick covering. Clean and persistent culture is the only practical means of exterminating such plants.

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Short; Snappy; Spicy. Six weeks, beginning Nov. 11, 1901. Sell a cow and take the course. Learn to make five cows pay the profit of six. Followed by poultry course. RHODE ISLAND COLLEGE, Kingston, R. I.

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U S U S U S

Ruralisms

NOTES FROM THE RURAL GROUNDS.

PROF. MUNSON'S NEW GRAPES.—We have about a dozen of Prof. T. V. Munson's new hybrid grapes under trial, most of them being selected for this northern locality. Three varieties, growing in a favorable place on the south wall of a poultry yard, fruited quite profusely, considering they have only been planted two years. The others are young vines set this season, and with one exception have made a satisfactory growth. The three bearing vines all made a tremendous growth of canes, which is explained by the roots getting under the poultry run. R. W. Munson was the first to ripen, coming in by August 30, just before Concord. The clusters were large and round, with an occasional shouldered specimen. The berries were of medium size, running a little smaller than fine Concords; black in color, with a thin blue bloom. They hung on well, and resisted rot better than any grape on the grounds. The quality was sweet and juicy with a mild acidity in the tender pulp about the seeds. The foliage is healthy, and is holding on well. Evidently a very promising variety for our conditions.

BIG HOPE also made a strong growth, throwing canes over 18 feet long. It set many long straggling clusters, some containing 10 to 12 ounces of grapes. They were barely ripe enough to be agreeable October 1. The berries are very persistent, clinging tightly to the pedicel, globular in form, and rather less than medium in size. The color is rich dark red, and the quality sprightly acid, with a small tender pulp. It appeared very resistant to rot and mildew this trying season. The parentage of both Big Hope and the preceding variety is given as Post Oak (Vitis Linsecumii) x Triumph, but the varietal differences are well marked, R. W. Munson being plainly the most desirable grape for our use. In the Munson catalogue Big Hope is offered as especially adapted for the South, though it may develop value here as a late variety.

BRILLIANT set some fine clusters which were decimated by rot, while the leaves were damaged by mildew. A few bunches ripened up by the middle of September. The berries were handsome dark red, and of fair but not high quality. This variety is a cross of Lindley and Delaware, and is becoming well known in the North. We have seen some fine clusters of excellent quality at exhibitions, but its susceptibility to rot may greatly lessen its value for commercial purposes. The growth of canes is all that can be desired in our plant, and it is probable, with increasing age and in a normal season, that Brilliant will acquit itself more creditably. The grapes on these young vines were borne too near the ground for good results. Next year we hope to have them at a height of five or six feet.

THE WICKSON PLUM.—One of the interesting hybrid plums sent out by Burbank is the Wickson, which has been quite generally planted, and is now fruiting in many places. It is given as a hybrid between Kelsey and Prunus Simoni. Some of the very large yellow plums, labeled Wickson, seen at late exhibitions, were remarkably like Kelsey, though the latter is supposed to be out of its range in New York. It is possible that some mixtures have occurred in budding, as Wickson is a dark red plum of less average size than Kelsey, though of the same form. Fig. 328 shows a fair specimen. The red ground color is dotted and shaded with yellow. The quality is very good, the flesh being meaty and solid, clinging to the stone. It ripens in early September, but keeps fairly well, and is likely to prove a good shipper. It is regarded in some quarters as a light bearer, but its beauty and good size secure it a market when seen. Our young trees are among the earliest bloomers, which is certainly not a recommendation, but have not yet been allowed to bear. The blossoms are almost as flimsy as those of its pollen parent, P. Simoni, and would appear quite susceptible to injury, but some of the shrewdest growers who have fruited it are planting more, showing that they are satisfied of its merit. The tree is a vigorous and very upright grower.

FERRY'S NEW MORNING-GLORY.—Seeds of the new morning-glory Aurora, disseminated by D. M. Ferry & Co., Detroit, Mich., were sown last April in pots, and turned out in the garden in May, together with plants of the giant Japan or Emperor morning-glory of which Aurora is said to be a hybrid. Both varieties grew with vigor, and came into bloom late in August. The blooms of Aurora are large, and produced with remarkable freedom. The colors are bright crimson or deep blue, both with white throats. Neither shows the beautiful markings and odd frills so common in the Emperor type, but the new variety is plainly more robust and free than the common morning-glory, though much later in coming into bloom. Although our plants had little chance to display their capabilities, the great knotted masses of vine show that they would climb high and cover an immense surface. The seeds germinate freely, and in this respect are more satisfactory to handle than the Japan varieties, which generally need to be notched or filed before planting, and often come up weak and spindling even under the most careful treatment. The coloring of some of these oriental forms is marvelously fine. They are usually grown in pots in their native country, and particular varieties are highly prized. Early in the last century the culture of fine morning-glories had a great boom in Japan; seeds of prized sorts selling at a price equivalent to $30 apiece. These varieties were first introduced as a novelty in this country about six years ago, and some of the earliest specimens were grown on the Rural Grounds. The original defects of weak germination, lack of vigor and late blooming have been corrected to some extent by importations of better seeds and the production of some good home-grown strains, but they are not yet seen as frequently as their merit deserves. Aurora should meet the popular demand for a vigorous and free-blooming annual climber for quick effects on porches, screens and trellises, but is not equal to many Japan sorts for individual beauty. Both the common and Japan morning-glories probably belong to the same species, Ipomœa hederacea, though the Japan sorts are supposed to have been crossed with related species. W. V. F.

Fruit Notes from California.

The Rambo is a poor apple in this valley when allowed fully to ripen on the tree, but if picked as soon as the seeds are brown, and ripened in boxes, it is delicious. I shall try some other poor varieties that way, the Ben Davis for instance, but it is too late this year. It is possible that the Stark, Ben Davis and perhaps other varieties may be improved by proper treatment. Most fruit growers are familiar with the fact that the Bartlett pear must be picked while yet hard and ripened in boxes to preserve its flavor. When allowed to ripen on the tree it is dry and tasteless. On the other hand, some varieties of apples as well as pears are injured by picking too soon. The Easter Beurre pear and the Newtown Pippin and White Winter Pearmain are examples, and yet thousands of boxes of Newtown Pippins have already been picked in California for shipment to eastern markets. We shall not pick ours for two weeks or more, depending somewhat on the weather. The Easter Beurre pear, when properly handled, is most delicious for baking about Christmas, but if picked too green it never becomes palatable. Our work in peaches and prunes is about over, but the almonds are mostly on the trees yet. I have been contemplating a trip through the Pajaro Valley for the purpose of seeing the apple orchards and the process of harvesting for market, and also methods of drying apples. I understand that the windfalls will be dried this year, as the price is high enough to warrant it. Ordinarily this fruit is allowed to rot on the ground, and only the sound fruit saved for shipment. On account of fog, which is very frequent at Pajaro, the curing of the apples must be done with evaporators. The apples are put in a machine that pares, cores and slices them at one operation. This produces what is called "ring cut" apples. They are first put in salt water and then lightly sulphured to fix the color as white as possible. H. G. K.

Edenvale, Cal.

The Alton Peach.

The Alton peach originated near Alton, Ill., and was first put out as Emma. Another Emma from Texas was already on the market, hence that of Illinois had the name changed to Alton. It ripens about the same time as Mountain Rose, is better in quality, and in southern Illinois has proven among the better. I doubt whether it has been tested in New Jersey sufficiently (if at all) to know what it will do. It has only been out a few years, and was first brought to the attention of New Jersey growers in the Winter of 1899-1900 and then as for trial.

J. B. ROGERS.

The Pruning of Sweet Cherry Trees.

There has always been an objection to the growing of sweet cherry trees in that their nature is to grow tall and spindly, making it difficult to gather the fruit, and impossible to spray thoroughly. The tree can, however, be made to assume a form quite similar to that of the sour cherry. This can be accomplished by careful and judicious pruning, which should be practised from the very start. First select stock with a low branching head, and retain four or five of the lowest branches, cutting out all others. G. T. Powell recommends close pruning for two or three years, after which one may allow the tree to grow as it will, cutting out only dead and superfluous wood. If pruned properly at the start, the tree will retain more or less of a low branching habit. In dry windy districts a low head is especially desirable, as it shields the trunk and limbs from the hot rays of the sun, and thus prevents cracking and decay. But great care should be exercised to prevent the head from becoming too bushy, as an excessive growth of foliage will cause a decrease in fruit production.

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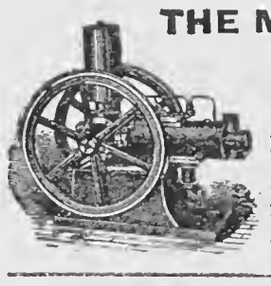
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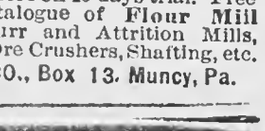

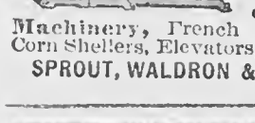
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HOPE FARM NOTES

KILLING BORERS.—Here is a letter like many others which have come lately:

A man from the South has just been here, and wants to treat my young (two-year-old) peach orchard for borers. He puts some preparation around them that forms a gas, which kills the borers, he says. He charges three cents apiece. Shall I let him *work me?* W. P.

At Hope Farm we would let this "man from the South" burn his mouth with hot words before we would let him work us by playing with the peach trees. I don't know him, and don't wish to do him any injury, but I don't believe in any such theory of killing peach borers.

Why not—do you pretend to know it all?

No; I know very little about it. I'm a beginner in actual peach culture. That is why I'm taking advice about borers only from those who are in a position to know what they are talking about. Entomologists who have spent years in studying the life history of the borer, and men who own thousands of peach trees, have no faith in such "gas" remedies. If such men can't manufacture faith out of their experience you can hardly expect me to.

Mr. Van Deman tells me that once at a fruit meeting out West a man came up with one of these Peach borer cures. He hung on so that finally a committee was appointed with our friend Van at its head to bore into the wonderful remedy. The borer-killer led them out into an orchard some distance away, found a borer's hole and painted it over with some stuff he had in a bottle.

"There," he said, "that borer will die in half an hour!"

Our good friend Van couldn't see any advantage in waiting that length of time. He took out his knife, dug the borer out of his hole, and stamped the life out of him.

"There!" he said, "he's dead *now*!"

At the South and in California washes of various kinds seem to be effective against the borer, but at the North I think the old-fashioned digging-out plan is best.

FAITH OR OBSTINACY.—So you believe in going to headquarters after information, do you?

I think I see what you are getting at, but I will say yes—at least I ought to.

Did the best peach growers you know advise you to set out those Stringfellow peach trees?

No, every one of them said that the trees would fail—one good man said I was crazy to do it. Another—probably the best authority in the country—said I would only encourage laziness, and cause hundreds to lose money and swear every time my name was mentioned.

Ha! Ha! Take your own words about the borer! How came you to have faith when these masters had none?

I didn't pretend to have faith—it was just obstinacy and nothing else. Mr. Stringfellow's arguments seemed plausible to me, though, judged by what most fruit growers believe at the present time, they were all wrong. I know, however, that some of these very scientists and practical men have, before now, whipped right around when they ran to the end of their theory, and started off on a new track. I observed also that not one of them had ever carried out the exact plan urged by Mr. Stringfellow. They said it would fail because their system of planting big trees with big roots in big holes and giving them high culture had proved a great success. It struck me that Nature ought to be asked to apply a sort of Babcock test to such an argument as that, so I planted the trees just exactly as Mr. Stringfellow suggested. If a man pin himself to faith in what others have done, he has a right to growl and play football with the advice he received if results are bad. If a man is willing to foot the bills, to be silent if he lose it all, and to keep still until there is something to say, don't you think he has a right to be obstinate and ask Nature to check off man's advice? Some great results in the world's history have been brought about by obstinacy—yes, and some have been held back for years also. Faith may remove mountains, but obstinacy will hold them down!

SHREDDING DRY FODDER.—A man might write half of a large book in reply to the following questions:

What make of fodder shredders do you use at Hope Farm? You spoke of your horses eating the fodder so readily. I have had some shredded on different occasions with an old cylinder, and stock wasted more than they ate, both horses and cattle. However, my live stock lives well, always fat, and I thought that had something to do with it. If I can get a machine to prepare fodder that the stock will eat readily, it will be business for me to purchase one, if the expense is not too great. I have a nice little dairy business here and keep about 30 cattle and six horses on 100 acres of very hilly land, and buy no coarse feed. I must raise wheat and corn for the landlord, as I am only a renter. We have had as much as 1,800 bushels of corn in one year. B. R. B.

Franklin Co., Pa.

We use a Leslie or St. Albans shredder. The cylinder in this machine is adjustable—the shredding being done by 24 sharp, slender knives. The Blizzard is well spoken of, though I have not tried it. Our machine is a large one, requiring strong power. We hire a portable steam engine and shred enough for six to eight weeks at a time. The stalks are smashed, split and crushed. The horses leave the pith and some of the butts, but eat the lighter parts of the stalks clean. At one time we used waste molasses on the stalks, and thought it tempted the horses to eat more of them. The refuse makes excellent bedding. Of course it must be understood that this shredder will not put value into the stalks if they have been ruined in the field. It might pay to run moldy and leached stalks through the shredder and put them on the manure pile, but to make good horse or cow feed the stalks must be bright and well dried. We expect to husk our corn early in November, and get the stalks under cover as soon afterward as possible.

FODDER AND FEED.—Shredding corn fodder is a necessity with us for, without any silo we could not otherwise feed our stock economically. I intend to sell hay, which as we are situated, is, I believe good practice. I have explained why we have no silo. I do not intend to do much with cows, but our stock is chiefly hens, hogs and horses. For this class of stock, it is my conviction that the grain crib and the hay mow are better than the silo. In other words, I think it pays us better to husk and shred. If, like our Pennsylvania friend, I had 30 cows, I would certainly put part of my corn in the silo, for silage is the best expanded milk one can use in a hilly country. D. C. Lewis grows corn and keeps cows. Part of the corn is left with five stalks to the hill, and part with only three. The five-stalk hills are cut for the silo, the others are left for grain. If I had a large herd of cows I would operate that way. Perhaps our friend is under contract to raise dry corn for the landlord. I believe that can be done and have silage too. We have already begun to feed stalks to the horses. They have the sowed fodder and sweet cornstalks once a day. This will last until nearly the middle of November or later. We shall begin to shred about December 1, and from then until March 1 little else but shredded fodder will be given. Why not cut the dry stalks after husking into the silo and wet them? I have never been able to find anyone who was willing to do that twice.

WEATHER NOTES.—On October 15 the Cannas by the house were still in bloom. We were still eating sweet corn from the garden on the lower part of the farm. On the high hill the Evergreen sweet corn was in tassel, but it is too small to amount to anything. One can stand on our hill and look down into the valley, where the early frost has nipped and colored the leaves, while on the heights the leaves are still fresh and green. We have had a good fall for farm work. The weather has been bright and clear most of the time, and Jack Frost has been so busy elsewhere that our late crops have had a fine chance for their lives. The Fall-sown wheat and grass have started well, and if the weather will continue favorable we shall have our work well done in time. Where one raises hay in the cornfield as we do, bright weather makes quite a difference between profit and loss.

POTATO FAILURE.—There isn't any difference between profit and loss in the potato field, for there isn't any profit at all. We shall have to value our "experience" at a price heavy enough to sink it out of sight in order to come out even. Thus far we are not getting quite enough to pay for seed and fertilizer! That is the plain truth. I put no lace or frills on it, because that would be like putting filigree work on a skeleton—making it all the more ghastly. I cannot tell just how it happened, for we never used greater care in planting, and the seed was good. It cannot be because we used our own seed, for seed from Florida and seed from Maine gave a crop so poor that they are not worth digging. We did our best, but that "best" is hardly good enough to go on the books. Nature gave us fine tops, but left the tubers out. We had a chance to show these tops off and make visitors envious all through the Summer, but as we get below ground we realize that fine tops pay no taxes. We have plenty of company this year, but that doesn't take the sting out of a failure.

GOOD STOCK.—Hope Farm life is full of hill and valley. One thing that we depend on fails, and another that seemed of little account turns out better than we expected. Blossom, our oldest heifer, has dropped her first calf. She is the first of the Hope Farm heifers to begin milking. She looked so rough and beefy that I became quite disgusted with her, and was minded to put her down as a robber cow before she had a chance to prove her honesty. To my surprise the actual business of life finds her a smooth, well-rounded cow that bids fair to equal her mother. I now think it likely that her big neck and thick loin will, in time, pass down into the milking pail, and leave her pretty near to the true dairy type. Why, this heifer's unexpected value will make up for a good many of those potatoes we didn't raise! . . . And the colt promises to make up for a good many more! She's a beauty! Charlie has her now so that she will lead anywhere. He can call her up and put her halter on out in the pasture. There are possibilities in that colt, but it will take a wise and gentle man to bring them out. One man might yell at her, jerk her bridle, and give her a kick now and then, and at three years old few could be found to pay $50 for her. Another might coax and pet her, and keep her so true and hopeful that at three years she will readily sell for $400. Nature knows her business. She puts man in charge of thousands of natural forces, and pays him a premium for patience and skill. Yes, and she puts other forces over him, which he cannot measure or explain, so that he may trust and hope and work bravely on. H. W. C.

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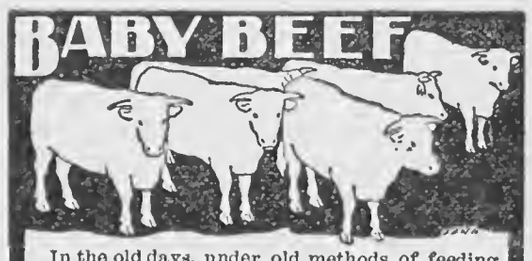

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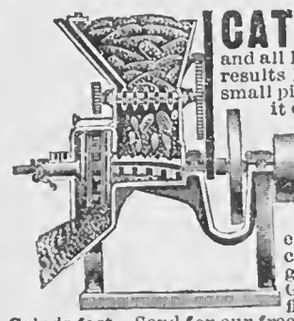

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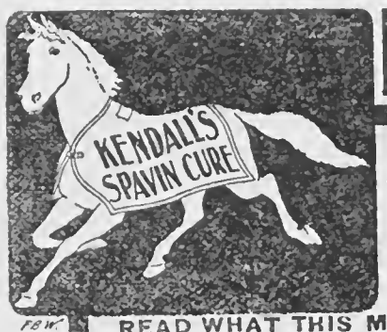

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SATURDAY, OCTOBER 26, 1901.

FROM reports now coming in it seems that the cow pea is giving a good account of itself at the North. This plant is poorly named. It has little to do with a cow, and is not a true pea. Taking the name as it stands the plant is truly a bovine—it is about the best *beau* to captivate the shy Miss Nitrogen that we have.

*

WE are glad to print, on page 734, the names of a few more rogues who were caught and convicted of selling oleo and bogus milk. A part of the sentence of every such rogue should be a good dose of printer's ink well set in by the type. We are glad to contribute our share of such a sentence. Publicity for such rascals!

*

WE are glad to see that Mr. Cook (page 735) advocates the plan of growing more corn on eastern farms. Somehow eastern people have found it so convenient to buy western corn that they seem to think it is a crop that belongs to the West alone! Nonsense—corn sustained the eastern people while the West was producing little besides wild animals and savage Indians. The present high price for the grain reminds eastern farmers that there are thousands of acres now idle that can be made to produce good crops of corn. We predict that next year the acreage of corn east of Buffalo will be largely increased, without seriously affecting the acreage of other farm crops.

*

ABOUT a year ago a commissioner was appointed to investigate the ration served to the "bluejackets" on American warships. One of the first suggestions made is that milk be served regularly. It is a good one. Such fighting as our sailors will be called upon to do can be done better on a diet of milk than on a dose of grog! During the Cuban War we did our best to have cheese made a part of the army ration. We thought then, and we think still, that good cheese is better suited to form at least part of a soldier's ration than the fat meat usually furnished him. At any rate, the use of milk and cheese by the army and navy will provide a new and profitable market for dairy products. If the training of fighting men is necessary, let them, at least, eat for the best interests of their country! Glory may fill their hearts, but let the old cow fill their stomachs!

*

LIGHT on the ethics of catalogue requests is desired by a correspondent in another column. He apparently feels that a request to an advertiser for a catalogue describing goods for sale, the price of which, it is reasonable to infer, includes a fair profit, carries a moral obligation to make a purchase, since the catalogue and its postage represents an outlay on the part of the advertiser, for which he would not otherwise get a return. We venture to say that advertisers in general wish the largest possible circulation of their catalogues and price lists among those really interested in the commodities listed, with the hope that a fair proportion of orders will eventually return. It is not to be supposed that a discriminating buyer will always find just what he wants, quality and price considered, in the first catalogue that may come to hand, and as the cost of several catalogues is really included in the profits on an average order, he is justified in examining those from different houses until he is satisfied. Of course requests for catalogues from idle curiosity, when there is no probability of making a purchase, are clearly wrong, though many advertisers would be glad to send them in the hope they may eventually be seen by interested parties. Catalogues often represent a large expenditure, but they describe a multitude of articles about which there would otherwise be an endless amount of costly and fugitive correspondence. They give valuable and timely information, and form permanent records of value. They displace expensive drummers or solicitors, and save the time of both seller and buyer, as they can be consulted at leisure. As the average cost of business letters under present methods is not far short of 10 cents each, it may be realized what an enormous saving is made in correspondence alone. It is safe to say that a request for a catalogue does not from the advertiser's standpoint imply an obligation to purchase, but only to examine the included offers intelligently.

*

THE State of Connecticut has gone into the forestry business. Mississippi raises cotton with convict labor, Kansas is to make butter with student labor, and Connecticut is to grow oak, pine and chestnut. The sum of $2,000 has been appropriated, and the State Forester at New Haven is to buy timber land at not more than $4 per acre. This land is to be deeded to the State but assessed and taxed by the town at the regular rate of taxation. It will be handled under improved forestry methods to show, if possible, how such land can be made useful and productive. The State will buy abandoned land without trees or with scubby growth, expecting to show what practical forestry will do for such fields. This seems to us like a valuable and practical form of education. Thousands of acres in New England never should have been cleared. They have starved the farmer, but may fatten the forester.

*

WE hear much about the use of steam power on the great farms of the West, but those western farms do not have a monopoly of this business by a good deal. Now and then an eastern man takes the steam horse out into the field. Here is one case:

A little experience may be worth something to some of your readers. I had 1,000 old peach trees to clean out, and found it rather slow work with ropes, pulleys and team. I hired a thrashing traction engine for $5 per day and coal furnished; had a stout chain 20 feet long and two men to hook and unhook it to and from the trees. Result, pulled 500 trees in 10 hours, roots and all, clean from the ground. The soil is a stiff loam, and was pretty dry and hard. The trees stood 18 feet apart, and it was very seldom that the engine had to back. G. T. W.
Monroe Co., N. Y.

We believe that the time is coming when steam and electric power will be common on the eastern farm. The streams in our hills afford cheap power for generating electricity, and it will, in time, be wired all over the country, and harnessed to suit the small farmer.

*

THE French government has ordered that berry-bearing trees and shrubs, in woods under its jurisdiction, shall not be trimmed early in the season, because the removal of fruiting twigs means distress—perhaps starvation—to many birds. It is saddening, in many districts, to see how little provision exists for these tiny friends; how soon they learn to know those who feed them. Deep or prolonged snow means distress to so many during a severe Winter; yet how cheerful and companionable they are! The bread crumbs swept from the table cloth after each meal, thrown upon a window sill, soon attract the Winter birds; so, too, does a bit of hard suet or fatty meat put upon the branches of some shrub. Rare, indeed, is the time when sparrows and snow birds are our only winged visitors, because they always find their table spread for them. When we consider what good friends the farmer or fruit grower possesses among the birds, we find a thousand reasons for supplementing their food supply during any time of scarcity.

*

EX-GOVERNOR HOARD, of Wisconsin, makes the following statement:

There is a deeper sentiment than ever among the farmers of the country that oleomargarine, in the semblance of butter, should be taxed to extinction. They are in no humor, either, to brook interference with this purpose, on the part of party leaders.

All who have kept track of the feeling among farmers know that this is exactly true. We believe that the sentiment in favor of the principles embodied in the Grout bill have become more popular than ever during the past few months. Public sentiment both in country and in town is crystallizing round the evident fact that the sale of colored oleo has become a fraud. It is a dishonest business as conducted in most markets. The American people do not object to fair and open competition, but they see clearly that if the business of counterfeiting is to be legalized, no man's trade or job is safe. For the first time in its history an avowed champion of oleo went to the National Farmers' Congress, hoping to secure the support of that organization. He failed, and it is now quite amusing to hear the oleo people say that this Congress never did represent the farmers. If the honest butter advocates had made no fight, and oleo had won the day, its backers would have glorified the Congress to the skies. You see it makes a great difference whether the ox or his sister the cow is gored!

*

A COMPARISON of military measurements in the countries where army service is compulsory or very general brings out the fact that the Swedes are now the tallest people in Europe, and probably in the world. Ten years ago the Norwegians led in height, but the average height of the Swedish conscript now exceeds his Norwegian brother by half an inch. This improvement in stature is attributed to the decrease of intoxication brought about by enlightened public sentiment, and in part by the Gothenburg system of public control of the manufacture and sale of alcoholic beverages. A similar system is in force in South Carolina, and it would be interesting to have data on the moral and physical effect on her people.

*

IF you have not already done so, examine your peas and beans for the weevil. Whatever damage has been done cannot, of course, be remedied now, but further damage may be prevented by using about one ounce of bisulphide of carbon to two to four bushels. We are not sure just how small an amount can be used effectively, but the range given above will do the work. Place the grain in a box or bin, pour the liquid into a dish, immediately cover with blankets, and the work will soon be done. Positively, *keep away* with lights or lanterns for 24 hours. The stuff evaporates rapidly; the vapor is much heavier than air, penetrating quickly through the grain in the box. Any grain so affected is cheaply and surely treated with bisulphide of carbon. Try it.

*

BREVITIES.

Oh Admiral Schley,
Did you tell a big lie?
Did you swear when you made your big loop?
Those mudslingers say
That you ran clean away
Like a chicken that flies from the coop.
It is talk! talk! talkee,
But you'll please excuse me
If I don't read a word of the stuff.
For life is too short
And the fact that you caught
All the Spaniards is quite fact enough.
We don't care a thrip
Where you went with your ship,
While we'd rather not hear people swear.
We'll shut up our ear
And pretend not to hear
For the sake of the way you got there.

STRONG actions for week days.

So fertility is too much for Jack Frost—page 723.

JACK FROST has been under the weather this Fall.

A BLUE law enforced by a green hand will make a yellow record.

DON'T feed the children on table "scraps" between father and mother.

THE demand for vetch seed is good—a chance for some farmer to grow the seed.

"THAT certainly jars me," said the peach, as it dropped into the preserving kettle.

IT is all right to "scatter seeds of kindness," but better to concentrate them where they will make a good showing.

SOME men think that their value to the world is increased by their ability to keep their trousers permanently creased.

MANY a woman performed her full share of the deeds that saved the farm, but she gets a mighty small portion of the deed to the property.

DON'T let your desire to make the yard or garden neat induce you to cover plants or shrubs needing Winter protection too early in the season.

CHAS. FORSTER, of New York, says that western boxed red apples brings $2. This means $6 per barrel, and shows what will be gained by *boxing* good fruit.

YOU may set it down as a settled fact that the plan of carrying a separator about from house to house to separate cream scores 99 in theory but 0 in practice.

THE first shipment of Florida oranges has been made. They are too green. It is estimated that there will be 1,000,000 boxes of oranges from the sandy State this year!

"THE last half of a horse's life is worth more than the first half," says Mr. Cook, on page 735. He says a good word for the horse whose age is between 10 and 20 years.

IF a man were to tell us that there is any fruit just now better than a mellow Rhode Island Greening we should have to feel sorry for him, and be thankful that we haven't his taste.

WHEN a person reaches the point which makes him incapable of learning from others he becomes a "know-it-all." He is ripe, and should be both picked and kicked.

Is there any chance for the farm boy to work himself into a good surveying practice without the advantages of a college course? That is one of the things we hope to answer before long.

THE season has arrived for testing some of those methods of collecting leaves described in THE R. N.-Y. last Winter. It was generally agreed that fallen leaves are well worth the trouble of collecting.

Events of the Week

DOMESTIC.—By an air blast at the Quincy mine, at Houghton, Mich., October 10, tons of rock were jarred down, completely covering and killing three men. . . . . Two men were killed and several injured in a boiler explosion at a saw mill, near De Witt Station, in Dinwiddie County, Va., October 10. . . . . President Lorenzo Snow, head of the Mormon church, died at Salt Lake October 10, aged 87. He was a native of Ohio, succeeding Wilford Woodruff as head of the Mor. non body four years ago. . . . . A McKinley memorial association has been formed, with the object of erecting a monument to cost $1,500,000 in memory of the late President. Appeals for funds will be made throughout the United States. . . . . Four men were killed and seven injured in a collision on the Santa Monica electric road, near Sherman, Cal., October 11. . . . . The board of health of Pottsville, Pa., has ordered all women to wear short dresses. This action is based on the ground that the long dresses, which sweep the pavement, gather up all the disease germs in the street, and are thus carried to the homes of the women. . . . . A lumber fire at Arkansas City, Ark., October 7, destroyed property valued at $500,000, including 4,000,000 feet of seasoned timber. . . . . James Gilleland and a son perished, October 13, in a mine shaft, near Connellsville, Pa., which they descended to rescue another son, who had fallen into the pit, and lost his life. The three bodies were recovered by miners. . . . . The bursting of a reservoir at East Liverpool, O., October 13, caused loss amounting to $150,000. The reservoir was a new one, filled for the first time. . . . . A disastrous fire occurred at Los Gatos, Cal., October 13, the damage reaching $250,000. . . . . The Apaches are on the warpath in the Mogollon Mountains, New Mexico, having killed five persons on Willow Creek recently. . . . . Settlers in the Mille Lacs region of Minnesota are alarmed over the ugly attitude of the Indians there; they are seven hours from a telegraph, and in case of an outbreak might all be massacred before help could reach them. The Indians have been ordered to move off homestead land, and the Government is withholding money due them because they will not go; this, together with a smallpox quarantine, has aroused their resentment. . . . . A boiler explosion at Clifton, Ariz., killed four men October 14. . . . . The village of Galien, Berrien Co., Mich., was almost wiped out by fire, which started in a laundry October 14; loss, $120,000.

ADMINISTRATION.—The total of claims filed as a result of the late Cuban insurrection and of the Spanish-American War is $57,581,807. Among the claims are the following: Deaths caused by explosion of the Maine, $1,890,000; injuries caused by said explosion, $135,000; injuries and deaths caused by said explosion, $30,000. . . . . The postal money orders sold in the United States during the past fiscal year reached a total of $300,000,000 in round numbers. This is an increase of almost $40.000,000 over the previous year. . . . . There are indications, based upon returns now being received at the Treasury, that the coming months will show a considerable falling off in internal revenue receipts as the result of the recent legislation in reducing and abolishing war taxes. Recent figures published by the Treasury Department give the cost of the Spanish War and the suppression of rebellion in the Philippines as amounting so far to $489,000,000.

PHILIPPINES.—A detachment of the Twenty-first Company of Macabebes encountered a large force of insurgents near Lipa, Province of Batangas, October 10. Lieutenant Beau, of the Macabebes, was killed, and one of the force was wounded. The enemy was strongly entrenched. After two hours' fighting the Americans retreated to await reinforcements. The insurgents numbered over 300, were armed with Remington and Mauser rifles and apparently had plenty of ammunition. . . . . It has been determined at the War Department to send troops to the Philippines to take the places of those whose terms of enlistment expires. Where the reënlistments are not large in any one regiment their places will be filled by separate detachments of recruits. If any considerable number of enlistments expire in a single organization, it is probable that the organization as a whole will be returned from the Philippines, and another regiment sent to take its place. . . . . The entire police force of Catanag, Province of Tayabas, numbering 11, have been carried off by insurgents, armed only with bolos. Presumably the police made no resistance, as they were well armed with carbines and revolvers. . . . . General Malvar, the insurgent leader, is believed to be planning an operation in the Province of Bulacan, Luzon. The police force of Banan, Province of Batangas, has been disarmed, and the chief of police arrested for belonging to an insurgent society.

GENERAL FOREIGN NEWS.—Apprehensions for the safety of Miss Stone's life are being entertained in the event of the Bulgarian troops attempting to rescue the captive missionary from the mountain outlaws, and efforts are being made to prevent any use of force by the soldiers pending the outcome of the negotiations with the brigands, which, it is expected, will result in the unfortunate woman's liberation. . . . . The Pacific coast of Nicaragua was recently flooded to the depth of eight feet by tidal waves, believed to be due to volcanic disturbances in the bed of the Pacific Ocean. . . . . The recent clash between Venezuelans and sailors on a German steamer, at Porto Cabello, may lead to international complications. Berlin advices state that the German government does not believe the bluejackets violated Venezuelan territory, and may demand an apology and reparation for injured from Venezuela. A German cruiser is being fitted out at Kiel for South American waters.

FARM AND GARDEN.—The California State Grange, in session at Petaluma October 5, selected Sacramento as the place of meeting for 1902. C. W. Emery, Oakland, was elected Master.

W. J. Hayes, an expert in growing shade tobacco on the Mitcheison farm, in Tariffville, Conn., has been engaged to experiment with shade tobacco in Porto Rico, where he will raise under shade, not the Sumatra, but the thick native Porto Rico leaf. It is hoped that the leaf can be made lighter in tint and thinner if grown under cheesecloth.

Ranchers in southern Utah and northern Arizona are trying to destroy desert horses, holding big hunts for the purpose. The mustangs are so thick in the district lying between Hurricane Ridge and Kanab Wash and over the old Canan range to Mount Trunbill that ranchers are complaining on many scores. The range is being eaten up, gentle horses are being run off, and many valuable animals are being shot by mistake by careless sportsmen firing on supposed desert horses. Two years ago there was a similar hunt, and nearly 500 horses were killed.

The next annual meeting of the Indiana Horticultural Society will be held at Indianapolis, December 5-6; secretary, J. Troop, La Fayette, Ind.

The Niagara Co. (N. Y.) Farmers' Club will hold a harvest meeting at North Ridge October 26. There will be an excellent programme in which well-known speakers will participate.

Farm Matters in Kansas.

We had a very warm and dry Spring here, terminating in quite a serious drought in June. Early potatoes were half a crop, but sold for double usual price. Wheat was good, but only a few in Allen County had any. Corn was nearly exterminated by the fearful hot and dry weather, so that there is no corn for sale, and many will have to buy, but an extraordinary amount of fodder has been put up, and there is plenty of coarse feed, but a great shortage in fattening feeds. Late potatoes are a failure; only fit for home use, they are so small. Hay has been cut twice, and was a half crop each time, making the usual amount of hay, but twice the work to make it. Fall rains have given us the best Fall pastures we ever had, and clover fields will furnish pasture until the ground freezes. The only living thing that went right ahead in all its glory was the Mammoth Soy bean. This made a growth three feet high, and gave about 20 bushels per acre of beans. I had in 10 acres of them, and they are now in my barn, and will be fed out to hogs, sheep and cattle without thrashing, a very little at a time.

Every farmer has put in a field of wheat, and there are actually over 100 times the usual acreage in. It is now about two inches high, and the weather conditions are extra favorable. The pasturage during the Winter will help out wonderfully, and if there is a crop of wheat, the grain will take the place of corn by July 1. Farmers have sold their cattle, sheep and hogs down to a very few, and as a rule have more roughage than they will use, and of course they saved only their best stock; thus the great drought has been a great purifier, so to speak. It is probable that wheat will always be raised here hereafter, and, of course, we must find a way to prevent the ravages of chinch bugs over surrounding crops. It is my plan to put in a field of Soy beans on one side and flax on the other. The bugs will not trouble either of these crops, and the flax ground can be plowed in August and put in wheat again. Everyone who put in wheat drilled in commercial fertilizer with it, and there has been a good trade in wheat drills and fertilizers. When it became apparent that all the corn had to be cut up, there was a great scramble for corn harvesters, and one concern sold four carloads in our little town. Now they are here with their shredders, and next Spring they will have to be here with their harvesters to gather in the wheat crop, and the thrashermen will have to multiply also. J. C. N.

Allen Co., Kas.

Farm Values.

Real estate does not seem to be changing hands of any account, although there seems to be quite a lot for sale, at what a few years ago would have been called low prices. I live in the edge of a village of about 3,000 inhabitants. We have two large creameries here and two corn-packing companies. A car of cream goes to Boston every morning from one company. Some farms are well kept up, while others are in fair condition, yet there seems to be an unrest among farmers. I attribute it to the high and still increasing taxes. My place is 1½ acre, well situated every way. I have one acre of small fruit; it is under high culture. I get lots of currants, gooseberries, raspberries, plums, pears and apples, yet I could not sell for near (I was about to say for one-half) what it is worth, and that is the general complaint.

Dexter, Mc. A. R. B.

New York State Cabbage Crop.

The crop is about a general average. S.

Little York, N. Y.

The weather conditions have been unusually favorable, but owing to the very small acreage planted the yield will be only about 50 per cent of the usual amount grown in this section. Crops on low lands have considerable stem rot and club-foot. The crop in general is 100 per cent better than last season. The severe drought a year ago caused an entire failure of late cabbage. A. G. M.

Elmira, N. Y.

We have a large acreage of cabbage, and until recently have had favorable weather and conditions; but our late or Danish cabbage has suffered from blight or rust, which first attacks the outside leaves and then the head, which seems to rot at the heart or core, and finally drops off the stalk. Our Warren or domestic crop was fine, which, however, is nearly harvested, being shipped to southern and western points, most of it being made into kraut. The price paid by dealers here is from $10 per ton early, or about September 10, to $7 per ton at the present time. The Danish or late crop will mostly be stored by farmers and dealers here for Winter shipment.

Homer, N. Y. LITZ & WATROUS.

The cabbage crop here is, I believe, about 10 per cent short in acreage of last year. I think the yield per acre will about equal that of last season. The heads are not as solid, and will not weigh as much, according to size. Prices now around $6 per ton. There is some stem rot and leaf blight. We are in the midst of the late potato harvest. Yields very uneven—from 50 to 200 bushels per acre; some dry rot in nearly every field and a good deal in some fields. An unusual quantity is going to market on that account. Quality of sound potatoes pretty fair, though a little rougher than last year. I don't think that carefully sorted potatoes, pitted or put in cellar in good shape now, will rot any further. Prices just now 50 cents per bushel. We think they are good property to hold for the Winter market. G. F. W.

Fairport, N. Y.

Crop Prospects.

The clover crop here in Lenox township, from what I can learn, is very good, and the yield is better than in former years. More has been harvested here than for several years. D. M. S.

Rowenton, O.

Last Summer was very dry here until the middle of August; our eight acres of sugar beets were late starting, and at this writing are still growing, with tops perfectly green. They may go 18 tons per acre. I sowed Alfalfa in two and one-fifth acres of corn August 30, and oats with it to furnish a Winter cover; cutivated both ways with one horse. Alfalfa is 1½ to two inches high now; oats five to six inches. L. C. B.

Crown Point, Ind.

OCTOBER 14.—The weather has been fine for the past few weeks, and farmers have been improving it in gathering in the crops. Apples are not quite all gathered in yet, but the crop is better than was supposed. Perhaps it may reach 50 per cent of an average crop in this vicinity. Buyers are offering $2.50 to $2.75 per barrel, and sometimes $3 for Kings. The potato crop is of an ordinary kind, and there is complaint that many are scabby and wormy. Fall feed is good and stock is looking well. The yield of sweet corn was very satisfactory to the farmers. A smart rain is prevailing to-day. T. D. S.

Madison, Me.

New Jersey Farmers' Institutes, 1901-1902.

Locktown, Hunterdon County	Nov. 12, 13
Three Bridges, Hunterdon County	Nov. 14
Keyport, Monmouth County	Nov. 15, 16
Shiloh, Cumberland County	Nov. 18, 19
Swedesboro, Gloucester County	Nov. 20, 21
Salem, Salem County	Nov. 22, 23
Stelton, Middlesex County	Nov. 25
Millstone, Somerset County	Nov. 26, 27
Harlingen, Somerset County	Nov. 29
Pennington, Mercer County	Nov. 30
Laytons, Sussex County	Dec. 2, 3
Branchville, Sussex County	Dec. 4
Blairstown, Warren County	Dec. 5, 6
Delaware, Warren County	Dec. 6, 7
Stewartsville, Warren County	Dec. 9
Clinton, Hunterdon County	Dec. 10
Ringoes, Hunterdon County	Dec. 11
Hamilton Square, Mercer County	Dec. 12
Haddonfield, Camden County	Dec. 13
Mt. Holly, Burlington County	Dec. 14
Woodbine, Cape May County	Dec. 16
Vineland, Cumberland County	Dec. 17, 18
Hammonton, Atlantic County	Dec. 19
Woodstown, Salem County	Dec. 20, 21
1902.	
Williamstown, Gloucester County	Jan. 20, 21
New Egypt, Ocean County	Jan. 22

Trenton, N. J. FRANKLIN DYE, Secretary.

Grass Notes by Geo. M. Clark.

I don't confine myself entirely to the cultivation of grass. I sowed an acre of oats for hay this year. The yield was 8,190 pounds. Cut in the milk it makes excellent feed for horse or cow. I also sowed 1¼ acre to Japanese millet on land that is quite dry, but the season being wet it grew to five and seven feet high, and yielded, when well dried, 13,100 pounds. It took nearly two weeks to dry it. Some one said that it was a bad plant to get started in the land; that it made the land foul, so I removed it from the field where it grew as soon as possible, but it certainly killed hard. I could have killed the hardest sod on my farm easier. If I had let it alone it would have produced three or four tons more, and seed enough to have covered the town. When sown on moist land early it will make two large crops, 10 or 12 tons to the acre. Perhaps you will remember about my sowing some Timothy and Red-top the first of November, 1900. The grass did not come up till Spring. I let a quarter of an acre of it stand, fertilized it as usual, and cut it the middle of July. It produced less than 200 pounds of hay; 3½ acres of the same kind of land adjoining, sown 40 days earlier, produced 35,415 pounds of dry hay cut July 1. Three years ago last Spring I set out 1,425 Japan plum trees. They produced about 400 baskets this year. The fruit was very large. I used no fertilizer of any kind, but kept the land intensively cultivated to the depth of five and six inches. I didn't raise a weed or spear of grass; nothing but the largest and best flavored plums of this kind I ever saw.

Items of Interest.

IMPORTED POTATOES.—We think that there will be a good many imported during the season, especially the latter part of Winter. Crops on the other side seem to be good, and according to our correspondence all large potato-producing sections are depending on our markets to take a portion of their surplus. The principal variety heretofore imported has been the Magnum Bonum, the quality of which compares very favorably with the best of the home production. They come principally from Great Britain, Belgium and Holland.

Philadelphia. J. D. HENDRICKSON.

EXPERIENCE WITH CORN.—During planting time last Spring there was so much rain that our silage corn could not be planted till the middle of June; varieties were Leaming, Thoroughbred flint and two others highly recommended. Our success with the last two was not sufficient for us to make any statement except that we shall not try them again. The Thoroughbred flint was a little earlier than the Leaming, but did not grow over four-fifths as many pounds of silage. Our plan would be in future to fall back on Sanford for perhaps one-third of the crop; or, if we were delayed in planting as we were this year, would plant nearly all Sanford, with another trial of an acre or two of Thoroughbred flint. With a good year where corn can be planted early, Leaming would, on the whole, seem to be best. There are almost no apples this year in the State of Maine, not over 10 per cent of last year's crop. Potatoes in this section are about the usual crop, but in Aroostook County they have a very large crop, and it has been an extraordinarily good year for that section of the State. J. H. R.

Portland, Me.

Woman and Home

From Day to Day.

WHERE YE SPANKWEED GROWS.

There's a corner in our garden, but my nurse won't tell me where,
That little boys must never see, but always must beware,
And in that corner, all the year, in rows and rows and rows,
A dreadful little flower called the Spankweed Grows!

My nursie says that if a boy who doesn't wash his face,
Or pulls his little sister's hair, should ever find that place,
The spankweed just would jump at him and dust his little clothes.
Oh, it's never safe for fellers where the Spankweed Grows!

Some day I'll get the sickle from our hired man, and then
I'll go and find that spankweed place—it's somewhere in the glen.
And when I get a-swingin' it and puttin' in my blows,
I bet there'll be excitement where the Spankweed Grows!

—Paul West, in Life.

*

ACCORDING to Good Housekeeping, a baker who makes jam on a large scale says that he never stirs it, but puts a large handful of marbles on the bottom of the kettle. When the jam boils these roll around, and prevent it from burning.

*

LITTLE Agnes had been a regular attendant at the Sunday school last Winter, says the New York Sun. The other day the school opened again after the vacation and the teacher decided to have a general review of all the ground covered by the primary department. She started, very properly, at the beginning.

"Children," said she, "after Adam was created, how was Eve brought into the world?"

A half-dozen hands went into the air.

"Willie Smith may answer," said the teacher.

"Made-outen-a-bone-frum-Adam."

"Now, children that is correct. And from what bone was woman created?"

There was an awful silence in the class-room. Finally little Agnes's hand went up like a shot.

"You may answer, Agnes."

Her decision came quickly.

"The jaw-bone," said she.

*

WE recently met a severe-faced woman with an air of extreme propriety whose costume was a shrieking example of conspicuous lack of taste. She wore a very nice gray jacket suit and a gray hat, which, one would imagine, would tone down any brilliancy of color, and give a harmonious whole. But she also wore, with her low shoes, bright purple stockings with white dots, which gleamed luridly below a violent pink silk petticoat; a green silk waist with a red neck ribbon, showed under her gray jacket, and her hat was trimmed with a scarf of turquoise blue. The general effect would make a rainbow seem sad and lonesome. Every article she wore was good in quality and style (save only the purple stockings, which we could not reconcile to our conscience); yet the general effect was poor and tawdry. The fact is, that a clever combination of becoming colors always gives a look of style to the simplest dress. The girl who always looks well in a shirt waist is the one who knows just the right shade to wear in necktie, and belt, perhaps repeated in her hat. We used to see one girl last Summer, nearly every day, who always wore a red neck ribbon with a pink waist, except when she varied it by wearing a pink ribbon with a red waist, and we always felt sorry for her; it is charity to assume that she was color blind.

WHEN it is necessary to dilute very strong tea, water at the boiling point should always be used. If made strong at first, and then diluted with water that is merely hot, not boiling, the flavor is poor. The water should never be allowed to boil and reboil for tea making; it should always be used just as soon as it comes to the full boil. We think that carelessness in these two particulars is responsible for most cases where tea is lacking in flavor and aroma. To seek to repair these faults by long steeping of the tea is a fatal error, which not only ruins the flavor, but also spoils the tea for its real purpose, which is that of a mild stimulant and aid to assimilation.

*

EMBROIDERED flannels for shirt waists seem likely to achieve as great a popularity as last Winter, the patterns being similar to the printed ones. Light blue is a favorite color, one of these being embroidered all over with black rings inclosing a French knot of white. In the printed patterns white with black figure is very effective. Novelties in shirt waist materials have borders, sometimes merely a different shade or heavier weave, and sometimes an elaborate arrangement of colors or stripes. Embroidered borders are decidedly gorgeous. In making up, one strip of the border is put down the front hem, and, as a rule, straps with pointed ends are put at yoke depth on either side. The colored strips also form stock and cuffs. Clusters of tucks with straps between form a very pretty and popular trimming. Among silk waists, taffeta is still a standby; a weave called metallic taffeta, from its luster, costs $1.25 a yard, and makes up beautifully. Sicilian, a ribbed silk with a woolen warp, will be used; this is very durable, thick, and suitable for Winter wear. Plain silk waists are still freely tucked, and for this style peau de soie is still a favorite, also peau de cygne and peau de mignonne, which is a little duller in finish.

3951 Boys Suit,
6 to 12 yrs

Louisine is another of the favorite silks. Velveteen, which is really a beautiful fabric as now made, promises great popularity, though in the gay colors it has rather a tawdry look. It is a very comfortable fabric for cold weather.

THERE are a good many who are regretting that they are so without money or other material means as to be unable to do all they would like toward relieving others' burdens and leveling down the rough roads they have to walk over. But is is one of the mistakes we are all the time making to suppose that bread and milk and money are the great panacea of human distress.—Dr. Parkhurst.

The Rural Patterns.

Nothing makes a more satisfactory boy's suit than dark blue serge. The model shown is made of that material with simple bone buttons and is well adapted to school wear; but mixed cheviots and all other suiting materials can be substituted if preferred. The trousers are carefully shaped and are correctly fashioned. The vest is double-breasted, and is supplied with double rows of buttons and buttonholes. The jacket is seamed at the center back and curves

3950 Misses Norfolk Waist,
12 to 16 yrs.

to give a graceful effect. The fronts are half loose, with inserted pockets covered with laps. The neck is finished with regulation collar that rolls over with the fronts to form lapels and the sleeves are in coat style, stitched to simulate cuffs. To cut this suit for a boy of eight years of age 2⅛ yards of materials 44 inches wide or 1¾ yard 54 inches wide will be required, with ½ yard of lining for back of vest. The pattern No. 3951 is cut in sizes for boys of 6, 8, 10 and 12 years of age; price 10 cents.

Norfolk styles make a marked feature of the season and are noticeable in waists as well as jackets. This smart model is made on the latest lines and is correct in every detail. As shown, the material is fine serge flannel woven in a pretty fancy plaid, collar, cuffs and belt being of black velvet, but plain flannel, corduroy, velveteen, striped flannel, cashmere and all waist and dress materials are suitable, as the design is equally appropriate for the costume and the odd waist. The foundation, or fitted lining, is snugly fitted and closes at the center front. The waist proper is laid in box pleats that are stitched at their under folds and extend from the neck and shoulders, the closing being effected by means of buttons and buttonholes worked through the pleat at the center front. The two seamed sleeves are in dress style with slightly flaring cuffs. The neck is finished with a standing collar that terminates in a point, and at the waist is a narrow curved belt. To cut this waist for a miss 14 years of age 3½ yards of material 20 inches wide, 3¼ yards 27 inches wide, 2¾ yards 32 inches wide or two yards 44 inches wide will be required, with ⅜ yard of velvet to trim as illustrated. The pattern No. 3950 is cut in sizes for misses of 12, 14 and 16 years of age; price 10 cents.

EACH man has to seek out his own special aptitude for a higher life in the midst of the humble and inevitable reality of daily existence. Than this there can be no nobler aim in life.—Maeterlinck.

THERE is no man so angular or crotchety that we cannot get along with him if we love him. We must remember that we are just as crotchety from his point of view as he is from our point of view. Probably the only real reason why God is able to tolerate us is because He loves us. There are some people who are always ready with some little word that makes others more easy to get along with.—Dr. Parkhurst.

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House Plants for Winter.

It is the hardest thing in the world not to gather in too many. Such a lot of plants are in the beds, which we know would do well in the house, under proper treatment, that we are tempted to nip off slip after slip, cheating Jack Frost of his lawful harvest. I raised a dozen different kinds of Coleus from a packet of seed planted in the Spring. They were about the tiniest seedlings I ever saw, but made a fine show by the first of August; rather late, of course, but learn to labor and to wait. One specimen leads the others by a long stretch, being in color a rich, glowing crimson or cherry, with leaves like thickest velvet. "I must have a slip of that," said a friend; "won't it make a fine show in my south window this Winter!"

I have gathered in 14 Abutilons, or flowering maples, raised from seed and kept in pots in a half-shaded place during the Summer. Two have blossomed, one yellow and one white, and most of the other plants are budded. They make pretty graceful window plants, and are continuous bloomers. A rose-colored one planted in a shady border last Summer has grown to be a fine little tree. I shall try to lift it carefully, but am very much afraid that the experiment will prove unsuccessful.

Geraniums, slipped in July, are now budded. A great deal of advice is given to amateurs not to bother with geraniums for Winter, but where can we get such bright masses of color as the scarlet and pink geraniums give us? It is useless to try to grow them in a little, close room without much sunshine. They must have air and light. They do best in rather small pots, and must be watered sparingly. A pink Winter-blooming Verbena grown in a southwest window was beautiful, as were also some double white and purple and white Petunias. Pelargoniums, commonly called Lady Washington geraniums, are beautiful early Spring bloomers, the pink and white variety, known as Apple Blossom, outdoing the others in profuseness of flower, sometimes literally blooming itself to death; but the scarlet are lovely, as are also the rich dark pink, and white blotched with crimson. The pink ivy geranium is another lovely plant for the window. Another pretty addition to a window is what we call a mosquito plant—neighborhood name. It is neither a vine nor a creeper, but a twiner, with very small leaves and tiny, red-winged blossoms. It is a rapid grower, and is prettiest when given a round support of wire upon which it can twist and turn to its heart's content. The Manettia vine with its dark green foliage and tiny fire-cracker blossoms is also a standard plant for the sitting room. The lobster claw cactus is a pretty October bloomer. I have seen specimens that were truly gorgeous for a week, or, perhaps, 10 days, and then one must wait a year for another show. I have two of these peculiar individuals; sometimes they are lovely and sometimes not—just as it happens.

A rubber plant that in 1898 was about 12 inches in height has now grown to be a fine, strapping six-footer. I "beheaded" it in 1899, and in 1900 it put out two branches that have made a pretty even growth ever since; a third branch has started lower down, and I think I shall have to cut off the buds of the two older branches and give the new one a chance to catch up with them; also, force more side growth. But you've got to dust your rubber plant every morning, just like a chair or table, or it will tell everyone who notices it that its mistress doesn't really care for it. Some one has called dust "the bloom of time," but is there, in the whole, wide world, a neighbor who would look at it in that poetical light? Civilization just means neighbors, that's all!

A half dozen or more bulbs of Oxalis planted in a broad, shallow pan or in a hanging basket will bloom continuously throughout the season. I like the pink ones best. Lantanas are also desirable Winter bloomers, and I saw some lovely pots of Phlox last Winter, four or five little plants in one pot; about Easter they were a mass of lovely color. The Plumed asparagus (A. plumosus nanus) is a favorite with my friends; I like ferns better. A well-grown Boston fern is simply grand, and requires a grand amount of space. An umbrella plant keeps you busy dancing attendance with the watering pot, or the leaves will shrivel up and must be cut off, and it's very provoking to have a fine, artistic piece of greenery go back on you that way. Begonias require a whole chapter, and lilies and hyacinths another. The Fall catalogues are as tempting to a country girl as bargain counters are to her city cousins. DOCIA DYKENS.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

Scraps and Carpet Rags.

Mary has been fitting up her room, says a writer in the Kansas City Star, and her rugs particularly pleased me. Three were plain white, one white with a dull blue border, and the fifth a shaded blue.

"You see, I couldn't afford to buy new rugs, so I gathered all the clean, white scraps I could find, cut them into strips in the usual way, and got old Becky Martin to weave them these especial sizes. This white fringe on the edge is knotted warp.

"The blue rug is of wool strips. It took me a long while to collect so many shades of blue, and Becky wove them, 'hit or miss,' as she called it, with bright blue warp."

"But the white ones will soil quickly, will they not?"

"What if they do? They can go into the washtub every week if necessary. See that one by the bed? Would you believe it has been washed twice? And it is so pleasant to step out of bed on a dainty white rug."

"What is that divan cover made of?" I asked.

"Oh, old ribbons and silk pieces. I had seen silk portieres, and thought a couch cover would be pretty. The strips are cut only a half inch wide, and woven very loosely."

I lifted it and found it was as light as eiderdown. She had had it woven with black warp. On each end was a stripe of plain blue a foot wide, then a mingled narrower one, and next an inch wide black. Then yellow and red. The body of it was "hit or miss." The old weaver had done her work well.

"But did you not grow tired of sewing rags?"

"No, indeed. I'll tell you how I sew them. Say I have a piece of goods a yard square. I cut it into a number of equal strips, and lapping the end edges, sew them twice on the machine. Then I go round and round with sharp scissors, cutting spirally, as it were, and it comes out in one long strip. It is lazy girl's carpet rags!"

She took me into the hall.

"Do you see that rug? What do you say it is made of?"

I bent to examine a beautiful square of dull red, woven with a black warp, which had an expensive look.

"That is made of an old chenille portiere. I cut it into long, even strips, sewed them together on the machine, and the cutting did not take me long. It only cost me 35 cents to have it woven and the warp was 25 cents. It is a splendid way to use up half worn chenille curtains or table covers. The strips are to be cut almost an inch wide for rugs, and narrower for divan covers."

"You clever girl, tell me about that pretty pillow I see there, of as many colors as Joseph's coat."

"Well, I'm tired of crazy quilt and log cabin silk work, and I wondered what to do with my scrap silk. I cut silk into pieces two inches square; fold them once in the middle—now, that makes a long strip. Then I bring the two ends down to meet the folded bottom edge, and this forms a triangle like a cocked hat. I sew a row of these, points upward, on a foundation, and the next row overlaps it, the points alternating with those of the first row. The whole pillow, then, is of vari-colored silk points lying flat. It makes a pretty pillow to brighten a corner."

"And they're quite as pretty when they get a little ruffled," I said.

"Now, before you go, come and see my bookcase. I didn't have room in my shelves for the volumes of the Century Dictionary, so I got a box that just fit the set, and another one just as long, but narrower, for the top box. I nailed them together and covered them with tea matting, inside and out."

Sure enough, the dictionary was in the lower shelf, and the upper space held reference books, and she had them set against her writing desk to save space.

Rural Recipes.

Panned Guinea Fowl.—Dress as you would a chicken, cutting the fowl up as for fricassee; place in covered baking pan with a large tablespoonful of butter, a cupful of boiling water, teaspoonful of salt and one-fourth teaspoonful pepper; cook until tender, basting frequently. Remove cover to brown, then take up the meat on to a warm platter; thicken the gravy in pan with tablespoonful of flour, add water enough to make a pint of gravy and pour it over the meat. A garnish of parsley is appropriate. Serve creamed potatoes with this dish.

Mutton Ragout.—Cut the mutton into two-inch lengths (three cupfuls in all), season with a small teaspoonful of salt and one saltspoonful of pepper and dust lightly with flour; place two tablespoonfuls of butter in a pan, heat very hot and place in the meat; brown well, shaking often; draw the pan to the back of the range; lift the meat out with a skimmer and place it on the serving dish; add one medium-sized onion and a sprig of parsley minced; cook for five minutes and add one cupful of milk; when hot add a saltspoonful of salt and two tablespoonfuls of flour stirred to a paste with a little cold water (about one cupful), cook for 20 minutes and stir frequently to prevent scorching; add a pint of chopped oysters 10 minutes before serving, then pour it over the mutton and serve at once. The oysters must be drained well before adding to the gravy. Excellent. Serve with grated cheese.

Preserved Citron.—Slice the citron crosswise in slices one-third of an inch thick. Peel and remove the seeds. Cut citron into one-third inch dice. Place them in a porcelain kettle. Add one-half cupful of salt to each five pounds of fruit. Cover with cold water and let stand over night. Drain and cover with fresh cold water. Soak two hours, changing the water four or five times. Dissolve one tablespoonful of pulverized alum in two quarts of boiling water, pour over citron, and bring to boiling point. Drain. Prepare a syrup of 2½ pounds of sugar and 1½ quart of boiling water. Boil and skim. Add citron, and simmer gently until clear and tender. Drain citron from syrup. Set in the sun for two hours to harden. To the syrup add the peel of one large lemon, using only the yellow rind shaved off as thinly as possible. Add the juice of two lemons and a small piece of green ginger root (two inches long) sliced in thin slices. Boil gently for 20 minutes. Set aside. When citron is hardened, fill into glass jars and bring syrup to boiling point and strain it over citron. Treat watermelon in the same manner.

Baked Indian Pudding.—One quart of scalded milk, with a teaspoonful of salt added, 1½ cupful of Indian meal (yellow), one tablespoonful ginger, letting this stand 20 minutes; one cupful molasses, two beaten eggs, a piece of butter the size of a common walnut. Bake two hours in slow oven. Serve with caramel sauce. To make this, put one cupful of sugar in a small pan and stir on the fire until brown; add one cupful of boiling water and simmer 15 minutes. Set away to cool slightly and serve with the Indian pudding.

Warm Molasses Ginger Bread.—One cupful of brown sugar, one-half cupful of butter, one cupful of milk, three cupfuls of flour, three eggs, one tablespoonful of ground ginger, one tablespoonful of ground cinnamon, one teaspoonful of cloves, one teaspoonful of soda. Mix butter and sugar to a cream. Then add the molasses, eggs beaten separately; spices, and then the flour. Dissolve the soda in the milk and put into the batter just before baking.

Cream of Celery Soup.—A pint of milk, a tablespoonful of flour, a head of celery, a large slice of onion and a small piece of mace. Boil celery in a pint of water from 30 to 45 minutes; boil mace, onion and milk together. Mix flour with two tablespoonfuls of cold milk and add to boiling milk. Cook 10 minutes. Mash celery in the water in which it has been cooked and stir into boiling milk. Add butter and season with salt and pepper. Strain and serve immediately.

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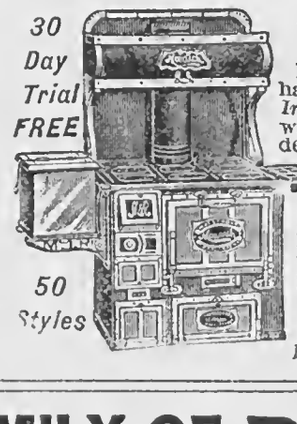

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MARKETS

THE WEEK'S QUOTATIONS.

WHOLESALE PRICES.

NEW YORK, OCTOBER 19, 1901.

GRAIN.—There is but little speculation, and export business is light. There are reports of extensive drought damage to the crop in Argentina.

Wheat, No. 1, N'thn Chicago...	—	@	76⅛
No. 1, Northern Duluth.....	—	@	77¼
No. 2, red, elevator.....	—	@	75⅛
Corn, No. 2, mixed, elevator....	—	@	61½
Oats, No. 2, mixed.....	—	@	39½
Rye, No. 2, W'n, f. o. b., N. Y.	—	@	61½
Barley, feeding	52	@	55
Malting, new crop.....	57	@	65

BEANS.

Marrow, 1901, choice, bu.....	—	@	2 75
Pea, bbls, 1901, choice.....—		@	2 10
1900, choice	—	@	2 05
Red kidney, 1901, choice.....2	60	@	2 65
1900, choice	—	@	2 55
Black turtle soup, choice.....1	85	@	1 90
Italian, medium 1	80	@	1 90
Other foreign, medium.....1	70	@	1 80

FEED.

Spring bran, coarse.....17	50	@	18 00
Winter bran 18	50	@	19 00
Red Dog	—	@	22 75
No grade flour.....	—	@	22 40
Unsound wheat, per 100 lbs...	67	@	70
Linseed meal, ton.....29	00	@	30 00
Cottonseed meal, ton.....	—	@	26 10

HAY AND STRAW.

Hay, No. 1.....	82½	@	85
No. 2	75	@	80
No. 3	62½	@	65
Clover	50	@	55
Clover, mixed	60	@	70
Straw, rye, long.....	55	@	80

MILK.

New York Exchange price 2¾ cents per quart in 26-cent freight zone.

BUTTER.—A slight scarcity of extra creamery raised the price to 22 cents. The accumulation of lower grades has been worked off, and the market is in better condition than for some time.

Creamery, extra, per lb.....	—	@	22
Firsts	19½	@	21
Seconds	17	@	19
Lower grades	15	@	16
June, extras	—	@	21
June, seconds to firsts.....	18	@	20
State dairy, tubs, fancy.....	20	@	20½
Tubs, firsts	18	@	19
Tubs, seconds	16	@	17
Tins, etc.....	14	@	19
W'n imitation creamery, fancy.	17	@	17½
Firsts	15	@	16
Lower grades	14	@	14½
W'n factory, June, fancy.....	—	@	15½
Fresh, firsts	14¾	@	15
Fresh, fair to good.....	14	@	14½
Renovated butter, fancy.....	17½	@	18
Common to choice.....	13	@	16½
Packing stock	12	@	14

CHEESE.

Full cream, colored, small, fcy.	—	@	10¼
Colored, small, choice.....	9¾	@	10
White, small, fancy.....	10	@	10¼
Small, white, choice.....	9½	@	9¾
Small, good to prime.....	9¼	@	9⅜
Colored, large, fancy.....	—	@	9¼
Colored, large, choice.....	9	@	9⅛
White, large, fancy.....	9¼	@	9½
White, large, choice.....	9	@	9⅛
Large, good to prime.....	8½	@	8¾
Common to fair.....	7	@	7¼
Light skims, small, choice.....	—	@	8½
Large, choice	7½	@	7¾
Part skims, prime.....	6¾	@	7⅓
Fair to good.....	5	@	6¼
Common	3	@	4
Full skims	1½	@	2½

EGGS.—An advance of one cent was noted early in the week, but this turned buyers to cold-storage stock and weakened the market for fresh receipts.

QUOTATIONS LOSS OFF.

State & Pa., avge. prime, doz..	—	@	23
W'n, fresh-gathered, average best, per doz.....	22	@	22½

QUOTATIONS AT MARK.

Nearby State & Pa., fresh-gathered, fancy, selected, doz....	—	@	25
Average, best lots.....	21½	@	22
W'n, fresh-gathered, candled, selected	—	@	21½
Regular packings, N'th'n secs.	17	@	21
Southerly sections, best.....	18	@	19
Southerly sections, ordinary..	15	@	17
W'n, fresh-gathered, dirties....	13	@	15
Checks	12	@	12½
W'n, refrigerator, per doz.....	15½	@	18

LIVE POULTRY.

Spring chickens, per lb.....	8½	@	9
Fowls, per lb.....	9	@	9½
Roosters, per lb.....	—	@	5
Turkeys, per lb.....	8	@	10
Ducks, average W'n, per pair..	55	@	65
Average Southern, per pair...	45	@	55
Geese, average W'n, per pair..1	12	@	1 25
Average Southern, per pair...	90	@	1 12
Pigeons, mixed, per pair.....	—	@	15

DRESSED POULTRY.

FRESH PACKED—ICED.

Turkeys, Spring, dry-picked, lb.	11	@	13
Scalded, per lb.....	8	@	10
Culls, per lb.....	5	@	7
Broilers, Phila., over 4 lbs. to pair, per lb.....	17	@	18
Phila., mixed sizes, per lb....	11	@	13
Penn, fair to good, per lb.....	9	@	13
Ohio & Mich., scalded, lb.....	9½	@	10
Other W'n, dry-picked, lb....	9	@	9½
Other W'n, scalded, per lb...	8½	@	9
Poor to fair, dry-picked or scalded, per lb.....	6	@	8
Fowls, W'n, dry-picked, prime.	—	@	9
Western, scalded, prime.....	—	@	8
South'wn, dry-picked, prime..	—	@	8
W'n & S'th'wn, poor to good.	6	@	8
Old roosters, per lb.....	—	@	6
Ducks, Spring, L. I., and other nearby, per lb.....	14½	@	15
Western	7	@	11
Geese, Spring, Eastern.....	12	@	15
Squabs, choice, large, dark.....2	75	@	3 00
Mixed, per doz.....1	75	@	2 00
Dark, per doz.....1	25	@	1 50
Culls, per doz.....	50	@	1 00

COUNTRY-DRESSED MEATS.

Calves, veal, prime, per lb.....	—	@	10
Fair to good, per lb.....	9	@	9½
Common to medium, per lb....	6	@	8
Buttermilks, per lb.....	7	@	8
Grassers, per lb.....	5	@	5½
Pork, Jersey, dressed, light, lb.	8½	@	9
Jersey, dressed, medium, lb...	8¼	@	8¾

GAME.

Grouse, per pair.....1	00	@	1 25
Partridges, per pair.....2	00	@	2 50
Woodcock, per pair.....	—	@	1 50
English snipe, per doz.....	—	@	2 50
Golden plover, per doz.....	—	@	2 50
Grass plover, per doz.....1	50	@	2 00
Wild ducks, canvas, per pair...2	50	@	3 00
Red head, per pair.....1	50	@	2 00
Mallard, per pair.....	75	@	1 00
Teal, blue wing, per pair.....	60	@	75
Teal, green wing, per pair....	40	@	50
Common, per pair.....	25	@	30
Rabbits, per pair.....	30	@	35
Venison, saddles, per lb.....	—	@	30

DRIED FRUITS.

Apples, evaporated, 1901, fcy, lb.	—	@	10
Evaporated, 1901, choice.....	—	@	9¼
Evaporated, 1901, poor to good.	6	@	8
Evaporated, 1900, fancy, lb....	—	@	9½
Evaporated, 1900, choice, lb...	8¾	@	9
Evaporated, 1900, prime, lb....	8¼	@	8½
Evaporated, 1900, common to good, per lb.....	6	@	8
Sun-dried, 1901, per lb.....	4½	@	5½
Chops, per 100 lbs.....1	50	@	2 25
Cores and skins, per 100 lbs...1	00	@	2 00
Raspberries, evaporated, 1901, lb.	23½	@	24
Sun-dried, 1901, per lb.....	20	@	21
Blackberries, 1901, per lb.....	—	@	7
Huckleberries, 1901, per lb.....	16	@	17
Cherries, nearby, 1901, per lb....	15	@	15½
Southern, 1901	13½	@	14

FRESH FRUITS.

Apples, York Imperial, bbl...	3 00	@	4 50
Wine Sap, per bbl.....	3 00	@	3 50
Snow, good to choice, bbl....	3 00	@	4 50
King, per bbl.....	3 00	@	4 50
Ben Davis, per bbl.....	3 00	@	4 00
Greening, per bbl.....	3 50	@	5 00
Twenty-oz., hand-pekd, bbl.	3 00	@	4 00
Fall and York Pippin, bbl..	3 00	@	4 00
Pound, Sweet, per bbl.....	3 00	@	3 50
Fall varieties, com. to fair.	2 00	@	3 00
Baldwin, prime, per bbl.....	3 00	@	4 00
Ordinary hard, red, fair to prime, per bbl.....	2 50	@	3 00
Ordinary, hard, red sorts, inferior, per bbl.....	1 50	@	2 00
Windfalls, per bbl.....	1 25	@	1 50
Pears, Bartlett, fancy, bbl...	—	@	4 00
Bartlett, avge. lots, per bbl.	2 50	@	3 50
Bartlett, prime to fancy, keg	1 25	@	1 50
Seckel, fancy, per bbl.....	4 00	@	4 50
Seckel, fair to prime, bbl...	2 25	@	3 50
Beurre Bosc, per bbl.....	2 50	@	3 50
Beurre Clairgeau, per bbl..	2 00	@	3 00
Beurre d'Anjou, per bbl.....	2 00	@	3 00
Kieffer, per bbl.....	1 00	@	2 25
Duchess, per bbl.....	1 50	@	2 00
Nearby, common, per bbl..	1 00	@	1 50
Quinces, per bbl.....	3 00	@	4 00
Peaches, up-river, pony bskt.	60	@	1 00
Up-river, per 2-bskt. ear'r..	1 00	@	1 75
Ohio & Mich., per bu. bskt..	1 25	@	2 50
Southern, per basket.....	50	@	1 00
Southern, per carrier.....	1 50	@	2 00
Grapes, up-river, Del., carrier.	1 00	@	1 25
Up-river, black, earrier.....	50	@	65
W'n N. Y., Catawba, sm. bk	10	@	11
W'n N. Y., Del., case, 15 3-lb. basket	1 50	@	1 75
W'n N. Y., Del., small bkt.	12	@	15
W'n N. Y., Niagara, case, 15 3-lb. basket.....	—	@	1 50
W'n N. Y., Niagara, sm bk.	10	@	14
W'n N. Y., Coneord, case, 15 3-lb. basket.....	—	@	90
W'n N. Y., black kinds, small basket	8	@	8½
Wine grapes, blaek, ton....30	00	@32	00
Wine grapes, Del., per ton..25	00	@50	00
Wine grapes, white, per ton.30	00	@40	00
Cranberries, Cape Cod, fancy, large, late varieties, bbl..	6 25	@	6 50
Cape Cod, Early Blaek, fancy, dark, per bbl.....	—	@	5 75
Cape Cod, med. col'rd, bbl..	5 25	@	5 50
Cape Cod, poor to fair.....	4 50	@	5 00

VEGETABLES.

Potatoes, L. I., per bbl.....2	25	@2	50
Malne, prime, per bag.....2	00	@2	10
Maine, per 180 lbs.....2	00	@2	12
Maine, inferior 1	25	@1	75
State & W'n, prime, bbl.....2	00	@2	12
Albany & Troy, prime, bbl....	—	@2	00
State & W'n, inferior.....1	25	@1	75
Jersey, per bbl.....1	50	@1	87
German, prime, 112-lb. bag...1	25	@1	35
German, inferior, 112-lb. bag.	75	@1	00
German, per 168-lb. bag.....1	50	@2	00
Scotch, Magnum, 168-lb. bag..1	50	@2	00
Sweet Potatoes, So. Jersey, bbl.1	50	@2	25
Yellow, Va., per bbl.....	—	@1	25
Beets, Jersey & L. I., 100 bchs..	—	@1	00
Brussels sprouts, per qt.....	6	@	12
Cauliflowers, per bbl.....1	00	@2	50
Celery, State & W'n, doz. roots.	20	@	50
Jersey & L. I., doz. flat bchs.	—	@1	00
Carrots, L. I., per bbl.....	75	@1	00
Cabbages, L. I., Flat Dutch 100.3	00	@4	00
Cucumbers, Shelter Island, bbl.4	00	@6	50
Hothouse, per doz.....	75	@	87
Eggplants, Fla., per bbl.....3	50	@4	50
Fla., per ½-bbl. crate.....1	75	@2	25
Lima beans, Jersey & L. I., Potato, per bag.....	75	@1	50
Jersey, flat, per bag.....	50	@	75
Lettuce, nearby, per bbl.....	75	@1	00
Onions, pickle, white, bbl.....3	00	@4	00
Orange Co., white, per bag....1	50	@2	50
Orange Co., red, per bag.....2	00	@2	50
Orange Co., yellow, per bag...2	00	@2	25
Orange Co., inferior, per bag.1	00	@1	50
Connectlcut, white, per bbl....2	00	@3	50
Connecticut, yellow, per bbl..2	25	@2	50
Connecticut, red, per bbl.....2	50	@2	75
State & W'n, yellow, per bbl.2	25	@2	50
State & W'n, red, per bbl.....2	50	@2	75
Peppers, Jersey, green, bbl....	75	@1	00
Jersey, red, per bbl.....1	25	@1	50
Peas, Va., per ½-bbl. basket....1	25	@2	50
Squash, Hubbard, per bbl.....1	00	@1	25
White, per bbl.....1	00	@1	25
Marrow, per bbl.....	90	@1	00
Pumpkins, per bbl.....	50	@	65
String beans, J'y & L. I., bag...	50	@	75
Southern, wax, ½-bbl. bskt...	75	@1	00
Southern, green, ½-bbl. bskt..	75	@	90
Turnips, Jersey, Russia, box...	—	@	90
Canada, Russia, per bbl.....	75	@	80
Tomatoes, fair quality, bu. box.	50	@	75

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DERRICK OIL CO., of Titusville, Pa., is offering to sell oil to our readers with the privilege of returning it at the firm's expense if not satisfactory. That seems very liberal and certainly fair.

DURING recent years the pros and cons of dishorning have been very generally discussed editorially. On the outset there was considerable objection to the practice on the part of those who thought it cruel and inhumane. On investigation it has been found that dishorning, when properly done, is both humane and profitable. One of the finest instruments for this purpose is the Keystone dishorner. We advise dishorning because we believe it has a quieting effect upon the animal itself, making it gentler, easier to handle, and consequently, more profitable. The proper season for doing this work is at hand, and those who are thinking of buying would do well to write at once for further particulars. Address M. T. Phillips, Sole Manufacturers, Pomeroy, Pa.

Consumption, Bronchitis and Bronchial Asthma.

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From Dr. Robert Hunter's Lectures on Consumption.

A cold settling on the chest or grippe that goes down to the lungs produces bronchitis, and when it has continued for several months it becomes chronic bronchitis.

There is at first only trifling cough in the morning with slight chilly feelings, followed by a sense of feverishness towards evening. Walking rapidly or going upstairs cause shortness of breath with a general sense of tightness and oppression in the chest.

As the disease advances the patient begins to raise yellow or greenish-yellow matter; has hectic fever and night sweats and loses in flesh and strength. From this point, unless arrested by treatment, it goes on rapidly, soon exhausts the vitality and causes death with symptoms closely resembling consumption and yet not consumption at all.

By careful observation extending through many years, I am confident that fully TWO-FIFTHS of all the deaths charged to consumption are really deaths by consumptive bronchitis. On examining the sputum and the tissue of the lungs in these cases we find neither tubercle nor the bacilli germs that are always present in TRUE consumption.

This is a most important fact, for bronchitis is much easier to cure than consumption, every case being curable if properly treated. It is only a seated, chronic inflammation of the mucous lining of the air tubes, and at the worst is as certainly curable in the lungs as such inflammation in any other part of the body.

Consumptive bronchitis is not curable by medicine given in the stomach, nor by those hyperdermically injected, for they never reach its seat. It is only by the direct application of medicines to the lining of the bronchial tubes in the lungs that cure is ever effected. The disease is not in the stomach, nor in the blood, but in the lining of the lungs, and THERE THE REMEDIES MUST BE APPLIED.

Nothing but a direct application of healing medicines, antiseptics and germicides to the very seat of the disease will affect the cure of this or any other lung case, and they can be applied only by inhaling them in a gaseous state. The lungs constitute an air cavity, and can be reached medicinally only by medicated air. This treatment was discovered, perfected and first successfully applied by me. It is the only natural, scientific and common-sense treatment ever applied for the cure of bronchial and consumptive diseases. If it fails, nothing else could possibly succeed. But it never does fail, unless mortal injury to the lung structures has taken place before it is applied.

Readers mentioning THE RURAL NEW-YORKER can obtain Dr. Hunter's book, "The Lungs and Their Diseases," absolutely FREE by addressing Dr. Robert Hunter Association, 117 W. 45th Street, New York City.

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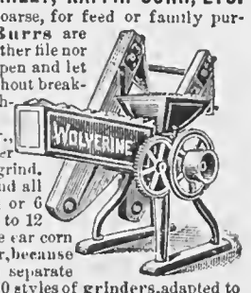

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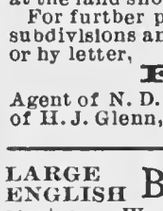

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Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, of Chico, Butte County, California.

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MARKET NOTES

CHESTNUTS started off at a high figure on account of light receipts and a reported short crop. Conditions seem to have changed, however, and prices have dropped $2 to $3 per bushel, $4 being the highest wholesale figure now. Chestnuts, either raw or roasted, retail on the streets at 10 cents per pint.

DOCK RENTALS.—Owners of shipping pay heavily for the privilege of loading and discharging their cargoes in this city. The last annual report of the Department of Docks and Ferries shows gross receipts of over $6,000,000. Construction and repairs cost about $3,500,000, leaving a net profit to the city of $2,500,000.

ALMERIA GRAPES are now seen in this market in large quantities. They can hardly be said to compete with the California or eastern fruit, as they are distinct from both, and make a place of their own in the trade. They come in small barrels, packed in cork chips, and in this way stand transportation and storage well. An Anchor Line steamer in the Mediterranean service recently brought to this port 17,000 barrels of these grapes, and 3,000 barrels of Greek currants.

BROOM CORN.—It is doubtful whether the price of any other product on the market has jumped up and down so wildly during the past two or three years as has that of the brush from which brooms are made. The sections of the country in which this corn is grown are so limited that a combination of buyers has been able to control it, and force manufacturers to pay enormous prices. At the beginning of this season the price started at $55 per ton. From that it went to $140, and it is not improbable that $200 may be reached. The crop for the past two years has been unusually light.

THE HOP TRADE is dull at present. Buyers are holding off, expecting lower prices, while growers, particularly in the East, are inclined to hold their crop for a time. Hop growers have no adequate organization, and hence reliable crop statistics are hard to get. Local buyers circulate misleading reports, and the grower scarcely knows what to do. In the extensive hop-growing districts on the Pacific coast buyers cannot monopolize things in this way, but in the scattered hop sections of the East a local buyer who is a good talker, has nearly his own way. The exceedingly low prices for several years have discouraged hop growers, and many have gone out of the business.

SUPPLIES FOR SOUTH AFRICA.—Two transport vessels are about to take on 700,000 bushels of oats at this port for Delagoa Bay, and it is said that contracts have been made for 6,000 tons of hay for the same trade. This hay is rebaled and put in about half the bulk, in order to save freight on shipboard, as this is charged by space rather than weight. There is considerable competition for the South African trade. Rates have been cut and business is much depressed. Owing to the conditions in that country there is but little to bring back, and to make the voyage profitable as much must be made on the outward trip as would ordinarily be taken in both ways, as often the returning vessels have to load with ballast.

FRUIT NOTES.—Some dealers are putting the better grades of apples in storage rather than sell at the present prices. A good many medium and low grades are received, as this is the season when nearly all growers are getting rid of the fruit that they do not care to hold. Choice Seckel pears sell as high as $4.50 per barrel, and next in price are fancy Bartletts, of which there are but few offered. Kieffers are plenty, but not many bring over $2. Peaches are scarce. I notice an occasional lot of quinces, but not much interest seems to be taken in them. It is probable that growers who have only a small quantity can do better by peddling them out in their local markets than by shipping to large cities. Many city buyers do not care for fruit that requires so much labor for preserving as the quince. The grape trade is at its height, and prices are running a little higher on all grades.

THE LABOR BUREAU, which has previously been mentioned in this column, is now situated in the Barge Office, Battery Park, instead of at 45 Pearl Street. This is a free employment agency maintained by the Irish Emigrant Society and the German Society of the City of New York, but is free to all nationalities. By sending a stamped envelope to W. H. Meara, Superintendent, at above address, full particulars in regard to the workings of this labor bureau may be obtained. Capable farm hands are always in demand, and quickly find places. There is considerable uncertainty in getting this kind of help, as often a man who starts out well proves to be utterly useless either on account of a surly and stubborn disposition, or habits that make him not to be depended upon; yet some farmers have so much trouble in getting satisfactory help that they jump at anything which seems at all promising, and are willing to overlook disagreeable traits. It is difficult to see just why so many men prefer to dig up the pavements or work in the sewers of this city, continually breathing foul air and living in filthy lodging houses, when they might obtain more agreeable work on the farm, have plenty to eat and more money at the end of the year. W. W. H.

THE WEST THROUGH EASTERN EYES

PART I.

THE SIOUX VALLEY.—On his first trip to the West an eastern man sees many things to excite his interest and to provoke comment. I had my first glimpse of the Middle West as I arose from my berth in the sleeper in the famous Sioux Valley in northwestern Iowa. Here the surface is very uneven. The soil on the hills looks light and infertile; but the valleys are level and productive. As one proceeds north the valley broadens and the surface becomes more level and, if possible, more fertile. Corn, oats, barley and Spring wheat are the principal crops. In early October the corn stood for the most part where it grew, ripened and withered. Husking had scarcely begun. In Iowa one occasionally sees a part of a cornfield cut up and stacked as we do it in the East. This is done when a portion of the stalks is to be used for fodder, but the great bulk of the stalks is never cut. The farmers drive through the fields with a box wagon, and gather the ears from the stalks as they stand in the hills. The stalks are then broken down and plowed under. The other grains are stacked at harvest time, three or four stacks being grouped together for convenience in thrashing. A stack, I was told, would usually thrash out about 300 bushels. Traction engines are used, and the straw is blown up through a pipe or funnel just as the cut cornstalks are delivered by the Blizzard corn cutter. This saves any handling of the straw whatever after it passes through the thrasher. This straw usually remains in the field, and the farmers cultivate around the pile of waste. The more thrifty ones burn it. The cost of thrashing is three cents for oats and four cents for wheat or barley. Some of the work is done by men who own the machinery and make a business of it. In other places a number of farmers club together in joint ownership of the thrasher and engine, and do their own work, and occasionally some for other neighbors. The corn in the Sioux Valley is estimated this year at 85 per cent of a full crop.

FARMING ON A LARGE SCALE.—Some of this land has been cropped for 40 years without fertilizer of any kind. In the older settled regions of Iowa one sees great herds of fattening steers, hogs and some sheep; but in the comparatively new settlements farther north in South Dakota, the live stock disappears, the grain and hay being shipped to market. This verifies the usual observation that new and fertile countries are prone to ship the raw material to market, while the older settlements learn to produce and market the finished product. Farm work is done entirely by machinery, and for the most part by horse power. I met one farmer who owns and operates 23,000 acres of land. He has 14,000 acres under corn this year. He says he would discharge a man whom he found walking at work in the field. Three or four horses are usually used on the plow, which turns two furrows at a time, and the plowman rides. There are no stones to interrupt the progress of the plow, and the furrows behind are as even and smooth as the clapboards on the side of a house.

IDEAS IN CULTURE.—Farmers are beginning to give great attention to surface culture in order to keep the water in the soil and conserve moisture. Some have harrows attached to the plow, so that the surface behind the plow is at once stirred and loosened to prevent evaporation. Others make sure to harrow before dinner or supper all that has been plowed the half day before, and if rain falls before planting time the ground is harrowed again as soon as the rain is over. Drought has little effect on the land where this system is faithfully carried out from the time of plowing as long as the horses and implements can work in the growing corn and other grain. The rich alluvial soil in this valley runs down 18 or 20 inches, with a subsoil of gravel loam. The native grass of these prairies is very nutritious and grows two to three tons to the acre. Alfalfa grows there in great abundance.

J. J. D.

THE native horses of Japan are said to be small and of but little value for any purpose. The Emperor has become greatly interested in foreign horses, and has recently bought from a California ranch a number of fine animals, also engaging an American trainer. Doubtless his example will be followed by many wealthy Japanese, and the result may be a considerable demand for fine horses from this country.

Taxing Cows in Atlanta.

The newspapers report that the City of Atlanta, Ga., is likely to put a tax on all cows furnishing milk for the city. The proposed ordinance has for its purpose the levying of a license tax on each dairyman selling milk in Atlanta, the amount being 8C cents on each cow used in such dairy. It is the intention of the board of health to get this ordinance passed. The effect of the passage of such an ordinance would probably advance the price of milk some, on account of the extra tax, and also because only the licensed dairymen could sell milk. Each person selling milk now has to have a permit from the city, but it doesn't cost anything to get the permit issued. The consumer pays 10 cents per gallon for buttermilk, 20 cents for skimmilk, and 30 cents for sweet milk; this is the usual price. The board of health has inspectors to look after the dairies, as to cleanliness and quality of the milk, so that while the price may be somewhat advanced the consumer is assured of a pure healthful supply of milk. W. M. M.

No such tax has been levied, and I don't suppose it ever will be, though I have not investigated the subject yet. In no event could the city of Atlanta levy such a tax upon the cows of dairymen which are kept outside of the city limits. H. B. T.

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Our **No. 13 WOLVERINE** Feed and Ensilage Cutter complete WITH FOUR 13 INCH KNIVES, made of very best tool steel. Our FOUR EDGE CUTTING BAR is made of tool steel and gives four cutting edges without grinding, this is a great improvement over the single edge bar. THE KNIFE HEAD has a double adjustment; the whole head is adjustable as well as each knife individually, always giving a good clean cut. This is not found on other cutters. **SAFETY** FLY WHEEL is furnished and in case any hard substance is fed in machine the fly wheel revolves on shaft, obviating breakage and possibility of accidents. THE STOP FEED lever is in easy reach so feed roller can be stopped instantly. With our expansion gears for driving feed rolls length of cut is varied without changing any gears from ¼, ⅜, ¾ or 1½ in. **CAPACITY** with 2 to 4 h. p. 1 to 5 tons per hr. Handles straw, hay and CORN FODDER, WITH EARS ON. The frame is made of well seasoned hard wood, mortised and bolted. Shaft is 1½ in cold rolled polished steel. Casting made from No. 1 pig iron, therefore tough and strong. **GUARANTEED** to be absolutely perfect; to cut as much or more per hr. as any machine of same size. If not found exactly as represented in every way and equal to cutters retailed at twice our price, return at our expense. WE HAVE NO AGENTS, thus we are able to sell direct to you at WHOLESALE PRICES. We have 47 sizes and combinations of cutters and shredders. Price $1.75 to $110.00, largest cut 25 tons an hr. Swivel carriers any length. WRITE FOR LARGE FREE CATALOGUE.

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A postal brings sample and name of nearest dealer.

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85c per 100 square feet with caps and nails. In use by thousands of poultrymen

is fatal to poultry success. This is equally true of roup, frozen combs, etc. Your poultry will have none of these if their house is sided up and roofed over with

SWAN'S EXTRA HEAVY FELT ROOFING.

You can put it on yourself. It only takes a knife and a hammer—no experience necessary. Keeps out wind and water and is fire-proof. Soft and pliable; becomes as hard as slate. The ideal light structure roof. Send for free sample and circulars.

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THE POULTRY-HOUSE ROOFING

As a water-proof covering for Poultry-Houses, RUBEROID has no equal. Keeps the houses cool during the warm weather, and warm in Winter, and the chicks dry and comfortable. The sun cannot melt it.

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A High-Grade, Pure-Burning OIL. Shipped on trial to be returned at our expense if not satisfactory. For particulars and prices address

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In time of need—for Granulated Scratches or Grease Heel, just developing or in the chronic state—turn to

Veterinary Pixine.

It absorbs inflammation, penetrates to the bottom of sore, stimulates and builds up new cellular tissues, counteracts effects of impure blood softens the fissures and sloughs off proud flesh. It is the most natural, scientific and vital healing ointment made. Money back if it fails to cure any sore, case of speed cracks or skin disease no matter how aggravated, what the cause or how long standing.

It is an antiseptic, soothing ointment of marvelous penetrating healing power.

2 oz., 25c.; 8 oz., 50c.; 5-lb. pkge., $4.

At all druggists and dealers or sent prepaid
Money back if it fails.

TROY CHEMICAL CO., TROY, N. Y.

Live Stock and Dairy

THE CATTLE IN THE PAN-AMERICAN MODEL DAIRY.

Readers of live stock and agricultural journals in the United States have been informed for several months that a so-called "Model Dairy" is in operation on the Pan-American Exposition grounds at Buffalo. The milk for this dairy is supplied from five cows each of the following breeds: Ayrshire, Brown Swiss, Dutch Belted, French Canadian, Guernsey, Holstein-Friesian, Jersey, Polled Jersey, Short-horn and Red Poll. These cows are supposed to be good representatives of the breeds. In part only the breeding associations selected the animals to be used in the test, and neither the American Jersey Cattle Club nor the Holstein-Friesian Association of North America supervised the selection of Jersey or Holstein. These were contributed by the Dominion Government of Canada, as were also the Ayrshires, Short-horns and French Canadians.

These 50 cows have been kept in the Model Dairy building on the Exposition grounds since May 1, and have lived from month to month in the stalls. They are protected from visitors by woven wire fencing, and each herd is in charge of a herdsman who supervises the feeding and care. A record is kept of the daily food of each kind fed each cow; all the milk drawn is weighed and sampled, and tested for its butter-fat content, and various other records are kept to throw light on the relationship of consumption to production. While the original idea was simply to maintain a model dairy at the Exposition, the fact that different breeds supplied the milk, with equal representation in each, soon reduced the trial to a breed contest. This was not at all the purpose contemplated by some of the persons interested. While the Guernseys, for example, have been leaders in the records, Guernsey breeders did not understand that their cattle were to be placed in a breed trial, and did not enter them with this purpose in view. The conditions, however, made it a test, whether the breeder desired it so or not.

The writer has been interested in the work of these cows, and has had the privilege of making fairly careful personal examinations of most of the cows in the barn. This examination convinced me that while the Jerseys and Holsteins were fair specimens of these breeds, without doubt cows of much more capacity than these Canadian cows, in fact, better representatives, could easily have been found in the United States. The Holsteins certainly lacked the general size and capacity of the best individuals of the breed. The Ayrshires are a grand lot, and represent perhaps the choicest collection in the barn of any breed. The Short-horns were fair specimens, but better types of milking Short-horns should have been found in Canada. They certainly are there.

The amount and kind of foods fed the different breeds, depends upon the persons in charge of each breed. The Guernsey people, for example, can feed what they wish, and the Brown Swiss may feed quite differently. The feed for the cows is kept under lock and key in the care of a man who issues it, and charges the same to the cow for which it is intended. A schedule of prices for the different feeding stuffs is adopted, that has a general application to all the animals. A careful study of the official report of the foods consumed by each breed, and the cost of the same, makes interesting reading. In the latest record available at my command (for the week ending September 24) it is shown that all the cows were fed hay, green fodder, silage, bran and gluten. Nine breeds ate cornmeal, six oats, nine linseed meal and six cotton-seed meal. The Jerseys, Brown Swiss, Red Polls and Dutch Belted were all fed these different feeds. No cornmeal was fed the French Canadians, no oats to Guernsey, Ayrshire, Short-horn or French Canadian; no linseed meal to Ayrshire, nor cotton-seed meal to Ayrshire, Holstein, Polled Jersey or French Canadian. The Ayrshire and French Candian during this week had the simplest diet. This week's record showed the lowest cost of food the French Canadian, $4.10, and the highest the Holstein, $6.62.

In feeding the cows, some of the feeders at least study the economy of food, and feed with the view of showing the greatest net profit in butter production, or in total solids in the milk. It did not matter so much what the cost of the food was, if after it was deducted from the value of products, a good net profit remained. The Holsteins are big eaters, but they are also large producers, and this week they made a net profit in butter of $7.28; but the Jerseys made $7.41, the Ayrshires $7.36 and the Guernseys $7.26. Among the poorest records, the Dutch Belted lead with $5.96, with the Polled Jersey next with a record of $5.30. During this week of feeding the Short-horns ate 301 pounds of hay and green fodder, by far the most of any one breed, while the Red Polls ate but 90 pounds. The latter breed, however, consumed heavily of silage, eating 2,122 pounds, the next greatest amount being 1,986 pounds eaten by the Brown Swiss, while the smallest amount, 1,445 pounds, was eaten by the Ayrshires. This shows that the Red Polls ate about 60½ pounds of silage a day per head, while the Ayrshires consumed about 41 pounds. Hay, fodder, silage, bran and gluten are shown to be the staples relied on. Each breed was fed bran fairly heavily, but a wide difference prevailed in the use of gluten. About 1½ pound of gluten was fed each Jersey per day, while five pounds were fed the Holsteins and nearly 4½ pounds a day to the Short-horns. So near as I can figure it out, each Holstein cow ate daily for the week ending September 24, essentially the following amounts of feed in pounds: Hay and green fodder, six; silage, 58½; bran, four; cornmeal, one-half pound; oats, two; gluten, five; linseed meal, 1½; a total of 77½ pounds of which the grain comprised 13 pounds. Such a ration cannot be called a small one, yet it was fed with much profit to the cows, as the records show. The three great standbys with each feeder are apparently, silage, bran and gluten, and all persons familiar with feeding dairy cattle realize that these are the best of foods for producing milk flow rather than flesh.

The best cow of any breed in the matter of profit is the Guernsey cow Mary Marshall, for she has had top rank nearly all the time during the test. The Red Poll cow May Flower is a very excellent worker, and so also is the Jersey, Primrose Park's Pride. The Red Poll breed has surprised some people in the showing they have made, which is very creditable, but it is entirely in harmony with Red Poll records in England and America. One thing in connection with this test that is of interest, is the fact that the Guernseys and Jerseys made the best record at the Columbian Exposition in 1893, the Jersey slightly leading. The writer believes that the American Jersey Cattle Club could have selected cows that would have done much better than those representing the breed at present, animals that could have led in this breed exhibition.

The Model Dairy has been an interesting exhibition, but it really has demonstrated nothing conclusive on the breed question. To be sure it has shown what representatives of the different breeds can do, but it has not been demonstrated that some of these breeds could not do still better, and make records that would cause a general readjustment of the breed rating. One interesting feature of the test is to demonstrate that dairy cows can be kept under very unfavorable conditions, on a fair grounds amid great excitement, and during extremely hot Summer weather, and surrounded by a multitude of flies, and yield a good profit in production over cost of feed. If such satisfactory results can be secured in a place like that at Buffalo, then considerably better returns should be obtained from fairly good animals under suitable home surroundings. C. S. PLUMB.

A Few More Oleo Rogues.

We herewith include list of violations for oleomargarine and condensed milk. Two of the oleomargarine cases were against New Jersey wagon men. In the case of Dunn & Sullivan they forfeited their bail on the day set for trial, their counsel intimating that he was unable to bring the defendants over from New Jersey, as they feared imprisonment. The other seven oleomargarine cases were against storekeepers. The condensed milk penalties were imposed for violations of the branding law. The condensed milk was placed upon the market without having the name of the manufacturer upon its label.

OLEOMARGARINE.

Michael Moriarty, 116 Greenwich Ave., New York City; $50.

John Bremmer, 485 Columbus Ave., New York City; $25.

Henry Dunker, 3009 Third Ave., New York City; $25 and costs.

Henry Dunker, 3009 Third Ave, New York City; $100 and costs.

Wm. Hayes, 644 Third Ave., New York City; $25 and costs.

Henry W. Mehrtens, 303 E. 25th St., New York City; $50 and costs.

Bernard Levy, 705 Grand St., Brooklyn; $50 and costs.

WAGONS.

Dunn & Sullivan, Jersey City, N. J. Forfeited $1,000 bail.

George Keller, 98 Newark Ave., Jersey City; $200 or 60 days.

CONDENSED MILK.

(Violation of the Branding Law.)

Henry Nestle Co., New York City; $100.

Scranton Dairy Co., New York City; $300.

Strait Brothers, New York City; $100.

Vermont Milk Co., New York City; $100.

John M. Chapman Co., New York City; $100.

F. J. H. KRACKE.

Assistant Commissioner.

Horse Owners Should Use
GOMBAULT'S
Caustic Balsam
The Great French Veterinary Remedy.
A SAFE, SPEEDY AND POSITIVE CURE.

Prepared exclusively by J. E. Gombault ex-Veterinary Surgeon to the French Government Stud

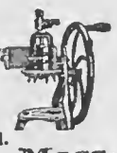
SUPERSEDES ALL CAUTERY OF FIRING
Impossible to produce any scar or blemish. The safest best Blister ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses or Cattle.
As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, Etc., it is invaluable.
WE GUARANTEE that one tablespoonful of CAUSTIC BALSAM will produce more actual results than a whole bottle of any liniment or spavin cure mixture ever made.
Every bottle of Caustic Balsam sold is Warranted to give satisfaction. Price $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address
THE LAWRENCE-WILLIAMS CO., Cleveland, Ohio

Death to Lice on HENS and CHICKS. 64-page book FREE.
D. J. LAMBERT, Box 307, Apponaug, R. I.

NEWTON'S CURE. For Heaves Use $1 size. For Distemper, Cough, Worm Expeller and Conditioner, a 50c. size. Strong recommends Dealers or delivered. Newton Horse Rem. Co.(Y)Toledo, O

Every Hen a Paying Hen

IF YOU FEED RAW CUT BONE, Nothing produces eggs or promotes growth like it. No machine does as good work as Mann's Bone Cutter 1902 Model. New design, open hopper, enlarged table, new device to control feed. You can set it to suit any strength. Never clogs. Sent on TEN DAYS FREE TRIAL. No money asked for until you prove our guarantee on your own premises, that our new model will cut any kind of bone with adhering meat and gristle, faster and easier and in better shape than any other type of bone cutter. If you don't like it, send it back at our expense. Free Cat'lg explains all.



F. W. MANN & CO., Box 15 Milford, Mass.
Manufacturers of Clover Cutters, Granite Crystal Grit, Corn Shellers, etc.

Breeders' Directory

JERSEY BULL
Yearling—registered, from a great show cow; almost faultless, by a producing sire Farmer's price. R. F. SHANNON, 907 Liberty St., Pittsburg, Pa.

JERSEYS.
ST. LAMBERT and Combination. For sale 7 Cows, 14 Heifers, 25 Bulls. S. E. NIVIN, Landenburg, Pa.

123 HOLSTEINS all ages, for Sale
DELLHURST FARMS, Mentor, Ohio.

FOR SALE—PUREBRED HOLSTEIN-FRIESIANS. Two registered Bulls, ready for service. Above from best families. Write for breeding and prices. W. W. CHENEY, Manlius, N.Y.

Holstein-Friesian Bull
ready for service, and a fine lot of Bull Calves. Best of breeding, and from deep producing families.
C. K. RECORD, Peterboro, N. Y.

FOR SALE—Holstein-Friesian Bull Sir Tanganoxie No. 26210 H. F. H. B. First Prize Winner. Beautiful animal; good-natured. Age, two years nine months. ORMSBY HILL FARM, E. W. SCHUCHARDT, Mgr. Manchester, Vt.

FOR SALE—Thoroughbred HOLSTEIN-FRIESIAN CATTLE of the best families. Also, 30 high-bred Bulls at reasonable prices. Write the MAPLES STOCK FARM, Binghamton, N. Y., WM. ROOD, Prop

Short-horn and Polled Durham
Calves, must go. Bulls, $26.50; Heifers, $18.50; crated, 3 to 6 mos. SHOEMAKER & CO., Harrodsburg, Ky.

BOZENDALE HERD Brown Swiss Cattle. Calves of both sexes for sale. Milk and butter strain. D. H. COOK, M. D., Albany, N. Y.

Berkshire, P. China and C. White Pigs; all ages; eligible to register, $5 ea. and up. Also B. P. Rocks and W. Holland Turkeys. W. A. Lothers, Lack, Pa

PROLIFIC SWINE—Three sows just farrowed 14, 13 and 12 pigs. The Cheshires are as kind and good milkers as they are prolific. $500 from one sow. Illustrated Catalogue—History of Breed, Methods of Feeding—sent for 2c. stamp. C. E. CHAPMAN, Peruville, N. Y.

Reg. P. Chinas, Berkshires and C. Whites.

Choice Pigs, 8 weeks old, mated not akin. Bred Sows and Service Boars. POULTRY. Write for hard times prices and free circular.
HAMILTON & CO., Rosenwiek, Chester Co., Pa.

Ferrets—Get my prices before buying. Illustrated Book free.
O. E. HEMENWAY, Box R, New London, O.

FERRETS—CHOICE STOCK for sale at all times New book sent free. Address W. J. WOOD, New London, Ohio.

2000 FERRETS. First-class stock. Some Trained. New price-list free.
N. A. KNAPP, Rochester, Lorain Co., O

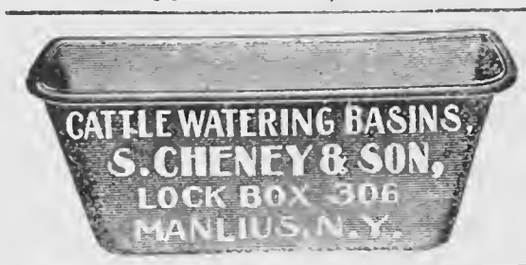
ANGORA GOATS—Delaine Bucks, good stock, low prices. Large circular for stamp. ED. W. COLE CO., Kenton, O.

SHROPSHIRES.
A few Yearling Rams left; they are bargains to quick buyers. Also in lamb Ewes at reasonable prices
J. C. DUNCAN, Wawanund Farm, Lewiston, N. Y.

RAMS—Wool-Mutton, Golden Fleece Shropshires. Special low prices now. Catalogue 47 free. Write to-day.
MAPLEWOOD STOCK FARM, Maplewood, Mich.

RAMS—A choice lot of Delaine and Black-Top Rams and Ewes to select from, will be sold cheap. Correspondence solicited. M. C. MULKIN, Friendship, N. Y.

Cheviot Sheep.
We have 50 Thoroughbred Cheviot Sheep for sale at reasonable prices, both Ewe and Ram Lambs, yearlings and full-aged, that only need to be seen to be appreciated. Good-sized and hardy; all registered in the American Sheep Society.
Eureka Stock and Poultry Farm,
HENRY VAN DRESER, Proprietor,
COBLESKILL, N. Y.



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Hatch every fertile egg. Simplest, most durable, cheapest first-class hatcher. Money back if not positively as represented. Circular free; catalogue 6c. GEO. ERTEL CO., Quincy, Ill.

IT WILL PAY YOU
to send for our new poultry book describing the DANDY Green Bone CUTTER
It tells how to increase the egg yield. The Dandy, the easiest turning of all bone cutters, is sold direct on 30 days' trial. Price, $5 up. Handsome Book Free.
STRATTON MANFG. CO., Box 13, Erie, Pa.

DAIRY AND FARM NOTES.

MORE CORN. — The manufacturer makes his plans ahead; why not the farmer? How many are arranging for next year? "Think not of the morrow." Yes, but we must for successful business. We should have our cropping pretty thoroughly arranged for the coming season, before Winter is upon us. One of the things that at present interests me is the growing of a large acreage of corn for husking, or rather for ear feeding. We have formerly put everything into silos. This year the high price of corn and the great growth with us has given a quantity for hog and horse feeding. Why not raise every pound required for such use? That is just what we shall do next year; the plots are already laid out, and plowing has commenced. Plowing in the Fall? Yes; each year confirms more fully an opinion that Fall plowing in a snowy country is best, giving more time in the Spring for harrowing. In wet seasons the difference in production is not noticeable. In dry seasons it is always in favor of Fall plowing. The furrow slice becomes compacted with the soil beneath, permitting easy and rapid capillarity. As soon as dry enough harrowing begins, which checks loss of moisture. We shall plow until Winter shuts off operations, if not completed before.

Why this increase of grain? I am satisfied that our eastern farms can grow corn as well as the prairie, and the higher price, it seems to me, may remain for a time. That is, I do not look for 40-cent corn again soon. When we could buy cornmeal in quantities at $15 a ton it hardly paid to handle the ears other than in the silo; $25 a ton changes the tune, or even at $20 we should raise our corn. We are now shocking and picking off the ears as fast as needed without husking. The hogs will take care of it, and by the way, corn on the ear is a good horse food, especially for horses after passing the 10 or 12-year mark. When buying I never found one older than that.

THE FARM HORSE.—This idea leads to the most profitable horses for farm work. My mind has changed very materially on this question. I was educated to think that horses had passed their best usefulness at 10 years. I say now that the last half of a horse's life is worth more than the first half. That is, if a horse lives to be 20 years old. His service from 10 to 20 will be of more value to the farmer than from birth to 10. I speak from the standpoint of horses that work hard nearly every day and are driven by hired men. Horses in early life are more nervy and active, but they cannot, if they have not previously been injured, stand as much feed and strain as the more mature animals. Then again, farm work is of such a nature that much time is saved if the horses will stand at the door or anywhere for a moment without hitching. We are keeping these horses as long as they will be useful, and then giving them a decent burial. We have one at the present time 22 years old, which will be given his long rest before this is printed. He could not be bought—faithful old fellow—he shall not have abuse. I bought a pair of horses a few days ago; one of them has galls and collar bunches. When looking at the collars it was all explained; dirty collars. A few minutes each day will keep them clean, and then with a hard, smooth collar—the harder the better—few breasts will get sore. The cheap "sweats" which are sold and used so generally in our section are a curse to horses. They get wet from rain or perspiration, and then, like a wet glove, make a sore. I have cured sore necks and breasts with a new collar of the best quality, without ointments. A noble animal is the horse, but some farm horses are shamefully treated, not only from poor driving and sometimes light feed, but from ill-fitting harness. Have the collar fit close to the neck; if too large cut it down. H. E. COOK.

A Second-hand Separator.

I have a small dairy; keep four cows in milk the year round, as I make butter. I can buy a No. 2 De Laval separator, used a few years, for about $40. A small-sized machine of this make or of any other, can be bought for about $60. Is it policy to get a small machine even for a small dairy? Will it do the work as well and as easily as a larger one? The different parts to the large machine are heavy to handle and clean, and must, I presume, turn harder than a smaller one. Is it advisable to purchase this second-hand large machine, or to buy a new one of the small size for $20 more? Some tell me butter made from separated cream is not as good as that made by the old way of ripening the cream on the pan. What is your opinion? S. D. C.

Fairfield Co., Conn.

Before buying the second-hand separator take a sample of skim-milk from it, and put it through a Babcock test. If it leaves more than one-tenth of one per cent butter fat reject it, and buy a new one, which will have a guarantee with it. The small machines will no doubt be ample for your requirements. Your butter will be of the finest quality if the cream is only properly ripened. Hold cream at a temperature of 50 degrees for two days, cooling each skimming to that degree before mixing. When ready to ripen, warm the whole mass to 60 to 65 degrees, and hold at that temperature until thick; then cool down to 52 degrees; let stand five to 10 hours, according to circumstances, then churn. H. E. C.

The Tenant's Share.

What would be a fair share for me to receive to work a farm on shares in this manner: I have to rent a house close to the farm for $6 a month, and take care of three cows for the people, and do not get any share of the milk from those. The feed for them is to come from their share, and I am to furnish one horse and pasture for the cows in the Summer. They are to furnish one horse all the time, and an extra horse during haying. I am expected to feed the horses that they furnish from my share when I have the use of them. A. H. S.

Dallas, Pa.

In our section on rented farms the tenant furnishes teams and tools, does all of the work; the owner furnishes stock, grass and clover seed, and all other seeds each party furnishes one-half. All concentrated food is paid for one-half by each; everything sold from the farm is divided equally. The teams are usually fed from undivided foods. The conditions in the question seem somewhat peculiar, or else it is not a dairy farm. One cannot advise with much intelligence, not knowing the size or value or producing power of the land. It would seem that you should be paid for taking it, if you are required to pay house rent and take care of stock from which you get no returns; $72 a year is pretty strong house rent. On rented farms houses and all necessary buildings are furnished. Unless you have some income not mentioned in your inquiry better let the job pass. H. E. C.

MY plan of caring for old hens and pullets this time of the year is to give them plenty of corn to start them to laying, and about once a week give them sulphur, about one tablespoonful to 50 hens. Give them plenty of lime, and keep your henhouse yard full of small bits of cracked earthenware. Pound it up fine enough so they can swallow it. Keep them in a warm house, and give plenty of charcoal. That is all I do, and I get plenty of eggs, and have healthy chickens. W. R. N.

BLOATED COWS.—A writer in Hoard's Dairyman gives this experience in relieving cows that were bloated: "We fed Alfalfa hay twice a day, and occasionally we would get some of the third and fourth cutting, that had been frostbitten before harvesting. This would usually bloat two or more, about every time. It was suggested by a veterinarian that I try a one-inch hose, six feet long, by running it down the throat to the stomach, allowing the gas to pass off at once. It requires one man to hold the cow while another puts the hose down. Some cows are damaged by tapping, while the hose in my experience saved many a valuable cow."

HIGHEST AWARD
CREAM SEPARATORS
BUFFALO EXPOSITION.

Just as in the case of every representative exhibition or other contest since the invention of the Cream Separator twenty years ago, the De Laval machines have maintained their supremacy at the Pan-American Exposition, Buffalo, having received the Gold Medal on Cream Separators.

This is the highest and only award of its kind on Cream Separators. The Sharples machines received a Silver Medal. The Vermont Farm Machine Co. received a Gold Medal for its combined exhibit of cream separators, Babcock testers, churns and other apparatus, and A. H. Reid a Bronze Medal for a similar exhibit. With characteristic advertising honestly, the Vermont Company is claiming this Gold Medal to be an award to its "U. S" Separators.

The jury of awards on cream separators consisted of Dr. S. M. Babcock of the University of Wisconsin, the famous dairy authority and inventor of the test bearing his name, and Prof. H. W. Spangler of the Franklin Institute, Philadelphia. This jury awarded the Gold Medal to the De Laval machines, a Silver Medal to the "U. S." machines (Vermont Farm Machine Co.), and a bronze one to the Sharples machines. But the after "pulling and hauling," which unsuccessful exhibitors always resort to in an exhibition contest of this character, finally resulted in the general award authorities granting awards as above announced

In the Model Dairy at Buffalo the work of the De Laval machines was in keeping with their recognized superiority in ordinary dairy practice. Four makers of separators were offered opportunity to set in machines. Two of these, the Sharples and Reid, evaded doing so. Of the third a prominent dairy expert writing under date of October 10th says: "I hear that neither natural gas nor soft coal would make enough steam, so that they had to use wood and coke to run the 'U. S.' machine, keeping water ready to put out the fires that had been started two or three times in the roof of the engine house by the heat from the smokestack,"—the machine being one of those "light" running "dairy" turbines of the make in question, which like the other sizes of such separators run as easy "on paper" as De Laval machines.

OTHER GREAT EXPOSITIONS.

The supremacy of the De Laval machines at Buffalo is a continuation of their triumphant record at all previous great expositions. At the World's Fair, Chicago, in 1893, they received the Gold and only medal awarded by the regular jury of awards and were the only separators used in the Model Dairy. At Antwerp in 1894 and at Brussels in 1897 they received the Grand Prizes or highest awards. At Omaha in 1898 they received the Gold Medal, and again at Paris in 1900 the Grand Prize or highest award.

THE DE LAVAL SEPARATOR CO.

Randolph & Canal Sts., CHICAGO.
1102 Arch Street, PHILADELPHIA
103 & 105 Mission Street, SAN FRANCISCO.
General Offices: 74 CORTLANDT STREET. NEW YORK.
327 Commissioners Street MONTREAL.
75 & 77 York Street, TORONTO.
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The Exponent of Advanced Agriculture is

The Practical Farmer, of Philadelphia

American agriculture has made rapid advances during the last ten years. No thoughtful student of the agricultural press can fail to note the progress made, both from the character of the papers themselves, and the results as portrayed in their columns. There have been potent agencies at work to effect these results; agencies which are still at work, and which year by year, are exerting a wider and stronger influence. For the last twelve years, under its present management

THE PRACTICAL FARMER

has been in the forefront of this effort to raise the American farmer to a higher plane of thought, and action, and results. It has aimed at all times to talk to the farmer and not at him, by enlisting men who have made their mark as practical farmers, and bringing their experience and thoughts into its columns. No other agricultural journal has such a corps of writers, who know from experience what they are writing about, as has THE PRACTICAL FARMER, of Philadelphia, and it has also had the good fortune through its foresight and management to bring into its column from week to week, and year to year, the experiences and practices of thousands of the best and most successful farmers, stockmen, gardeners, and workers in other departments of the farm. By this happy combination of the leading practical Agricultural writers and the plain farmer who tells at night what he has done through the day, THE PRACTICAL FARMER has won the confidence of its readers as it could have done in no other way.

We are glad to be able to announce that

PROF. W. F. MASSEY,

who has been a force in advanced agriculture for two score years, has resigned his position in the North Carolina Agricultural College to assume editorial charge of THE PRACTICAL FARMER, writing exclusively for its columns. What this means for our readers, those who have been conversant with the rich results which have followed Prof. Massey's labors well know. It means a broadening of every department of THE PRACTICAL FARMER. Of the counteracting of any tendency which it may have had or does have to get into ruts. For twelve years it has worked week in and week out to lift the American farmer out of the ruts, and if there has been any tendency to get into a rut itself, Prof. Massey will have the ability and authority and financial backing to lift it out. Every department will be vitalized; new blood, new ideas, new methods. The whole paper will feel the uplift. The men who have shown such skill in the editorial management of the Special Departments, will still retain their management, but the whole will be under the supreme control of a master mind, and every department will respond to that control.

Second only in importance to the acceptance by Prof. Massey of the editorial management, is the engagement of **Mr. A. F. Hunter,** for ten years editor of Farm Poultry, to look after the Poultry interests of THE PRACTICAL FARMER. Mr. Hunter is recognized as one of the ablest authorities in the United States on all subjects pertaining to Poultry. His practical experience and thorough observation in this country and Europe give the assurance that the Poultry interests of the paper will be brought up to and maintained at the very highest standard.

MR. T. B. TERRY, of Ohio,

who writes exclusively for **The Practical Farmer,** of Philadelphia, will continue to make the front page of THE PRACTICAL FARMER the strongest page in the Agricultural Press, the index of the good things which follow that page. No other man is fitted to exert just the same influence. Year by year his Institute work, covering almost every section of the country, broadens him and brings him into contact with almost every known need and experience of American Agriculture. Thus, both by his own experience and success, as well as through the experiences and opinions of thousands of farmers against whom he personally rubs through the Institutes, he brings to his weekly articles a strength which makes them unique.

His book, "Our Farming," is the most successful agricultural book ever published. A complete record of his farm work, covering a quarter of a century. Contains 368 pages, beautifully printed, handsomely illustrated and cloth bound. As noted at the bottom of this page, we give a copy of this book free to any person sending us a club of six yearly subscriptions to **The Practical Farmer,** of Philadelphia, at 50 cents each.

One of the most potent factors in the power which THE PRACTICAL FARMER has exerted in advancing agricultural practices, is the **Special Departments,** which are peculiar to it. THE PRACTICAL FARMER struck a popular chord, and its Special Departments met with an instant success, which the years increase. There is a reason for it, too. They were especially intended to bring out the common farmer; the man who stands back of American Agriculture, and makes or unmakes it. To print his experiences; to give place to his opinions; to enable him to come into contact with his fellow farmer, and to evolve from that contact the mutual help which should bring better results: following these lines,

Our Experience Pool will remain under the direct editorial management of Prof. Massey. These weekly discussions of subjects connected with farm crops and stock, and their management, under his skilful direction, have proven very popular. The topics are selected with special reference to their adaptation to the ordinary farm and garden routine. Fifty-two of these topics are discussed each year by the thousands of subscribers of THE PRACTICAL FARMER, who bring to the discussions the experience and knowledge gained from their daily work as related to the topics discussed. The discussion in each pool is carefully summarized by Prof. Massey, the main points being developed and practically applied. 50 cents is paid for the best (which will be at head of column) and 25 cents for each other article published.

Short Cuts by P. F. Subs., tell of the thousand and one ways by which the successful farmer and his housewife achieve their success. Every one knows of a short way of doing some certain thing. Every week some of these short ways find a place in Short Cuts, and the thousands of readers who did not know those particular ways can do them too. The ability to make one's work tell; to achieve results at the least expenditure of time and labor, is what commands success. Short Cuts tell how it can be done in thousands of ways on the farm and in the home. This department is under the editorial charge of Mr. T. Greiner, an expert in short cuts himself, and thoroughly alive to the possibilities for usefulness of such a department. 50 cents is paid for the best and 25 cents for each other article published.

Farm Implement Annex has to do with the selection, care and use of farm machinery. In these days the farmer who does not avail himself of every help which inventive genius supplies, and which he is able to get, will be left in the race. Larger production from fewer acres is the secret of success on the farm, and farm machinery is a potent help to bring it about. But the machinery needs to be oiled with brains, and Farm Implement Annex is designed to help its readers do that. Judgment in the purchase and use of farm machinery, and care in its management will bring success. The collected experiences published in this department make a trustworthy guide to its readers. A cash prize of 50 cents is paid for the best and 25 cents for each other contribution published in the department.

Mistakes, Failures and Successes. The first two of these words strike a tender spot. We like to tell how we succeed, but to tell of a failure is like pulling teeth. And yet to arrive at correct conclusions it is just as necessary to know of the mistakes and failures as of the successes. The first two warn you from, and the latter points to certain things. And so the aim of this department is to collate both the mistakes and the successes of the readers of THE PRACTICAL FARMER. We honestly believe that thousands of its readers have been saved from failure and loss by the experiences which their fellow farmers have contributed to this department. The successes admirably supplement the failures and mistakes, and very often the writer tells how through failure he has won success. We pay a cash prize of 50 cents for the best and 25 cents for each other contribution printed in this department. Both the Implement Annex and the Mistakes, Failures and Successes Departments are under the editorial charge of Geo. T. Pettit, who keeps both of them fully up to the progressive ideas and ideals which are embodied in THE PRACTICAL FARMER.

Postal Card Correspondence are reports from all sections of the United States and Canada, with an occasional contribution from other countries. The state of the crops, prices, local advantages are clearly and succinctly set forth. It is a bird's eye view of matters and things which it is important that the farmer should keep posted upon. It gives a general and accurate idea of crops and prices. 25 cents is paid for each contribution published.

These five departments are maintained exclusively by contributions from subscribers of THE PRACTICAL FARMER. They form a sort of a Free Parliament, where the members of THE PRACTICAL FARMER family can meet and exchange ideas and experiences. While the articles are pruned and put in shape by skilled editors, the ideas are the result of practical, every day work right on the farm and in the home.

Another feature peculiar to THE PRACTICAL FARMER is its

CROP SPECIALS

The whole front part of the paper of a given number is devoted to the discussion of some certain topic; the articles being written by subscribers of the paper. Several of these are printed during the year, and the aim is to discuss leading matters that interest the whole country, or large sections of it. Cash prizes of Twenty-five, Fifteen and Ten dollars are paid for the best three articles contributed to each Special. We have arranged thus far for the following Specials:

Incubator and Brooder Special, December 21.
Tobacco Special, January 18.
Dairy Special, February 22.
Commercial Fertilizer Special, March 22.
Farm-Garden Special, April 19.
Ten Year Experience Pool Anniversary, May 24.
Clover Special, June 28.

Cream of the Bulletins is another thing original with THE PRACTICAL FARMER. Each week a bulletin of some Agricultural Experiment Station is taken and its facts and conclusions stated in plain English, so that in a short space the cream of the bulletin is skimmed off and dished up to our readers. The subscribers of THE PRACTICAL FARMER get an intelligent idea of the most important Bulletins, State and United States, published during the year.

Veterinary.—Dr. A. S. Alexander, a skilled veterinarian, answers free, through this department, all queries relating to the diseases of all kinds of live stock. The questions are given in full, so that subscribers who wish to minister to the ailments of their animals, can often find in the numbers of THE PRACTICAL FARMER the advice they need without any delay. It is safe to say that this department has saved thousands of dollars to our readers.

Queries.—Sometimes the answer to a single query will cost twenty-five dollars to the management, but not a cent to the inquirer. The aim is to answer fully every query sent by subscribers on all subjects concerning agriculture, stock, garden, horticulture, poultry, and related subjects, and in such a manner that the answers are of general interest, and a means of information to the general reader, as well as to the particular person for whom the answer is printed.

The Home Circle is especially attractive in the home. Mrs. Velma C. Melville has had years of experience in this work and caters successfully to the highest moral tone of the farmer, his wife and children. Through its columns the farmer's wife and daughter chat with their neighbors a thousand miles away, and inspire a community of feeling and purpose which helps to cement the sisterhood of women.

The General Departments are such as are found in all live agricultural journals. The Agricultural, of which the weekly letter of Mr. Terry furnishes the backbone; the Garden Department under charge of Mr. T. Greiner, a gardener and writer of National fame; the Stock, of which Dr. Galen Wilson has charge; the Horticultural, with Mr. Joseph Meehan at the head; Poultry, under the wing of Mr. Hunter, are of the most practical character. Indeed, it may be said that the distinguishing characteristic of THE PRACTICAL FARMER is the intensely practical nature of everything which appears in its columns. All the articles are prepared expressly for its columns, by writers who, from their own experience, know and appreciate the needs of the soil-tiller, and write with the consciousness of that need permeating their work.

These are the lines along which THE PRACTICAL FARMER will be conducted during 1902. But it will not stand still. The coming year ought to, and we believe will, mark a note-worthy advance in American Agriculture. That must keep pace with the improvements made in every other business and profession. It will be the aim of THE PRACTICAL FARMER to lead that advance.

$1.00 **$1.00 pays for The Practical Farmer from now until January 1903.**
$3.00 pays for a club of 6 subscriptions to THE PRACTICAL FARMER from now until January 1, 1903, and a copy of Mr. Terry's book, "Our Farming," to the club raiser. **$3.00**

All Subscriptions Discontinued on Expiration. Remit by P. O. or Ex. Order, Bank Draft or Registered Letter, and address

THE FARMER CO., Publishers The Practical Farmer, Market and 18th Streets, Philadelphia.

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2701. NEW YORK, NOVEMBER 2, 1901. $1 PER YEAR.

FEEDING STUFFS FOR THIS WINTER.

THE CHEAPEST FOOD TO BUY.

How to Use Roughage.

As this has been an unfortunate crop year in certain sections of the country the question will naturally arise with many, what feeds can be used most profitably where they are both scarce and high in price? One can only offer suggestions, and these may have an application in some regions, and will not do nearly as well in others. Yet where money is to be expended the suggestions may have a wider application. For the Central West hay and fodder will not be especially scarce. The severe damage to the corn crop was to the grain rather than the stalk and leaves, although the supply of fodder will be far short of an average. Yet the crop of early hay was quite generally good, and corn stover will be abundant in the Mississippi Valley, if the product of the fields is utilized. Hundreds of thousands of acres of corn stover have each year in the past gone to waste, by standing uncut through the Winter, to be plowed under or burned in the Spring. The past season's drought may result in saving a large percentage of this year's forage. An acre of ordinary corn stover contains about 1,600 pounds of digestible food, and if there is but half a crop, there will be perhaps half that amount. A thousand pounds of field-cured corn stover contains 20 pounds of digestible protein, so the reader can readily see that there is nourishment in the plant, even if the ears are gone.

Pork can be fed with good profit this coming season. Live hogs have already passed the seven-cents-a-pound figure in the West, and corn and shorts at present prices will let one have a liberal margin on the cost of production. Even though the price of grain is high now, this is the season of golden harvest for the man with a good bunch of pigs. Grain may be bought at a distance and shipped in, and considerable money saved in many localities. Minneapolis and Chicago; Cincinnati, Louisville, Pittsburg and southern cities have responsible dealers in feeding stuffs, from whom samples and prices can be secured. Correspondence may save many dollars to some farmer about to lay in a Winter supply of feed. It will no doubt be wiser to buy now what is needed for the Winter, than buy from time to time, for prices may be expected to rise rather than fall, so good judges report. The writer has recently purchased a carload of bran and shorts. These were shipped 600 miles, and delivered here from Minneapolis at $17 for the bran and $18 for the shorts or middlings. I also bought five tons of gluten meal, which cost delivered $26.50 a ton. Of late I have bought some hominy chops at $20 a ton, and shelled corn at the rate of $25 a ton. Analyses show that these contain the following amounts of digestible foods in 1,000 pounds:

	Dry matter.	Protein.	Carbohydrates.	Fat.
Bran, Spring	885.	129.	401.	34.
Shorts	882.	122.	500.	38.
Gluten meal	918.	258.	433.	110.
Hominy chops	889.	75.	552.	68.
Corn	891.	79.	667.	43.

A study of this subject will show that on the basis of valuable food nutrients secured the gluten was by far the cheapest feed. Protein is the most costly material secured in our feeds, and the gluten is specially rich in this material, yet it cost almost the same as the corn. The fact of it is, that gluten is really one of the cheapest foods one can buy. Dairy cattle in particular respond to its influence, and our cows do their very best when fed this food. But one does not want to feed all gluten. Bran is a peculiar feeding stuff. It seems to have a laxative, cooling effect on the bowels, and while it supplies a fairly good per cent of protein or muscle-making food, it also keeps the digestive system in good condition. No other grain seems quite to take the place of wheat bran, and so it should always be used to some extent with cattle. Bran and shorts are much alike in composition, but shorts I especially prefer for the pigs, giving the bran to the horses, cattle and sheep. Old pigs may be fed bran if desired, but shorts handle nicer, and are not so irritating to the digestion of pigs, and young ones in particular.

The hominy chops can be bought at hominy mills or in the market in many places in the West. This makes a most palatable meal for cattle and pigs, and it has essentially the same composition as corn, although there is rather more fat in the hominy than in the corn. In making up feeding rations, variety is relished by animals, and better returns may generally be expected where a variety is fed. And if one has to buy anyhow, then why not buy several sorts? We must take palatability into account in feeding our stock. The chemical analysis is only an indicator of value in part. The taste in the mouth affects animals as well as man. And so I find, in the fixing up

A PAIR OF WELL-BRED FARM BABIES. FIG. 333.

of these feeding stuffs, that some cornmeal along with the gluten gives an additional flavor, and further helps to balance the ration up. Gluten is very rich in protein, and an animal should not eat of this feed heavily. So in place of gluten some cornmeal or hominy may be substituted if feeding cattle, and a better balanced ration made. A ration of 25 pounds of stover, three pounds of gluten, four pounds of cornmeal and four pounds of bran, would cost about 15 cents on the basis of the above prices, and would be well adapted to a dairy cow of 1,000 pounds or less. Of course, the amount of grain fed depends on production. This amount will do for a good milker making say three gallons a day. A fattening animal would need less rough feed, more cornmeal and less bran.

The economical carrying of horses through the Winter should not be a difficult problem. On many farms where work is light, good clover hay, moistened, will give first-rate results alone, with no grain. This the writer has given a good Winter trial, and T. B. Terry's experience in keeping horses on clover hay alone has been much quoted in the past. For several Winters we have fed our horses shredded corn stover with excellent results, plus a light feed of oats. The horses relish good bright corn stover for a change, and keep up on it in a surprising manner. At present we are feeding 1,300-pound horses on four quarts of oats three times a day, and Timothy hay, with three-fourths of a pound of oil meal once a week, as a conditioner, but soon the oats will be reduced, and a cheaper diet fed. We must get the cost of our horse feed down close to 10 cents. If 15 pounds of stover are fed, at $2.50 a ton, and 10 pounds of oats at 32 cents a bushel, then the horses will do nicely, and the feed will cost but about 11 cents. As the work is increased the feed may be increased. One can easily tell how horses are doing by the way they respond to work, and the way they appear in flesh. In Winter some bran may also be substituted for oats. The New Jersey Station found that it could substitute brewer's grains for oats and save money. Oat rations at prevailing prices cost 24.3 cents a day, while rations with dried brewer's grains substituted cost 19.4 cents. To 1,000-pound horses this Station fed six pounds of hay, two of bran, four of unground corn and eight of dried brewer's grains.

For sheep a feed of clover hay or Alfalfa, with a light ration of bran or wheat screenings, with a bit of oil meal is desirable. In some regions wheat screenings can be bought very cheap, and while they do not represent any fixed feeding quality, they as a rule are most excellent for sheep, and give good returns. I have bought them all the way from $8 to $20 a ton. Sheep relish them greatly, and one can afford to pay a good price for high-class screenings. Oil meal or oil cake seems a most excellent food for sheep in a small way, giving a finish to the wool, and condition to the skin and eye of the desirable sort. Sheep also relish oats, and these feeds are all staples. Ample good hay, a pint of oats daily and an occasional bit of oil meal, will keep sheep thriving. Ewes at lambing should also have some bran, while fattening sheep would do better on corn than oats. At present low prices on sheep, one can hardly afford to spend much on stock animals, unless sure of a select market. Stockers should have plenty of good hay of some sort, and then be fed grain on the most economical basis, according to local surroundings. Screenings will probably be cheaper and better than corn. Finally, if you feed at all, feed only superior stock, that will more than pay for their keep.

C. S. PLUMB.

R. N.-Y.—We find wheat bran one of the most useful feeds for all kinds of stock. This year oats seem to be the most expensive feed that eastern farmers can buy.

A SHETLAND PONY COLT.

About two years ago I invested in a pair of Shetland ponies, with the idea first of pleasing the little boys, and secondly, I thought they might be profitable to raise for market. I send you a photograph of the first pony bred and raised at Hickory Hill Farm, shown at Fig. 333, with his young master, Harold Morse, aged three. This colt's dam was less than three years old at the time the colt was foaled. She is 38 inches tall, and weighs about 300 pounds. At birth the colt weighed 27 pounds and was 22 inches tall. As far as we have found, the purebred ponies are very docile and safe for the children. A very good illustration of this was an incident that occurred two days after this colt was born. I had turned the mare and colt in the back yard, and soon after we missed Master Harold. We found him in the attitude in which he appears in the picture. The mare was standing close over them, very watchful, but not at all inclined to be cross. This little mare is not a "fish-cart" pony though, by any means, and can draw the two older boys, aged eight and 11 years, five miles

an hour, and has made one trip of 20 miles in a day this Fall.

The boys have broken a two-year-old this Summer to drive to the cart, and it is hard telling which learned the more, the boys or the pony. I also have learned a few things about ponies and some about men also. I have found that some of the mares are non-breeders, and also that it is well to have a certificate of registry come with the pony, or he may grow, and grow, and grow, until he is just an undersized little horse, too small for a horse and too big for a pony. Dealers in this class hurt the sale of real ponies, because they offer their stock at low prices, and cause dissatisfaction among those who buy.

J. GRANT MORSE.

THE "HICKORY HORNED DEVIL."

I found the large worm I send you in my yard, crawling on the ground. Will you inform me as to its name and nature? Upon what does it feed? Does it ever damage trees or plants? C. S. D.
Barnesboro, N. J.

The "large worm" proved to be rather a "rare bird" among the caterpillars. It seemed willing to pose for its photo, and I think many readers of THE R. N.-Y. will be interested in the result, as shown in Fig. 334. Is it not a formidable looking creature? And yet it is perfectly harmless to man, but it can eat a large number of leaves of various trees and shrubs, its favorite food being hickory and walnut. However, it has so many enemies among the parasitic insects and the various insect diseases that it rarely multiplies in sufficient numbers in any locality to be considered a pest; it usually only defoliates a shrub or small tree here and there. The general color of this frightful caterpillar is light green, with the black and white spots shown in the figure; the long horns are brown tipped with black. C. S. D.'s caterpillar was full-grown, and would have soon burrowed into the ground and in a few days transformed into a brown, lifeless-looking object called the pupa stage. This pupa would have wintered over, and some time in June next one of the most magnificent of our moths would have emerged. This moth has a wing expanse of five to six inches. Its front wings are of an olive-gray color, adorned with several yellow spots, and veined with broad red lines; the hind wings are orange-red with large patches of yellow. This truly regal insect was aptly named the "Regal moth" (Citheronia regalis). But its ferocious-looking caterpillar is popularly known by the expressive name of "Hickory horned devil." It is a "rare bird" in New York, but more common southward and eastward.

M. V. SLINGERLAND.

NEW MARKET FOR APPLES.

There are some faint-hearted people yet who do not understand what can be done by an organization like the American Apple Consumers' League. We wish to call their attention to the following letter from the proprietor of Dorlon's Restaurant in this city:

"I have been told that my father once ate 18 apples in a day. Hence my daily average of three or four is not too much, if there is anything in heredity. I have been in the restaurant business over 25 years, and never (strange as it may seem) sold an apple on my tables until about two years ago, when I commenced to read THE R. N.-Y., and was particularly attracted by your articles on apples. A friend of mine, a clergyman, said to me at that time: 'Why can't I get some apple sauce here?' THE R. N.-Y. and the clergyman decided the question. I told the steward to buy a barrel of apples, and I have never been without them since, and I made my friend a member of the Baked Apple and Apple Sauce Association.

"I have great difficulty in buying the kind of apples I want. Except the Long Island Newtown Pippins, which we have great difficulty in getting, the Spitzenburg, I think, is the best for baking; the Rhode Island Greening, the best for cooking and apple sauce. (Oh, how good it is!) I think packing in boxes is a very great improvement on barrels, and while the cost is a little more the waste is less. For my table I must have quality and uniformity. I can afford to pay a good price, for I get 15 cents for two baked apples and a pitcher of cream, and my customers pay it willingly, in competition with a Ben Davis at 10 cents for two great big apples. When people do make a comparison I simply tell them that I pay $7 a barrel, and can buy the Ben Davis for $3. Of course, up to this time it has not become a very large part of the business, but it certainly is increasing. I think we use for baking and eating raw about a barrel a week, and for sauce and stewing another barrel. I expect this Winter to use more. I am using now for eating apples, what is called a Spitz, for which I am paying 15 cents a dozen. Go ahead, brother, give us a good flavored apple, uniform in size, and convenient packages, and you will have done more for prosperity than many men with their millions."

W. H. CAPEN.

There is only one instance of what a few words will do, yet it means 100 barrels a year extra. Not only that, but every dish of those fine baked apples is an educator. People eat them, and then go to other restaurants, or go home, and demand the same quality. All this surely increases the trade in fine fruit. It is only a hint at what may be accomplished if those who are interested will only make *apple eating* popular. We must educate those who live in town and city to eat apples as freely as the fruit is eaten in the farmer's own family. The way to do this is to talk it up, and thus create the impression that apple eating is fashionable. In the southeastern corner of New York State there are nearly 5,000,000 people, most of whom do not know a good apple when they see it.

DEER VS. FARMERS IN VERMONT.

Which Does the State Prefer?

THE R. N.-Y. feels somewhat responsible for the following case. Several years ago we were asked for an opinion regarding the chances for apple growing in Vermont. We collected the best information we could find regarding markets, varieties and culture. The inquirer went ahead with his orchard, but now it seems that a new enemy appears upon the scene—one that cannot be fought successfully with spray pump or gun!

Deer Worse than San Jose Scale.

I have purchased a farm about one-eighth mile from quite a village, and directly on a stage road. I purchased it for the purpose of raising fruit, particularly apples, plums and cherries. I supposed all I

THE WELL-NAMED HICKORY HORNED DEVIL. FIG. 334.

would have to fight would be bugs, weeds and such vermin. I set out a lot of trees two years ago. Last year they grew finely, and put on nice tops. This year the deer came in in droves when the new growth had pushed out about a foot, young and tender, and literally cleaned it up. I then tied some colored cloths to the trees, and that kept them off until now. Now they are eating last year's and this year's growth, and I expect next they will bark the trunks. There is a good chance for fruit growing here; the quality is of the best, and the market close by. I wrote the Fish and Game League, an association run in the interests of the railroads and sportsmen, and they replied that they would prosecute me if I touched one of their deer out of season. The "season" is one male deer to each hunter in the last 10 days of October. This is not an isolated case, but is happening all over this part of the State (Windsor Co.). Only the old timers know enough not to try to raise fruit trees. They eat one's corn, turnips, beans and lodge down the farmer's clover. They eat all the apples they can reach, and they can stand on their hind legs and reach 10 feet, as I have seen them do while sitting on my front porch. As a deer preserve Vermont is becoming a grand success, but an enterprising farmer would better keep away. Now I cannot protect my crops without calling down all the powers of the State on my head. FRANK HOWARD.

The Vermont Law Expounded.

That is what we call pretty dear experience. Mr. Howard wrote to the Fish and Game Commissioner of Vermont, and received the following enlightening letter. The man who would not write forcibly when he saw his trees being pruned in this way has no business ever to raise an apple:

"I am not much of a farmer, but supposed that if the country you named was good for farming and especially for fruit growing, it would not be allowed to go to waste. Of course, one must adjust himself to the conditions and laws of the State, both natural and legislative. The last paragraph of your letter, while not explicitly so stating, intimates that the deer law is not favorable for your business, and, therefore, you propose to get rid of the deer. Before reading that paragraph, your letter intimated too much common sense to make any threats. I have no doubt that the deer damaged your crops, and that it will not be a favorable place for raising fruit in the vicinity where you have set out your trees. The Vermont Legislature is supposed to represent the will of the majority of the people. To violate one of the acts of the Legislature because you disapprove of it is not good citizenship. I, of course, so far as I am concerned must see that you do not violate the law protecting deer, and if you do violate it must see that you are prosecuted. I suggest that the better way is to be a law-abiding citizen, and if your crops have been damaged appeal to the Legislature to reimburse you." JOHN W. TITCOMB.

The Facts in the Case.

We have been at pains to investigate this matter. Our reports show that deer certainly do considerable damage—especially in the hill towns in the northeast part of the State. In the thickly settled parts little if any damage is reported. The majority of those who have written us do not think the present fish and game laws of Vermont are fair or helpful. One man writes that the greatest nuisance comes from the danger of being shot by the hunters in the open season. Cows and other stock, and even children, have been hurt in this way. The following statement is sent us from Rutland County:

"Deer and other game do no perceptible damage to crops in this part of the valley of the Otter Creek, which is at the western base of the Green Mountains. I am informed, however, that deer do destroy crops on the heights, where there are smaller cleared lands adjoining dense forests, and the owners of such tilled lands do complain bitterly of their depredations. No other game is complained of. There is no particular increase of any game except deer, and I think fish is even more scarce since the fish and game laws were enacted than before. The law operates like the prohibitory liquor law, which makes every boy and young man want whisky. Every man or boy who ever handles rod or gun goes as wild as the game when the open season commences."

On the other hand, a good farmer well acquainted with the central part of the State, says:

"Some farmers kick about the deer because it is an easy thing to kick about. The Potato rot has done something over $100,000 damage this year, most of which might have been prevented without any change in the game laws. But most of the farmers prefer to let the Quack grass and rot fight it out in the potato patch. It is easier. They don't kick about that, because they can't blame anybody else. The deer will not do one five-hundredth the damage this year that the Potato rot does. Further than this it seems to me that the agitation for a change in game laws is largely a waste of energy, simply because the present game law is practically a dead letter as regards deer. A farmer can go and shoot all the deer he wants to, and there isn't a police officer in the State who can get a case against him. What sort of a game law would help keep the deer out of the farmer's orchard?"

SOME NOTES FROM OHIO.

There is practically no clover seed grown in this county, and I might say the whole Western Reserve. Cow peas are gaining in favor every year. In 1895 I was the first to try them, and now they are to be seen on nearly half the farms. The large firm of Storrs & Harrison Company plowed under 60 acres of them last year, and I notice many other smaller nurseries are using them also. They had never used any, but had tried Crimson clover with only partial success, and were using millet largely to plow under. Now the cow peas have taken its place. I am interested in the articles on chemicals and clover in THE R. N.-Y. Crimson clover, though, is a most uncertain crop, although I have never sown it in corn as described. I think if we were sure of good northern-grown seed perhaps our efforts would be more successful. This section is largely devoted to onions, grapes and this year an immense peach crop; the first to amount to anything, as there have been many peach orchards set along the lake in Lake County. Last week we got off the last of 2,500 bushels. I doubt whether there will be many set next year, as the prices have been so extremely low, and many orchards proved to be untrue to name. Quite a number of farmers bought of an Ohio nursery and orchard company exposed in THE R. N.-Y. They are surely very unreliable. I could furnish any amount of evidence against them. It's a pity growers can't get some satisfactory damages from nurserymen. When one buys from 1,000 to 2,000 trees for the best yellow stock, and after four or five years of care and tending finds that they are 95 per cent white ones, with 50 per cent of those a miserable cling at that, it is enough to fill one with murderous feelings. In a block of trees if a few should be off in name it is overlooked, but to have them all like these it is clearly fraud and intentional. L. W. K.
North Madison, O.

EXPERIENCE WITH COW PEAS.

Their Use in Central Ohio.

During the season of 1900 I had six acres of Black cow peas, put on ground that had been grained for several years, wishing to keep up its fertility, and to learn whether the cow pea would thrive and mature in central northern Ohio. They were drilled in with an ordinary corn drill three feet 10 inches apart; closer rows might have done as well or better, cultivated several times during the season. At first they grew slowly, but later, when drier and warmer, they seemed to thrive much better, and matured quite a crop of pods filled with peas, but not as great a crop as I had expected, being from two to eight pods where the bunches of blossoms set little stubs or stems for many more. They were quite tedious to gather (we may not have known how to do it to the best advantage), it being difficult to supply the requisite amount of help at this busy season. We came to the conclusion that the cost was more than the benefits derived, and concluded not to grow any more.

In the Spring of 1901, on coming to the farm I found the tops had been gathered together (instead of being plowed down) with a view to burning them to get in early a seeding of oats. I stopped the burning, directing their being hauled to the barnyard to be tramped in with the manure. On their getting there (there were 14 large loads of them) the cattle and hogs began to eat them with avidity. Some were thrown to the sheep, and they, too, enjoyed them. It is needless to say that they were kept and fed as fodder, and not tramped in with the manure. We gathered and gleaned from this patch 63 bushels of heavy oats to the acre, while the general average of the county was not 30 bushels. Our average from about 100 acres was not so great. The ground was plowed for wheat last Summer, breaking up mellow and nice for a seed bed. I shall report on harvesting wheat whether there is any difference in the yield from this part of the field. I did not find on the roots of the cow peas during their growth or afterward the nitrogen-gathering tubercles I had hoped for. Had they been present would we not probably have a better yield of peas? The fine yield of oats will encourage our trying them again. I shall get the Whippoorwill cow pea the next time, as I understand it matures earlier. G. W. G.

Columbus, O.

R. N.-Y.—We have been careful not to advise northern farmers to attempt to make hay of the cow-pea vines. Such instances as the above show that stock will eat the vines, but they are hard to cure, and in our own practice we find it better to plow them all under for green manure. The increase in the oat yield appears to be due to the cow peas, and had the vines all been plowed under the yield would have been larger yet. We think that the wheat also will show the effect of the cow-pea crop. By using a variety like New Era, another crop of cow peas could have been grown between the oats and the wheat, and if a small amount of fertilizer had been used with the peas the vines would have benefited the wheat nearly as much as a fair dressing of manure. In Delaware and States farther south this short rotation of cow peas between crops of small grain, with the fertilizer on the cow peas is very profitable.

It is not unusual to find no warts or nodules on the roots of cow peas when they are grown for the first time. That has been our experience, but invariably these nodules have appeared in increasing numbers, as year after year the crop continued to be grown. The explanation of this is quite simple. At first the special bacteria which cause and occupy these nodules were few in number. They were brought to the soil on the cow-pea seed. The first year perhaps there were not enough of them to make a fair showing, but as other crops of cow peas were grown they multiplied and did their work. We have found that these nodules are more likely to form when the cow peas are grown in poor soil containing but little available nitrogen.

Good Results in Michigan.

Feeling under obligations to THE R. N.-Y. for giving me information on the growing of cow peas, I am glad to give my experience with them, hoping it may interest others. About the middle of June I sowed four acres of Whippoorwill peas; these were put in with a beet drill used by sugar-beet growers. The drill sows four rows 21 inches apart. I used about 12 quarts of seed per acre. The land is thin and sandy, and the season with us was unusually hot and dry, but in spite of these unfavorable conditions the peas grew to an average height of perhaps 16 inches—about as large as I could turn under without trouble. They were cultivated three or four times with a weeder; this, with a few teeth taken out, covered the four rows sown by the drill, and made short work of cultivation. The roots were well supplied with nitrogen tubercles; as well, I think, as clover grown under same conditions would have been. Part of the field received a light coat of manure, and the difference in the growth of the peas was most marked. This leads me to think that while they can rustle for a living on light soil, they appreciate a full meal as much as other crops. Some of the peas were cut and given to the horses green, but they utterly refused to eat them until forced by hunger, so I decided to stick to my original intention and turn them under as a fertilizer, but first we cut and cured a small load for hay, and this the contrary horses eat in preference to Timothy. Now when I reflect that I turned under what would make 16 tons of hay worth $12 per ton, I feel that I have a rather costly fertilizer. L. W. R.

Benton Harbor, Mich.

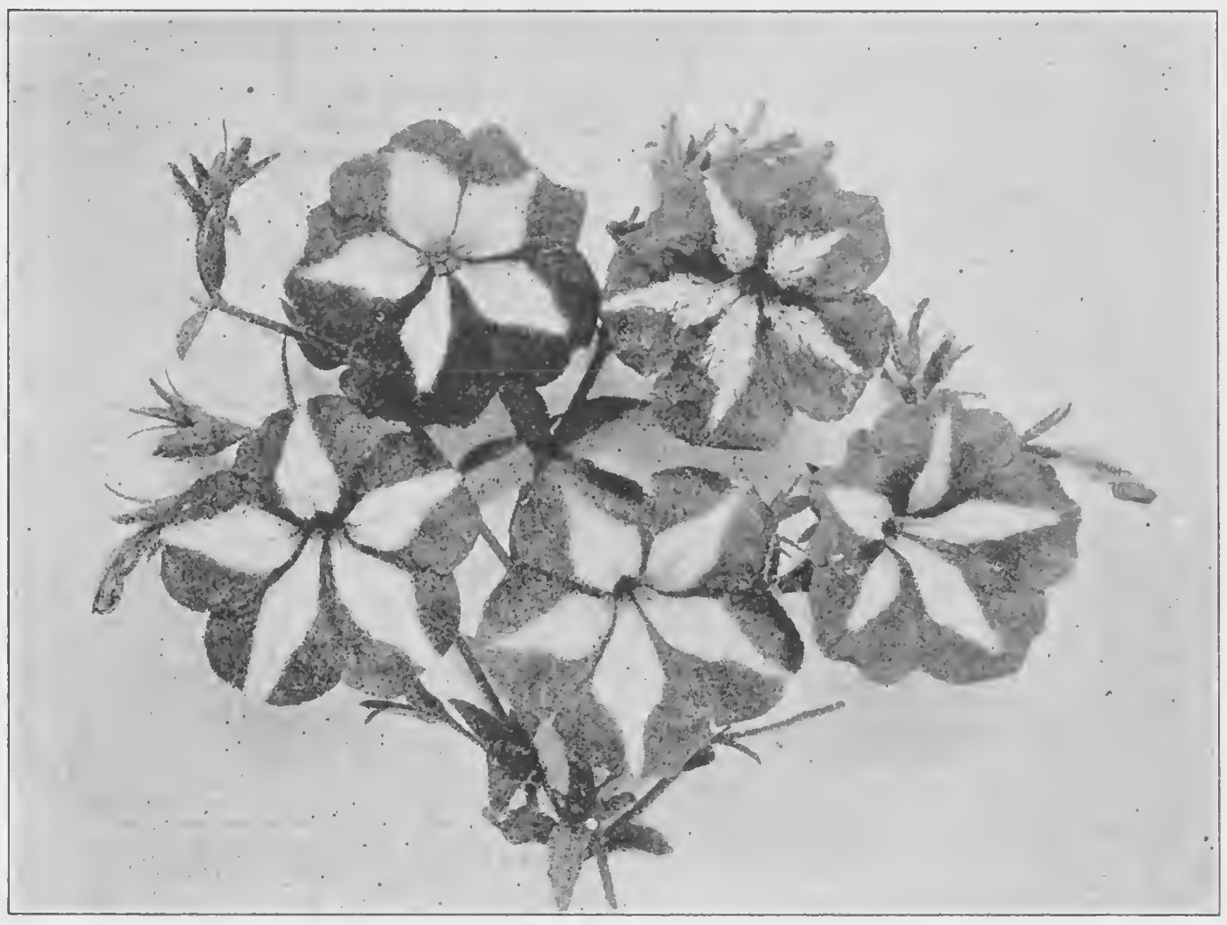
R. N.-Y.—That fertilizer did not cost much at any rate. Wait until you see what grows after it!

NOTES FROM KANSAS.

The creameries are having more cream than usual, on account of the good pasture, and the early-sown wheat will furnish rich yellow cream nearly all Winter. My 10 acres of Mammoth Soy beans and the enormous crop of evergreen hay secured from them has set many wild after them. I plowed up my flax stubble and sowed it to Siberian millet on August 7, and October 7 it was dead ripe, and a good yield, being one of the greatest curiosities ever seen along the road by my place. I raised a bouncing crop of flax on the ground that was taken off on July 6 and 7, but it did not rain enough to plow and put in millet until August 4, when 1.76 inches of rain fell, and I put two big teams at work and had the millet all in August 7. I also sowed Mammoth clover with it, and the clover now shows green all over the field. I could have put the millet stubble into wheat without plowing, and next year put the wheat stubble into millet again, then into wheat in early October, thus getting two crops each year,

Our Government Year Book mentions Siberian millet but does not tell much about it. The seeds are very much larger than common millet seed, and make excellent poultry feed, being nearly one-half the size of pop corn kernels. It only takes 15 pounds of seed per acre, as each plant stools out the same as wheat, and the chinch bugs have never yet been known to trouble it. It is my opinion that this plant and acclimated Mammoth Soy beans will make a valuable addition to the farm crops in this climate. I have recently sold five acres off the farm for a mammoth brick plant, and three railroads on my south line take 15 acres more, so I am forced to raise two crops each year in order to carry the usual amount of live stock. It has been a famous year for sheep. They never were known to thrive so well. I sold down my flock to only 14 ewes and one imported ram, and every one of them is a show sheep. I sold down my Shorthorn herd of cows to four cows and three calves, and my purebred herd of Poland China hogs to 10 show sows and a splendid boar. J. C. N.

Allen Co., Kan.



STAR AND FEATHERED STAR PETUNIAS. FIG. 335. SEE PAGE 742.

AGRICULTURAL USE OF PLASTER.

Why It Is No Longer Used.

IN NEW YORK STATE.—Ground rock containing a large per cent of sulphate of lime was formerly used quite extensively on land to increase productivity. Its chief office seems to be to oust or make available potash. When used alone it requires 400 pounds of water to dissolve one pound of gypsum; hence it should always be used in small quantities, from one-half bushel to two bushels per acre. Formerly, when the land was full of potash which was not readily available, the application of land plaster in many localities produced a marked increase in yield, especially when applied to corn and clover, both of which use normally large quantities of potash. After a time, lands which had been treated for several years with land plaster failed to show beneficial results from its use, and farmers remarked that the land had become "plaster sick." The fact is, that land plaster seems to benefit the land least where the soil is deficient in potash, and most when potash is abundant but not available; hence, the practice has grown up among the most intelligent farmers of supplying the land with potash instead of treating it to land plaster for the purpose of ousting what little potash remains in the soil. I think this practice is a wise one, and that plaster is only profitable on lands which contain a large amount of "lazy potash." In our experiments we have found such lands in the black soils along the Mohawk River near Rome. So far as I can learn not one-tenth as much land plaster is now used in the country easily accessible to the plaster mills as formerly, but I think the reason for such discontinuance of its use is self-evident. So with the New England States, but I am not so conversant with them as with New York, but I am led to believe that it is not used as much as formerly in any locality except in a few rare cases. We are still using small amounts of it in the cow and horse stables, with the hope of securing double benefit; first, conservation of the liquid manures and sanitation, and second, some possible benefit to the land when the manures are applied. I. P. ROBERTS.

Cornell Exp. Station.

IN NEW JERSEY.—The use of plaster as a fertilizer is very limited as compared with its use 25 to 30 years ago. The cause is probably due to the reduced cost of direct fertilizing materials, as well as a better understanding of what constitutes a direct manure. In many cases, too, the effect of plaster is now not marked, because the benefit formerly derived is not observed, owing to the fact that the constituents readily set free by the plaster have been used up, and the plaster has no further effect. Plaster is indirect in its action, the increase in yield obtained from its use being due to the greater amount of potash that may be obtained by the plant, rather than to any direct effect of the lime in the plaster. I may say, however, that a very considerable use is now being made of plaster as an absorbent in stables and manure cellars.

New Jersey Exp. Station. E. B. VOORHEES.

IN MASSACHUSETTS.—Plaster is much less generally used than formerly. At the time, about 40 years ago, when it was so largely used, the general problems connected with the nutrition of plants were much less generally understood than at present; it was not then clearly perceived that the productiveness of soils depends in most cases upon the store of available nitrogen, phosphoric acid and potash within the reach of the plant. With the recognition of this fact the use of materials furnishing these elements naturally increased rapidly, and the use of plaster and of lime decreased, as it was believed that our soils, as a rule, are capable of furnishing the elements contained in these in sufficient quantities. More recently it has been found that while there may be lime enough in the soil to serve as a source of direct supply to the plant, lime nevertheless serves numerous important uses, such as bringing the soil into better tilth, rendering dormant plant-food constituents available and neutralizing injurious acids, or in other words, sweetening soils; and accordingly the use of lime in some form is increasing. Plaster, it is true, may serve some of the purposes served by lime, but it is less effective in all directions than lime, and accordingly the latter is generally preferred. Even this is not yet very generally employed. WM. P. BROOKS.

Mass. Agricultural College.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

The Care of Budded Stock.

J. H., Saranac, Mich.—What is the best way to care for young budded stock? Last Fall I budded several hundred, and they all seemed to take well; I don't think that one in a hundred missed. They seemed to be mostly in good order this Spring when I cut them off, but before long the buds began to drop off, and I think I lost 90 per cent. I am not a nurseryman, but a farmer, budding a few for my own use. It is peach stock I have reference to. I understand some bank them up, while others dig them up and store them in cellars or places of protection.

ANS.—Your buds were probably killed by frost. Generally speaking, an August-set bud will endure as much cold as the twig it was taken from, but the union is not always as perfect as it looks, and dries up just before starting. We would suppose thorough banking the best method of protection. Unless carefully done cellar storage lowers the vitality to a dangerous degree in many stocks.

When to Cut Peach Buds.

C. S. P., Menlo, Ga.—Will you give the proper time to cut peach buds for June budding, and also the best way to keep them dormant until time for use?

ANS.—Scions or "bud-sticks" of the peach for Spring budding should be cut as soon as the leaves are well off the trees, and after securely labeling each bundle they should be placed where they will be cool and moist. In a cold storage room would be the best place, provided they are packed in damp moss, so there will be no possibility of their drying. If this is not available then bury them in the ground on the north side of a building, where there will be the least chance of their starting until the stocks will peel. In Georgia the weather is so warm that it would almost be necessary to find some cold storage room. The butcher shops are likely to be able to furnish a small space.

H. E. V. D.

Varieties of Plums.

N. B,. Watertown, N. Y.—I intend to set a few plum trees and would like advice concerning the kinds to set. My land is sandy loam. The north winds have full sweep, and the mercury sometimes goes down to 30 degrees below zero in Winter.

ANS.—It would be safer to set the hardy kinds of American plums than the European varieties, or even the Japan where the Winters are so severe as in most parts of northern New York. Lombard will sometimes safely endure a temperature of 30 degrees below zero, and of the European type this is one of the most dependable varieties to try. Abundance and Burbank, which are Japan kinds, will also endure that degree of cold when it is not of long duration. Wyant, Ocheeda and Stoddard are perfectly hardy in Iowa and farther north and will doubtless be the same in northern New York. They are of the native Americana type. Sandy loam is a good soil for plums. H. E. V. D.

Small Fruits for Arizona.

B. P., Thatcher, Ariz.—What kind of raspberry, strawberry or blackberry will do well in this climate? We are in a desert country and have to irrigate to raise anything. I have lived here the past six years, and I have not seen the day in that length of time that the sun did not shine. The thermometer ranges all the way from just above zero in Winter to 110 degrees in the Summer, with a cool breeze every warm day, so that the heat is not over oppressive. Apples and pears do well. Peaches are occasionally caught by frost in the late Spring, but are never a total failure. What kind of soil would be best to plant berries in, clay, clay loam, sand, or sandy loam? We have a variety of soils in this valley. The variety of fruit necessary for this climate is one that will take the least water to mature and make full-grown berries.

ANS.—It may be said that Arizona is a very unsuitable place to grow berries of any kind, except where the climate is somewhat cool, and where irrigation is easily and abundantly supplied. Under such conditions I think almost any of the varieties of this fruit might do fairly well. You will find the Bubach, Crescent and Warfield strawberries to be very good, and as likely to stand that climate as any other varieties. The Cuthbert and Loudon raspberries are as good as any of the red varieties, and the Kansas is a very good black kind. Of the blackberries, Snyder and Taylor will perhaps be among the best to try. Almost any kind of soil that is good for apples and other fruits will suit the berries. Both sandy or clay loam are good.

H. E. V. D.

The Lorentz Peach.

W. E. G., Hammonton, N. J.—I have a peach called the Lorentz which has some fruit nearly ripe, but only from one to four each on a few trees two years old. The fruit is of good size, although the trees were not pruned for fruiting. Lemon color with blush and yellow; juicy and fine flavor. A rapid strong grower; last year the trees made seven feet of growth which was cut back this Spring to 18 inches and made about six feet or more this season. The variety is said to have originated in West Virginia and to stand a very low Winter temperature and late Spring frosts. I should like to know more about it, as it ought to be a money maker.

ANS.—The Lorentz peach is considered by those who have tried it to be a very good variety. I think from what you say that you understand its character quite well, and you ought to know about how it will do with you, and whether it is worthy of further planting. Those who originated it have written me years ago that it would endure considerable low temperature without serious injury, but I have never tried it myself. It is a good late yellow peach and is worthy of general trial.

H. E. V. D.

How to Handle a Poor Field.

W. H., Springfield, Mass.—We have a field of poor sandy loam, too poor for any crop except buckwheat, which yields fairly well. What is the best way to bring this land up? We can get black swamp muck handy; stable manure we require for other fields.

ANS.—We believe that a crop of cow peas plowed in next Fall, and followed by rye, will put the field in fair condition for cropping. Read the articles on cow peas which are to appear during the Fall and Winter. The swamp muck may help if it is well rotted in a compost before using. It will be a mistake to use the sour muck right from the swamp.

Fertilizing Value of Corncobs.

L. C. B., Crown Point, Ind.—I have been wondering whether it would pay to manure with corncobs, and would like your opinion as to their value, at the elevator, whole or crushed, as I suppose they would rot quicker if crushed.

ANS.—The following table shows the composition of corncobs as compared with some other substances. The figures give the number of pounds in one ton.

	Nitrogen.	Potash.	Phosphoric acid.
Corncobs	5	5	1
Wheat straw	10	13	5
Oat straw	11	32	5
Oak leaves	20	7	4
Pine needles	16	3	2

Thus it appears that corncobs rank low in fertilizing value. Most people have an idea that the cobs contain large amounts of potash. This is because the ash of the cobs is rich in that substance. In one ton of cobs there are only nine pounds of ash, of which five pounds are potash. As compared with other fertilizing substances a ton of the cobs would be worth less than $1, and as they decay slowly they would add but little available fertility to the farm. The crushed cobs will make fairly good absorbents for the liquid manure. We should mix them with the manure in the barnyard, especially where the yard is wet or muddy. We doubt whether it would pay to haul the crushed cobs to spread directly on the soil. We find it most satisfactory to use the whole cobs for fuel and either scatter the ashes on the land, or use them for the hogs.

Tools on a Maine Farm.

L. B. S., Brunswick, Me.—We are on an abandoned farm, having over 80 acres of clayey loam fields, much of which has hardly been stirred for 20 years. Though land is not yet fitted we expect to make a trial of vetch, Crimson clover, peas, rye and rape. We moved here about August 10, on which date we planted three kinds of peas, same of beans and one kind of corn. The only fertilizer used was leached soot, dirt and ashes from an old open top chimney. I wish to get 60 of the 80 acres into a three or four-year rotation as soon as possible. I have very little barn manure and would appreciate any suggestions. The money crop will probably be potatoes. Would you advise the addition of a grain drill and binder or other tools to this list: Clark sulky disk plow, double action Cutaway harrow, Planet Jr. pivot-wheel cultivator, corn planter, garden seed drill, weeder and hay tools? I have been unable to find a grain drill in use about here, or at implement stores. I would like to know to what extent I can make use of a combined grass seeder, grain and fertilizer drill in distributing lime and ashes, sowing clover, cow and field peas, vetch, rape and turnip seed.

ANS.—A rotation will, of course, depend on the crops you wish to grow. For a five-year rotation the one followed by D. C. Lewis, of New Jersey, and often described in THE R. N.-Y., is a good one. You may not want to grow wheat or corn. If you intend to grow wheat and can afford to keep the money in tools, we should certainly buy a grain drill and a binder. The drill is largely used by farmers for distributing fertilizers. The only objection to its use for ashes and lime is the fact that the fertilizer box is too small, and where a ton or more is to be used to the acre constant refilling is required.

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EVERYBODY'S GARDEN.

A PROSPEROUS YEAR.—Not for many years, in this section at least, have the returns from gardening been as satisfactory as in the past season. Crops in all lines have been nearly or quite up to the average, while the demand has been far in excess of former years, with correspondingly high prices. These features doubtless have by no means been general the country over, for weather conditions in many regions have been anything but favorable, and shortage in some localities has been largely responsible for brisk demand and high prices in other sections. The respite from the usually sharp competition has been highly appreciated by the gardening craft, and flushed with the season's success, they go forward on more extensive operations for next year. But with the increased efforts for more extensive operations, will come the almost ever present contingency of competition, not always turned aside from its natural trend by weather conditions such as have prevailed the present season. As these favorable conditions must be considered only periodical, and not to be continuously looked for, the lessons generally to be learned from the prevailing contingencies of close competition and high price of labor are in economy of production. This can only come through more intelligent efforts in intensive culture, larger yields and higher qualities. Making one acre produce what two acres have heretofore grown must be the constant aim of every producer; and this implies the closest attention to every detail of the work. Watch the small leaks, make the by-products which in gardening are usually the refuse, go just as far as possible in meeting expenses. The pigs and the chickens are the most economical means of converting this into cash and fertilizer.

THE COMPOST HEAP.—This is also a safe deposit for much that otherwise would be lost, and is, I think, a necessary adjunct of every well regulated garden. At the same time some judgment is necessary to determine what ought and what ought not to be consigned to the compost heap. Evidently, the fire is the safest and most economical place for all noxious weeds containing any percentage of seed, all vines or brush likely to harbor and become the breeding place of insect pests. To handle over and doctor them sufficiently effectively to destroy the germinating power of the seed and the insect life, requires more time than the fertilizing value of the rubbish will ever compensate for. However, sufficient other rubbish will usually accumulate around the average farm or garden to make the compost heap very useful and desirable.

WINTER GREENS.—If the spinach bed for Winter greens has not materialized, a substitute equally as good may be provided and grown very easily. Select some of the overgrown beets too large and woody for table use, and set them in sand or soil on the cellar bottom, or other convenient place, where they can receive sufficient heat to grow the tops rapidly. The hotbeds banked up with manure sufficiently to turn the frost will grow a good crop. In this case, manure underneath the beets, and the sash on top will be necessary. Lacking these the rhubarb or house cellar will do, as they will grow equally well in the dark. Turnips may also be grown in the same manner; but growing in the hotbed with exposure to the light will be most generally satisfactory, as when grown in the light they will retain the naturally green color, instead of the lemon color which is the result of growing in the dark.

CHARCOAL FOR POTTING.—Good soil is, of course, necessary for successful results in potting bulbs, but even good soil coming directly in contact with the bulbs is very liable to cause bulb rot. To avoid this, the precaution to line the hole or receptacle for the bulb with sand is usually necessary. Many successful growers, however, prefer charcoal dust to sand, and claim it to be an almost certain preventive of the trouble. The method is certainly worthy a trial, and to be successful the bulb should be entirely covered with the charcoal, allowing no soil to come in direct contact with the surface of the bulb. For those unaccustomed to its use, it is safe to try a part in this way and the remainder in the way with which they are acquainted; and this will prove to a certainty which is the better way. In experimental matters it is always safe to "make haste slowly." The charcoal broken in small pieces (not powdered), and placed in the bottom of the pots is without doubt the best of drainage.

FOOD FOR THE WINDOW PLANTS.—Many ready-for-use plant foods are put up by different companies, and while most if not all of them are genuinely good, they are often hard to procure as they are sold only by dealers in certain lines. The following formula can be obtained by any druggist, and is one of the very best plant foods in use: Sodium nitrate, three-fourths pound; sodium phosphate (dry), one-fourth pound; sodium sulphate, one-half pound. Pulverize and thoroughly mix the ingredients dry. It may be kept for any length of time by covering closely. When required for use, dissolve in the proportions of one rounding tablespoonful to a gallon of hot water, using a half teacupful to a six-inch pot. Apply once in two weeks by pouring the solution on to the soil (not on the plant), varying the amount used according to the size and vigor of the plant and also the size of the pot.

EARLY SWEET PEAS.—For the first sowing of sweet peas, the ground should be prepared this Fall, any time before the ground freezes too hard to work thoroughly. Select a warm sunny spot, sheltered from the north and west winds, arranging if possible to run the rows east and west. Spade the ground deeply, working in a liberal supply of well rotted manure, and top-dress with air-slaked lime and wood ashes, one quart of the former to four quarts of the latter for 12 or 15 feet of double row. This should be thoroughly worked into the soil, and the bed should then be covered with coarse manure or any kind of mulch to prevent freezing too deeply. Remove the mulch early in the Spring and as soon as the surface is sufficiently dry to work nicely, rake the soil until well fined and sow the seed. Sow in shallow drills five or six inches apart and cover not to exceed an inch depth. Sow as soon as the ground will admit of working, even if the frost is not out below, as there will be little if any danger of injury from freezing. In this way the blooms may be had long before they can be obtained from the seed sown for later blooming. Sowing for late and continuous blooming requires far different treatment and will be treated at length later on. J. E. MORSE.

Michigan.

Selling a "Balanced Ration."

Reader, Ohio.—I have a quantity of corn to dispose of. Do you think it probable that I can grind it, mix it with oil meal, bran, shorts (bran for cattle, shorts for hogs), or other feed rich in protein, making a "balanced ration" with a nutritive ration of say 1:6, and sell it at a reasonable profit to eastern stockmen at $22 to $24 per ton?

ANS.—We doubt it. The chances are that the expenses would more than eat up your profits. You would find it difficult to interest buyers in your feed. Several eastern States have laws governing the sale of mixed feeds, and the cost of license and analyses must be considered. You would, no doubt, make a good mixture, but we question your ability to compete with the large firms that use the refuse of oat or hominy mills as the base of their mixtures. If you cut the price too low a large class of buyers would become suspicious at once. We think it would pay you better to sell the whole corn at the present high price, or feed it to hogs.

How to Store Celery.

O. S., Fitchburg, Mass.—I have a quantity of celery and would like to know how to store it away after taking it from the field. Can it be put in a hotbed, and if so, how should it be managed? Can early kinds be planted so close as to bleach themselves? How early can it be put on the market? What is the latest method for keeping cabbage through cold weather? Is there a book on celery?

ANS.—A hotbed is not a good place to store celery. It would be quite certain to rot or start into growth with any covering that could be placed over it. Where celery sheds are not available the plants may be closely packed in a trench dug just as deep as the celery is tall, in any well-drained place. The trench should not be more than a foot wide. The celery plants are packed closely, in an upright position, the roots resting on the earth floor. It may be trenched from November 1 to 15, taking care to avoid hard freezing. A covering of leaves or straw should be put on gradually, until by the last of December it is a foot or more thick. If put on too heavily at first the celery is quite sure to rot or heat. Boards may be placed over the covering to keep out most of the rain, though a little moisture is beneficial. Celery may also be stored in a cool cellar, covering the roots with moist soil, which may be carefully watered when it shows signs of drying out. Boards should be placed on edge at intervals of a foot or so to divide the celery, and insure ventilation. Early celery may be planted about a foot apart each way in very rich soil, and watered well during dry weather. It will grow tall and tender, and sometimes bleaches well. This method is not growing in popular favor. Cabbages are wintered in root houses built partly underground, or stacked upside down in the field on a dry place, and covered with a foot or more of earth, which is protected from hard freezing by a thick coating of straw or long stable manure. A good book on the required topic is Celery for Profit, by Greiner; 20 cents from this office.

During the sixty-two years that Dr. D. Jayne's Expectorant has been used in the treatment of Pulmonary disorders, the percentage of cures has largely increased. Undeniably, IT HEALS THE LUNGS.—*Adv.*

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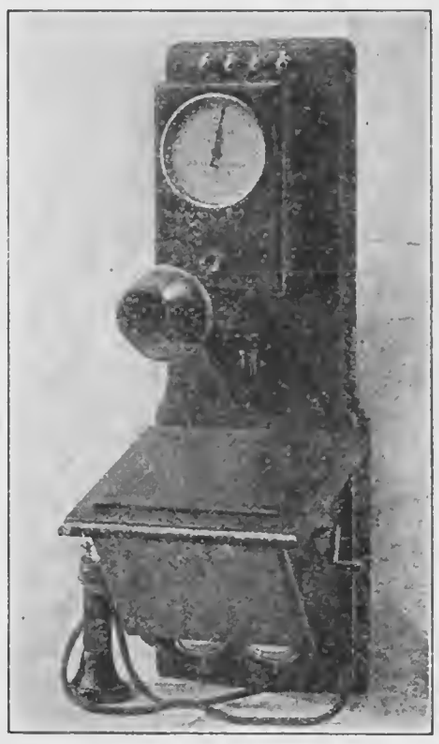

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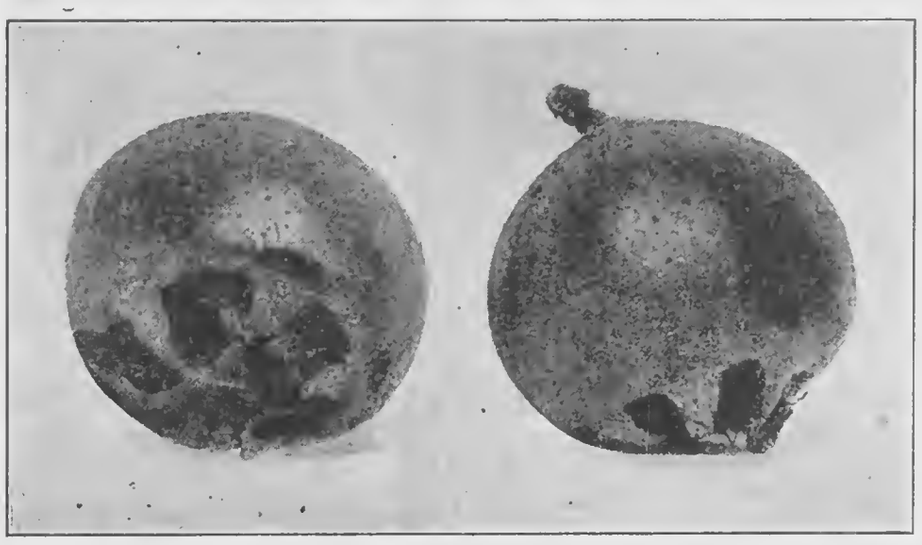
WATCH THIS SPACE NEXT ISSUE.

Ruralisms

NOTES FROM THE RURAL GROUNDS.

GOLDEN ROD AND WILD ASTERS.—One of the many compensations for the past rainy growing season is found in the brilliant display of golden rod and hardy Asters just closing. These beautiful wild flowers, lining the roadsides and covering waste uplands, have never bloomed to greater advantage. We expect a good show of yellow, white and purple from these Autumn bloomers in moist places every year, but the rainy Summer put such vigor in the species growing on hillsides where they are usually dwarfed by drought that the attention of the most casual visitor is arrested by the masses of blooms. The multitude of species contained in Aster and Solidago, the genera including the starworts and golden rods respectively, is so great and the specific distinctions often so obscure that only a careful botanist can distinguish them apart. Some few of the most showy kinds have got into cultivation, and in every case seem improved by the change. Aster Novæ-Angliæ is most commonly planted, and has broken from the purple of its wild state to a very pretty rose color, as well as white. Any of the wild Asters or golden rods may soon come into general cultivation as popular taste for reliable hardy flowering plants increases. About the only golden rod now planted is Solidago Shortii, which grows nearly four feet high in good ground, and bears great panicles of bright yellow flowers in September. The Asters and golden rods may be found on all soils, from heavy muck and clay to barren sandy and gravelly slopes, and the different kinds vary as much in stature and season of bloom. Some thrive in shade and others like full sunlight. A pleasant task awaits the cultivator who cares to study the needs of these plants.

SOME MEDLAR FRUITS.—Few exhibits attracted more attention at the Fall show of the horticultural section of the American Institute, held September 24-26, than a collection of medlars in named varieties, contributed by Cornell University Experiment Station. The European medlar, Mespilus Germanica, is commonly cultivated abroad, but is almost unknown here. It may be likened to an overgrown thorn-apple, and is botanically nearer to the thorns than to other pome fruits. Only one species, native to central Europe, is known, but it has broken into many garden varieties, differing in size, form and adaptability. Fig. 336, this page, shows two favorite kinds, Hollandaise on the left and Royal on the right, in natural size These fruits are now just coming into the English markets, bringing from 38 to 50 cents per half bushel. The medlar is used abroad as a dessert fruit, and is of limited value, taking about the place of persimmons in our southern localities. It is a late ripening fruit, and the flavor does not develop fully until they have been touched by frost and softened by keeping in a cool airy place. The flavor is peculiar, and rather acid, but is enjoyed by many when fully softened and just on the verge of decay. The medlar is very hardy as to tree, and may be planted up to the Canada border without fear of cold, but it requires a fair season of growth to mature the fruits, which are excessively hard and acrid up to the point of softening after being gathered. Medlar trees grow 12 to 15 feet high, and are very twiggy and tough-wooded. The foliage is luxuriant and handsome, having a soft woolly effect, while the large white flowers appear late in May. The trees are grown from seeds which are hard and slow to germinate. Choice varieties are grafted on various thorns, and also on pear and quince stocks as well as budded or grafted on their own seedlings. The fruits are used for preserving as well as eating in their natural state. The culture requires no special care, as they thrive wherever pears or apples do well. The Japanese loquat is often erroneously called a medlar, but it has no affinity to the true species. It is a tropical fruit, and can only be cultivated under glass in the North. The botanical name is Eriobotrya Japonica. Some of the Japan thorn-apples of the genus Photinia have been termed medlars with more propriety than the loquat, as they are more nearly allied to the real Mespilus, but none produces fruit of culinary value. They resemble the Mountain ash to some extent and are not hardy north of Washington. Some are evergreen in character. P. villosa is a deciduous species, which has been grown successfully in Massachusetts.



HOLLANDAISE AND ROYAL VARIETIES OF MEDLAR. FIG. 336.

INTEREST IN CATALPA SPECIOSA appears to be very general, judging from the number of requests for the address of the International Society of Arboriculture received since the publication of the note on this valuable native tree, on page 646. Bulletin No. 1, devoted to Catalpa speciosa, may be had by addressing the secretary of the Society, John P. Brown, Connersville, Ind.

W. V. F.

SOME IMPROVED PETUNIAS.

Among the many new varieties or novelties among the common flowers of our garden, nothing that I have seen possesses so marked features or is more beautiful, than the Star Petunias grown by A. B. Howard, of Belchertown, Mass. Mr. Howard has devoted many years and a great deal of skill to improving the Petunia by hybridization and selection, and has produced a variety of the greatest beauty and fixed characteristics coming true to the two types of "Star" and "Feathered Star" blossoms. The Petunia is the plant for the million, being easily grown from seed, so hardy that it will stand frosts both in the Spring and Fall, and producing flowers continuously from May to October, and when such strains as the above are used the effect even in conspicuous places is very beautiful. The criticism of the Petunia so often made that it is a coarse and gaudy flower, only suitable for distant effect, and that it has a cheap appearance, does not apply to this strain, for the colors are so distinct and beautiful that there are few flowers that will produce such a blending with other ornamental plants, or that are more beautiful individually. Mr. Howard's dwarf Zinnias, upon which he has been at work for many years in the same way, have reached a degree of perfection found in no other strain, and when introduced to the public will add another valuable factor to our ornamental planting that we do not now possess. I am sure all lovers of the truly beautiful will welcome and use both of these new strains largely in the future in their ornamental work. The flower is shown at Fig. 335, page 739.

[Prof.] S. T. MAYNARD.

Amherst, Mass.

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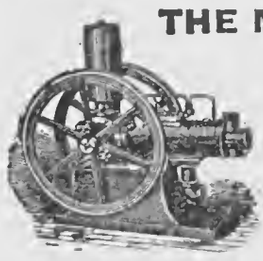

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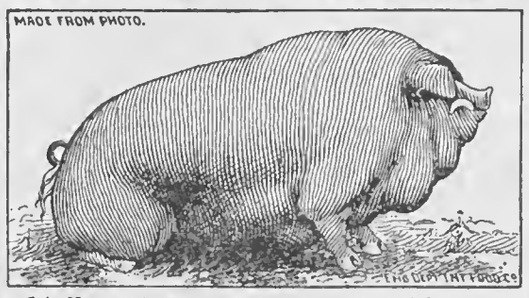

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HOPE FARM NOTES

Do we understand you to say that shredded corn fodder is equal to Timothy hay for horses?

That has been our experience for Winter feeding. The fodder must be bright and sweet. For Summer feeding it would not be so good.

How do you prove your statements?

For two Winters we have not fed any hay, and the horses kept in good weight and spirits.

Has anyone given it a really scientific trial?

Yes, the New Hampshire Experiment Station (Durham) in Bulletin No. 82, gives a record of one of the most practical feeding experiments I have ever noticed. There were five big horses working on the farm. Their average weight was 1,220 pounds. For two years an accurate account was kept of all that these horses ate and drank and five different rations were fed them.

What was the object of the experiment?

They wanted to know what it cost to feed a horse for one year; also whether wheat bran would take the place of oats for a working horse, and whether corn fodder worth $5 per ton will substitute for hay worth $16.

What did they find out?

Here are their figures for two years' feeding of five horses:

10,044 lbs. oats at 36 cts. per bu..	$113.00
25,570 lbs. corn at $16 per ton.....	204.56
1,530 lbs. gluten at $18 per ton.....	13.77
1,440 lbs. linseed oil meal at $28 per ton	20.16
225 lbs. cotton-seed meal at $26 per ton	2.93
10,711 lbs. bran at $17 per ton.....	91.04
36,540 lbs. Timothy hay at $16 per ton	292.32
2,190 lbs. corn stover at $5 per ton.	5.48
Total for two years.....	$743.26
Average cost for each horse per year	74.32

Do you mean to say that it costs nearly $75 to feed a horse one year?

It would cost me more than that if I fed hay all the year around, and fed oats. That is, I could sell the hay and grain required to keep Dan and Frank one year for more than $150! I cut this amount down by feeding more bran and ear corn and shredded fodder.

Where are your figures?

Take the statement as given above. Suppose that for at least five months in each year they had fed fodder instead of hay. This would mean 60 pounds of fodder per day for 302 days, or 18,120 pounds instead of the same weight of hay. At their own figures this would substitute $46.05 worth of fodder for $147.36 worth of hay—a saving of $101.31.

That surely brings it down!

Yes, and if they had fed 8,000 pounds more bran instead of oats they would have saved $21.60 more, and brought the cost of feeding one horse for a year down to $62.03, allowing full prices for all food. That is a saving of over 16 per cent.

How did they test the corn fodder?

They fed two horses 12 pounds of hay per day for 75 days, and two others 12 pounds of the fodder. One horse of each lot had oats and corn, and the others bran and corn. One horse fed on fodder held his weight and the other gained. They did just as well as the horses that had hay.

Was this fodder shredded?

No, it was run through an ordinary cutter, and was not so good for feeding as the shredded stalks.

Well, what about it?

I think these figures prove what I have been saying about shredded fodder. Where hay is cheap it will not mean so much, but in sections like ours where good loose hay is salable at $20 per ton or more this means a good deal. Take a poor man in the city with a big hungry family and a small and shrinking job. Potatoes cost him $4 a barrel, but he suddenly finds that his people are just as well satisfied with yellow turnips at $1.25. That's the way a farmer ought to feel when he finds that the horses will make no audible complaint (at least none that he can understand) when he substitutes $5 stalks for $16 hay! Don't you forget, however, that all this means taking better care of our stalks and getting them under cover early.

They also fed linseed and cotton-seed meals! Why?

Chiefly because they wanted to compare them with oats. The cotton-seed meal was not very satisfactory. The linseed was very useful. I always feed a little of it when the horses are eating stalks.

What are stalks worth in your country?

They have no regular value. Last Winter a neighbor, an old man, sold a horse which was thrown back on his hands. He had no feed and I let him have long stalks which, at what he said was "the going price," were worth $6. They kept the horse alive for nearly four months! She had a very small amount of ear corn in addition. She kept alive on this cheap ration, but that was all. It never pays to let a horse run down in the Winter. He won't get his full strength back until too late for the Spring plowing.

FARM NOTES.—On October 25 the Cannas were still blooming and the sweet corn at the top of the hill untouched by frost. The killing frost came last year on October 18. . . . We are still sowing rye, and shall continue to do so up to November 10 at any rate. This late-sown rye makes but a poor start in the Fall, but it jumps lively in the Spring and gives a good crop of fodder or green manure. The Orchard grass in the old orchard is now a beautiful sight. How the stuff does grow! I shall turn the stock in for a few hours each day to nibble down this thick Fall growth. I would not do it, with any other grass! . . . The Cow-horn turnips have made a good stand. On October 19 a fair specimen plant measured two feet nine inches from tip of root to top of leaf. The root itself was 13 inches long—11 inches being below ground. Right along side, a patch of rape seeded on the same day showed plenty of plants three feet from tip to tip, with roots two inches longer than the Cow-horn! The roots of the rape are much smaller, however.

Is not the rape a better manurial plant then?

No, I do not think so. It requires a much richer soil than the Cow-horn. The latter seems able to grow and thrive under conditions which would give the rape the hollow horn. In rich open soil the rape goes down deep, but it will balk and turn at a hard subsoil, while the Cow-horn will dig right through it. It has always seemed to me a mistake to use for manurial purposes a crop that needs to be fed, or which sulks if the soil is not rich. That is why I like the cow pea. Where soil will produce a fair crop of corn I would not grow a crop to be plowed under; at least I would not give the whole season to it. For green manuring I want a crop that will improve poor land—not one that requires good land to make it grow. I like the combination of Cow-horn turnips and Crimson clover very much for Fall growing.

MANURE MATTERS.—You have been writing lately about "chemicals and clover" for fields at a distance from the barn.

Yes, I fully believe in that system. It is quite possible.

But good farmers say that all hay and straw should be used on the farm, and not sent away.

I know they do, and equally good farmers say and know that they can often sell their hay and grain for enough to buy twice the fertility they sent away. It is sometimes, not always, good policy to do this.

Name a case.

I have a quantity of rye straw which I expect to sell at $20 per ton. According to the chemists I sell 11 pounds of nitrogen, 22 pounds of potash and six pounds of phosphoric acid. I can buy this amount of fertility in the form of high-grade fertilizer for less than $4. I can go into the woods and rake up leaves for bedding which are worth more for fertilizing than the rye straw. Under these circumstances would it not be foolish for me to use the straw for bedding my horses?

But this would not be fair of a crop like hay that could be fed.

Why not? Take Timothy hay. A ton contains 27 pounds of nitrogen, 40 of potash and 14 of phosphoric acid. True, I send away more than when I sell the straw, but I can buy the fertility for less than $8 and feed my stock on corn fodder, which is not salable in our market. Thus it may be better policy for Hope Farm to feed a horse in the city than it would to feed a cow at home! I would not for a moment belittle the plan of feeding all that we profitably can at home. There is no cast-iron rule about it, however, and sometimes it will pay to sell rather than to feed. It requires wise judgment to tell when this is true.

Then you believe in stable manure?

Yes, indeed. While other forms of plant food may be just as available there is no form of humus or vegetable matter quite equal to manure.

Would not a crop of clover plowed directly into the ground be equal to the manure made by feeding the same clover to stock?

The manure would have one advantage.

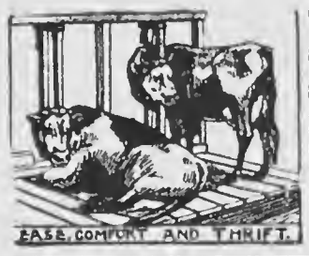
What is it?

The chief advantage that I will admit is that the manure contains more of the bacteria that do so much work in the soil toward breaking up and setting plant food free. Personally, I do not consider this advantage great enough to warrant hauling manure for any very long distance. It is my own practice, therefore, to crowd all my manure on the 20 acres nearest to the barn and use chemicals and manurial crops on the rest of the farm. If the farm were level I should scatter the manure over a larger area, but as it is I could not do so without hauling up a very steep hill.

HOME COMFORT.—The nights are long and the air chills after the sun goes down. We realized that the other night as we started on a long ride home from town. We had a late start, as there had been various delays, but when Charlie finally shook out the lines Dan and Major started off to cover the 12 miles of hilly road that lay before Hope Farm. Aunt Emma and Grandmother pulled their cloaks around them. The Madame was to come later on the train.

"That's the green corn!" said Charlie as old Major began to sweat even in the chilly air. The sun went down and the shadows grew darker, and still the horses trotted on mile after mile. We stopped talking, as many do when twilight comes on with its load of old-time thoughts. At last we left the main road and climbed the hill that looks down on our valley. There it was—far across on the other side—the light of Hope Farm. There is little sentiment about Dan or Major, but they know the remedy for an empty stomach when they see it in the distance, and they picked up their feet for a final sprint. With a whirl we turned the corner into our own road. There was Shep, watching for us in front of the house. The Cutting was bustling about inside getting supper ready, and four little faces were glued against the window. The Graft brought a chair to help Grandmother step out of the surrey. The Bud's little face fell because Mother did not come, but that did not last. Philip and Hugh had the chores done, and they led the tired horses off to the barn. All the barn folks were made snug and then we went in to sample what the Cutting had ready for us. With bread and butter, codfish and cream, a slice of meat, baked apples and a big bread pudding piping hot from the oven, we soon filled out the kinks that had been jolted into us on the long ride. Surely the farm home is a good place to get into on a cold night. We see the best side of it after driving in the dark past other homes. H. W. C.

For the land's sake, use Bowker's Fertilizers. They enrich the earth.—*Adv.*



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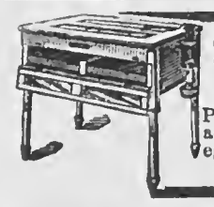

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Perfect in construction and action. Hatches every fertile egg. Write for catalogue to-day.
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by feeding green cut bone. The Humphrey Green Bone and Vegetable Cutter is guaranteed to cut more bone in less time with less labor than any other cutter made. Send for free book containing blanks for one year's egg record.
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results if hens are fed raw cut bone—the greatest of egg producers.
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cuts all bones, including meat and gristle easier and faster than any other or don't keep it. Open hopper. Self-governing feed. Wastes nothing. TEN DAYS TRIAL. No money in advance. Cat'lg. free.
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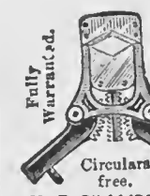


A QUICK, SHARP CUT
hurts much less than a bruise, crush or tear.
DEHORNING Done with the KEYSTONE KNIFE
is the safest. Quick, sharp cut. Cuts from four sides at once. Cannot crush bruise or tear. Most humane method of dehorning known. Took highest award World's Fair. Orders with cash filled from Chicago if desired.
M. T. PHILLIPS, Pomeroy, Pa., (Successor to A. C. BROSIUS)

Thirty Thousand Pennies for Your Thoughts!
$300.00 IN CASH PRIZES
will be given to farmers and their wives, sons and daughters for writing acceptable **Advertisements for DIETZ LANTERNS,** as follows:

1st Prize, for best advertisement in prose	$ 60 00
2d " " next best advertisement in prose	40.00
3d " " best advertisement in poetry	25 00
4d " " third best advertisement in prose	20 00
Next 4 Prizes, prose or poetry, $10 each	40 00
" 10 " " " " 5 "	50.00
" 20 " " " " 2 "	40.00
" 25 " " " " 1 "	25.00
Total 63 Cash Prizes	$300.00

CONDITIONS:
All advertisements entered in this contest must be original with the sender. The writer or some member of the writer's family must be an actual user of a Dietz lantern. This is necessary in order to know the Dietz points of superiority over other makes The writer may illustrate or suggest the idea for an illustration for the advertisement, or may omit illustrations altogether, at his option. There is no restriction as to the number of advertisements each may enter for the prizes, but **each one** should have attached the writer's name and address plainly written. All advertisements submitted are to become our property **There is no charge of any kind for entering this contest.** This contest closes December 15, 1901. The editors of three prominent farm papers will act as judges to decide the merits of advertisements submitted Announcement of the prize winners will appear in this paper as soon as possible after the awards are made.

YOUR THOUGHT MAY BE VALUABLE.
You stand the same chance as anyone else to win a prize -If you try. "Fair play and no favor" is the motto of this competition. Samples of previous advertisements, illustrated catalogue of Dietz lanterns and any further particulars desired will be sent all who write that they intend to complete for the prizes. Mention this paper and address all communications and entries **Advertisement Contest Dept.,**
R. E. DIETZ COMPANY, 87 Laight St., New York City.
This announcement will not appear again. Put this aside for safe keeping and reference.

The Rural New-Yorker

THE BUSINESS FARMER'S PAPER.

A National Weekly Journal for Country and Suburban Homes.

Established 1850.

HERBERT W. COLLINGWOOD, Editor.
DR. WALTER VAN FLEET, H. E. VAN DEMAN, MRS. E. T. ROYLE, } Associates.
JOHN J. DILLON, Business Manager.

SUBSCRIPTION: ONE DOLLAR A YEAR.

To foreign countries in the Universal Postal Union, $2.04, equal to 8s. 6d., or 8½ marks, or 10½ francs.

"A SQUARE DEAL."

We believe that every advertisement in this paper is backed by a responsible person. But to make doubly sure we will make good any loss to paid subscribers sustained by trusting any deliberate swindler advertising in our columns, and any such swindler will be publicly exposed. We protect subscribers against rogues, but we do not guarantee to adjust trifling differences between subscribers and honest responsible advertisers. Neither will we be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent us within one month of the time of the transaction, and you must have mentioned THE RURAL NEW-YORKER when writing the advertiser.

Name and address of sender, and what the remittance is for, should appear in every letter.
Remittances may be made in money order, express order, personal check or bank draft.

THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, NOVEMBER 2, 1901.

10 Weeks for 10 Cents.

WE would ask every reader of this issue to turn to page 749, and see our announcement for trial subscriptions during November and December. To introduce it to new homes we will send the paper 10 weeks for 10 cents. See the inducements for getting up clubs. If you do not feel that you can get up a large club, you at least have one neighbor who would be glad to send an order on this basis. Tell him about it.

*

MANY farmers are in the habit of husking their corn in the field. This saves considerable heavy handling, and is not bad business in fair weather. But to sit in the field for hours at a time, when the ground is wet and the air cold and raw, is dangerous to health, and the husker is likely to get a cold which will stick to him all Winter. It is a good plan to have a few loads under cover to work at during cold mornings and damp days. There is enough work on the farm that is hard and disagreeable, without adding unnecessary burdens to work that may be done more comfortably.

*

READ and study Prof. Plumb's article on stock foods. Oats and corn are high this year, and it is surprising what a difference this makes with those of us who must buy more or less grain. These grains have long been the standard for stock food. Many farmers still believe that there is no good substitute for them. They also believe that a horse must be fed on high-priced hay, when it is a fact that bright and sweet cornstalks with bran and corn will keep a working horse in thrifty condition through the Winter. In a season like this one food economies are necessary for most of us, and no wise economy is possible without careful study of the principles of feeding.

*

OUR northern readers begin to give their experience with the cow pea this week. We believe they will clearly demonstrate the value of this crop for northern soils. We have repeatedly advised against cutting the vines for hay. We desired to prove the manurial value of the crop. We are sorry therefore that so many farmers have cut and cured the vines for hay. It hurts the feelings of a thrifty farmer to see anything with green leaves on it plowed into the ground. Much of this cow-pea hay will not make satisfactory fodder. The stubble and the roots alone will not produce nearly as large a crop as the whole plant would. Then the cow pea will be slated as "no good," which will be entirely unfair!

*

WHAT about J. W. Wadsworth and the agricultural committee of the House of Representatives? The feeling is growing among American farmers that he is not the man to represent them as the head of this important committee. We have nothing against his personal character, and he is honored and respected by those who know him best. At the same time he has, for reasons best known to himself, placed himself on record as opposed to the principles embodied in the Grout anti-oleo bill. The sentiment for this bill is strong, and constantly growing among farmers. As its objects and aims are made clearer the demand for its passage becomes stronger. There can be no doubt but that farmers are now more interested in its passage than they were one year ago. This being so, it seems evident that Mr. Wadsworth would be sadly out of place where once before he prevented the passage of this bill. He will hardly be prepared to maintain that he is right and that 5,000,000 farmers are wrong! The most graceful thing he can do would be to step aside and refuse the chairmanship. We hope he will do so, for it is not the most edifying job in the world to be compelled to drive tacks into the chair of an obstinate man. The farmers have the tacks and the hammers ready, however.

*

WE have referred, from time to time, to the swindlers who rob farmers, while professing to be purchasers of farm lands. Their plans vary, but the following is a common method: An Iowa farmer was recently approached by a man who offered a handsome price for his farm. He accepted, and the stranger, after paying down $200 to bind the bargain, departed for a neighboring city, where he was to secure the services of a notary, and return next day. The same evening another stranger appeared, who also fell in love with the place, and became so enthusiastic that he offered the farmer $8 an acre more than the first man. The farmer decided to call off the deal, but when the first comer returned he insisted on holding to the bargain, unless the owner would return his $200 deposit and $1,500 additional. This was done; the stranger departed, and the second would-be buyer never returned. Of course the two men were in collusion, and the farmer was their victim. The advice to avoid any important business dealings with strangers is almost old enough to be worn out, but there is plenty of need for it yet. Such an important matter as the sale of property is surely too weighty to be undertaken without assurance as to the good faith of all parties to the contract.

*

AMERICAN APPLE CONSUMERS' LEAGUE.

ITS OBJECT.

To make apple eating fashionable. Business in other lines of production has been doubled by convincing the public that it is *the proper thing* to wear or use a certain article. There are 40,000,000 Americans living in town and city. Educate them so that they will eat two apples each every day and you do more for practical agriculture than can be done in any other way.

LEND US YOUR TONGUE!

The League Pledge.

I agree to call for apple in some form whenever I eat a meal at any public table. Should apple not be named on the bill of fare I will ask *why not*, and endeavor to secure the serving of good eating apples. I will also encourage apple eating in my own family.

.....

It Costs You Nothing but a Little Tongue Service.

The League has already induced a number of first-class hotels and restaurants to make a feature of good apples.

*

SOME remarkable stories about apples and land come from Maine. The Maine fruit is fine in quality, and buyers are after it at from $2.25 to $3.25 per barrel. Last year one farmer tried to sell his farm for $500. This year he has 250 barrels of good fruit for sale! Another man bought half interest in a farm for $1,500, and this year has 600 barrels of the finest apples. In another case a man bought a farm several years ago for $1,000. Some of his friends thought he had made a fatal mistake, but this year he has 300 barrels of fine fruit for sale. These things show what can be done on the cheap land which is for sale in New England. Not all at once—for it will require time, money, work and skill to produce first-class fruit. We feel sure, however, that the market for the finer grades of apples is sure to be greatly developed during the next few years. People who buy this New England fruit will certainly remember the Maine apples, and demand more of them.

*

THE cost of feeding a farm horse is discussed this week under "Hope Farm Notes." Some farmers who have never stopped to weigh and figure will say that $75 per year is altogether too high. They should send their horses to board at a city stable for a time and find out. City livery stables make a uniform charge of $1 a day for boarding driving horses. The wishes of the owner and needs of the horse are observed in regard to feeding and care. Stable men say that some horses are so peculiar about eating, and require so much fussing, that there is but little money in it at this price, but on the average $1 a day gives a fair profit. The charge for work horses varies from $16 to $20 per month, or a little more, depending upon the quantity of food they consume. Truck horses get little but hay and oats, and they work hard enough to have a good appetite. Of course they neither require nor get the care which is given to the driving horse, which is studied, and has his whims in regard to feeding gratified. The charge for shoeing work horses used on the pavements runs from $2.50 to $4 per month. Let a farmer undertake to feed his horse or his family on city prices for a while, and he will be far better able to appreciate some of the blessings of the farm.

*

IT has been said that THE R. N.-Y. is a local paper. Here is a little incident that throws light on the subject. A German came to this country and went to work in south Jersey. He wanted information, but did not know where to get it. A friend who lives in Wisconsin—a subscriber to THE R. N.-Y.—finally wrote to the man in New Jersey advising him to consult our paper. So we received a letter written in German, which was answered. The fact is that THE R. N.-Y. is local only in name. We have readers in Eastport, Me.; Provincetown, Mass.; Wilmington, N. C.; Orlando, Fla.; New Orleans, La.; San Antonio, Tex.; the City of Mexico; Santa Ana, Cal.; San Francisco; Seattle, Wash; Duluth, Minn.; Mackinaw, Mich.; Buffalo, N. Y.; St. Albans, Vt. Draw a line through these points and you will see that very little of the country is left outside, and the enclosure is well dotted with readers. The fact is that THE R. N.-Y. has a wider circulation than any other legitimate agricultural paper, and is truly a National publication.

*

EVERY good citizen is interested in the great problem of keeping the farm home happy and prosperous. In the cities we are rearing up a generation of the lawless, indolent and vicious. The boys and girls of the farm are more favored, because they have something to do. If only we can make their home life on the farm still more attractive, and hold them there, they will have less desire for the attractions of the city. We do not pretend to say that all the country boys and girls who come to the city fail and lose character. Quite the reverse is true, for without fresh supplies of country blood and brain the cities would fail. But where one giant comes and makes a place for himself there are five untrained and unfitted for city life who fail to make a place and simply join the ranks of the disappointed or hopeless. After a few years in the city they are often unfitted for true work in the country. Yes, the hopeful and happy farm home is now as it ever has been the best cradle for American citizenship. In every country town you will find great-hearted women who, silently and without recognition, are doing more for their country than any politician that ever lived in the town.

*

BREVITIES.

Apple! Apple! Call for apple!
Everywhere you go.
Closely watch the bill of fare,
And if apple is not there,
Then proceed at once to pare,
Cook and landlord down with care.
They will come with smirking manner,
Offering the big banana,
Or the orange—be not shaken
In the job you've undertaken;
Call for pie or raw or bake,
Sauce—no matter what you take
If you only call for apple,
Make your tongue proceed to grapple
With this plan of edueation
For an apple-eating nation.

BEFORE trying to stand on your dignity make sure that it isn't eraeked.

THEORY is as easy as eating minee pie—praetiee harder than the digestion of it.

WE want to enlist your tongue for service in the Amerlean Apple Consumers' League. Talk applies.

A GOOD deal of ink has been shed in giving advice to the girl who asked for hints about earning money. It's a good eause.

TWO great tests of friendship—to be asked to lend money without seeurity, or to give a candid opinion of another's poetry!

OIL is largely used for fuel in the engines of southwestern railroads. Northern roads have not yet attempted this oil burning.

HOW does the politieian temper his steal? He cries "save the party" to the shorn lamb—and the lamb saves it—so that he ean be shorn again.

ACCORDING to our eorrespondents on page 745, the game laws and their stringent enforcement are really a benefit to the farmers, in inereasing the demand for squabs.

REGARDING the reeent article on Duteh Belted eattle—page 690—of course, we are glad to do justiee to all. We would not willingly harm any worthy objeet or enterprise.

Is the "true steel" born in a man, or is it the fire and the hammering of life's work and trials that does the tempering? The more you hammer some people the more they flatten out.

WE are told that in California eleetrle power is transmitted from a mountain stream to a city over a wire 190 miles long. This transmission of eheap power largely offsets the lack of eoal.

IT has been reported that in Nebraska grasshoppers are eaught by the millions in "hopper-dozers," dried and pressed into eakes for poultry feeding. There is evidently some truth in the statement.

Events of the Week

DOMESTIC.—Eight railroad laborers were buried under gravel near Tioga, Wis., October 16, and four of them fatally injured. . . . . At Hamilton, O., Sylva Bishop and his wife, Leota Bishop, were indicted October 16 for causing the death of their eight-year-old daughter. They are believers in faith cure, and when the child was shockingly burned by a gasoline explosion, they refused to permit any medical attendance, treating her with prayer alone. . . . . Prominent men in the shoe, harness, leather and belting trades have united to form the Free Hide Association, in an effort to have the present duty on hides removed at the coming session of Congress. . . . . By the fall of 50 tons of rock from the roof of the rapid transit tunnel in upper New York City, October 18, five men were killed and one seriously hurt. . . . . A fire in a New York carpet warehouse October 19 caused, within 30 minutes, damage amounting to $250,000. . . . . At Chicago, October 21, thieves mined their way into the temporary post office building by means of a tunnel, and stole stamps amounting to nearly $75,000.

ADMINISTRATION.—Estimates of appropriations for the navy to be presented to Congress in December for the year beginning July 1, 1902, have been prepared. The total of these estimates is $98,910,985, which is $21,631,823 in excess of the total appropriated for the current fiscal year. The increase mainly arises from recommendations in connection with public works, the extension of yards and docks and steam engineering plants. For increase of the navy $24,000,000 is recommended, the sum appropriated last year being $25,400,000. . . . . Intervention by the United States in the Venezuela asphalt dispute may be brought about by a decision against the New York and Bermudez Company rendered by the Court of Second Instance in Cumana. Evidence to show that the decision was obtained by fraud has been presented to the State Department. If any attempt be made to put the decision into effect, and to give the Warner-Quinlan syndicate temporary possession of the Felicidad concession, the Administration will probably consider it advisable to interfere.

HAWAII.—There are now 909 lepers and 164 clean persons at the Molokai leper settlement in Hawaii, according to a report from Chief Quarantine Officer Cofer, in charge of the Marine Hospital Service in Hawaii. All these are housed, fed, clothed and governed at a cost of $80,000 a year. The report praises the hopeful and cheerful way in which the lepers resign themselves to their fate. The three oldest patients at the settlement arrived in 1874, 1875 and 1879, respectively. The number of commitments to the settlements each year during the last decade, ranging from 132 in 1891 to 85 in 1900, show a gradual decrease, despite the fact that the hunt for lepers throughout the islands never before has been so vigorous.

PHILIPPINES.—Owing to the vigilance of Lieut. Thomas M. Bains, Jr., of the Ninth United States Infantry, another slaughter of American troops by insurgents has been averted. It seems that Lieut. Bains discovered a prisoner reëntering a cell at Carbiga, Island of Samar, where several were confined, through a hole that had been let in the wall. An investigation showed a plan to fill the jail with bolomen, and to call the guard, which would be necessary to get the door open, and then to attack the garrison. It also developed that the instigators were a priest and the presidente, both of whom have been arrested, together with several other prominent persons. Other attempts have been discovered, but fortunately frustrated, at Pambujan and other points in Samar. Several persons have been arrested in connection with these. . . . . The War Department is at work on plans to send more troops to the Philippines. Several detachments must be sent home soon, and, in view of the affair at Samar, it will be necessary to keep up the strength of the army. Several of the smaller garrisons in Luzon are likely to be consolidated. . . . . October 22, Admiral Rodgers telegraphed the Navy Department that the Island of Samar was in active insurrection, and that the naval forces were all engaged in coöperation with the army.

GENERAL FOREIGN NEWS.—A very serious epidemic of typhoid fever exists at Gelsenkirchen, Germany. . . . . The efforts of the missionary agents, as reported in a cablegram from Constantinople, to get in touch with the outlaws who abducted Miss Stone, have failed. Russia has promised to assist Ambassador Tower in the search. Rev. Dr. Talmage, who will be one of the fifty to make up the remaining $50,000 of the ransom fund, believes it should be raised quickly in order to save the life of the kidnapped woman. . . . . The plague is causing fearful ravages at Foochow, China.

FARM AND GARDEN.—A swindler who represented himself as a member of a reputable commission house recently secured thousands of dollars' worth of fruit and produce from Michigan farmers. He carried stencils of the firm he professed to belong to, shipped the produce to Chicago, sold it all for cash, and then disappeared.

The annual meeting of the Maine State Pomological Society will be held at Dexter, November 6-7. The exercises will consist of one of the largest and best exhibitions of fruits and flowers ever shown in Maine, and a profusion of papers, addresses and discussions upon practical fruit and flower topics. Fruit experts will be present from Maine and elsewhere to assist. Maine fruit was never better than this year, and there is a quick market at good prices. The president of the Society is Z. A. Gilbert, North Greene; secretary, D. H. Knowlton, Farmington, Me.

The total consumption of sugar in the United States during 1900 was 2,219,847 tons. The average annual increase during the past 19 years is 6.34 per cent, which would bring the consumption during the present year up to 2,360,585 tons. Of this Louisiana produces 350,000 tons; 150,000 tons are produced from the beet, Hawaii (free) produces 350,000, and Porto Rico (free) produces 150,000 tons. The excess over domestic production is subject to a duty averaging $36 a ton, amounting in all to $84,981.60.

The twelfth annual convention of the Missouri State Dairy Association will be held at Palmyra, Mo., November 7-9. A strong programme of papers and addresses has been prepared. Secretary, Levi Chubbuck, Chemical Building, St. Louis, Mo.

The annual meeting of the Pennsylvania Live Stock Breeders' Association will be held at the Monongahela House, Pittsburg, December 18-19. An excellent programme is being prepared, including addresses by leading breeders and scientists. Secretary, E. S. Bayard, East End, Pittsburg, Pa.

Prof. F. S. Earle, until lately at the Alabama State College and Agricultural Experiment Station, has joined the staff of the New York Botanical Garden as mycologist, and will devote particular attention to the question of plant diseases.

The annual meeting of the Missouri State Horticultural Society will be held at St. Joseph, Mo., December 3-5.

The Wisconsin Cheesemakers' Association will hold its tenth annual convention at Milwaukee, January 8-10, 1902.

The Iowa Dairymen's Association will meet at Dubuque, November 12-14.

The evening of November 13 has been set aside for a big rally in favor of the Grout bill. Hon. W. W. Grout, of Vermont, father of the bill, Hon. James A. Tawney, of Minnesota, one of its most aggressive advocates in the House, and Hon. Jas. H. Davidson, who was the first to introduce a 10-cent tax measure in Congress, have signified their intention of being present, and in addition Congressmen Hangen, of Iowa, and Dahle, of Wisconsin, members of the committee who so valiantly fought for the measure when it needed friends most, will also probably be present. In addition, the dairy leaders from all over the West, including Governor Hoard and other officers of the National Dairy Union, will be on hand to take part. The object of this meeting is to give the dairymen, creamerymen and buttermakers an opportunity to hear from the Members of Congress themselves something of the necessities of the Grout bill campaign, as well as to have made clear to them conditions and prospects in the coming Congress.

The officers of the New York State Breeders' Association met at Buffalo, October 9, and selected December 17, 18 and 19 as the dates of the annual meeting, December 17 to be devoted entirely to meetings of the various National and State breeders' associations, and the other two days to a combination meeting of all the associations and breeders of live stock in this State. The sheep, cattle, poultry and dairy interests will be discussed by specialists at each session, and the "question box" will be one of the features. The Western New York Jersey Cattle Club, the Western New York Shropshire and the Standard American Merino Sheep Breeders' Associations will meet at the New Osborn House, Rochester, December 17, in connection with the State Breeders' meeting.

The Dairymen's Association of Southern California has decided to hold quarterly meetings during the year in different sections of the territory they include.

PROSPECTS FOR N. Y. GRAPE GROWERS.

It is reported in some of the papers that in consequence of the great competition from the West many grape growers in the grape districts of New York are rooting out their vineyards and planting apple and peach orchards. Will you tell us how much truth there is in this statement, as it refers to your section?

The number of vineyards that have been discontinued, or have been rooted out and planted to other fruit, is very small in this section. I do not think it would amount to eight per cent of the whole. G. L. S.
Erie, Pa.

The reported rooting out of vineyards is a fake as far as this section is concerned; in fact, the acreage has increased this last year. This district takes in 12,000 acres or more. C. C. P.
Pulteney, N. Y.

As to the vineyards being rooted out and planted to apple and pear orchards, I do not think it is the case in this section. There are some vineyards on the west side of Seneca Lake being taken out on account of the rot; but otherwise vineyardists think that their vineyards pay as well as other kinds of fruit. H. M. S.
Watkins, N. Y.

The report is not true in reference to this grape section. There is an occasional vineyard uprooted which has not paid the owner, either because of a wrong location or through gross neglect, but there are two acres planted out to every one destroyed. While there is not the big profit in grapes there was 15 or more years ago, there is no reason for discouragement. The crop is short this year, about 60 per cent of a full crop, but the demand is strong and the price good. There are a good many vineyards here that will give gross returns of $100 per acre, but, of course, that is far above the average. There is an occasional peach orchard planted, but almost no apples. E. C. G.
Penn Yan, N. Y.

There is no truth in the report that grape growers are pulling up their grapes and setting fruit trees in this part of the grape belt. I went to Westfield and asked a grower there. He says that a few grapes have been pulled up and others planted in the same place, and a few fruit trees have been set out. He has lived at Westfield working in the vineyards for the last 12 years. I know that between Westfield and Mayville, a distance of some six miles, there have been more grapes set than have been pulled out, and I know of more apple trees being pulled out than there have been grapevines. There is some alarm about the leaf hopper, a small fly that is sucking the juice out of the leaves and making them look rusty, but what they will amount to I don't know. C. D. C.
Mayville, N. Y.

I have noticed such reports. There is no truth in them as regards the Chautauqua—Erie belt. The lowest prices reached were in 1896. Bulk shipment began that year, and has increased to immense proportions. Price has improved until this year growers get more net returns than the land would produce in any use it might be put, unless it may be some special crops. A few acres have been torn out, but there was reason for it; either they were unprofitable varieties or on land not suitable. I am sure it is safe to say that the new plantings have kept the acreage fully up to what it was five years ago. Present prices paid to growers, f. o. b. loading stations, are nine to 10 cents per eight-pound basket, and $15 to $17 per ton bulk, buyer furnishing or paying for bulk packages. Offerings of bulk much below demand. Above for Concord, Niagara 50 per cent higher. The reason for the grape growers' prosperity is not very encouraging to the cause of temperance. If it were not for the thousands of tons of bulk used for wine, grapes could not be sold for half the cost of production. A. I. L.
North East, Pa.

THE MARKET OUTLOOK FOR SQUABS.

Dealers Give Encouraging Reports.

White squabs are selling at $2.50 to $2.75 per dozen; dark, $1.25 to $1.50. The trouble is that the farmers do not raise squabs good enough for the trade; that is, they place them on the market before they are fat enough. They are too much in a hurry to get them on sale.
New York. JOHNSON & REED.

We notice yearly an increased demand and outlet for squabs, particularly in the past year, owing to the scarcity of game birds in the various markets. Fancy white squabs are selling on this market at $3; second quality, $2 to $2.25 per dozen. We should think the breeding of squabs would certainly prove profitable, particularly as owing to the enforcement of the game laws throughout the country they will be wanted to replace quail, snipe and other small birds in the markets.
Chicago. LEPMAN & HEGGIE.

The outlook on squabs is very favorable. The demand is considerably better for them than it has been, and while the supply has been up to the average, they have found a much readier sale, and prices are considerably better also than what they were this time a year ago. The reason for this improvement in the demand and also in the prices, in our opinion, may be attributed to the stringent game laws that we are now having, and in consequence of which more squabs are being used than heretofore. Under the circumstances, we think that it would be safe to encourage farmers to breed more of them, and also to continue improving the breed, as we think is being done, by the number of extra large squabs that we notice that are finding their way to the market.
New York. HOEHN & MAYER.

There is a steady demand during the entire year for squabs. They are used more particularly during the closed season on other game, viz., quail, partridge, grouse and woodcock, being a good substitute. The price is governed by the supply, which is generally the heaviest during the Summer months, at which time the dealers buy the surplus stock and freeze them for later use; this keeps the market value at a fair minimum figure. There are two species which seem to be unavoidable in breeding, "white" and "dark," the first and better species being the large "white" and the second or inferior large "dark," besides which a poor grade of white and dark squabs, either too young and small, or too old and thin in flesh. Having been out of the nest and old enough to fly around in search of food for themselves they become thin in flesh, and pass the point of their best marketable value. The extreme range in our wholesale markets is as follows: May to September, large white, $2.75 per dozen; large dark, $1.25 to $1.75; mixed and small, $1 to $1.25. September to May, large white, $3 to $4 per dozen; large dark, $2 to $3; mixed and small, $1.50 to $2. It is considered unprofitable to farmers to have pigeons on their premises if allowed the same freedom as poultry, for the reason that they are particularly destructive, but if confined to a certain area, properly caged and regularly fed, the business of raising squabs for market is considered a profitable one.
New York. HANCE BROS.

THE SEASON AT THE SOUTH.

The past season has not been as satisfactory as it looked at the time I wrote you last. This section was visited by a very severe dry spell which commenced on April 19, and continued until May 19. This cut the yield of the cabbage crop 50 per cent, and the potato crop 60 per cent. Of course, the quality of both was poor and not up to the standard, and while yield was good the stock could have been of much better quality. The acreage this season will be about the same as last. Farmers are planting cabbage seed at present. Some cabbage is up and growing nicely. Farmers have made good corn and hay crops. They have all the corn and hay they need; in fact, there will be some grain and hay for sale. The corn and hay is raised on the land that the Spring crop of cabbage and potatoes is grown on. Corn will average about 25 bushels per acre; hay about two tons per acre. We use the native Crab grass for hay, some farmers sowing about one-half bushel of cow peas per acre in the land left out for hay. This mixture makes very fine forage, and our hay from Crab grass is also fine. Horses and mules prefer it to eastern or western hay. The cabbage crop will be set out in December, the potatoes will be planted in February. Around the vicinity of Charleston there is a fine large crop of strawberries set out; they look fine. We have had very dry weather for the past 30 days; consequently the Fall snap bean crop, which is shipped east in the latter part of November, is partly ruined. The Fall potato crop, which is grown by the farmers for seed for Spring, is very badly injured by the extreme dry weather; therefore, our farmers will be in the market for a large lot of Virginia second crop and eastern seed potatoes, to plant the Spring potatoes in February. READER.
Charleston, S. C.

Potatoes here are in most cases a fair to very good crop. They have sold 1,000 bushels at 50 cents, and have 400 bushels more, on my father's place, from about eight acres. Cabbage is small and blighted in many cases; worth $7 per ton at the car. There will not be a barrel of apples sent out of here this season, and many have none for their own use; $1 a bushel for wormy ones. The price of potatoes is higher, which is strange—in the middle of the harvest. Considerable rot is found.
Tompkins Co., N. Y. C. E. CHAPMAN.

Woman and Home

From Day to Day.

THE LIGHT THAT IS FELT.

A tender child of Summers three,
Seeking her little bed at night,
Paused on the dark stair timidly,
"Oh! Mother! take my hand," said she,
"And then the dark will all be light."

We older children grope our way
From dark behind to dark before;
And only when our hands we lay,
Dear Lord, in Thine, the light is day
And there is darkness never more.

Reach downward to the sunless days,
Wherein our guides are blind as we,
And faith is small and hope delays;
Take Thou the hands of prayer we raise,
And let us feel the light of Thee!

—John G. Whittier.

*

A SECOND installment of "A Trek to the South" will appear shortly, circumstances rendering the delay in publication inevitable.

*

THE postillion tails which were introduced sparingly last Winter continue to appear more freely now; they are both flat and side-pleated. Many of the Autumn tailor gowns have these tails, which are described under the general name of basquines. When made of side pleats the basquine is very flat, and may be either attached to the skirt or waist. This is a great improvement with a habit-back skirt.

*

WHEN the French housekeeper wishes to improve a tough beefsteak, she allows it to stand over night in a mixture of vinegar and salad oil in equal parts. The meat is spread out flat in a crockery dish, and the mixture poured over it. Salt or pepper is not used with it. A marinade, or savory bath of vinegar and condiments, is often used to flavor meat before cooking, much to its improvement, as in the case of beef a la mode, which gains greatly in flavor thereby.

*

WHAT is called muslin toast is sometimes served with cheese and salad, or with fruit. Rather stale homemade bread, which cuts into firm slices, is required. The bread is cut, literally, "as thin as a wafer," and spread out to dry an hour or two before needed. Then, just in time to serve, the bread is spread out on a hot tin pan, and put on the top shelf of a quick oven, just long enough to curl up a little and take on a pale shade of brown. This toast is excellent for people of delicate digestion, but is appetizing for anyone. It is frequently the custom now to serve cream cheese and fruit jelly together as a latter course at dinner, and muslin toast is a very desirable accompaniment.

*

A WESTERN correspondent asks how to make Worcestershire sauce. This is a proprietary relish, its mode of making and ingredients kept secret for a century or more. Green walnuts appear to form a part of the original sauce, whose red labels, bearing the three pears displayed upon the shield of the ancient city of Worcester, are familiar everywhere, and cassareep (the boiled sap of the cassava) is doubtless another ingredient, but we do not believe that it has ever been imitated with entire success. The following recipe is recommended as a homemade Worcestershire sauce: Five pints best cider vinegar, one-half pound small sliced vinegar pickles, one-fourth pound crushed mustard seed, one-fourth ounce of celery seed, also crushed, one bunch minced garlic. Cook the foregoing ingredients in a granite kettle until reduced to four pints. Into a second granite kettle put one ounce crushed ginger, one-fourth ounce cloves, one-fourth ounce cayenne pepper, one pint India chutney, four pints of water, and cook until it boils down to four pints. Put both into one kettle and cook one-half hour. Let it cool. Cut the rind of three lemons in small strips and brown in the oven, then put into the cold sauce. Cover and let stand 10 days. Then draw off and strain into bottles.

*

THE idea of skinning a pearl sounds exceedingly extravagant—yet it is not an impossibility. A friend of ours possesses an old-fashioned ring set with a fine large pearl. In course of time the jewel lost its luster, becoming blackened and dead. Our friend stored it away for several months, when, happening to look at it, she discovered that the surface of the pearl was cracked, and apparently peeling off. Being a woman, she began to scrape off the cracked surface with her manicure tools, and was astonished to discover a perfect and lustrous surface beneath. After thus shedding its coat, the pearl looked as though fresh from the jeweler's hands. Speaking of this to an expert, he told us that the shedding of the coat itself was not remarkable because the pearl consists of a series of concentric layers deposited upon some irritant particle introduced into the oyster shell; the remarkable feature of the incident was the fact that the secondary layer was perfect and without blemish. It is, however, an uncommon incident; the only moulting pearl we are acquainted with.

*

WHAT to do for closet room is often a puzzling question where proper provision has not been made in building. One woman whose accommodations were limited solved the puzzle thus: She purchased a plain kitchen clothes horse six feet high, made with flat slats instead of round. Her next purchase was six yards of a very bright and pretty art fabric, and following this purchase was a liberal supply of fancy gilt headed tacks. In order to make the covering secure, a strip of wood was placed at the bottom of the triple folds of the clothes horse. The drapery was then stretched to cover the wood completely. Small upholstery tacks were used for fastening and later the fancy ones were placed at regular intervals. Each fold of the clothes rod was covered separately, the leather strips that originally served as

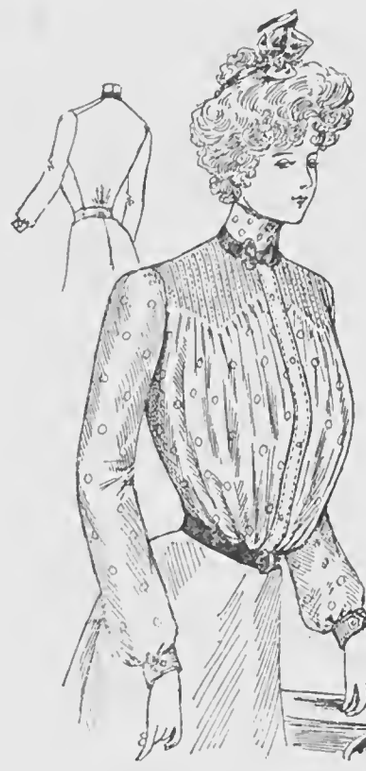
3933 Woman's Three-Piece Skirt, 22 to 30 Waist.

hinges were replaced by fancy brass hinges, and the clothes horse was converted into an artistic screen. A couple of dozen clothes hooks were inserted in the inner side of the screen, thus transforming the screen into a closet that served as a decorative as well as a useful addition to the sleeping apartment.

PEOPLE lift their eyebrows over women mastering the higher mathematics; why, it is infinitely more difficult to learn the details of good housekeeping. Anybody can learn mathematics, but it takes a lot of skill to manage a house well.—William Morris.

The Rural Patterns.

Skirts with circular flounce still remain in high favor, the example shown having a much graduated effect which is very fashionable. The upper portion is cut in three pieces and is fitted snugly about the hips, the fullness being laid in inverted pleats. The flounce is narrow at the front but widens suddenly to run well up at the back, making a specially desirable model for wide fabrics. The fan pleat is a novel and fashionable feature, besides which, it adds to the flare and freedom about the feet, but when desired the flounce can be made plain. To cut this skirt for a woman of medium size, 8½ yards of material 21 inches wide, 6¾ yards 27 inches wide, 5½ yards 44 inches wide or 4⅝ yards 50



3932 Woman's Shirt Waist, 32 to 42 Bust.

inches wide will be required. The pattern No. 3933 is cut in sizes for a 22, 24, 26, 28 and 30-inch waist measure; price 10 cents from this office.

The pretty tucked waist shown is made over a fitted lining, but the lining can be omitted if desired. The back is plain, drawn down in gathers at the waist line; but the fronts are tucked to form a pointed yoke, below which they fall in soft folds which can be arranged in gathers at the waist line or left free to be adjusted to the figure as preferred. The edge is finished with a box pleat and the neck with a stock. The sleeves are in bishop style with narrow pointed cuffs. When the waist is unlined, the gathers at the waist line are stayed with a band of the material, or a casing is applied and tapes inserted by means of which the fullness is regulated. Otherwise the process of making is unchanged. To cut this waist for a woman of medium size 3⅝ yards of material 21 inches wide, 3½ yards 27 inches wide, three yards 32 inches wide, or 2⅛ yards 44 inches wide will be required. The pattern No. 3932 is cut in sizes for a 32, 34, 36, 38, 40 and 42-inch bust measure; price 10 cents.

THE oldest trouble in the world comes from want of understanding.—Kipling.

That Busy Life Again.

In the issue for August 24 I read the experience of a busy farmer's wife. After reading it the second time I had come to the conclusion that she must have been a perfectly healthy woman with a very strong constitution, or she would have given out under the burden of all those years. My experience has been that there is a limit to each one's power of endurance, and I think that some of the sisters will agree with me in saying that if we go beyond the limit we must suffer the penalty, which means nervous prostration, or something worse. I would not encourage idleness, and think one far happier for working, and while we can detect just a little spirit of egotism on the part of the busy woman who tells of her work, at the same time we cannot but admit that she was very smart to accomplish so much, and praise is her just due for leading such a useful life.

A CONNECTICUT READER.

THERE are great truths which every honest heart may be assured of. There is such a thing as a serene, immovable conviction. Faith is a deep want of the soul.—Christian Register.

About half the lamp chimneys in use have my name on them.

All the trouble comes of the other half. MACBETH.

If you'll send your address, I'll send you the Index to Lamps and their Chimneys, to tell you what number to get for your lamp.

MACBETH, Pittsburgh.

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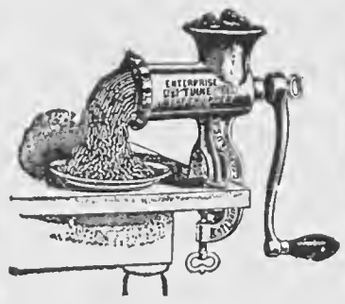

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chops anything—meats, vegetables, fish, or fruit. Simple, strong, easily cleaned, and can't rust. Any one can use it.

35 styles and sizes—hand and power. Sold at hardware, housefurnishing and department stores. 4 cents brings "Enterprising Housekeeper"—200 receipts.

THE ENTERPRISE MFG. CO. OF PA., Philadelphia, Pa., U. S. A.

The Girl on the Farm.

WHAT MONEY-MAKING OCCUPATIONS ARE OPEN TO HER?

The following question which was printed on page 696, has excited much interest among our readers, and some of their opinions and experiences are now given:

Seeing many helpful things in THE R. N.-Y., I now write to ask you whether you know of any work I could do at home. I am 20 years old, live on a farm, and I am staying at home to help Mother with the work.

A Woman Poultry Raiser.

Tell the young girl in the country to take up caring for poultry, and she will find it a good job and a profitable one, for what money is invested in it. I have done so for years, besides doing my housework for four or five, and also making from 20 to 30 pounds of butter a week, and the poultry brought me the most money and the easiest work of it all. I only keep from 30 to 35 hens and pullets and two cockerels, and cleared every year from $60 to $80 on them. Once in a while it would reach $100. I have now for 12 years kept a steady account of all, debtor and creditor, and can give you the full list. I feed well; they have all they can eat three times a day, and little chicks oftener, but of course they must have some care. If the inquirer wishes to write to me I will give her my way of feeding and caring for them, as I should like to interest country girls in poultry work for their spending money. MRS. H. S.

Connecticut.

Poultry and Flowers.

In answer to the inquiry of the girl on page 696, why could not she, with her father's or brother's assistance, engage in the poultry business in a light way, and the net profits of the business into the young woman's pocket would be as much as many a working girl's salary above her board and laundry bills. She might take up floriculture. Besides the many flowers she could sell she could get a little fortune by exhibiting at the Fall fairs, and the premiums would be duplicated by some of the seedsmen, if she bought her seeds from them. I know of instances where both of the above ideas have been carried out by young girls on the farm with good paying results, and 70 per cent of their time devoted to helping Mother; and then the satisfaction of being "your own boss" is everything. YOUNG FARMER.

Ohio.

A Bunch of Suggestions.

We are asked how a young country woman who is staying at home to help her mother with the work may earn some cash, and we are moreover told not to theorize but to tell what we know *has been done.* Well, here goes in an attempt to comply, first being allowed to say that we will give this young woman credit for the expression of a desire that is something more than a vague aspiration after the unattainable. But has she really a set purpose to earn some money, and the necessary will power and physical force to make her keep on trying until she finally succeeds? If she has her parents must give her a chance, and help her by every means possible. A young woman in the country may keep bees. They will work for her while she is helping her mother. She may raise ducks or chickens if she can have facilities for keeping them separate from the farm hens. This has been successfully done by many women. She may nurse into vigor the weakling lambs that would otherwise be allowed to perish, and have their wool and affection for her pay. This also has been done, and the money was used to pay the cost of a serious but successful surgical operation. She may rescue and raise into value the runt pigs until they are fit to kill. She may "dressmake" if she can and will. She may "make over" the women's hats for a small fee of 50 cents each if she has a knack for it, or perhaps she can acquire the art by study and practice. I have just heard of a woman who made money mending for Summer boarders, and of another who sold patchwork quilts, unquilted.

She may dry fruit. Tons of fruit are allowed to rot on the ground that might be turned into cash by nimble fingers. I would advise the use of a small evaporator that would sit upon the stove. They could be bleached and neatly packed into empty starch boxes, and would always sell. This is a good field for home work, as it is admitted that much of the dried fruit as it comes from the large evaporators is not carefully prepared, and needs to be looked over and trimmed over before it is used. A nice appearing package of strictly fine dried fruit sells readily. A friend in a village sells all she can make of daintily prepared pot cheese. Another sold for $5 to a New York seedsman two ounces of carefully saved tomato seed of a new sort. A large essential oil factory agreed to take all the pennyroyal that could be gathered, and the sheep fields were full of it. Another friend had a large grape vine of a new kind and sold every eye that could be cut off to a propagator for five cents each.

If this young New England girl likes flowers well enough to be willing to know them thoroughly and could love them well enough to get down (or up?) among them in order to succeed in their cultivation, let her father set aside half an acre of his best land near the house in plain sight of the road, and manure it as heavily as if he were about to grow asparagus and then turn her loose in it until she had worked up "a flower patch" that would just astonish the natives. Let her fill it full of all sorts of hardy plants in great rows; the brilliant brightly-colored hardy Phlox with their immense panicles of bloom lasting for months, Iris, Delphinium, roses, etc. Have a nice big sign painted "Plants for Sale," and nail it up in plain sight. That would keep off beggars. No matter if some one does say: "Ain't it mean! Betsy Smithers won't give a body even the least little speck of one of them flowers of her's, and I hinted I would like a mite ever so much." Every such remark only advertises the business, and the fact that it is run on a strictly-cash-one-price-to-all basis, and brings customers from all over the country.

She might also rig up a homemade propagating bench. (This also has been done.) A big drygoods box with a false bottom set in amidships, with three inches of coarse moist sand on it, with a B burner oil lamp burning under it for bottom heat, and she could then strike all manner of plants from cuttings full as readily as the florists, and sell them for cash. She might raise seedling plants in the odd moments. They certainly would grow for her gladly while she was dutifully helping her mother with the work, and finally, sisters, where there is a will there is a way. In fact, there are several ways, and doubtless many more than have here been mentioned. Make your choice.

New York J. YATES PEEK.

Rural Recipes.

I dearly love these Autumn days;
With joy my heart throbs high,
The frost is on the pumpkin, and
The pumpkin's in the pie.
—Phila. Record.

Pumpkin Marmalade.—Four pounds of yellow pumpkin, 4½ pounds of sugar, half a dozen lemons and half a dozen oranges; cut the pumpkin into very small dice; mix the sugar with it and let stand over night. Peel the oranges and lemons with a very sharp knife, and boil the rinds two hours, changing the water twice. When the rinds are cold trim off as much of the white part as possible to prevent bitterness. Put the ingredients all together in a preserving kettle, and boil for two or three hours until the right consistency is reached. Place in jelly glasses, and keep in a dark, cool place.

Banana Pie.—This is nothing more than a custard pie improved by sliced bananas. Line a pie dish with a rich crust and let it cool. Slice two large bananas into the crust. Boil one cupful of milk, one-half cupful of sugar, the yolks of two eggs, and two tablespoonfuls of cornstarch until thick. Let this custard cool before pouring it over the bananas. Make a meringue of two egg whites beaten stiff with two tablespoonfuls of sugar and pour it over the pie. Set in the oven just long enough to brown.

Snipdoodles.—One cupful of sugar, one tablespoonful of butter, one-half cupful of milk, one egg, one cupful of flour, one teaspoonful of baking powder, one teaspoonful cinnamon. Cream the butter, add the sugar, then the egg, well beaten; then the flour, baking powder and cinnamon sifted together, and the milk. When nearly done sprinkle with sugar. When brown remove from the oven, cut into squares, and remove quickly with a knife. They should be thin and crispy.

Grape Pickle.—Pick sound grapes from the stems without breaking them and put them in a jar. For every seven pounds of the fruit allow a quart of vinegar, three pounds of brown sugar and a tablespoonful of whole cloves and stick cinnamon, boil together for a few minutes, and when cold enough to bear putting the finger in pour over the uncooked grapes. Cover jar with a saucer and do not disturb for two or three weeks.

18 Infant's Barrow Coat and Under Shirt, One Size.

3911 Child's Frock, 6 mo., 1, 2, 4 yr.

Angel Cakelets.—Beat the whites of four eggs and half a level teaspoonful cream tartar until stiff; sift together half cupful fine granulated sugar and half cupful of flour; add gradually to the eggs. Flavor with quarter teaspoonful of almond. Bake in little cake pans. Sprinkle with powdered sugar and bake in a moderate oven 20 minutes.

Santa Clara Prune Cake.—Two cupfuls of sugar creamed with one-half cupful of butter, three eggs (whites beaten separately) two-thirds cupful of sweet milk, one heaping teaspoonful of baking powder, one tablespoonful of powdered mace, one cupful of chopped walnuts, one cupful of chopped prunes that have been steamed. Line a cake pan with buttered paper, fill in a layer of the cake batter, spread a layer of the chopped prunes and over this put a layer of the nuts, then another layer of cake, and so on until the pan is two-thirds full. Bake in a steady but not quick oven.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

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Take Scott's Emulsion for scrofula. Children often have sores on the neck that won't heal up. The sores may come and go. Parents may not know what's the matter nor what to do. Scrofula is the trouble and Scott's Emulsion is the medicine.

Scott's Emulsion heals the sores. But that is not all. Scrofula leads to consumption. This is the real danger.

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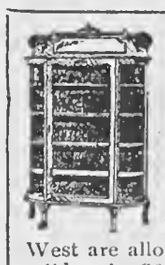

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Envelopes, p'd, 500 $1.50; Letterheads, same, 125 ea., $1; Tags, 500, $1, deliv'd. Cards with stock cuts 50c. 100 up. Sam. 2c. stamp. H. Sedgwick, Cornwall Hollow, Ct

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Girls can get this beautiful Life Size Doll absolutely Free for selling only four boxes of our Great Cold & Headache Tablets at 25 cents a box. Write to-day and we will send you the tablets by mail postpaid; when sold send us the money ($1.00) and we will send you this Life Size Doll which is 2½ feet high and can wear baby's clothes. Dollie has an Indestructible Head. Golden Hair, Rosy Cheeks, Brown Eyes. Kid Colored Body, a Gold Plated Beauty Pin, Red Stockings, Black Shoes, and will stand alone. This doll is an exact reproduction of the finest hand painted French Doll, and will live in a child's memory long after childhood days have passed. Address,

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Doll Dept. 134 L New Haven, Conn

MARKETS

THE WEEK'S QUOTATIONS.

WHOLESALE PRICES.

NEW YORK, October 26, 1901.

GRAIN.—Trade in wheat is active. Oats and corn one to two cents higher.

Wheat, No. 1, N'thn Chicago..	—	@	76⅞
No. 1, Northern Duluth.....	—	@	78⅜
No. 2, red, elevator.....	—	@	77⅛
Corn, No. 2, mixed, elevator..	—	@	62
Oats, No. 2, mixed.....	—	@	40¾
Rye, No. 2, W'n, f. o. b., N. Y..	—	@	61
Barley, feeding	50	@	52
Malting	57	@	62
Buckwheat, per 100 lbs.....	—	@1	10

BEANS.

Marrow, 1901, choice, per bu.	—	@ 2	75
Medium, 1901, choice.....	—	@ 2	05
Pea, 1901, choice.....	—	@ 2	05
Red kidney, 1901, choice.....	—	@ 2	65
Black turtle soup, choice.....	1 85	@ 1	90
Italian, medium	1 80	@ 1	85
Other foreign, medium.....	1 70	@ 1	80

FEED.

Spring bran, coarse.....17	90	@18	20
Winter bran 18	50	@19	00
Red Dog 22	00	@22	50
No grade flour.....	—	@22	40
Unsound wheat, per 100 lbs..	67	@	70
Linseed meal, ton.....29	00	@30	00
Cottonseed meal, ton.....	—	@25	10

HAY AND STRAW.

Hay, No. 1.....	$82½@		87½
No. 2	75	@	80
No. 3	62½@		65
Clover	50	@	55
Clover, mixed	60	@	65
Straw, rye, long.....	60	@	80

SEEDS.

Clover, per 100 lbs.....10	00	@11	25
Timothy, per 100 lbs..... 5	00	@ 5	50
Millet, per lb.....	2	@	2⅛
Sunflower, per lb.....	3¾@		4
Rape, German, per lb.....	3½@		3⅝

MILK.

New York Exchange price 2¾ cents per quart in 26-cent freight zone.

BUTTER.

Creamery, extra, per lb.....	22½@		—
Firsts	20	@	21½
Seconds	17½@		19½
Lower grades.....	15	@	16½
June, extras	21	@	21½
June, seconds to firsts.....	18	@	20½
State dairy, tubs, fancy.....	21	@	21½
Tubs, firsts.....	19	@	20
Tubs, seconds	16	@	18
Tubs, thirds	14	@	15
Tins, etc.	14	@	20
W'n imitation creamery, fcy..	17½@		18
Firsts	15½@		16
Lower grades.....	14	@	15
Western factory, June, fcy....	15½@		—
June, good to choice.....	14½@		15
Fresh, firsts	14¾@		15
Fresh, fair to good.....	14	@	14½
Lower grades	12½@		13½
Renovated butter, fancy.....	14	@	17
Common to choice.....14		@	17
Packing stock.....	12	@	14

CHEESE.

Full cream, col'rd, small, fcy..	—	@	10¼
Colored, small, choice.....	9¾@		10
White, small, fancy.....	10	@	10½
Small, white, choice.....	9½@		9¾
Small, good to prime.....	9¼@		9⅜
Colored, large, fancy.....	—	@	9¾
Colored, large, choice.....	9¼@		9½
White, large, fancy.....	9½@		9¾
White, large, choice.....	9¼@		9⅜
Large, good to prime.....	8½@		9
Common to fair.....	7	@	7¼
Light skims, small, choice.....	—	@	8½
Large, choice	7½@		7¾
Part skims, prime.....	6¾@		7
Fair to good.....	5	@	6¼
Common	3	@	4
Full skims	1½@		2½

EGGS.

QUOTATIONS LOSS OFF.

State & Pa., avge. prime, doz..	—	@	23
Western, fresh-gathered, average best, per doz.....	22	@	22½

QUOTATIONS AT MARK.

Nearby, State & Pa., fresh-gathered, fancy, selcted, doz.	—	@	25
Average best lots.....	21½@		22
Nearby, State & Pa., fair to g'd.	19	@	20
W'n, fresh-gathered, candied, selected	—	@	21½
Reg. packings, N'th'n sects..	16	@	21
Southerly sections, best.....	18	@	18½
Southerly sections, ordinary..	15	@	17
Fresh-gathered, dirties	13½@		15
Checks	12	@	12½
Refrigerator, per doz.....	16	@	18

COUNTRY-DRESSED MEATS.

Calves, veal, prime, per lb.....	10½@		11
Fair to good, per lb.....	9½@		10
Common to medium, per lb...	5	@	8
Buttermilks, per lb.....	7	@	8
Grassers, per lb.....	5	@	5½
Pork, Jersey, dressed, light, lb.	8½@		9
Jersey, dressed, medium, lb..	8¼@		8¾

LIVE POULTRY.

Spring chickens, per lb.....	—	@	8½
Fowls, per lb.....	—	@	8½
Roosters, per lb.....	—	@	5
Turkeys, per lb.....	8	@	10
Ducks, average W'n, pair.....	55	@	65
Average Southern, per pair...	45	@	55
Geese, average W'n, per pair...1	12	@1	25
Average Southern, per pair...	90	@1	12
Pigeons, mixed, per pair.....	—	@	20

DRESSED POULTRY.

FRESH PACKED—ICED.

Turkeys, Spring, dry-pkd, lb...	11	@	13
Scalded, per lb.....	8	@	10
Culls, per lb.....	5	@	7
Broilers, Phila., over 4 lbs. to pair, per lb.....	17	@	18
Phila., mixed sizes, per lb....	11	@	13
Penn., fair to good, per lb....	9	@	12½
Ohio & Mich., scalded, lb.....	10½@		11
Other W'n, dry-picked, lb....	—	@	10
Other W'n, scalded, per lb....	10	@	10½
Poor to fair, dry-picked or scalded, per lb.....	7	@	9
Fowls, W'n, dry-picked, prime.	9	@	9½
Western, scalded, prime.....	—	@	9
South'wn, dry-picked, prime.	—	@	9
W'n & S'th'wn, poor to good.	7	@	8½
Old roosters, per lb.....	—	@	6½
Ducks, Spring, L. I., and other nearby, per lb.....	14	@	15
Western	7	@	11
Geese, Spring, Eastern.....	12	@	15
Squabs, choice, large, dark.....2	75	@3	00
Mixed, per doz.....1	75	@2	00
Dark, per doz.....1	25	@1	50
Culls, per doz.....	50	@1	00

GAME.

Grouse, per pair.....1	00	@1	25
Partridges, per pair.....2	00	@2	50
Woodcock, per pair.....	—	@1	50
English snipe, per doz.....	—	@2	50
Golden plover, per doz.....	—	@2	50
Grass plover, per doz.....1	50	@2	00
Wild ducks, canvas, per pair...2	50	@3	00
Red head, per pair.....1	50	@2	00
Mallard, per pair.....	75	@1	00
Teal, blue wing, per pair.....	60	@	75
Teal, green wing, per pair....	40	@	50
Common, per pair.....	25	@	30
Rabbits, per pair.....	20	@	35
Venison, saddles, per lb.....	—	@	30

HONEY.

N. Y. State, clover, comb, fcy, per lb.....	15	@	15½
Clover, comb, fair to good, lb.	12	@	14
Buckwheat, comb, per lb.....	10	@	11
Extracted, clover, per lb.....	—	@	6½
Extracted buckwheat, lb.....	—	@	5½
California, extracted, per lb....	5½@		6½
Southern, extracted, per gal...	55	@	60

DRIED FRUITS.

Apples, evaporated, 1901, fcy, lb.	—	@	10
Evaporated, 1901, choice.....	9¼@		9½
Evaporated, 1901, prime.....	8¾@		9
Evaporated, 1901, poor to g'd.	6	@	8¼
Evaporated, 1900, fancy, lb...	9½@		9¾
Evaporated, 1900, choice, lb...	8¾@		9
Evaporated, 1900, prime, lb....	8¼@		8½
Evaporated, 1900, common to good, per lb.....	6	@	8
Sun-dried, 1901, S'n, sliced....	4½@		6
Sun-dr'd, 1901, S'n, coarse cut.	4	@	5
Sun-dried, 1901, W'n, q'tr's...	4½@		5½
Chops, 1901, per 100 lbs.....1	75	@2	25
Cores and skins, 1901, 100 lbs..1	50	@2	00
Raspberries, evap'r'ted, 1901, lb.	23½@		24½
Sun-dried, 1901, per lb.....	20	@	21
Blackberries, 1901, per lb.....	7	@	7¼
Huckleberries, 1901, per lb.....	16	@	17
Cherries, nearby, 1901, per lb....	15	@	15½
Southern, 1901	13½@		14

FRESH FRUITS.

Apples, York Imperial, bbl... 3	00	@ 4	50
Spitzenberg, prime to fcy... 4	00	@ 6	00
Wine Sap, per bbl..... 3	00	@ 4	00
Snow, good to choice, bbl... 3	00	@ 4	50
King, per bbl..... 3	00	@ 5	00
Ben Davis, per bbl..... 3	00	@ 4	00
Greening, per bbl..... 3	50	@ 5	00
Twenty-oz., hand-pkd, bbl.. 3	00	@ 4	00
Tallman, sweet, per bbl..... 2	75	@ 3	00
Fall varieties, com. to fair. 2	00	@ 3	00
Baldwin, prime, per bbl..... 3	00	@ 4	00
Ordinary hard, red, fair to prime, per bbl..... 2	50	@ 3	00
Ordinary hard, late sorts, inferior, per bbl..... 1	50	@ 2	00
Windfalls, per bbl..... 1	25	@ 1	50
Pears, Bartlett, fancy, bbl...	—	@ 3	50
Bartlett, poor to good, bbl.. 2	00	@ 3	00
Bartlett, prime to fcy, keg. 1	25	@ 1	50
Seckel, fancy, per bbl..... 3	50	@ 4	00
Seckel, fair to prime, bbl... 2	25	@ 3	00
Beurre Bosc, per bbl..... 2	50	@ 3	50
Beurre Clairgeau, per bbl.. 2	50	@ 3	00
Beurre d'Anjou, per bbl..... 2	50	@ 3	00
Kieffer, per bbl..... 1	00	@ 2	25
Duchess, per bbl..... 1	50	@ 2	00
Nearby, common, per bbl... 1	00	@ 1	50
Quinces, per bbl..... 2	75	@ 4	50
Peaches, up-river, per 2-bkt. carrier 1	00	@ 1	50
Grapes, up-river, black, per 8-basket crate	60	@	75
Up-river, black, 12-bk. crate. 1	10	@ 1	35
W'n N. Y., Catawba, per small basket	—	@	11
W'n N. Y., Del., case, 15 3-lb. basket	—	@ 1	75
W'n N. Y., Del., small bk...	12	@	16
W'n N. Y., Niagara, case, 15 3-lb. basket	—	@ 1	50
W'n N. Y., Niagara, sm. bk.	10	@	15
W'n N. Y., Coneord, case, 15 3-lb. basket.....	—	@ 1	00
W'n N. Y., black kinds, small basket	9½@		10
Wine grapes, Concord, ton.30	00	@36	00
Wine grapes, Del., per ton..25	00	@50	00
Wine grapes, white, ton....35	00	@40	00
Wine grapes, Clinton, ton..40	00	@50	00
Cranberries, Cape Cod, fancy, large, late varieties, bbl.. 6	00	@ 6	50
Cape Cod, Early Black, fancy, dark, per bbl.....	—	@ 5	50
Cape Cod, med. color, bbl.. 5	00	@ 5	25
Cape Cod, poor to fair..... 4	00	@ 4	75

VEGETABLES.

Potatoes, L. I., per bbl.....2	00	@2	25
Maine, prime, per bag.....2	00	@2	10
Maine, per 180 lbs.....2	00	@2	12
Maine, inferior 1	25	@1	75
State & W'n, prime, bbl.....	—	@2	00
Albany & Troy, prime, bbl....	—	@2	00
State & W'n, poor to fair.....1	25	@1	75
Jersey, per bbl.....1	50	@1	75
German, prime, 112-lb. bag...1	00	@1	12
German, inferior, 112-lb. bag..	75	@	90
German, per 168-lb. bag.....1	00	@1	75
Scotch, Magnum, 168-lb. bag..1	00	@2	00
Sweet Potatoes, So. Jersey, bbl.1	75	@2	50
Yellow, Va., per bbl.....1	37	@1	50
Beets, Jersey & L. I., 100 bchs.	—	@1	00
Brussels sprouts, per qt.....	6	@	10
Cauliflowers, per bbl.....1	00	@2	25
Celery, State & W'n, doz. roots.	10	@	40
Jersey & L. I., doz. flat roots.	75	@1	00
Carrots, L. I., per bbl.....	75	@1	00
Cabbages, L. I., Flat Dutch, 100.2	00	@3	00
Cucumbers, hothouse, per doz..	75	@	87
Eggplants, Fla., ½-bbl. crate..2	50	@3	50
Lima beans, Jersey & L. I., Potato, per bag.....	75	@1	25
Jersey, flat, per bag.....	50	@1	00
Lettuce, nearby, per bbl.....	75	@1	00
Onions, pickle, white, per bbl..3	00	@4	00
Orange Co., white, per bag...2	00	@2	50
Orange Co., red, per bag.....2	25	@2	75
Orange Co., yellow, bag.....2	25	@2	62
Orange Co., poor to fair, bag.1	25	@2	00
Connecticut, white, per bbl...2	00	@4	00
Connecticut, yellow, bbl.....2	50	@3	00
Connecticut, red, per bbl.....	—	@3	00
State & W'n, yellow, per bbl.2	25	@2	75
State & W'n, red, per bbl.....2	50	@3	00
Peppers, Jersey, green, bbl....	75	@1	00
Jersey, red, per bbl.....1	25	@1	50
Peas, Va., per ½-bbl. basket....1	00	@2	00
Squash, Hubbard, per bbl.....	—	@1	25
White, per bbl.....1	00	@1	25
Marrow, per bbl.....	90	@1	00
Pumpkins, per bbl.....	50	@	65
String beans, Southern, wax, per ½-bbl. basket.....	60	@1	00
Southern, green, ½-bbl. bskt.	50	@1	00
Turnips, Jersey, Russia, box...	—	@	75
Canada, Russia, per bbl.....	75	@	80
Tomatoes, fair quality, bu. box.	50	@	75

LAND values have undoubtedly risen here slightly in the last few years, and a decidedly better feeling exists. No manufactures or emigration here. A. R. L.

Barboursville, Va.

BUSINESS BITS.

THE R. E. Dietz Company, 87 Laight Street, New York, makes a liberal offer to readers of THE R. N.-Y. Look up the offer and try your hand at writing an advertisement for the famous Dietz lantern. It will be good mental recreation, even if you do not win a slice of the $300 prize money.

THE Mietz & Weiss gas and kerosene engines make a very creditable showing in machinery hall at the Pan-American Exposition at Buffalo. These engines are well adapted for farm work, a number of them being in use for different purposes on the farms of readers of THE R. N.-Y. Write to A. Mietz, 128 Mott Street, New York, for particulars.

MANAGER F. F. PROCTOR has inaugurated a new departure in theater entertainments that is meeting with great success. He has four theaters in New York, one in Albany and one in Montreal, making six theaters now in active operation. His select company of 150 players is divided into six sections, and the tour of the six theaters is made, so that each house has a new play each week. Old comedies, farces and laughing plays are revived and presented with every attention to detail, and between the acts of the plays and before and after the dramas vaudeville numbers were introduced. In this way the long and tedious waits usually attendant upon the ordinary dramatic presentation are obviated, and the entertainment is continuous. Everyone who visits New York wishes a night's entertainment at the theater, and the attractions at Proctor's are surpassed by no house in the city.

BRONCHIAL CONSUMPTION.

From Dr. Robert Hunter's Lectures on Lung Diseases.

Of the many forms of Bronchitis, the one most alarming of all is that in which the symptoms closely resemble those of consumption, and hence called consumptive bronchitis, or bronchial consumption. You must not, however, understand from its name that it is really tuberculosis in character, or produced by the bacilli which cause true consumption.

In all lung cases I require a portion of the expectorated matter coughed up by the patient to be brought to me, or sent in a small bottle by express, before giving a definite opinion of the disease. If, on examination, I find the tubercle bacilli present, the case is consumption; and if no bacilli—Bronchitis. A large percentage of those who die of lung disease, supposed to be consumption, are really deaths by chronic bronchitis resembling consumption.

A remarkable instance in verification of this recently occurred. A lady was brought to me in what appeared the last stage of consumption. Her physicians had told her husband that she could not live a week. She had a bad cough, puriform expectorations, night sweats and was wasted almost to skin and bone. Judging by her symptoms and appearance, it was impossible not to fear that she had come too late. On sounding her chest, however, I was surprised to find no solidification by tubercles, and on examining her sputum a total absence of the bacilli. The history, too, of her sickness revealed that it had followed an attack of whooping cough and grippe So, although her pulse was 120 a minute, and so feeble as to be hardly perceptible, and the wasting of her body so extreme that she could not stand without support, I did not hesitate to pronounce the disease bronchial, and give it as my opinion that, if we could sustain her strength long enough for remedies to act, she would be saved. She was immediately placed under medicated air treatment, with tonics to impart appetite and digestives to help the enfeebled stomach to transform nourishments into chyle and blood. Within a week she showed signs of improvement. Her progress was necessarily slow, as the healing power of the body were nearly exhausted before the first inhalation was given, but she gradually acquired more and more strength, and within six weeks was able to take short walks in the open air. She recovered perfectly in about six months, and is alive and well to-day.

This case shows the importance of a correct diagnosis and proper adaptation of the treatment of the conditions to be remedied. Had the true nature of her disease not been discovered just when it was, she would have lost her life through wrong treatment, and been recorded as another death by consumption.

Every form of bronchitis is curable by local antiseptic and healing remedies applied directly to the lungs by medicated air inhalation, but none of them by stomach treatment. The stomach is not the part affected. The air tubes and cells of the lungs are the seat of every bronchial disease, and unless remedies capable of changing their bad secretions and healing the inflamed tubes are applied to them, cure is impossible.

Readers mentioning THE RURAL NEW-YORKER can obtain Dr. Hunter's book, "The Lungs and Their Diseases," absolutely FREE by addressing Dr. Robert Hunter Association, 117 W. 45th Street, New York City.

WHEN you write advertisers mention THE R. N.-Y. and you will get a quick reply and "a square deal." See our guarantee 8th page.

Wants, For Sale or Exchange

WANTED—Farmers and Dairymen, $30 to $50, with house or board. Only competent men with good references. The Rural Agency, Durham, N. H.

Fine Farms and Orchards in the great Piedmont Fruit, Grain and Stock section of Virginia. Elegant water and climate, with best educational advantages, and near great markets. For further information address JOHN L. McCUE, Afton, Va.

Real Estate Wanted and for sale. If you want to sell or buy (no matter where located) send description and cash price and I will send (FREE) my successful plan. W. M. Ostrander, North American Building, Philadelphia. See my big ads. in all magazines.

"I OWN MY HOME." That's what puts nerve and backbone into a man. We sell them on the easiest terms. More than a hundred to choose from in our Illustrated Real Estate Catalogue Mailed free Write to-day. W. F. Allen Land & Imp. Co., Salisbury, Md.

GLENN RANCH,

Glenn County, California,

FOR SALE IN SUBDIVISIONS.

This famous and well-known farm, the home of the late Dr. Glenn, "the wheat king," has been surveyed and subdivided. It is offered for sale in any sized government subdivision at remarkably low prices, and in no case, it is believed, exceeding what it is assessed for County and State taxation purposes.

This great ranch of 40,000 acres runs up and down the western bank of the Sacramento River for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

F. C. LUSK,

Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, of Chico, Butte County, California.

POULTRY SHIPPERS.

We make a specialty during the Winter months of handling Poultry, having a very extensive trade. Write us for any information you may wish regarding dressing, packing, etc., and we will be pleased to answer all inquiries.

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Barns of Plank save Timber and cash. Best, cheapest, strongest; 4,000 in use. Book for stamp. SHAWVER BROS., Bellefontaine, Ohio.

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Oldest Commission House in New York. Established 1838. Butter cheese, eggs, pork, poultry, dressed calves, game, &c, E. B. WOODWARD, 302 Greenwich Street, New York.

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Commission Merchants and Dealers in all kinds of COUNTRY PRODUCE, Apples, Peaches, Berries. Butter, Eggs, Cheese, Poultry. Mushrooms and Hothouse Products a Specialty. Consignments solicited. 34 & 36 Little 12th St., New York.

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No. 2 and Clover Grades of Hay.

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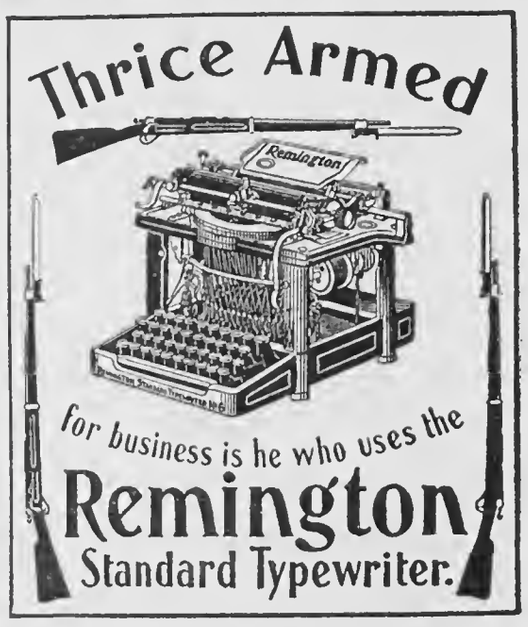
Bought at Receivers' Sale. Sheets either flat, corrugated or "V" crimped. No tools except a hatchet or hammer is needed to lay the roofing. We furnish free with each order enough paint to cover and nails to lay. Price per square, $1.75 A square means 100 square ft. Write for Free Catalogue No. 57 on General Merchandise. Chicago House Wrecking Co., West 35th and Iron Sts., Chicago, Ill.



WYCKOFF, SEAMANS & BENEDICT,

327 Broadway, New York.

To Our Friends, Club-Raisers and Agents.

The R. N.-Y. 10 Weeks for 10 Cents.

We have set out to get 20,000 new trial subscriptions by January 1, 1902. May we ask you to help us get them? To make it easy for you we are going to send the paper to the new subscriber the 10 weeks for 10 cents. No intelligent farmer will refuse you an order on these terms. To make it an object for you to help us we are going to send 23 cash premiums as New Year's presents to the 23 persons who have sent us the 23 largest clubs up to January 1, 1902. These will be as follows:

First Largest,	**$25**
Second Largest,	**15**
Third Largest,	**10**
Ten next largest $5 each,	**50**
Five next largest $3 each,	**15**
Five next largest $2 each,	**10**

These premiums will be awarded on the basis of 10 weeks' trials. Every sueh order will count one, and an order for a new yearly subscription will count 10. These premiums are in addition to regular commissions. Renewal of old subscriptions will not count for the premiums, because we want to make this a special effort to get our 20,000 new names. But the commissions will be allowed on the new and old names alike. If you have not already received the regular commission rates, blanks, samples, etc., send for them. We look for all our old friends to take a personal interest in this matter, and send us a club, be it large or small. Don't delay until the last week. Begin at once.

THE RURAL NEW-YORKER, NEW YORK.

MARKET NOTES

POTATO PRICES have declined still further. The highest figure now given is $2.25. The chief reason for this drop is the inferior quality of a large part of the receipts, many of which go for $1.25 to $1.75 per barrel. The crop of Aroostook County, Maine, is reported to be very heavy, although there is considerable damage from rot.

ORANGES are in this market during the whole year; but the local fruit trade is considerably interested just now in the first receipts from Porto Rico under free trade. The fruit thus far has been inferior and poorly packed, and prices have run considerably below California and Florida stock. The Porto Rican orange matures earlier than the western or Florida fruit. The trade generally expects a rapid development in the Porto Rico orange business, as a number of experienced growers who have suffered from frosts in northern Florida have gone to that Island. A few Florida oranges have reached New York, but they were so green that buyers did not take hold of them very well. The crop is estimated to be less than the average, owing to unfavorable weather.

BUYING BY LABEL.—"That's the kind I want," said a man who was looking for grapes on a fruit stand. "I have had that man's pack before, and know they are all right." He picked up a four-pound basket labeled Niagara white grapes 723, paid 20 cents for it, and did not go through the usual performance of loosening the cover and holding the basket bottom side up to see that the fruit was uniform. Evidently he had considerable confidence in number 723 of that brand. Out of curiosity I bought a basket from the same lot, and found that the buyer was not mistaken. The grapes were well ripened, and this makes at least 50 per cent difference in the quality of Niagaras. A great many are picked and shipped when about the color of Paris-green, and by the time the consumer gets them they are insipid and watery. A ripe Niagara with the bloom on is yellowish white with a faint shade of green showing through the skin. The grapes in the bottom of the basket were as large and fine as those on top, and the fruit had been packed so closely that it had not been bruised in handling. At each end of the cover was tacked a strip an inch wide and three-eighths inch thick. This raised the cover slightly, so as to leave an air space between it and top of the basket. Retail buyers are good people to be friendly with, and it would be hard to find a better way to get acquainted with them than by putting up the fruit under a label that stands for quality, and living up to it strictly. Of course buyers do not expect that every basket of perishable fruit will be equally good, for some may be kept too long before selling, but they appreciate the attempt to protect them from the dishonest practices of those who try to make the good fruit sell the poor by mixing it.

W. W. H.

THE entries for the Pan-American poultry show call for 2,000 large poultry. There are 550 bantams, 140 turkeys, 110 ducks and 25 pheasants, which are all single birds. In addition there are 185 breeding yards and three displays which contain 950 birds, making a total of about 4,000 birds; besides 1,865 pigeons.

THE WEST THROUGH EASTERN EYES

PART II.

HOME SURROUNDINGS.—One peculiarity of the country that strikes an eastern man is the small low houses and lack of barns or outbuildings. The farmhouses are almost exclusively one-story buildings. They are usually square or nearly so, the roof coming to a point or apex over the center, and slanting down on all four sides, making eaves all around the house. I suspect this construction is built with a view of exposing the least possible surface to the winds. Another invariable protection from the winds is the "wind-breaks." These are clumps of trees which have been set to the windward side of the house to protect it from storms. Sometimes they quite surround the house, and cover considerable area, while others are small in extent and flank one or two sides of the home. Another thing one notices as peculiar is the general lack of fruit and kitchen gardens. We were told that they had no time for such small things. It is greatly to be regretted, because both fruit and vegetables could be produced in great abundance, and would add much to the appearance of the home and the comfort and living of the family. On the other hand, every family, even in the villages, seems to keep a few chickens, and some places appear to give considerable attention to this industry.

LARGE FARMS.—The farms are laid out in sections; that is in tracts one mile square, contain 640 acres. Some of these are cut up into half and quarter sections; but a farmer seems to feel that he has something to apologize for when he operates only a quarter section of 160 acres, the tendency and ambition being to operate large farms. Farm help is scarce, and one man often operates a half section, or even a full section of 640 acres alone. This scarcity of help, together with the tendency to run large farms, and the wonderful productiveness of the soil, all combine to account for the slipshod appearance of things which we in the East call improvident. Of what use are cornstalks or straw when there are no cattle to eat them, and why take the trouble to burn a stack of thrashed straw, when there are lots more rich fertile ground like that under the stack? Then what a waste of time it would seem if one spent a half day with small seeds in a garden, when the drill or planter could distribute bushels of wheat or oats on broad acres in the same time? The western plowman, like the eastern farmer, is a great deal the product of his environment, and he is subject to conditions which he has not been entirely able to control, but which he is fast learning to bring under his dominion. As I passed rapidly through his fertile fields, with its windmills and homes shaded and protected with blocks of trees that he himself had set, with roads that he had built, and railroads that he had made possible, and remembered that 30 years ago this had been a trackless prairie with scarcely a sign of habitation, and entirely barren of trees, I communed with myself that these must be a rugged sturdy people. I thought to myself that they had done more for civilization and future ages than the men in manufacturing and commercial circles, of whom we heard so much, because of the millions they have accumulated. I made up my mind then and there that the farmers of the East had nothing to fear from the competition of their honest products in the markets of the world; and that the men who subdued those stubborn prairies, watered their surface, and baffled their storms, would never help to perpetrate a fraud on the honest products of the East. I found them in council as I had pictured them—rugged, sturdy, honest. Plain and frank themselves they are quick to see through sham and hypocrisy. Perhaps a bit sensitive, and for that reason quick to resent a sentiment where no offense or wrong is intended; yet generous to the extreme. He would voluntarily suppress his own interests when justice and right favored his competitor or neighbor. Social functionaries may sneer at his rough exterior and grammarians may deride his awkward speech, but his communion with nature, his independent thought, and habit of doing things, have given him a power of expression and a culture of mind that the city-bred man can neither appreciate nor imitate.

J. J. D.

Exhibition of New York Florists' Club.

The first annual exhibition of the New York Florists' Club was held at Madison Square Garden, October 21-27. The immense hall was filled with one of the finest collections of ornamental plants and flowers ever brought together in the city. Separate days were given to the general exhibition, roses, carnations decorations and Chrysanthemums. The attendance was very good, especially on the closing day, which was given over to the Chrysanthemums. The show of vegetables was much larger than expected for the season and generally of fine quality. No potatoes showed up to better advantage than Sir Walter Raleigh and other Rural New Yorker varieties. A few good apples and many splendid glass-grown grapes comprised the fruit exhibit.

The great feature was the magnificent collections of decorative plants shown by many exhibitors. Palms in immense sizes and great variety, ferns, bamboos and specimen evergreens in bewildering variety made the hall a bower of greenery. The groups of flowering orchids were probably the best ever seen here. The brightest feature of the show was a large group of Kniphofia Pfitzerii, recently illustrated in these columns, and the next plant in brilliancy was plainly Clerodendron fallax, shown in a group of well-grown specimens. Some fine naninized or dwarfed conifers from Japan excited much interest. They were fine specimens, and it was a comfort to find none was claimed to be more than 100 years old, instead of the incredible ages often assigned to these twisted little monsters. Some vases not over 12 inches in diameter contained miniature pine forests of 50 trees. The pines were less than two feet high, bright and healthy.; one or two bearing cones. Clipped bay trees in large sizes made a very noticeable feature, the formality of which was well balanced by many particularly well-grown rubber trees. The premiums were very generous, and fortunate exhibitors were well rewarded for their trouble. This first effort of the New York Florists' Club was very successful, and similar exhibitions are likely to become a permanent feature of its operations.

W. V. F.

One Man Saved

From a wreck will attract the world's attention to the life-saver. Yet let the life-saving be continued every day, and very soon it attracts no public attention. If the scene of the saving of one life by that life-saving remedy, Dr. Pierce's Golden Medical Discovery, could be made to stand out alone, like a picture on a screen, it would attract the notice of the whole nation. By a curious contradiction the very frequency with which the "Discovery" saves life, robs the fact of general interest. For obstinate coughs, bronchitis, weak lungs, and other diseases of the respiratory organs, "Golden Medical Discovery" is the one medicine which offers certain help, and almost certain cure. It contains neither alcohol nor narcotics.

"Only for Doctor Pierce's Golden Medical Discovery I think I would be in my grave to-day," writes Mr. Moses Miles, of Hilliard, Uinta Co., Wyoming. "I had asthma so bad I could not sleep and was compelled to give up work. It affected my lungs so that I coughed all the time, both day and night. My friends all thought I had consumption. My wife insisted on my trying 'Golden Medical Discovery.' I have taken four bottles and am now a well man, weighing 185 pounds—thanks to Dr. Pierce."

The People's Common Sense Medical Adviser in paper covers, is sent free on receipt of 21 one-cent stamps to pay the cost of mailing *only*. Address Dr. R. V. Pierce, Buffalo, N. Y.

WROUGHT IRON PIPE

Good condition, used short time only; new threads and couplings; for Steam, Gas or Water; sizes from ½ to 12 inch diameter. Our price per foot on ¾ inch is 3c; on 1 inch 3½c. Write for free catalogue No. 57

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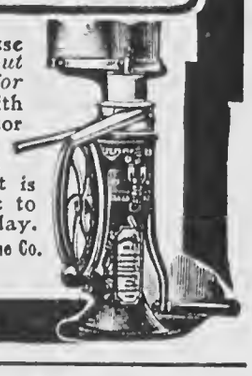
W. 35th and Iron Sts., CHICAGO.

Let us lend you a skimmer

to prove that you can do your skimming easier, better, cheaper, with a

NATIONAL Hand Separator

We want you to use one 10 days (*without paying a penny for it*). Compare it with any other separator and return it in 10 days if you're not convinced that it is the best machine to buy. Write to-day.
National Dairy Machine Co.
Newark, N.J.



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Furnished with BLOWER *or* CARRIER, *as desired.*
GUARANTEED to be the BEST.
E. W. Ross Co., Springfield, O.
Send for Catalogue No. 44
51 Years on the Market.

LIGHTNING WELL MACHY IS THE STANDARD
STEAM PUMPS, AIR LIFTS, GASOLINE ENGINES.
WRITE FOR CIRCULAR D3
THE AMERICAN WELL WORKS
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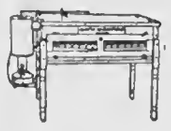

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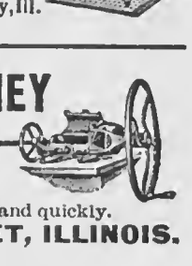
Fully Warranted. Free Catalogue.
L. A. BANTA, Ligonier, Ind.

$5 FOR AN INCUBATOR. It holds 50 eggs and is equal to any incubator made for hatching. Costs less because it's smaller. THE 50 EGG BANTLING SPECIAL is guaranteed as to results, if you follow instructions. 20th Century Poultry Book explains all. Sent for ten cents Write for it at once.
Reliable Inc. & Brdr. Co. Bx. B101, Quincy, Ill.



BONE CUTTER MONEY

The money spent for the Adam Ball Bearing Green Bone Cutter is money in your pocket. We will convince you of this if you send for our Illustrated Catalogue No. 33. The Adam cuts clean, easily and quickly.
W. J. ADAM, - JOLIET, ILLINOIS.

WELL DRILLING Machines

Over 70 sizes and styles, for drilling either deep or shallow wells in any kind of soil or rock. Mounted on wheels or on sills. With engines or horse powers. Strong, simple and durable. Any mechanic can operate them easily. Send for catalog.
WILLIAMS BROS., Ithaca, N. Y.

DID YOU FORGET?

In time of need—for Granulated Scratches or Grease Heel, just developing or in the chronic state—turn to

Veterinary Pixine.

It absorbs inflammation, penetrates to the bottom of sore, stimulates and builds up new cellular tissues, counteracts effects of impure blood softens the fissures and sloughs off proud flesh. It is the most natural, scientific and vital healing ointment made. Money back if it fails to cure any sore, case of speed cracks or skin disease no matter how aggravated, what the cause or how long standing.

It is an antiseptic, soothing ointment of marvelous penetrating healing power.

2 oz., 25c.; 8 oz., 50c.; 5-lb. pkge., $4.

At all druggists and dealers or sent prepaid.
Money back if it fails.

TROY CHEMICAL CO., TROY, N. Y.

Live Stock and Dairy

THE BEST SHEEP FOR ORCHARDS.

I have a small orchard of about an acre, and have been thinking of trying Mr. Woodward's plan of putting sheep in to eat fallen fruit. What breed ought I to get? I want them to be quiet and peaceable, and, of course, expect them more than to pay their way. I started Alfalfa last Spring. If it should prove a success, how would it work to feed the sheep Alfalfa hay instead of bran? READER.

I should not attach much importance to the breed selected for this purpose. Any one of the common middle-wool sheep, such as Shropshire, Oxford, etc., will do. Of course the Merino is more restless than the middle or long-wool breeds. Gentle, quiet handling of sheep will nearly always result in the flock becoming very tame, and easily managed. The writer has had a small flock of sheep in an orchard all this past Summer, and it has been a decided benfit to both sheep and trees, for all fallen fruit has been eaten, and so insects have been destroyed in large numbers. Alfalfa hay is largely fed to sheep in Colorado, they being fitted for the Chicago market. The Colorado Experiment Station reports that a lamb eats about 400 pounds of hay and 120 pounds of grain. The lamb is put on Alfalfa for about two months, after which grain is gradually fed, until about a pound a day is given. Bran is not needed so much when Alfalfa is used, and cracked corn or wheat are used instead. Of the two grains, I should give corn the preference over wheat. If the idea is to feed the Alfalfa hay in Winter, instead of bran, that will do, but to keep the sheep in the most profitable condition a light feed of corn should be fed beside, and also a bit of oil meal will give good returns on the investment. C. S. PLUMB.

No breed equals the common American Merino for this purpose. The English or so-called mutton breeds are not good scavengers; they have not been "brought up that way," and put into an orchard 10 or 15 to the acre could hardly be fed enough to make them thrive. Besides this, they do not take as kindly to a diet of weeds, sprouts, fallen apples and bran as do the Merinos. There is another objection to the mutton breeds; they are far more apt to injure the trees by bunting and rubbing against them. Any sheep, if fed every day, will be quiet and peaceable, but the Merino excels all others in tractability. Where one feeds them regularly they will get so tame as to be all about the feeder and hard to keep from under foot. As a part of the supplemental food the Alfalfa would be first-class, but it would not be best for the orchard. The manure resulting would be too rich in nitrogen and would be deficient in both potash and phosphoric acid. While bran is high priced and seems a very dear food for sheep, yet to feed in the orchard there is nothing that can take its place. In a ton of Alfalfa hay there would be about 46 pounds of nitrogen, about 10 pounds of phosphoric acid, and 29 pounds of potash, while in a ton of wheat bran 53 pounds of nitrogen, nearly 58 pounds of phosphoric acid, and 33 pounds of potash, so although bran nowadays is pretty high in price, it is by far the most desirable supplemental food for use in an orchard. I would be glad to have our inquirer put 15 Merino ewes into that acre of orchard, provide them with an abundance of water, and feed them enough Alfalfa hay and wheat bran to keep them thriving, and next Fall report appearance of orchard and character of fruit. J. S. WOODWARD.

I FEED hens and pullets scorched wheat and cracked corn, with plenty of separated milk. Pullets that are expected to lay in Winter should have good care from first start. If allowed to shift for themselves in Summer and Fall they will not lay in Winter. W. W.

East Clarendon, Vt.

PROFITABLE PENNSYLVANIA HENS.

Our hens are mostly B. P. Rocks crossed with the Buff Leghorns. I think they make as good layers as we find for both Fall and Winter. One thing you must do if you expect a hen to lay is to take care of her, and do it from the time she hatches until she dies, just as you must do with anything you expect to make money from. From the time mine are hatched in Spring(and the earlier they are hatched the better) I see that they are well fed; not all they can possibly stuff, but enough so that they will start off bug-hunting with that contented little peep that tells of a happy chick. They always have all the water they can drink. I take no special care of my pullets until the roosters are large enough to shut up and fatten; then I shut the roosters by themselves and let the pullets run. In the morning I give them (the pullets) a light feed of bran and meal, about two-thirds bran to one-third meal, mixed with water or milk, but not too much milk. At night they get a feed of wheat, corn and oats, using buckwheat instead of wheat when I haven't the wheat, and when I have both mix them. I feed one-half wheat, one-fourth corn and one-fourth oats; sometimes less oats, and more of the others. Some object to the oats, but I think it makes the hens stronger. This is what they get in Fall.

In Winter they get about the same in feed, only more of it, and I usually feed the soft mash at night, and have it warm. I often cook them little potatoes or steam them a kettleful of oats, buckwheat and wheat. They like that the best, and I fix it about three times a week, stirring in enough bran and meal to make it like their soft feed. We send to the meat markets in the city and get the steamed and dried scraps that are prepared for hens, and feed that two or three times a week, a quart for 20 or 25 hens in their soft feed. My hen roost has two parts and as my hens all run together I use one part to feed them in and in the other put about six inches of chaff of some kind, in which I scatter all hard grain to make them scratch. That is why I feed whole grain in the morning, so they will be busy all day. They only need to sit on the roosting pole at night. They have warm water to drink, all they want; oyster shells and a box of road dust to wallow in. At noon they get cabbage or some other raw vegetable to eat, and they will eat almost anything that is green in Winter. Don't let them out on the cold ground or in the snow.

I do not expect pullets to lay before they are 5½ or six months old, as they must have time to get their growth. My old hens get about the same care as the pullets. I always sell off all or nearly all of those that are two years or over, and keep only the yearlings and pullets. We find it pays better; as the hens get older there are always some that will not lay, and only eat up the profit of the others. We keep the roosts as clean as possible, well ventilated, but no drafts. The hens are as nearly healthy as we can keep them, and we trust to nature to do the rest. We usually get eggs, if not as many as we would like, but the pullets must have time to grow, and the old hens to moult. E. L. B.

Hop Bottom, Pa.

The Holstein-Friesian Test at the Pan-American.

The arrangements for this test were made at short notice, as it was not decided to hold it until about two months before the week which was to be devoted to the cattle exhibit at the Pan-American. It was evident that cows for such a test should be in fresh milking condition. No cows had been bred with this object in view, and it is well-known that all breeders avoid having their cows freshen during "dog days," except for some special exhibit. The committee finally found 15 cows, four of which had calved. They were all put in temporary quarters near Buffalo, where the remaining calves were dropped. They were kept there until September 9, when nine of them were selected for the test and driven to the Pan-American grounds. The cows and their products were as follows:

Names and H. B. numbers.	Milk, lbs.	Fat, lbs.
America 2d's Pauline DeKol 37096	574.1	15.019
Katc Spray 33957	441.3	11.786
Piebe Queen 29065	419.8	13.037
Floa 3d 28564	436.8	12.532
Lyntje's DeKol 25070	388.5	11.421
Pauline Whitney 39946	366.4	12.591
Orleans Maid 45008	375.	11.028
Clothilde Lunde Artis 39867	407.4	13.358
Altoana Pietertje A. 54656	392.1	11.239
Bodora 2d's DeKol 44418	378.9	11.430
Shadybrook Gerben Parthenea 46008	450.4	12.923
Dirkje Von Holingen 3d 35256	395.6	11.626
Woodland Iosco 39699	355.6	10.254
Total products	5381.6	158.244

S. HOXIE.

Breeders' Directory

BOZENDALE HERD Brown Swiss Cattle. Calves of both sexes for sale. Milk and butter strain. D. H. COOK, M. D., Albany, N. Y.

Short-horn and Polled Durham Calves, must go. Bulls, $26.50; Heifers, $18.50; crated. 3 to 6 mos. SHOEMAKER & CO., Harrodsburg, Ky.

JERSEY BULL Yearling—registered, from a great show cow; almost faultless, by a producing sire Farmer's price R. F. SHANNON, 907 Liberty St., Pittsburg, Pa.

JERSEYS. ST. LAMBERT and Combination. For sale 7 Cows. 14 Heifers, 25 Bulls. S E. NIVIN, Landenburg, Pa.

123 HOLSTEINS all ages, for Sale DELLHURST FARMS, Mentor, Ohio.

Holstein-Friesian Bull ready for service, and a fine lot of Bull Calves. Best of breeding, and from deep producing families. C. K. RECORD, Peterboro, N. Y.

FOR SALE—Holstein-Friesian Bull Sir Tanganoxie No. 26210 H. F. H. B. First Prize Winner. Beautiful animal; good-natured. Age, two years nine months. ORMSBY HILL FARM, E. W. SCHUCHARDT, Mgr. Manchester, Vt.

FOR SALE—Thoroughbred HOLSTEIN-FRIESIAN CATTLE of the best families. Also, 30 high-bred Bulls at reasonable prices. Write the MAPLES STOCK FARM, Binghamton, N. Y., WM. ROOD, Prop

For Sale—PUREBRED HOLSTEIN-FRIESIANS from best families. Two registered bulls ready for service and bull calves. Also have purebred BERKSHIRE SWINE and SCOTCH COLLIE PUPS at low figures Write for breeding and prices. W. W. CHENEY, Manlius, N. Y.

AYRSHIRES, Oxford sheep and Cheshires for sale Bull calf two weeks, heifer calves two weeks and six months, young boars, fit for service. Sows ready to breed, pigs in pairs not akin. Ram and ewe lambs, older ewes. All stock eligible to registry. Reasonable prices. Stock fine. HOMER J. BROWN, Harford, Cortland County, N. Y.

Berkshire, P. China and C. White Pigs; all ages; eligible to register, $5 ea. and up. Also B. P. Rocks and W. Holland Turkeys. W. A. Lothers, Lack, Pa

LARGE ENGLISH BERKSHIRES—Three young boars fit for service. W. DORMAN, R. D. No. 1, Stanley, N. Y.

O. I. C. PIGS (Silver Strain) either sex, eight weeks old, $5 each. J. O. WADSWORTH, Wolcott, N. Y.

Reg. P. Chinas, Berkshires and C. Whites.

Choice Pigs, 8 weeks old, mated not akin. Bred Sows and Service Boars. POULTRY. Write for hard times prices and free circular. HAMILTON & CO., Rosenwick, Chester Co., Pa.

SHROPSHIRES. A few Yearling Rams left; they are bargains to quick buyers. Also in lamb Ewes at reasonable prices J. C. DUNCAN, Wawanund Farm, Lewiston, N. Y.

RAMS—Wool-Mutton, Golden Fleece Shropshires. Special low prices now. Catalogue 47 free. Write to-day. MAPLEWOOD STOCK FARM, Maplewood, Mich.

Cheviot Sheep. We have 50 Thoroughbred Cheviot Sheep for sale at reasonable prices, both Ewe and Ram Lambs, yearlings and full-aged, that only need to be seen to be appreciated. Good-sized and hardy; all registered in the American Sheep Society. Eureka Stock and Poultry Farm, HENRY VAN DRESER, Proprietor, COBLESKILL, N. Y.

ANGORA GOATS—Delaine Bucks, good stock, low prices. Large circular for stamp. ED. W. COLE CO., Kenton, O.

Ferrets—Get my prices before buying. Illustrated Book free. O. E. HEMENWAY, Box R, New London, O.

FERRETS—CHOICE STOCK for sale at all times New book sent free. Address W. J. WOOD, New London, Ohio.

2000 FERRETS. First-class stock. Some Trained. New price-list free. N. A. KNAPP, Rochester, Lorain Co., O

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All kinds of lying and misrepresentation upon the part of disgruntled would-be competitors and imitators cannot change or detract one iota from any one of these facts.

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DUTCH BELTED CATTLE.

Their Pan-American Record Explained.

In your article on the great Pan-American dairy test in THE R. N.-Y. of October 12, you do the Dutch Belted cattle an injustice. True, this breed is "close to the tail of the race," and doubtless many people have inferred that the reason was about as you stated in your article. But there are other reasons. Some may even think that there are *no* good cows in this breed. To such let me say that Cyrene No. 315, an old cow, that I sold for beef in January, 1899, gave 196 quarts of milk in one week, in June, 1897, with no grain, and only very ordinary pasture. Her daughter, Fern No. 781, now six years of age, has always calved in December; but, should she come fresh in Spring, I think she would give as much or more than her dam ever did. Lady Baird No. 82 gave 32 quarts per day at the World's Fair. Queen gave 70 pounds a day for seven days on pasture alone, and milked 14 years without going dry, breeding yearly. How much longer she would have bred yearly and milked continually cannot be known, as she was burned to death when 16 years old.

You may ask: "Why were not such cows selected for the Pan-American Model Dairy?" There are probably not more than 200 mature cows of this breed in America. The owners of many of these exhibit stock at the fairs annually, and have their cows come fresh at that time, that they may be in good show condition. Other owners, like myself, make a specialty of Winter milk and also have their cows to come fresh in the Fall. Breeders of other breeds of cattle planned for the contest a year in advance and had their best cows freshen the last of April of this year. Then some cattle associations bought 10 of the best cows of their respective breeds that could be procured, that would be fresh the last of April and sent them to the Exposition grounds a few days before May 1, and some of them actually calved after their arrival. These cows were tested and the best five selected for the Model Dairy, and were rested from their journey ready for business when the contest began. Understand me; I am not charging other cattle associations with underhand methods. They only did what in my opinion the Dutch Belted Cattle Association should have done, but neither the Dutch Belted Association nor individual breeders of Dutch Belted stock made any previous preparations for the contest, and two of this breed did not reach Buffalo until the contest was three weeks under way. The Dutch Belted cows were not strictly fresh, but had been milked two or three months, and some of them were so old as no longer to be prime cattle.

In substantiation of the above statements I will say that early in April I asked Mrs. Servin, who owns one of the largest herds of Dutch Belted cattle, and who exhibits at many fairs, and is also a member of the executive committee of the Dutch Belted Cattle Association, whether any of her cows would be in the Model Dairy. She replied under date of April 8: "I believe that the Dutch Belted cattle will not compete. Compared with the other breeds we have so very few cattle to select from that it is doubtful whether we could make a good showing. Personally, we could not possibly enter more than two, as others will not be fresh at that time." After this another breeder concluded that the Dutch Belted breed must make a showing in the Model Dairy. He had one cow that he thought would do to enter, and he got Mrs. Servin's consent to enter her two; then he engaged Mr. Sanders to look after this breed during the six months' contest at Buffalo. But there were still needed two cows to make up the five required, and these two were not forthcoming. The first of May was almost at hand, and other fresh cows could not be found, so he added two more from his own herd. Under date of May 1 he wrote me: "Sanders took three of my cows to Buffalo—not what I would have liked to send, but my best cows are too near dry. I gave him instructions, if any other breeder sent cows, to dispose of two of mine, and only keep one in the Model Dairy."

Mr. Richards, secretary of the Dutch Belted Cattle Association, who is an expert judge of dairy cattle, and who has seen most of the mature cows of this breed, had written of one of my herd: "I don't know of a better cow for the Model Dairy than Lady of Warren." Then I was requested to enter her. But she did not come fresh till July 3, and, of course, this practically barred her from the contest. The only cow I had to become fresh this year earlier than that was Lady of Warren's daughter, Electress, a two-year-old heifer, who calved May 10. She was due—counting nine months—April 28. Mr. Sanders and Superintendent Converse did not think the cows representative animals of the breed, and renewed the search for other cows. On April 29 I received four telegrams from them and others, and they urged me to forward my heifer. I refused to ship her before she calved. On May 1 Mr. Sanders came to my place to see her. He decided not to take her because she, though of good size and very promising for a two-year-old, was not as large as the mature cows, and he liked to have the cows of the Model Dairy herd of uniform size. Here is where outside appearance took the place of performance! In the meantime Mrs. Servin got the idea that the intention to enter Dutch Belted cattle in the Model Dairy had fallen through, and was surprised about that time to receive a telegram from Buffalo stating that her cows had not yet arrived. No wonder, they hadn't started. Well, after unavoidable delays they were started, but did not get there to enter the contest till May 21—just three weeks behind time. Considering these and other facts it is no wonder that the Dutch Belted cattle are "close to the tail of the race." It would be about as reasonable to sow grain on the unplowed earth and expect a full harvest as to expect any but the best cows of any breed to win laurels in such a contest. The color characteristic of these cattle was established hundreds of years ago, and it is scarcely ever that it is not transmitted. No, we don't have to reject our best animals because they are "off color."

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Uncle Sam is Out Again with His Blandest Smile.

HE WON

THE GOLD MEDAL

AT THE

Pan-American Exposition

in spite of the "would-be competitors," fiercest opposition, who imagined that everything was fixed to come their way, and who had a lawyer in their interests almost constantly at Buffalo; but, oh! what a disappointment when they found that they were not the "Only Pebble on the Beach."

Our "would-be competitors," the De Laval Separator Co., rehearse at great length their view of how the U. S. Separator beat them at the Pan-American, but the fact remains just the same that the U. S. did beat them by its work in the Model Dairy.

Now, to draw attention away from the actual workings of the Separators, these "would-be competitors" begin to shout "fire" and talk much about sparks that caught in the roof of some boiler-house instead of giving the actual tests of the Separators.

These "would-be competitors" go back to the World's Fair, Chicago, and state "they received the gold and only medal awarded by the regular jury." Everybody who knows anything about that Fair knows that the De Laval Company received no Gold Medal, and all they got was a Bronze Medal.

It is true they did have the jury fixed to their liking, and that jury turned everybody down but themselves, but when it was shown to the Fair officers that this jury was made up of De Laval agents and partisans, they immediately appointed a new jury, and that jury **awarded the Vermont Farm Machine Company twelve medals of highest merit** on its different articles of manufacture; twelve times as many awards as our "would-be competitors" the De Laval Company got.

At Paris, 1900, the De Laval Separator Co. had no exhibit or Separators. Their foster-father, the Aktiebolaget Separator of Stockholm, Sweden, did have a big exhibit, but no prize was awarded them by the regular or class jury. When the class jury was examining the separators, our representative urged that the separators be tested to prove our claims of superior merits, and also presented a written request that such tests be made, but was informed by the jury that the De Laval Company's foster-father, the Aktiebolaget Separator, objected to tests, claiming that it would take six months (three in Winter and three in Summer) to make reliable tests.

Every one knew this was only for a bluff to prevent tests, and the jury so looked upon it, and gave the Aktiebolaget Separator no prize, and the official list of the prizes published and distributed at the Paris Exposition did not contain any award to the Aktiebolaget Separator or the De Laval Separator Co.

The Aktiebolaget Separator Co., of course, were dissatisfied, and appealed to the Grand or Superior Jury. They got the King of Sweden to make a personal appeal to the jury for them when he was on a visit to the Paris Exposition, and also the Swedish Minister to France, and the Swedish Commissioner-General to the Exposition made personal appeals to the Grand or Superior Jury in behalf of the Aktiebolaget Separator and its child, the De Laval Company, and made it a political matter, so that it is now reported that when the revised list of prizes, which is not yet published, is issued, it will contain notice of an award to the Aktiebolaget Separator Co.

The above statement can be proved as correct. The De Laval Company and their foster-father had to get the King and the Minister and the Commissioner to use their political influence before they could get an award at Paris, and then only on an appeal to the Superior or Grand Jury.

We ask the dairy public how much that reflects on the merits of the De Laval Separator, and who it is that does the "after pulling and hauling which unsuccessful exhibitors always resort to?"

The United States Separator has been awarded the GOLD MEDAL or the Highest Prize at EVERY INTERNATIONAL EXPOSITION where it has been exhibited since its manufacture.

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And, rising, he swore
This was more than his cars could get
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"Is your daughter learni[illegible] play by note?" "Certainly not," [illegible]ered Mrs. Cumrox, a little indignan[illegible] "We pay cash for every lesson. [illegible] idea!"—Washington Star.

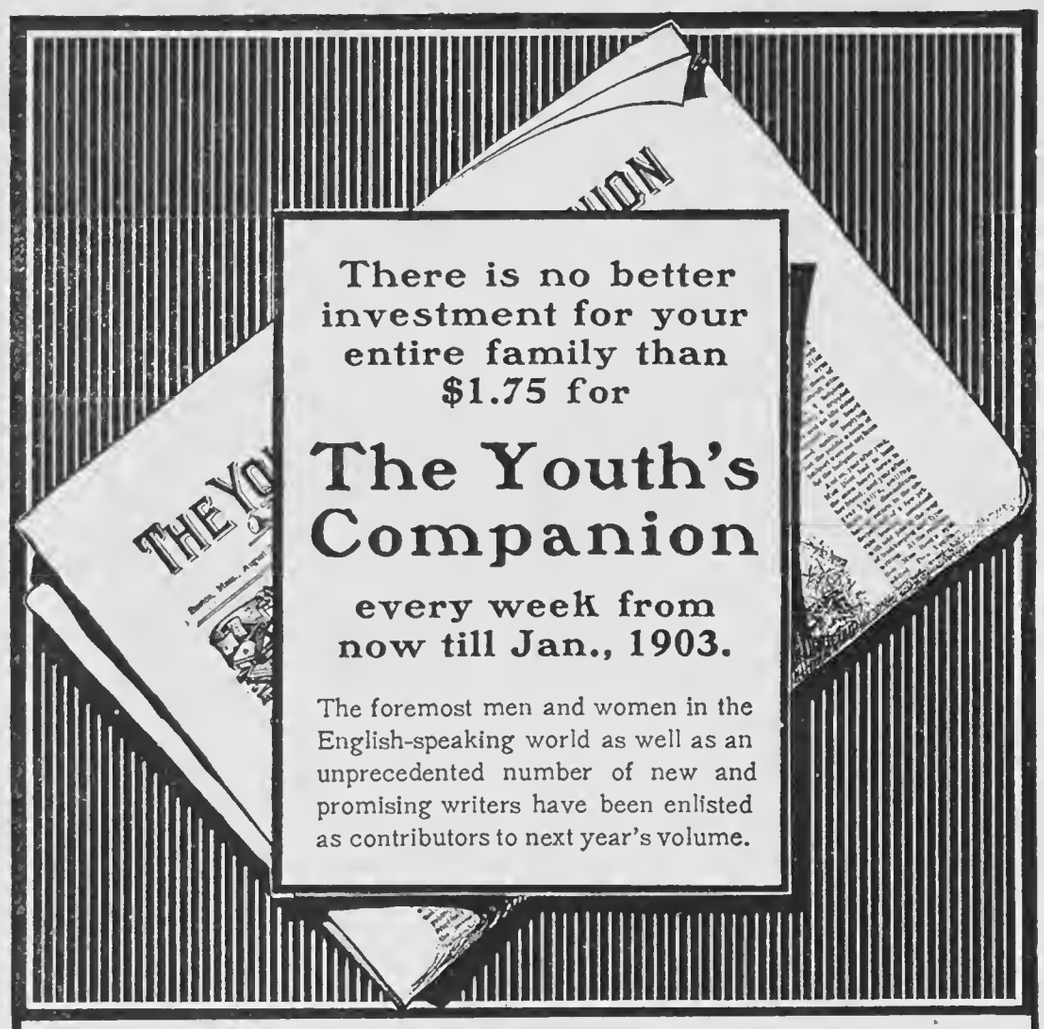
GLADYS: "What's beco[illegible]f Mabel?" Belle: "She's joined the [illegible]at majority." "You don't mean to say she's dead?" "Oh, no! Married a man named Smith."—Tit-Bits.

MRS. MILDLY: "Matches have gone up two cents a box. I wonder why that is?" Mr. Mildly: "I suppose it is because there are so many strikes."—Lippincott's Magazine.

TOWNE: "Do I understand you to say that Spender's case was really a faith cure?" Browne: "Yes. You see, the doctor and the druggist both trusted him."—Philadelphia Press.

TEACHER: "What led Columbus to conclude that the world was round?" Bright Boy: "Well, his experience with it proved that it was anything but square."—Albany Telegram.

LITTLE ETHEL: "Mamma, I know why it isn't safe to count your chickens before they're hatched." Mother: "Why, dear?" Little Ethel: "Coz sum of 'em might be ducks."—Ohio State Journal.



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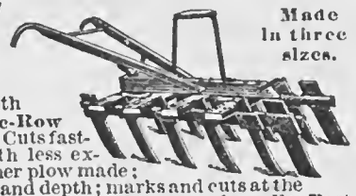

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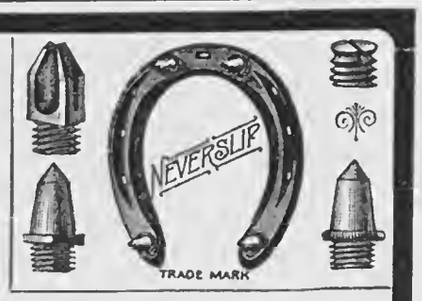

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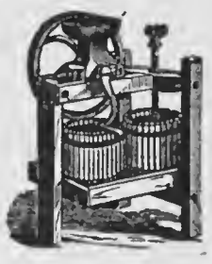

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2702. NEW YORK, NOVEMBER 9, 1901. $1 PER YEAR.

APPLES INJURED BY SULPHUR FUMES.

HOW THE DAMAGE IS DONE.

Results of Practical Experiments.

Since the season has arrived when the fruit growers are beginning to consider the questions of storage, and, more immediately, the preparations of cellars and storehouses, any bit of information relating to the subject of storage may not be out of place. Here I wish to bring up a point regarding the fumigation of cellars. At the last meeting of the Western New York Horticultural Society I had occasion to observe some Northern Spy apples, which were injured in a peculiar manner. The specimens were submitted by a fruit grower from Medina, who stated that a serious loss had resulted to some stored apples from this injury. The injury consisted of depressed, pale, straw-colored areas over the entire surface of the skin. Some of the spots were small and rounded, but over a large part of the surface they had run together, forming large sinuous blotches. The accompanying picture, Fig. 342, page 754, will give a good idea of the character of the injury, although it was not possible to photograph the specimens until several days after they had been received, and they had consequently begun to decay. When cut open, the flesh just beneath the discolored skin was dead, and of a dry, spongy consistency. Otherwise the flesh was uninjured, but decay soon followed in the spots.

These apples had been sprayed with Bordeaux and Paris-green in the usual way, and were in sound condition when placed in cold storage. Here some of them had begun to decay, and to prevent this the cellar had been fumigated with sulphur, after which the injury described appeared. The spraying with Bordeaux is mentioned because an injured Baldwin was submitted which was said not to have been sprayed, and the injury in the first case was attributed to the fact that the apples had been sprayed while on the tree. From the nature of the treatment, it was not difficult to find the cause of the injury, but since neither the grower nor several fruit men present seemed to be acquainted with its cause, I will take this opportunity of explaining the effect of sulphur fumes on apples. To give the matter a fair test, the following little experiment was performed. About a dozen apples of Northern Spy, Baldwin and Mann were placed in a vessel containing a little over a cubic foot of space. Some were sprayed with water, and a few were covered with Bordeaux Mixture, while the others were left dry. About 10 grains of sulphur were burned in the vessel, the fruit being subjected to the fumes for nearly an hour. At the end of this time the Northern Spies were seriously injured, the whole surface being covered with spots. See Fig. 341, page 754. The Baldwins were less severely injured, while the Mann apples were practically untouched. These differences in the extent of the damage may be due to varietal differences in the apples, or to variations in the degree of ripeness. The presence or absence of water on the surface of the apples caused no perceptible difference, although the drops showed strong acid reaction after the experiment. It is needless to say that the Bordeaux had no effect whatever. The skin of the apple is generally impermeable to the fumes of sulphur. By an examination of Fig. 341 it will be seen that the injured areas appeared around the lenticels or "spots" of the apple. These are pores, which exist for the purpose of permitting gaseous interchange between the outer air and the interior of the apple, the cuticle generally being impermeable to gases. Note the large injured areas at points where the skin has been mechanically punctured.

The probable direct cause of the damage done by sulphur is the formation of sulphurous acid. Whenever fumes of burning sulphur come into contact with water or water vapor this acid is produced. To this reaction the slight disinfecting power of sulphur is due. The acid is formed from the moisture in the flesh of the apples after the fumes penetrate the breathing pores. From the foregoing, it is clear that cellars containing fruit should not be fumigated with sulphur. If it is desired to kill molds and other fungi, the cellar should be thoroughly cleaned and fumigated before the fruit is put in. This will prevent such losses as that occasioned in this instance.

H. HASSELBRING.

Geneva (N. Y.) Experiment Station.

R. N.-Y.—We are glad to have this clear explanation of the effects of sulphur fumigation. There have been many efforts to destroy scab and rot on living fruits and vegetables by burning sulphur. Most of them have failed.

ROSE CLOTHILDE SOUPERT. FIG. 340. SEE RURALISMS, PAGE 758.

APPLE-GROWING ON GRASSY HILLSIDES.

HOW GRANT HITCHINGS RAISES FINE FRUIT.

Sod Orchards and Low Heads for Early Bearing.

It was in the latter part of September that Prof. Beach, of the Geneva Experiment Station, and I went to Syracuse, on our way to South Onondaga, to see with our own eyes the orchard of Grant Hitchings. Col. A. C. Chase, of Syracuse, drove us out behind a lively pair of young horses. It was a beautiful drive of about 12 miles, south of Syracuse, through the Onondaga Indian Reservation, and among the hills of Onondaga County. At first glance, one would not pick this out as an ideal fruit-growing section, for the land is very rough, and the average Niagara or Orleans County fruit-grower would be rather at a loss what to do with it. As we drove along, Col. Chase called attention to the numerous apple seedlings along the roadside, some of them very old trees, and we found that in many places the hillside is spotted with them, even competing with the wild second growth of the woods. On some of the hillsides these natural-growth apples are so thick that if top-grafted a fair orchard would result, and we noticed as we passed by that many of the apples were of good size and color. In fact, close observation would lead one to suspect that the soil and conditions are peculiarly adapted for apples.

Mr. Hitching's orchard was pointed out as we were in sight of the place, and the first thing that we noticed was that the trees did not appear to have been planted regularly in rows. The results that Mr. Hitchings obtains from his method of apple culture are almost beyond belief, and must be seen to be appreciated. We saw 11-year-old trees that were yielding 15 to 18 bushels of fruit, and apple trees bearing paying crops at six years from setting. Prof. Beach said that he could hardly believe the statements made regarding this orchard, until he had seen it for himself, and found that they had not been exaggerated in the least. It is a mistaken idea that Mr. Hitchings's trees make little growth. His idea is not to force that growth. The young apple trees set over one year were making a growth of from 18 inches to two feet, equal to that of most young cultivated orchard trees. Of course the heavy bearing of the older trees will check the growth to a great extent. The foliage at the time of our visit was very large and green, and gave one the impression of luxuriant growth. One of the peculiar features of Mr. Hitchings's method of culture is setting in sod. His bearing orchard is in straight rows one way, and the other way at irregular distances, so as to avoid the ridges. He stated that the trees did not do well upon them, and he had tried to place the trees as much as possible in the depression upon the side hill. There was no cultivation; the first 10 years the trees are mulched with the hay cut between and around the trees, after that letting grass lie where cut.

The trees are headed low, many of their branches starting at 18 inches to two feet from the ground. No pruning is practiced. Whether it is the local conditions or the result of Mr. Hitchings's culture methods that cause his trees to bear at such a young age, I am unable to say, but it seems to me that the

secret may lie in one or more of the following points: Sod culture; the sod taking up the elements of fertility in the Spring, prevents an excessive wood growth. This grass being cut in early Summer, decays and gradually gives up its fertility during late Summer and Fall, when it is most needed fully to develop and strengthen the fruit buds and carry to maturity a crop of apples. He does not trim; that is, cut back the young growth of the tree, or cut off any branches except those that are necessary to the good health of the tree. This in itself is conducive to early bearing. I have noticed that if the end of young growth is not cut off, the terminal bud is likely to make a rather short growth the year following, and the side buds to develop into fruit spurs. If the terminal bud is cut off, several of the side buds will send out strong, thrifty shoots, while the buds below fail to develop. It may be that the low heading of the tree has something to do with the early bearing and high color of fruit. It is a question whether these apple trees that are headed low bear heavy crops before ordinary trees begin to fruit at all, or will ever grow as large as trees grown in the usual way. Mr. Hitchings tells us that as a rule they bear annually. It seems to me that his 11-year-old Pewaukee trees were of about the ideal size, 12 to 15 feet high, and yielding about 18 bushels of apples to the tree, three-quarters of which could be picked from the ground.

These are some of the advantages of the method of culture. Early bearing, easy picking, easy spraying, easy to fumigate if necessary, high color, annual crops on young trees, a short fall for the fruit upon a mulch, almost all windfalls salable as picked apples. It requires less labor and attention than cultivating and sowing and plowing under of cover crops, and the results that he gets surpass anything that I have seen in the apple-growing line. Just think of one to two bushels of Spy, and double that quantity of Duchess and Wealthy on a six-year-old tree; nine-year-old Greenings and Baldwins, with five or six bushels of fruit, and trees of many more varieties at that age, all bearing. We could even occasionally find apples on trees that had been set only three years. Would it be advisable for apple-growers over New York State to adopt Mr. Hitchings's methods, and would they get the results that he does? I don't know, but believe that it is quite possible, and would advise any fruit-growers who live among the hills to go and study his methods and conditions. Go when the fruit is on the tree, and see the results. I know that those sturdy, short-legged trees had a business look, and filled baskets with fruit, while trees grown in the usual way were getting size. It certainly looks as though one need not wait until an apple orchard is 20 years old for a crop of fruit. V.

A NEW SCHEME FOR ADULTERATING MILK.

The following item is going the rounds of the press: "A new milk adulterant has been discovered in use by the dairy inspectors in Minnesota. It is called viscogen, and is composed of sugar, lime and water. It has the effect of making milk appear richer than it is, as the lactic acid in the milk turns the lime to a thick, white substance that assimilates with the milk, improving its looks without injuring its taste." We sent this to Dr. S. M. Babcock, the inventor of the famous milk tester, and he replies as follows:

Viscogen is prepared by dissolving caustic lime in a solution of cane sugar, and was first recommended by Dr. Russell and myself as an agent which could be used without detriment to health for the restoration of the consistency of Pasteurized cream, which is very much thinner than natural cream, containing the same amount of fat. In natural cream the fat globules are to a considerable extent grouped together in masses, containing all the way from two or three to several hundred globules, while in Pasteurized cream the globules are uniformly distributed. The thinner appearance of Pasteurized cream is due to this fact. It was found that viscogen caused the fat globules to become grouped in a similar way to natural cream, and that the consistency was in this way restored. The amount of viscogen required to accomplish this is very small, so that the lime introduced is scarcely more than the difference found in natural milks from different sources. Before publishing our bulletin, leading physicians were consulted regarding the sanitary effect of this addition, and without excepton, we were told that it did not injure the cream; in fact, most physicians recommend the addition of lime water to milk for children and invalids, as it is supposed to promote its digestibilty. We also consulted legal authorities, and were told that viscogen could not be considered an adulteration if the consumers are informed of its use. Under these conditions only have we recommended it. The customers of the University Creamery all prefer cream treated in this way to natural cream. Wherever viscogen has been used in the manner recommended by us, there seems to be no objection either from a sanitary or legal point of view. In this respect it differs widely from the ordinary preservatives and adulterants that are added to milk. I presume, however, that in many cases unscrupulous parties have used it to deceive their customers regarding the richness of cream, and wherever this has occurred the penalty for adulteration should be strictly enforced, although no injury to health is likely to result from such practice. I very much regret that this substance, which was originally intended only to benefit the consumer, has been misused in this way. S. M. BABCOCK.

CAN WE EAT CORN CAKE AND HAVE IT?

The question of silage as Winter food for farm stock is quite an important one with me, as it also is with thousands of farmers who have silos, and fill them

SULPHUR SPOTTING OF NORTHERN SPY. Fig. 341.
One-half Natural Size. See First Page.

nearly every Fall. It is also an important question with thousands of farmers who have no silos, and are from year to year, wintering their stock in the old way, on dry fodder, with, perhaps, a little grain to cows that are in milk. This latter class of farmers cannot be said to be *all* non-progressive, because a great many of them are watching and noticing the varied success of those who have, and use silos, and as they become convinced of their utility and economy, proceed to build, and fill them on the most approved plans and practices obtainable. The practice of filling silos with corn in the glazed state, running the whole product through the cutter, ears and all, is getting to be pretty well understood, and the measure of success where the silo is tight, and the silage reasonably well tramped, is very good, and farm stock, including milch cows, dry cows, store cattle and horses, will relish and thrive on it, if a little straw is added to the ration. But the greater question with me is, how to cut and preserve dry cornstalks with the ears off, so that the product will come out of the silo in an eatable and appetizing condition. If you will give this question to Prof. King, or some other of your practical and valued contributors (who as yet have said little or nothing in their articles on this subject), and who will give us practical directions now to preserve cured cut fodder in silos, you and they will deserve and receive the thanks of thousands of farmers who are anxious to learn how to practice economy in the matter of wintering farm stock.

EFFECT OF SULPHUR FUMES ON APPLE. Fig. 342.
One-half Natural Size. See First Page.

I have tried it with more or less success by cutting quite short, say half an inch, wetting and tramping thoroughly. I think when I succeeded the best was when I used the most water, so that the material packed well, and was quite firm, excluding the air as much as possible. The mass would heat and ferment more or less, and soften the hard portions of the stalks so that stock would eat them up quite clean, and seem to do well on them with a small grain ration. We are all, as farmers, keeping more or less stock, such as dry cows and store cattle, that will winter fairly well on fodder, with but little grain, but the milch cows and work horses must have grain. If we put the fodder and grain all into the silo together, all the stock must share alike, unless you add more grain, raised for that purpose, from the bin, to the cows in milk and work horses. Now, why cannot we let the corn stand and ripen, pick off the ears, or cut and husk in the old way, silo the fodder and crib the corn to grind and feed when needed, and where it will do the most good? Some of our large forehanded farmers may say that the labor required in husking, cribbing and grinding the corn is unnecessary, and a waste, when the fodder and grain can all be stored in the silo by one operation, but I must differ with such, for we usually find the bottom of the silo by the time grass is up enough to pasture in the Spring; then our corn is gone (unless we raise an extra piece to harvest in the old way), and we want corn all Summer for our poultry, pigs, horses, and, perhaps, some for our cows, when the pastures get short and dry, and the prospects are that from now till the corn harvest of 1902 it will take quite a bit of labor to buy a bushel of good, sound corn, to say nothing of the bushels that farmers must have to tide them over. E. G. O.

Wysox, Pa.

R. N.-Y.—A few years ago there was quite a discussion regarding this plan of husking corn and cutting the stalks into the silo late in the Fall. Several of our readers were very enthusiastic about it, and in theory it seemed like a fine plan for utilizing the corn crop. We did our best the following year to learn how the theory worked out. We were unable to find a single man who cared to repeat the work. If there are any who follow the plan year after year, we would like to hear from them, for their experience will be of great value. We think our friend is right in saying that on most farms a certain amount of dry corn is necessary. By running the dry stalks through a shedder, we have found it possible to save our dry grain and provide cheap Winter roughage for all the stock.

PAINT OF LIME AND SKIM-MILK.

Several R. N.-Y. readers wish to know more about the milk and lime paint mentioned on page 675. There is no cast-iron rule for mixing it; no mysterious chemical affinity; no drier; no failure, if everything is not weighed to an ounce; and, in fact, it is a most accommodating mixture. It is necessary to keep it thin, for if it has much body, like other paint, it will flake off; but on rough boards, like unplaned hemlock, it may be much thicker than on a smooth surface. We do not try to put on enough so that the lumber will not show the grain when dry. Of course to get a uniform result, all the paint for any one job should contain the same proportions of milk and lime. Any kind of milk, sweet or sour, or even buttermilk, will answer. Use water lime, not stone lime or cement. It can be bought in paper sacks, and needs no slaking. I use for unplaned surfaces, one-half pound of lime to a pound of milk, stirring thoroughly, and then stirring in the coloring matter to suit. Keep the mixture well stirred while putting on, and stir well from the bottom of the tub before dipping out a second supply. You cannot mix it so that the lime will not settle some. On this account, I would not mix more than a 50-pound butter tub full at a time. C. E. CHAPMAN.

ROOT-PRUNED TREES IN MEXICO.—I will not argue further with Mr. Trott, page 690, as to how far north a root-pruned tree will succeed, but certainly as far as a piece-root graft will grow, the two being practically identical, but I do seriously object to the impression he makes that root-pruning originated in Mexico. Texas Farm and Ranch has quite a number of subscribers in that country, who, reading my articles on the subject for the last 10 years, have written me frequently as to its adaptability to the coffee tree. I have always advised them to root-prune, and exactly as Mr. Trott describes, and G. M. Clark, of Lugunas, Oaxaca, had the nerve, like Mr. Hale, with the peach in Georgia, to set out a great many thousand coffee trees that way with perfect success, though strongly advised against it by old planters.

H. M. STRINGFELLOW.

NORTHERN EXPERIENCE WITH COW PEAS.

A Heavy Growth in Pennsylvania.

The photograph shows a *single* volunteer plant of the Black Renovator cow pea, which grew in the garden at Woodbine Farm the past season. This plant completely covered a circle 12 feet in diameter. The stem was three-quarters of an inch in diameter where it entered the ground, and was still growing rapidly when taken up, September 23. This plant did not come to the blossoming stage, owing to the abnormal season. Last year the Black Renovator matured seed on this same ground. Cow peas have come to stay at Woodbine Farm. It was formerly claimed that this plant was of doubtful value this far north (latitude of Cleveland, O.), but our experience has proven the error of such claims. We have grown chiefly the Early Black, but have also tried other varieties, notably Warren's Early and Renovator. On the whole, the Early Black gives as good growth of vines as any. Besides, the seed is much cheaper to buy and much easier to shell, if we save our own seed. With us all the varieties mentioned matured seed in 1900.

In the season of 1900 we sowed a bushel of Early Black on 1⅛ acre of thin land, which had been in meadow for a number of years. The ground was plowed and fitted during the second week of June, and on June 15 the seed was drilled in with a nine-hoe grain drill, running three hoes, this making the rows wide enough to admit of cultivation. Twice during the season we went through them, once to the row with the Planet Jr. 12-tooth cultivator. At the last cultivation we sowed a plot to Crimson clover, a plot to turnips and one to oats. This was some time after the middle of July. The grasshoppers destroyed the clover, and the growth of vines smothered out the turnips and oats. These peas ripened a full crop of seed. We saved enough for our own sowing, and left the remainder on the field—not the most economical thing to do. Early in the Spring of 1901 we plowed the vines under and planted potatoes. The soil was noticeably of a darker color and in finer physical condition where the peas grew. We applied several loads of good barn manure along one side, and bordering on the plot where the cow peas grew. Our potato field extended clear across both the cow pea and manured plots. The potato crop was slightly better upon the manured portion. The potatoes ripened several days earlier upon the portion which had been in peas. The tops of the potatoes were a darker green where we used the cow peas. As the matter appears to us now, we made the following mistakes in this experiment: We did not use enough seed; we should have used acid phosphate and potash in the drill when sowing; we should have saved the crop of seed; the vines should have been plowed under and the ground seeded to rye in the Fall.

The past season we plowed and prepared three acres for cow peas, this time turning under a liberal growth of grass and weeds. The peas were sown June 15, in the same manner as above described, except that we used 100 pounds per acre of high-grade complete fertilizer. We cultivated them three times. Owing to extreme wet, growth was slow at the first and but few pods were matured when killed by frost on the night of October 6. The growth of vines was satisfactory, with the exception of a few wet spots. These vines will be plowed under, and rye sown, together with as much ground lime as the drill will apply. This land is intended for potatoes next season. Our favorite method in the future will be to mow a portion of our meadow land, say during the fore part of June; immediately fit the soil and seed to cow peas, using a small quantity of chemicals; as soon as the vines are frosted, plow under and seed to rye, using lime, the rye to be turned under the next Spring for potatoes. Soy beans have promise with us. We shall try sowing a mixture of cow peas and Soy beans next season. In theory, this seems to us an ideal method; how it will work out in practice remains to be ascertained. J. T. C.

Hartstown, Pa.

Good Success in Massachusetts.

June 28, 1896, I sowed cow peas in a worn-out pasture—light, sandy soil. In October, after several severe frosts, I plowed in the peas—a light crop—and sowed rye. In the following Spring the rye was plowed in and corn planted, with no manure to speak of. The result was a crop of corn, which was a surprise, considering the soil, due to the peas. These were the Black. Since then I have sown cow peas every year, for green manuring and fodder, with good results, using the Whippoorwill, which is smaller, earlier, and makes a better growth than the Black. This variety readily matures a crop here in central Massachusetts. During the season just closed I tested another variety, the Warren, which is three weeks earlier, and does not make as large a crop. For green manuring there is an advantage in having the crop nearly matured, as it is then much richer. If not matured, they should be well frosted or cut and partially dried before turning in, as there is danger of souring the soil by turning in too large a mass of very green matter, requiring lime as a remedy. Cow

MRS. COW PEA TAKES THE CHAIR. Fig. 343.

peas, which are not peas at all, but beans, must not be sown until it is safe to plant corn or other beans. On good soil they make a tremendous amount of green fodder, which is good feed until after frosts. If cut off early, they make a lighter second growth. They produce a large mass of roots, which with the coarse stems and the pods and beans, are rich in nitrogen, and excellent food for the soil, and (except the

TALL CORN ON LONG ISLAND. Fig. 344

roots) for the cow. Some cows must learn to like them, but this they will do if mixed with other green feed which they like. If they are pastured, cows eat the leaves and tender tops, leaving the coarse stems and roots for fertilizer and humus in the soil. After haying, you can sow the Whippoorwill as late as July 5 in this region, where we had no severe frosts until October 4 and 5, obtain a large quantity of green feed, and have left also a large mass of roots and stems for fertilizer. If the land is plowed again and rye sown as a cover crop, and to prevent waste of nitrogen, it is in good condition for the Spring crop, without manure. If manured, so much the better. If the vines are not plowed in, much of their nitrogen is lost during the Winter. I have found them especially adapted to sandy soil, but they also do well on clay, especially if sown in rows and cultivated. But for building up and renovating worn-out soils, there is nothing like them, so far as my experience goes. They will grow on soil so poor as to be unable to raise anything else. I have always sown them alone, not with other crops. H.

So. Hadley, Mass.

Report from Northern New York.

I live in the southern part of Warren Co., N. Y., and that is pretty well north. We have sown cow peas for the last five years; have found the seed rather expensive to buy, as we had to pay $3 per bushel the past Spring for Black. This year we raised about 25 bushels of Mt. Olive, from seed we grew last year. We saved about one-half bushel of Black last year, but none seeded this year. We planted this year about the middle of June. One piece of Mt. Olive was podded well; another, planted the next day, did not have a pod. They were planted with Eclipse corn planter in drills, as I wished to save seed. It was quite a job to pick them, and brought a good many grunts from the boys. We thrashed with a thrashing machine; it broke lots of them, but I tried a flail with about the same results. We generally drill them in with grain drill, and plow under in Spring for manure. I think it would be better to plow under in Fall and sow to rye, and turn that under in Spring for corn.

I have one plot of about two acres this year of Black, sown broadcast by hand, and dragged in about July 8, that has made a growth of about two feet, and was a perfect mat of vines when frost struck it, October 5. We think they are a grand thing for our light, sandy soil; would as soon have a good growth of cow-pea vines to turn under as the general run of manure we buy, and it is a great deal cheaper. Last year I had sweet corn on cow-pea ground. I plowed on one side, where there were no cow peas, wide enough for two rows, and did not get one ear of corn on these two rows, while the other was good corn. F. P. W.

Glens Falls, N. Y.

Seed Grown in Latitude 43.

We are situated about three miles from the New Hampshire College of Agriculture, in latitude 43. In 1900 we planted a few of Salzer's Prolific cow peas, just to try them. I do not know the exact date of planting. They made a fine growth, and were cut and fed to the cows before seed matured. In 1901, June 8 and 11, we sowed about four acres of the land where we planted silage corn to the same variety. After marking off the ground in rows about 3½ feet apart, we dropped the silage corn by hand, one kernel in a place, from 10 inches to one foot apart; then went over the ground again at a rapid walk, dropping the peas, one, two or three, in a place, as it happened, and, perhaps, two feet apart. We covered both corn and peas with a two-horse hoe. You will observe that the peas cost us nothing but the seed, and the dropping, a mere trifle. Now, as to results. On the major part of the four acres the peas came up well, and flourished, nearly covering the ground under the corn. We were hoping that they would climb the cornstalks, so that we could cut them with the corn, and let them go into the silo. This they failed to do to any great extent, so we pulled many of the vines before the corn was cut, feeding the vines to the cows with green corn fodder. The cows were crazy for them, eating them up root and branch, and increasing their yield of milk. There were many ripe pods on them for the past three weeks. In the future we will plant them by themselves. We note in our farming that the land where we had beans and other legumes in 1900 gave us much better crops this year than land beside it planted to oats in 1900.

New Hampshire. H. M. DE R.

TALL CORN ON LONG ISLAND.—I noted the article on a "Two-story Cornfield" in your issue of October 12, with interest, the height of it being stated as 14 feet, but I can go that one better. I enclose a picture (see Fig. 344) of corn on my place which is 16¼ to 18 feet in height by actual measurement, which you can judge by the picture. The seed was sent here by a corporal at Angeles, Luzon, Philippine Islands, but he says it does not grow to that height over there. It was planted without any care or cultivation, and with an idea that it wouldn't grow here, not to speak of its enormous height. The corn is red, round, bead-like, and very easy to shell; the stalks are very hard and strong, withstanding the winds better than the domestic, regardless of its height; the leaves are long, wide and sweeping. It has attracted the attention of many on the street, and wagers have been made on its possible height; even the local papers have commented upon it. W. C.

College Point, L. I.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Barberry and Asparagus Rust.

A. L. J., Chateauguay Basin, Canada.—Is it at all likely that a barberry hedge said to breed mildew can convey it to plants of asparagus near by? Is this true as said of the barberry?

ANS.—There is no evidence to support the idea that mildew on barberry plants will infect asparagus with rust, though the barberry is well-known to act as host for the Orange rust of wheat and rye. The fungi affecting the barberry and asparagus are of different species.

Cooking Food for Stock.

C. C. Z., Norwich, Conn.—Do you think cooked grain is better than raw for stock in general? If so, how much will it pay to bother to cook it?

ANS.—We have used a cooker for five years. It pays best for potatoes, turnips, and other bulky food. We find it very useful for hogs. A warm breakfast right from the cooker does them good, and we think it pays to cook all such food. Whole corn and cornmeal are improved by boiling in cold weather, but we have not found it profitable to cook the nitrogenous foods, like bran, oats or linseed meal.

Using Bisulphide of Carbon.

E. S., Lionville, Pa.—I have about 250 bushels of wheat in a good granary just over the cows. It is infested with the Angoumois moth, and with weevil. The lantern is used in the stables morning and evening. If I treated this wheat with bisulphide of carbon, would I endanger the cows or run any risk from fire?

ANS.—No, under ordinary circumstances there will be no danger. Of course the grain bin is tight. The bisulphide would do but little good unless the bin is tight enough to hold the gas. We are advised to put blankets or bags over the bin to prevent the escape of the gas. In a well-ventilated stable there would be no danger, but to make doubly sure you can use the bi-sulphide in the morning after the cows are turned out. You will not kill the insects unless you make the bin airtight and keep it covered.

Peaches for Central New Jersey.

C. McM., Westfield, N. J.—What varieties of peaches do you think are best to set an orchard containing 500 trees, to have five kinds to ripen in succession? I have been thinking of Mountain Rose, Oldmixon, Stump, Late Crawford, and Stevens Rareripe. Soil is clay loam with traces of iron. How do Spitzenburg, Oldenburg or Jonathan apples do in this section and soil? Northern Spy does not do well here; keeps poorly. Baldwin does well. I believe in planting fruit of high quality, as I think it will pay in the end.

ANS.—The varieties you mention are excellent for your locality. We would suggest that some Triumph be worked in for early use, and that Chairs Choice be substituted for Late Crawford. You would run some slight risk with these newer varieties, but the chances are that they would please you. Jonathan apple should succeed well with you, but Spitzenburg has never been satisfactory as far south as New Jersey.

To Confine a Spring.

C. B., Windsor, Conn.—In a pasture in the rear of the house I occupy there is a very fine spring which I would very much like to confine and make easier to get at. It is in the side (at the bottom) of a hill. Can some of your readers advise me as to the best plan to do this, something permanent, but not too expensive? If I could bring the water nearer the house (perhaps to a spring-house) it would be more convenient.

ANS.—If I understand this question correctly the inquirer wishes to confine the water in his spring and pipe it to his residence. We should dig at the head of the spring and find whether at the depth of two or three feet this water issued from rock or through hardpan soil. If the main head of spring is at one point we should here either insert a large drain tile, or if preferred, would enclose it with a stone or brick vat, using Portland cement. We should prefer the large tile, as then only cracks to stop up will be at bottom, which can be done with Portland cement, or clay rightly puddled will settle into cracks and stop leaks. It will be easy to drill a hole in the tile to pipe the water. If necessary a vat can be constructed near the spring to hold a larger amount, but we should prefer to draw direct from the spring. We should get a man who thoroughly understands his business to do the cement work; then a satisfactory and inexpensive job will result.

H. G. M.

Various Fruit Questions.

A. D., Friends, Pa.—I have a piece of Cuthbert raspberries set in May, 1901, that were pinched off at about 18 inches. They have thrown out from three to four laterals that in some places meet across the seven-foot rows. These laterals are quite close to the ground, many at the surface. Will they support themselves during Winter and fruiting next year, or would you advise wire or stake support for the plants? They did not send out but one or two canes until late in the season. Will these small canes be all right for setting next Spring? Would you advise plowing to the rows this Fall? They have had level culture, and the soil is well drained. My Miller raspberries set same time have not made one-third the growth of Cuthbert. They are affected somewhat with root galls. Are they a good variety to set in this latitude, 42 degrees north? How are the Loudon? Are the Miller and Loudon more subject to disease than the Cuthbert? What varieties of strawberries would you advise setting on black somewhat mucky ground? Jessie has made fine growth of plants this season, but I have not fruited them yet. Would you advise Clyde and Bubach for higher ground?

ANS.—Your raspberries are too young to bear much fruit. It would hardly be worth while to stake them this season, and they will not be likely to need it next year, unless you are willing to take the trouble chiefly for the sake of appearance. Trim the laterals back to two or three buds next Spring. The new canes may be allowed to grow about 30 inches high before pinching. They will probably be self-supporting if well pruned the following Spring for fruiting. Leave your rows level, plowing to the rows will do more harm than good by cutting roots. The Miller Red, where affected with root galls, should be dug and burned. This variety is useful on account of its early season and bright color, but it does not generally succeed as well as Cuthbert. The Loudon is later and rather dull in color, but is usually healthy and hardy. Gandy is considered the most profitable strawberry on heavy soil, though there are many local favorites. Clyde, Bubach, Warfield and William Belt are excellent for upland.

Nodules on Peas; Green Crops.

E. D. B., Cayuga, N. Y.—I enclose some roots of Canada field peas. You will see that they have small bunches attached to them. Are those bunches the tubercles that gather nitrogen from the air? I wrote you last Spring for best treatment of a piece of ground intended for strawberries next Spring, but at time of writing it was in rye. Your advice was to "cut the rye for hay if needed, plow the ground, drill in cow peas, cultivate long as possible to get between rows, and at last cultivation sow Crimson clover." I did not need the hay, so I plowed it under about the time the grain was forming. When going to our local seedsmen for the cow peas, they had all been sold; so I concluded to try the Canada field peas. I drilled them in, making the rows 28 inches apart; kept them well cultivated and at the last time over, sowed Dwarf Essex rape. I used rape instead of Crimson clover because I wished to plow the ground late in the Fall. The peas grew nicely until the latter part of August, when they began to turn brown; and upon examination the vines proved to be covered with green lice. The two days succeeding my discovery of the lice we had heavy rains lasting for several hours, and when the weather cleared up there were no green lice to be found; the peas, taking on new life, have grown nicely ever since. A week ago I broke a vine off at the ground and it measured 9½ feet in length. The rape is making a good showing, and with all that mass of green stuff it puzzles me to make out how to get it all plowed down, unless by going on with a Cutaway harrow and chopping it up. Within a few days the green lice have returned to the peas.

ANS.—The little "bunches" on the roots of the peas are the nodules or houses in which live the bacteria which secure the free nitrogen from the air. These "bunches" are found on the roots of the leguminous or pod-bearing plants. These tiny bacteria are living germs or low forms of life which do their work underground, and add greatly to our supplies of nitrogen. Whenever these nodules are present on the roots it is safe to conclude that the plant is obtaining nitrogen in this way. We have reports of green lice on field peas. The lice do not, we think, usually work on cow peas. The rape will keep green until the ground is fully frozen. Some plants usually live through the Winter. We would not Fall-plow this ground, but let the rape grow and rot—plowing all in the Spring. It is sometimes possible to chop up these heavy green crops by rolling and then working with disk or Cutaway across the track of the roller.

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Springs and Forest Growth.

A. A. H., Vermont.—Are springs affected by the cutting off of wood and timber? The spring which supplies my buildings with water comes out of the foot of a mountain. The question I would like answered by experts is: Should I cut the timber near the base of this mountain and about the spring, would it decrease or in any way affect the supply of water? Do not the roots of large trees drink up as much moisture from the earth as the branches would hold? The trees are mostly large maples, hemlocks, etc., and the spring is a deep one, evidently. If I cut the wood off I should set the land again to an orchard.

The question as to the influence of forest cover on the flow of springs cannot readily be answered by a simple yes or no, for it depends upon a complexity of conditions and would, therefore, require a careful diagnosis of the conditions surrounding the spring, especially geological and topographical conditions. There are various kinds of springs, according to the character of the geological formation; some, like the so-called ground water or cavern spring, would not be to any particular extent influenced by the presence or removal of the protecting forest cover; others, namely surface springs, very quickly show a difference in flow, sometimes to the extent of wiping out the spring altogether; while with others, like the so-called fissure springs, it would depend whether the supply of water comes from a distance or from near the spring. In the latter case removal of the immediate shade of a forest cover may reduce the outflow. The roots of trees do not, as a rule, absorb as much water as the evaporation by the sun on an unprotected water-shed would. If, as the writer states, the spring is a deep one, the removal of the shade may not affect it much. B. E. FERNOW.

Ithaca, N. Y.

It is quite necessary that a person know something about the geological conditions in order to discuss this question satisfactorily. That the cutting off of woods does affect the flow of springs there is little question, generally speaking. While it is true that trees do act as pumps, and assist in giving off much water to the air through transpiration, they nevertheless shade the ground and retard much evaporation. The leaf mold and decaying organic matter found in woods act as reservoirs for springs. Under certain formations of soils, however, springs are entirely independent of forest growth. I am inclined to think that if all of the growth above the spring is cut off, and the land broken up and put into an orchard, the spring would feel the effect. The orchard cannot take the place of the forest for conserving moisture, and at the same time be a profitable orchard. If only a portion of the wooded growth is removed, and that near the spring, while plenty of growth remains on the mountain, it is believed that the spring will not be affected. I would, however, keep a small amount of shade just above the spring itself to lessen the evaporation, and keep the ground moist and cool.

Durham, N. H. FRANK WM. RANE.

It is not very likely that this spring is so local in character as to be appreciably affected by the removal of timber from any moderate area such as a farm immediately around the spring. Forests influence the capacity of springs and the drainage of water from a country chiefly by retaining the water which falls upon the ground in such a way that a larger per cent of it soaks into the ground so as to reach the source of springs, rather than to flow off quickly from the surface without penetrating the ground at all. This effect of forests is accomplished through the retardation of the flow over the surface due to the leaves, fallen branches, and forest mold, which absorb at once quickly and retain quite heavy rains, thus preventing them from flowing down slopes and giving them opportunity to soak into the ground. I should not, therefore, expect that the clearing up of 40 to 80 acres, or even 160, would seriously reduce the capacity of any deep-seated spring. If your correspondent's land covers the whole of a comparatively short steep slope, so that all of the water which contributes to the spring must fall upon his own land, then it is quite likely that the clearing of it and replanting to orchards might lessen the flow of his spring somewhat, unless he planted his orchard on contours, and controlled the drainage from the slope by means of contour ridges, so as effectually to prevent washing and gullying. But I should not expect a sufficient decrease to render the spring dry unless it is a very small spring. F. H. KING.

Madison, Wis.

EVERYBODY'S GARDEN.

EXTENSIVE VS. INTENSIVE CULTURE.—In these days of magnificent enterprises in farming and gardening, as illustrated on page 721, the small operator must needs pinch himself to determine whether he is really awake, or Rip Van Winkle-like, merely sleeping the hours away. To many of but little or even no means at all, the idea of launching out into the teeth of these vast undertakings with the hope of successfully stemming the tide, the outlook seems hopeless. If, however, it is remembered that broad acres and costly paraphernalia are not always the true index of real profits, the case may perchance take on a new aspect. I have no quarrel with the extensive operator, but nevertheless have the almost certain knowledge that there always has been and always will be plenty of room for the less pretentious, provided he is the really up-to-date and intensive man. It is all right and withal very instructive for the man of the long bank account and unlimited ready cash to set the big wheels in motion to tell us just how these great enterprises may be profitably operated. But if he can clearly show his less fortunate neighbors how to "make circumstances," and by his own unaided efforts to throw up a highway to success, he may perchance confer upon the world a far greater service. The vast majority have to begin the life battle empty handed, and hence, said vast majority are, at the start at least, compelled to face and solve the stern problem of making bricks without straw. None of us by any means holds the true key to the situation, for it must be filed and fitted to meet the varying circumstances and contingencies of the individual; but the faithful record of success, or even failure, is often helpful and encouraging. If, happily, I may assist some one in the solution of this great problem, it may be pardonable to make some extracts from the garden record of 1899, which was fortunate enough to win first prizes in the great international garden contest of that year. For this purpose the expenditures and receipts from three-fourths of an acre are tabulated. While space forbids the detail of the cultural methods, or the work performed in order from day to day, it may be well to explain that the ground, by force of circumstances, was cultivated in four separate plots, and the tables in the main are general results rather than itemized; also that whatever was consumed by the family or given away, or left on hand at the close of the contest, was estimated at the regular market prices:

PROFITS.

Rhubarb (dark forced)	$5.17
Radishes	.64
Lettuce	5.95
Tomato plants	13.50
Cabbage plants	3.00
Peas	1.20
Carrots	1.50
Cabbage	47.57
Sweet corn	7.77
Butter beans	1.80
Potatoes	8.25
Beets	2.85
Tomatoes	35.35
Sweet peas	10.50
Melons	6.55
Lima beans	4.05
Cornstalks	.75
Squashes	3.50
Parsnips	2.25
Sea kale	2.00
Mangels	6.22
Onions	.50
Total	$170.87

EXPENSES.

Rent of land	$3.60
Fertilizer	9.62
Labor	40.77
Seeds	4.75
Plants	8.10
Roots	1.00
Interest on capital invested at six per cent	7.90
Wear of garden tools at 1½ per cent.	1.77
Total	$77.51
Proceeds from garden	$170.87
Expense of garden	77.51
Profits	$93.36

IMPLEMENTS USED IN GARDEN.

Plow	$6.50
Planet Jr wheel hoe	6.00
" " hill and drill seeder	7.00
" " 12-tooth cultivator	8.00
Roller	3.50
Wheelbarrow	1.00
Spade	.75
Shovel	.60
Hoe	.40
Garden line	.15
Rake	.35
Sprayer	5.00
Horse and wagon	75.00
Hotbeds	10.40
350 flower pots	7.00
Total	$131.65

The tools above enumerated would have cultivated much more ground, and were but little worn, but reasonable allowance was made in interest on capital invested. At this rate, the profits per acre would be $124.48, which is a fair showing, but not at all out of the ordinary, as many of the gardens reported showed profits far and away above this. The prizes were not contingent upon the largest showing of profit, but accuracy of detail as to methods and results or "just what you did and how you did it."

SIDE LINES.—While the actual results clearly show that good profits are not always contingent upon large investments, it clearly shows that intensive culture will bring satisfactory results. While the large cash prizes must be considered purely as side lines, and by no means to be considered as certain quantities, they readily show the value of keeping the eyes open to the possibilities around us, and keeping them constantly set upon the highest possible mark. As before intimated in these columns, other possibilities, such as breeding up, highest excellence in products, catering for best customers, prizes at fairs, and a thousand and one other sources of profit, are all accessible to the small as well as the large operator. Then for us who must doubtless be numbered among the "small fry," there is much of encouragement. In fact, with eyes ever wide open to the possibilities around us, we need never have a fear to pull off our coats and knock the chip from the shoulder of the largest operator on earth. J. E. MORSE.

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THE RURAL NEW-YORKER, NEW YORK.

Ruralisms

NOTES FROM THE RURAL GROUNDS.

ROSE CLOTHILDE SOUPERT.—There is a prediction in the late H. B. Ellwanger's charming book, "The Rose," made nearly 15 years ago, that Tea roses, growing in huge clusters, might come from the use of the many-flowered wild rose of Japan, Rosa multiflora, in breeding new varieties. A race of dainty small-flowered kinds, resulting from crosses of R. multiflora with various Tea and Noisette roses, had already been introduced under the name of Polyantha roses, but it remained for a French grower to produce in 1890 a rose fulfilling Mr. Ellwanger's prophecy, in an extraordinary manner. It was produced by hybridizing Mignonette, one of the popular Polyanthas, with a white Tea, and was introduced to the American trade by J. C. Vaughan, of Chicago, under the name of Clothilde Soupert. It is certain that no rose of greater value has ever been disseminated here. It is useful wherever roses may be grown, either for pot culture or bedding purposes. It is almost hardy in the latitude of New York, and can be grown farther north if protected from hard freezing and Winter sunlight. It is covered with large blossoms at all times when in growth, and has healthy, glossy foliage, seldom affected by any disease. Fig. 340, first page, shows a small cluster of blooms less than natural size, borne on a plant grown seven years in a six-inch pot. We have had a cluster of 15 blossoms open in good condition, though such large clusters usually fail to develop well unless judiciously thinned. After trials extending over 10 years, we value Clothilde Soupert so highly that we would retain it to the exclusion of all other varieties, if forced to content ourselves with one rose. While invaluable for the border or window garden, it is of no use to the grower of cut blooms, as only varieties bearing large individual blooms on long stems are wanted for that purpose. It is, however, the rose for the million, and is greatly appreciated by amateurs. It should be included in every order for plants by beginners in rose culture. Plants are very cheap, being offered at 10 to 15 cents each by growers. Plant out in an airy place, and fertilize with old manure, wood ashes, and, if possible, a little clayey loam burned until it is red in color. It should begin to bloom almost as soon as growth starts, and continue until freezing weather. Cut off the flowers as they fade, and occasionally prune or thin out any weak branches. When the ground begins to freeze the plant may be lightly covered with coarse straw or reeds, and later with evergreen boughs, where procurable, or it may be potted up for a sunny window. Where the climate is too severe for safety outdoors, the rose may be lifted and planted in a box of earth, with a few holes in the bottom for drainage. The box may be kept in a spare room, where moderate freezing will do no harm, if it is not warm enough to start growth during the intervals. The soil should be kept quite moist, and the endeavor made to have the plant dormant during cold weather. Many hard-wooded plants of doubtful hardiness may be wintered in this manner. Nothing has appeared likely to succeed Clothilde Soupert in its way, though innumerable attempts have been made to develop varieties having more substance to the petals and of other colors. Probably the nearest competitor is Mosella, sometimes called the Yellow Soupert. It had a yellow Tea or Noisette for one parent, and a Polyantha for the other. The flowers are a pretty light yellow in bud, but turn white when opened. They are freely produced in clusters when the plant is in full growth, but there are frequent intervals when it is "off crop." Pink Soupert, produced by crossing Clothilde Soupert with Lucullus, a dark red Bourbon rose, is very pretty, and a free and constant bloomer. The three varieties mentioned make good companions in the garden, as they are about equal in stature and hardiness, but the delicate blush and white Clothilde Soupert will always be most admired.

KIEFFER AND LE CONTE PEARS.—The season has been very unfavorable for pears about the Rural Grounds, and the crop of all varieties is very light, though the Sand pear hybrids, Kieffer and Le Conte, have done vastly better than the standard varieties. They endured the trying conditions of excessive moisture and heat through the growing season with no perceptible damage to the foliage, though continuous rains at blooming time caused the set of fruit to be very scattering. Many thousands of barrels of Kieffers will be shipped from near this locality as soon as matured sufficiently for market. A few orchards are fairly well loaded, while others, apparently as well cared for, have barely a show of fruit. The prices, in sympathy with the scarcity of all pome fruits, are quite satisfactory to those who have the pears to sell. Windfalls have been bringing $1 to $1.25, and good hand-picked $1.75 to $2.25 per barrel. Inquiry develops that most of these Kieffers are used for canning and culinary purposes, and they are not offered so freely as in the past on the fruit stands. Growers are learning better how to handle and ripen them up in an attractive manner. The Le Conte was planted quite freely about here eight or 10 years ago for family use, but, luckily, did not find its way into many commercial orchards. It is a handsome grower, like Kieffer, but more spreading in habit, with even more lustrous foliage. The pears ripen in October, and at once begin to decay about the core. The variety is usually promptly condemned on this account as soon as it comes into bearing, but if the fruits are picked as soon as the seeds color, and kept in a close place for two or three weeks, they color waxy yellow and develop a pleasant sub-acid, but not high flavor, with scarcely any loss from rot. They are excellent for stewing and other kitchen uses just before they soften. When one learns to handle the Le Conte properly, it is found to be a useful home variety, coming in when other pears are not available. Kieffer is supposed to be the result of the action of Bartlett pollen on the Chinese pear, though Downing gave the pollen parent as Anjou. The pollen parent of Le Conte does not seem to be known, but it has been much grown through the South for nearly 40 years. Our trees of Kieffer and Le Conte commenced to bear three years after planting, and by means of careful thinning and early picking, we get some very acceptable fruits while waiting for better varieties to come on.

PLANTING GARDEN LILIES.—The long list of lilies offered in bulb catalagues is very tempting, but disappointment usually follows the planting of any considerable number of varieties. Lily bulbs lose much vitality during shipment and storage, and only a few kinds are likely to reward us with a healthy growth. The list of really reliable varieties is very short, running about as follows: Lilium tigrinum splendens, L. lancifolium rubrum and album, and varieties of L. elegans. Where white lilies are wanted, L. candidum and L. longiflorum may be planted with reasonable hope of success. The magnificent L. auratum, the Golden-rayed lily of Japan, is very uncertain, most of the bulbs decaying after giving a few poor blossoms; but it may be planted with the hope of securing a chance specimen vigorous enough to establish itself. Lilies, as a rule, are unfavorably affected by crude fertilizers, and do not seem to require nitrogenous materials, except during the period of bud development. They are best planted six or seven inches deep in good unmanured soil in a well-drained place. If they can receive a little shade at midday success is more certain. Each bulb should be bedded in and surrounded with two or three inches of clean sand, to check the inroads of fungus myceliums. The covering should be of sand or light soil, easily penetrated by young shoots in Spring. A light covering of leaves, held down by a few boughs, is all the protection needed to winter the varieties named. Lilies look best in irregular groups, with the plants standing about a foot apart. If a fair growth results, the bed may be mulched with old manure as soon as the buds can be seen, which will greatly aid the development of the blooms, but in the long run the less manure used the more permanent the results are likely to be. Some L. lancifolium bulbs, planted seven years ago in sod, under an apple tree, without culture or fertilization of any kind, have developed in a splendid specimen clump, growing in beauty each year, while a similar planting in a well-fertilized rose bed has diminished in strength about to the vanishing point. The apple tree is an old one, headed so high that sunlight reaches the lilies freely. Lilies seem to like the protection and drainage afforded by tree and shrub roots, but they also appreciate free air and light, and should not be planted in close shade.

W. V. F.

A Blow at Quack Grass.

Three acres of peach orchard had been abandoned for a couple of years—not cultivated—and had become thickly set with Quack grass. In August of last year, after the trees had been cleared off, the Quack stood about as thick and tall as a first-rate crop of Timothy, and it was the only Quack grass of any amount on the farm. How it got there and infested the soil so completely in the time it did is a puzzle. We plowed it in August, and harrowed the field five or six times before Winter. It was then pretty clean, but last Spring the Quack sprung up as thick as new seeding, and shortly the field was green as ever with it. About June 10 last we plowed it 10 inches deep, cultivated thoroughly, and planted potatoes and cabbage. Good cultivating and hoeing was the rest of the treatment. The Quack is knocked out. Two acres of the potatoes will yield 180 to 200 bushels per acre; and the acre of cabbage 12 to 15 tons. Land always grows fertile under Quack grass.

G. F. W.

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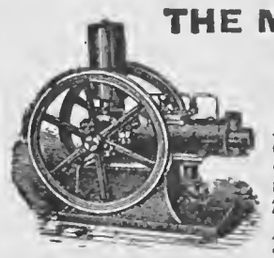

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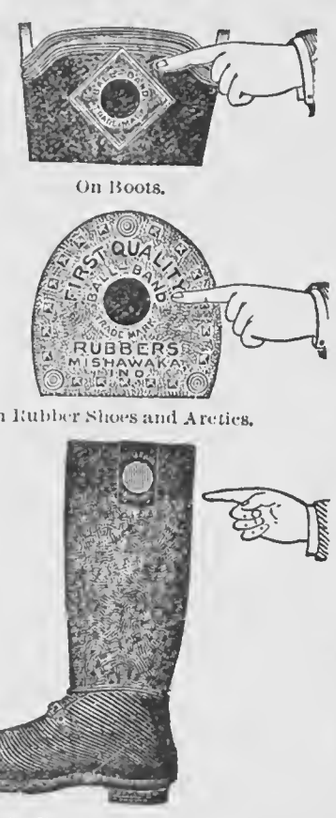

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HOPE FARM NOTES

LOOK OUT FOR LOCUSTS.—I have the following letter from Paterson, N. J.:

I see it reported that the 17-year locusts are coming next year. I intended to plant 500 pear and apple trees this Fall, but after reading about them I desired to get your advice first. I saw an article in THE R. N.-Y. of October 12, from a district where the locusts were last about four years ago. It is about seven years since they were in this section, and at that time they did considerable damage to young trees. Don't they show up all over the country at the same time? Is there anything to keep them off young trees, or do you think it better to wait and plant them next Fall?
W. G. B.

What our friend saw was a warning by Prof. J. B. Smith, of the New Jersey Experiment Station. These locusts are due next year. They spend 17 years in the ground, and then crawl out and lay their eggs. The little ones, when hatched, crawl into the ground and remain 17 years more before coming out. In 1885 these locusts came in great numbers over the northern part of New Jersey, and did great damage. This is only one brood. There are at least 22 different broods in the country, each occupying a certain tract of land, and sure to appear every 17 years. In the South the locust remains 13 years in the ground instead of 17. We are therefore reasonably sure to see these creatures next year. We may expect them in enormous numbers during the last of May or early in June. They will be with us about a month, though they will wear out their welcome in 24 hours. There is no way of fighting them with poisons.

WHAT ABOUT IT?—These locusts appear to have no ill-feeling against humanity. Like the poor fellow in Bleak House, they don't "go for to do it," but they get in their work all the same. Like many a human blunderbuss they do damage without meaning to. They cut slits in the twigs and small branches of trees in which their eggs are laid. When they are numerous they cut so many of these slits that the tree may be killed, or twisted and warped all out of shape. That is why Prof. Smith advises farmers in our part of New Jersey not to set any fruit trees this Fall or next Spring, because these tender little trees will be just the sort of incubator and baby carriage that the locusts will pick out. The older trees will be able to provide a cradle for the young locusts and still have energy enough to attend to their own business. Growing grafts or buds are said to be favorite resorts for the locusts. The danger is a real one, I am sure, and it is well to be warned in time.

TAKE A RISK.—In the face of this warning shall we plant trees next Spring? I had planned to plant a good many, but there is surely a big risk about it. I shall certainly not plant any very small trees. No June-budded peach trees for a locust year! I shall get the largest trees I can afford, and not prune them close. The idea is to leave as much wood as possible on the tree, so that even if the locusts are numerous there will be a chance to save some good shoots. I had intended to do a good deal of pruning this Winter, but shall now give it up until after I see how many locusts we are expected to provide for at Hope Farm. I do not understand that they fly far. I think there will be localities right in the track of the last brood where there will be but few locusts. It is said that the sparrows hate these locusts as they do few other insects. They tear the locusts in pieces in the most savage manner, and kill thousands of them. The sparrows will be worth their weight in gold next year, and if you see a boy killing them it is your duty as a fruit grower to spank him then and there. I expect to plant some large trees, for I do not like to change the plans we have made. At the same time I know that it will be a risk, and that it will be my own fault if the locusts ruin the trees.

FARM NOTES.—We have learned to respect the roller this Fall. Much of the land where we have sown rye and wheat was quite rough. Charlie spent one whole day harrowing two acres, and still there were little ridges. After sowing the grain the roller was put on and it packed and smoothed the ground, making a far better seed bed than could have been possible without it. I see many fields of wheat and rye covered with big clods which the harrow did not break. The roller would have crushed and fined them, and added 20 per cent to the stand of grain. A tiny grain plant will grow weary of trying to crawl around and under one of these big lumps, and will simply quit trying and die. . . . Husking has begun, and the corn is turning out well. We hope to get our stalks mostly under cover before another long rain. The hay mows will be filled and also a big barrack back of the barn. The first shredding will be done as soon as our sowed fodder is all eaten. The horses have no hay now. . . .The plan of throwing ears of corn to a horse is seldom satisfactory unless the feeder is able to reduce the ear to pounds. We find that 10 pounds of our ear corn shells out on the average about seven pounds of grain. Later, when the cob is further dried out, the proportion of grain will be higher. While plowing lasts we aim to feed a work horse about eight pounds of corn and four pounds of bran per day. . . . The tender stalks of the sowed corn make good horse feed, and you can grow a heavy weight on an acre. Still, I shall not *sow* any more corn. It pays better to drill it and give fair cultivation What we want to get into our stock food is sunshine, not shade. Sunshine is force, and unless the fodder has it while growing, you will need a whip to get force out of your animals. . . . The mixture of Cow-horn turnips and Crimson clover has made such a strong growth that I am now sorry that we did not seed this mixture in all of the cornfields. It makes a fellow inclined to kick himself for his obstinacy in not having faith when he sees what might have been done for that cornfield.

STRANGE THINGS.—An old pear tree near the woodshed had two branches in full bloom on October 28. The tree gave a fair crop of fruit, which ripened in August. Then the web-worms got at the tree and nearly stripped it. After that these branches put out new foliage and bloom. There are scattered blooms on other parts of this tree, but I have not been able to find another bloom in the entire orchard. I shall expect next to see old Major start into a sudden burst of speed without any urging, and while headed from home, or Grandmother show us how to dance, or the old buggy carry us over the hills without sounding an alarm like a watchman's rattle. . . Another mystery is the reason for our potato failure. I am quite unable to account for it, for as a matter of experiment we tried seed of the same variety from Maine, from New York, and also from New Jersey and Florida. We also planted on high ground and low ground, sod and cornstubble, and used both fertilizer and manure. Our best returns were on low ground with manure, but even these were barely worth digging. Yet, after all, I believe we have the best crop of any farmer in our neighborhood—so general has been the failure. . . . Who can explain how a boy is able to turn work into play? The Orchard grass in the barn orchard grew so tall after the second cutting that we turned the cows in for a few hours each day to nibble it down. Orchard grass will stand this sort of pasturing better than any other hay grass that I know of. At one end of the orchard is a newly seeded piece. Julia and Blossom persisted in tramping over this, one because she is a natural kicker, and the other because she is hunting for her calf. To keep them off this seeding we put the little boys on guard. Had they been simply ordered to watch the cows this would have been hard work. I told them to play that the cows were buffaloes and that they were Indians. When the buffaloes came to the line they were to ride their ponies out and drive them back. They got some hen's feathers and stuck them in their caps, ran muscle into their little legs and had a glorious time. What a world this would be if grown up men could inoculate their daily toil with play like that!

STOCK NOTES.—Blossom is developing into a fine young cow. She has milked the theory all out of my prediction as to how her thick neck and fat ribs would empty the pail. Her big neck, those fine potato tops, and the appearance of some of my old apple trees have been so discounted by the actual results that I don't care to do any more judging by the eye alone. . . . Blossom's mother, old Jersey, is still on hand, and will end her days at Hope Farm. Her milk is a little short now, and we shall give her a long vacation. I saw the old cow the other day with her neck stretched out while Blossom was licking the old lady. How the old girl did enjoy that sandpapering. I am no mind reader, but it was easy to imagine Blossom saying to her mother: "Now, Mother, I want you to rest. I am young and strong, and I can fill the pail. You have done more than your share. You are old and tired. Stop working so hard. Take a good long vacation and leave things to me!"

"What nonsense to talk that way about a cow," some of our practical folks will say. Very well, drop the cow part of it if you like. Isn't that the way a dutiful daughter ought to talk to her mother? Would it hurt a son to give voice to the same idea? . . . Several weeks ago I spoke of two little pigs. They are own sisters, and at that time had had the same food and care. One weighed 42 pounds and the other 19. Since then the larger one has run in a field with just enough food to keep her growing thriftily, as we intend her for a brood sow. The other has been kept in a small pen and stuffed with food to see if we can feed the runt out of her. On October 26 the larger one weighed 62 and the little one 33½ pounds. No use talking, runts will be runts. The poorer the breeding the larger the per cent of runts.

ALL SORTS.—The pullets are going into Winter quarters in good condition. They have been well fed and warmly housed. For the first time in several years we have been able to keep the poultry well yarded. Not over half a dozen have been able to get over or through the fence. As the cool nights come on these few outsiders fly into the trees for roosting. This seems to be a habit which the unconfined fowls cannot shake off. Though housed for a hundred generations the hen follows her remote ancestor into a tree whenever she can. . . . We had an object lesson in the power of a hen's leg when we opened the garden door. This garden is the hens' Winter playground. In early April we turn them out, plow, smooth and sow garden seeds. Late in September we turn the hens back. By this time little is left on the ground but weeds. The corn and Lima beans are beyond the reach of the hens, and the low-growing vegetables have been picked. This year the garden was weedy, but in two weeks the hens had it scratched and cleaned from corner to corner. Weeds and all had disappeared. It seemed impossible that the small hen's claws had rooted out such a mass of vegetation, yet it had been done. . . . One of the interesting things this Fall is the way the Japan plum trees are holding their leaves. The pear trees are mostly bare, and the Greening apple trees have nearly shed their coats, but the plums and the Baldwin apple trees have a grip like iron, and refuse to take leave of their leaves. . . . . There have been too many augur holes in the floor behind the cattle and under the horses. These holes do not augur well for the size of the next crop. We plug them up and use old sawdust freely under the stock. The solid value of the manure is in the liquids. . . On October 28 the nasturtiums were killed by frost. The Cannas look sad around the edges of the leaves, but are not yet dead, and the sweet corn at the top of the hill has not yet soured on the world.

H. W. C.

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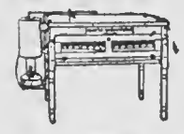

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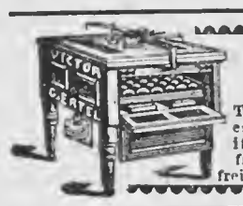

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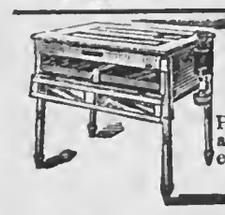

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SATURDAY, NOVEMBER 9, 1901.

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WE are asking every reader to interest himself in this proposition. We want THE R. N.-Y. to visit 20,000 new homes by New Years on this proposition. If every subscriber sent just one new name we would more than double that number of homes. Cannot you who are now reading these lines get just one farmer of your acquaintance to give you 10 cents for 10 copies of THE R. N.-Y.? We keep mentioning it because we want you to have it in mind when you meet your farmer friends.

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WE find that the "Chemicals and Clover" system of farming appeals to many of our readers. We refer to the plan of maintaining the fertility of the land by means of green manures, or the roots and stubble of hay and grain, with chemical fertilizers. Will those who have followed this plan of farming without stable manure tell us about it? We know that the plan is practical under many conditions. We need reports of wide and varied experience to determine just what those conditions are.

*

FARMERS are apt to forget—if they ever knew—that there is a seed laboratory in connection with the National Department of Agriculture, where seeds will be tested free of charge. If you send on a sample of seeds the experts will tell you what proportion of them will grow and how badly they are mixed with weed seeds and trash. Such a laboratory ought to be very useful to farmers who buy seeds, but thus far the seedsmen have received most of the benefit, because the farmers have not asked for help. This laboratory ought to help buyer as well as seller, and it will just as soon as the buyers ask for the service. You should write to A. J. Pieters, Office of Botanist, Department of Agriculture, Washington, D. C.

*

A STORY going the rounds of the press is how the President of Mexico killed a trust or injurious trade combination. It is said that the Mexican corn crop was short, and that certain dealers undertook to corner the crop, and thus force the people to pay exorbitant prices. The President saw through the game, and at once proceeded to have the high Mexican tariff on corn removed. This being done, a flood of American corn was imported, prices dropped to a natural figure, and the gamblers presented a gamboling ground for the lambs they had expected to shear. We are not familiar with the Mexican tariff laws and do not know what power the President of that Republic has to change them at will. This would be dangerous power to place in the hands of most men. In France, we understand, most tariffs are arranged upon a sliding scale. If the French wheat crop is heavy it is made easy for the authorities to increase the tariff and thus maintain prices. Should the crop be light it is just as easy to reduce the tariff, increase imports and thus equalize prices. In theory this would seem a desirable arrangement, and it points to one way of overcoming the evils of the trusts which destroy home competition. We have felt that one great trouble with our American tariff laws is the fact that any change in them requires a long and bitter political fight. It is now reported that President Roosevelt favors a tariff commission. As we understand it, this means a strong non-partisan body of men who may hear evidence and make such changes in the tariff as seem best for all classes. The details of the plan are not yet clear, but as a general proposition we think such an arrangement would be much better than the present system.

THE Supreme Court of New York State has decided that it is against the law to put so-called "preservatives" in milk. The question considered was whether a law prohibiting the use of these drugs was constitutional. Such a law was passed, and the Agricultural Department undertook to enforce it. A clear case was made against a milk dealer, but the court decided against the Department on the ground that the law was unconstitutional. The Supreme Court now declares that the law is sound. It would be indeed surprising if the use of drugs which undermine the human constitution is to be permitted on constitutional grounds!

*

LAST week an Ohio man gave his experience with cow peas. At first the crop seemed disappointing, as the farmer expected it to pay him in seed. Finally the vines were raked up to be burned, which would have been the most wasteful use that could be made of them! Then they were hauled to the barnyard to be tramped in with the manure, but the cattle and hogs began to eat them! This is not the first time that the cow and the hog have taught the farmer a new wrinkle in his business. If they could only talk they would say about thus: "Why do you go to all this trouble of cutting, raking and hauling these vines? If you think you must have them eaten up why not let us do it for you? Pick what seed you want and then turn us into the field. We will cut and carry and turn these vines into meat and milk while you are doing something else—and what a polish we will put on the crops that follow!" It is a pity, isn't it, that some of our dumb brutes cannot talk so that all can understand them?

*

THE viscogen treatment devised by Dr. Babcock to thicken Pasteurized cream was intended to aid the labors of the cook or housekeeper. As he says on page 754, Pasteurized cream is thinner than natural cream, because the fat globules are uniformly distributed, instead of being grouped in masses. Viscogen restores this grouping; it is quite harmless, and there is no reason against its use, so long as the wishes of the consumer are consulted. But now we are told that this innocent cream stiffener is being used to give fictitious richness to attenuated milk, in an effort to make it appear the thing that it is not. It seems that a parallel may be drawn between stiffened cream, that is cream, and honest Winter butter to which a little coloring is added, as compared with watered milk thickened with viscogen and hog or steer fat tinted to look like June butter. The fraud consists, not in the stiffening or coloring, but in the cheap or adulterated substance which masquerades as something different and better.

*

THE writer once made the statement before the Connecticut State Grange that but for the New England water powers and the Yankee's love for his home the greater part of the New England hills would have remained a cow pasture. The veteran T. S. Gold replied that even had this happened New England would still remain a prosperous country. He was right. The figures of the last census make a remarkable story. We look upon Arizona as wonderfully rich in live stock—yet compare these figures:

	Total value of live stock.	Value of one year's product.
Arizona	$15,458,717	$4,522,801
Connecticut	10,932,212	11,651,359

While Arizona stockmen keep $15,000,000 worth of stock to produce $4,500,000 worth of meat, butter and milk, those Yankee farmers get a yearly income of $11,000,000 from $10,000,000 worth of stock! That is one advantage of living close to good markets. There are thousands of acres still left in New England, well suited to dairying and sheep breeding. They are also suited to the production of fine apples. The hill farms will yet be redeemed, and become literally a land flowing with milk and fruit.

*

AN illustration of the slow growth of prohibition sentiment or the effort to stop an objectionable practice is seen in the public signs against spitting on the floor in public places. During the past 10 years we have observed the following development of such notices in ferryboats and street cars:

1. Please do not spit on the floor!
2. No gentleman will spit on the floor.
3. Spitting on the floor not allowed.
4. Spitting on the floor is a misdemeanor, $500 fine or imprisonment for one year or both may be the punishment therefor.

Here we have the story of a slow growth which kept pace with public sentiment and education. For many years the scientists and physicians have known that probably the greatest source of infection for tuberculosis comes from the habit of spitting in public. They started the crusade against the habit, but the public seemed to consider it an infringement of "personal liberty." Hence the first notices included the word "please." Slowly the people are learning the truth about the cause and spread of consumption. As they understand the danger the authorities are able to use stronger and stronger regulations against it. In a few years they can substitute "will" for "may" in the last notice! Reforms grow in about that way. They must be backed by public sentiment before they can be enforced. That is all the more reason why some one should keep pounding away at unpopular necessities.

*

WE do not care to talk much about what we are going to do, for, in journalism, nothing is really done until it is printed and digested. Among other things in hand, however, are the following:

BARN BUILDING, by H. E. Cook. The barn is the dairyman's factory, and Mr. Cook knows what is needed.

REFITTING THE OLD ORCHARD. Prof. F. W. Card. Prof. Card will give among his "Nature Study" articles some valuable hints on the old orchard tree.

TESTING GRASS SEEDS. Prof. A. J. Pieters. Prof. Pieters has charge of the Government seed laboratory at Washington.

THE MODEL DAIRY TEST, by E. Van Alstyne. Mr. Van Alstyne had charge of the cows during the great test at Buffalo. He will tell us some of the odd and striking things which were observed.

It is our business to crowd into every issue of THE R. N.-Y. all the sense, science and sunshine we can. That is our business, and we are not hunting for an easy job.

*

IN a city like New York, where there are savings banks which are firmly founded, and have been in business for a long time, people have little difficulty in disposing of their savings. They use these banks with confidence, and scarcely give the matter a thought. Throughout the country districts, however, the conditions are different, and there are large sections either with no savings banks or with those whose records do not tend to give depositors confidence. That it is not safe to keep large sums of money in farmhouses is evident from the number of murders that have resulted from an attempt to protect property from robbers. The Government might relieve this condition by receiving money on deposit. The postal savings bank system has worked successfully in other countries, and some such arrangement would be welcomed by many. Cases have been known in which people have invested their savings in money orders payable to themselves, being willing to pay the extra fee and do without interest in order to feel that their money was safe in these Government checks.

*

BREVITIES.

BRED and meat—the purebred steer.

Go slow on experiments if your money is tied fast.

THE man who will not be sobered by responsibility is a dangerous citizen.

READ the articles on cow peas—all ye that have lean land to fatten at a low figure.

CANNING dry fodder in the silo, page 754. Who has followed this plan year after year?

IT'S harder than pulling teeth to find out the weak points of the things we want to buy.

IN hunting for suitable varieties of fruit we would always seek the advice of the best local growers.

"THE thorough head
That thoroughbred
And thoroughfed."

SKIM-milk paint may be made with sweet or sour milk, or buttermilk. Use one-half pound water lime to a pound of milk.

BE sure to keep windows and doors where apples are kept well screened. Thus Codling moths hatched in the cellar cannot escape.

IN 1900 there were 1,073,026 hens, 7,717 turkeys and 14,100 ducks in Connecticut. The year's income from eggs was $1,523,319, and from poultry $984,207.

PROF. PLUMB does not like shredded fodder for sheep as well as for cattle and horses. The sheep's mouth is pretty small for the work of grinding stalks.

OF course we do not pretend that the commission men on page 761 settle the Kieffer pear business for good. If others think differently we want to hear from them.

CAN any farmer "have cake and eat it, too?" One of the nearest things to it is to sow cow peas early, cut the vines for hay before "dog days," and let the second growth stay until frost for green manure.

A REFORMED dyspeptic says he cured his ailment, after all other specifics failed, by taking small doses of fine dry sand. This recalls the statement of one sufferer who asserted that the only cure for hay fever is six feet of gravel.

THESE scientific men have proved that mosquitoes carry malaria and yellow fever. As one result of this knowledge a New York man has brought suit against his neighbor to recover damages for "discomfort" resulting from mosquitoes bred in a pond!

Events of the Week

DOMESTIC.—The big packing houses of the G. H. Hammond Co., at Hammond, Ind., were destroyed by fire October 23, the damage reaching $400,000. The Hammond plant covers 15 acres, and 1,800 men are employed in the cooling department. . . . . A fire which started in a furniture warehouse in Philadelphia October 25, caused, within a short time, the death of 21 persons, and a property loss of $1,100,000. The entire building in which the fire started was aflame from top to bottom in a few minutes, and the victims were burned in full view of helpless spectators. . . . . An explosion of gas in a coal mine at Wilkesbarre, Pa., October 26, killed five men and injured 10 others. . . . . The locomotive of a freight train on the Wabash Railroad exploded October 25, near Boody, Ill., killing a fireman and brakeman. The engine and six cars were destroyed, and 150 feet of track torn up. The wooden leg of a tramp was blown off, but he escaped injury. . . . . Disastrous prairie fires have been raging in the northwestern part of North Dakota, and thousands of dollars' worth of range hay have been destroyed. . . . . A sawmill fire at Davenport, Iowa, October 25, caused a loss of $110,000. . . . . A fire at Delmar, Del., October 26, rendered hundreds of people homeless, and caused property loss amounting to $160,000. . . . . Warrants were issued, October 28, for members of the firm of J. M. Fisher & Co., brokers, Boston, Mass., on the charge of using the United States mails in a scheme to defraud. It is alleged that $1,000,000 has been taken from the public since January 1, 1900. People all over the country were written to and told what excellent chances there were to invest money, and that large returns could be expected. Pools were formed, and those desirous of getting rich quickly were invited to remit. After two or three weeks investors would be advised that a pool had been formed on some well-known stock, and that as the quotations had gone down the margins had been swept in, and that more money was necessary immediately in order to save the stock. . . . . October 28, reports were received at New Orleans of a terrible race war at Balltown, La., on the Mississippi border. Nine negroes and one white man were killed. . . . . The assassin of the late President was executed at Auburn Prison October 29, and his body interred in the prison cemetery, his relatives renouncing all claims to the remains. . . . . A railroad wreck near Lexington, N. C., October 29, killed 110 horses belonging to Buffalo Bill's Wild West show, and caused a loss estimated at $60,000. . . . . During the year's fishing season, just over, the town of Gloucester, Mass., lost nine ships and 62 men killed or drowned, leaving 17 widows and 35 orphans. The tonnage loss was $67,000.

ADMINISTRATION.—Great corporations in the United States are evincing a deep interest in the attitude of President Roosevelt on the trust question, and the recommendations thereon which he will submit to Congress in his annual message. Of late many prominent trust representatives have come to Washington for the purpose of ascertaining the President's views with respect to combinations of capital. . . . . The President has decided to hold no public receptions during the Winter. While he will, of course, receive visitors, and is doing so daily, his official family do not propose that he shall be placed in a position where he will be an easy mark for any evil-disposed person. The public will, therefore, be barred from the New Year's reception, as well as from the other official functions to be given during the Winter. The President's decision is thoroughly approved by officials and residents of Washington. At the New Year's reception, the persons who follow after the army and navy do not form a representative gathering. In fact, it is the strongest who are able to stand in line several hours before entering the White House who usually have the opportunity to shake the President's hand.

PHILIPPINES.—There are 2,600 troops in the Island of Samar. General Chaffee does not anticipate any further disasters. The garrisons, he says, have been increased, and every precaution has been taken to prevent another surprise like the one at Balangiga, which was unfortunate not only in the loss of the men, but in the effect it will have on other parts of the archipelago. Agitators have been endeavoring to inflame many communities by giving glowing accounts of the occurrences in Samar. The Central Filipino Committee has issued a proclamation confirming Malvar as the successor of Aguinaldo. . . . . Admiral Rodgers has notified troops at the ports to be on their guard, owing to the massacre of troops of the Ninth at Balangiga. At Pambujan, Island of Samar, all of the buildings in the vicinity of the barracks were immediately razed. General Smith, on his arrival at Calbayog, Island of Samar, sent reënforcements to Weyler. They found the garrison, numbering 15 men, besieged by over 100 bolomen. . . . . The constabulary report a fight with insurgents near Passi, Island of Panay, in which 25 insurgents were killed and three captured, together with a quantity of arms and ammunition. The news from General Hughes regarding conditions in the Island of Cebu is encouraging. Lorega has surrendered with his entire force, and one cannon and seven rifles, while General Hughes is negotiating for the surrender of Maxilot, who styles himself "Governor Political-Militar." His surrender will mean the pacification of the Province of Iloilo. . . . . Lack of food and the harassing effects of the aggressive tactics now pursued by the American forces are having their influence upon the natives. In many places where rice is doled out by the Government only enough is given for one meal, so that it is hardly possible for any large quantity to find its way to the insurgents. It is believed that the recent manifestations in the Island of Samar were chiefly due to the lack of food, the insurgents finding it necessary to make outlets to the coast in order to obtain this. . . . . The first labor problem growing out of the new tariff has arisen. A hat and umbrella factory, employing 600 hands, has found it necessary to close. The lawyers are making a protest to the Civil Commission, urging protection, as the same goods from Germany can be sold at half the price it takes to manufacture them here.

GENERAL FOREIGN NEWS.—The difficulty between the German and Venezuelan governments, arising from the fracas between the German sailors of the cruiser Vineta and the police of Puerto Cabello, has been settled satisfactorily. . . . . The American representatives at Constantinople and Sofia are said to be in communication with the bandits who are holding Miss Stone a prisoner, but the information from the outlaws' headquarters is said to be unsatisfactory. Rumors continue in circulation at Sofia that Miss Stone is dead.

FARM AND GARDEN.—The Missouri State Veterinary Medical Association met at Kansas City, Mo., October 22-24.

Atlanta, Ga., had a live stock show October 14-24.

The American Short-horn Breeders' Association held an exhibit at Kansas City, Mo., October 16-25, and will exhibit at Chicago December 2-7; secretary, John W. Groves, Springfield, Ill.

The Illinois Horse Breeders' Association will meet at Champaign November 18-21; secretary, Geo. Williams, Athens, Ill.

The Illinois Pure Food Commission is investigating the sale of horseflesh as beef in Chicago. They believe that an extensive trade is going on in this line, most of the horse meat going to cheap restaurants and saloons. Animals too old or diseased to work are killed for this purpose, and the authorities regard the trade as a menace to public health.

The next annual meeting of the Wisconsin State Cranberry Growers' Association will be held at Grand Rapids, Wis., January 14, 1902.

Extensive importations of cattle from the drought-stricken districts of Kansas, Missouri and Nebraska are to be made by farmers of Whitman County, Wash., a number of whom went to Kansas City to buy several trainloads. Wheat and corn are cheap in eastern Washington, and as cattle can be bought low farmers see opportunity of making large profits. Late in the Summer James Woodly, of Colfax, shipped out a trainload of young steers from Kansas City. These are now getting fat on his ranch. This experiment was so successful that other farmers are following his example.

The second annual meeting of the Blue Andalusian Club will be held in Mechanics' Building, Boston, Mass., January 15, 1902; secretary, Robert W. Lovett, 234 Marlborough Street, Boston, Mass.

The National Live Stock Association will hold its annual meeting in Chicago December 3, in connection with the International Live Stock Exposition.

The National Association of State Food Commissioners, in recent session at Buffalo, elected A. H. Jones, Food Commissioner of Illinois, as president. The convention reindorsed the Grout bill, and some such bill as the Brosius bill; also passed a resolution in favor of the passage of a National law regulating the sale of dairy and food products, and the appointment of a National commissioner to enforce same, with power to make rulings, etc. The convention also appointed Hon. H. C. Adams, Commissioner of Wisconsin, as a committee of one to attend the session of Congress and look after securing the passage of the bill.

The twelfth annual meeting of the Missouri Dairymen's Association was held at Palmyra November 6-8.

The Minnesota State Butter and Cheese Makers' Association will meet at St. Cloud, November 20-21; secretary, J. K. Bennett, Clinton Falls, Minn.

The Wisconsin Dairymen's Association will meet at Menominee February 12-16, 1902; secretary, Geo. W. Burchard, Fort Atkinson, Wis.

The National Dairymen's Association will meet at Lincoln January 22-24, 1902; secretary S. C. Bassett, Gibbon, Neb.

The South Dakota Dairy and Buttermakers' Association will meet at Huron December 4-5; secretary, J. H. Hubbard, De Smet, S. D.

The Vermont Dairymen's Association will meet at Montpelier January 7-9, 1902; secretary, F. S. Davis, North Pomfret, Vt.

California's orange and lemon shipments this season are expected to reach 26,000 cars.

The annual meeting of the Virginia State Horticultural Society will be held in the Chamber of Commerce Hall, Richmond, Va., January 7-8, 1902. The Society extends a cordial invitation to any visitors who wish to attend; they can feel assured of receiving a hearty welcome. Secretary-treasurer, Walter Whately.

The prominent rank attained by the students of the Iowa Dairy School in State and National contests has led to a demand for special instruction in the use of starters and flavors and the use of the acid test in butter making. This course will begin January 2, 1902, and continue 10 days. No one but experienced buttermakers who have had entire charge of creameries will be admitted. Beginning January 13, 1902, and continuing four weeks, a short course of instruction will be given in practical butter and cheese making and the related scientific and technical subjects, including dairy bacteriology, dairy chemistry, butter scoring, dairy machinery, and dairy bookkeeping. A short course in stock judging and grain scoring will be given January 6-8, 1902. For any further information address C. F. Curtiss, Director, Ames, Iowa.

Prof. W. D. Gibbs, of the Ohio State University, has been appointed as Director and Professor of Agriculture of the New Hampshire State Experiment Station at Durham.

Olean, N. Y., is the place and December 11 and 12 the time for the next annual convention of New York State Dairymen's Association. Full particulars will be given at a later date.

THE FUTURE OF THE KIEFFER PEAR.

In the Brevities of a late copy of THE R. N.-Y. you say the "Kieffer pear has taken a back seat." Now give us a reason for the faith that is in you. I have a year-old orchard, and contemplate planting more unless it shall appear that you are right. L. W. R.

Benton Harbor, Mich.

R. N.-Y.—We have been watching the Kieffer pear closely in this market. A few years ago in New York, during its season, the push carts and fruit stands were well covered with it. Many were sold to eat out of the hand, and the result, nine times out of 10, was evidently a disappointment. Gradually the fruit has disappeared from these retail stands, until now it is rarely seen. This is good evidence that the buying public recognize it, and will not buy it for eating from the hand. We believe that its sale will be limited to the demand for canning purposes, and there are few better fruits for this purpose. In order to make sure we have asked some leading fruit dealers for opinions as to the future trade in Kieffers. Here they are:

It is a fact the Kieffer do not begin to bring the prices that other varieties of pear do; and in our section of the country they seem to be overdone—too many being grown, and the consequence is that they are selling low and at unsatisfactory prices. We receive quite a great many of them from the Eastern Shore, Maryland and Delaware, and judging from our experience of the past few years, we feel that there are enough trees already on there to supply the wants of the trade in Kieffer pears for a long time to come. STEVENS BROTHERS.

Baltimore, Md.

The Kieffer acreage is quite large in our own and adjoining States, New Jersey, Delaware and Maryland, and up to this date orchards with fruit of clear color and good size have paid nice profits. A large portion of the orchards produce fruit that is dark and cloudy; such sells at much lower prices, as the fruiterers don't want them, and they barely pay the producer. The foreign demand seems increasing somewhat. This will help to relieve the market, and it may be that large increased production might pay many years to come. Our judgment would be that for farmers having very light loamy soil, even if sterile, it may be one of the best crops to grow, the rich dark soil being given to other crops, hay, grain, etc., as it is the poorest light sandy soil, as a rule, that grows the cleanest, clearest colored fruit.

New York. S. H. & E. H. FROST.

Our opinion is that the Kieffer pear business is very much overdone, and instead of planting more trees they would better cut some down. It is no doubt a fact that it is a poor pear for eating out of the hand, and if it was not for the canners it would bring very little, owing to the large quantities produced. As we understand it, the canners this year have contracted for them at about 17 to 20 cents for five-eighths baskets, and we should not suppose that the grower would get rich at these prices. The Kieffer pear has no doubt hurt the sale of a good many other kinds, such as Duchess, etc., as the Kieffers are good lookers and the price is always lower. Of course, they do not affect the sale of Bartletts and Seckels, and that class of fine pears. We believe you would be doing a good work if you would advocate not planting too many Kieffer pears.

Philadelphia. BROWN & M'MAHON.

The Kieffer is not a very desirable pear for eating; it is beautiful to look at, in fact, even far superior in looks to many more desirable pears. This year the Kieffers sold very well, considering the quantity coming to market, and the reason is that other varieties were much scarcer, otherwise they would have fared badly. Last year Kieffer pears were in enormous supply and brought but very little by the barrel. We would hardly advise planting this tree with a view to making it profitable. Of course, we understand it yields largely, and is a late pear, when others are out of market, but it is only the appearance that sells it at any time. Customers are generally dissatisfied when they buy it, thinking it is an eatable pear. It may be very good for canning or cooking; in fact, in the South it is a pear which they prefer to all others, probably because they have no others. ARCHDEACON & CO.

New York.

The Demand for Good Apples.

The following notes are from proprietors of New York restaurants who do a large trade every day. We find that the demand for fruit of high quality is constantly growing:

We find either the Baldwin, Pippin or Northern Spy give the most general satisfaction and bake the best. There is a growing demand for good baking apples, and if such were served in a restaurant the sales could be largely increased. BAILEY RESTAURANT CO.

The varieties of apples most suited to our purpose are Greenings and Baldwins; Kings and Northern Spies are very good also, but do not save well. Apples seem to be growing more scarce each year, but judging from what our dealer says, who is in communication with the whole apple country, good saving varieties will be very scarce this year. I should think all farmers who are in the apple growing sections, that is, where it has been proven that apples grow well, would do well to set out a number of trees, and I have found from my own experience that they are about the most profitable crop that can be raised, provided they are well cared for.

CHILDS UNIQUE DAIRY CO.

The Crop of Florida Oranges.

Will the Florida orange crop be much larger than last year? Are there any good oranges north of Tampa? Are the growers inclined to pick the fruit green?

As near as we can judge from the various reports in, estimates are about 1,000,000 boxes of oranges, about the same crop as last season. There are some good oranges north of Tampa. Fruit is allowed to be fairly colored before gathering. PORTER BROS.

The orange crop will be much larger than last season; estimates from reliable sources put it about 1,000,000 boxes. There are very nice oranges grown in some sections north of Tampa. We don't think the growers generally are inclined to pick the fruit green, as it is not advantageous to do so, although some have been coming in that condition. M'CORMICK, HUBBS & CO.

As near as we can learn there are from 1,000,000 to 1,250,000 boxes in Florida this season. The crop is certainly larger than last season, and it is also scattered over a wide area, sections having oranges this season which have not had any since the great freeze which occurred several years back. Even Marion County is estimated as having 10,000 boxes; fruit from there formerly was very good. From information we learn that the crop of grape fruit is much smaller than last year. We already have had several hundred boxes of oranges from Florida, and while some of the fruit is of poor quality others are fairly good for so early. We are satisfied a good share of the growers who have fruit showing the slightest sign of ripeness are inclined to ship. We can see no reason why they should hold back, when there is any quantity of green immature Jamaicas sent here, and which the trade is willing to work on. In our judgment this green immature fruit which is sent here from Jamaica should be stopped.

P. RUHLMAN & CO.

Woman and Home

From Day to Day.

THE BAD BOY'S BRAVERY.

I ain't afraid of lickin's
  And I ain't afraid to stay
Away from school sometimes
  When no one says I may;
I ain't afraid to jump
  On cars that's runnin' fast,
I ain't afraid of horses,
  And I bet you that I dast
Throw pebbles at the grocery boy
  When he goes drivin' past;
I ain't afraid of Grandma
  And I ain't afraid of Pa;
I ain't afraid of nothing
  A body ever saw.
And once I shot a pistol
  And nearly hit the mark—
But I wish folks needn't ever
  Go to bed up where it's dark.

—Chicago Record-Herald.

*

EVERY girl ought to be taught to pick her companions, but not necessarily to pick them to pieces.

*

THE most thoroughly adequate sweeping cap we have seen was made in the shape of an apron, 12 inches wide and 24 inches long, put into a band without gathers. The band, which ends in short strings, is passed around the forehead, and tied at the back of the neck. This cap protects the head thoroughly, does not disarrange the hair, and can be washed and ironed as easily as a duster. It is not so picturesque as a coquettish mob cap with a frill, but it does the work expected of it far better.

*

ONE of our friends who believes in a place for everything, has a number of racks made to store window screens during the Winter. The racks are made of inch strips, each one being large enough to contain the screens from one room, slipped in on edge. Each rack is marked with the name of the room to which it belongs, so, when the screens are needed again, there is no hunt through a careless pile to find the one wanted. The racks take up little room in the attic, and there is no risk of screens being warped or knocked around.

*

WE have heard of an unusual number of cases this Fall where serious trouble has resulted from ivy poisoning, and it sees a matter where a little nature study is urgently needed. Poison ivy (botanically, Rhus radicans) is also known as poison oak; three-leaved ivy, mercury or markry, markweed and pickry. It is not a true ivy, but forms a fringe of aerial roots, which holds it to its support, as the true ivy does. Though usually climbing or trailing, it sometimes grows in shrub form. Its leaves are variable in shape, often like box elder, but grow three in a cluster, a peculiarity which at once distinguishes it from the innocent five-fingered Virginia creeper. It has waxy white berries that often remain on the plant all Winter. The poison is an oil, insoluble in water; therefore, it can only be washed off the skin with alcohol. Witch hazel is a good remedy for ivy poisoning, and one usually at hand, but the best application is an alcoholic solution of sugar of lead. The alcohol should not be too strong (50 to 75 per cent); to this powdered sugar of lead is added until no more will easily dissolve. This is rubbed well into the affected skin, and repeated as necessary. This lead solution is very poisonous if taken internally. As a means of destroying the poison ivy, concentrated sulphuric acid is recommended, a half teaspoonful being applied to the roots every few weeks during the growing season. The acid must be handled carefully, as it is highly corrosive. Wood overgrown with poison ivy should never be used as fuel, as the fumes from it often cause a painful affection of the eyes. This malignant plant takes on such brilliant tints in the Autumn that people often pluck the gorgeous leaves for ornaments, to repent bitterly at leisure, though some are immune against it.

A READER asks how to clean light-colored gloves with dry powder. We always clean light gloves with benzine, but the following dry cleaning is recommended: First rub with clean flannel and cream of tartar. Leave for an hour,

3954 Home Gown.
32 to 42 Bust.

then rub with fuller's earth and powdered alum in equal parts. Next day brush with a clean, soft brush, and finish by rubbing with dry oatmeal to which a little whiting has been added, following with a dry cloth for a final rub. This is a good way to clean white kid slippers. Benzine gives a satisfactory method of cleansing light kid, and if the articles are hung in an airy place for several hours afterward the odor passes away. It must always be remembered, however, that the benzine is highly inflammable and explosive. It should be used by daylight only, and kept away from the vicinity of any fire. A high-grade benzine should be used only, as there appears to be danger of ignition from friction with a poor quality. Chloroform is also used to clean gloves.

*

ONE often meets with people who proudly declare that they never change their minds, apparently under the impression that an unchanging adherence to a wrong idea is more commendable than an occasional variation towards a right one. The fact is that such people resemble the lobster in the "Water Babies," who preferred to lose his claw rather than let go, after once taking hold. Few people are so wise that they never need to change their minds. Down near Salem, Mass., are two old-maid sisters of the name of Witherspoon, who quarreled over the seats they should occupy at the funeral of their mother. The elder claimed the privilege of sitting next to the coffin. The younger assented, but when the service began took her chair around to the other side, so that she sat next to the coffin, also, and, as it happened, on the right side. The elder, indignant at being outwitted in such a manner, vowed that she would never speak to her sister again, and has been stubborn enough to hold her tongue. Living near Newburyport, Mass., are two sisters who, in 1879, quarreled over the best method of preserving tomatoes. They separated in anger, both refused to apologize, and, although they live in the same town, they have never made up or spoken to each other since. Their husbands and families are friendly, and visit back and forth daily. Such people as these would certainly do well to change their minds for another and a better one.

The Rural Patterns.

The pretty home gown shown is made of turquoise blue challie with black figures, the front and undersleeves being of plain blue Sapho satin; the revers of black velvet and the edging of fancy galloon, in which threads of gold are woven; but many equally satisfactory materials might be suggested. Cashmere, albatross, princess crepe, nun's veiling and French flannel are all fashionable, while soft silk always makes a handsome gown. The back is fitted with a center seam, side-backs and underarm gores, that curve to the figure and give a princess effect. The full front is tucked to yoke depth, then falls free, its edges being attached under the fronts proper, which are turned back to form revers. Beneath is a snugly fitted body lining that extends slightly below the waist line. The fancy sleeves are arranged over fitted linings and are curved at the lower edge, where they fall over soft puffs. At the front is a velvet ribbon that is attached at the under-arm seams, brought around to the front and bowed. To cut this gown for a woman of medium size 13 yards of material 21 inches wide, 11 yards 27 inches wide, or 7 yards 44 inches wide will be required, with 2¼ yards 21 inches wide for full front and undersleeves and ⅞ yard of velvet to trim as illustrated. The pattern, 3954, is cut in sizes for a 32, 34, 36, 38, 40 and 42 inch bust measure; price, 10 cents, from this office.

The graceful walking skirt shown includes some of the newest features. The back is cut with the new ripple that falls in graceful folds from a few inches below the belt, and the flounce means both flare and freedom. The original is made of homespun in mixed shades of brown and tan, but all checks, cheviots and skirting materials are appropriate. The skirt is cut in five gores, the side gores being narrow, and is without fullness at the belt. The flounce is graduated in width, and is seamed to the lower edge. At the right side is placed a patch pocket with turn-over flap. To cut this skirt for a woman of medium size 6⅛ yards of material 27 inches wide,

3916 Walking Skirt.
22 to 30 waist.

3⅞ yards 44 inches wide, or 3⅜ yards 50 inches wide will be required. The pattern, 3916, is cut in sizes for a 22, 24, 26, 28 and 30-inch waist measurement; price, 10 cents.

PREACHING and prayer are good for those who can attend upon them, but they will never by themselves convince the world. It is action and example, a life fully lived out, that has power over mankind.—William H. Fremantle.

GREAT men are the fire-pillars in this dark pilgrimage of mankind; they stand as heavenly signs, everlasting witnesses of what has been, prophetic tokens of what may still be, the revealed, embodied possibilities of human nature.—Thomas Carlyle.

A Photographic Competition.

PRIZES FOR PICTURES OF HOUSEHOLD SUBJECTS.

As anuounced three weeks ago, the Woman and Home Department offers the following prizes for the best pictures illustrating domestic subjects:

First Prize, $7.00
Second Prize, $5.00
Third Prize, $3.00

The subject should illustrate, preferably, some idea of convenience, comfort, or saving of labor, but domestic episodes which form effective pictures will be considered. We desire photographs that show something, but that will also make attractive pictures. The prize winners will be asked to furnish descriptive notes to accompany the illustrations. The competition will be open until December 1. In addition to the prize-winners, other pictures which, though failing to receive a prize, are still considered worthy of use in illustrating, will be paid for upon use at our regular rates. Address all matter relating to this to the Woman and Home Department of THE R. N.-Y.

A Trek to the South.

PART II.

Passing through Keeseville, we finally reached a lovely place, beside a dear little lake, where we staid over night. The people were as good and kind to us as they could be. We were off early, and then, on our way, had breakfast. At noon we reached a pine grove, nice and dry, and I went to a cottage, made some tea, and we had a real good lunch. While I was fixing the tea, I talked to the woman, and fouud out that she was 48 years old, and had had 16 children. I asked her when she was married, and she said, 'When I was 18." I remarked:

"Well, that did not give you much time for fun beforehand."

She was mopping the floor, and she gave the mop a fliug, with:

"Well, I'm sure I have not had much fun since!"

The horses are well, and Gray felt so good that she wanted to roll with her harness on. We shall not run any risks, and, till it is warm and dry, will not camp out nights. There are ways and places of stopping so that it will not be too expensive for our pocketbooks, and we are getting on nicely and having a good time. You remember who it was that said, "It does not do to be too proud; one ought to accept things?" I am going to try this Summer and see how that works.

Fred has his first soldering job. Where we are staying the tea kettle and coffee pot had given out. Fred is glad to fix them. We are putting up here till Monday. The people are French, and are very nice. We find that we cannot go very fast, but we will get there in time, all the same.

CONSUMPTION

Right food—right medicine—right time—these three things are of the utmost importance to the consumptive. Right food and right medicine—these are contained in Scott's Emulsion of pure cod-liver oil. Right time is at first sign of disease. Right time is now.

Scott's Emulsion always helps, often cures. Ordinary food helps feed. Fresh air helps cure. Scott's Emulsion does both. Begin early.

We'll send you a little to try, if you like.
SCOTT & BOWNE, 409 Pearl street, New York.

In the morning we started in good spirits for the Gap. We were right in the mountains, and climbed up, up, up. At last we got out and looked around, and it was lovely. We walked miles that day. At noon we camped under a large pine and had our lunch of chicken, horseradish, bread and butter, tea and cookies. But we don't feel much like eating, and are not lightening the load as fast as the horses are. After giving them a good rest, we started off again; and in a little while reached the Bouquet River, a beautiful stream; then we reached Elizabethtown, and Fred came out of the post-office, his face all beaming, the "Hawk's" letter in his hand. My, I was glad to get it!

I do not wonder that people like the Adirondacks; for it is just grand. Our carriage brake is fine, and it was fun to see Fred work it at first. Tell Brother Seldon that yesterday we passed a band of gypsies, and the man smiled on Fred and wanted to trade horses. He insisted that he wanted to trade, and we had hard work to get away. He thought he had met a friend and fellow traveler. Elizabethtown is a lovely place, just out from the forest, and has five hotels, four churches and very many fine shade trees. It is quiet and homelike, for the city people have not reached there yet. After we left it we followed the river a long way, but Fred would not stop to fish, for he wanted to reach the "Promised Land." Then we turned off, and up through scattered hamlets all the afternoon. At seven o'clock we found a place to stop, and as we had to leave the carriage out doors, Fred chained McKinley under it. He would not let anyone go near it. We made an early start next morning, and then again up, up, up, we went. Had to walk, and Fred put on the brake three times on the hill and rested the horses. All day we were climbing hills, and at last we went down some, toward night. I said to Fred:

"Well, dear, this is like life; it is not *all* up hill."

He looked at me with his first smile since we started, and answered:

"We are sometimes up, and we are sometimes down; but still, we are southward bound."

Well, it was through the woods, "the forest primeval," hour after hour. At night we came to a schoolhouse just off the road, and I was so tired that we stopped there. There was a good shed near. I thought I was in Jersey, for the whippoorwill sang all night. I was so glad to hear it again. I said to Fred the next day that I did not see why they made such a fuss over the cutting down of the Adirondacks, for we must have passed at least three or four dozen trees the day before (?).

Well, we followed roaring torrents; drove on the edge of precipices, climbed high mountains, and crossed rivers. (I just read this to Fred, and he said, "You take too much poetic license, you!")

Of all the lovely places I have ever seen, Schroon Lake is the most beautiful. Lots of hotels and churches, and so much wealth. On one place they had a lawn of about four acres. We followed the river from there, and at last it took us into the woods again, and we had our dinner. On again in the woods, and about two o'clock we came to a fork in the road, and did not know which to take; so Fred left me and walked over a mile to find out at a hut, where they were so very poor that they were all in rags; but one of the boys had a "bike," and the other boy was trying to get one. I told Fred that I wished I had let him go the road he wanted to. He jumped in the wagon with a laugh. "If we had taken the wrong road you would have told the Hawk that 'Fred was on one of his exploring expeditions.'" Towards dusk we found a deserted place, with a nice barn for the horses, and a shed for the wagon. We had a good night's rest.

As Fred was walking his horses at Warrensburg a nice hotel-keeper came out and talked to us. He liked our wagon, and said that it was just the thing for camping. I told him that we were dirty and demoralized, and would be taken for gypsies, I was afraid. He laughed, and said that he went camping every Summer, and that people took him for everything except what he really was. We are treated so nicely and everyone takes us for what we are. The road from Warrensburg is a toll road, and lovely, and we went along fairly well. We found a change of trees there. We came to our dear old chestnuts, and they are used for railroad ties and for other things, as we use cedar at home. In the Adirondacks there is a good deal of variety in the soil. Lake George is lovely. We had a beautiful afternoon. I would have liked to stay there a week, but we had to get on. We struck right into a good road, through sand and woods. After going quite a way, we found a place where we would spend the night, but, as Fred said, "Their noses were too red for him," so we went on, and after a while we came to a house where there were three rough-looking men, so we went again, struggling through the sand and dark. Fred walked and I sat in the carriage with drooping spirits. At about nine o'clock we saw a break in the trees, and a nice brick house. The man was just closing up for the night. He let us put our horses in the barn, and we drew up the carriage close to the house. They were very nice, and we had a good night's rest. They caught that same storm that we had the afternoon we left home, but up there it was terrible. When the woman of the house saw the storm coming she went out to get the milk pans, and the lightning struck them and ran across her chest and down her arm and her leg. They took her into the house, and she had just got so that she could stand on her feet, and they thought she would be a long time getting over the shock. Her mother and sister were taking care of her. The sister was a bright young girl. The land is so very poor; no grain but buckwheat is raised. She said: "We do not depend on our farms for our support; it is from the lumber that the money comes." I asked them if they did not get lonely. "Why, no; we have neighbors!" So they had, a mile away. Well, we started off early the next morning, and, as we drove along, saw lots of lumber and sawmills.

We reached Luzerne early. It is a charming place; four churches and nice stores. There we crossed the Hudson, and reached Hadley. The mail was just in, and so we got your letters, ordered the others to be sent on, and Fred sent the little pine trees, one for each of our three nieces and one for our dear Hawk. (They came safe, and "the Hawk's" is growing well, and is a beautiful little tree.)

We soon left Hadley, and into sand and pine trees again. We followed the Sacondaga River, and found at last a lovely camping ground in the pines, and strawberries near. Went to the river and had a good bath, then supper, and then to bed. At about 10 o'clock the horses were so uneasy that Fred was afraid to leave them tied, so he loosened them, and we watched them. They both started for home, and he had a good chase for them, but all returned at last, safe and sound, and we went to bed again. In the morning we traveled over the worst road we have yet struck, and we do not live in the sand hills down South, you better believe! We have had enough sand to last us the rest of our lives. We passed five hamlets, and then found a farmhouse and a nice place for the horses, and had a good night's rest. When we awoke the ducks were quacking, and Fred asked me if it did not seem like home. They are kind, nice people, and they have a lot of children; all great singers. A lovely boy, 17 years old or so, with curls. I went to get some water to wash the dishes, and told his mother that it was a shame for boys to have curls; that my husband had curls when I married him, but he said that I had taken all the curl out of his hair. The boy said, "Women are enough to take the curl out of any man's hair." We go over 20 miles a day. That is all we can do at first. When we get out of this sand and on hard roads we can do better.

F. E. W.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

Pocket Money for Home Girls

All honor to the girl who wishes to earn money, and yet feels it her duty to stay at home and "Make things pleasant in one little place." Not knowing the circumstances and situation of her home, it is not easy to advise, but the result of different experiences may be recorded. There are many girls who have undertaken the care of poultry, on shares, or with a little flock of their own on their homestead, and found it profitable, when near a town market. I know a girl who lives with her widowed mother, and has a garden where she keeps bees. She has overcome all fear of them, and studied their habits and management to advantage. I spoke to her recently, and she said that the bees had wintered and summered well; that the season had been profitable. The pound sections sold at from 12 to 15 cents, and the strained honey at 10 cents per pound. Wax was troublesome to manage, but when melted and clarified brought 30 cents per pound, and found ready sale, as the nuns were anxious to get it for candles. She could not tell me the value of each hive, but had found it a profitable business.

Then Lillie Baylis wanted some pocket money, and the only thing she knew how to make that she thought salable was peanut brittle and butter scotch. She spoke to a prominent grocer in a near-by town. He entered into the project, only insisting that the name "L. Baylis" be printed on each box. He gave it a trial, and sent for more, and Lillie had to get an assistant the next year.

I know a girl who bought a crate of jelly pots and a barrel of sugar. She gathered all the small apples and windfalls in her father's orchard, and made delicious apple jelly, that found ready sale. Another bright little girl who made ice cream that everybody liked, gave some of her time to the subject, and takes orders from the Summer residents, that pay her well. Many years ago in THE R. N.-Y., I gave an account of an acre of ground that brought me in over $100 a year in celery, besides other marketable products. The same land now brings that money from the sale of currants and grapes. The latter are sold quite cheap to a girl, who makes grape juice and sells it to customers at 25 cents a bottle. Her friends supply the bottles, and as half a pound of sugar is sufficient for three pints of juice, there is a fair profit, in half-pint bottles. The grapes are first heated in a preserving kettle, the juice then being strained, sugar added, and again brought to a boil, when it is bottled and corked hot—the quicker the better, to avoid fermentation. The work is not difficult nor tiresome. But readers will say, "Everyone has not grapes or land so easily obtained." For these there may be other employments found. The other day, as I sat beside a full basket of undarned socks, I wished that one of these little girls who want money would agree to come in and help, or, if necessary, carry the socks home to mend. But girls have such foolish ideas often that they do not like it to be known that they are willing to work for others. My advice is to put your pride in your pocket and keep it there.

My charwoman, who is often laid up in Winter by rheumatism, earns a good deal of money by making rag rugs. She blends the colors nicely, and sews them strong, so that they are well worth the money paid, and Summer residents purchase them for their country houses. This has become a business in a certain town in Maine, where they have learned to work up wool and cloth in an artistic manner, but any girl who can make colors harmonize can do salable work. I know an old lady, who has to sit most of the time in her chair—yet she has made beautiful knitted counterpanes, that would be preferred by many to ones bought. One lady, with only a back garden, has set up as a florist. She grows the flowers best suited to mix with those she has to purchase, and gets her bulbs in quantity for pots to force for Winter sales. A great feature last Christmas was small grape baskets filled with earth and planted with Roman hyacinths, just in bud, the top of the basket covered with moss, making them very attractive. Each locality must determine for itself the best method of earning money at home, but if I had to choose I should at once take up the business of poultry, as both suitable and interesting, as well as profitable for a girl at home, who knows the meaning of economy.

A woman in the neighborhood adds materially to a limited income by the aid of a knitting machine. She is an expert at the work, and is employed by the large stores in the near-by city, to make socks and stockings, mitts and caps. It is work that any young girl can learn, and is interesting and clean.

ANNIE L. JACK.

A Boon To Humanity

Is what everybody says who has used

St. Jacobs Oil

For it cures the most difficult cases of Rheumatism—after every other form of treatment has failed.

St. Jacobs Oil never fails.

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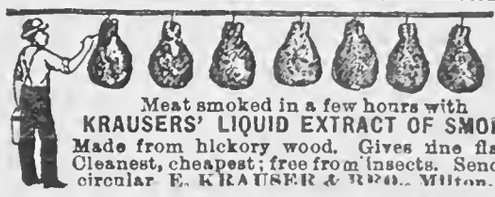

Meat smoked in a few hours with KRAUSERS' LIQUID EXTRACT OF SMOKE. Made from hickory wood. Gives fine flavor. Cleanest, cheapest; free from insects. Send for circular. E. KRAUSER & BRO., Milton, Pa.

LET US START YOU! $20 to $40 Weekly and expenses, Men and Women—at home or traveling. Our agents and salesmen made over $600,000.00 last year supplying enormous demand for our famous Quaker Bath Cabinet and appointing agents. Wonderful seller. No Scheme or Fake Methods. WRITE today for NEW PROPOSITION, PLANS, ETC., FREE. World Mfg. Co., 6 World B'ld'g, Cincinnati, O.

[We recommend above firm as reliable.—Editor.]

SALESMEN AND AGENTS WANTED

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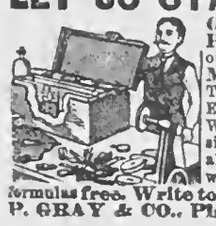

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FAMILY OF DOLLS FREE

Of course every little girl loves a Doll, but how delighted she would be with a whole family of Dolls with which to "play house." Besides the Boy and Girl Dolls here pictured, there is a Grandpa and a Grandma Doll. Grandpa in full military uniform, and Grandma in the dainty costume of the olden time. The large dolls are nearly two feet high, the small ones 15 inches. They have rosy cheeks, beautiful hair, heads that will not break, eyes that will not fall in, and are handsomely dressed in bright colors that will not fade. Words can never express the delight which any child will feel in possessing this Doll family. We will give these four beautiful dolls absolutely free for selling only five boxes of our Laxative Stomach Tablets at 25 cents a box. Write to-day and we will send the Tablets by mail postpaid. When sold send us the money. ($1.25) and we will send you the family of four dolls at once. Address, NATIONAL MEDICINE CO., Premium Dept. 134 L, New Haven, Conn.

MARKETS

THE WEEK'S QUOTATIONS.

WHOLESALE PRICES.

NEW YORK, NOVEMBER 2, 1901.

GRAIN.

Wheat, No. 1, N'th'n Chicago..	—	@	77
No. 1, Northern Duluth.....	—	@	78⅛
No. 2, red, elevator.....	—	@	76⅝
Corn, No. 2, mixed, clevator....	—	@	63⅜
Oats, No. 2, mixed.....	—	@	41½
Rye, No. 2, W'n, f. o. b., N. Y..	—	@	61½
Barley, feeding	50	@	52
Malting	57	@	62
Buckwheat, per 100 lbs.....	—	@1	13

BEANS.

Marrow, 1901, choice, per bu....2	60	@2	65
Medium, 1901, choice.....	—	@2	05
Pea, 1901, choice.....	—	@2	05
Red kidney, 1901, choice.....2	55	@2	60
Black turtle soup, choice.....	—	@1	85
Lima, California, 1901.....3	45	@3	50
Italian, medium 1	80	@1	85
Other foreign, medium.....1	70	@1	80

FEED.

Spring bran, coarse.....18	00	@18	50
Winter bran 18	50	@19	00
Red Dog 22	00	@22	50
No grade flour.....	—	@22	40
Unsound wheat, per 100 ibs...	65	@	71
Linseed meal, ton.....29	00	@30	00
Cottonseed meal, ton.....	—	@25	10

HAY AND STRAW.

Hay, No. 1.....	82½	@	87½
No. 2	75	@	80
No. 3	62½	@	65
Clover	50	@	55
Clover, mixed	60	@	65
Straw, rye, long.....	60	@	80

SEEDS.

Clover, per 100 ibs.....10	00	@11	25
Timothy, per 100 ibs..... 5	00	@ 5	50
Milliet, per lb.....	2	@	2⅛
Sunflower, per lb.....	3½	@	3¾
Rape, German, per lb.....	3½	@	3⅝

MILK.

New York Exchange price three cents per quart in 26-cent freight zone.

BUTTER.

Creamery, extra, per lb.....	—	@	22½
Firsts	20	@	21½
Seconds	17½	@	19½
Lower grades	15	@	16½
June, extras	21	@	21½
June, seconds to firsts.....	18	@	20½
State dairy, tubs, fancy.....	21	@	21½
Tubs, firsts	19	@	20
Tubs, seconds	16	@	18
Tubs, thirds	14	@	15
Tins, etc.....	14	@	20
W'n imitation creamery, fancy.	17½	@	18
Firsts	15	@	16
Lower grades	14	@	15
W'n factory, June, fancy.....	15¼	@	15½
June, fair to choice.....	14	@	15
Fresh, firsts	14¾	@	15
Fresh, fair to good.....	14	@	14½
Lower grades	12½	@	13½
Renovated butter, fancy.....	—	@	18
Common to choice.....	14	@	17
Packing stock	12	@	14

EGGS.

QUOTATIONS LOSS OFF.

State & Pa., avge. prime, doz..	23	@	24
W'n, fresh-gathered, avcrage best, per doz.....	—	@	23
Fresh-gathered, fair to good..	22	@	22½

QUOTATIONS AT MARK.

Nearby, State & Pa., fresh-gathr'd, fancy, selected, doz.	25	@	26
Average best lots.....	22	@	23
Fair to good.....	19	@	20
W'n, fresh-gathered, candicd, sciccted	—	@	22
Regular packings	16	@	21½
Kentucky, fresh-gathercd.....	16	@	20
Tennessec, frcsh-gathered	16	@	19
W'n, fresh-gathcred, dirties....	14	@	15
Checks	12	@	12½
W'n refrigerators, per doz.....	16	@	18

LIVE POULTRY.

Spring chickens, per lb.....	8½	@	9
Fowls, per lb.....	8½	@	9
Roosters, per lb.....	—	@	5
Turkeys, per lb.....	8	@	10
Ducks, average W'n, pair.....	60	@	70
Average Southern, per pair...	55	@	65
Geese average W'n, per pair...1	25	@1	37
Average Southern, per pair...1	12	@1	25
Pigeons, mixed, per pair.....	—	@	20

DRESSED POULTRY.

FRESH PACKED—ICED.

Turkeys, Spring, dry-picked, lb.	10	@	11
Scaided, per lb.....	8	@	10
Culls, per lb.....	5	@	7
Broilers, Phila., over 4 ibs. to pair, per lb.....	17	@	18
Phila., mixed sizes, per lb.....	11	@	13
Penn., fair to good, per lb....	9	@	12½
Ohio & Mich., scalded, lb.....	10	@	11
Other W'n, dry-picked, lb.....	—	@	10
Other W'n, scalded, per lb....	—	@	10
Poor to fair, dry-picked or scaided, per lb.....	7	@	9
Fowls, W'n, dry-picked, prime.	—	@	9
Western, scaided, prime.....	8½	@	9
S'th'wn, dry-picked, prime....	8½	@	9
W'n & S'th'wn, poor to good..	7	@	8
Old roosters, per lb.....	6	@	6½
Ducks, Spring, L. I., and other nearby, per lb.....	14	@	15
Western	7	@	11
Geese, Spring Eastern.....	12	@	15
Squabs, choice, large, dark.....	—	@2	50
Mixed, per doz.....1	75	@2	00
Dark, per doz.....1	25	@1	50
Culls, per doz.....	50	@1	00

GAME.

Grouse, per pair.....1	00	@1	25
Partridge, per pair.....2	00	@2	25
Woodcock, per pair.....	—	@1	25
English snipe, per doz.....	—	@2	50
Golden plover, per doz.....	—	@2	50
Grass plover, per doz.....1	50	@2	00
Wild ducks, canvas, per pair...2	50	@3	00
Red head, per pair.....1	50	@2	00
Mallard, per pair.....	75	@1	00
Teal, blue wing, per pair.....	60	@	75
Teal, green wing, per pair.....	40	@	50
Common, per pair.....	25	@	30
Rabbits, per pair.....	20	@	35
Venison, saddles, per lb.....	—	@	30

For full information about this, also, best Horse-power, Thresher, Clover-huller, Dog-power, Rye Thresher and Binder, Fanning-mill, Feed-mill, Drag-saw, Land-roller, Steam-engine, Ensilage and fodder-cutter, Shredder, Root-cutter, Corn-sheller and Round-silo,

Address, GEO. D. HARDER, M'f'r, Cobleskill, N.Y.
Please tell what you wish to purchase.

DRIED FRUITS.

Apples, evaporated, 1901, fancy, per lb.....	—	@	10
Evaporated, 1901, poor to good.	6	@	8½
Evaporated, 1901, poor to good.	6	@	
Evaporated, 1900, fancy, lb....	9½	@	9¾
Evaporated, 1900, choice, lb...	8¾	@	9
Evaporated, 1900, common to good, per lb.....	6	@	8
Sun-dried, 1901, S'n, sliced....	4½	@	6
Sun-dried, 1901, S'n, coarse cut.	4	@	5
Sun-dried, 1901, W'n, quarters.	4½	@	5½
Chops, 1901, per 100 lbs.....1	75	@2	25
Cores and skins, 1901, 100 lbs..1	50	@2	00
Raspberries, evaporated, 1901, lb.	23½	@	24
Sun-dried, 1901, per lb.....	20	@	21
Blackberries, 1901, per lb.....	7	@	7½
Huckleberries, 1901, per lb.....	16	@	17
Cherries, nearby, 1901, per lb....	15	@	16
Southern, 1901	13½	@	14

FRESH FRUITS.

Apples, York Imperial, bbl... 3	00	@ 4	50
Spitzenberg, prime to fancy. 4	00	@ 6	00
Winesap, per bbl..... 3	00	@ 4	00
Snow, good to choice, bbl... 3	00	@ 4	50
King, per bbl..... 3	50	@ 6	00
Ben Davis, per bbl..... 3	00	@ 4	00
Greening, per bbl..... 3	50	@ 5	00
Twenty-oz., hand-pkd, bbl.. 3	00	@ 4	00
Tallman Sweet, per bbl..... 3	00	@ 3	75
Fall varieties, com. to fair. 2	00	@ 3	00
Baldwin, prime, per bbl..... 3	00	@ 4	00
Ordinary, hard, red, fair to prime, per bbl..... 2	50	@ 3	00
Ordinary, hard, iate sorts, inferior, per bbl..... 1	50	@ 2	00
Windfalls, per bbi..... 1	25	@ 1	50
Pears, Bartlett, fancy, bbl....	—	@ 3	00
Bartlett poor to good, bbl... 2	00	@ 2	50
Bartlett, pme to fancy, keg. 1	25	@ 1	50
Seckei, fancy, per bbl..... 3	50	@ 4	00
Seckel, fair to prime, bbi... 2	25	@ 3	00
Bcurre Bosc, per bbl..... 2	50	@ 3	50
Beurre Clairgeau, per bbl... 2	00	@ 3	00
Beurre d'Anjou, per bbl..... 2	00	@ 3	00
Kieffer, per bbi..... 1	00	@ 2	00
Nearby, common, per bbl... 1	00	@ 1	50
Quinces, per bbl..... 2	50	@ 4	50
Grapes, up-river, black, per 12-basket crate 1	00	@ 1	25
W'n N. Y., Catawba, per small basket	11	@	12
W'n N. Y., Del., case, 15 3-lb. basket 1	75	@ 2	00
W'n N. Y., Niagara, case, 15 3-lb. basket 1	40	@ 1	50
W'n N. Y., Niagara, sm. bkt	10	@	15
W'n N. Y., Concord, case, 15 3-lb. basket 1	00	@ 1	10
W'n N. Y., black kinds, small basket	10	@	11
Wine grapes, Concord, ton..30	00	@35	00
Wine grapes, Del., per ton..25	00	@50	00
Wine grapes, white, ton.....35	00	@45	00
Wine grapes, Clinton, ton...40	00	@50	00
Cranberries, Cape Cod, fancy, late varieties, per bbi..... 6	00	@ 6	50
Cape Cod, Early Black, fcy, dark, per bbi..... 5	25	@ 5	50
Cape Cod, med. color, bbi... 4	50	@ 5	00
Cape Cod, poor to fair..... 2	75	@ 4	00

VEGETABLES.

Potatoes, L. I., per bbl.....2	00	@2	25
Maine, prime, per bag.....2	00	@2	10
Maine, per 180 ibs.....2	00	@2	25
Maine, inferior 1	50	@1	75
W'n, prime, per 180 lbs.....2	00	@2	25
State, prime, per bbi.....	—	@2	00
Albany & Troy, prime, bbl...	—	@2	00
State & W'n, poor to fair.....1	25	@1	75
Jersey, per bbi.....1	50	@1	75
German, good, 112-lb. bag.....1	12	@1	37
German, inferior, 112-lb. bag..	75	@1	00
German, per 168-lb. bag.....1	00	@2	00
Scotch, Magnum, 168-lb. bag..1	00	@2	00
Sweet Potatoes, So. Jersey, bbl.1	75	@2	50
Yellow, Va., per bbl.....1	25	@1	50
Beets, Jersey & L. I., 100 bchs.	—	@1	00
Brusseis sprouts, per qt.....	5	@	10
Cauliflowers, fancy, per bbi....1	50	@1	75
Fair to good, per bbi.....1	00	@1	25
Culis, per bbi.....	75	@1	00
Celery, State & W'n, doz. roots.	10	@	40
Jersey & L. I., doz. flat bchs.	75	@1	00
Carrots, L. I., per bbl.....	75	@1	00
Cabbages, L. I., Flat Dutch, 100.2	00	@3	50
Florida, per crate.....1	00	@3	50
Eggplants, Fla., ½-bbi. crate..3	50	@4	00
Lima beans, Jersey & L. I., Potato, per bag.....	75	@1	50
Jersey, flat, per bag.....	75	@1	00
Lettuce, nearby, per bbl.....	75	@1	00
Onions, pickle, white, per bbi..3	00	@4	00
Orange Co., white, per bag...2	00	@2	50
Orange Co., red, per bag.....2	25	@2	75
Orange Co., yellow, per bag..2	25	@2	75
Orange Co., poor to fair, bag.1	25	@2	00
Connecticut, white, per bbl...2	00	@4	00
Connecticut, yellow, per bbi..2	75	@3	00
Connecticut, red, per bbl.....3	00	@3	25
State & W'n, yellow, bbl.....2	50	@3	00
State & W'n, red, per bbl.....2	50	@3	00
Peppers, Jersey, green, bbi.....1	00	@1	25
Jersey, red, per bbi.....1	50	@1	75
Peas, Va., per ½-bbl. basket...1	00	@1	25
Squash, Hubbard, per bbl.....	—	@1	25
White, per bbl.....1	00	@1	25
Marrow, per bbi.....	90	@1	00
Pumpkins, per bbi.....	60	@	75
String beans, Southern, wax, per ½-bbl. basket.....1	00	@1	25
Southern, green, ½-bbl. bkt..1	00	@1	25
Turnips, Jersey, Russia, box....	—	@	75
Canada, Russia, per bbi.....	75	@	80
Tomatoes, Fla., per carrier.....2	50	@3	00
Nearby, poor to fair, box.....	25	@	75

BUSINESS BITS.

HAMILTON & CO, Rosenvick, Chester Co., Pa., breeders and shippers of choice pure-bred hogs and poultry, have lately got out new circulars that give full information about their stock, prices, mode of doing business, etc. They will be pleased to send them free to anyone wishing stock, who will send his address.

BEFORE Winter sets in we hope all our readers will see that there are no cracks in their poultry houses or cattle barns—it costs more for extra feed than it will to stop up the cracks. The Neponset Red Rope roofing is excellent for this purpose; it is both waterproof and windproof. F. W. Bird & Son, E. Walpole, Mass., will gladly send you sample if you request it. A postal will do.

WE don't know when we have seen more good hard sense in a pamphlet than is found in "The Egg Subject," written by H. B. Humphrey. It deals with egg production in a practical manner, pointing out how to get eggs when bringing the highest prices, and its conclusions are based on proven facts—not on idle theories. Mr. Humphrey will send a copy to any of our readers who ask for it. Address Humphrey & Sons, Box 39, Joliet, Ill.

"MORE Money from Your Hens" is the title of a new book issued by the Stratton Mfg. Co., of Erie, Pa., manufacturers of the well-known line of Dandy green bone cutters. It is attractively printed in two colors, well illustrated, and goes into the question of making poultry profitable in a very thorough manner. Of course, it places special emphasis on the value of freshly-cut green bone as an egg producer and growth promoter. There is no doubt in the minds of poultry raisers that a little green bone added to the feeding ration is productive of the very best results in two ways; it not only saves in the grain bill, an important feature this Fall when grain is high, but it also makes the poultry more productive in every way. You will be interested in the handsome book which they send free.

TECUMSEH PARK, Springfield, O., was occupied on September 28 by 500 employees of the Foos Manufacturing Company, of that city, accompanied by their families and friends, as guests of the company in al fresco entertainment. The spontaneous gaiety of the great party was due to the good feeling between employer and employees in this big manufacturing plant—a good feeling that is daily reflected in a tremendous output of grinding mills, portable forges and blacksmith tools of the very highest quality. A very fine dinner was spread and many entertaining diversions supplied, including music from a famous orchestra. The Foos Manufacturing Company affords an example worthy of general emulation, certainly, one that would redound to the honor of any employer, and incidentally afford a monetary return. Such kindly thought and consideration of the welfare of the employed is only too rare.

PROBABLY there are very few of our readers who do not know by name, and favorably by reputation, the Keystone Farm Machine Co. of York, Pa. These people have this season brought out a number of new machines of interest to the farmer, but probably no one of them so deserving of notice as their new "Keystone Tony" feed cutter, which is a distinct advance on their previous efforts. For some time they have made and sold a machine under the above name, but the new pattern has fully double the capacity of the old, and without requiring any noticeable increase in power. This somewhat remarkable result is obtained by the double knives and eccentrics. This feature feeds the machine accurately and rapidly, and the double knives take care of the increased quantity as readily as in the single machine formerly made. Intelligent farmers are all convinced of the economy of feeding cut feed. It will be particularly valuable to the average farmer and stockman, and it is a source of genuine profit to the dairyman. The manufacturers will very gladly send their catalogues and descriptive circulars on application. Write for them to-day, and address Keystone Farm Machine Co., 1547 N. Beaver street., York, Pa.

CONSUMPTION CURED.

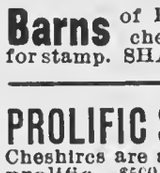
An old physician, retired from practice, had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all Throat and Lung Affections; also a positive and radical cure for Nervous Debility and all Nervous Complaints. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all who wish it, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail by addressing, with stamp, naming this paper, W. A. Noyes, *847 Powers Block, Rochester, N. Y.*

WHEN you write advertisers mention THE R. N.-Y. and you will get a quick reply and "a square deal." See our guarantee 8th page.

Wants, For Sale or Exchange

WANTED—Farmers and Dairymen, $30 to $50, with house or board. Only competent men with good references. The Rural Agency, Durham, N. H.

Fine Farms and Orchards in the great Piedmont Fruit, Grain and Stock section of Virginia. Elegant water and climate, with best educational advantages, and near great markets. For further information address JOHN L. McCUE, Afton, Va.



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W. F. Allen Land & Imp. Co., Salisbury, Md.

GLENN RANCH,

Glenn County, California,

FOR SALE IN SUBDIVISIONS.

This famous and well-known farm, the home of the late Dr. Glenn, "the wheat king," has been surveyed and subdivided. It is offered for sale in any sized government subdivision at remarkably low prices, and in no case, it is believed, exceeding what it is assessed for County and State taxation purposes.

This great ranch of 40,000 acres runs up and down the western bank of the Sacramento River for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

F. C. LUSK,

Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, of Chico, Butte County, California.

Barns of Plank save Timber and cash. Best, cheapest, strongest; 4,000 in use. Book for stamp. SHAWVER BROS, Bellefontaine, Ohio.

PROLIFIC SWINE—Three sows just farrowed 14, 13 and 12 pigs. The Cheshires are as kind and good milkers as they are prolific. $500 from one sow. Illustrated Catalogue—History of Breed, Methods of Feeding sent for 2c. stamp. C. E. CHAPMAN, Peruville, N. Y.

Oldest Commission House in New York. Established 1838. Butter, cheese, eggs, pork, poultry, dressed calves, game, &c. E. B. WOODWARD, 302 Greenwich Street, New York.

POULTRY SHIPPERS.

We make a specialty during the Winter months of handling Poultry, having a very extensive trade. Write us for any information you may wish regarding dressing, packing, etc, and we will be pleased to answer all inquiries.

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BRAND NEW STEEL ROOFING

Bought at Receivers' Sale. Sheets either flat, corrugated or "V" crimped. No tools except a hatchet or hammer is needed to lay the roofing. We furnish free with each order enough paint to cover and nails to lay. Price per square, $1.75
A square means 100 square ft. Write for Free Catalogue No. 57 on General Merchandise. Chicago House Wrecking Co., West 35th and Iron Sts., Chicago, Ill.

Do You Wear Rings?

No. 77.

Perhaps you would like one to use as a holiday remembrance to some friend. We have been able to make arrangements with a manufacturing jeweler by which we can furnish handsome rings with stone settings at surprisingly low prices. These rings are rolled gold, with a five-year guarantee. We offer four styles. No. 77 is a single stone. You can have any color stone or any size ring. Price, 25 cents. No. 81 has three stones, Tiffany shape; you can have any combination of colors, and any size ring. Price, 40 cents. No. 79 is a three-stone baby and misses' ring, any combination of colors, and any size. Price, 25 cents. No. 66 is a cluster of imitation diamonds with center stone, which may be had in any color. Price, 75 cents. No. 55 is an Egeria diamond scarf pin. This is a gold-plated pin on German silver, which gives a high finish. The setting is new and gives a pretty effect. Price, 25 cents. We will send any one of these rings or the pin as a reward for one new subscription at $1, except No. 66. We will send this for a club of two new subscriptions, or with one new and 25 cents extra. Select ruby, sapphire, emerald, opal, turquoise or diamond. Measure size of finger carefully with narrow slip of paper, and send this with order. The rings are sold only to subscribers or their families.

No. 81.

No. 66.

No. 79.

No. 55.

THE RURAL NEW-YORKER, NEW YORK.

10 Weeks for 10 Cents.

Last week we made the announcement on this page that during the months of November and December we would accept subscriptions for new subscribers for 10 weeks for 10 cents, as an inducement to introduce THE R. N.-Y. to 20,000 new homes. January 1 we send 23 cash premiums for clubs sent under this proposition. We are going to ask every reader to send one or more names, and we would suggest to those who can raise a club to begin at once. Every name will receive 10 copies of the paper, but the sooner you begin the better your chances for a holiday premium check. Remember that a new yearly subscription counts 10 in this contest, and the subscriber gets the remaining issues of this year free with his yearly order.

THE RURAL NEW-YORKER,
NEW YORK.

BOOK BULLETIN

FOR SALE BY THE RURAL NEW-YORKER.

THE STORY OF GERM LIFE, by Prof. H. W. Conn. Modern methods in agriculture bring both farmer and dairyman in touch with the germ theories of the scientists. Prof. Conn's book throws much light upon these tiny organisms, and their war against mankind, or its enemies. Price, postpaid, 40 cents; cloth bound.

THE LIFE OF THE BEE, by Maurice Maeterlinck. This book is described by nature lovers as "the epic of the bee." It discusses the wonderful communistic life of the hive; the system by which these intelligent insects educate their queen, and feed their young; the pitiless massacre of the drones, and the whole organization of the honey-storing city. It is a remarkable book, combining with its scientific accuracy the poetic charm of style and language which makes Maeterlinck a leader in literary thought. All students of nature should read The Life of the Bee. Price, postpaid, $1.40.

CUT-PRICE BOOKS.—Any of these 20-cent pamphlets sent postpaid for 10 cents:

Cooking Cauliflower.
Fruit Packages.
Country Roads.
Chemicals and Clover.
Canning and Preserving.
Memory Training.
Milk Making and Marketing.
The Modification of Plants by Climate.

THE RURAL NEW YORKER,
409 Pearl Street, New York.

MARKET NOTES

STRING BEANS.—"Where do the string beans and peas come from which I see quoted in New York now?" asks a reader. Before the northern crop is out of the market southern growers have plantings which are ready to be shipped in and fill the gap. Most of those now received come from Virginia and the Carolinas. The trade is not large on account of the variety of other vegetables at this season. Half-barrel baskets of both peas and beans wholesale at $1 to $1.25.

WHEAT EXPORT trade this season has been disappointing to many dealers, while some have met with severe losses. The early reports of short crops in Germany and France were very much exaggerated, and this led to excessive speculation both in wheat futures and ocean freight engagements. Buyers engaged steamer room months ahead at high prices. In many cases they were unable to sub-let this satisfactorily, and in order to avoid total loss of freight engaged, were obliged to ship at times when conditions in foreign markets were unfavorable. This is one of the snags that speculators run against, and long experience in business cannot save them from losses of this sort. Crop estimates are valuable in their way, but there is so much opportunity for error in them that the only report which it is safe to depend upon is the one made after harvest.

CABBAGE is for sale in this market during the whole year. The first of the northern crop is brought in from Long Island about the middle of July, and later large quantities come from central New York and neighboring States. This supply continues until the latter part of April, when $10 to $15 per ton is a common price. In March the new crop from Florida begins to arrive. The first of this is usually small and inferior, and has but a limited sale at from $1.50 to $2.25 per barrel crate. Early in May the Charleston and Norfolk crop is on the way. As old cabbage is then practically out of the market, the price usually runs up to $2.50 to $3 per barrel crate. The heads are small, but the quality is fair, and sales are quite satisfactory until the new northern crop comes in better condition and quality, and takes its place. The Long Island crop within hauling distance (20 or 25 miles) is brought in in wagons piled up as high as small loads of hay, and covered with canvas. That from a distance comes loose in cars, and thus has to be handled so much that the outer leaves get torn and have to be removed. Considerable cabbage is repacked in barrels or crates and shipped from New York to suburban or more distant towns. This is done with many other kinds of produce, and it sometimes happens that this stuff is shipped back to towns through which the farmer has passed with his load of produce in coming to New York. At present Long Island cabbage sells for $2 to $3.50 per 100. W. W. H.

National Grange Meeting.

The thirty-fifth annual session of the National Grange will be held at Lewiston, Me., commencing November 13. Most of the railroads make the usual concession of one and one-third fare for round trip. Full fare must be paid for the ticket to Lewiston. The agent will give a certificate which is to be signed by the secretary of the National Grange, and the special railroad agent at some time during the meeting. On presenting this to the ticket agent at Lewiston, a return ticket for continuous passage over the same line will be issued at one-third fare. Agents at small stations should be notified in advance, as the blank certificates are not distributed to all stations unless ordered, and the reduced rate from Lewiston cannot be obtained without this proof that a full fare has been paid to the meeting.

Cost of Grain Shipments.

At the recent meeting of the National Grain Dealers' Association at Des Moines, Iowa, Gov. Shaw said among other things: "When the first bushel of wheat was transported by rail from the Missouri River to the Atlantic Ocean, thence by ship to Liverpool, it cost 61 cents thus to market it. It now costs 21½ cents to take a bushel of wheat from the Missouri River to Liverpool. This is due to improved roadbeds, lighter grades, fewer curves, heavier iron and larger locomotives. Our people all understand this and they are both contented and happy. They are building better houses, planning better schools, putting more pianos in their parlors, more books on their shelves, more sunshine in their homes and are advancing the prices of their farms. These can now be rented for cash and will pay a better income for twice their market value than Government bonds at current quotations."

DOG AND MOON.—There seemed to be just a shade of annoyance in Hope Farm Notes caused primarily by seemingly unjust criticism or pure nagging. Remember the Hoosier farmer's dog story. Every moonlight night the dog sat on a sycamore stump and bayed at the moon. The dog was gritty, and kept at it, but the moon never showed any irritation, not even that tired feeling; went and got full just as usual, and gave forth its reflected light. People sometimes have wondered why the moon did not take a vacation and start a school of gentility for curs. E. D. R.

SPEAKING of the prairie dog pest in that State a Kansas man says: "There are at least ten millions in western Kansas that are plowing up the ground and ravaging the fields of what grain can be found. They will eat anything from pumpkin seed to a scrub oak sapling, and seem to thrive where no other living thing can exist." The last Kansas Legislature appropriated $5,000 to be used in efforts to exterminate the animals. Numerous experiments were tried, but the results were not satisfactory. Now some one comes forward with a proposition to vaccinate these pests with hydrophobia, and set them to killing each other.

CATS AND FLEAS.—In a pamphlet issued by the Department of Agriculture the following is credited to a New York paper: "An excellent way to get rid of fleas is used by a lady in Chicago, who owns some of the best cats in America. She has ready a square of cotton batting and a square of cotton cloth, placing the cat in the center of the batting, which has been laid over the cloth; she rubs strong spirits of camphor quickly into the fur and then gathers the corners of the batting and cloth tight around the neck of the animal. She has a fine comb ready and a dish of hot water, for the pests, who detest the camphor, will run to the head of the cat, and must be combed out and plunged into the scalding water. Hundreds of them, however, will jump from the cat and lodge in the cotton batting, where their scaly feet stick in the cotton so that they cannot get away. When the fleas cease to run out on to the head of the cat she judges that they have deserted the cat. The animal is then let out of the batting bag, and the latter carefully carried to the kitchen and deposited in the stove. The scent of the camphor clings to the cat for some time and acts as a preventive. A whole cattery may be cleaned out in this way."

OIL-BURNING LOCOMOTIVES.—On some of the western and southwestern railroads crude petroleum is to be used as fuel in the place of coal. Of course, this will mean a change in the shape and size of the engine, since burning a liquid fuel is a very different thing from a coal burner. A report from California gives the following description of a new oil-burning engine: "In the oil-burning locomotive just constructed for the North Pacific Coast Railroad the cab is placed at the head of the locomotive over the cowcatcher and the smokestack is set at the rear end. The tender trails behind with its oil and water tanks, and the fluids from both are fed to boiler and furnace in the customary way, the oil pipe being led around the body of the boiler to the fire box, which opens as usual in the cab."

RABIES OR HYDROPHOBIA.—Bulletin No. 79 from the Pennsylvania Department of Agriculture gives an excellent account of this dread disease. The following directions are given for the benefit of persons who may be bitten: "In the event of a bite by an animal supposed to be mad the wound should be cauterized as soon as possible with fuming nitric acid. This should be thoroughly applied to all parts of the wound, making sure that there are no pockets or recesses which escape the action of the acid. If such cauterization is carried out within 24 hours of the reception of the wound, the danger is very much lessened, and if done within a few hours the protection is absolute. In the absence of fuming nitric acid the hot iron or the thermo-cautery, or even strong antiseptics may be used, but experiments have shown that nitric acid is the most efficient. The invariable rule should be: *Cauterize as soon as possible, and in the meantime do everything to get the virus out of the wound*, by washing in an abundance of water, enlarging the wound and encouraging free bleeding by cupping or the application of ligatures around the limb above the site of injury. Osler advises that the wound be kept open for five or six weeks. The animal which inflicted the wound *should in no case be killed, but should be captured, if possible, and confined for observation.* In this way it is often possible to determine positively within a day or two whether the animal was really rabid, and much anxiety spared the bitten person. As soon as the animal dies the whole head should be cut off close to the shoulders, packed in ice and sent to the nearest laboratory for examination."

THE R. N.-Y. is very helpful to us. Some object to it on account of its embracing such a range of country in its agricultural information, but this is interesting, and in the case of crop reports highly valuable. Such articles as those by H. E. Cook and others on the details of crop and especially corn cultivation are very useful to us. The articles you print on soil renovation are also useful. We live in quite a grain-growing section, silos are becoming general, and with them more cattle feeding. Moore, Ont. T. E. W.

Miss Maud Kenyon,

Of 1533 Orange Street, Los Angeles, Cal., writes: "I had been afflicted with my eyes for over a year with such a dreadful itching and inflammation that I could not use them for anything. Physicians had given me many different remedies which were like using so much water; they measured my eyes for glasses, which I got and wore for some time, but they did not benefit me in the least. My mother desired me to write to Dr. R. V. Pierce and explain the condition of my eyes. I did so, and after following your advice, and using eight bottles of the 'Favorite Prescription' and eight of the 'Golden Medical Discovery,' can say my trouble is entirely cured. I would advise any one so afflicted to try these wonderful medicines. My health was never so good as it is now, and I shall never tire of praising Dr. Pierce's medicines."

Sick women are invited to consult Dr. Pierce by letter and secure a specialist's advice *free* of charge.

WRITE TO DR. R. V. PIERCE
BUFFALO, N.Y.
ALL CORRESPONDENCE PRIVATE.

DRY BRONCHITIS.

From Dr. Hunter's Leetures on the Progress of Medical Scienee in Lung Diseases.

There is another form, called dry bronchitis, in which the matter expectorated is neither profuse nor watery nor purulent. It is a glutinous kind of stuff, of a bluish white or pearly gray color. The chronic inflammation which causes it thickens the mucous membrane, thereby narrowing the tubes through which we breathe, and shortening and oppressing the breath. Often tubes of considerable size become completely clogged by this tough phlegm, causing great difficulty in breathing.

Of all the forms of bronchitis this is the most common. It is the most insidious of lung complaints. Those suffering from it have at first only a slight cough; it may be only a trifling coughing spell in the morning; they have a chilly sensation in the forenoon, and toward evening are feverish.

There is always a feeling of more or less tightness and oppression in the chest, which is relieved from time to time by coughing up a quantity of the tough, jelly-like matter before described. Sometimes the cough comes on in paroxysms, attended by great oppression and distress, like asthma. On inquiry of a person so affected if he has any lung trouble he will almost certainly answer, No, and yet during your conversation will perhaps hack and raise this jelly-like mucus half a dozen times.

Here we have a lung disease which directly tends to consumption, and has most of the symptoms of that disease, and yet is not consumption at all. When it ends fatally, as it often does, an examination of the lungs reveals neither tubercles, ulceration nor the bacilli of tuberculosis.

In such cases death generally results from suffocation caused by a sudden attack of congestion, which, supervening on the chronic disease, fills the lungs with viscid mucus that the patient, in his weakened condition, is unable to raise.

Bronchitis is not generally treated with success, because the proper remedies are not applied to the diseased tubes within the lungs. I had the good fortune some years ago to discover and successfully apply a local treatment for this and other lung complaints. I made the air which the patient breathes the carrier of the remedies which are necessary for his cure. Instead of sending them on a roundabout way through the stomach and general system, I introduce them directly into the air tubes and cells of the lungs, where the disease and all the danger lies, and I know by ample experience that this treatment is the only hope there is for the cure of any form of bronchial or lung diseases.

Readers mentioning THE RURAL NEW-YORKER can obtain Dr. Hunter's book, "The Lungs and Their Diseases," absolutely FREE by addressing Dr. Robert Hunter Association, 117 W. 45th Street, New York City.

WROUGHT IRON PIPE

Good condition, used short time only; new threads and couplings; for Steam, Gas or Water; sizes from ⅛ to 12 inch diameter. Our price per foot on ¾ inch is 3c; on 1 inch 3½c. Write for free catalogue No. 57

CHICAGO HOUSE WRECKING CO.,
W. 35th and Iron Sts., CHICAGO.

In time of need—for Granulated Scratches or Grease Heel, just developing or in the chronic state—turn to

Veterinary Pixine.

It absorbs inflammation, penetrates to the bottom of sore, stimulates and builds up new cellular tissues, counteracts effects of impure blood softens the fissures and sloughs off proud flesh. It is the most natural, scientific and vital healing ointment made. Money back if it fails to cure any sore, case of speed cracks or skin disease no matter how aggravated, what the cause or how long standing.

It is an antiseptic, soothing ointment of marvelous penetrating healing power.

2 oz., 25c.; 8 oz., 50c.; 5-lb. pkge., $4.

At all druggists and dealers or sent prepaid. Money back if it fails.

TROY CHEMICAL CO., TROY, N. Y.

Live Stock and Dairy

SHEEP FOR THE SOUTH.

I have just bought a bunch of common native ewes. Will THE R. N.-Y. give me its opinion as to the best type of ram to grade these sheep up for this latitude? The object is a general-purpose sheep (if this can be attained), viz., a hardy sheep with a good heavy fleece, one that will produce fair to good mutton, and one that will do as well as any other on the range, without too much pampering. The practice here is to drive up in May, mark, castrate and shear, then turn them in the woods till next May; practically without care or attention. I have built pastures and sheds to shelter them in inclement weather, and purpose to breed all about the same time, then take up my ewes before lambing and give them such care as needed. Will you tell me the difference in the three types of Merino, the Delaine, American and Rambouillet? Do you know anything of the Tunis sheep? READER.

Seminole, Ala.

Of the mutton breeds, I do not know of anything better than the Cheviot for these range conditions, where great hardiness and mutton and wool are all wanted. The Cheviot, in his native home, in Scotland, never has any shelter Summer or Winter. He ranges the hillsides and subsists entirely on grass. Down in Alabama, sheep of Cheviot stock should thrive in the woods and pastures, and do well on a minimum of attention, and at no time of the year would require artificial shelter. A friend of the writer handled a flock of Cheviots in Indiana one Winter, and they never saw shelter other than a rather open woods pasture. Yet he tells me he never had sheep do better or remain more healthy. On a ranch in northern Wisconsin, where Lincoln, Shropshire, Tunis, Cheviot, Merino, Hampshire and other breeds have been tried for the past two years, the Cheviots are the most hardy in every sense, stand the Winter best, and have the least sickness.

The three Merino breeds are all hardy and well suited to the range, but they lack mutton quality, and I assume that is what Reader desires. The Rambouillet and Delaine are smooth-bodied types, very much alike, excepting that the former is larger and weighs more. At the Indiana Station we have Rambouillet ewes that weigh as high as 165 pounds, and some Rambouillet rams will weigh 250 or over, though this weight is rare. Both of these breeds produce very fine wool, and the Rambouillet the heaviest mutton of any of the Merino types. The American type has folds in the skin, and is a much smaller breed than the others, and is not to be seriously regarded from the mutton point of view. Just now, of all the Merinos, the Rambouillet seems to be meeting with the most favor, especially on the western range. A first-class Rambouillet ram will shear about 20 pounds of wool, while the ewes will range about 12 pounds. Ordinary stock will shear much less. A superior Cheviot ram will weigh about 225 pounds, and cut 12 to 14 pounds of medium wool, such as will command the highest market price, while the ewes will weigh near 145 pounds, and will shear about seven pounds. The Tunis breed is being recommended by its promoters for its excellent mutton, hardiness and reproductive power. Tunis rams of fair size will weigh about 180 pounds, and the ewes near 135. It is also considered that this breed will do well in the South. It has been bred in South Carolina for nearly a century, but I believe it has never had much of a distribution either north or south. If the flock owned by Reader is sufficiently large, I should recommend buying both a Cheviot ram, and a Tunis, and trying each and doing a bit of experimenting. Such a plan would perhaps be the cheapest in the end. One ram can breed 50 ewes readily, or perhaps 60, so that with a flock of 100 ewes, at least two rams should be used. I might say that for mutton I consider the Cheviot the best of the breeds mentioned, with the Tunis second.

C. S. PLUMB.

SHREDDED CORN FODDER FOR SHEEP

Can you tell us anything about feeding shredded corn fodder to sheep? Will it pay to hire the shredding done rather than to feed fodder in shock? We have quite a quantity of fodder, and have never tried cutting it for sheep. W. W.

Washington, Pa.

Several years ago at the Indiana Station the writer conducted an experiment in which shredded corn stover was fed wether lambs in comparison with clover hay. We had 12 wether lambs, and these were divided into two equal lots. The sheep of both lots were fed whole wheat in equal amounts, and also sugar beets. The experiment lasted 122 days, during which time the lambs were in good health. Those fed the shredded stover, however, did not eat it as economically as was desirable. Although this stover was of good quality, the lambs refused to eat 39 per cent of it, leaving the more pithy and stalky parts in the troughs. The lambs fed clover not only ate more of this roughage, but rejected only nine per cent of it, this representing the coarser, woodier stems. Each lot during the 122 days ate 328¾ pounds of whole wheat and 728 pounds of beets. The cost of the food fed those receiving shredded forage was $5.47, while the ones fed clover consumed food to the value of $11.24. Those fed the shredded stover gained a total of 77½ pounds, while the clover-fed gained 193 pounds. This makes the cost for each pound of gain for the shredded stover lot at seven cents a pound, while the gain of the clover-fed lot cost about 5¾ cents a pound.

One swallow does not make a Summer, and this experiment was not repeated, but I should expect relatively the same results again. The shredded forage is coarser and less easily manipulated in the mouth of the sheep than is the clover. Further, clover is more nutritious. If the stover can be shredded quite fine, much of it, however, will be eaten to advantage by sheep. Personally, however, I should not wish to make the expense of shredding very high. The cost of this rough feed should be kept very low to make it a profitable feed. I have a very high regard for shredded stover, but deem it much better suited to either horses or cattle than to sheep. There certainly will be a great waste in feeding sheep unshredded stover, but as to whether it will pay to shred or not, depends on cost of shredding, size of flock and cheapness of clover or other hay. If I could get it shredded for $1 a ton or less, and had a flock of 100 or more, I should consider it a paying proposition. C. S. PLUMB.

INDIANA FARM HENS.—I give the following as my plan for caring for pullets and hens during Fall and Winter: The hens and pullets get the same care. In the morning they are given a ground mixture consisting of equal parts of corn, oats and bran or shorts, with table scraps, a small amount of animal or beef meal, and a little salt. This mixture is given warm in cold weather. At noon they are fed what wheat they will clean up, with occasional feeds of oats or sunflower seed, and in the evening all the whole corn they will eat. They are allowed to run at large, excepting in severe weather, and are supplied at all times with crushed oyster shells and fresh water; also dust boxes with plenty of road dust when needed. No males are allowed with the flock at any time. Milk is fed to some extent at all times, but at present prices for pork I prefer to feed the bulk of the milk to pigs. This plan is for the ordinary farmer's flock, where the bulk of the feed can be produced on the farm. W. H. I.

Etna Green, Ind.

Horse Diseases in Cuba.

The annual report of Gen. Wood, Military Governor of Cuba, refers to peculiar influences affecting horses in Cuba. It seems that the number of horses condemned and eliminated from the service in Cuba averages higher than under similar conditions of service in the United States; but the great majority of condemnations result from blindness. There is an eye disease prevalent in the American horse in Cuba, the cause of which has not yet been satisfactorily explained by the veterinarians. The disease seems first to attack one eye, which gradually becomes covered with a cataract or film, destroying the sight thereof, after which the other eye becomes sympathetic and follows the same course, when the animal becomes totally blind. It was at first thought that the glare and heat of a tropical sun had somewhat to do with the trouble, but so much care has been exercised to protect the animals from the sun's rays when not in use, that the veterinarians have about given up that theory, and several of them are now of the impression that it is a predisposition resulting from indiscriminate breeding of the horses in the United States just a few years prior to the Spanish-American war. Another disease that is more or less severe on the American horse in Cuba is lockjaw. This malady has been successfully treated by the veterinarians of the Seventh Cavalry, but the eye trouble still baffles the veterinarians. There is some recompense to the Government for the severe losses by these diseases, in the fact that the animals sell in some instances for the full value of their first cost to the Government, and very frequently a horse that would not bring $10 in the States will sell in Cuba for $50, $60 or even $70. It is the same way with mules, and buyers will frequently pay $100 for a mule that would not sell for $20 in the States.

MARKET GARDEN HENS.—To tell the honest truth I do not take care of the hens. They have to look out for themselves. The Madame does not take to chickens, and the children take after her. Hens are a nuisance on a garden farm, and my method is the future will be to sell in the Spring and buy in Autumn for Winter's supply of eggs. U. D.

THE chickens which are hatched out in July or August are the best for laying purposes, and those which are hatched out later should be used for market this Winter. These chickens should be kept in a warm coop and they will do much better for laying. They should be fed on corn through the Winter and house scraps. Once a month they ought to get red pepper with bran and salt, and also break them up some china ware; it does them good for laying. Chickens hatched later in the season would pay well in the Spring for market if kept in a very warm place over Winter. After chickens are once past three years of age it doesn't pay to keep them any longer for laying. A. L.

Elm Grove, W. Va.

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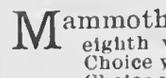

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DAIRY AND FARM NOTES.

The Breeds of Dairy Cattle.

WHAT COW?—"What are the best breeds of dairy cattle? What stock will make the most profit? Would you advise me to breed Jerseys, or Holsteins, or Ayrshires?" These are questions asked at institutes and in the press. No one can definitely answer them, and yet they will not down. If it is impossible to place one breed at the head, why come these questions? Butter fat determines the value of milk; that is, its true value. People who have any thought upon the subject know it, and creameries quite generally credit the farmer upon that basis. Butter fat also determines the cheese-making power of milk with equal certainty. Just why farmers in New York are so slow to accept it, I am not able to state. After a long experience in testing milk, I am quite in the dark just why farmers should in cheese sections so persistently fight the only true measure of milk value. In the milk-selling districts the explanation is easy. Milk containing 3.4 to four per cent of fat, and about 12.5 per cent total solids is satisfactory, or, rather, a milk containing more solids will bring no more. The farmer, therefore, is justified in producing only a so-called average milk. Any test of cows bearing directly upon the fat content does not fully satisfy him. It may be unfortunate that such a condition exists, but it does. The question resolves itself with these farmers to the greatest flow for least cost, provided always that the milk has an acceptable amount of solids. These people have no use for the Channel Islands cow, although she may as a breed produce butter fat cheaper than others; not only butter fat, but milk solids. I am inclined to think that the breeders of Holsteins, Ayrshires and Short-horns, have overestimated the value of their skim-milk in instances where the rich milk producer has excelled them in cost of producing a pound of fat.

SKIM-MILK VALUES.—The claim was at once made that the extra skim-milk more than balanced the loss. Let us see about it; 100 pounds of Holstein 3½ per cent milk will give us remaining after accounting for all losses about 95 pounds of skim-milk. Assuming nine pounds of solids, not fat, to the 100 pounds, this 95 pounds would contain 8.64 pounds of solids. Valuing the skim-milk at 15 cents per 100 pounds, and figured upon a basis of actual solids contained, this would give us 14¼ cents for the skim-milk resulting from 100 pounds of milk, or for 8.64 solids, not fat, one pound of solids would therefore be worth 1.64 cent. Let us turn this same valuation over to the Jersey milk, with five per cent fat. In order to obtain 3½ pounds of fat from the latter milk, 70 pounds only would be required, leaving, say, 64 pounds skim-milk. The five per cent milk will contain net in solids, not fats, slightly more than the Holstein milk, about one pound to the 100 of milk. Figuring on the 64 pounds, we have 6.40 pounds of solids, not fat; at 1.64 cent per pound, we have a net value of 10.49 cents. The difference between 14.25 cents value of Holstein skim-milk and the 10.49 from Jersey skim-milk, gives a difference of 3.76 cents, quite insignificant when compared to first and full valuation of milk, or where any material increase is found in producing fat in the low-grade milk. I do not think we are justified in placing too much stress upon the skim-milk value of the large milk producers over the smaller and richer milkers.

THE BIG COWS.—There seems to me a place for the Holstein cow. Although my experience warrants the general conclusion that they are large consumers, they are at the same time very strong, hardy animals. Especially is this true of the young. The strong, robust constitution gives them a place in our American dairying in a way not filled by any other breed, the Ayrshires most closely approximating. It is a principle in the breeding which I think has been pretty well established, that the top cross should always have plenty of vital force and energy; in other words, if a weakness prevails, be sure that it does not appear in the sire. The Holstein, with its vigor, makes a valuable purebred for crossing upon native and mixed breeds, such as we find scattered in every dairy section. In all sections where milk is sold, or under any or all conditions where the skim-milk is not returned to the farm, the raising of the young is a problem not cheaply solved. So many writers and speakers repeatedly affirm: "Make butter; do not sell milk or make cheese." Yes; that sounds well enough on paper; but, see here, people must have a half-pint of milk per day per capita, and if they would double the amount household economics would be better satisfied, digestion improved, and our dairy interests advanced.

MORE CHEESE.—While we are not a cheese-consuming people, like the English, with their 18 pounds per capita, or the French, with eight pounds, we still must have 250,000,000 pounds annually, or 3½ pounds per capita, and when we come to produce only a fancy full cream product, cured at low temperatures, soft, silky, clean-flavored, and put up neatly, the Americans will double their present paltry consumption. In fact, we are increasing steadily our demand for special milk products, which does not permit the possibility of skim-milk return. From every indication our per capita consumption of butter will not materially increase for a few years at least. We must expect the greatest increase from the consumption of crude milk, cream, and special milk products, condensed milk, soft cheeses, etc. If this statement is true, the larger Holsteins, Ayrshires, milking strains of Short-horns, and we may add Red Polls, if the breeders can produce the type shown in the Model Dairy at Buffalo, have a place in our dairy breeding economics, which the Channel Islands cows cannot fill; from the fact that the young can be more easily reared upon skim-milk substitutes.

YOUNG STOCK.—To be sure new milk, fresh milk, can be given for four weeks, but most dairy farmers do not feel that they can raise calves upon such expensive foods. Let me say here, that a calf that is not worth two or three quarts of new milk daily for two weeks after birth is not worth raising, and upon these vigorous young things a daily ration as mentioned above, supplemented with whey when at hand, or a boiled mixture of oats, corn and linseed meal, in a proportion of 3—3—1, will make a growth. While not as satisfactory as one would wish when milk is at hand, a growth will follow which will produce a medium-sized animal at two years, ready to take a place in the dairy. It may not be out of place here to say that most failures in growing stock come from an occasional period of fasting or check in growth. The satisfactory young animal, as produced upon our business dairy farms, is the one that does not stop growing until maturity is reached, which is usually not much before five years. In my experience, animals that have grown rapidly, and then from a lack of proper food have halted in their development, are not as profitable as those more slowly grown, but evenly and uniformly developed from birth.

H. E. COOK.

NOVA SCOTIA HENS.—I feed my hens and pullets mostly on grain—oats in the morning and buckwheat at night. I only feed twice a day, morning and night, with scraps from the table at noon; give them milk and buttermilk when I can—with plenty of oyster shells ground; fresh meat twice a week. W. F. N.

SHEEP prospects on Spring lambs never were brighter with me. We have about 40 half-blood Tunis lambs now, and prospects point to many more soon. I had two half-blood twin lambs that I showed at the Pan-American with the Tunis flock; they drew well. At the "Streets of Cairo" at the Exposition they have a sacred or fat-tail sheep and she is almost like the one I have. C. ALLIS.

AN HONEST HEN MAN.—A reader in Illinois asked to give his experience with hens writes as follows: "My experience handling old hens and pullets would be of no value to the readers of THE R. N.-Y. Mine are cared for on the hit-and-miss plan; if they do well it's a hit. From what I am about to relate you will see that I am constrained to be truthful in this matter. Away back in the sixties a contributor of THE R. N.-Y., who lived in this town, wrote such fascinating descriptions of how to manage a farm that the editor, who was passing through, concluded to stop and visit his place. The first thing he saw was a wagon that closed the opening where the gate should be. In pursuing his investigations he found that the mules had kicked out the back of the barn, and that their hind feet were on a manure pile higher than their heads. This story is still going the rounds, and warns one not to pass off fiction for truth."

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He came home from Manila,
With health somewhat precar
And to inquiring friends he said
He guessed he was Malayrious.
—Detroit Free ss.

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"HERE, poor man, is a ny." "Thank you, mum; I'll always nber you among my closest friends."—Indianapolis News.

"WHAT would you do if world should come to an end, Uncle Dave?" "Jump on de end en trust in de Lawd."—Atlanta Constitution.

"THEY tell me you broke three ribs coming across the field. How did it happen?" "I was beating off the bulldog with my umbrella."—Chicago News.

"WELL, Rollo, what did you learn in school to-day?" "I learned that a person who lives to be a hundred years old is a centipede."—Detroit Free Press.

GENTLEMAN (indignantly): "When I bought this dog you said he was splendid for rats. Why, he won't touch them." Dog Dealer: "Well, ain't that splendid for rats?"—Tit-Bits.

"CAN any of you tell me what an altar is?" asked the Sunday school superintendent addressing the juvenile class. "I can," replied a little tot. "An altar is a thing what they burn insects on."

SUNDAY SCHOOL SUPERINTENDENT: "Children, what are we to tell Satan when he tempts us to commit sin?" Children (with one voice): "Go 'way back and sit down!"—Chicago Tribune.

MR. DUKANE: "How do you account for the longevity of Methuselah and the other patriarchs?" Mr. Gaswell: "Oh, that was before so many new diseases had been invented."—Pittsburg Chronicle-Telegraph.

"YOU came down pretty quick," remarked a spectator to the victim of a boiler explosion. "Yes, answered the aerial navigator, "I wouldn't have been in such a hurry, but there wasn't anything up there to sit on."—Chicago News.

"CONDUCTOR," inquired the timid old lady, "ain't you afraid of bein' killed by the 'lectricity in these trolley cars?" "No, ma'am," said he, as he pocketed four fares and rang up two. "I'm not exactly a good conductor."—Philadelphia Press.

BRIDEGROOM: "I don't see anything of your father's $10,000 check. He promised it, didn't he?" Bride: "Yes; but he saw that your father had already given us one, and he knew we didn't care to have any duplicate presents."—Philadelphia Record.

"So!" exclaimed Senator Sorghum melodramatically; "that politician says I have betrayed my trust, does he?" "Yes." "Well, you can go and tell him to his teeth that he has uttered an untruth. I have stood by my trust ever since it put up the money for my campaign years ago."—Washington Star.

JEWELER: "See here, you want to be more cautious. What was it you said about that cheap watch you sold to that customer?" New Salesman: "I told him it would work like a charm." Jeweler: "But don't you know we can't guarantee those watches to keep time?" New Salesman: "Well, charms don't keep time."—Catholic Standard and Times.

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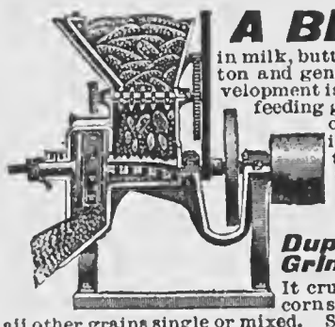

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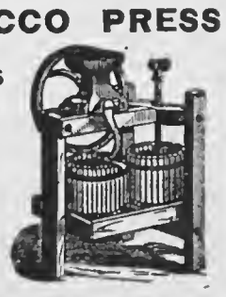

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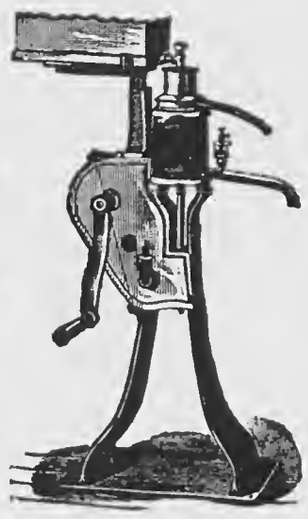

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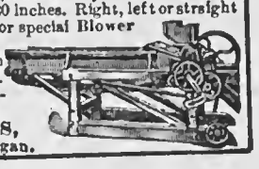

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LX. No. 2703. NEW YORK, NOVEMBER 16, 1901. $1 PER YEAR.

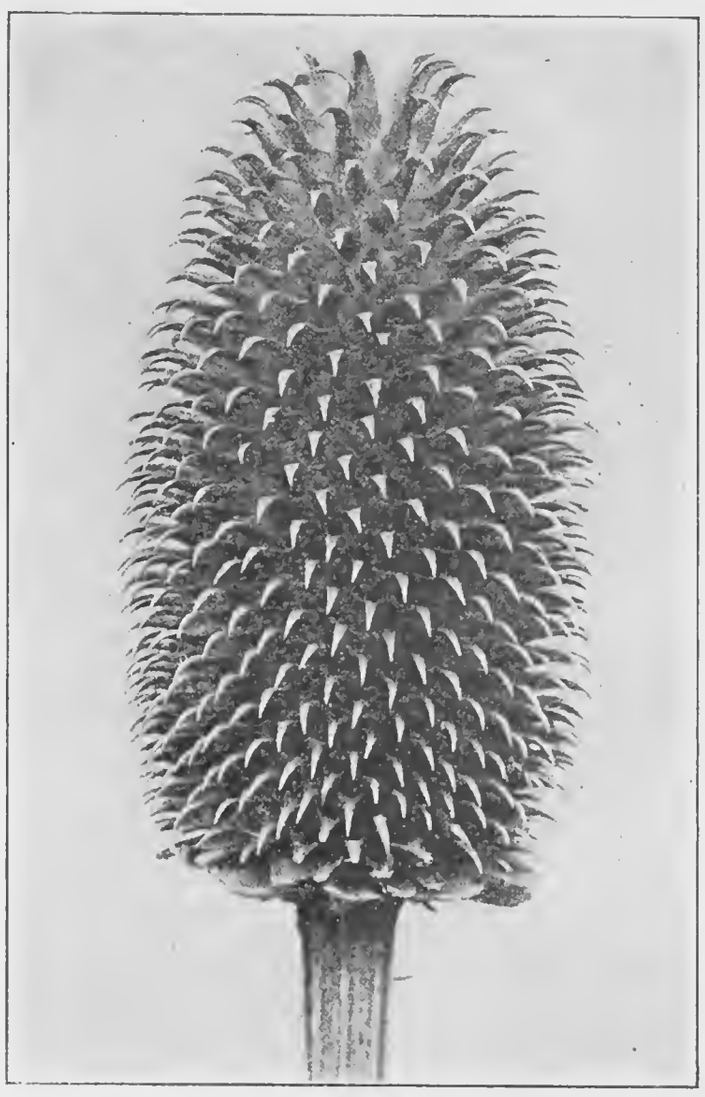
THE CULTIVATION OF THE TEASEL.

A PROFITABLE LOCAL INDUSTRY.

All About the Culture.

HOW TEASELS ARE USED.—Near Skaneateles, Onondaga Co., N. Y., there has grown up an industry which is unique in many respects. While there are other sections of the country in which teasels are grown, yet the German and English manufacturers of woolen goods pronounce the teasel which is grown near Skaneateles to be the best grown anywhere. There seem to be some peculiar conditions of soil and climate which make this teasel tough and elastic, qualities which are of great importance when the teasel is used in the mill. Before proceeding to discuss the cultivation of teasels it may be well to explain what use is made of them after they are grown. In the manufacture of woolen goods it is the custom to produce what is known as the "nap." This is the slight roughening of the fibers which gives to the goods the fuzzy appearance so prized in woolen fabrics. To produce this slight roughening there has been nothing found yet so well adapted to the purpose as the teasel point. Efforts have been made to manufacture steel points which would displace the teasel, and while for the coarser grades of goods a steel point is now used, yet for all the finer fabrics the teasel point has not been displaced. The teasel heads are fastened to cylinders, and then over the rapidly revolving cylinders the woolen goods are passed. The tip of the teasel point is allowed merely to touch the goods, and thus is produced the roughened appearance. It is found that the point of steel cannot be made perfectly smooth, while the teasel point, even under the highest magnifying power, is entirely smooth. If a fine cambric needle is examined under the microscope it will be found rough and jagged in comparison with the teasel point. Fig. 347 shows a teasel head trimmed for use, enlarged. The market for teasels seems at the present time to be a permanent one. Many tons are exported each year to England and Germany, and they are used in the manufacture of the finer grades of woolen cloth. American manufacturers are using large quantities of steel points, but only in the manufacture of the coarser goods.

QUALITY AND CLIMATE.—Just why Skaneateles has come to be a center for teasel growing is unknown, but it is found from actual experience that in a section of about 10 miles square a fine quality of teasel can be raised, and in sections outside of this area the teasel which is produced is almost worthless. The qualities which make the teasel valuable are extreme toughness and elasticity; consequently a moist climate is necessary, and it is found that the teasel, when grown in an extremely dry year, is not of as good quality as when grown in a damp season. At present two varieties or species of teasel are grown, one known as the Oregon teasel and the other as the Skaneateles teasel. The latter is a large, coarse teasel, while the Oregon variety is small, with finer points. It is found that the Oregon teasel, when grown at Skaneateles, produces a product which in the English market is worth 50 per cent more than the same variety of teasel when grown in Oregon. This is due to the fact that a certain degree of elasticity and toughness is imparted to it which it does not receive in the dry climate of Oregon. Four years ago the market demanded a large teasel, but at the present time double the price will be paid for a teasel not more than 1½ inch in length than will be paid for one two inches or more in length. Four years ago the reverse was true. At the present time the German manufacturers of fine goods will not purchase a teasel more than two inches long, and they prefer 1½ inch. The wild teasel is more or less familiar to all. In its general appearance the plant is not very different from the cultivated



HEAD OF TEASEL (ENLARGED.) FIG. 347.

teasel. The wild teasel, however, is lacking in the rigid point which makes the teasel of commerce valuable. Fig. 349 shows mature wild teasel plant at left, and cultivated teasel at end of first season's growth at right.

SCENE IN A FIELD OF CULTIVATED TEASELS. FIG. 348.

SOIL AND CULTURE.—The soil upon which teasels are grown should be a heavy clay or clay loam, and well drained. The more thorough the preparation the better. It is found that the manure would better be applied to the crop which precedes the teasels, and that teasels do better when following a crop of corn or beans rather than following a grass crop. The effort is made to give the ground clean intensive culture the season previous to growing the teasels that all weeds may be destroyed. In early Spring the land is plowed, and it is even better if it can be plowed in the Fall, and after thorough harrowing some time during April or in early May the teasel seeds are planted. Rows are marked off three feet apart, and the teasel seed is drilled thickly in the row in order to secure a stand. They are covered lightly, about as lettuce seed would be covered. After the plants are well up they should be, but are not always, thinned out to distances of about one foot in the row. This is not always done in practice, yet it is conceded by growers that a better product would be produced if it were done. In the rows with the teasels corn is planted, the hills of corn being from five to six feet apart. This corn is planted, not for the purpose of producing a crop of corn, but for the influence of the corn stubble in holding the snow during the Winter. Fig. 348, a teasel field in October, shows the topped corn and the teasel plants.

SECOND-YEAR TREATMENT.—The teasel is a biennial, and occupies the land for two seasons. The first season the plants attain a growth of from 15 to 18 inches, but during the Winter they hug the ground closely and it is important that they be covered with snow, otherwise they may winterkill. The corn, which is simply topped, causes the snow to lodge, and thus protect the teasel plants. In the Spring of the second year cultivation begins early, and is continued until about June 1, at which time the teasel plants so branch out that it is impossible to continue tillage. From the middle of July to the first of August is the harvest season. The head on the central axis is harvested first, and then the tops from the branches are cut as they reach maturity, several cuttings being necessary. About three inches of the stem is cut off with the top, and the remainder of the teasel stalk is either plowed under or burned (usually burned) upon the land where grown. The tops are placed in baskets and carried to scaffolds or drying frames, and for two or three weeks are permitted to dry. A teasel-drying house need not necessarily be different from a tobacco-drying house. Free circulation of air is the important requisite. After drying they are sold by the farmer to the dealer. The price secured by the farmer varies with the season and with the demand. During the past season it has been about 10 cents per pound. It is said by the dealers that after purchasing teasels from the farmers the shrinkage is about one-fifth in weight. The dealer trims the tops and packs them according to size, in large shipping boxes. The work of packing must be very carefully done, as the teasel tops must not vary more than one-fourth inch in length or diameter. The shipping boxes, weighing from 400 to 600 pounds each, are then sent to the woolen manufacturer either in this country or abroad. The price received by the dealer during the past season was about 17 cents per pound. One firm in Germany would purchase all the teasels grown in Skaneateles of the proper size if they could be purchased. The amount raised upon one acre in a good season is about 1,500 pounds, this amount, of course, varying with the season. Inasmuch as two seasons are required in which to produce the crop, the profit is probably no more than from many other farm crops.

A CONDENSED INDUSTRY.—In England and Germany, where teasels are grown, the plants are started in beds much as tobacco plants are started in this country. In the Fall of the first season the plants are taken from the bed and set in the field, thus enabling the farmer to secure his teasel crop by using the land only one season. One of the best crops with which to follow teasels is wheat. The teasels come from the land at just the proper time to enable it to be fitted for Winter wheat. Up to the present time no insects or fungous enemies have appeared to produce serious damage to the crop. Recently there has been an attack by what is evidently a fungous disease which causes the stalks to weaken and droop shortly before the plants reach maturity. This trouble is at present being investigated by the Department of Agriculture at Washington, and without doubt some remedy will be found. The teasel industry was started in Skaneateles in 1832 by John Snook, who brought seed with him from England. The Oregon teasel industry was introduced into Oregon by an Englishman, Mr. Sautell, who brought seed from Belgium. Owing to the limited area on which teasels can be grown successfully there is not much danger of the market being over-supplied. They cannot be stored for an indefinite length of time, for with age they become brittle and break easily. No investigations seem to have been made, up to the present time, as to proper methods of fertilization and amount of plant food removed from the soil by teasels. These investigations will shortly be undertaken, and it is hoped that soon definite information may be secured as to the effect of the growth of teasels upon the soil, and also soil and climatic conditions which produce the valuable qualities in teasels. L. A. CLINTON.

COW PEAS AT THE NORTH.

A Good Start in Pennsylvania.

As I had never seen any cow peas growing I concluded to try an acre of them. I planted them June 15, in rows three feet apart; dropped them by hand and covered them by putting shovels on the cultivator. Just before they came up I ran over them with weeder; cultivated three times, once in a row each time. The ground on which they were planted was heavy clay, with no humus in the soil. Heavy cold rains about September 1 turned vines very yellow. About September 20 they were frosted. They matured some ripe pods. I plowed them under October 10, and sowed the piece to rye. The ground on which the peas were planted was so poor that I cannot remember the time when the mowing machine was run over it. It has been the custom to plow it, raise a crop of buckwheat, then a crop of oats or rye; try to seed it with sweepings of barn floor, let it rest a few years, then give it another dose of the same, until it got barren of all vegetation except five-finger and silver grass. I measured some of the vines that were eight feet six inches high. These grew on a part of the field that was made rich by the sheep lying in the shade of an apple tree. I removed the tree with dynamite, but the growth on the whole field was about all that could be plowed in. The ground was filled with nitrogen nodules, or at least the roots were covered with them. The cow peas were an early black-seeded variety. If this experiment plot proves a success I shall use the same means on the rest of the poor land. It is 12 years since I bought this place; it was then in a worn-out condition, or at least in a bad chemical condition. How to pay for it, build new buildings and rebuild the old ones, keep the pot poiling and raise three healthy children was a very serious question to me, but for me to tell the rest would take too much space, so will close. G. B.

Factoryville, Pa.

R. N.-Y.—You close just at the wrong point, for we all want to know how you mastered these hard problems. We feel sure that the cow peas will help.

A Good Account from Massachusetts.

On June 18 we planted a bushel of Black-eyed cow peas alone, in drills, on an acre of land. They had hardly begun to blossom the last of August when they were cut for hay. They made a tremendous growth, and completely covered the ground. We consider them a success, although they were hard to cut and hard to cure. Another year we shall try for an earlier variety. We have not begun to feed the hay yet, but we fed some of the vines green, and the cows were extremely fond of them. Our making the crop into hay was a case of necessity. We need the cured fodder very badly. If the long, wet Spring had not made it impossible we should have put oats and Canada peas on that piece. We would have liked to put more of the crop under ground than just the roots and stubble, but we wanted the rest to feed. I think there is a way to "have your cake and eat it, too." After the piece was cut over, and before the hay was cured, the stubble sprouted enough so that the rows showed plainly. My idea is this: Plant the peas as soon as the ground is warm, and cut to feed green, so that all will be cut by the first part of "dog days." This would be the most favorable time for the stubble to sprout, and, judging by the way ours started, there would be a good second growth by the time frost came. This could be plowed in, or left on the ground for a cover crop. S. B. ROBBINS.

Massachusetts.

They Show Up in New York.

My cow peas were sown June 22 (a black-seeded variety) 28 inches apart and cultivated twice; 100 pounds of phosphoric acid and potash per acre and one bushel of beans. The growth was very large, completely covering the ground 1½ to two feet deep. I tried to cure some of them, but the wet season had induced a watery growth and with a cool, moist Fall they did not cure well. On October 8 they were still green, not killed by frost, and had only produced a few blossoms, no pods. I think they were a late variety. I began on the above date to plow them under. Well, I thought myself an expert at turning under green crops, but those cow peas were a sticker. The vines reached across two rows, some of them four to five feet, and well tangled. I used a large swivel steel plow with heavy chain, but they clogged so badly I could not get them under until I used a harrow to turn them around in line with the furrow; then they went well out of sight in the bottom of a nine-inch furrow. The plow was followed by roller, then well harrowed and sown to rye, two bushels per acre, with 100 pounds more fertilizer, to be turned under next May and planted to beans. While plowing one thing was brought forcibly to my mind. The land where the cow peas grew was very loose and lively,

THE WILD AND CULTIVATED TEASEL. Fig. 349.

in splendid mechanical condition, while land alongside, in same lot, treated the same heretofore, but planted to field beans, was so hard that I could hardly plow it. This is my first experience; its teachings are that they are poor to feed to cows or swine (as mine failed to relish them), but I believe the key to success on these old run-down clay loams is to furnish more humus, and the past season's trial tells me that cow peas are the best crop I have ever used for that purpose. W. L. M.

Searsburg, N. Y.

SOME REASONS FOR BREEDING PONIES.

Danger Before the Carriage-Bred Colts.

It pays to raise well-bred driving horses. That is, if you can. But there are several things in favor of raising ponies. One of these is that they are not nearly so liable to get injured; being of a very quiet disposition, they will run by a barbed wire fence all Summer, when it would be impossible for a trotting-bred colt to run there without his getting more or less cut. Then the cost of feed is very small. Indeed, one of the drawbacks of breeding the ponies is that the little mares get so fat that they are liable not to breed. We have just been having a serious time with our colts, as they have had an attack of distemper or strangles. The baby pony had it very badly indeed, and it was only by the greatest care that we saved his life. Here was another case where his diminutive size was of value. When he got so bad that it was only with the greatest difficulty that he could breathe, I just picked him up and carried him into the kitchen, where Mrs. Morse and I poulticed his throat with flaxseed meal, and steamed him by placing his head in a grain bag partly filled with fine hay and sprinkled with pine tar, and then saturated with boiling water. He is now probably out of danger, but he is much lighter than before. That distemper can take the flesh off a colt in a surprising manner. But his being a pony, it does not do any hurt if he does not grow very fast. This distemper will only help to make him a diminutive little prize pony, another point in the pony's favor, for the carriage-bred colt needs to be kept growing, and this distemper has left her looking as if walking on stilts, her legs are so long.

Speaking of carriage-bred horses there is no danger of their becoming too plentiful, because there is nothing to breed them from. If a farmer raises (by chance) a fine carriage mare, off she goes to the city, and only the runts and "beef" mares are left to breed from. Two years ago I was able to get a Hambletonion mare six years old, standing 16 hands tall, and weighing about 1,150 pounds. She was of a very nervous disposition. In fact, she had run away and scattered a wagon shortly before I got her. I thought she would make an excellent breeder, if I could find a suitable horse to mate her with. By careful handling she, with her mate, will plow two acres of sod in a day, but she will go up in the air if she is "fooled" with. This is a serious drawback to using this class of horses on the farm. On the road they will draw a wagon 10 miles in an hour, up hill and down. Still, neither is a "salable" horse. I bred this mare to Harry Eddy, a standard-bred horse with a race record of 2.26¼. He is a blood bay, 16 hands high and weighing 1,100 pounds. This horse is having a remarkable run of popularity just now, having served 100 mares the past season, and these mares are big mares and little mares, draft mares and mustangs; any old mare that perchance may raise a "Harry Eddy" colt. And what a lot of disappointed men there will be when these colts grow up, and they find that their "Harry Eddy" colt looks so very much like their little old Dolly, whose neck grew bottom side up, and whose legs were made for a Jersey heifer, but by mistake got attached to a horse!

My mare dropped a blood bay colt on April 5, long of leg and long of neck, filled to the brim with "ginger," because both the sire and dam were of these characteristics, not because one of them was and the other with faults enough to ruin a dozen colts. The colt was kept in a box stall, and the mare was taken to the barn to nurse her once during the forenoon and again in the afternoon. We could not let the colt run in the lot while working the mare, because the thing was too crazy to stay within a quarter of a mile of her mother, and the mother was inclined to go crazy with the colt. Yet she would work very well until the time came to go to the barn, then the best thing to do was to unhitch and go. After haying I turned the mare and colt into a meadow, where one side was fenced with wire, on the back side of the lot, next to the woods where no stock were. But in a few days the colt came down with an ugly tear in one hip, which took several stitches and much liniment to mend, and since this time they have had to be contented with the "calf pasture," which is fenced with boards. Then came the distemper, through which she has barely lived, and she is less than seven months old. A long time yet before she will be a five-year-old "market" horse, and I am beginning to think that when a man produces one he earns his money, to say nothing of the fact that it is more than half just "luck." J. GRANT MORSE.

BIRDS THAT BOTHER FRUIT.

How can I prevent my apples being eaten by birds? There are a number of them here that belong to the Apple Consumers' League, mostly the woodpecker, of which there are four species. Jays sometimes think their systems need toning up by a diet of apple, and take a hand in the work of destruction. I have in former years shot large numbers of the black and white woodpeckers, as they are the worst of all, but their ranks were immediately filled up, and the work went on. They begin each year on the early varieties, Sweet Bough if they can find any. I cut my Bough trees down, thinking that would stop them, but they would turn to next in season, Early Harvest, Red Astrachan, Maiden Blush, Nonsuch and also peck and spoil Winter kinds, Wagener, Willow Twig, etc. We have been familiar with the fruit conditions in this section for 35 years and have not known birds to injure apples until about eight years ago. It is not for the want of food that they do so, as the crop of worms and other insects, except Potato bugs, gets larger every year. We also lose from one-third to one-half of our cherry crop by the same crowd, assisted by robins and catbirds; also lose a large share of the berry crop except strawberries, by the same gang. Is there any remedy for this state of affairs? H. S. M.

Canton, Ill.

R. N.-Y.—We call for information from those who have had similar trouble. What can we put in the apple sauce that will cure this bad habit? Membership in the Apple Consumers' League is confined to humans.

A PROBLEM IN HOUSE DRAINAGE.

Having had the same problem of house drainage as that stated in Hope Farm Notes October 12, I give you my experience. My house stands about 80 feet from road; soil a clay loam underlaid with shaly limestone at two to three feet depth; road about 15 feet below level of house. Having plenty of room at side of house I carried the drain 80 feet west (house faces south) properly trapping and ventilating at house. I dug a square cesspool five feet deep, walled and cemented it, divided it in center with plank wall and placed therein a panel of wire cloth; one-quarter-inch mesh, heavy galvanized wire. This acts as a strainer. Beyond the strainer a tile drain leads the water into a blind ditch of stones, covered with earth. The cesspool is covered with plank. There is a manhole in this covering, on the house side of the strainer, and through this the contents of cesspool are removed. We have a bathroom and closet draining into this cesspool, and for four months in Summer have 20 to 30 people in the house. The cesspool has been emptied but once a year. The water seeps away into the thin soil, making the grass green over a wide space. The system proves efficient and inoffensive. I do not consider it complete, for the waste of valuable fertilizing material is great. I intend to dig a ditch about 100 feet long, fill with stone to within 1½ to two feet of surface, fill in with earth and plant grape vines along side, and will conduct the liquid drainage into this ditch for a permanent outlet. My house, drained as above, you illustrated in THE R. N.-Y. as the "first premium" farmhouse two or three years ago.

New York. W. B. CLEVES.

CANADA AND COW PEA HAY.

A word about haying cow peas. I tried it on a small scale, cutting the hay in a cutting box, mixing with mill feed, scalding and letting steam several hours. This makes a good feed, especially if pods are allowed to form before haying. But I imagine cows must be very hungry to eat the hard, coarse, dry stems. For hay I much prefer sowing Canada field peas and oats—both hardy—early in April here, more than a month earlier than it is safe to sow cow peas; cut in June and cure. This hay will be eaten more readily than that of cow peas. Then there is still time to sow cow peas, even though it were as late as July 5, and by the middle or latter part of September have a good crop of green feed. Thus I get two crops instead of one, and the soil is none the worse for it. The ground can now be plowed for the third time for that season and sown to rye, and it will be in good condition for corn next season. If I can manure it, so much the better. By the way, I have seen the statement that manure has very little effect on cow peas, which does not accord with my experience. On soil of ordinary fertility they make a good growth. They will also grow on soil too poor to grow any other useful crop, and where clover is not to be thought of, but on such soil it will well pay to manure them. The fact that they grow on poor soil, and improve it, renders them especially valuable. H.

South Hadley, Mass.

R. N.-Y.—Manure will benefit any crop, but we sometimes have so little of it that it is better to put a fair dressing on part of the crops and let the cow peas alone.

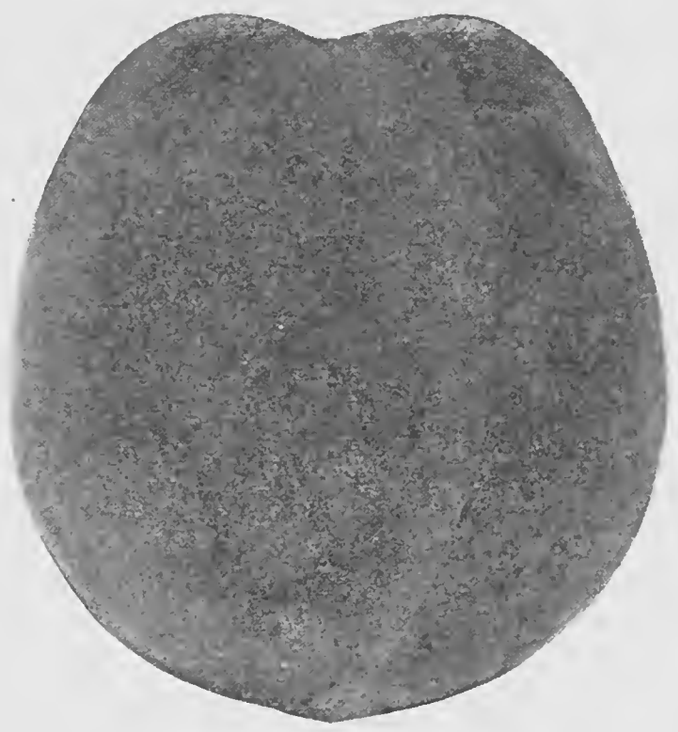
CREAM SEPARATOR FACTS WANTED.

Prof. I. P. Roberts, of Cornell, in one of his answers within a year or so, in speaking of so-called water separators, speaks of the method of water separation as of doubtful utility. "Doubtful utility" used in this connection seems to be just a guess based on general knowledge rather than on "I know." Prof. Roberts has no heartier admirer in his bailiwick than "yours truly," and so I write you to induce him to say "I know," for I have tried certain experiments to find out. Seven years ago I commenced here, and the first year used small pans. Two four-year-olds, one three and one two-year-old made up my dairy. The sum total of butter was 620 pounds and some ounces, or an average of 155. The next year I used water in an open can—sometimes a tin butter tub—skimming crudely yet carefully from the top; the same cows, one year older, and a two-year-old. The result was 947, or 189.4 per cow, with the same feed, no grain of any sort being fed. The next year an average of 204.7. I now possess a so-called separator, and use it Sundays, as I send milk to a cheese factory during the week. I have always ascribed the increase in butter to the water separation, and if it be of "doubtful utility" I want to know why.

I wish you to induce Geneva and State College to unite with Prof. Roberts in making an experiment like this: Use 400 pounds of milk, all mixed together. First, water 110 pounds, milk 100 in water separator. Second: 100 pounds milk run through a standard separator. Third: 100 pounds milk in Cooley-Stoddard or any standard creamer. Fourth: 100 pounds milk set in small pans. Fifth: After milk has been watered in No. 1, wait four hours or more, and then very slowly draw off about 100 pounds of milk and water, warm it and run the product through a De Laval, United States or other separator, and see how much butter can be extracted therefrom. Then, when these results are tabulated, we shall know *why*. Meantime, I will read and love THE R. N.-Y., water the milk and wonder whether I'm an old stupid or *why* watering is of "doubtful utility." E. D. R.

Pennsylvania.

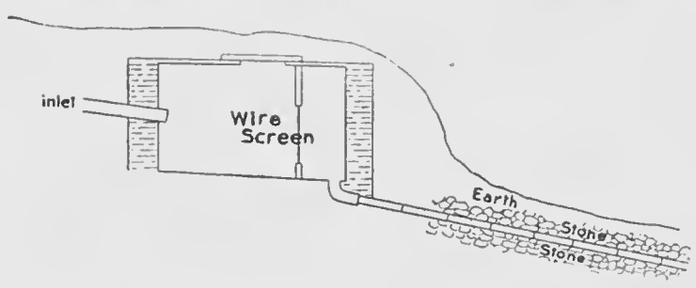
R. N.-Y.—The directors of the experiment stations at Cornell and Geneva, as well as the Vermont Station, tell us that they consider this question has been fully settled. At the Vermont Station the centrifugal separator did extract some cream from the diluted



NEW HARDY PEACH, WELLINGTON. FIG. 350.
See Ruralisms, Page 774.

skim-milk. A bulletin from Cornell, No. 151, gives the full history of very complete experiments in which large quantities of fat were found in every sample of skim-milk taken from one of these dilution separators. H. E. Cook sums the matter up as follows:

"I consider the 'dilution' system something of a humbug. It possesses no merit above the cold setting, and has many disadvantages, the chief of which is nearly spoiling the skim-milk by making it so thin. Cornell made under Prof. Wing most elaborate experiments, and if the writer will send for their bulletin he will be satisfied that they 'know,' and did not guess. I have tested skim-milk from this system that contained over two per cent fat. I have not tested any that had less than .4 of one per cent. The reason I call it a humbug is because several cans were on the market advertised to possess some mysterious power of getting the cream all out, and were called separators, a name which cannot be applied to them as we understand and accept the term. A separator gets the fat all out. These things do not. A Babcock test usually takes the conceit all out of this system. I would suggest to E. D. R. that he put his skim-milk through a test and see how much is left. The centrifugal separator is the only means to-day of getting clean skimming, and all other systems have more or less loss. The so-called Cooley system, or to simplify, a can about six inches in diameter placed in ice



A PROBLEM OF HOUSE DRAINAGE. FIG. 351.

water, is next best, and with Jersey or Guernsey milk properly attended to will give very good results. But please do not buy these so-called dilution separators."

CLOTH IN PLACE OF PLASTERING.

In a copy of your paper a few months ago there was an article on building a small tenant house. The writer alluded to using cloth instead of plaster. Would you tell me what kind of cloth was used, and whether pasted on or nailed? E. H. M.

Grant Park, Ill.

Last May, on page 323, I gave a description of a small tenant house I had recently built, at small cost, and which has proved very satisfactory. The house in question is finished inside with cloth instead of plaster. We used unbleached sheeting, which cost 4½ cents per yard. Some use cheesecloth, but I do not think it strong enough. The cloth should be firm enough to bear hard stretching. It is tacked on with tacks that come for the purpose. They are a little smaller than carpet tacks, and the heads are thinner and flatten down to the goods, holding it firmly. The cloth should be put on before the casings; and for walls eight feet high 2½ breadths of yard-wide sheeting are required. This leaves six inches for base. The breadths should be sewn together on the sewing machine and then rolled upon a board with the seams out. The board should be a trifle shorter than the walls are high, and the first end of the cloth should be securely tacked to it. Now, beginning at a window or door, stand the board up, and begin rolling off the cloth and tacking the upper edge until you come to a corner. Have ready a piece of cove molding as long as the cloth is wide and, making the threads of the cloth come straight down the corner, press the molding into the corner, and nail with small finishing nails. This holds the cloth firmly and makes the work easy. Now continue to stretch and tack the cloth into place. The spaces above windows and doors are filled in with pieces.

For the ceiling, make the cloth a few inches larger than the room; sewing together, same as for the walls. This also is put on with cove molding. Cut four pieces as long as the walls of the room, and drive nails about 10 inches apart the entire length of each. The nails should pass through the molding, about a quarter of an inch. Now take one of the pieces, and pushing the nails through one edge of the cloth, nail it up. The opposite edge, then the two remaining edges, are fastened in the same manner, stretching it tight. Tack the cloth to each joist, to prevent sagging. The cove simply rounds the corners, and is papered over and forgotten. If preferred, it may be painted. The corners cannot be mitered; but a very neat finish may be obtained by letting each piece lack an inch or more of reaching the upper corner and fitting in little cubical blocks before putting on the last pieces of molding. The cloth may be put on without sewing, tacking each breadth separately, but this is more work, and the result is less satisfactory. J. S.

ON THE DEATH OF SAMUEL MILLER.

Another of the old veterans of horticulture has lately passed to the world beyond. October 24 Judge Samuel Miller, of Bluffton, Mo., died at his home in his eighty-first year. He was born near Lancaster, Pa., October 4, 1820. He had a large family, having been the father of nine children, and is survived by seven of them and 38 grandchildren. Mr. Miller was born with the love of horticulture in his soul, and at an early age he decided to follow its pursuits. For many years he grew trees and fruit in his native State, where he originated the grape which he named Martha, in honor of his wife, Martha Isabel Evans. For many years this was the best of the white grapes, but it is now superseded by the Niagara and a few others of later origin. He was honored early in life by being chosen a county judge by his fellow-citizens and also a member of the Pennsylvania Legislature. In 1867 he moved to Missouri and settled on the picturesque banks of the river near Bluffton. Here he had resided ever since. His life has been spent in good works. It was his delight to plant trees, plants and seeds, and watch their development. A new variety of fruit or flower to him was of more interest than the acquisition of property of financial importance. He loved to see things grow, and he worked hard to have all prosper that he planted. The grape was one of his favorite fruits, but he loved to grow all those that would flourish in the region where he worked. He also labored to grow some of those that required special attention. Of late years the persimmon and several kinds of nuts occupied his attention, because he was anxious to see them improved.

Judge Miller was a ready writer for the horticultural press, and his thoughts on paper have helped many others who were laboring in the same cause as himself. He has long been a special contributor of Colman's Rural World of St. Louis. His pen is now quiet forever, and his kindly words of advice will be sadly missed. Perhaps he was a little too sanguine and enthusiastic at times, but he was always candid, strictly honest and fair-minded. My first personal acquaintance with Mr. Miller was at a horticultural meeting in Kansas in 1874. We have often met on similar occasions and corresponded still more frequently. It was a great pleasure to have him serve as an attendant at the Missouri fruit exhibit in the Pan-American Exposition, where he spent several weeks of his latest service to the world in explaining Missouri fruits and their culture and kindred topics. It was while so engaged that a dropsical affection overtook him. This caused his return home in a precarious condition, with the fatal results we so much deplore. Otherwise he might have lived to bless the world for a few years more. One thing that he greatly enjoyed on the Exposition grounds was an extensive plantation of old-fashioned flowers by H. A. Dreer, of Philadelphia. As he and I were walking through the grounds one morning on our way to the horticultural building I pointed it out to him and he at once wanted to see them all once more. It was a great pleasure to guide him through the beds and thus minister to the happiness of a devoted and venerable horticulturist. May his noble life encourage others to follow his good example.

H. E. VAN DEMAN.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

ARCTIC APPLE IN MASSACHUSETTS.

One of our readers in Massachusetts wishes to know whether it would probably pay to set a large orchard of Arctic apples. He says that he has grown specimens of the variety this year that were very fine and excellent in every way; and, if he could produce large quantities, they would probably sell better than Baldwin. What would be your advice with regard to substituting the Arctic for the Baldwin?

So little is known of the Arctic that I cannot advise your Massachusetts reader to plant it largely. If he has fruited it for several years, and it invariably does well, he is better able to judge of its value than anyone else. Fruit is always better on young trees than old ones, and the fruit on two trees in these stages should not be compared. The Baldwin is far from being perfect, and I do not think I would plant it for profit, but would substitute Sutton Beauty and Washington Royal (Palmer Greening). S. T. MAYNARD.

Mass. Ag'l College.

If the reader has been as successful in growing this class of apples several years, as he has this season, it might possibly do for him to try this variety in a small way. But for our New England hills give me the old reliable Baldwin. This apple with plenty of plant food, thorough cultivation and the proper spraying will surely bring success to the grower, while many of the other varieties are not sure. Don't make a mistake and set too many varieties; two or three good reliable sorts are much better than a dozen.

ETHELBERT BLISS.

Hampden Co., Mass.

For Massachusetts at the present time Baldwin is the standard market apple, which counts very much in the profitable and quick sale of fruit. Baldwin is a very productive apple, but to my mind one of its best points is its ability to raise better fruit on a well-laden tree than on young, or trees sparsely set with fruit. Simply because a young tree grows a few fine specimens does not prove it to be valuable. It may not be productive when older, or produce good-sized and well-flavored fruit when bearing heavy crops. With me Arctic is a good grower, but I do not know of its being tested on older trees in our section. It is simply a matter for the inquirer to investigate and decide for himself; then he will know whom to blame if he makes a mistake in trying something new. As a rule, one who does not feel able to meet much loss should not invest in untried fruits too heavily; for others it does not matter. H. O. MEAD.

Worcester Co., Mass.

My opinion is that it would be a mistake to substitute any apple for the Baldwin until it had been most thoroughly tested. Had I something that by one or two years' product I considered better or even equal with the Baldwin, would start in a small way, both by planting trees and setting scions on old stocks until its superiority was apparent. I am not familiar with the Arctic, but should be glad to purchase and test it in the heart of Massachusetts. There is one fact about the Baldwin; it has the habit of bearing abundantly when apples are very cheap, and no crop when apples are scarce and high. I thought some years since that I had conquered that unsatisfactory habit by grafting an orchard with scions from trees bearing the odd year. For a few years they followed the habit of the original stock, but lapsed into the habit of giving the last few years a crop the even year only. From a tree that in 1854 I picked 10 barrels of Baldwins, and for years before an even year tree, I took the bloom from one or two large lower limbs which blossomed and bore fruit the next year, and gradually increased the odd year crop until the tree bore about one-half its crop each year, for 15 or 20 years, but for the last few years, it has returned to its original habit of bearing the even year only. Perhaps by persistence in these two lines of work a permanent change might be wrought. C. E. PARKER.

Worcester, Mass.

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The Value of Hen Manure.

F. P. H., Philadelphia, Pa.—Would it benefit next year's corn ground to spread chicken manure upon it this Fall and harrow it? The soil is a sandy loam. Is chicken manure as valuable as cow and horse manure, pound for pound, when applied to hoed crops? Give the constituents side by side (for comparison) of each kind, viz., chicken manure and barnyard manure.

ANS.—It is difficult to give a fair analysis of hen manure, because as found on most farms there is a varying amount of dirt, feathers and trash found in it. The figures given below represent a fair average sample of fresh manure:

Pounds in One Ton.	Nitrogen.	Potash.	Phosphoric acid.
Hen manure	35	17	30
Horse manure	11	10	5
Cow manure	7	8	3½
Sheep manure	17	13	5

Thus it will be seen that hen manure is richer than that from other domestic animals. The explanation of this is that the food of the hen is richer, for she eats considerable meat and insect food. Again, the solids and liquids of the hen are ejected together, while in the case of larger animals the liquids are often lost. As usually applied to the soil, hen manure is dried, and the analysis would of course vary, but the above figures are fair for comparison. We would not spread the hen manure this Fall, but would keep it until Spring and at corn planting time either put it in the hill or mix it with chemicals and apply it broadcast. When hen manure is dried and fined it makes a good base for a fertilizer. Let it be crushed and sifted and then mixed in the following proportions: 1,200 pounds manure, 150 pounds nitrate of soda, 450 pounds acid phosphate and 200 pounds muriate of potash. If one is prepared to go to the trouble of crushing and mixing this will make a good use for hen manure.

Poultry and Potato Beetles.

Several Readers.—What are the facts about chickens and Potato beetles? Do they really ever eat the insects?

ANS.—As some have questioned the statements that chickens will eat Potato beetles, it may be instructive to consider the bird enemies of this pest. The Rose-breasted grosbeak early learned to like the insect, and the crow is said not only to take the beetles from the vines, but late in the season digs into the earth in search of hibernating individuals. The common quail and the Yellow-billed cuckoo are also reported as Potato-bug eaters. For several years after the advent of the pest into man's potato patches, the duck was the only domesticated bird that would touch the nauseous insects. Here is an interesting report from Kansas of a duck foraging expedition: "Headed by an old drake, the 20 ducks were waddling off in a beeline for my potato field. I crawled into some bushes and awaited developments. As they came to the end of the rows they seemed to deploy right and left, and such a shoveling in of bugs I never beheld. They meant business, and for fully one-half hour did they continue, until every duck was filled up to his bill with bugs. The expedition was repeated about 4 P. M., and kept up until every bug went under. I have tried these ducks and others since, and find they all like them and seem to get fat on Potato bugs."

Another states that while it is true that ducks, under some circumstances, will acquire a taste for the beetle, still you cannot "bet on it," for they are just as likely to destroy produce more than to balance the account. I do not recall any accounts of turkeys including Potato beetles in their menu; they are great grasshopper eaters, however. As to chickens eating the pest, it is said that for a long time they would invariably give the beetles the go-by. But after a while some chickens learned to eat, first the eggs, and then the "soft-shells," or grubs, and finally acquired the habit of feeding upon the mature insects to such an extent that Dr. Riley has stated that instances had been reported to him where between 30 and 40 perfect beetles had been found in the crop of a single chicken, and this not from lack of other food, but from preference. And there are several other instances on record of chickens eating the Colorado Potato beetle, but it is doubtless an acquired rather than a constant habit with chickens, and perhaps it is necessary to entice the chickens into the potato field with grain scattered on the ground, and at the same time knocking off the beetles and soft grubs among the grain, thus educating the chickens to such a bug diet. This is the method employed by one person who states that it was a success, as the fowls soon began to pick off the insects for themselves. M. V. SLINGERLAND.

Pear Leaf Spot.

L. A. O., Jubilee, Pa.—I send sample of pear leaves, bark and moss. Will you tell me what is the trouble affecting them? I would like to know the remedy. These trees have a good crop of Bartlett pears of good quality, but not as fine as I would like. The trees have been set about 25 years, and have borne a good crop continually since they first commenced. The soil is sand loam.

ANS.—The moss is simply an accumulation of lichens on the bark. Scrape off this moss, and while spraying the trees with Bordeaux Mixture, as recommended below, drench the bark wherever the moss occurs, and it will soon clean the bark. The leaves were badly infested with the Pear leaf-spot fungus disease. It is necessary to spray with the fungicide Bordeaux Mixture for this disease. Three sprayings during the season have given almost perfect protection against it. Spray first just after the blossoms fall, and make two subsequent applications at intervals of two or three weeks. The spraying must be thoroughly done to be effective.

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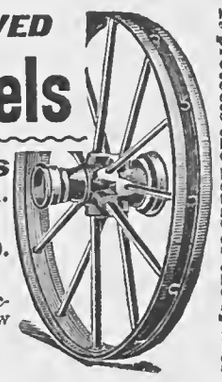

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THE "ADULTERATED" BALE OF HAY.

We frequently hear stories about rocks, old boots and other "foreign matter" found in bales of hay. Is there any truth in such reports?

In reference to the many stories you hear about rocks, sticks and similar things being packed in baled hay, we think nowadays that they are merely jokes or pure accidents. We find it is a very rare exception when anything like this happens. It used to be a frequent occurrence, but in the last 10 years we think the morale of the hay shippers has reached a higher level, and what they ship as hay is hay, and not full of something else inside the bales.

Baltimore, Md. W. G. BISHOP & CO.

During an experience of nearly 24 years as receivers and jobbers of hay from Canada and all parts of this country, we recollect nothing of the kind coming under our own observation, but occasionally, or once in a great while we hear of somebody finding a stone in a bale. Once we heard of a horse's head being found inside a bale, but we have never heard of more than half a dozen, if as many, cases of fraud of this kind in all of our 24 years. We regret to say, however, that we often find a large quantity of hay seed in the middle of the bales, and this is as much of a fraud as putting in stones and other heavier substances. We find the greatest risk in buying hay from strangers to be the danger of "short weights," and many buyers have been caught in this way.

MACKENZIE & WINSLOW.

Fall River, Mass.

Stories that you hear about rocks, sticks and similar things being packed in baled hay may sometimes be jokes, but my experience, covering a period of 30 years, proves that they are not always jokes. I have had large stones, old boots, sticks and cordwood of various dimensions brought to me by my customers with the assertion that they were found in baled hay. I believe, however, that these are only isolated cases, and that the majority of baled hay is free from them. The hay in which a number of heavy stones were found, was furnished me by a man whose honesty could not be questioned. The hay was baled in an old-fashioned hand press, and when the attention of the shipper was called to the fact that large stones had been found in the hay, he investigated the matter, and found it was due to a rivalry among the men employed on his farm as to who could press the heaviest bales, it being considered a test of strength. I have heard of fish being stuffed with stones to make them weigh heavy, but this is the only case I have ever heard of where very large stones, weighing 60 or more pounds each, as these did, were used to make heavy bales of hay. S. D. ANDREWS' SON.

Providence, R. I.

As far as the packing of stones, sticks or other objectionable articles into bales of hay is concerned, the complaints we receive therefrom are so few that we hardly ever consider it seriously. However, if we go away back in the hay business 10 or 20 years, we remember it to be a common occurrence to find almost anything, from a dead chicken to a rock of almost unlimited size in the center of the bales, but that is, at the present time, what we call a "has been." Of recent years the shippers and receivers have become better acquainted with each other, to such an extent that complaints of any kind are, and can easily be traced back to the original trickster; this being a fact, it has naturally stopped such nuisances to a certain extent. The only time it ever occurs is when a new hay presser begins business, or new men are employed who do the act thinking it a practical joke. It is not always the farmer who is to blame when his hay does not come out correct, either in weight or the contents that may have been put therein. The pressing of hay has become a separate or special business, and is carried on in a great many instances by persons not connected with the farmer in any way, either in the shipping or selling of this commodity, and they, of course, care little what may result when the hay reaches the consumer. It, however, only takes the new comer a short while to learn of the putting-up methods, and to satisfy the consumer he is compelled to put the hay up in proper form or accept any deductions made by the receivers.

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New York.

In all my experience in handling baled hay during the past 15 years (several hundred cars per year) there never has come to my knowledge a case where we have found stone or other makeweights baled up with hay for the intent purpose of fraud. Only the other morning our men ran a hay knife through the cutter, and neither the man pitching, nor the man feeding the cutter with his hands, discovered it until it was in the cutter; so it is possible sometimes for some small stones or horse shoes, that may be gathered up with the horse rake, to get into the press, but any man accustomed would quickly make the distinction between these things and something that was large enough to need special help to get in. There have been undoubtedly a few cases of the kind, but I believe they are well out of date, and fully as much or more trouble now comes from ignorance of what constitutes different grades of hay, on the part of the balers in the country, many of them never having had the chance to see well-graded hay in our large hay markets. Such a visit would clear up the mystery to many a man who accuses unjustly the commission man, and the buyer of his hay whoever he may be, by showing him his own by the side of better and correctly defined grades. We all judge things by comparison, and the lack of this opportunity in the hay business, I believe to be the source of much so-called fraud. We have bought hay from many shippers in Canada, New York, Pennsylvania, Ohio, Indiana and Michigan, and had there been foreign substances in the bales we certainly should have heard from it, quick and direct. Dealers in baled hay, car lots, usually protect themselves against short weights and off grades, but the risk on frauds from stones, etc., would be considered so small as not to be mentioned; in fact, if we bought a man for the price of a small rock we would think that we got him cheap enough. The same rule applies to buying hay that fits in all commercial transactions; buy of men who have a reputation and are known to be reputable dealers, and keep clear of those who are on the dishonest side, or even those who seem to be on the fence.

Union City, Pa. W. L. MITCHELL.

Migratory Bee Keeping.

Several Readers.—We have seen an article in some of the papers giving the story of a northern bee-keeper who keeps his bees at the North as long as the honey flow lasts, and then carries them to Cuba, where they continue to work during the remainder of the year. Is there any truth in this report?

ANS.—There is and has been what is known as migratory bee-keeping, that is to say, the owner of 100 colonies may, after the bees have gathered all the honey in one locality, or when the season has finally closed, remove these same bees either by rail or by boat, to a southern climate where the season is just beginning again. In this way he is able to get two crops instead of one. Mr. C. O. Perrine, about 20 years ago, tried this plan on a large scale. The whole apiary was put on a good-sized raft on the Mississippi. The bees would be left for a couple of weeks in one location and then moved southward to catch another honey flow, but the experiment proved to be disastrous, because the bees dropped down into the water and were drowned. This so decimated the strength of the colonies that the bees could not store any considerable amount of honey. Taking it all in all, migratory bee-keeping has not proven to be profitable. The little item referred to, like a good many other newspaper accounts, is only partially true.

E. R. ROOT.

Fancy Prices for Apples.

D. W. R., Hickman, Ky.—I have about 250 bushels of select Winesap apples. I wish I could place them at the extra fancy prices THE R. N.-Y. mentions. I am familiar with many varieties of apples and know none that approaches the Winesap as a cooker. The sauce is nectar rich, aromatic, and truly of a winy flavor. Will you suggest a way for me to place my apples where they would bring high prices?

ANS.—The prices quoted were of course retail. No one here would pay such prices to a stranger, or buy that quantity of fruit without sampling it. The restaurants and hotels like to buy produce of commission men. They can see the goods, and thus they know just what they are buying. Most of them have few facilities for storing fruit and want their supplies delivered in small lots. At present, your best plan will be to correspond with some good commission man and make a bargain with him to handle the apples. There is a scarcity of fine fruit this year, and those Winesaps ought to bring a good price.

More About the Clark Grass.

H. L. C., Cumberland, Me.—Mr. G. M. Clark gives on page 708 some figures about his hay crop. Does it not strike you that $16 per ton is quite a high average for hay in the barn for the last 12 years, or that $9 will do all the work to an acre of ground that Mr. Clark claims to have done, page 708? I have been working eight acres the past Summer, harrowing every two weeks, and now that it is sowed I find the cost way ahead of that price. If $9 will fit an acre of Mr. Clark's ground, what does he allow per day for team and man?

ANS.—In making my estimate for 12 years on a certain section of my hayfield I have figured the grass at $12 per ton, and found that at that price the profit on seven acres for the 12 years is $5,581.40, but if I had figured it at $16 the profits would have been $7,433.40. I have never figured in my estimates as high a price as what I actually received. As to the cost of labor, if H. L. C. should use the same tools that I use he would find that at 30 cents an hour for a man and team, which I figure for common farm labor, it would not cost him $9. I have always given figures favorable to the producer when proper tools have been used. If he will use the double-action harrow he will find that it will not cost him two-thirds the price that I have named. GEORGE M. CLARK.

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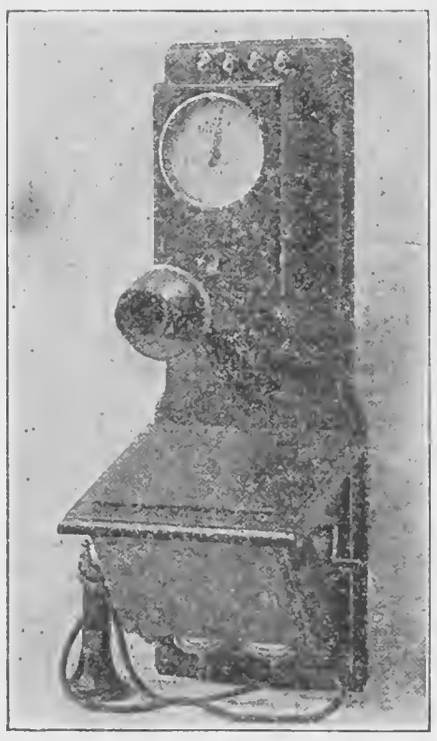

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Ruralisms

NOTES FROM THE RURAL GROUNDS.

CLOVER AND COW PEA BENEFITS.—Reference has been made in these notes to the usefulness of Crimson clover and cow peas as hen forage. We are able to report an increasing partiality for these nitrogenous foods among the two flocks of chickens kept on the Rural Grounds, and correspondingly good results in the way of egg production. Hens readily take to clover in any variety, but they are often shy of beans, seldom eating them uncooked. An appetite for raw peas or beans may be considered an acquired taste coming on gradually. Our hens ignored the cow-pea seeds the first season they were grown here, and only developed the taste late in the Winter when scratching the pods open by chance in a sheltered part of the field. The example of contented old biddies coming in with comfortably extended craws and an urgent thirst for water to complete the swelling process proved contagious, and they all now hurry to the field at once on being released from the yard. There can be no doubt as to the beneficial effect of the exercise needed to get the pods open, nor of the high food value of the beans themselves. The Rural Grounds lie in a strip about 800 feet long by 200 wide. There are poultry houses near each end, and the flocks have but little chance to mingle, as they are necessarily kept yarded most of the time, yet the cow-pea habit, which we heartily approve, seems to have been communicated. The second flock has no access to the fields, but acquired the taste from scratching the gathered pods shelled for seed. An increase in egg yield was noted in both cases as quickly following the ripening of the Early Black cow peas, which is the variety best suited for us. Cow-pea seeds, when ready for market, are too costly for poultry food, but we are convinced that a patch of these hustling land improvers handy to the chicken yard is a good investment where practicable. Crimson clover has become a necessity, sown in August between bush fruits and after early crops to improve our soil and diminish washing by Winter rains, and incidentally as forage for the fowls, who keep the more accessible strips sheared as closely as with a lawn mower. The season has been favorable and the plants on early-sown strips are now seven to eight inches high, but we find such leafy plants do not, as a rule, winter as well as those closely picked by the fowls. Chickens are fond of green food, but eat very few weeds with relish. If not provided with clover in this manner they are very troublesome on the lawn, when at liberty. These clover strips entice them away, and thus fit in all along the line.

A NEW HARDY PEACH.—Peach culture has been lately extended over an enormous area, this delicious fruit being grown from Florida to Canada, and from Texas to Washington. J. H. Hale says that there are now no "peach districts," as peaches may be grown anywhere if attention is given to the wants of the tree. Residents of cold latitudes know, however, from bitter experience how quickly the hopes of a crop may be blasted by a hard freeze, and are little inclined to plant southern varieties, or those supposed to be tender in tree or bud. The so-called hardy peaches, Crosby, Bokhara, etc., while quite resistant to cold, are not altogether satisfactory in fruit, and new sorts for northern culture are wanted. Stone & Wellington, Toronto, Canada, send us the peach illustrated in Fig. 350, page 771. They say that the tree has been bearing four years in Toronto, and shows great hardiness, never having been killed back in any degree. It ripens in that locality about the first week in October. The flesh is yellow and of good quality, though our specimen was overripe. While not believing in the multiplication of varieties, the originators think that this one is worthy of propagation, and have named it Wellington. They say that the peaches happened to be smaller this year than previously, as the overloaded tree was not thinned. Good specimens should be one-third larger than represented. If this peach should really prove as hardy as its present condition seems to indicate there is a great field for it.

FINE AUTUMN FLOWERS.—November 1 does not often find nasturtiums, marigolds and geraniums in brilliant bloom outside, but these old favorites never showed to much better advantage than at this late date. A few nasturtium leaves have been nipped by frost, but the flowers are as perfect and plentiful as ever. Geraniums, marigolds and Verbenas as yet show little deterioration from the lengthening cool nights. Burbank's Elegance Verbena was particularly bright and sweet throughout October. Cannas open many blooms, considering the lateness of the season, but the foliage begins to show the effects of cold, while the brilliant clumps of Salvia or Scarlet sage, always locally grown in abundance, are fading out rapidly. Hardy Chrysanthemums, Cosmos and Japan Anemones remain to round out the gardening year. The daily brilliant sunshine, almost continuous for the last six weeks, warms the soil so that a fair rate of growth is still maintained on unripened plants. It is getting rather dry for celery, however, and there is a noticeable falling off in its development within the last two weeks.

W. V. F.

10 Weeks for 10 Cents. You have several neighbors and friends who need THE R. N.-Y. We are going to help you to see that they get acquainted with it. For our part we will send the paper to them now 10 weeks for 10 cents—a cent a week. We ask you to call their attention to this offer. Perhaps you can get up a club. The 23 largest clubs will each get a cash premium January 1. Will you be one of them?

17-YEAR LOCUSTS AND PEACH TREES

In regard to the 17-year locusts I think that the probable danger from them is overestimated. I should not hesitate to set out an orchard or make improvements, provided on long-cleared land. Where forest trees or brush rows had been removed it might be different. It was my observation 17 years ago that the locusts confined themselves exclusively to wild thickets and forests, or where such growth had been. G. D.

Whitehouse, N. J.

I do not predict serious damage to fruit trees by the locusts next year in the rural districts except perhaps to young chestnuts, which they are very severe on. In boroughs or villages where other trees are scarce they may cut severely. I noted them closely in 1868 and 1885. They fairly mowed the chestnut and oak thickets, but our orchards were not damaged much as a rule. I believe in thorough pruning, especially peach, and Kieffer pear trees. Less fruit buds, larger fruit; quality rather than quantity, therefore follow up the sawyers with clear-cut pruning shears. W. S. C.

Collingswood, N. J.

I have seen some injury done to young trees by the locust, but do not now recall any instance where the injury was severe enough to ruin the trees. From past observations the locust is not general, but confines itself to certain localities along sandy or high wooded ridges, and works more on forest trees than anything else. Still, if young trees are planted on or near such situations, which were infested by them the last time the locusts came, they would, no doubt, be severely injured, and I would not advise planting in such places, but as to the wholesale abandonment of tree planting I think it folly; I shall plant just the same as though no locusts were coming. If they ever are prevalent on level areas I have never known the fact. I would advise those who contemplate planting to do so unless, as I state, they expect to plant near localities that were infested 17 years ago.

Mercer Co., N. J. CHAS. BLACK.

Near the river here we have never had any locusts. In 1851 on the upper end of our farm, or rather in the timber, they were plentiful, and their effect on the oak trees was very plain. Locusts are seriously injurious only near timber lands, that have been standing over one locust year, and where there were great quantities in 1851 there were very few in 1885 in timber land, and none where timber had been cut, so that I think, judging by the past, that locusts will only be an obstacle to tree planting near where there is timber or was timber 17 years ago. I intend to plant some peach trees in the Spring, and do not anticipate any serious trouble, although timber is not very far off. The locusts are partial to oak trees. I. J. BLACKWELL.

Mercer Co., N. J.

When the locust brood was around before I was fresh from college, and gave these matters but little thought. As soon as I received Prof. Smith's warning I at once talked with some of our older fruit growers, and failed to find wherein the brood did much harm before. Wishing to plant about 4,000 or 5,000 peach trees next Spring I wrote Prof. Smith for advice. He said he would "plant but not trim until June, planting only the largest trees." To sum up, I expect to plant over 23 acres with peaches and run the risk. By the way, I dare not try the Stringfellow method, as my only success in peaches is from working the soil from May until August. I should think some of those back fields of Hope Farm, unless too much clay, would be a grand source of income when planted to peaches.

Sussex Co., N. J. A. E. R.

Stringfellow Method in Tennessee.

I was glad to read your recent reference to the Stringfellow plan of tree growing, and desire to give a little experience of my own on the same line. I have an orchard of 2,400 peach trees here, six years old. It had been given intensive cultivation until last year, only to have the blooms killed by a late frost. In disgust I let it severely alone last year. As usual the late frost showed up, but the ground being compact the sun did not penetrate, my blooms were late and the result was a splendid crop of fruit. After picking the orchard being so weedy I cultivated it, with the same old result this year—no fruit; killed by a late frost. I confess I had no patience with Mr. Stringfellow's method before, especially his plan of setting trees, but in the future I am with him on after cultivation; i. e., a pair of good horses and a mowing machine.

Morristown, Tenn. H. L. D.

The Alton Peach.

On page 726 J. B. Rogers undertakes to tell us all about the above peach, and how it got the name of Alton, where it originated, etc. T. V. Munson, of Denison, Tex., originated the peach, and sent it to me under the name of Minnie. It was so good that I sent some buds to the Experiment Station at Alton, where Stark Bros. got it and changed the name to Alton. Names of fruits should not be changed without the consent of the originators. The tree Mr. Munson sent has borne 14 crops of peaches in 15 years (the 1899 freeze was too much for it), and the 1901 crop was over 20 bushels, so I think it a good one as a fruiter, but the quality is not as good as Mountain Rose. G. W. ENDICOTT.

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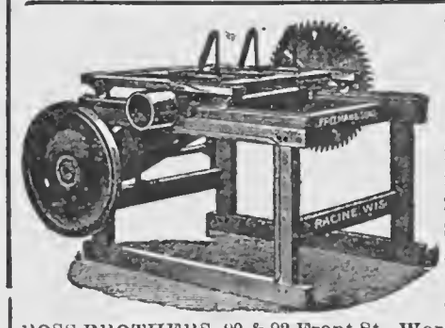

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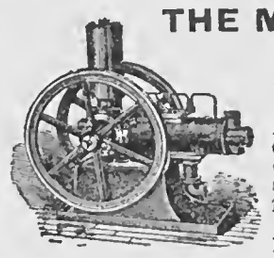

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HOPE FARM NOTES

POLITICS.—The Hope Farm man did his share of work on the stump this Fall. It seems to take a good many words to convert a voter. I am led to believe that it is easier to pull out the stump of a Northern Spy apple tree than for the average man to get on the stump and pull out political convictions by the roots. I read of orators who drive their hearers so crazy with conviction that the crowd will unhitch horses from the carriage and drag the speaker along in triumph. Truth compels me to say that nothing of the sort happened to me. I was obliged to walk or drive Nellie in the old buggy. I must conclude that I fall as far short of those soul-stirring orators as I do of those wonderful farmers who never make a mistake, whose hens lay 350 eggs a year, whose potatoes never fall short of 600 bushels per acre, and whose children are such remarkable specimens that they never need spanking and never even have a dirty face when company comes!

VERBAL BOUQUETS.—Once in a while the humblest of us will receive a little compliment that means something. I find that the Hope Farm folks are quite reconciled when they are forced to forego the pleasure of listening to my oratory. The little Graft, however, has an appreciative soul! As he was going to bed a few nights before the election he looked up at the Madame and said:

"I *would* like to hear him speak! Why, I'd rather hear him speak than to go to another Punch and Judy show!"

Now there are two ways of regarding such things. My political opponents will say:

"What did we tell you? Here's a member of his own family admitting without reserve that his arguments are on a dead level with a Punch and Judy show!"

That's one side of it—here's the other. A Punch and Judy show represents the most exciting theatrical entertainment our little folks have yet seen. When the little Graft gave his opinion he went beyond his highest fixed ideal of fun and excitement. There you are—it's all in the point of view and the standard you set up.

The result was that one cold and foggy night the little Graft drove with me nearly 15 miles back and forth to a political meeting. The little chap was good company. He sat on a front seat and drank in all the speaking. It was nearly 12 o'clock when we got home, but the little campaigner never winked. The Madame had made some sandwiches for us, and we ate them with good relish as we drove through the thick fog. The Graft kept his ears wide open listening for teams and trains, for we could not see a rod ahead of us in some of the hollows. The little chap finished his sandwiches, and after some thought—piped up in his soft voice:

"I believe just as that man does—I tell you that license is a bad thing!"

"But what *is* license?"

"I don't know, but it's an awful bad thing, because that man said so!"

Some grown-up folks will smile at that, and yet they are but grown-up Grafts! If a great big share of the voters of this country have any more real logic or reason about their voting than the Graft has about *license* your humble servant has not been able to observe it. The other man seems to be better able than I am to make people decide what is worth voting for.

WEATHER NOTES.—Take it all through we have had a glorious Fall. On November 3 the Cannas in the door yard were still green. The corn on the hill looked rusty, but the peach trees were still green. The forest trees are dropping their leaves rapidly. Some of them gave up early. I observe that some oaks and chestnuts stand with bare branches, while others are still well leaved. This is not due to exposure either. I notice the same thing in apple and other trees. Truly, some trees have strong and real character, just as certain humans seem able to toss off disease or temptation that will strip off all that makes life enjoyable for others. . . . The yellow turnips have not turned a hair for Jack Frost yet. They seem likely to keep on growing up to Thanksgiving at least. It is high time to keep the cows and the hens well sheltered at night. It has been great husking weather, and the boys have been pushing the work. We want to get both corn and fodder under shelter before the long November rains set in. We much prefer to husk in the field, but it may be necessary to haul the last few loads in for barn husking.

FARM NOTES.—On November 1 one would have thought that the Boers were capturing a British convoy in our valley. It was only the hunters celebrating the "open" game season. The quail that we have tamed and fattened through the Summer were in danger that day, and so were the cows and the children. My own theory about game is that it belongs first of all to the farmer on whose farm it is found. We haven't so much as a pop-gun at Hope Farm, and none of us cares to hunt. That being the case, I hold that neighbors on adjoining farms who want to hunt and are careful about fires and about shooting should have next right to the game. As to the pot-hunters and careless fellows from town and city, I claim that they have no moral right to shoot our game. I would keep them off the farm and try to get neighbors to combine and post notices all over the community. . . . Our tools are ready for Winter. Philip took the larger tools apart, scoured the metal parts and daubed them all over with crude petroleum. The sulky plow, the Cutaway harrow and the mower will make a big quarrel for room if you leave them as they were used. Take their tongues out and they pack closely and comfortably together. That is true of humans also. A working tongue makes a mighty wide house necessary, while one that is hung up under control permits close packing in small compass. . . . I have never known such a large proportion of red ears as we find this year in the corn. It is a yellow dent from selected seed, and we are sure that not a single red kernel was planted. Yet the red ears roll out in numbers sufficient completely to demoralize an old-fashioned "husking bee." Too bad that all this blushing maize is wasted on Hugh, Charlie and Philip. . . . We expect to keep on sowing rye up to the middle of November anyway. After the corn is off we shall work up the ground with the spring-tooth and sow rye. Ought to have done that 80 days ago, you will say! You are right. That is one of our oughts. All that corn ground ought now to be six inches deep in living green.

STONE WALL REFLECTIONS.—No, I am not going to tell about my own Sunday afternoon reflections on that stone wall. I sit there now and then, but I don't tell about it. Why, some of the men who are up to that very business themselves turned around and made great sport of me. I am just drawing a mental picture of a man who wandered off to the hills one Autumn day. Strange fancies led him along, old memories dogged his footsteps, doubts and coming difficulties put a burden on his shoulders. He sat down because it seemed as though the things that stirred in his mind demanded every energy and muscle of his body. It was a glorious day, but he could only see in it the coming of the year's end. The color had come to the leaves and the white had come to his hair. That tree below him was stripped of leaves. A hawk's nest was fully exposed. It was started when the leaves were thick, in the hope and belief that it would be hidden from view. The man saw it, and reflected how he had sought to build cherished ideals and ambitions only to have the winds of chance and circumstance expose them, crude and undeveloped, to the ridicule of thoughtless ones. A great thicket of chestnut had grown up in the path of the northwest wind. It stood in the gap, and shielded the tender peach orchard from the biting wind, yet for a few dollars the farmer had slashed and hacked these friendly trees away. The man thought how long years of denial and hardship had been rewarded by stinging ingratitude or worse. A younger man could have laughed such thoughts away, for youth cannot realize what the Autumn of life really means. For a moment the man did not see so clearly as before, but when the dimness passed away, a mighty change had come over the silent hills. The bare limbs of the dead trees, the yellow corn, the green rye, the red maples and the brown soil seemed to have been grouped by the very finger of God until he read in mighty, unfading letters:

"For I bear in my body the marks of the Lord Jesus."

ROUNDING IT UP.—This man had never been what most people call a religious man. It would hardly be possible for him to live up to all the forms and outward show of religious life, yet there came to him that day on the hills an answer to the question which had puzzled him for years: "Why is it that some lives must be classed as a long-drawn-out sacrifice, denied the things they most desire, and burdened with things they cannot use for their own happiness?"

The children came running up the lane waving their little hands to him. He went down the hill, a smile on his face and a great glory in his soul. What pleasant tidings do these little ones bring? The little tot who reaches him first drops out her words between her gasps for breath.

"Oh, Father, you let the fire go out and didn't leave any dry wood. Mother is *awful* mad!"

All of which goes to show that the little things of the present should come in ahead of the larger things that belong to the past and future. H. W. C.

HIRED MAN'S LUCK.—The Farmer's Guide tells the following story: A farmer sent a green hired man out with the planter to plant a big field of corn last Spring. The farmer supposed that the hired man knew how to operate the machine, and he did, as it turned out. About the time he had the field planted the farmer went out to the field and discovered that the man had set the machine so that all the seed corn was planted from four to five inches deep. Then the farmer lifted up his voice and cussed this hired man in a most eloquent agricultural way. Well, a third of the corn never showed above ground, and what did had a hard pull to get through and looked very tired. The crop was cared for, however, and then came the drought, and the cornfields with a good stand and properly planted little by little gave up the ghost and became an acreage of seared fodder, while the hired man's field with its thin stand and deep-rooted corn showed up green and luxuriant and will make a crop of 40 bushels per acre. Fool luck, was it not?

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That's how Scott's Emulsion drives out coughs, colds and bronchitis. It keeps them out, too.

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The Rural New-Yorker

THE BUSINESS FARMER'S PAPER.

A National Weekly Journal for Country and Suburban Homes.

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THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, NOVEMBER 16, 1901.

IT seems from what the hay dealers say on page 773, that most of the stories about rocks, old boots and other "foreign substances" in hay bales are "fakes." It is easy to accuse the farmer of cheating, but an investigation of this sort shows that there is really less of it than one would suppose. Modern methods of doing business are often a great check on dishonesty, because when the consumer finds that he has been cheated the disgraceful record is handed back through one handler after another to the original seller—and he is rightly shunned. But what a world we would have if true honesty were applauded as dishonesty in such matters is condemned!

*

MR. Clinton's article on teasels is useful in again bringing out the fact that there are little localities or pockets scattered over the country which are well suited to some particular crop. It is a legitimate part of agriculture for one to hunt out these localities and utilize them. Many of us do not really know what crops our farms or fields are best adapted to. Perhaps we lose time and money every year because we try to grow potatoes on soil that never was designed for that crop, or grain on fields naturally adapted to fruit. No one would think of suggesting teasels as a crop for all farmers, but the facts about it ought to set every farmer to studying the needs and capacity of his own farm.

*

THE American Apple Consumers' League is growing. The Fruit Trade Journal of this city prints the pledge and pats the League on the back. There is no fooling about this movement. Just go ahead and "call for apple." Human nature will do the rest. We have this note from a city man:

> Could you recommend me to some good man who would sell me A1 goods at a fair figure? A man who does not wish to become rich through a single transaction would be the right party. E. D.
> Life member A. A. C. L.

There is the weak point in the business. Where are these fine apples to be bought? The time is rapidly coming when there will be in this city alone 50,000 families who will demand a box of fine apples each week. The California growers are preparing for that trade. What a wonderful opportunity the New York State Fruit Growers have to put guaranteed boxed apples on the market! Keep up the call for apples. "Absence makes the heart grow fonder!"

*

ONE Saturday afternoon, in this city, the writer saw a large wagon loaded with baskets of grapes which were being sold at 10 cents a basket. The price was so low that people at first fought shy of them, but finally it was found that the grapes were excellent and the load was quickly sold out. Investigation showed that the man who grew and shipped these grapes had actually secured more than the buyers paid. How could that be possible? It turned out that the commission man had paid an average price per basket for an entire large shipment. They had been sold at different prices—the average being such that he cleared a fair profit. On Saturday there were a few hundred baskets left, and more were coming the following week. It was decided to close them out at once at a low price, since the entire shipment had already paid. In one way it was a good advertising dodge. People who bought these grapes were sure to notice the names of the grower and the commission man, and call for their goods when they bought again. Every taste of good fruit creates a craving for a dozen more, and this is what builds up and develops trade. In most lines of business manufacturers are willing at first to give away the price of one article to advertise four more.

*

THE postal authorities have issued an order denying the use of the mails to a so-called art manufacturing company in this city. They advertised to give profitable employment at home, and promised to buy the work done by those who sent them $3.50 for an outfit. The books of the company failed to show that they had ever made any of these promised purchases, the whole thing being a clear case of fraudulent intent. The Government is also after a number of oil companies which have sprung up in Texas and are trying to sell worthless stock in the East. It is said that of the 550 or more oil companies which have been organized in Texas during the present year less than one-fifth hold any property of value. It is a hard blow to these frauds to shut them out of the mails, and all who run across clear cases of this sort should communicate with the postal authorities, giving all the facts.

*

LAST week we had a good article describing some of the peculiar methods of culture which have made the apple orchard of Grant Hitchings famous. We always hesitate before printing such articles. They are as true as human mind can put them, yet readers do not always apply them as they should. We may safely say that whenever any farmer makes a true statement of results that are much above the average, it is always safe to assume that some natural advantage of climate, soil or location is partly responsible for it. There is generally some controlling factor which either cannot be duplicated by all, or else requires the most patient study and the most ceaseless toil. We do not say this to discourage anyone who tries to duplicate these remarkable successes, but rather to point plainly to a fact which many of us must learn to our sorrow. One great trouble with agricultural journalism as we view it is the fact that writers try to paint the story of their successes without a shadow of qualification.

*

THE Milk Commission of the New York Medical Society has been investigating the city's milk supply. They make various suggestions about the care of the milk on the farm, some of which are sensible. The following, however, strikes us as getting down to a point finer than the bacteria which it is desired to keep out of the milk:

> In addition to having a milker clean shaven, it is better that he should be a single man than a married man, because the former is less likely to carry infection from his home, as the details of his living admit of better oversight.

There has long been an outcry against the child of the hired man, and this looks like warfare on the married milkman. If our medical friends really desire to improve New York's milk supply they may well bring all their guns to bear on the enforcement of a law which compels dealers to steam thoroughly all milk vessels sent back to the country. Let the cans be well steamed here and there will be less trouble at the farm. Don t waste your time over the married man and his beard, gentlemen, but see that the cans are steamed!

*

IN a recent address before the American Bankers' Association Secretary Gage among other things said:

> Taking the last 30 years, what sum, on the average, in excess of an ample working balance has the Treasury kept under lock and key and away from all current use in the fields of industry and exchange? The amount is found to average $50,000,000. If these surplus millions had been deposited with National banks in the Clearing House cities in the proportion the relative capital of each bank bears to the whole capital; and if secondly, the only security to the Government had been, in case of bank failures a prior lien on such bank's assets, not a dollar of loss would the Treasury have suffered. Next, if under these conditions the banks had paid interest to the Government at the rate of two per centum upon the funds so deposited, how much would the Treasury have been benefited? Answer: $32,000,000. With this fund as an aid to their general operations in the field of trade and commerce, to what extent, on the average, would the banks have been able to increase credit accommodations to the people? Answer: $200,000,000. Have we not been guilty of an enormous economic waste by reason of our peculiar Treasury system?

The "idle dollar" is usually more of a curse than a blessing. It would seem as though every honest dollar should be regarded as a tool to be kept clean and free from rust by fair work. Why should Uncle Sam keep such vast sums hidden away in his stocking, while worthy enterprises are suffering for the lack of credit or capital? How absurd it is to keep these great sums of money in the Treasury and still keep up the stamp taxes levied during the war with Spain! The remaining war taxes are no longer needed for purposes of revenue, and should be repealed at once.

"WHAT are the chances of passing the Grout bill this Winter?" We were surprised to hear this question from a man whom we supposed took little interest in trade matters. He went on to explain: "I have read about this bill in THE R. N.-Y. At first it did not impress me as of much importance, but I now understand the principle that lies back of it. The whole thing comes down to a question of business honesty. The oleo people have had every chance to be honest if they really cared to sell their product for just what it is. They have declined the chance, and now it is a question of chaining them to honesty with a high tax. If they are permitted to sell a counterfeit the way is opened for dozens of other frauds and adulterations. Therefore this is a matter which concerns the whole body of American common people. It will establish a precedent one way or the other, and there is every reason why it should be decided honestly."

*

FROM all over the West come reports of corn shows and studies of the corn ear. All these things help farmers to decide just what a good ear of seed corn should look like. A few wise men here and there have for years taken great care in the selection of their seed. In some cases they had but a crude idea of what was wanted in the shape and character of the ear, yet by selecting what they called the "best" they have produced a local strain which produces a fine crop. The work now being done is an effort to learn just what the "best" ear is—what shape, how many rows and the size of the kernel! One trouble with many farmers is the fact that they have no definite standard for seed or work. A man can no more farm well without some ideal in mind than a hunter can learn to shoot without a target. This plan of studying and classifying the desirable points in an ear of seed corn is excellent, and will surely increase the yield of all who try it.

*

LAST year we imported into the country 34,735,682 pounds of Egyptian cotton, valued at $5,204,853! The year before nearly 50,000,000 pounds of this cotton were imported. Strange, is it not, that while this country supplies its own mills and actually exports nearly 3,500,000,000 pounds, it must still send $5,000,000 abroad for cotton! There is nothing strange about it when we understand that the Egyptian cotton is of a peculiar quality which we have not yet been able to duplicate profitably. We must first find some place in this great country where the conditions of climate and soil which prevail in Egypt can be duplicated. For several years past the Department of Agriculture has been searching for just such a place—and it is now reported that New Mexico and Arizona give just the conditions required. It is hoped that out on the sands of these territories a way may be found to wipe out our National cotton bill. One of the most interesting things connected with the development of American agriculture is the slow and patient search for sections where may in time be grown the sugar, tea, coffee, fruit and other food products which we now purchase abroad.

*

BREVITIES.

A TICKET is a bill of fare.

Cow peas for humus—Canada peas for hay.

YOU turn a bill into a William by paying it.

GIVES a good account of itself—the cow pea.

CAMPAIGN cry for the dairyman—the full milk pail!

THE hen, as ever, stands ready to do her share for the family.

SOME men have the stuff in them—others are simply stuffed!

WHY, oh why, has not the surplus rooster been made into pie?

SOMETIMES a so-called scientist at some tough nut will squirm. Instead of saying "I don't know" he gets behind a "germ."

MANY young men need both help and advice. They demand the first and kick hard when the latter is gently handed them.

IT looks as though the programmes of the various horticultural and agricultural meetings would be better than usual this year.

To bring the discussion of work for the country girl down to a more definite target we will say that she now asks whether balsam pillows will sell!

TWELVE deaths from lockjaw, as the result of infected antitoxin supplied to diphtheria patients, is a matter the St. Louis board of health must investigate very closely. It will be used as an argument to strengthen the claims of anti-vaccinationists.

VARIOUS devices were employed during the recent campaign in this city to break up opposition meetings. One man employed two dogs which started a fight just as the opposition speaker was getting his best licks. Another employed a professional "fit thrower" who had what is known as a "fake fit" just when the speaker most needed his audience!

Events of the Week

DOMESTIC.—General Miles, in his annual report, disputes the theory that the abolition of the army canteen prevents enlistments and causes desertions. . . . . There is an epidemic of smallpox on the Kickapoo Reservation, near Hiawatha, Kan. . . . . A fire which started in a picture frame factory in Chicago, Ill., October 30, made 75 families homeless, and caused damage amounting to $250,000. . . . . Forest fires were raging along the slope of mountains in Tazewell County, Va., between Graham and Flat Top Yards, October 31. The entire mountain was a sheet of flame, and a vast amount of fine timber and fences have been ruined. The flames have crossed from one side of the railroad and river to the other at numerous places. . . . . Yaqui Indians are on the warpath in Sonora, Mexico, recently attacking ranchers near Onaias, where they killed 30 persons. . . . . There is an epidemic of smallpox among Winnebago Indians in northwestern Nebraska, and many of them are dying. An attempt was made to vaccinate them a month ago, but they rebelled against it. . . . . November 3, fierce forest fires were raging near Poplar Bluff, Mo.; the woods had been on fire three days, and farmers and stockmen, whose cattle and horses were in danger, turned out in force to fight the flames. . . . . November 3, a fire which started in a peg mill at Lisbon, N. H., destroyed a large part of the business section of the town; loss $100,000. . . . . The Jacob Dold packing establishment at Buffalo, N. Y., was destroyed by fire November 3; loss $100,000. . . . . Great alarm has been caused in St. Louis, Mo., by a number of cases of tetanus or lockjaw, 12 proving fatal. The disease appears to come from infected antitoxin supplied by the city board of health for diphtheria cases, the serum being cultivated for this purpose. The horse supplying it was affected with tetanus. . . . . The Pan-American Exposition closed November 2. The Exposition has not been a financial success, but it is believed the benefits derived from it will be of great value to the commercial interests of the country. The financial loss will be in the neighborhood of $3,000,000, which will fall upon the holders of the common stock, the holders of second mortgage bonds, and the contractors who erected the buildings. The total number of admissions for the six months was close to 8,000,000. An average of 2,000,000 a month had been figured on by the Exposition officials. The great snowstorm of last April was a severe blow to the Exposition. An immense amount of work was undone, and work on the grounds and buildings was delayed for a week. The lamentable tragedy in the Temple of Music, which robbed the nation of a beloved President, was another blow to the Pan-American. The attendance had been increasing steadily up to the date of the assassination of President McKinley. The gates were closed for two days, and when reopened there was a drop of 12 per cent in the attendance, and no improvement followed. . . . . What is said to be the strictest pure food law in the United States went into effect in New Jersey November 1. Its enforcement has been intrusted to the State Board of Health. Under it the office of State Dairy Commissioner is abolished and a chief food inspector substituted. There will be a large number of deputies throughout the State. Everything that can come into use for human consumption as food or drink, even including canned goods, is included under the law. It does not matter whether anything is manufactured or put up outside the State or in it. . . . . The most notable feature of the elections November 5 was the revolt of New York against Tammany misrule. Seth Low, the Fusionist candidate, was elected with a plurality of nearly 30,000, and the entire city Fusion ticket went with him. This means the downfall of Richard Croker, whose power over Tammany appears to be at an end. The State was generally Republican. Ohio went Republican, but apparently without gain; Iowa Republican with a big gain, Governor Cummins having a plurality of 90,000; Nebraska Republican with slight gain. Raw weather kept down the town and city vote, but the farmers turned out in the country districts in full force, though it had been feared that cold and snow would keep them at home. Democrats won in Virginia by more than 30,000 majority. The negroes did not go to the polls at all in many parts of the State, and there will be a decided falling off in the total number of votes cast. The failure of the negroes to vote is ascribed in part to the belief that their votes would not be counted if cast, and in part to fear that by voting they would assent to the endeavor of the Constitutional Convention to disfranchise them. The city of Richmond gave a Democratic majority of 5,000, a considerable part of which came from the region inhabited almost exclusively by negroes. Rhode Island, Connecticut and Pennsylvania went Republican, the machine politicians carrying Philadelphia. Crane, Republican, was elected Governor of Massachusetts over Quincy, Democrat, by about the same plurality as a year ago. The vote was heavy. In Mississippi, the only candidates were Democrats. . . . . A fire which started in a wholesale grocery store at Portland, Me., November 5, spread to adjacent lumber wharves, and caused a loss of $250,000.

ADMINISTRATION.—The Postmaster-General, in his forthcoming annual report, will ask for an appropriation of $6,000,000 for the maintenance and extension of the rural free delivery system. Fully 4,000,000 people are now served by the system, and 6,000 applications are on file for its extension to other communities. The encouragement which was given to the extension of the free rural delivery system under the Administration of President McKinley will be continued under President Roosevelt. In addition to the financial provision that is to be made for the new method of delivering mail to the remoter sections of the country, there is a strong prospect that the service will be placed under the civil service rules, and that the 5,600 carriers will be protected and retained in employment on the merit plan, and without regard to political influences. It will be several months no doubt before this will be done, but it is understood that the Civil Service Commission is already at work on the rules that will apply to the service. The fact that the rural carrier provides his own horse or automobile, as is the case in a few instances, requires a different examination from any other now in vogue. He is also expected to have an acquaintance with the region and the patrons to be served, and this makes necessary a more careful examination and a certain degree of specialization of the questions to be asked of applicants. . . . . Rear Admiral Henry C. Taylor, the coming chief of the Navigation Bureau, in a report submitted to the Navy Department upon the establishing of an immense naval station in the Philippines, estimates that the project will cost the Government $30,000,000, and perhaps $40,000,000. . . . . Lord Pauncefote, the British Ambassador, has notified Secretary Hay formally that the British Government accepts the American proposition relative to the Clayton-Bulwer treaty as basis for a new treaty. . . . . The State Department has received telegraphic advices from Turkey and Bulgaria stating that Miss Stone and Madame Tsilka were alive and being treated well. Nothing definite can be obtained respecting the progress of the negotiations which Consul General Dickinson is conducting with the brigands, except that they demand the full amount of the ransom fund.

PHILIPPINES.—General Hughes reports the complete surrender of the insurgents in the Island of Cebu, consisting of 450 men and 60 officers, with 150 rifles and eight brass field pieces. The pouring of troops into the Island of Samar is believed to have had a good effect on the Cebu insurgents, who had been wavering for some time. The malcontents kept up the conflict by saying that a majority of the American troops had left the Philippines. . . . . Affairs in the Island of Bohol are very unsatisfactory, and more troops will be sent there. . . . . A plot to massacre the American garrison at Moncada, Province of Tarlac, Island of Luzon, has been revealed and the conspirators arrested. Gen. Smith has ordered the deportation of Gen. Lukban, leader of the Samar rebels. In a fight near Catbalogan, Samar, recently a body of scouts under Lieutenant Gaujot killed 25 rebels, burned 175 houses and captured 5,000 pounds of rice and other supplies.

GENERAL FOREIGN NEWS.—According to reliable reports received from Gen. Warren, 600,000 persons in the province of An Hui and 300,000 in the province of Kiang Su, China, are on the verge of starvation, and the famine is spreading. The available funds are insignificant. The Chinese have contributed $37,500 and the foreigners $7,500. A committee of the consuls is being formed to aid the sufferers. . . . . The revolution in Colombia continues, the revolutionists meeting with considerable success. Yellow fever is epidemic in some sections of Colombia. . . . . The flooding of mountain streams in Sicily has caused widespread damage, and 11 lives have been lost. . . . . A disaster to the British forces occurred in the eastern Transvaal November 1 in which several officers were killed or wounded, and 54 men were killed and 160 wounded. . . . . France is making hostile demonstrations against Turkey, and has captured three ports on the Island of Mitylene. The Sultan has ordered the speedy completion of defences at Turkish ports and at the entrance to the Dardanelles, the laying of mines and the mobilization of troops. A strong anti-French feeling prevails at Constantinople. . . . . During a recent storm on Lake Baikal, Siberia, scores of fishing boats were destroyed, and 170 men drowned.

FARM AND GARDEN.—The annual convention of the New York State Dairymen's Association, to be held at Olean December 11-12, will be a very important meeting. The exhibit of dairy products and dairy machinery will be eliminated this year. The reason for this is that these products have been so fully represented, both at the Pan-American Exposition and the State Fair, that a further exhibition among the dairymen would impose an unnecessary tax upon exhibitors. This enables the Association to confine its energies to securing prominent speakers, and preparing a fine programme. The customary exhibition will be resumed next year.

The Missouri State Horticultural Society will hold its forty-fourth annual meeting at St. Joseph, Mo., December 3-5. A fine exhibition is expected, and there will be a complete and instructive programme.

The results in the model dairy contest of the Pan-American Exposition are announced by Frank A. Converse, Superintendent of the Live Stock Division, as follows: Greatest net profit in butter fat—Guernseys, margin of $4.66. Greatest net profit in churned butter—Guernseys, margin of $5.86. Greatest net profit in solids—Holstein-Friesians, margin of $26.14. Greatest gain in live weight—Holstein-Friesians.

O. E. Bradfute, the well-known Ohio breeder of Angus cattle and feeder of prime steers, will discuss beef cattle topics before the Pennsylvania Live Stock Breeders' meeting at Pittsburg December 18 and 19. Breeders in Pennsylvania and neighboring States should not fail to hear him and other authorities who will be on the programme.

E. H. Webster, a graduate of the Iowa Agricultural College, has been appointed chief of the dairy department of the Kansas Experiment Station.

William Gray Storrs, one of the most prominent and respected citizens of Painesville, O., and owner of large interests in the Storrs & Harrison Co., of which he was vice-president and general manager, died October 22. Mr. Storrs was born in Lapier, Cortland Co., N. Y., January 19, 1840. In 1854 he went to Lake County, Ohio, with his brother, the late Horatio Storrs, and his father, Jesse Storrs, who founded the Storrs & Harrison nursery. He was educated in the Painesville high school, and spent his early life there assisting his father in the development of the new enterprise. August 22, 1861, he enlisted in Company G, Second Ohio Cavalry, and served until September 17, 1865, when he was honorably discharged. The early part of his service was in the Western army at Fort Scott and at Indian Territory. He returned to Ohio in December, 1862, and recruited through the Winter at Columbus. Leaving April 6, 1863, he went to Kentucky and joined the Army of the Cumberland, operating through that State until Fall, when he went with Burnside to Tennessee, being among the first to occupy Knoxville. Later, engaged with Longstreet's forces in Virginia, he suffered many hardships. In April, 1864, he joined the Army of the Potomac, and in May was with Grant's army in the battles of the Wilderness, Spottsylvania and Cold Harbor. In August, 1864, Mr. Storrs became blind with erysipelas, and after much difficulty secured his removal to Cleveland, where he recovered. Then in December, 1864, he again joined his regiment and continued in the service until the close of the war. Mr. Storrs was held in the highest esteem by all with whom he was associated, and his untimely death is deeply regretted. He leaves a widow and four daughters.

The annual meeting of the Pennsylvania Dairy Union will be held at York, Pa., December 4-5. A number of prominent speakers will be present, including Dr. W. H. Jordan, of the New York Experiment Station; Prof. Voorhees, of the New Jersey Experiment Station; Prof. Hills, of the Vermont Experiment Station, and many others. Secretary, H. Hayward, State College, Centre Co., Pa.

End of the Dairy Test at Buffalo.

The great test of dairy cows at the Pan-American Exposition came to an end on October 31. The Guernseys won on net profits on butter fat, and also on the net profits on churned butter. The Holsteins won on total solids and also on gain in live weight. The margin of the Guernseys was very small, while the Holsteins in their classes had a good lead, thus proving themselves excellent general-purpose cows. We shall have the pith of the whole thing soon. The corrected figures for the full six months are given below:

	Butter fat.	Churned butter.	Total solids.	Solids & added weight.
Guernsey	$230.10	$220.37	$202.75	$208.60
Jersey	225.44	214.51	201.52	207.19
Ayrshire	217.68	212.91	235.70	242.24
Holstein	210.56	192.88	262.14	273.87
Red Poll	197.80	191.83	201.61	212.08
Brown Swiss	183.08	176.83	207.69	213.63
French-Canadian	176.34	181.81	182.76	191.40
Short-horn	172.84	164.77	205.67	229.73
Polled Jersey	169.44	160.59	145.38	153.63
Dutch Belted	116.94	111.96	143.66	154.94

Of individual cows a Guernsey made the largest individual profit on butter, making $59.40. A Red Poll cow was second, a Guernsey third, and a Jersey fourth. As we have mentioned before, butter was reckoned at 25 cents a pound and total solids figured at nine cents, while the gain in live weight was estimated at three cents.

Farm Conditions in Nebraska.

I live in the fertile West, where chemicals and fertilizers are unknown except those found in the manure pile, which is always accessible in the towns free of cost, and many even hire it drawn out into the country and dumped by the roadside. Yes, we raise clover here, but not to any great extent, but the acreage is increasing yearly. Prairie grass furnishes us our hay and pasture. Alfalfa is not altogether a success here. Our principal crops are corn and wheat. Cattle raising and feeding are important industries, also the raising of hogs. This is not a dairy country. We can and do raise some fine fruit here, in fact all kinds except those of the tropics. I notice in the article from C. E. Chapman that he has an idea that we, in the West, are "in the mud" most of the year. I want to say that we are not bothered in that respect in Nebraska. Few farmers are compelled to wait longer than a day after the heaviest rain before back again in the field. As to roads, we do not need any crushed stone, as our soil packs hard when traveled upon for any length of time, and any farmer's team can haul from 2,000 to 3,000 pounds to market easily. I believe in the theory of "a little farm well tilled," and that the *intensive* and not the *extensive* farmer will be the prosperous one in the end. C. V. D.

Tecumseh, Neb.

Milk Prices.

The New York Milk Exchange has raised the price to the producer to three cents per quart. This is the same as last year, but the increase then was made the last of September. This price is usually called net to the producer in the 26-cent freight zone, but there are other items which must be deducted, such as ferriage and expenses at receiving stations where such charges are made. November prices at eastern condenseries are a trifle higher. At Middletown and Johnsons it is nine cents per can more, and at Walton four cents, while at Elgin, Ill., the price is the same as that of the New York Exchange, and for the year it averages one-fifth cent per quart less than at the highest eastern condenseries. The Philadelphia Exchange price is four cents per quart, from which an average of one-half cent freight must be taken.

CALIFORNIA has a boom in sales of vegetables to the Middle West this year. The drought cut the crop short in a large section of this territory, which ordinarily produces most of its own vegetables. The potato crop in the vicinity of Sacramento is large, and shipments are now being made to Kansas, Missouri, Colorado and Texas. The onion crop of California and Oregon is large, but the demand is heavy and prices are advancing.

THE QUAKER IDEA OF HONESTY.—An item in your issue of November 2 on editorial page arrested my attention yesterday, and I thought your attention ought to be called to it. The point of the article is to warn farmers against swindlers who try to get money from them by pretending to want to buy their farms at fancy prices. This is right, but in the case noted the act of the farmer in breaking his agreement to sell was a much more venal act than the other. As it reads, because he was offered more money over night he deliberately concluded to break his contract, made in good faith (as far at least as the farmer then knew or believed), probably intending to take advantage of the fact that it was a verbal agreement only, not in writing or under notarial seal, that the other was a stranger to the neighborhood, and would not be believed before the farmer's friend, Squire ———, etc. That he had to lose $1,500 was the result of *his* doing a wrong act, not the swindler or his friend. Your article says naught of this and in no way censures the act. That this should go out to your thousands of readers as having your editorial sanction I can hardly believe you intend. It seems to me it was a case of the biter who was bitten, and in no way is the farmer entitled to any sympathy. I am a farmer, and also in the real estate business, and here in Pennsylvania among us Quakers, a man who would refuse to sell after a contract was made verbally or written because he had a better offer, would be ostracised, as he ought to be. Whatever it may do for New York, it would not do here, neither, as "said Jno. P. Robinson he, that ain't the way they did down in Judee." It is a bad example for my four boys or any other man's boys who read it. SAMUEL C. EASTBURN.

Pennsylvania.

Woman and Home

From Day to Day.

HELP FROM ABOVE.

The little griefs, the petty wounds,
The stabs of daily care—
"Crackling of thorns beneath the pot"—
As life's fire burns—now cold, now hot—
How hard they are to bear!

But on the fire burns, clear and still;
The cankering sorrow dies;
The small wounds heal; the clouds are rent,
And through this shattered mortal tent
Shine down the eternal skies.

—Dinah Mulock Craik.

*

MACHINE stitching in silk of a contrasting color is again seen on shirt waists and millinery trimmings. A waist of black taffeta stitched with white had both front and sleeves tucked half way down, and the back had four tapering tucks, all being stitched with white. Cuffs and stock were also stitched with white. A white cloth waist with red stitching was another very pretty model.

*

LAST Summer a Kansas newspaper solicited cooking recipes from a number of prominent women, and among them was Mrs. Roosevelt, who sent her recipe for spice cake. Here it is: One cupful butter, two cupfuls sugar, one cupful milk, four eggs, four cupfuls flour, two teaspoonfuls baking powder, one tablespoonful ground cinnamon, half teaspoonful nutmeg. A good recipe, and one that will be appreciated by others as much as by the White House family.

*

JUST at present there is quite a rage for Indian bead work, but much that is now made simply to supply this fad is very coarse and common in design. The older or more painstaking work is really handsome. Bead belts fastened with silver clasps are seen. There is an increasing taste for the domestic manufactures of the American Indians, pottery, baskets, carving, woven fabrics and embroideries are all making their appearance in city stores, and their picturesque qualities are being impressed upon people of taste. They certainly deserve equal recognition with the aboriginal work of other lands.

*

RUSSIAN drawn work, now coming into favor here, differs from the Mexican in having embroidery over the drawn threads, often very elaborate in effect. Russian lace, which is heavy, usually of gray or twine-colored thread, has been used freely during the past year as a dress trimming. This is made on a cushion, with needle and bobbin, the patterns being rather medieval in effect; sometimes gold threads are introduced, making a very rich trimming. This lace used to be made entirely in Russian convents, but now instruction is being given to women and girls of the peasant class and remunerative employment thus provided for them.

*

IT is believed by the average man that whenever a woman essays a bit of carpenter work, she selects as her tools a flatiron, a hairpin, or a broomstick, in preference to all the conveniences a tool chest may display. Her confidence in these accustomed tools is doubtless the result of familiarity; that it is not misplaced is evidenced by the recent experience of a 15-year-old girl, who vanquished a burglar with a flatiron as her only weapon. She did not throw it at him, thereby, perhaps, preventing damage to the adjacent furniture, but she put the burglar through much the same process as the weekly wash, to his exceeding discomfiture, and was left victorious on the field of battle.

SUCH a multitude of pretty stocks is seen now, and they are easily made by anyone with a bit of knack. We prefer to build these upon the ready-to-wear stock foundations, either of crinoline and featherbone, or of milliner's wire; they hold their shape better than one made from collar lining, and are not so thick. A great many stocks are black and white, some of the newest being of white silk with turnovers of black velvet. These, however, are prettier when viewed in the shop than when worn, for few women really look well with the black next the skin; the sharp contrast is likely to bring out unbecoming lines. On the other hand, a black velvet stock with little white turnovers is almost universally becoming. A white silk stock having a black velvet tie brought around from the back, and tied in the front in a four-in-hand knot is very pretty; so, too, is one with the tie ends passed horizontally through a buckle, and terminating in a little loop. Small strass or rhinestone buckles, such as have been used on hats, form a frequent decoration for stocks.

The Rural Patterns.

Norfolk jackets and waists are now very fashionable, and they make a pretty and becoming style. The jacket shown is of black camel's hair cheviot, with smoked pearl buttons, and makes part of a costume, but the design is suited to separate wraps also. The back is snug fitting and includes a center seam that is curved to the figure, the fronts are fitted by single darts which are concealed under the applied pleats. The pleats are graduated in width, so producing a tapering effect at the waist and are applied over the jacket. The belt, which is merely an ornamental feature, passes under those at the back and terminates in pointed ends over those at the front, and can be omitted when the jacket is preferred plain. The yoke is pointed and the neck is finished with a regulation collar that rolls over with the fronts to form lapels. The sleeves, in coat style, have flaring pointed cuffs that open at the back. To cut this jacket for a woman of medium size 5½ yards of material 20 inches wide, 2⅜ yards 44 inches wide or two yards 50

3964 Norfolk Jacket,
32 to 40 Bust.

inches wide will be required. The pattern No. 3964 is cut in sizes for 32, 34, 36, 38 and 40-inch bust measure; price 10 cents from this office.

A girl's Norfolk shirt waist, as figured, is becoming to slight or unformed figures. The original is made of velveteen in a black and white shepherd's plaid; but flannel corduroy, and all the season's waist cloths are equally appropriate. As shown, the waist is made over the fitted foundation, but can be left unlined when preferred. The lining is simply fitted, and terminates at the waist line. The fronts and back of the waist are smooth at the upper portion, but drawn down in gathers at the waist line. The box pleats are applied, stitched at each edge, and are graduated in width to give a tapering effect to the figure. The yoke is cut in points, that

3963 Misses Norfolk Waist,
12 to 16 yrs.

are stitched flat over the pleats, and the neck is finished with a novel collar that matches it and the cuffs. The sleeves are in bishop style. To cut this waist for a miss of 14 years of age 3⅝ yards of material 20 inches wide, three yards 27 inches wide, 2¼ yards 32 inches wide or two yards 44 inches wide will be required. The pattern No. 3963 is cut in sizes for misses of 12, 14 and 16 years of age; price 10 cents from this office.

A Photographic Competition.

PRIZES FOR PICTURES OF HOUSEHOLD SUBJECTS.

The Woman and Home Department offers the following prizes for the best pictures illustrating domestic subjects:

First Prize, $7.00
Second Prize, $5.00
Third Prize $3.00

The subject should illustrate, preferably, some idea of convenience, comfort, or saving of labor, but domestic episodes which form effective pictures will be considered. We desire photographs that show something, but that will also make attractive pictures. The prize winners will be asked to furnish descriptive notes to accompany the illustrations. The competition will be open until December 1. In addition to the prize-winners, other pictures which, though failing to receive a prize, are still considered worthy of use in illustrating, will be paid for upon use at our regular rates. Address all matter relating to this to the Woman and Home Department of THE R. N.-Y.

REMEMBER your own soul must be illuminated before you can help others: the spring does not brim over with refreshing water that has not a hidden source.—Light on the Hidden Way.

What Shall I Give for Christmas?

Whatever you choose. You can easily earn the money to do it with before Christmas comes.

THE LADIES' HOME JOURNAL and THE SATURDAY EVENING POST, of Philadelphia, will show you how, and will give you all the help and advice you need.

No guesswork or chance about it. It is as sure as it is easy.

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FARM TELEPHONES
How to put them up—what they cost—why they save you money—all information free. Write for it to J. Andrae & Sons, 208 W. Water St., Milwaukee, Wis.

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Money Making on the Farm.

A New England Worker.

I was interested in the paragraph about the New England girl who wishes to earn money at home, and I think it possible that I may give her some hints. Conditions and individuals differ so widely that it is impossible to lay down any hard-and-fast rules. A girl situated like the one in question must use her eyes and her brains, plan carefully and work conscientiously. She must not expect to make much money at first, but if she does good work, at something people want, and sticks to it, she must succeed in time. Two things I would recommend her to do at the outset: keep strict account of all expenditures and receipts, and leave any false pride she may have, in some out of the way place where she won't be able to find it. I think the experience of another New England girl may be suggestive to others who are situated like the one spoken of in THE R. N.-Y. What I am going to tell about her is just as it happened.

She began in her early teens to do all the housework, excepting the washing, for a family of four, and a part of the time five. She had a small allowance, and as she was not over strong at that time it was several years before she tried to earn any pin money. She was one who had a good many fads, and one of these was writing stories for amateur papers. Finally she tried sending things to professional papers, and after some discouragement she began to sell now and then a manuscript. She kept this up till at length she earned enough with her pen to pay all her personal expenses and have some money left over for extras. Now I don't want to be understood as advising every girl to go to writing stories. Not every girl has a liking for that kind of work, and not every girl would be willing to spend most of her spare time for three years in writing, before getting a cent in return, as did this girl. This merely shows one way, and that it takes patient work to bring results. While writing was her main dependence, she had other strings to her bow. She had always been very fond of flowers, and she had good success with them. She studied their needs and fussed over them, and they responded. One Spring she bought a small Begonia at the greenhouse, kept it through the Summer, repotting it once, and sold it for 15 cents more than she paid for it. The next year she had an order from a friend to start a dozen plants for Winter, and she sold a handsome maidenhair fern for a good price. She also raised about 50 tomato plants for home use, and they were so fine that she could have sold them all and as many more if she had had them.

Then she liked to cook. She made very good sponge cake and molasses cookies, and by letting people know of it, she got a few orders for these. She put up more than 100 quarts of tomatoes one year, and sold a good part of them at 20 cents a quart, including jars. One season she made butter. She was very careful and painstaking to have it good, and it sold readily. When it happened that there was anything on the farm that would go to waste, such as fruit or vegetables, and she had the time and could have the horse, she left her pride at home and peddled them out to her friends at the village. She gathered things like peas and green corn just before starting, with the result that next year all her friends urged her to plant a good many peas, because hers were so much better than any they were able to buy elsewhere.

While all these things, except the writing, brought in very little money, there was no reason why each one might not have been developed into a paying business if she had felt like giving up the others for it. She also saw other opportunities which she could not attempt, one of which was taking in washing. If a girl is strong and can have things conveniently arranged, she can make good pay by washing, only very often pride stands in the way, and it is forgotten that any necessary work which is well done is worthy of respect. I know of a case where a woman declared she could earn more money and earn it more easily by washing than by working in the factory, and she made good wages there. It would seem that the girl I have been writing of had enough irons in the fire, but her friends have urged her to try other things, such as bees, Belgian hares, Angora cats, geese, sheep, peacocks, boarding old people, taking Summer boarders and boarding State and town children. No one has suggested dressmaking, or millinery, because it is known that her tastes do not run in these directions, but she has a standing order for a yard of knit lace whenever she has the time to make it.

If a girl is about to go into the business of earning money at home, she wants first to select some work that she has a taste for, so that it will be a pleasure, and not drudgery. Then she wants to figure out just where the profit is coming in. If she is going to make cake, for instance, she must reckon up the cost of the materials and fuel, then add a fair amount for her time; then if she finds she cannot get her price for the finished product she would better keep out of cake making. It will be much better if she can sell direct to the consumer; middlemen do eat up the profits so. It may not be as pleasant, and she may dislike to advertise her goods, but she will soon get used to it. The most important point is to have the product always the same in quality, and always the best of its kind. Good, conscientious work is always in demand, though one may sometimes have to work to find those who want it, and may even have to go to considerable pains to convince them that it is faithfully and well done.

DOROTHY BARTLETT.

Poultry Farm and Garden.

The case of the young girl who wants to earn money, but who is obliged to stay at home on the farm to help her mother, is one of interest. Thousands of girls and women are situated in just such circumstances. Thousands more have left the farm, for whom it would have been far better had some duty compelled them to stay. The editor well says that "it ought not to be necessary to leave the country in order to obtain money with which to gratify a few simple and honest desires." It is not necessary. There are better opportunities to earn spending money right at home without sacrificing liberty and individuality than in the city. The editor wants only things which have been done, but some things can be done which have not been, or at least some things can be done by such a girl which have not been done by other girls, but which have been done by other people. One of the most natural ways for earning money under such circumstances is in poultry-keeping. Any girl who has a taste for poultry can obtain considerable spending money by intelligent management. If poultry is already kept on the farm and the income goes to Father, let her prevail upon him to give her 25 per cent of the gross sales in return for her care and management, he furnishing the feed. I know one young woman who gets this percentage, so at least that much of this suggestion has been done. Certainly many other women keep hens and make some profit from them.

Here is another suggestion, though perhaps no girl has done it. Yesterday I visited a little grapery where a minute insect had nearly ruined the crop this year. This was discouraging, but the insect had been met and conquered by others before, and can be as easily conquered in this case. The grapery was not large, yet the owner said that they should have obtained 600 or 800 pounds of grapes from it. This was a cold grapery, requiring no expense for heat. It did require some capital to put up the building, which would be a hindrance in some cases, but not in all. Near any good-sized village these grapes would find ready sale at paying prices. If the home market were unavallable growing grapes in heated houses for shipment to New York or Boston might be preferable. I know of no young woman who has done this, but I do know of graperies which yield excellent returns, and the product from one house would give such a young woman more spending money than she could earn behind the counter with many times the number of hours spent that would be required in caring for the crop. I do know one young woman who manages a little greenhouse filled with flowering plants who secures some spending money in that way. I know many greenhouses not managed by women which yield considerable money to their owners. I know no reason why these could not be managed by a woman as well as they are by a man.

If none of these things seems attractive, Father might be prevailed upon to turn over some one field or part of a field to her use, with the definite agreement that whatever she could produce upon that land should belong to her. Then let her begin to study the possibilities of that field. With pencil and paper let her carefully figure what might be produced upon it, getting advice from Father and others as to the cost of labor required and all other expenses. Then let her add a liberal allowance to these expenses, and carefully figure the probable returns. Let her not be satisfied until she has studied many possibilities. She ought to find something which would yield a profit after paying for the labor and the expense of growing. I should like to see a hundred young women try such an experiment and report their results. Women have made money from land, as the columns of THE R. N.-Y. will testify; other women can do it. If this young woman can leave home long enough, let her take a short course in one of our agricultural colleges, like those offered at the Rhode Island College for the coming Winter. If she cannot do that, let her take a correspondence course, as several women are doing in our own school of correspondence. By means of such study, I am sure that any bright, pushing, young woman can find ways to make a very satisfactory amount of pocket money without leaving home.

FRED W. CARD.

R. I. Agricultural College.

WE must go in contemplation out of life ere we can see how its troubles subside and are lost, like evanescent waves in the deeps of eternity and the immensity of God.—**James Martineau.**

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

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MARKETS

THE WEEK'S QUOTATIONS.

WHOLESALE PRICES.

NEW YORK, NOVEMBER 9, 1901.

GRAIN.

Wheat, No. 1, N'th'n Chicago..	—	@	79¾
No. 1, hard, Duluth.....	—	@	86
No. 2, red, clevator.....	—	@	81⅞
Corn, No. 2, mixed, elevator....	—	@	65¾
Oats, No. 2, mixed.....	—	@	43½
Rye, No. 2, W'n, f. o. b., N. Y..	—	@	64
Barley, feeding	50	@	52
Malting	62	@	66
Buckwheat, per 100 lbs.....	—	@	1 17

BEANS.

Marrow, 1901, choice, bu.....2	40	@	2 45
Medium, 1901, choice.....	—	@	2 00
Pea, 1901, choice.....	—	@	2 00
Red kidney, 1901, choice.....	—	@	2 50
Black turtle soup, choice.....1	80	@	1 85
Yellow eye, 1901, choice.....2	65	@	2 70
Lima, California, 1901.....3	30	@	3 35
Italian, medium 1	80	@	1 85
Other foreign, medium.....1	70	@	1 80

FEED.

Spring bran, coarse.....18	50	@	19 00
Winter bran 19	00	@	19 50
Red Dog 22	50	@	22 75
No grade flour.....	—	@	22 50
Unsound wheat, per 100 lbs..	65	@	71
Linseed meal, ton.....29	00	@	30 00
Cottonseed meal, ton.....	—	@	25 10

HAY AND STRAW.

Hay, No. 1.....	82½	@	87½
No. 2	75	@	80
No. 3	60	@	65
Clover	50	@	55
Clover, mixed	55	@	65
Straw, rye, long.....	60	@	80

SEEDS.

Clover, per 100 lbs.....10	50	@	11 25
Timothy, per 100 lbs..... 5	25	@	5 50
Millet, per lb.....	2	@	2⅛
Sunflower, per lb.....	3½	@	3¾
Rape, German, per lb.....	3½	@	3⅝

MILK.

New York Exchange price three cents per quart in 26-cent freight zone.

BUTTER.

Creamery, extra, per lb.....	—	@	22½
Firsts	20	@	21½
Seconds	17½	@	19½
Lower grades	15	@	16½
June, extras	21	@	21½
June, seconds to firsts.....	18	@	20½
State dairy, tubs, fancy.....	21	@	21½
Tubs, firsts	19	@	20
Tubs, seconds	16	@	18
Tubs, thirds	14	@	15
Tins, etc.....	14	@	20
W'n imitation creamery, fancy.	17½	@	18
Firsts	15½	@	16
Lower grades	14	@	15
W'n factory, June, fancy.....	15¼	@	15½
June, fair to choice.....	14	@	15
Fresh, firsts	14¾	@	15
Fresh, fair to good.....	14	@	14½
Lower grades	12½	@	13½
Renovated butter, fancy.....	—	@	18
Common to choice.....	13	@	17
Packing stock	12	@	14

CHEESE.

F. c., colored, small, Sept., fcy.	10¼	@	10⅜
Colored, small, Oct., choice...	9¾	@	10
White, small, Sept., fancy....	—	@	10¼
Small, white, Oct., choice.....	9¾	@	10
Small, good to prime.....	9¼	@	9½
Colored, large, Sept., fancy...	9½	@	9¾
Colored, large, Oct., choice...	9	@	9¼
White, large, Sept., fancy....	9½	@	9¾
White, large, Oct., choice.....	9	@	9¼
Large, good to prime.....	8½	@	9
Common to fair.....	7	@	7¼
Light skims, small, choice.....	—	@	8½
Large, choice	7½	@	7¾
Part skims, prime.....	6¾	@	7
Fair to good.....	5	@	6¼
Common	3	@	4
Full skims	1½	@	2½

EGGS.

QUOTATIONS LOSS OFF.

State & Pa., avge. prime, doz..	24	@	25
Western, fresh-gathered, average best, per doz.....	—	@	24
Fresh-gathered, fair to good.	—	@	23½

QUOTATIONS AT MARK.

Nearby, State & Pa., fresh-gathered, fcy, selected, doz.	26	@	27
Average best lots.....	23	@	24
Fair to good.....	19	@	22
W'n, frcsh-gathered, candled, selected, per doz.....	—	@	23
Regular packings	18	@	22½
Kentucky, fresh-gathered	17½	@	22
Tennessee, fresh-gathered	17½	@	22
W'n, fresh-gathered, dirties....	15	@	15½
Checks	—	@	13
Refrigerator, per doz.....	15	@	18
Limed, W'n, good to fancy.....	17	@	17½

GAME.

Quail, prime, per doz.....	—	@	3 00
Grouse, per pair.....1	75	@	2 00
Partridges, per pair.....1	75	@	2 00
Woodcock, per pair.....	—	@	1 25
English snipe, per doz.....	—	@	2 50
Golden plover, per doz.....	—	@	2 50
Grass plover, per doz.....1	50	@	2 00
Wild ducks, canvas, per pair...2	50	@	3 00
Red head, per pair.....1	50	@	2 00
Mallard, per pair.....	75	@	1 00
Teal, blue wing, per pair.....	60	@	75
Teal, green wing, per pair....	40	@	50
Common, per pair.....	25	@	30
Rabbits, per pair.....	20	@	25
Venison, saddles, per lb.....	—	@	30

LIVE POULTRY.

Spring chickens, per lb.....	—	@	9½
Fowls, per lb.....	—	@	8½
Roosters, per lb.....	—	@	5
Turkeys, per lb.....	8	@	10
Ducks, average W'n, per pair..	60	@	70
Average Southern, per pair...	55	@	65
Geese, average W'n, per pair...1	25	@	1 37
Average Southern, per pair...1	12	@	1 25
Pigeons, mixed, per pair.....	—	@	20

DRESSED POULTRY.

FRESH PACKED—ICED.

Turkeys, Spring, dry-picked, lb.	10	@	11
Scalded, per lb.....	8	@	10
Culls, per lb.....	5	@	7
Broilers, Phila., over 4 lbs. to pair, per lb.....	15	@	16
Phila., mixed sizes, per lb....	11	@	13
Penn., fair to good, per lb....	9	@	12
Ohio & Mich., scalded, per lb..	—	@	10
Other W'n, dry-picked, lb.....	—	@	9
Other W'n, scalded, per lb....	—	@	9
Poor to fair, dry-picked or scalded, per lb.....	6	@	8
Fowls, W'n, dry-picked, prime.	—	@	8½
Western, scalded, prime.....	—	@	8½
S'th'wn, dry-picked, prime....	—	@	8½
W'n & S'th'wn, poor to good..	6	@	8
Old roosters, per lb.....	6	@	6½
Ducks, Spring, L. I. and other nearby, per lb.....	14	@	15
Western	9	@	11
Geese, Spring, Eastern.....	12	@	15
Spring, Western, per lb.....	8	@	10
Squabs, choice, large, dark.....	—	@	2 50
Mixed, per doz.....1	75	@	2 00
Dark, per doz.....1	25	@	1 50
Culls, per doz.....	50	@	1 00

HONEY.

N. Y. State, clover, comb, fancy, per lb.....	15	@	15½
Clover, comb, fair to good, lb.	12	@	14
Buckwheat, comb, per lb.....	10	@	11
Extracted, clover, per lb.....	6	@	6½
Extracted, buckwheat, per lb.	—	@	5½
California, extracted, per lb....	5½	@	6½
Southern, extracted, per gal....	55	@	60

DRIED FRUITS.

Apples, evaporated, 1901, fcy, lb.	10	@	10½
Evaporated, 1901, choice.....	9½	@	9¾
Evaporated, 1901, prime.....	8¾	@	9½
Evaporated, 1901, poor to good.	6	@	8½
Evaporated, 1900, fancy, lb....	—	@	10
Evaporated, 1900, choice, lb...	8¾	@	9¼
Evaporated, 1900, prime, lb....	8¼	@	8½
Evaporated, 1900, common to good, per lb.....	6	@	8
Sun-dried, 1901, S'n, sliced.....	4½	@	5½
Sun-dried, 1901, Va., c'rse cut.	4	@	5
Sun-dried, 1901, Tennessee, coarse cut	3¾	@	4½
Sun-dried, W'n, quarters.....	4½	@	5½
Chops, 1901, per 100 lbs.....1	75	@	2 25
Cores and skins, 1901, 100 lbs..1	50	@	2 12
Raspberries, evaporated, 1901 lb.	23½	@	24
Sun dried, 1901, per lb.....	20	@	21
Blackberries, 1901, per lb.....	7	@	7½
Huckleberries, 1901, per lb.....	16	@	17
Cherries, nearby, 1901, per lb....	15	@	15½
Southern, 1901	13½	@	14

FRESH FRUITS.

Apples, York Imperial, bbl...	3 00	@	4 50
Spitzenberg, prime to fancy.	4 00	@	6 00
Winesap, per bbl.....	3 00	@	4 00
Snow, good to choice, bbl...	3 00	@	5 00
King, per bbl.....	3 50	@	6 00
Ben Davis, per bbl.....	3 00	@	4 00
Greening, per bbl.....	3 50	@	5 50
Twenty-oz., hand-pkd, bbl..	3 00	@	4 00
Tallman Sweet, per bbl.....	3 00	@	4 00
Baldwin, prime, per bbl.....	3 00	@	4 50
Ordinary hard, red, fair to prime, per bbl.....	2 50	@	3 00
Ordinary hard, late sorts, inferior, per bbl.....	1 50	@	2 00
Pears, Bartlett, fancy, bbl....	—	@	3 00
Bartlett, poor to good, bbl..	2 00	@	2 50
Bartlett, prime to fcy, keg.	1 25	@	1 50
Seckel, fancy, per bbl.....	—	@	3 50
Seckel, fair to prime, bbl....	2 25	@	3 00
Beurre Bosc, per bbl.....	2 50	@	3 50
Beurre Clairgeau, per bbl...	2 00	@	3 00
Beurre d'Anjou, per bbl.....	2 00	@	2 75
Keiffer, per bbl.....	1 00	@	2 25
Nearby, common, per bbl...	1 00	@	1 50
Quinces, per bbl.....	2 50	@	5 00
Grapes, up-river, black, per 12-basket crate	1 00	@	1 25
W'n N. Y., Catawba, case 10 3-lb. baskets.....	1 25	@	1 50
W'n N. Y., Catawba, per small basket	10	@	12
W'n N. Y., Del., case 15 3-lb. baskets	1 75	@	2 00
W'n N. Y., Del., small bkt..	12	@	18
W'n N. Y., Niagara, case, 15 3-lb. baskets.....	1 25	@	1 50
W'n N. Y., Niagara, sm. bk.	10	@	15
W'n N. Y., Concord, case, 15 3-lb. baskets.....	1 00	@	1 10
W'n N. Y., Concord, sm. bk.	10	@	11
W'n N. Y., Concord, per large basket	15	@	16
Wine grapes, Concord, ton..35	00	@	38 00
Wine grapes, Del., per ton..25	00	@	50 00
Wine grapes, white, ton....40	00	@	45 00
Wine grapes, Clinton, ton...40	00	@	60 00
Cranberries, Cape Cod, fancy, large, late varieties, bbl...	6 00	@	6 75
Cape Cod, Early Black, fancy, dark, per bbl.....	5 50	@	5 75
Cape Cod, medium, bbl.....	5 00	@	5 25
Cape Cod, poor to fair.....	3 00	@	4 50

VEGETABLES.

Potatoes, L. I., per bbl.....2	00	@	2 25
Maine, prime, per bag.....2	10	@	2 25
Maine, per 180 lbs.....2	12	@	2 25
W'n prime, per 180 lbs.....2	00	@	2 12
State, prime, per bbl.....1	87	@	2 00
Albany & Troy, prime, bbl....1	87	@	2 00
State & W'n, poor to fair.....1	25	@	1 75
Jersey, per bbl.....1	50	@	1 75
German, good, per 112-lb. bag.1	12	@	1 37
German, per 168-lb. bag.....1	25	@	2 00
Scotch, Magnum, 168-lb. bag..1	50	@	2 00
Sweet potatoes, So. Jersey, bbl.1	75	@	2 50
Yellow, Virginia, per bbl.....1	25	@	1 50
Beets, Jersey & L. I., 100 bchs..	—	@	1 00
Brussels sprouts, per qt.....	5	@	8
Cauliflowers, fancy, per bbl.....1	50	@	1 75
Fair to good, per bbl.....1	00	@	1 25
Culls, per bbl.....	75	@	90
Celery, State & W'n, doz. roots.	10	@	40
Jersey & L. I., doz. flat bchs..	75	@	1 00
Carrots, L. I., per bbl.....	75	@	1 00
Cabbages, L. I., Flat Dutch, 100.2	00	@	3 50
Cucumbers, hothouse, No. 1, per doz.....	60	@	75
Florida, per crate.....1	00	@	2 50
Florida, per basket.....2	50	@	3 50
Eggplants, Fla., ½-bbl. crate...3	00	@	4 00
Lima beans, Jersey & L. I., Potato, per bag.....	75	@	1 50
Jersey, flat, per bag.....	75	@	1 00
Lettuce, nearby, per bbl.....1	00	@	1 50
Onions, pickle, white, per bbl...3	00	@	4 00
Orange Co., white, per bag....2	00	@	3 00
Orange Co., red, per bag.....2	50	@	3 00
Orange Co., yellow, per bag..2	50	@	3 00
Orange Co., poor to fair, bag.1	50	@	2 25
Connecticut, white, per bbl...2	00	@	4 00
Connecticut, yellow, per bbl..2	75	@	3 00
Connecticut, red, per bbl.....3	00	@	3 50
State & W'n, yellow, bbl.....2	50	@	3 00
State & W'n, red, per bbl.....2	50	@	3 00
Peppers, Jersey, green, bbl.....1	00	@	1 50
Jersey, red, per bbl.....1	50	@	2 00
Peas, Va., per ½-bbl. basket...1	25	@	1 75
Maryland, per ½-bbl. basket..1	75	@	2 00
Squash, Hubbard, per bbl.....	—	@	1 25
White, per bbl.....1	00	@	1 25
Marrow, per bbl.....	90	@	1 00
Pumpkins, per bbl.....	60	@	75
String beans, Va., wax, per ½-bbl. basket 1	25	@	1 75
Va., green, ½-bbl. basket.....1	00	@	1 75
Charleston, green, bu. bskt...1	00	@	1 25
Southern, inferior, per bskt...	50	@	75
Turnips, Jersey, Russia, box...	—	@	75
Canada, Russia, per bbl.....	70	@	75
Tomatoes, Fla., per carrier.....2	50	@	3 00

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of all sizes, positively the **Best**, and Carriers to match. For full information about these, also best Horse-power, Thresher, Clover-huller, Dog-power, Rye Thresher and Binder, Fanning mill, Saw-machine (circular and drag), Land-roller, Steam-engine, Root-cutter, Corn-sheller and Round-silo, Address

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☞ Please tell what you wish to purchase.

BUSINESS BITS.

CUTTING the year's wood supply is quite a task if it must be done by hand work. A circular saw to be run by horse power or engine is inexpensive, and any farmer can do enough work for his neighbors to pay for an outfit the first season. Write to Ross Bros., Worcester, Mass., for prices and full description of the saw advertised in this issue.

To the unobserving it is a revelation to note the tremendous strides such catalogue houses as Marvin Smith Co., of Chicago, are making. Their goods are carried on almost every train that runs out of Chicago, and every town and village in the country receives some of these goods. Theirs is a business policy that others would do well to imitate. Fair, square treatment always, is doing the work for them.

MANY years ago the popular way to sell farm and household implements was through the large jobber; the jobber to the wholesale merchant and he in turn to the retailer. Just see all the different profits that the consumer must pay! Now many manufacturers sell direct and the consumer gets the benefit of a large portion of the savings. If you want a good range don't pay the high prices asked by your hardware merchant or traveling agents, but write to Hapgood Plow Co., Alton, Ill.

OUR readers will note the advertisement of the Star Manufacturing Co., New Lexington, O., which appears on another page. It will be observed that these people are manufacturers of sweep and belt power feed grinders. Their two-horse short sweep crusher and grinder is well known as a highly efficient machine, and is widely used in all sections of the country. Indeed, it is looked upon as being one of the most successful mills of its class on the market. Their large power mills are of equal merit and superiority. Write them for their booklet "Feeding Live Stock."

THE progressive farmers and stockmen in all parts of the world are feeding cooked feed, thus getting every possible ounce of nutriment out of it. In years when there are great quantities of feed and the price is low, the stockman can be in a measure excused for not going into these matters carefully, but it is imperative this year that we close all avenues of waste. The Rippley Hdw. Co., Grafton, Ill., is making a feed cooker that we think you ought to know about. The entire cooker, except the smokestack, is made of galvanized boiler steel and will last almost a lifetime. The Rippley people absolutely guarantee this cooker to do all that they claim for it, or money refunded. It can be moved anywhere, it can be used outside, or be attached to any flue; it will burn wood, coal, cobs or coke. We trust that all our readers who are interested in cookers will write to the Rippley Hdw. Co., Grafton, Ill., and receive one of their new twentieth century catalogues, which are sent free.

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WANTED—Man and wife for farm in Rockland County, N. Y. Man must be practical farmer; wife must be a neat, clean housekeeper, and do the housework. Write, giving age of each and experience in fruit culture, stock and general farming, with reference as to character and ability. Those using alcoholic liquors must not apply. State wages expected. A. ROSS MATHESON, 37 Seventh Avenue, Brooklyn, N. Y.

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I have a large list of farms for sale in Vernon and Bates counties at $20 to $40 per acre; nice lying country; just as good as Iowa or Illinois; good climate; good water; am a farmer; born in Fulton County, Ill., and have lived 38 years near Prairie City, Iowa. Come to my house and I will show you my list of bargains free of charge, and will sell you land at owners' prices. For price-list and particulars write and inclose stamp to A. F. WILSON, Real Estate Agent, Stotesbury, Mo.

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FOR SALE IN SUBDIVISIONS.

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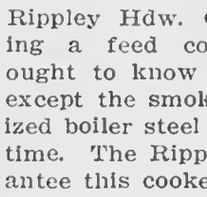
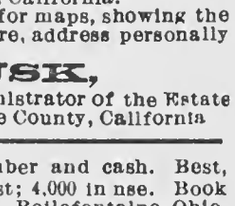


No. 77.

Perhaps you would like one to use as a holiday remembrance to some friend. We have been able to make arrangements with a manufacturing jeweler by which we can furnish handsome rings with stone settings at surprisingly low prices. These rings are rolled gold, with a five-year guarantee. We offer four styles. No. 77 is a single stone. You can have any color stone or any size ring. Price, 25 cents. No. 81 has three stones, Tiffany shape; you can have any combination of colors, and any size ring. Price, 40 cents. No. 79 is a three-stone baby and misses' ring, any combination of colors, and any size. Price, 25 cents. No. 66 is a cluster of imitation diamonds with center stone, which may be had in any color. Price, 75 cents. No. 55 is an Egeria diamond scarf pin. This is a gold-plated pin on German silver, which gives a high finish. The setting is new and gives a pretty effect. Price, 25 cents. We will send any one of these rings or the pin as a reward for one new subscription at $1, except No. 66. We will send this for a club of two new subscriptions, or with one new and 25 cents extra. Select ruby, sapphire, emerald, opal, turquoise or diamond. Measure size of finger carefully with narrow slip of paper, and send this with order. The rings are sold only to subscribers or their families.



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No. 66.

No. 79.

No. 55.

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Albion, N. Y.

This is the kind of friends that help us most, because there are hundreds who can send a few names of neighbors and friends where one feels like starting out to raise a big club and work for a prize. This makes it all the easier for those who can take the time to work for the prizes. We again appeal to every reader for some little effort towards that 20,000 list of new trial subscribers, if it be only one name and one dime. We will send samples and supplies promptly on request.

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MARKET NOTES

CRANBERRIES.—The Long Island crop is now being marketed. It is said to be unusually large and of good quality. Some estimates put the yield at nearly 1,000,000 bushels. November is the great month for shipping cranberries, and the retail trade continues heavy until after New Years. Present wholesale prices range from $4.50 to $6.50 per barrel. These figures are exceeded in certain brands of selected berries. Some of these sell as high as $10 per barrel, but a general quotation of this figure would be misleading.

BRUSSELS SPROUTS.—A reader asks: "In what shape are Brussels sprouts marketed, on the stems or picked from them? Are they sold by measure or weight, or at so much a stem? What is the usual price? I find the little heads infested with a gray louse. Is there any way to get rid of them?" Brussels sprouts offered in this market are picked from the stems and sold by the quart. Most that I have seen have been packed in quart baskets, in crates similar to those used in shipping strawberries. Packed in this way they reach the market in better condition than if shipped in boxes or barrels, and are in convenient form for retailing. The price is usually high enough to pay for a little extra work in marketing, ranging from four to 10 cents per quart. The demand for sprouts is light, and it is probable that no extensive trade could be worked up in them, as they are more expensive than other greens, and but few people prefer them to spinach or cabbage. There is no effective way of getting rid of the lice that are on the crops at harvest time. They might have been cleared off with a spray of whale-oil soap, four ounces to a gallon of water, but of course this must be applied long enough before harvest to give the rains an opportunity to wash off the offensive soap.

THANKSGIVING POULTRY.—For this trade prime turkeys of medium weight are most desired. Chickens sell well if of good quality. Scalded poultry is all right if the weather happens to be cool and dry. In damp, muggy weather, however, it gets sticky and is hard to sell, so that dry picking is preferable. In preparing for shipment it is well to make separate packages of the prime and second quality; or rather it is better to send only the prime and let the others live for two or three weeks. Where any large quantity is sent the best plan is to keep the hens and toms separate. Any extra attention given to the packing in order to make the shipments appear well when opened is usually well paid for. This is more important than most people think. It often happens that a buyer merely looks at a lot of poultry and passes it by on account of the rough manner in which it is packed, and pays a higher price for another lot which is of no better quality, but has been neatly put up. Any poultry that is fit to send to market is worth a reasonable amount of care in preparing it for sale. It is useless to make any prophecies as to prices, as no one can tell whether there will be a surplus or a shortage. If the former, the second grade poultry is what will suffer most, and there is but little danger of prime lots being left over, if received in time, or of being sold at a sacrifice. All stuff intended for Thanksgiving trade should be here not later than Monday of that week, November 25, and the latter part of the previous week would be better. Retailers stock up the first of the week, and late arrivals are likely to be left over unless there should happen to be a scarcity.

W. W. H.

5 for $4 Send us a club of four subscriptions with $4 and we will advance your own subscription one year free. New yearly subscribers will now get the paper from the time subscription is received until January 1, 1903. Get up a club at once.

VALUES OF FARM LANDS.

Falling Off in Connecticut.

So far as I can learn the value of farm property is not over one-half what it was 20 or 25 years ago. The reason I don't know, unless it is because the young men think they can do better at some other business. Some of them go to the nearby cities for employment. One farm about a mile from Cheshire center sold about 25 years ago for $18,000 has changed hands this year at $10,000. This perhaps is as valuable as any farm in town. As to my own, that is of another sort, it being carried on as a market garden. My son has managed it for several years past, built greenhouses and expended considerable money one way and another. Probably the sales are double what they were a few years ago. In Colchester, Conn., the Hayward rubber mill kept business up there until absorbed by the trust. Since then things have gone to the dogs fast. Few young farmers there; natives nearly all dead, and the Jews have possessed themselves of some of the best farms in town, and also Salem, adjoining town south. It takes all the heart out of a man for making any improvement on his place if his heirs are not likely to receive benefit from it. P.

Cheshire, Conn.

The Change in Pennsylvania.

Farm lands of the same productive capacity and equally as good improvements, would sell now about the same as 15 or 20 years ago. We are in the midst of the Connellville coke region. Coal is nearly all in the hands of companies who are working it, while the farmers own only the surface. Some farms are injured by surface falling in, some by the water supply failing, and others by too close proximity to the works. With these exceptions the land is as productive as ever, where it is properly cared for. Crops are good, and we have an excellent market for everything right at home. Some of the best farms of 20 years ago have passed from father to son, and have run down, and the sales are probably less than then. Others quite unproductive then and considered thin and poor, by the enterprise of their present owners have been very much improved, until they are now the best and most productive that can be found. I think it is only this latter class that have increased in agricultural value. As to my own farm, I claim it belongs to this latter class, but as I have only 40 acres, and am engaged principally in fruit raising and market gardening, the sales from it and the selling value of the land would hardly be a fair answer to the question. T. H. S.

Dunbar, Pa.

A Letter from Ohio.

I think if we take into consideration quite a scope of land about here that it will average $10 to $20 an acre less than 20 years ago. The poor price of wheat, generally, has had more to do with the depreciation than any other one thing. I think, though, that there is a tendency now to advance a little. As to my own place and all such little fruit and truck places about this town, there has been a great deal more of a depreciation than I speak of, because of the lower price of cabbage, strawberries, raspberries, blackberries and truck in general. This is a great shipping point for all of those things as well as the larger fruits and grains. We have a great variety of soils, but I cannot say that the price of any of it has increased in the past 15 or 20 years. My main efforts are at fruit and poultry raising. We have one of the largest sections interested in capon raising that there is in the United States. I caponize about an average of 9,000 per year around here, besides dozens of others doing various numbers. H. B.

Clyde, O.

SWEET POTATO FLOUR.

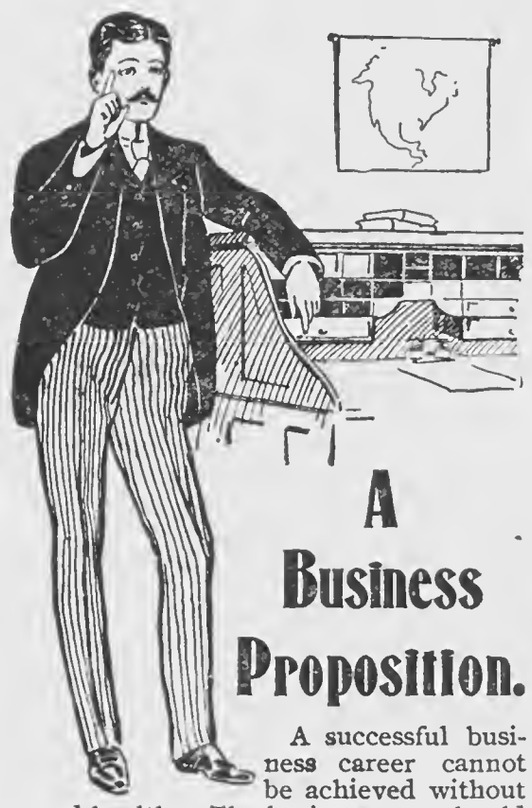
From time to time during the last year reports have appeared in various papers regarding the manufacture of sweet potato flour at Vineland, N. J. We recently visited the plant, and were given the following statements by the manager, Henry S. Morris, who represents the American Flour Co., capitalized by Philadelphians:

The manufacture of sweet potato flour was begun early last Spring from small sweet potatoes which had been bought and stored for the purpose the Fall before. The process of manufacture is not given to the public, but the statement was made that 500 barrels of the flour were made in two months, and that it takes only three hours to complete the process. On examination the flour proves to be fine, dry and of a slightly yellowish color. It has a sweetish rather pleasant taste, reminding one of the raw sweet potato. The wholesale price is $5 per barrel of 200 pounds, and it retails at three cents per pound. Nearly all of the flour made was used in the large confectionery establishments, but a portion went to the grocery trade. We were told that it could be blended with other flour in the proportion of 25 per cent for bread making, etc., but on further inquiry among those who have used it, and on trial ourselves, we conclude that a 10 to 15 per cent mixture is more satisfactory. Thus mixed it is especially recommended for griddle cakes. No particular attempt has yet been made to put it on the general market, but it is contemplated putting it up in packages for grocery trade as soon as the supply will warrant it.

We were told that the company was putting in $10,000 worth of new machinery and expected to make several thousand barrels of the flour the present season. They are now buying small sweet potatoes in large quantities, for which they pay 50 to 60 cents per barrel, the same as the canning factories pay. We were not told how many barrels of sweet potatoes it took to make a barrel of flour, but by reference to "First Principles of Agriculture," by Prof. Voorhees, we find that the raw sweet potato contains 27.6 per cent solids, and the flour contains 88.67 solids. Thus it would appear to take 321 pounds of sweet potatoes to make 100 pounds of flour, or about 4½ barrels of potatoes to make one barrel of flour. From the analysis of the sweet potato however, we find that it contains 1.1 per cent of protein, .3 per cent fat, 1.3 per cent ash. If there was no loss this would give us in the pure product of flour, 3.53 per cent protein, nearly one per cent of fat and 4.17 per cent ash. The loss of protein and fat may be accounted for, but what has become of the ash? Can this be accounted for in the waste of the thin skin which is removed?

We are glad to record the establishment of this new industry, as it will help to extend the market for one of our great National products, and especially forms an outlet for the smaller sweet potatoes, which are often difficult to dispose of except as feed for stock, and by this process of preserving them in a concentrated form, they can be kept for an indefinite period, and shipped anywhere without fear of loss. This company is also making a vegetable coffee composed of six different vegetables, which they expect to put on the market soon. We were given a sample for trial. It has a rather rich and pleasant flavor, and no doubt will be welcomed by those who cannot use ordinary coffee.

Cumberland Co., N. J. F. S. NEWCOMB.



A Business Proposition.

A successful business career cannot be achieved without sound health. The business man should guard his health as he guards his capital; for health is part of his capital and the impairment of that capital affects every business interest. A sedentary occupation and quick lunches, soon show their effects in a sluggish liver. The use of Dr. Pierce's Golden Medical Discovery will cure "liver trouble" as well as indigestion and other diseases of the organs of digestion and nutrition.

The "Discovery" strengthens the body by supplying Nature with strength making materials. It contains no whisky, alcohol or other intoxicant.

"After three years of suffering with liver trouble and malaria," writes Mr. Edward Jacobs, of Marengo, Crawford Co., Indiana, "I gave up all hopes of ever getting stout again, and the last chance was to try your medicine. I had tried all the home doctors and received but little relief. After taking three bottles of Dr. Pierce's Golden Medical Discovery and one vial of his 'Pleasant Pellets' I am stout and hearty. It is due entirely to your wonderful medicines."

Dr. Pierce's Pleasant Pellets assist the action of "Golden Medical Discovery."

A FEW PLAIN FACTS
On the Curability of
Consumption, Asthma and Bronchitis.

From Dr. Robert Hunter's Lectures on Lung Diseases.

I have made the lungs a specialty for nearly fifty years, and know by experience that Consumption is curable in all stages. By this I do not mean that it is curable in every case, for in some the patient's constitution is so bad and broken down that no healing power is left in the body. But treated in its early stages, fully 95 per cent recover under antiseptic medicated air inhalations.

But the mere act of inhaling some fragrant nostrum is not what I mean by inhalation treatment. The remedies must be adapted to the disease and condition of each patient. The physician must have thorough knowledge of medicines, be able to detect the different forms of lung disease and have experience in the action of inhaled remedies on the lungs or he can not apply it with success.

Consumption, to have the same chance of cure as other diseases, must be treated before serious injury has been done to the lung structures. Almost every case is seen in this stage by the patient's family physician, and, if he knew the remedies to use, their strength and how to apply them to the lungs, there would be few deaths by consumption.

But what possible chance has any one afflicted with consumption under the care of physicians who never cured a case in their whole professional career, who confess that they have no curative treatment of their own, and no confidence in anything they can do for the disease? What moral right have they to treat consumption at all, or to permit their patients to believe they are striving to cure them when all they are doing is but a wretched system of palliation of symptoms?

Here is the real cause of this widespread mortality of Consumption. People die of it because general physicians do not know its proper treatment and are wholly incompetent to cope with it. Before they can do so they must be retaught the principles of medical science which govern the treatment of all local diseases, and, acting under them, must discover, as I did, the remedies, which, when locally applied to the lungs, will kill the germs and heal the ravages they have made in that organ.

I have given to the world a positive cure for Consumption in my Antiseptic Medicated Air Treatment, when applied before mortal lesions have taken place. It is a treatment which places Consumption in the list of curable maladies and renders their cure certain as other serious local diseases. By it healing and germicidal remedies are brought into direct contact with the internal surfaces of the nose, throat, larynx, air tubes and cells of the lungs. It soothes the mucous lining of the breathing organs, arrests irritation and prevents inflammation, while the antiseptics destroy the germ life on which the disease depends.

Readers mentioning THE RURAL NEW-YORKER can obtain Dr. Hunter's book, "The Lungs and Their Diseases," absolutely FREE by addressing Dr. Robert Hunter Association, 117 W. 45th Street, New York City.

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Live Stock and Dairy

DAIRY AND FARM NOTES.

The Breeds of Dairy Cattle.

BEEF COWS.—Another point which the larger breeds possess to their advantage; in case of accident to the udder, partially or wholly destroying their usefulness in the dairy, they have a value on the block. I am not advocating the impossibility of an animal capable of large milk returns and a fancy beef possibility at the close of a milk-making career, but I would prefer a cow weighing in her milk-making form from 1,000 to 1,100 pounds. I think breeders have come to recognize that profit lies in the medium animal. We all know that some phenomenal producers have been both undersized and very large. But when we study the everyday working power of large herds we see at once that it is the medium cow with strong constitution and good digestion that stands up under hard work. It would seem that the previous explanation of neither overfeeding, producing rapid and excessive growth, overtaxing the digestion, or scanty food supply resulting in a weak assimilative power, would give us sufficient reason why these medium-sized animals are the profitable ones. Their digestion and constitution are not impaired by the extremes of feeding.

COW RECORDS.—I speak particularly of the dairy breeds, whose life of usefulness should be not less than 10 years. The beefy steer does not need to feed longer than three years, and like the race horse, his energy is given over to short periods. We have an easy explanation of uterine and digestive weakness so common to animals that have been pampered. As an opposite one can go into sections where animals have, Topsy-like, "growed up" with plenty of run and pasture grass, coming on the stage of usefulness with a rugged constitution, from which, with a purebred sire of pronounced prepotency, have come animals with the milking habit and a constitution to back it up. A cow having only an ability to make a weekly record is about as worthless to a farmer who makes his bread and butter from her, as a two-minute raced would be to plow his fields. It is the ability to wear that counts in the scale of profit. The first cost of rearing an animal up to a two-year-old form, at which age they begin to pay their way, is no greater for one capable of milking 10 years than for one that, through lack of vital force, has one or more of the thousand troubles that end their profitable usefulness at half that age. Two men are subjected to similar conditions of living and labor. One of them catches cold, has indigestion, which means a bad temper; troubles are magnified or rather often manufactured. The other has apparently no trouble; by reason of a vigorous constitution he is able to vanquish trouble and foe without even recognizing the encounter. All other things being equal, which man has the greater chance to succeed? It seems to me therefore that the larger cows offer greater profit to a large class of milk producers who are not, year in and out, making butter or selling cream. This statement does not mean that the Channel Islands cows are not possessed of constitution, but the weakness of the young thing demands a more careful rearing, and when we find these cows being reared under these untoward conditions and environments we find a weakness developing, and a sweeping assertion that they are not hardy, this careless statement being disproved by breeders the country over.

HOME-BRED COWS.—I am unable to get statistics showing to what extent or rather what proportion of farmers buy their milking cows. I know New York, New Jersey and New England are using at least 25 per cent of their stock not reared by the farmers who milk them. Under the present system these cows are milked for a brief period and disposed of to the local butcher or dealer, at 75 per cent of first cost, if well fed and "slippery," a term usually applied to such beef. Another reason for the larger cow. But a very small per cent of the people who buy milk in our large cities is willing to pay for five or six-per-cent milk. They do not, on the other hand, want skim-milk, either skimmed by man or the cow. The average per cent of fat as determined by Dr. Van Slyke in his elaborate series of tests several years ago among cheese factories in this State was 3.8 per cent. I am inclined to think that this quality about fairly represents the milk of New York State aside from those sections like Delaware County, where the Channel Islands cows predominate. Milk of this quality is well balanced and satisfactory as a human food. The Holstein cow has an especial value, in her power to eat and assimilate large quantities of coarse bulky food. Bred for 2,000 years and fed mainly upon bulky food, she has splendid assimilation, and I do believe that the profitable cow of the future will be one that can consume larger quantities of roughage and turn it to a profit. Our eastern population is yearly becoming more and more suburban in its makeup. Local and near-by markets call for a variety of foods and products, many of them leaving a by-product nearly worthless as a market crop. The cow that can step into the breach and turn this roughage into money and at a profit without a heavy feeding of concentrates has a peculiar value.

THE MODEL DAIRY.—Has the careful work done at Buffalo established any breed possibilities? Doubtful! There may be one exception, however; the Red Polls have demonstrated their value, so far as these five animals are concerned, that they are profitable dairy cows and are as near a dual-purpose cow as one could find. So far as the older and established milking breeds are concerned it has proven nothing, in my mind, beyond a comparison of the individuals in the test. The work done has a value, and a permanent value, to dairymen. First and most important, in my judgment, is the education of attention to every detail of feeding and testing; knowing sure that results are profitable or otherwise, and a method for doing it. No one will expect such an array of method and labor on a 50-cow farm. It would take $1 a pound for butter instead of 25 cents to foot the bill. Every dairyman can, however, with small expense of labor and equipment, approximate these results and foot up at the close of each fiscal year either a profit or loss with some known causes. Everyone who has studied the weekly figures, or personally inspected the workings, should have some lesson drawn and applied to his own business. The lessons applied are the only ones of value. The one mentioned above seems to strike me where I am weak, and hence the strong impression left of value. The plans are already perfected for carrying out on our own farms, imperfectly of course, as compared to the Pan-American system, a more perfect system and method of accounting. H. E. COOK.

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do a little pleasant and profitable work for us in your own town? No experience necessary. We will explain just what you have to do. The work will be light, and we will arrange for the time you shall be able to give to it. We can give you work for all your time or just for your spare time. Write for full particulars. THE RURAL NEW-YORKER, NEW YORK.

BEST FEED FOR STEERS.

Will you inform me as to the proper grain feed for two-year-old steers, when fed on Timothy and clover hay? I shall have to buy grain. F. E. L.

Rochester Junction, N. Y.

A mixture of three parts corn-and-cob meal, and one part each of ground oats, bran and oil meal makes a good grain ration for steers. If any change were to be recommended in this it would be to increase the proportion of cornmeal in the later stage of fattening. One can leave out some of the above grains, but good feeders will probably give good enough returns to justify the expenditure, and cattle usually grow faster and do better on a variety of grains than on only one sort. If you have access to hominy feed, and it is cheaper than cornmeal, it can probably be substituted for it with entire satisfaction. The bran is desirable on account of its laxative and cooling effect, while the oil meal helps produce a silky coat of hair and a mellow skin. If I were to leave out any of the above it would perhaps be the oats. If you have plenty of clover hay, feed it entirely instead of Timothy. Further, you will make money and practice good farming, if you sell Timothy and buy clover with the money, for while a ton of the former brings more money in the market than does a ton of the latter, as cattle food there is no better roughage for steers than good clover hay; besides, it contains a considerable amount of fertility which will go back to the soil. Timothy is not the best sort of hay for cattle, unless very fine and leafy and well cured. C. S. PLUMB.

If you find a cold creeping on, keep a bottle of Dr. D. Jayne's Expectorant near at hand, and take a little dose occasionally. It will relieve at once, and soon bring about a cure.—*Adv.*

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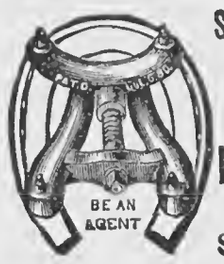

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A few Yearling Rams left; they are bargains to quick buyers. Also in lamb Ewes at reasonable prices J. C. DUNCAN, Wawanund Farm, Lewiston, N. Y.

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BROOKE MEADOW FARM has for sale a few trios of Buff Plymouth Rocks and Indian Runner Ducks at $5 per trio. JOHN H. JANNEY, Brighton, Md

Mammoth Bronze Turkeys, with one-eighth wild blood, for sale.
Choice young toms, - - $3 00
Choice young hens, - - - $1.75
Address H. M. PADDOCK, Freehold, Greene Co., N.Y

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We have 85 choice, large, thrifty, early-hatched cockerels, selected from a large number for breeding. They are from our best purebred egg-type stock. Prices right for quality. Write for circular. State what you want. WHITE & RICE, Yorktown, West. Co., N. Y.

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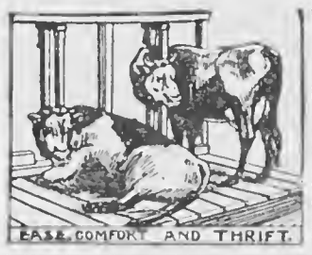

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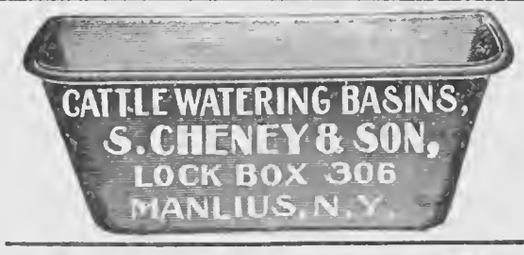

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A TALK ABOUT SHEEP.

I am keeping a flock of about 50 sheep of the ordinary mixed natives, which I find are too small and runty, and do not drop their lambs early enough. I want to have my lambs dropped in January or February at latest, as we have a brisk local market in May and June, and by July and August everyone has them for sale. Our Winters are mild; snow does not lie long, as we are surrounded by salt water, and we have more wet than snow. I wish to grade up with a purebred ram, but am undecided between a Hampshire or a Rambouillet, and at the Pan-American I saw some Cheviots which took my eye greatly, but I cannot find out much about them. I hear that they are hardy, good mothers, good milkers and prolific. Can they be depended on to drop lambs in January? Some say that only the Dorset or Tunis will do it, and they seem small in size, especially the latter. If this be true, which is better of the two latter breeds? The good points of all these breeds we can find out easily enough, but the weak points the papers seem afraid of mentioning for fear of treading on somebody's toes. Let me know the truth.

Suffolk Co., N. Y. J. R. T.

The inquirer desires his sheep to fill certain conditions. He wishes the ewes to lamb in January or February. That calls for breeding in September or October. He wishes early lambs. The Cheviot breed is notable for its hardiness, and the superior quality of its mutton, the salable type of wool and the beauty of the breed. The inquirer, however, states that the climate is mild where he is, and I do not believe Cheviots would be the best breed for his purpose so far south. The Cheviot is a superior breed in the respects above referred to. The ewes are also very excellent mothers, being good milkers and averaging more than one lamb per ewe. This breed, however, needs to be improved in the weight of fleece. Neither is it so fat in character as the Shropshire. These last two are the criticisms the breed might be considered most open to. It seems to me that for the securing of early lambs of the most salable class the Dorset is best suited to the purpose. This breed will lamb easily in January and February, and produce a high-class early lamb. It has already secured a foothold for this purpose in the best markets, and the lambs grow rapidly, and are easily fattened. I do not consider mature Dorsets as superior wool producers, but as early lamb raisers they rank high. The breed is also well adapted to mild climates.

The Tunis breed is much less known than the Dorset, but the few persons handling them make strong claims in their behalf. Mr. Roundtree, who has been prominently identified with the breed states that the ewes will breed any month in the year, and he makes strong claims in favor of the mutton, and the value of the Tunis in cross-breeding. The Dorset, however, crosses well for the purpose of meat production. The Hampshire ranks high, and many early Hampshire lambs have been sold in New York market, and the breed is an excellent one. Still, I think the Dorset may excel it in early breeding and possibly in fattening capacity. I have a flock of Rambouillets under my charge, and greatly admire the breed. The ewes will also breed early in the season. But this type of sheep in my judgment will not produce so high a class, and plump a lamb as will any of the preceding breeds, for early lambs.

C. S. PLUMB.

WHY WE BREED BERKSHIRE SWINE.

We are often asked whether we like the Berkshire better than the Poland China. They suit us better. The Poland Chinas in this, the southern central part of Ohio, outnumber all others combined. Chester Whites have a few representatives, and the Jersey Reds and their grades are found in limited numbers. In the early seventies we had on the farm grade spotted hogs that came nearer being Poland Chinas than anything else. Desiring something better we bought from Kentucky a pair of Berkshires whose sires and dams had but recently been imported. Other purchases followed, and soon crowded out the grade stock. From an imported sow that we bought there are descended, so far as we can tell, the brood sows now on the farm. Several years ago we crossed our Berkshire sows with a Poland China male, because our Berkshire boar was a failure, and besides we thought maybe the Poland Chinas would suit us better. But we did not experiment long in that direction, but got back to the straight Berkshires as quickly as possible.

We bought them first because we then thought them on many counts the best, and because we thought many of their traits and qualities suited us best. We liked their color and markings, and we have never seen any other color that suited us so well. These points are now the fashionable ones with the Poland China breeders. They stand well on their feet, and in growing up carry bone, muscle and flesh in the most desirable proportions. One great point in their favor with us is their free action. We want a hog that is a good grazer and gleaner; one that can clear up the wastes in the feed lot where the horses and cattle run, and go to its rest each night with sound bones and whole hide. For years we have kept our sows in the feed lot during Winter, where the horses and cows are kept during the day, and they have never been crippled or failed to bring their pigs all right at farrowing time. Always the objection against them has been that they are too small, yet a neighbor and a close observer and good feeder has expressed surprise that we were able to reach the same weights made by breeds claimed to be larger, and said that he did not know how we could do it. They respond to rapid feeding in the direction of early maturity to please us better than any other breed. We are satisfied that no other breed would glean our fields as well as they do, and save us the expense of harvesting. They are prolific, and the dams careful, and at the same time gentle and easily handled.

In two years we were able to market from five aged sows 161 fat hogs, excepting possibly a half-dozen that were reserved for breeders. We take great pleasure in having them so true to type that a stranger cannot note their individual differences. When ready for market they are always on their feet when they reach the station, and the shippers tell us that they are sure to be on top when they reach the market, and that they drift the least of any hogs they ship, and sell for the top price. We breed them pure because we can see no advantage in crossing them, selecting our brood sows from our own breeding, and purchasing males from some reputable breeder. We have not registered an animal of our own breeding for years. This does not add to their feeding quality, and is only a useless expense, as we grow to feed for market.

JOHN M. JAMISON.

Feeding Purchased Grain.

Would it pay in net profit to feed cows that came in in March to May, and are now giving a small quantity of milk on poor pasturage and cornstalks, a daily ration of grain, say equal parts bran and cornmeal? I would have to buy grain. Give feeding ration. B. V.

New York.

In former years, before adopting a system of sufficient food each day of the year, this question presented itself each Fall. Occasionally we tried it, but always failed to get a profitable return in milk. Finally I concluded that a break must be made some time for better feeding, and that no doubt whenever it was made it would at the outset be at a loss. It is just 22 years ago, and the change was begun by reason of abortion in the herd. Cows that were reduced to a small flow, as mentioned in the question, respond upon the back instead of the pail, unless they are exceptionally good ones. Had the questioner mentioned the value of the milk, it would have facilitated an answer. If the milk is sold at retail at usual prices, say five cents a quart, I should say yes. You will get enough extra milk to pay for the extra feed, and the improved condition of the animals will constitute profit enough. I would suggest a trial ration of one-third gluten feed, 27 per cent protein, or dried brewer's grains, and two-thirds bran or middlings, beginning with three or four pounds a day, and watching results. It is the watching out for results that answers more questions intelligently than anyone, however experienced, can do with pencil and paper. Do not feed cornmeal unless you have a cow very poor in flesh, which is a rare thing this Fall in northern New York, by virtue of such a splendid growth of grass. With these stripper cows the aim is to stimulate their somewhat dormant milking energies, and the protein foods will do this better than cornmeal, unless, as previously stated, cows are poor. Cornmeal for such cows for a while, say two weeks, will seem to start their systems into action with more profit than the blood-making foods. Another reason for discarding corn this Fall is the high cost. The cost of foods as well as the analyses must be considered in purchasing. H. E. C.

Soiling and Grain Feeding.

What soiling crops do you advise for Summer milk route (small)? Should a grain ration be fed with above and fair pasturage. C. M. V. B.

New York.

An answer to this question carried out to the letter will place the feeder in a position one year hence where he will find his cows giving a fair flow of milk, and ready to take on a grain ration at a profit. It is now too late to sow a Winter crop for early feeding (wheat or rye). But as early as the land will work sow one acre of oats and peas for each 10 cows. They will not eat it all, but the remainder will make good grain food, using 1½ bushel Canada field peas and 1½ to two bushels of oats. Be sure that the peas are in at least three inches deep. Repeat in 10 days, and again in 10 days or two weeks. This crop will be ready the end of June, and last until early corn is ready, and then with plenty of corn, and silage as soon as cut and filled, making Winter milk from good cows in warm stables is an easy and sure result. H. E. C.

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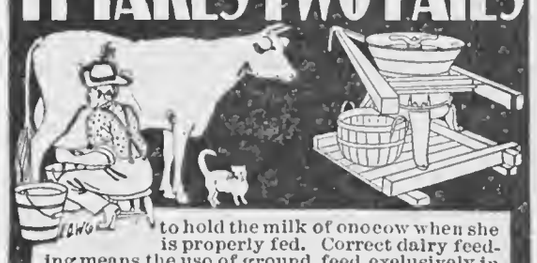

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"A shadowy vale of woe,"
And such frequent declarations
Are what help to make it
—Washing tar.

"WHAT's the difference een a biped and a quadruped?" t two feet."—Credit Lost.

"JONES seems rather pr his ignorance." "Yes; well, h t a good big lot of it."—Chicago d-Herald.

DOCTOR: "All you nee , madam, is rest." Patient: "But look at my tongue, doctor." Doctor: "Well, just let that rest, too."—Fliegende Blaetter.

YEAST: "Did your barber ever tell you any hair-raising stories?" Crimsonbeak: "Yes; he told me that tonic he sold me would make my hair grow."—Yonkers Statesman.

"HAVE you noticed the abstracted air that Brinsley wears?" "Yes; and I'm afraid it's catching." "Why so?" "The last time he came to my room my umbrella was abstracted, too."—Cleveland Plain Dealer.

MR. T. TOTALER: "My dear, I do not think it is very appropriate for you to wear that wine-colored silk to the W.C. T. U. convention." Mrs. T. Totaler: "Oh, but it is watered silk, you know."—Baltimore American.

"THE doctor would like to see you inside," said the physician's maid to the man who was waiting on the porch. "Not much," said the bucolic patient, "he don't try none of them X-rays on me!"—Yonkers Statesman.

JOHNNY: "They must have an awful big baby over at Meeker's house." Pa: "What makes you think so?" Johnny: "Why, I heard ma say to-day that every one in the house was wrapped up in him."—Philadelphia Public Ledger.

DEWITT: "Yes, my son follows the medical profession." Gabbil: "With his black clothes and white lawn tie, he looks more like a minister than a doctor." DeWitt: "I didn't say he was a doctor. He's an undertaker."—Philadelphia Press.

"ARIZONA has a petrified forest and it is said that it was once inhabited by four distinct peoples." "Were they petrified.too?" "The paper doesn't say." "They ought to have been." "Why?" "Because there used to be an awful hard lot of citizens in Arizona."—Cleveland Plain Dealer.

"WHILE I was out to the stockyards," said Hiram on his return to the city, "I met a bunko buster." "You mean a bronco buster, don't you?" inquired his wife. "No, I don't," retorted Hiram. "A bronco buster breaks horses, an' a bunko buster breaks men. I'm busted."—Chicago Post.

AUNT MARY: "What are you racing up and down the street in that manner for, Johnny?" Johnny: "Oh, I'm just practicing so I can outrun papa." Aunt Mary: "Why, what do you want to outrun your papa for?" Johnny: "'Cause he said it wouldn't be good for me if he caught me near the circus."—Chicago News.

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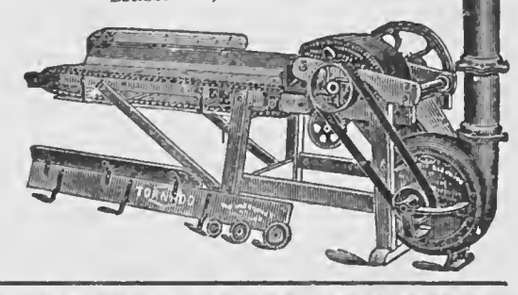

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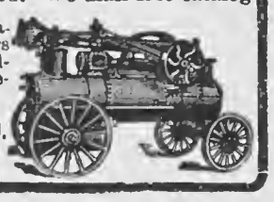
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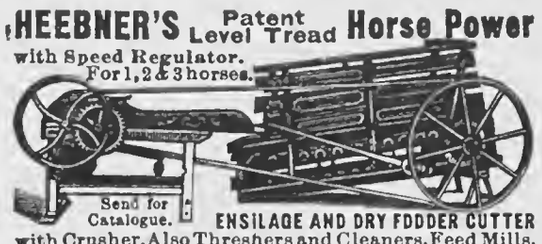
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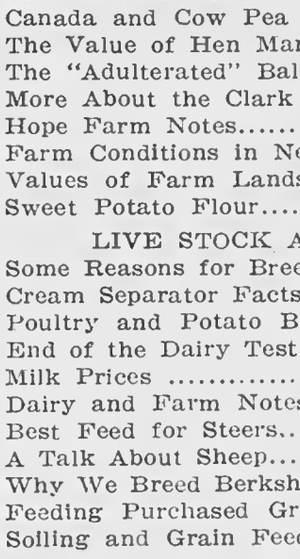
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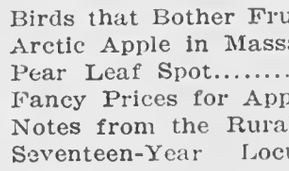
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VOL. LX. No. 2704 NEW YORK, NOVEMBER 23, 1901. $1 PER YEAR.

GUIDE BOARDS FROM THE MODEL DAIRY.

WHAT THE BUFFALO DAIRY TEST SHOWS.

Edward Van Alstyne's Comments.

NOT PHENOMENAL COWS.—After the six months' battle of the breeds is ended and the cows have "come home" strong and well, and in increased flesh, it would seem as if it were wise to call attention to some of the many points brought out and lessons taught. These were not phenomenal cows and beyond the reach of the well-to-do farmer, but fair samples of the different breeds represented. Nor was their production so large in either milk or butter as to be beyond ordinary attainment. This is evidenced when the Guernsey cow, Mary Marshall (the banner cow), in her best week (that ending May 21) gave 16.22 pounds of estimated butter, and the second-best cow, the Red Poll Mayflower, in her best week (that ending May 28) gave 15.07 pounds. The average per day for the six months of the Guernsey herd in churned butter was 7.77 pounds or 1.55 pound per cow; of the Jersey herd 7.65 pounds per week or 1.53 pound per cow. The total production of milk by the Holstein and Ayrshire herds was 39,269.94 pounds and 32,969 pounds respectively, or an average per day of each cow of 42.68 pounds in the former and 35.83 pounds in the latter. There are many working dairies that can show records equally as good, and better. It would be interesting if readers having such would report. Many times the remark has been made to the writer that these cows were given extra care, which would be impracticable in a working dairy. This point I have studied very carefully, and the consensus of opinions of those in charge, including the herdsmen, was that the extra care would hardly balance the unnatural conditions; i. e., excitement from crowds, close confinement, little or no exercise and unduly long hours, they being milked and fed at 5 A. M., 12.30 P. M. and 8 P. M., never getting entirely quiet until 9 P. M., and this was detrimental.

SACKED WHEAT IN THE PALOUSE COUNTRY DURING THE WHEAT BLOCKADE OF 1897. FIG. 354.

EXERCISE FOR COWS.—This naturally brings up this point: Do cows need exercise, or is entire stable feeding during the Summer desirable? I have very decided opinions on this subject, yet to prove conclusively the first point from this test would be impossible. I can only point to some suggestive circumstances. Without doubt they gave as much or more milk from not wasting energy in search of food, and perhaps took on more flesh. That this practice is to be commended for a breeding herd, that is to go on for generations producing healthy and strong offspring, I believe no careful student of maternity will allow. It was a source of perplexity to those of us, who handled the product, why a higher flavor could not be produced in our butter. It seldom scored over 42 points for flavor, and often in some of the churnings the flavor would be positively bad. This, too, with milk strictly clean, handled in the most approved manner, and with the best culture for starter. After careful investigation along all lines we tested the milk of each cow in a jar by itself, and found that in many of the cows the milk developed an odor plainly brought about by indigestion. Some of this doubtless was due to our feed (as 60 pounds of silage with six pounds of hay and 10 or 12 pounds of grain is more than the ordinary 1,000-pound cow can digest, particularly without exercise). After the yard was built near the barn for judging sheep the Jersey cattle for some time were allowed to run in it for an hour or two at night. That week their butter scored the highest in the barn, and the highest it had scored for the season.

SILAGE AND SOILING.—As to the practicability of silage for Summer feed there can be no doubt. Our silage until August 13 was brought from Hamburg, 17 miles distant, in spite of which, when drawn by our own men, it was in excellent condition. From that date until September 17 we fed in place of it oats and peas, millet and green corn; when we fed from the silo built on the grounds. After going over carefully the cost and amount of feed for the different herds during these periods the tendency seems to be that with the green feed *a little* less grain was fed. Yet the average cost of the ration was no less, and the milk production no more from the green feed than the silage. The difference in the amount of grain is accounted for by the grain in the silage. It seems very clear that cattle will produce more milk from the feed they graze in the pasture than from that cut and fed to them. Every dairyman knows that with *abundant* pasture little or no grain is needed. Yet to keep up a profitable milk flow these cows were fed from eight to twelve pounds of grain each a day, practically Winter rations. I would therefore conclude that when land is cheap and not easily tilled pasture is much cheaper than soiling; that land producing abundance of other crops would better be cropped than pastured, but that ordinarily the two systems can best be combined with profitable results.

NO ONE "BEST BREED."—We have certainly demonstrated that no one breed contains all the best cows. A man must be guided by his surroundings, amount of feed produced on his farm, and what he purposes to do with his product. I have no hesitancy in saying that the man who wishes to produce butter should select one of the Channel Islands breeds, not only because they can make a pound of butter at less cost, but because their butter is of a finer texture and higher color. The Guernseys made a pound of butter fat for 10.9 cents for the cost of food, the Jerseys for 11.1 cents, the Ayrshire 11.5 cents, and the Holstein 12.9 cents. The butter from any of the Channel Islands breeds, particularly the Polled Jerseys, could be churned at a much higher temperature and under unfavorable conditions and still be firm and merchantable than could that of any other breeds in the barn. For milk production where the fat is not the main factor and feed is abundant the Holstein or Ayrshire would seem to be the desirable cow. The former made a pound of solids at a cost for food of .0347 per pound, a pound of milk for .00419; the latter a pound of solids for .0336, a pound of milk for .00427. The Guernsey's solids cost .0362 cents, milk .00504 per pound; the Jersey's solids .0365, milk .0059 per pound for cost of food. The former with an average per cent of solids of 13.9, fat 4.6; the latter 13.6 solids, 4.58 per cent fat. The lower cost of solids in the Ayrshire milk is due to the fact that the average per cent of total solids in this milk was 12.6 per cent, the average fat 3.69 per cent, while that of the Holstein was 12 per cent, the average fat 3.25 per cent, a very significant factor in cheese making. It is interesting to note that the French Canadian cattle made a pound of solids for .0344 and a pound of milk for .00466; their average per cent of solids being 13.3 per cent, with an average fat per cent of 3.99. This point will be of value to many who have small farms and a limited amount of feed available for the dairy.

Doubtless no breed attracted more attention than the Red Rolls. They produced a pound of solids for

.0365, a pound of milk for .00488 cent, and a pound of butter fat for .1209 for cost of food consumed, with an average fat test of 3.98 per cent and 13.1 per cent solids, at the same time gaining 349 pounds in weight, coming certainly very close to a "general-purpose" animal. In localities where it is desirable to grow beef, a good calf or steer, and at the same time produce milk and butter at a moderate cost, this will be, I believe, the coming cow. Much has been said about the gain in weight by Short-horns, 802 pounds, or an average of 160.4 pounds per cow. This was worth at three cents a pound $24.06. They are within $2.57 as much feed as the Holsteins and produced $59.04 less value of solids, $40.29 less value of butter fat. Their food cost $24.09 more than the Red Polls, for which they made $28.15 more value in solids and $18.87 less value in butter fat. As compared with the Ayrshires their feed cost $21.14 more, their solids were worth $8.89 less, and their butter fat $23.70 less. The Holsteins gained 391 pounds, the Red Polls 349, and the Ayrshires 218 pounds. It ought to be evident in spite of the fine record made by this most valuable breed that it is vain to deny that dairying is not most profitable with a beef cow. The foregoing are some of the points that were brought out in the late breed test. There are many more that might be interesting, but these well digested will, I believe be a large enough dose for one sitting.

EDWARD VAN ALSTYNE.

COST OF WESTERN CORN PRODUCTION.

The cost of producing a bushel of corn depends upon the yield per acre. This yield per acre in turn depends upon the fertility of the soil, the season, the character of seed, and other considerations. Consequently, most of the investigations for any individual year or locality show very widely different results. However, in considering the cost of raising an acre of corn, the results of the different men engaged in studying this problem generally agree. There are three particular instances where authentic records have been kept of the cost of producing corn in Illinois, and the Central West. First, the manager of the Sibley estate of about 20,000 acres, F. A. Warner, has kept a record of cost of the various operations in producing corn for his own use in handling their great crop. In this case the corn is produced on farms averaging 160 acres for each tenant, of which about 80 acres are kept in corn every year. The following table shows the cost of raising 80 acres of corn and delivering two-fifths rent in Sibley, at the estate's elevators, and tenant's share in his cribs at the farm. The wages of man, team and tools are given as $3 per day, the average wage rate in that vicinity, except husking, which is estimated at $2.50 per day. Additional horses are charged for at the rate of 50 cents per day, and one man $1.50 per day.

Operation.	Rate.	Cost.
Fall plowing, 60 acres	$1.00 per acre	$60.00
Breaking stalks, 20 acres	3.00 per team & man	6.00
Spring plowing, 1 team 7 days	3.50 per day	24.60
Disking Fall plowing	4.00 per day	16.00
Harrowing, 2 days	3.50 per day	7.00
Seed corn, 13 bushels	.50 per bushel	6.50
Planting, 5 days	3.00 per day	15.00
Harrowing after planting	3.50 per day	8.75
Cultivating, 2 teams 19 days	3.00 per day	114.00
Pulling weeds, 4 days	1.50 per day	6.00
Cutting turn rows, 4 days	1.50 per day	6.00
Husking corn, 2 teams 26 days	2.50 per day	130.00
Hauling rent	2.50 per day	30.00
Extra work, replanting, etc		10.00
Total		$439.85

The average yield per acre is about 40 bushels per acre, so that the cost per bushel on this basis would be 13.75 cents. This does not include the rent. If we take the Sibley rent system of two-fifths share for landlord as a basis, the cost of raising a crop for the tenant would be found by deducting two-fifths of 40 bushels from 40 and dividing the cost per acre by this figure. The total cost for 80 acres is $439.75. Therefore, for one acre the cost would be about $5.50 per acre. Dividing this cost by 24 the tenant's share of crop, the cost per bushel for the tenant is seen to be 22.9 cents per bushel. At the ordinary rate of rental in central Illinois of one-half the crop, the cost would be 27.5 cents per bushel. The second record of the cost was made by the agricultural statistician B. W. Snow. The following table shows Mr. Snow's record of cost of producing corn in 4,051 acres.

Operation.	Average Cost Per Acre.
Cutting stalks and breaking stalks	$.054
Plowing	.425
Harrowing	.144
Listing	.027
Fertilization	.809
Planting and replanting	.155
Seed	.082
Cultivation	.679
Harvesting	1.372
Taxation	.283
Team maintenance	1.450
Depreciative machinery	.209
Depreciative horses	.149
Total annual investment	$5.838 per acre
Less value of fodder	.781 per acre
	$5.057 per acre

Cost per bushel at rate of average yield 39.2 bushel per acre, 12.9 cents. This data does not take into account rent or interest on land. Mr. Snow presents a further table, taking up all items, including interest on the investment and on the land, as follows:

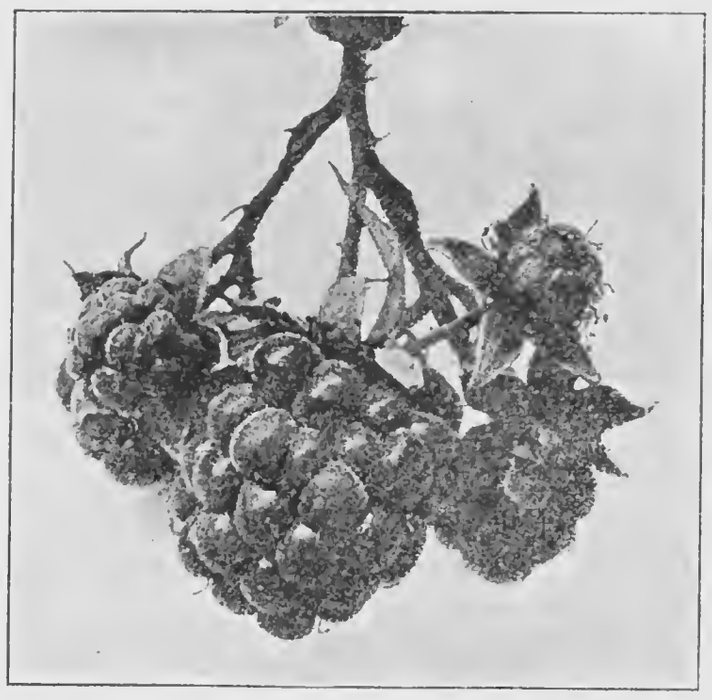
Annual investment or cost per acre	$5.057
Interest on machinery	.125
Interest on horses	.089
Interest on animal investment	.303
Interest on land	2.862
Total	$8.436
Total per bushel	21.5 cents

From these tables it can be seen that the records of Mr. Warner and Mr. Snow closely agree, taking into account different conditions. The third investigation was conducted by the Department of Economics of the University of Illinois, in charge of N. A. Weston. By averaging the records of several hundred farms for the year 1896, Mr. Weston found that the average cost per acre was $8.72, including rent of land. A tabulated cost in one instance was as follows:

Cutting stalks	$.19 per acre
Plowing	.90 per acre
Harrowing (smoothing)	.17 per acre
Planting	.28 per acre
Harrowing	.26 per acre
Cultivating (3 times)	1.13 per acre
Rent	3.25 per acre
Interest on equipment	.22 per acre
Wear and tear	.42 per acre
Seed	.12 per acre
Harvest	1.80 per acre
Total	8.74 per acre

Yield, 46 bushels per acre. The cost per bushel was 19 cents. It would seem, therefore, that the cost of growing a crop of corn, including the rent or interest on investment and interest on the equipment would amount to about $8.75 per acre. The cost per bushel rests largely with the farmer. If a good farmer, the cost will be low and the profits high; therefore, if a poor farmer, the profits will be low and the cost per bushel high.

A. D. SHAMEL.



NEW HYBRID BERRY, THE MAHDI. Fig. 355.

See Ruralisms, Page 790.

HOME OF THE CALIFORNIA APPLE.

Redskins Are Not Wanted!

I recently took a trip up through the Pajaro Valley among the apple growers. Leaving the train at Chittenden, the end of the road leading from the valley up into the hills, I followed the grade for a couple of miles, when a widening of the cañon revealed a hundred-acre apple orchard, where I spent some time asking questions. About three miles farther down the grade brought me out into the valley proper, and from this point on to Watsonville there was little land that was not set out to apple orchards in all stages of growth, from one-year-olds up to 30 years or more. Fine crops of beets, squashes and corn were being harvested from the younger orchards. Watsonville was at one time the center of the sugar-beet industry of this coast and the factory, shown at Fig. 356, where the donkey engines are unloading beets, was the original plant. No sugar is manufactured there now, but a larger plant is in operation at Salinas, about 20 miles south, to which place all of the thousands of tons of Watsonville beets are hauled on a narrow-gauge road owned by the Spreckles Company. Fig. 357 shows a four-horse load of beets on the way from the ranch to the yard at Watsonville. These wagons hold about five tons, and are loaded in a net, which covers the bottom and sides of the bed. When arrived at the yard and drawn up by the side of a car the donkey engine grabs hold of the net and yanks the whole load on to the car while one can count three. As soon as a train is loaded it is pulled out to make room for more empty cars. The growers are paid this season $4.50 per ton average for beets according to sugar test.

Near the depot at Watsonville are located numerous packing houses where the great crop of Pajaro Valley apples is packed for shipment. The apples are packed in boxes, every apple is wrapped in paper, and supposed to be free from worms and otherwise sound. If the stem is gone or a blemish of any kind appears on the apple it is rejected. Fig. 358 shows a load of apples and Fig. 359 a Watsonville orchard. These apples are almost all sold f. o. b. Watsonville, the buyer shipping where he pleases. The Newtown Pippins and Bellflowers are largely purchased by agents from fruit dealers in London, and these two varieties comprise, I should say from observation, more than three-quarters of the entire crop. Prices this year are $1 per box for Bellflowers, and $1.25 for Newtowns. Pearmains, Red and White, and Smith Cider make up the greater portion of the last quarter of the crop, while Missouri Pippins, Langford's Seedling, Winesap, etc., are occasionally seen. A box of apples weighs from 40 to 44 pounds, varying according to variety and size. The supposed demand for red apples seems not to affect the plantings in the Pajaro Valley. In fact, the apple growers seem to make room only grudgingly for any variety other than Newtown or Bellflower, and the result is that there are few orchards where a succession of apples is planted for home use, and at the hotel I found only the two popular varieties, and they were too hard to be eatable. At a restaurant I called for baked apples or apple sauce, and was met with a look of surprise, which said by inference that apples are too common an article to make an appearance on their bill of fare.

The Codling moth has been increasing rapidly in this section the last year or two, so much so that some of the growers are becoming alarmed. A 40-acre orchard of seven-year-old trees produced last season 10,500 boxes of sound fruit and about 35 boxes of wormy apples. This season fully 50 per cent of the apples are wormy. Some growers have sprayed and banded their trees with good results, while others have done nothing, and have allowed their orchards to become breeding places for the moths. The San José scale has also appeared in some orchards, and some spraying has been done. One orchard that I visited seemed particularly clean. In conversation with the owner I found that only last year there was some scale there, and that it was alive with Woolly aphis. This was evident from a closer examination of the wood. A few trees had been sprayed, but the main orchard had been cleared of aphis by the ladybugs and a lace-wing fly that earlier in the season was plentiful there. The ladybugs were not the "twice-stabbed" variety that we have here, but were gathered in the brush near Lassajara Springs in the mountains. Mr. Rogers, the bug inspector for that district, told me that the "twice-stabbed" variety did not seem to thrive in their cool foggy climate, and that he was an advocate of spraying, his favorite wash being the lime, sulphur and salt mixture which was quite extensively used in the Santa Clara Valley at one time, but is now almost entirely discarded. The invasion of the Pajaro Valley by the Codling moth is a serious matter, as it means a reduction in price from say $50 per ton for sound apples to $4.50 per ton for wormy ones delivered to the driers.

H. G. KEESLING.

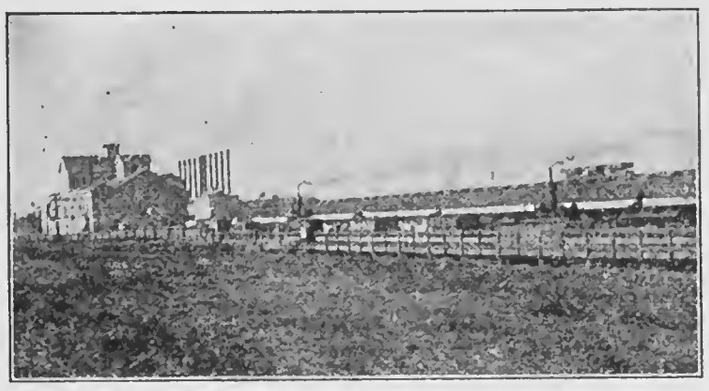
SUCCESS WITH "CHEMICALS AND CLOVER."

Speaking of "chemicals and clover," and the question just asked by a subscriber, on page 706, whether it will go, induces me to say that in 10 years I have taken good crops yearly, and some years two, from a heavy clay loam that was producing three-fourths of a ton of poor hay when we began. This season it produced a little over two tons per acre of good market hay, and the only fertilizer we have used has been 200 pounds of any good general grain fertilizer and clover rowen plowed under. On parts where we have been able to put a little stable manure in addition to above we have cut over three tons per acre. I write this for the benefit of your subscriber or any others in like situation. I know that the problem was a stiff one for me when I started in.

Vermont. C. A. CHAPMAN.

JERSEY SWEET POTATOES FOR AUSTRALIA.—We shipped to-day to the Department of Agriculture, Sydney, New South Wales, Australia, two barrels of sweet potatoes for seed, consisting of 28 pounds Big Stem Jersey Yellow, 28 pounds Little Stem Jersey Yellow, 56 pounds Jersey Red, 56 pounds Vineland Bush, 56 pounds Pierson, 56 pounds White Maryland. This shipment goes direct from New York to Sydney by steamer. Each potato was wrapped in paper. This is a long way to ship sweet potatoes, as they are quite subject to rot. It is hoped, however, that at least a part of them will arrive in a sound condition. They will be bedded immediately on their arrival if sound, as the Summer there will be well advanced by that time. They will be about 80 days on the water, and travel about 14,000 miles.

Vineland, N. J. F. S. N.



UNLOADING BEETS AT RAILROAD. FIG. 356.

JERSEY POTATOES.

Big Crops and Good Prices.

YIELD IN AN OFF YEAR.—Monmouth County, N. J., may usually be depended on to produce a fine crop of potatoes, the sale of which often brings in considerable revenue. Even in this year of general potato failure some large and profitable yields have been made within her borders. The crop immediately about the old town of Freehold is noticeably good, and accounts of profits sufficient to pay off mortgages and buy new farms have been freely circulated. An investigation by THE R. N.-Y. shows that the reports are well within the facts, and that really big yields, considering the trying nature of the season, were quite common about Freehold, as well as in restricted localities in the adjoining County of Middlesex. Wm. M. Moreau marketed 1,900 barrels from 19 acres; D. H. Buck got 2,000 barrels from 22 acres; Ben. Hayes 1,781 barrels from 14 acres, and W. T. Clayton 2,072 barrels from 20 acres. The barrels, of course, are computed at 180 pounds, or three bushels each. The prices received for delivery to buyers in bulk at the freight station were about $2.75 for those first out of the fields, and $1.60 for the main crop later, the average being close to $2 per barrel. Even the small sizes brought over $1.25 a barrel. It is thus evident that some of these crops brought in more than $4,000 cash to the growers. Larger yields and greater profits are spoken of, but the above may be taken as entirely reliable. These yields, without exception, were made on well-equipped farms by experienced potato growers, who rely on this useful vegetable as a money crop. Only twice within the last 15 years has there been an equal or better yield, and in neither case was the price, based on failures elsewhere, as favorable, so that a repetition of this season's financial success is not to be expected soon.

SOIL AND CULTURE.—There is quite a remarkable uniformity in the soils and methods of cultivation, the former being clay loams of good consistency, with rather retentive clay subsoils. A four or five-year rotation is carried out, which is sometimes curtailed by the use of Crimson clover. The ordinary method is to use all available stable manures on a suitable field of sod, and grow a crop of corn, giving especially careful cultivation to keep down weeds. Crimson clover is often sown at last cultivation, but the practice is not gaining, as the clover at times makes but an indifferent growth in the dense shade of tall corn. As early the next Spring as the ground can be worked it is deeply plowed, the usual practice being to shave up the subsoil. This brings up the decomposed sod and manure turned down the preceding year, and mixes it well through the whole furrow. A Cutaway or Acme harrow quickly follows and levels the furrows, which are further fined with drag harrows until brought to the necessary tilth. These potato farmers are great believers in thorough preparation, and act on the conviction that no subsequent cultivation can make up for slovenly harrowing. The potatoes are now planted with one of the standard horse planters, set to drop about 14 inches apart in the rows. Wider intervals are not approved, as in the case of missing plants there is an unprofitable interval, while the 14-inch space is usually filled by the extra development of the nearest plants. The rows are spaced about 34 inches apart, as repeated trials show this distance favorable to a maximum crop on a given area of land. The planters are set to cover as deeply as possible, and work very well on these well-prepared fields, there being practically no stones, and the surface generally very level. The effort is made to get the seed pieces in deep enough to average two inches under the soil when field is leveled with harrow after planting. This means covering at least four inches under the ridges left by planter, which is about the limit of effective work as the machines are now made.

FERTILIZERS AND TILLAGE.—The question of fertilizing with chemicals is of great importance, and seems well worked out locally. From 800 to 1,200 pounds of some reliable "potato manure," analyzing about 4½ per cent of nitrogen, 9 of phosphoric acid and 10 of potash, is used, put in with the planter. Most of the standard brands of commercial fertilizers have been used with good results, but the chief dependence of the farmers mentioned now seems to be on a local mixture prepared by J. H. Denise, of Freehold, himself a practical and successful farmer, as a result of experiments carried on for 20 years for the purpose of finding the combination best adapted to the retentive soils and average climate of the vicinity. He disposed of 1,000 tons last Spring within a 12-mile radius, nearly all being used for potatoes, with the results above reported. Thorough preparation and good fertilization are most important factors, but these Jersey potato men well know the absolute necessity of constant tillage, and keep their cultivators and weeders going throughout the growing season until the vines meet across the rows, and even then break up the centers with narrow shovel plows if there is any sign of crusting. There is but little variation in the method except in the use of riding and walking cultivators, the tendency being to go back to the single-horse walking type, so commonly used by truckers. The fields are harrowed immediately after planting to

A LOAD OF CALIFORNIA SUGAR BEETS. FIG. 357.

level the ridges, though some practice deep cultivation first, followed by a weeder across the ridges, which answers very well. The object is to get the ground in thoroughly good condition and the weeds pretty well killed off before the plants are more than three inches high. They try to cultivate twice a week, or at least after every rain, as long as possible. The weeder is run after nearly every cultivation, taking out a tooth immediately over the rows as the tops gain in height. Much stress is put upon cultivating as near the plants as possible, and the fining and filling in of fresh soil about the stalks by the weeder teeth. Where this implement is intelligently used there is scarcely any need of the hand hoe. The Potato beetle is disposed of with Paris-green, applied at the rate of 1½ to 2 pounds to the acre, preferably with a dry powder gun, whenever a new brood appears. These guns are often operated

A LOAD OF CALIFORNIA APPLES. FIG. 358.

from the tail of a light wagon driven between the rows, thus enabling the operator to work away from the dust. Two men and a quick-stepping horse will cover 12 to 15 acres a day in this manner. The potatoes are dug as soon as mature, or even before if the price warrants, with one of the later power diggers and hauled to the shipping station in bulk, where they are awaited by buyers who ship to various Pennsylvania points, chiefly in the mining districts.

VARIETIES SELECTED.—This brings us to the question of varieties, the least creditable feature of these agricultural operations. The American or Summer Giant is planted almost to the exclusion of better-quality kinds. It suits the soil, grows and yields well, and it is not subject to scab, or grub, as the affection is locally known. The growers don't eat them—they are too soapy to be liked when better varieties can be had, but they are acceptable to the mining trade. The seed potatoes come from the northern counties of New York, Onondaga, Oswego and Ontario, as the product of this section is found to succeed better about Freehold than that from points farther south. Repeated trials have convinced the growers that home-grown seed, no matter how high the apparent quality may be, gives less satisfactory results than northern, and they say that they cannot afford to plant potatoes of their own growing in quantity. For home use an acre or so of Rural Blush, State of Maine, or Bovee is grown, but under exactly the same conditions a yield 25 per cent less is expected than from the Giant. Wheat or rye is usually put in after the potatoes, the unappropriated plant food left by the Spring fertilization being sufficient to insure a good crop, and the land seeded to Timothy and Red clover in the usual manner. A year or two in meadow and pasture completes the rotation mentioned in the early portion of this account, but a frequent practice is to sow Crimson clover thickly as soon as the potatoes are out, and turn down the growth next Spring for another crop. How long this may be safely carried out has not been demonstrated, but one of the best crops of the season was made by Ben. Hayes, of East Freehold, in this manner, though he coated his clover field with stable manure before plowing it down, and used 1,000 pounds of chemicals in addition. His crop of 1,781 barrels on 14 acres, however, scarcely represents the full yield, as he dug half his field before maturity on account of attractive prices, which netted him more than the greatly increased turn-out of the portion left to gain full size.

An important feature of these operations is the intelligence and energy of the growers. All the farmers visited were found personally directing the farm work, and planning still better yields if Nature will allow it. They make a careful study of the local needs of their crops, and spare no reasonable expense and labor to insure favorable conditions. They say that they can grow potatoes in average seasons for 30 to 40 cents a bushel, and are much encouraged at the result of this year's work. They expect potato planting to be overdone next Spring, but purpose to keep right on in their investigations.

W. V. F.

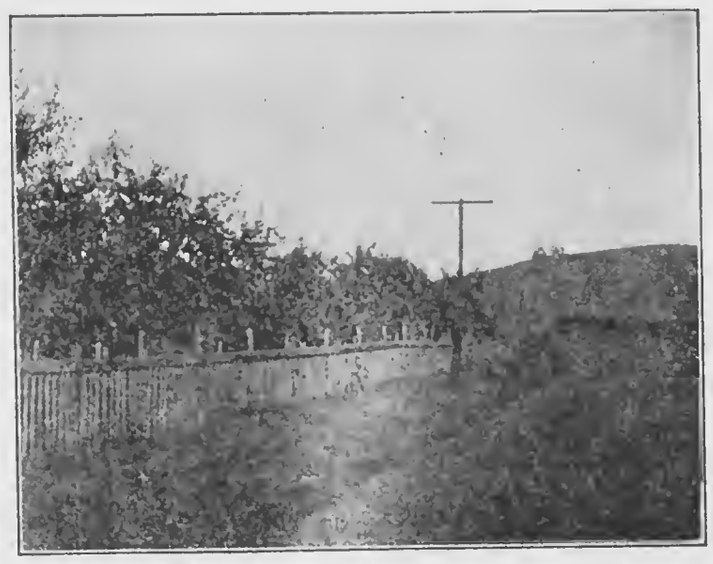
SOWING CLOVER IN THE CORN.

Believing in clover gathering nitrogen last year I sowed it in corn at the time advised by many, viz., early in August. It caught well, and lived through the Winter, and was plowed again this year for corn. The disadvantage I find with this late sowing is that corn is large and apt to be broken by the horse and singletree of cultivator. The corn being large makes it hard to sow seed well, unless one does it from horse's back, in which case considerable seed is lost on cornstalks and leaves. This year I sowed it about July 5, just before a rain. The corn was not high enough to interfere with sowing or cultivating, and it is now but little larger than clover sown a month later last year. It has not made any stalk so (as I understand if it does it will not live through the Winter) I claim I have made a gain. If it draws nitrogen from the air the longer it has to grow this year the more nitrogen it draws, as in plowing again for corn next Spring it will have but little opportunity to grow then. Another point; if fodder and corn are taken off by November 1 there is a nice lot of pasture for cows for a couple of weeks, certainly more than enough to pay for seed and labor, and a clover sod to plow down.

Westchester, Pa. G. B. L.

R. N.-Y.—Do we understand that you used Crimson clover? In our experience this has proved better for Fall seeding than the common Red. It makes more and quicker growth through the Fall and Winter. We have tried several experiments in mixing the Crimson clover seed with rye, rape and Cow-horn turnips. While we have not gone far enough in this to be sure, we conclude that the mixture of clover and turnips in the corn is as good a "cover" crop as we can get. By "cover" crop we mean one to be plowed under in early Spring.

GRAPE PROSPECTS.—The vineyardists on this belt are not pulling out their grapes. On the contrary, they are buying more vines to put out more acreage, although we have 30,000 acres on our belt. The exact reason, I think, that they are not pulling out vineyards, and are going to plant more, is that the grapes here are bringing big prices, better prices than they have before in many years. GEO. S. JOSSELYN.



AN ORCHARD OF CALIFORNIA BELLFLOWERS. FIG. 359.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Cleaning Cockle Seed from Wheat.

Reader.—A recent article in an agricultural paper says that cockle can be taken out of wheat by soaking all in a weak brine—the cockle rising to the top. Will not this soaking in brine injure the wheat for seed?

ANS.—Regarding soaking grain in a strong solution of brine, I would say that the practicability of it would appear to depend largely on the conveniences at hand for treating the seed and drying it after soaking. I do not believe that a solution of brine will injure the germination, although I cannot speak positively on that subject. Strong solutions of salt are not as readily absorbed by seeds as pure water, and the phenomenon has been observed that while a weak solution of a poisonous salt will injure germination, a very strong solution of the same salt can be used without injury. We shall take opportunity before long to make a test of the effect of brine upon the germination of grain seeds. A. J. PIETERS.

Poultry Manure for Strawberries.

H. G. B., Zionsville, Pa.—I have a strawberry patch that was planted last Spring, and bore a good crop this Summer. What do you think about giving it a good dressing of poultry manure this Fall, followed by a mulch of strong horse manure? Most of the old plants were plowed up, leaving only a narrow strip of row from which new plants spread out.

ANS.—We should call this a case of "better late than never." The poultry manure will help the strawberry plants, but it should have been put on in August or earlier for best results. That is the time to fertilize the strawberry for fruit, as the fruit buds are formed during the Fall. The manure will still prove useful, but would have been better two months ago.

Clipping Alsike Clover.

R. H. S., Homer, Ont.—In the issue of October 12 of THE R. N.-Y., on page 697, W. T. C., Albion, Ind., writes of clipping clover for a crop of seed. Of course he refers to Red clover: Could any readers of THE R. N.-Y. tell me whether Alsike could be treated the same way? If so, at what stage of growth should the clipping be done?

ANS.—In the original article the "clipping" referred to may mean ordinary cutting of the clover for seed and not merely the clipping of the heads. We know of no way by which the clover heads could be cut for seed leaving the straw standing. Alsike clover to be cut for seed should be allowed to approach maturity before cutting. It should become as mature and dry as possible without getting so dry that the seed will shell out. If the writer of the original article referred to can give information about clipping Alsike it might clear up this point.

L. A. CLINTON.

Grapes and Shade Trees for Massachusetts.

E. A. G., Norfolk, Mass.—1. What varieties of red, black and white grapes would you recommend for this frosty section? I have a Worden vine and also suppose I have one of Diamond, but it has not yet borne. 2. What varieties of forest trees would you use for shade purposes besides maple and chestnut; elms are not wanted. Trees for size, beauty and durability are desired, as well as different kinds. Does the Catalpa grow to a large size?

ANS.—1. Campbell is one of the newer but most excellent early black grapes. Winchell (also called Green Mountain) is a good white variety that ripens early, and Niagara is of the same color, but later and on the whole a better grape. Brighton is a red variety of the highest excellence. All of these are reasonably hardy. 2. The tulip makes a very good shade tree, and is well suited to street or yard planting. It makes a large and shapely tree, has beautiful foliage and bears flowers that resemble tulips. The hardy or western species of Catalpa grows to large size and has large clusters of handsome flowers, but the branches are coarse and straggling, and although the leaves are large the shade is not dense. The Japanese walnuts make thrifty and beautiful shade trees. The nuts are not very valuable from an edible standpoint, but they are borne in abundance and the flavor is good. H. E. V. D.

A Strange Apple Pest.

W. B. F., Lawrence, Ind.—I send an apple that has been marked by some species of insect. I am at a loss to know what did it. I find many apples so marked on certain trees, and some on all. Is it the work of the Palmer worm? I do not think that it is the Codling worm. I have each year given the usual sprayings, and am not injured much by scab or insects, except the one that does this work.

ANS.—It was not the work of any insect, but the fruits showed a curious kind of dry rot due to a fungus disease. There were small, circular, dark-colored depressions in the skin of the apples, and often the skin had opened, leaving a circular hole. Below these spots the flesh was brown and pithy, extending to a depth of about one-quarter of an inch. Experts are not yet sure just what fungus causes this dry rot. Many varieties of apples are subject to the trouble. Thorough work with Bordeaux Mixture should check it theoretically, but it has appeared in trees sprayed six times. Therefore, no way of checking it has yet been discovered, it seems. M. V. SLINGERLAND.

Apples and Pears.

H. S. M., Canton, Ill.—1. Are the Northwestern Greening and Rhode Island the same apple? If not, which is the better apple? 2. Will the Kieffer pear bear as soon when a standard as when dwarf? 3. Is the Whitney apple one of the crabs, or is it a variety of the common apple? 4. Is the Twenty Ounce a desirable Fall apple?

ANS.—1. The Northwestern Greening is entirely distinct from the Rhode Island Greening. It is a variety that originated in Wisconsin, and is chiefly prized for its ability to endure severe cold. The fruit is large, very smooth and symmetrical, of only fair quality and ripens in the Fall in most sections. It is of no special value where the Rhode Island Greening is successfully grown. 2. The Kieffer pear bears so soon as a standard that there is no need whatever to use it as a dwarf. I have seen trees bear fruit at two years from the bud, and at four or five years old they usually bear abundantly. The greatest fault of the Kieffer, next to poor quality, is over-bearing. 3. The Whitney is more like the crab apples than like the true apples in size, appearance and quality. It is quite hardy in tree and only valuable where good apples are grown with great difficulty on account of severe Winters. 4. Twenty Ounce is a very good Fall Apple in most sections. It is large, beautifully striped with red and of fair quality. H. E. V. D.

Several Nursery Questions.

J. H. S., Wapakoneta, O.—1. What kind of an apple is the Winter Banana, and is it a good one? 2. What time of the year should I cut buds of peaches, plums and cherries? How should they be treated after cutting and before budding? 3. How can I start Carolina poplar best by the hundred? 4. Do you print a book of instructions to persons who are starting in the nursery business?

ANS.—1. Winter Banana is an apple much like the Maiden Blush in color, being yellow when fully ripe and usually with a beautiful red cheek. The size is about medium and the shape nearly round. The flavor is excellent. From what I have seen of the Banana apple I fear it will not keep later than midwinter in most sections. 2. Budding of all kinds of trees is usually done in August and September, and the buds are cut at that time. They should be kept moist and cool until used. I usually wrap them in wet paper and lay them in the cellar. 3. Carolina poplars start very easily from cuttings. They should be about a foot long and set out in early Spring in good mellow soil, and then cultivated as any other plants should be. 4. There is a very excellent book to be had called "The Nursery Book," by Prof. L. H. Bailey. THE R. N.-Y. can furnish it for $1.

H. E. V. D.

Fitzgerald Peach; Arctic Apple.

L. W. L., Natick, Mass.—1. How does the Fitzgerald peach compare with the Crawford as a market variety? 2. Will it pay to set a large orchard of the Arctic apple in Massachusetts? A few of my young trees bore this year for the first time, and they were very high colored, similar in this respect to the McIntosh.

ANS.—1. Fitzgerald is an excellent yellow peach that ripens about with the Late Crawford or a little later, and is liked by those who have tried it, so far as I have heard. It is a good market peach. 2. The Arctic is too new and untried to warrant setting more than a few trees. This at least is my opinion at present. I know the apples of this variety are apt to be very highly colored, and from a market standpoint it will probably be a good apple. The quality is not high, according to my taste. I also fear that the size may be a little too small, especially when the trees bear heavily. H. E. V. D.

Apples for Pennsylvania.

L. W. R., Scranton, Pa.—I intend to plant an apple orchard near this city on ground well drained, rolling and soil in fair condition; elevation about 800 feet. I want trees that are young, prolific and annual bearing; those that are hardy, fruit long keeping, good quality and good color. Please advise me on the following, and how near they fill the above requirements: Boskoop, Arkansas, Mammoth Black Twig, McIntosh, Ontario, Salome and Scott. Will you name varieties more suitable for my location, or more suitable for commercial purposes, that will cover the requirements? What can you say regarding spurry as a green manure to plow under?

ANS.—Our friend wants about "the whole thing" in the way of an apple orchard, and he is not to blame for such a desire. The great trouble comes in the extreme difficulty, if not the impossibility, of finding just what he and many others would like to have in the way of varieties of Winter apples. I do not know of a single one that does not have objectionable points, and some of them are seriously so. All those mentioned by him are probably quite unsuitable to his locality, which is central Pennsylvania. Boskoop is nothing extra in any respect, so far as I know, and it is practically untried as a commercial apple. Arkansas is a seedling of Winesap that is larger and quite successful where its parent does well, but is not of so good quality. McIntosh is an improvement on Fameuse in size and quality, but is not a late keeper. Ontario is not so good as Northern Spy in quality, nor is it so late a keeper, although it is one of its seedlings. I have been closely watching it during the past few months at the great Pan-American Exposition. Salome is neither large nor of high quality. Scott is a small red striped apple that is principally valuable for its ability to withstand severe Winters. While York Imperial has some faults it is perhaps as good as any Winter apple for Pennsylvania and many other sections. Rome Beauty is also a very good market apple and is good enough in quality for home use. Stayman is probably well worthy of trial there. I have never tried growing spurry, but am told it is a good crop for making humus when plowed under. H. E. V. D.

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AMONG MAINE APPLE GROWERS.

The Maine Pomological Society held its Winter meeting in Dexter, Penobscot County, November 6 and 7. The Society scored a good point in the selection of date, and another in the place of its meeting. The weather was all that could have been hoped for and much finer than could have been anticipated for the season and latitude. Indeed, the Maine Autumn of 1901 will go down as a record season in the number of bright warm days and the fine opportunity thus presented for closing up farm work, gathering fruit, and preparing for Winter. Dexter and vicinity has been a notable fruit locality in Maine from the earliest times. The local growers vied with those who brought exhibits from a distance, and won their share of the liberal premiums hung up by the Society.

The meetings were well attended, but not to the extent of filling the galleries of the spacious town hall. The officers and other members of the Association were on the ground early, and by the hour for opening had a large and well-arranged display of Fall and Winter apples spread out on tables extending the length of the hall. Two tables on each side were separated from the wall, each other, and the seats for the audience by walks, while the pear and jelly exhibits were placed on either side of the entrance in the back of the hall. The flower exhibit occupied a prominent place on the front of the stage, and on tables just under the footlights.

President Gilbert called to order on the completion of the exhibit, and in a few well-chosen words greeted the members and citizens and opened the meeting with prayer by one of the Dexter pastors, and then introduced the first speaker, W. S. Brown, principal of the Dexter schools, who gave an address of welcome. The response was made by Secretary D. H. Knowlton. In this Secretary Knowlton referred to some of the conditions which make it needful for orchardists to confer in these meetings for the benefit of all, and also a few cases which make the future of orcharding in Maine bright to the intelligent persons in the craft. The proceedings of the morning session were concluded with music following the President's address. Every session of this meeting was enlivened by selections of good music. The afternoon programme consisted of four parts under the general head of "The Care of the Orchard," viz: "The Importance of It," by R. H. Libbey; "Methods of Culture," by V. P. De Coster; "Fertilization," by Chas. S. Pope; "Results of Culture," by John W. True. The first speaker, clinching his argument on the importance of care in the management of the orchard, cited a case of two orchards on two farms separated only by the line fence, and the difference between neighborly owners. One with no cultivation produced 10 to 15 barrels of apples, while the other for better care and cultivation yielded 200 barrels per year. A neighbor 80 years old had grown an orchard from apple pomace seed and lived to use some of the fruit. His successor had undertaken to improve this orchard. He has grafted 199 of the trees, and receiving a yield of 75 barrels of apples, finds this part of his operations to be paying better than any other. He will soon plant 200 more trees of good varieties.

Under "Methods of Culture," farmers were urged to raise their own trees; to graft in several ways. One case was cited where a boast was made of the large number of trees which had been set in a single day, but which was followed by serious loss of trees. It is safe to dig deep wide holes and plant the trees well; two feet deep by three feet wide in a circle is not too large a hole to set a small tree in, while they should in no case be set nearer than 30 feet. In cleft grafting let sprouts grow the first year to save scions from being pushed too fast. Prune for fruit, and thin the fruit well back to induce annual rather than biennial bearing. An orchard properly thinned, pruned and manured, should bear every year. The best time to prune is while you are bringing up the orchard to bearing; probably Fall and Winter are the best seasons. Plow and cultivate the orchard often. Some prune in June, which has been observed to spoil some trees. Thin the fruit any time after it is set, the sooner the better.

Under "Fertilization," which was taken up as manuring, the speaker spoke of the early richness of the soil when it was only necessary to plant a good tree in a pasture where the wealth of forest fertility had not been exhausted, and it would grow quickly to perfection. Now it is necessary to use commercial manure or the elements of plant growth in other ways by plowing and keeping turf well rotted when one has been grown, and the application of ashes and manures as they seem to be needed. Cultivate the first part of the season, and in August put in some mulch crop. Weeds are better than none to increase the vegetable fibers in the soil and help it hold more water. Rye, wheat, and peas were named. Stable manure was commended, but was said to contain too much nitrogen, and the suggestion was made to supplement a small application of it with lime, potash, chloride, ground bone, and phosphoric acid; afraid of ashes, as cost of elements may be too high.

Prof. Munson read a report of the Society's exhibit at the Pan-American Exposition. The Secretary could not attend to that display, and it was put into Prof. Munson's hands, and this report gave many details and facts concerning the exhibit and the keeping qualities of Maine apples which were sent to Buffalo to be shown. Under "Results of Culture," the speaker cited several cases brought up by previous speakers, and the presence of the fine display of fruit in the hall as evidence of the value of good culture, which would seem to make any further discussion superfluous. His mother's father had planted trees which fruited in seven years. Trees set in 1835 are now 30 or more inches in diameter, which speaks for the good culture these trees have received. Trees well set, but neglected, often are lost or ruined before five years. Keep grass down, especially Twitch grass, as it will sap the life of the trees early. Sometimes accidents and ice storms destroy trees, but these will be the small losses if trees are well cultivated.

At this session J. H. Hale, of South Glastonbury, Conn., entertained, instructed and enthused the audience with an illustrated lecture on fruit growing in Connecticut and Georgia. Mr. Hale included a large fund of humor and anecdote which pleases and instructs. The character sketch and folklore tales of the Georgia negroes were drawn on, and show that as devoted laborers those people have few equals and probably no superiors. It is not easy to give anything like a summary of this lecture without covering too much space. To be appreciated it must be heard, and the hearer then gathers something of the earnestness and enthusiasm of the speaker. R. N.-Y. readers should miss no opportunity to hear Mr. Hale on the subject of raising fine fruit for good markets, for he creates if he does not find a good market.

At the morning session on November 7 the reports of the officers were received. These showed a very satisfactory condition of affairs. Although the State Legislature had defeated every other call for an exhibit at the Pan-American Exposition, an appropriation of two hundred and fifty dollars was awarded this Society to help it make an exhibit of the State's fine fruit. With only an equal amount added from its slender means, a show so creditable as to medals received and approval by leading authorities attests the high quality of the small show made, and the care and economy with which this small sum was handled, when it was shown that the $500 appropriation was exceeded by less than $44 for all expenses of the exhibit.

The afternoon programme was disturbed by accident, and several parts omitted, the main part of the session being given to Messrs. Hale and Powell, of Washington, D. C., for talks on the general subject of orcharding. In the evening Mrs. Alonzo Towle delivered a very instructive and entertaining lecture on "Living for Health," and Mr. Powell an illustrated lecture on orcharding and clover crops.

The following officers were elected: Z. A. Gilbert, president; D. S. True and H. L. Lealand, vice-presidents; D. H. Knowlton, secretary; Chas. S. Pope, treasurer. Executive Committee: R. H. Libbey, V. P. De Costa, C. A. Arnold. Trustees: A. C. Day, J. W. Dudley, J. W. True, E. P. Purington, E. W. Worcester, E. A. Lapham, Alonzo Butler, A. J. Simmons, A. A. Eastman, Will E. Lealand, Frank E. Emery, Fred Atwood, G. W. Campbell, C. A. Hooper. Experiment station councilor, Chas. S. Pope.

F. E. E.

Grafting Grapes.

W. K. N. Dilley, Ore.—I wish to graft Niagara, Green Mountain and Diamond grapes to Worden and Concord. When is the proper time and what the best method? Can Delawares be grafted to Concord?

ANS.—Yes, all the varieties mentioned can be grafted successfully on Worden and Concord. Early Spring is the proper time to do the work. The cleft method is the one most suitable, especially where the vines are large. The union must be below the surface of the ground, and the earth well packed around it, and so high as to leave but one bud above the surface. H. E. V. D.

Feeding Hens; Rape for Green Manure.

T. S., Camden Co., N. J.—1. What is considered a proper quantity to feed at once to 12 hens and 12 four-months-old chickens? 2. What would you advise for Dwarf Essex rape about 12 inches high now; that is, when plow under to benefit the ground most? I would like it to remain as long as practicable to serve as a cover, the soil being very sandy and inclined to blow very much.

ANS.—1. We have found in our experience that five ounces of dry grain food is quite ample for a fair-sized hen. Of course much depends on the size of the hen's run. If at wide range less grain will be needed. If kept yarded closely green food of some sort must be added. For the 24 birds if closely yarded we should feed about seven pounds of grain—not all of one kind—in two rations, night and morning. 2. We should let the rape grow. It will keep alive until Christmas anyway, and some of it may even last until next year. Let it grow as long as it will and plow it under next Spring.

Sutton Apple in Northern New York.

R. M. P., Fruit Valley, N. Y.—Will Sutton apples do well in northern New York, and will it be well to graft into Baldwin trees? Will they bear every year under high cultivation and spraying?

ANS.—Sutton is thought to be a little more hardy than Baldwin, and will flourish wherever that variety does. I can see no reason why it should not do well in northern New York. Many fruit growers are putting to a test the question of the probable advisability of grafting over Baldwin trees to Sutton. In my opinion it will prove a benefit. Sutton is said to bear much more regularly than Baldwin, but there are very few varieties that will bear every year under any conditions. Spraying, thinning and good tillage will do much to bring about regular and profitable bearing. H. E. V. D.

Bowker's Animal Meal is the best food for fowls. It is better than scraps, because it is finer, cleaner, contains less water, more bone and more protein. It is better than bone alone, because it supplies bone in connection with thoroughly cooked meat. It is better than shells, because it supplies not only the lime necessary for the shell, but also the constituents required to make meat of the egg For sale by dealers generally.

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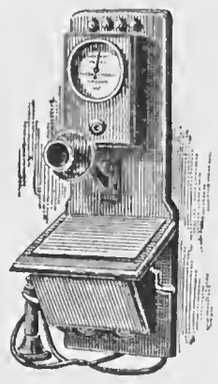

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is made of steel. It is **easy to operate,** because it washes by air pressure. Air forces soap and water through the clothes and takes out the dirt. No rubbing on washboards, no wood or metal pegs to destroy clothes, as in other machines, but simply air pressure, without hard work, without friction, wear or waste, making washing easy.
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UNCLE SAM'S SEPARATOR
HAS GROWN TO SUCH LARGE PROPORTIONS THAT IT IS
AN ELEPHANT TO THE DE LAVAL PEOPLE

The U. S. Separator is such a bugbear to them that they expect an elephant in everything connected with it, so it is not surprising to find them using an elephant to run a U. S. Separator with; neither is it surprising to see tears in the eyes of the elephant. It is enough to make an elephant weep to have to do work that a dog he could play ball with could do easily.
That a dog can run a U. S. Separator will be seen by reading the following letter:

84-lb. Dog Runs No. 7 U. S. Separator Without Trouble.

MINOT, ME., Sept. 10, 1901.
I see your competitors, the De Laval Co., are passing out circulars at fairs, showing an elephant running a dog-power, and printing the statement that it requires much power to run one of the U. S. Separators.
Now I have run one of your No. 7 new capacity machines for more than a year, and operated the same by dog-power. My dog weighs only 84 lbs., and commenced to run the separator when he was only four months old. I have no trouble in maintaining the required speed, and am greatly pleased with the separator and power.
A. K. P. QUIMBY.

VERMONT FARM MACHINE CO., BELLOWS FALLS, VT.
232

Ruralisms

NOTES FROM THE RURAL GROUNDS.

A NEW RASPBERRY-BLACKBERRY HYBRID.—The careful experiments in hybridizing blackberries with raspberries carried on by the late E. S. Carman did not result in varieties of commercial value, and the same may be said of all attempts to unite the characteristics of these useful fruits until Judge J. H. Logan, Santa Cruz, Cal., originated the now famous Loganberry, which sprang from seeds of the native Californian dewberry pollinated with a red raspberry of European origin. The Loganberry did not prove successful here in the East, but is grown commercially in California, and is steadily gaining favor in England, as it shows a special adaptability to the climate. It is becoming a feature of the Summer fruit shows over there. The defects here are tenderness of plant as regards Winter exposure, and limited productivencss, probably owing to injury of canes and buds by cold. The fruits are large and attractive, but the plant is rapidly going out of cultivation east of the Rocky Mountains. Now comes The Mahdi, a novelty resulting from crossing the raspberry Belle de Fontenoy with the common European bramble or running blackberry. It is said to be superior in flavor to the Loganberry, and perfectly hardy in England. Fig. 355 shows the form of the berries, which appear like very large violet-red blackberries, but more rounded in shape. The foliage is midway between the parents, and very luxuriant, while the plants are rapid growers and very prolific under British culture, ripening in late July and early August. These favorable reports do not necessarily imply that The Mahdi will succeed with us, as few berries of European origin are able to withstand our climate.

RURAL GROUNDS PRODUCTS.—It is always gratifying to get encouraging reports of new varieties of plants originating on the Rural Grounds. So many promising novelties fail to adapt themselves to changed surroundings and conditions that some self-congratulation over plants maintaining their good quality in distant places seems permissible. The new Gladiolus hybridus princeps, the gem of more than 100,000 hybrids, which has gained commendation wherever shown in this country, was given an award of merit at a late exhibition of the Royal Horticultural Society of London, and the following report of the behavior of the hybrid Canna flaccida Pennsylvania, comes from a point as far distant in the opposite direction.

The Canna Pennsylvania has one cluster full of bloom and one cluster of buds coming on. I have just measured the blooms; they are each just six inches across. They stand the sun here as well as the Crozy type. The petals seem to be of more substance than any of the orchid-flowered type which I have seen. The petals do not stand out as regular and stiff as I would like to see them, but it is a great advance in its thick petals and ability to stand our sunshine. LUTHER BURBANK.

Santa Rosa, Cal.

THE RIGHT SOIL FOR KIEFFER PEARS.—Each recurring season emphasizes the fact that the Kieffer pear grown on thin sandy or gravelly upland is a very different and much more acceptable fruit than his companion grown on rich or heavy loam. Planted on soils of the latter character the trees make a thrifty growth, and bear heavily after attaining sufficient size, but the large size, dull and rusty coloring, gritty consistency and watery taste of the pears do not encourage sales at paying prices. The trees are slow in bearing as a rule on thin light soils, but the pears, if picked soon after the seeds color, and packed away in boxes or barrels under shelter, soon color brightly and soften to the core, developing a brisk and pleasant flavor, though they remain too coarse in texture to compare favorably with standard dessert varieties. The clear, waxy yellow coloring occasionally relieved by a deep red flush, renders a properly ripened Kieffer, if grown on congenial soil, the most attractive pear of its season, while those from low and heavy soils are nearly all dull and cloudy. Growers are convinced of this difference, which is emphasized by the hard logic of dull sales and low prices for cloudy and rusty fruits, no matter how well developed, and fewer trees will be planted hereafter on uncongenial soil. Heavy soil and high fertilization, while favoring large crops of fruit, also encourage the tendency to blight, and most of the older Kieffer orchards are now seriously affected by the disease. It was supposed at the introduction of this vigorous pear that the trees once established would go on bearing indefinitely, but the impression is now gaining that 12 to 15 crops are all that should be expected from the Kieffer, even under the most favorable treatment. Orchards about Freehold, N. J., planted 17 to 20 years ago, are falling off so seriously in earning capacity that they are likely to be replaced with other fruits, though they have been highly profitable in the past. Brightly colored and well-ripened Kieffers will probably be wanted for a long time, but the market is glutted with undersized and cloudy fruits, which it consumes with difficulty. It may be that the sand pear hybrids in the future will be grown on thin soils where it is now considered unprofitable to plant tree fruits.

W. V. F.

Pears in Illinois.

In THE R. N.-Y., issue of October 12, H.E.V.D. asks for information regarding the Koonce pear. I have 20 bearing trees in my orchard. I found that they did not start as readily after transplanting as the other varieties. The second year they made up in growth for all their backwardness the first season, and now I find them equal to the Kieffer in the length of new growth of wood. They are very little behind the Keiffer in earliness of bearing, usually from three to five years from planting. The fruit is medium size, very good quality—better than Vermont Beauty, but will not sell as well, for it lacks the color, that beautiful crimson blush which creates a sensation of hunger when you look at it. Keiffer is the money-maker, but needs a pollenizer, and Vermont Beauty fills the bill. It helps the color and the quality. S. E. HALL.

Winter Cover for Dewberries.

On page 676 of THE R. N.-Y., E. T. B., of Whitewood, S. D., asks information about Winter covering for dewberries. I used to have the same trouble. From his description I think the climate is colder here, and the other conditions similar to those at Whitewood. We have the bare ground and drying winds. Here the fruit buds of the Lucretia dewberry will kill every Winter, and the stalks nearly every Winter, without protection. My experience in covering them with earth corresponds with that of E. T. B. I think the failure is due to the fact that the wood is made tender by the close covering of earth. If E. T. B. will cover his vines with a thin layer of cornstalks after the ground is frozen an inch or two, just enough to keep them frozen and prevent their thawing out every warm day and freezing up every night, he will have gained his point. Do not remove this cover until the buds have started, and some show tiny leaves. When the cover is removed lift the vines and tie them to the top of a stake three or four feet from the ground. Do not bring them up straight to the stake, but in a half bow, and cut them off six inches beyond where they are tied. Use the stalks for a mulch, and I am sure the results will be an abundance of fruit. S. E. H.

Cherry Valley, Ill.

Preparing Soil for Strawberries.

In regard to L. R.'s inquiry about manure or fertilizer for strawberries, page 708, I have a piece of ground in preparation to plant to strawberries next Spring. After cutting the grass I sowed cow peas July 3 (the Whippoorwill). Early in October I plowed in a good crop of vines and sowed rye. In the Spring I shall plow in the rye and put hen manure and commercial fertilizer in the row, and work into the soil before planting. I should avoid common stable manure, as it is apt to be full of weed and grass sceds, which will be very difficult to deal with among the vines. Would you not subsatitute sulphate of potash for the muriate? Some good authorities object to the muriate, as the chlorine in it is injurious to certain plants, strawberries among them, and advise using sulphate instead. By growing and plowing in a crop each f cow peas and rye I destroy the weeds and put into the soil a large quantity of vegetable matter which preserves the moisture and greatly lengthens the bearing season, and no quantity of commercial fertilizer will ever serve as a substitute for it. Thus I get vegetable matter and humus without the weeds usually found in stable manure. H.

South Hadley, Mass.

R. N.-Y.—That is a good preparation for strawberries. The sulphate of potash is said to give a better flavor to fruits like strawberries. Otherwise, the muriate is, we believe, just as good.

MORE ABOUT THE KIEFFER PEAR.—I have read with considerable interest the numerous notes on the Kieffer pear in your paper, and it seems strange to me that no one offers any suggestions as to how the Kieffer may be made to stand in a different light. If Kieffer pears are picked in September and properly ripened, they are a very good pear to eat, free from grit or woodiness, and I find that when they are in perfect condition they are nearly equal to Bartletts, but the trouble is they are left on the tree till the last of October and they change entirely, and then no matter how ripened will be gritty at the core. Surely no one who has ever had Kieffers properly canned, that is, has had the pear in the right condition, and then properly treated and put in the can, would say that a canned Bartlett can compare with it. The best Kieffers are selling in Philadelphia now at 50 cents per five-eighths basket. Lawrence does not bring more. The trouble in growing Kieffers is to keep them clear of rust, and to get them to color, that is have a red cheek. If that can be done there is no danger but what the growing of such fruit will be profitable.

W. H. C.

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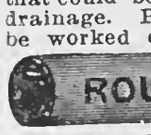

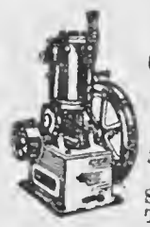
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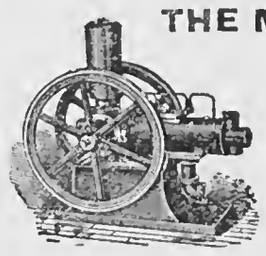
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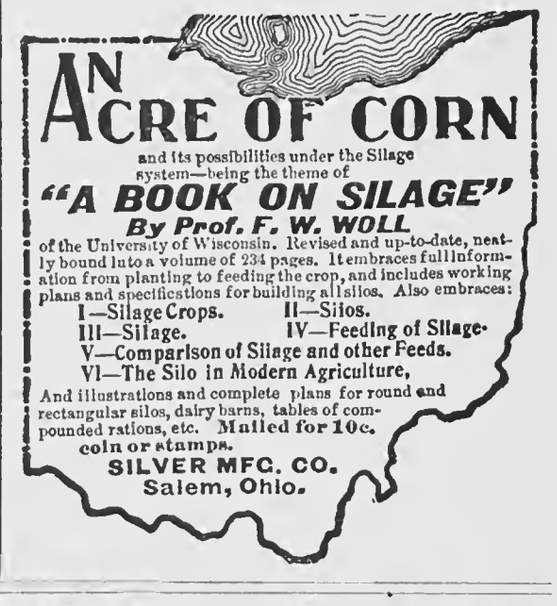
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HOPE FARM NOTES

TAX TIME.—I print the tax rate on Hope Farm for comparison.

	1900.	1901.
County tax	.35	.38
Bounty and interest	.039	.038
County poor	.019	.027
State school	.28	.17
Borough purposes	.27	.27
Deficiency and interest	.026	—
Special school	.40	.60
	1.384	1.485

As will be noticed, this year's rate is higher than last, the increase being largely in a special school tax. We spend a little more on the county poor, and it costs a trifle more to run our county business. The State school tax is lower, and we are told that before many years it will be wiped out. Who is to pay it? The trusts or big corporations which are chartered in our State, and which pay our State tax for us. Personally, I do not care to have any trust or saloonkeeper pay the share of public expense which justly belongs to me. New Jersey is already called the Mother of Trusts. The money which they pay into our State treasury represents a small part of the blood money which they have squeezed out of the public. They practically own the State now. The average public man who opposes them will be flattened out until he resembles a pancake with no baking powder in it.

FINE CORN WEATHER.—Yes, cool, breezy weather in the late Fall is fine for the corn crop—after it is cut. Our husking is over, and the fodder will all be under cover, I hope, before this is printed. We have never had better fodder. It was put in small shocks (24 hills) and after husking about a dozen shocks were set up together. The crisp, drying winds cured the shocks like clover hay in the cock. They are crisp and green, with a flavor and perfume like a delicate extract of silage. When run through our shredder they will make excellent horse feed. The value of a good corn crop is pronounced this year. Cash corn in Chicago is quoted at a trifle over $1 per 100 pounds, while our local miller charges $1.35. Thus corn is one of the most expensive feeds we can buy. I sometimes think it would pay me to sell the corn and buy other grain, but after all home-grown corn is one of the most satisfactory grains one can have in the barn.

FEED NOTES.—I have bought a lot of dried brewer's grains to feed as an experiment. The analysis shows that they are richer than either bran or oats, but I have observed that Frank, Nellie and the rest of the barn stock do not always agree with the chemist. Tongue and stomach do not always check off the work of flask and test-tube. We are feeding the grains to horses, poultry, hogs and cows. Thus far the animals all seem to do well on them, though I think it would be better to mix them half and half with bran. They look about as dry and unwholesome as little pieces of sticks, yet there can be no doubt that they analyze well. The nubbins and soft ears are reserved for "pig corn." We are feeding the sows a fair amount of corn, with plenty of bulky food like turnips, cabbage and rape. About the middle of December we shall begin feeding them linseed meal. They now have a small ration of dried brewer's grains and middlings. They have all the wood ashes and corncob charcoal they want. We have eight brood sows all told this year—four of them purebred Berkshires. The grade sows were profitable last year, and so we shall keep them one season more at least. I studied over this quite a little. We sold one hog for $14.90 dressed. At the same rate per pound the two grade sows would have brought $25 at least. Would it not have been good business to turn them off? They raised 18 pigs this year. We sold 12 of them for $33, ate two and have four left, one of which we shall use for a brood sow. The account for these sows stands as follows: Pigs sold, $33; consumed, $6; on hand, $20; total, $59. This represented but one litter for each sow, remember. Had we sold them as pork for $25 they would have given an income of $84. I argued that they may be expected to duplicate their performance of this year, give an extra litter and then sell well as pork. So instead of knifing them we will fork out another year's feed.

BAD CALCULATING.—The following letter created quite a little amusement at Hope Farm:

Mr. Hope Fa'm Man:

Dir Sur: In yure lettir tu las weak's R. n.y., yu saz that yu be goin tu so rye az late az Nov. 10. Well, I must tell ye that up in this neck uv the woods we're goin tu knock off frum labor *Saturda night*, Nov. 9—even ef we dont go tu meetin nex day. Sowin rye on the Sawbath is worser nor settin on the fents and ponderin.

Yoors trooly,

Sodus, N. Y. G. HAW BUCK.

I don't know whether I have the pleasure of Mr. Haw Buck's acquaintance or not, but he is O. K. when he says that sowing rye is a worse Sunday job than sowing reflections on a stone wall. I'll have to admit that when I set a date for late rye seeding I didn't look it up to see what day it came on. This gives me a chance to say that I think rye seeded up to Thanksgiving this Fall will make a fair crop next year. It's a cold-blooded plant. Do you know that it is a comfort sometimes to realize that your chances are in the hands of some cool-blooded, honest friend when the way is hard and rough? Some folks when they "ponder" may not sow rye, but they sow riot unless they are able to keep their thoughts to themselves!

HEN GIRLS.—New wine seems to have been put into the old bottles of the Hope Farm hen business. Let's see if the bottles burst. Our hens have been neglected. The men folks have been too busy to bother with them, and the pullets got in the habit of crowding into corners of the yard, while a number of sick birds went drooping about. This was bad business for November, but The Sprout came to the rescue with a proposition to take charge of the chickens. She has had some experience with a small flock and did well. I decided to set her up in partnership with the Bud. They are to take charge of the birds, see that they are well fed and cared for, pay half the cost of feed and have half the sales. At the end of six months, if they do well, the ownership of the flock will pass into their hands. The Sprout was much interested in the advice offered that girl who recently asked for home work in THE R. N.-Y. She thinks she can make these hens pay. The girls went right at work. First they picked out all the young roosters and put them in a small house by themselves, where they are fed on corn with warm water to drink. They expect that these young fellows can be sold for enough to feed the hens until there is an income from eggs. Then they put the droopy and sick birds by themselves in a dry hospital. They may be cured and made useful members of the henyard if they have a chance, otherwise they would surely have died. For several nights it was a big job catching the wanderers and making them go into the house. I helped one night, and did so much running that I don't dare to say how many times I passed my plate at supper. I used to play a good short stop on the diamond, but I'm out of practice, and the chickens slid past my fingers with ease. I think these hen girls are going to make our poultry department respectable.

ORCHARD PROBLEMS.—The Hope Farm orchard puzzle may be stated about as follows:

Steep, rocky hillsides! The soil is heavy and in places the ledge comes close to the surface. The few apple trees now growing on these slopes are strong and vigorous. The man is not as young as he used to be, and wants if possible to eat some of the apples while he is yet able to climb a tree after them. Varieties are wanted that will ripen at the best time for selling, keep well and make people call for more. How are we to get an orchard of good varieties into bearing on these hillsides in the shortest time?

I could fill a book with the advice I have had about this. In a general way it seems to me a sensible thing to plant seedlings of Northern Spy—if possible. Get them well started and then go to some first-class orchard and get wood from the best trees, true to name, which have given reliable crops for years. Use this wood for budding. I think that in this way we shall hurry up the bearing, and surely know what the trees are going to produce. As a part of the scheme, Hugh is thinking of taking the short course at Cornell this Winter, so as to learn all he can about the care of a tree.

MEN WANTED.—I judge from what people say and write that the help problem is about the toughest proposition there is on many farms. It is hardest near large towns and cities, because there it is easier for men and girls to obtain other jobs. Those who do work on the farms in such locations pick up the time and the habits of the factory workers—not all of which are suited to farm conditions. I print the following note, as it indicates the sort of job that can be had by those who are capable of filling it:

I want a truck gardener and farmer. I have about five or six acres of garden. The ground is productive, and the market a good one. I have glass for 10 hotbeds. I will give the gardener $15 per month and house, and 10 per cent on what he sells or furnishes the house. We consume a good lot, as we have about 65 persons in the house—except in Summer (three months) when we have but about 10 or 15. I want also a man to milk and take care of six cows and help the gardener, etc. His wages are $15 per month and house. Can I get such persons from your region?

This refers to a school for boys in Pennsylvania. I put it here as an experiment, to see how many readers would like such a job. The pay will seem small to first-class gardeners, but the 10 per cent of sales to such a school ought to bring it up. Wages of skilled labor in other lines of work are pretty high just now, and I believe it is quite easy for skilled farmers to command good returns for their labor. But who wants such a job as is described above?

H. W. C.

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I have no samples. Any medicine that can affect rheumatism with but a few doses must be drugged to the verge of danger. I use no such drugs. It is folly to take them. You must get the disease out of the blood.

My remedy does that, even the most difficult, obstinate cases. No matter how impossible this seems to you, I know it and I take the risk. I have cured tens of thousands of cases in this way, and my records show that 39 out of 40 who get those six bottles pay, and pay gladly. I have learned that people in general are honest with a physician who cures them. That is all I ask. If I fail I don't expect a penny from you.

Simply write me a postal card or letter. Let me send you an order for the medicine. Take it for a month, for it won't harm you anyway. If it cures, pay $5.50. I leave that entirely to you. I will mail you a book that tells how I do it. Address Dr. Shoop, Box 570, Racine, Wis.

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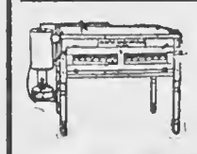

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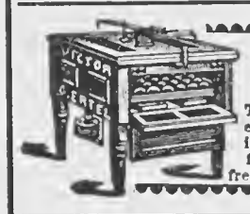

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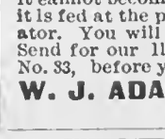

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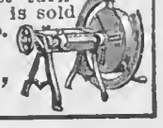

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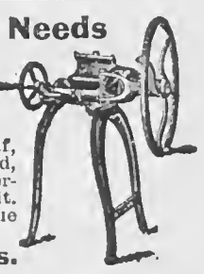

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SATURDAY, NOVEMBER 23, 1901.

AT the request of a reader we are collecting figures to show the cost of growing an acre of corn in the corn-growing States of the Middle West. Mr. Shamel gives a synopsis of many figures on page 786, and we shall have reports from many individual farmers. Eastern farmers must remember that on these great, level western fields powerful machinery can be used, which greatly reduces the cost for a single acre.

*

PROF. C. L. Marlatt, Assistant Entomologist of the Department of Agriculture has found, in northern China, the original home of the San José scale! He has also found an insect—a species of ladybug—which in that latitude keeps the scale in check. Specimens of this parasite are on their way to this country. The importance of this discovery can hardly be estimated. If the parasite will live in this climate and continue its work, we shall be able to destroy the scale as completely as is done in California.

*

WE regret to say that some of our readers seem to be running away with the cow-pea question. We have tried hard to make the following points clear:

1. It is a hot-weather plant, and will never come up if put in the soil before corn-planting time.

2. It will die at the first frost and will not make a green cover for Winter.

3. It is not, in our opinion, a first-class forage crop for the North.

4. We suggest its use only on poor, worn-out fields which will not give good crops without heavy dressings of manure or fertilizers.

5. We would not plant it on any soil good enough to produce a fair corn crop, and we would plow vines all under.

There is plenty of room for the cow pea on our poor, neglected fields, but please do not disregard the above statements, and then say that THE R. N.-Y. fooled the people about cow peas!

*

"FOR ways that are dark and tricks that are vain, the Heathen Chinee is peculiar," wrote a humorous western poet some years ago. Had the poet been a resident of New Jersey at the present time he might have substituted "oleo seller" for the tricky Celestial without doing violence to the facts. The oleo business is peculiar all along the line. It was conceived in fraud and iniquity and is carried on with great ingenuity for the purpose, not of supplying a cheap, useful food product, but of foisting off inferior substitutes at the price and in the place of real butter. One of the newer dodges is for the alleged butter dealer to take out an oleo license, which does not cost much in New Jersey, and offer the article when called for, while decrying its value. If oleo is demanded, a pale waxy grease, scarcely fit for lubricating purposes, is furnished at a moderate price, and when butter is wanted, and paid for at prime butter prices, a fairly palatable and highly colored brand of oleo is supplied. Thus the buyer is wronged either way, and the dealer's profits much increased. The risk of an occasional fine is taken as part of the game. The public is quite effectually hoodwinked by the affectation of fairness, and the consumption of and taste for good butter much lessened. The passage and enforcement of a law similar to the Grout bill would go far to break up these detestable frauds, as colored oleo would be an expensive and dangerous thing to handle.

NOT long ago we heard a business man remark in a sneering way: "I have found that the farmers who go to farmers' institutes are usually the ones who do not buy goods or pay their debts." He was trying to show that the experiment stations and the institutes had been of no particular benefit to farmers. Investigation showed that he was selling an article for which he claimed great results. The chemists had analyzed his stuff, and found that a mixture of common articles which farmers understand can be made at half the price of the manufactured goods, and prove even more effective. The institute speakers had given these facts to the farmers, and it was true that they did not buy the goods, and hence did not pay for them! We think that the farmers of this country can stand a great deal of just such instruction as that. The more these myths and big stories are pricked by the sharp point of science, the better for all except the rogues who have, in years past, stuffed their pockets with double profits.

*

THE picture on our first page is taken from Wheat Growing, an excellent pamphlet issued by the United States Department of Agriculture. Four years ago there was a "wheat blockade" in the famous Palouse country of Washington. Thousands of bushels of sacked wheat were piled up at the railroad stations, waiting for trains to haul the loads away. This Palouse country is blessed not only with a soil that seems inexhaustible, but with harvest weather that seldom shows rain. Thrashed grain may lie upon the ground in sacks with perfect safety, and farmers haul it at their convenience. There is no watching the sky to dodge in ahead of a shower. These vast piles of cheap wheat might discourage some eastern grain growers, whose fields are small and whose soil is poor. They must remember the millions of mouths that are to be fed on each side of the ocean and that the way to compete with extensive culture on new land is to practise intensive culture on old soil.

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THE account of good local profits from potatoes on page 787 is as correct as careful investigation can make it, and may be accepted as rather an under statement of the facts. The yields are not at all phenomenal, but in connection with the prevailing good prices for potatoes make a comfortable showing for the growers. The combination of a local good crop in the face of partial failure over large areas, and a brisk demand at high prices, may not again occur, and some of the growers are apprehensive that over planting may follow an account of their good fortune. The salient fact, however, remains that the successful growers have mastered the art of potato culture by persistent and intelligent efforts through a long series of seasons, good, bad and indifferent. The three requisites of good seed, ample fertilization and thorough, unsparing cultivation, can do much to offset an unfavorable growing season. If next year's operations fail to return more than a working profit, we venture to say that these experienced potato men will be less disappointed than the beginners who may be tempted to make a hurried investment in a poorly prepared potato patch.

*

THE R. N.-Y. has favored some features of the centralized school system. Under this plan the district schools are abandoned and pupils are carried back and forth in a public conveyance to the village school. We saw this plan in operation at one locality in Ohio, where everybody seemed to be well satisfied. The following letter from a reader in Jefferson County, N. Y., certainly gives another side to the matter:

> We have a district school here closed by a one majority vote without furnishing conveyance, and this compels five children of poor parents to stay at home. The well-to-do farmers are sending their children to a village school with the public money these children have a right to, or at least their share. The school closed is 3½ miles from the village school. The centralized school law is all right as intended, but unless forced to furnish conveyance it gives the parties having a little spite, or those looking for a cent at any one's expense, a decided advantage. It depreciates the value of farm property, both selling and renting. It gives those close by the village school a privilege at the expense of those farther out who can't go. It takes the poor man's only privilege of educating his children. It causes irregular attendance. Even with conveyance, who wants their little eight-year-old girls to be toted off four or five miles, night and morning, with some stranger, with mud up to the axle or snow up to horses' backs, as it is here in northern New York, when the school house is within half a mile? The vote that closed the school had no interest other than saving the little tax.

The facts as above stated show a case of injustice. No man or set of men should have the right to take the district school away from poor children without putting them within reach of another school. We do not understand all the circumstances connected with this case, but it seems reasonable to suppose that there are townships where this centralized school system cannot be enforced without annoyance or injustice to some one. Will those who live where it is being tried tell us how it works?

*

LAST Spring we received a call from P. O. Wannieck, an Austrian who has large fruit orchards in his own country. Mr. Wannieck came here to study the American system of orcharding. Strange as it may seem, he says, after visiting most of our apple-growing sections, that he expects to ship fruit to America! He says:

> One reason why American apples are not more popular on the Continent is that your exporters send us comparatively few varieties aside from the Ben Davis, which has no virtues but its beautiful colors and shipping qualities. Our trade, particularly in the German States, does not care for the big red apple, and buys in preference the one that is green, but of fine flavor and texture. We can produce fruit cheaper than you can in this country, because labor costs us but a third as much, and the problem of exporting profitably resolves itself into a question of transportation.

There you have the work of Ben Davis again. According to the last reports from the English apple markets, Missouri Ben Davis sold at $5.35 to $5.84 per barrel, Albemarle Pippin brought $6.33, King $7.78, and California Pippins $2.92 per box of one bushel! It will be nice business if the American Apple Consumers' League succeed in doubling the demand for fine eating apples in our eastern cities only to have the Californians and Europeans step in and capture the trade!

*

RHODE Island is a little State with only 5,498 farms—two less than 10 years ago. The soil for the most part is not rich, and has been under cultivation for more than two centuries. There are only 113 more farms in the State than there were in 1850, while in that time 169,133 acres have gone out of cultivation. The average size of the farm is now 83 acres, against 103 in 1850. Yet, with this decreased acreage under the plow, the total farm wealth of the State has increased $7,888,549, while the value of one year's farm products has doubled. This means that certain unproductive lands have been thrown out of cultivation, so that the farm work might be concentrated on fewer acres. Naturally the production of grain and the fattening of live stock have decreased, and fruit, vegetables and poultry have taken their place. The average income from an acre of potatoes was $75.72, while an acre of grain averaged only $17.97. Western competition has injured the Rhode Island farmer's business in beef and pork, and the oleo manufacturers have nearly destroyed the dairy business, but the hen helps out. The year's output of poultry and eggs was valued at $1,055,635, which would have bought all the horses and all the sheep in the State. It would also have bought all the milch cows and all the swine. Thus it appears that after 250 years of cultivation the farms of Rhode Island produce a greater value than ever. The land that goes out of cultivation should never have been cleared in the first place, and new crops and new stock have more than doubled the average income from an acre of cultivated land.

*

BREVITIES.

You never will carry a brimming pail
From a cow that droops with a "hollow tail."
For whoever heard of a tail all hollow
In a cow that has all she needs to swallow
Of a ration balanced to meet her need
Of roughage and plenty of clean, sweet feed?
It's the cow that droops by the windy stack,
Describing a circle with her poor back.
With nothing to drink but a chunk of ice,
And nothing to eat but a frozen slice
Of wheat straw sandwich—that sad and forlorn,
Comes down with a case of the hollow horn.
It's hollow stomach that brings her to grief,
So make her contented or make her beef.

PRINT facts rather than fakes.

THE best blow for self-criticism is a hit on the I.

THE Mother apple ought to make superior vinegar.

"YES," said the man as he made his "kick," "I deny that in toe toe!"

SEE what Mr. Keesling says about California apples—no red ones wanted!

Now that feeds are so high it's a good time to get rid of the low-grade cows.

WANTED—Sound reasons why there should not be an issue of fractional currency.

BEFORE you lay down the law about important matters be sure you know what you are talking about.

ARE we right in saying that a fair-sized hen should have the equivalent of five ounces of dry grain each day?

THE cause of "hollow heart" in potatoes is obscure, but the "holler" heart in man is caused by moral cowardice.

SOME people falter at their stent, and thus they never rise past "gent"; while others by self-culture can earn the grand name of gentleman.

WE commend Mr. Van Alstyne's article on the first page as pretty close to a model for readable, boiled-down fact and suggestion. It is the cream of the "Model Dairy" experience—well churned and stamped!

Events of the Week

DOMESTIC.—A fire in the Klondike Theater, at Hurley, Wis., November 6, killed 10 persons and injured four others, and it was only by strenuous work that the fire was prevented from destroying the entire town. The same theater, which was a vaudeville house, was burned down in July, 1887, when 11 women were burned to death. . . . . The Lyceum Theater, Atlanta, Ga., was burned November 7. The audience escaped without a panic, and no lives were lost. Loss $75,000. . . . . Oberlin M. Carter, formerly Captain in the United States Engineer Corps, and now a prisoner in the Federal prison at Fort Leavenworth, Kansas, is to have a rehearing of his case in the United States Circuit Court in Chicago. An agreement to this effect has been reached, growing out of the Government's effort to recover from Carter's relatives the proceeds of the alleged embezzlement. . . . . The thirteenth fatal case of lockjaw resulting from the injection of antitoxin for the treatment of diphtheria was reported in St. Louis, Mo., November 6. Charles Cytron, 11 years old, was the victim. . . . . Five blocks of the business portion of Jennings, La., were destroyed by fire November 5; loss $160,000. . . . . While blowing up stumps with dynamite near Bloomington, Ill., November 8, one man was killed, another fatally injured, and four others seriously hurt. . . . . November 8 26 convicts escaped from the Federal prison stockade near Leavenworth, Kan.; in the struggle one prisoner was killed and two guards wounded. . . . . November 11 an explosion in a chemical laboratory in Philadelphia, Pa., caused $52,000 damage and seriously injured 10 persons. The cause is supposed to be a defect in the pressure pan in which thermol was manufactured, allowing the gas to escape. The company denies that there were any high explosives in the building. . . . . The Paterson (N. J.) Steel and Iron Works suffered a loss of $100,000 by fire, and 100 men were thrown out of employment. . . . . Alabama has adopted by general vote the new constitution. It is said that this will eliminate 95 per cent of the negro vote, as educational or property qualifications are required of all who were not soldiers or their descendents. . . . . The leader of the escaped Kansas convicts has been captured after a fight in which he was wounded. Eight of the convicts are still at large. . . . . Wholesale adulteration of tub oysters with borax and formaldehyde has been discovered by Pure Food Inspector James Foust in Blair, Cambria, Somerset, Bedford, Clearfield, and Centre counties, Pa., and 30 dealers will be arrested within a week. Of 80 samples submitted to State Chemist Frear 43 were found to contain the preservatives. The discovery, so far as known, is the first oyster adulteration brought before the State Department.

ADMINISTRATION.—Secretary Root has issued an order changing the regulations relative to admissions to West Point, so that the Academic Board may accept candidates who are graduates of high schools or students of colleges and universities, without requiring them to pass the mental examination prescribed by the Department. . . . . Finding it impolitic to acquire a coaling station on the shores of the Caribbean Sea by direct negotiation, Germany has, apparently, attempted to evade the Monroe Doctrine by obtaining control of territory for this purpose through one of her subsidized steamship lines. . . . . An official report has been received by the State Department from Joseph Bowron, United States Consul at Cartagena, announcing that the Hamburg-American Steamship Company, owners of the Atlas Line, which plies between Central and South American ports, had filed an application with the Colombian Government for the right to establish a coaling station near that city. While there is no disposition on the part of the United States to interfere with private enterprise, there is no doubt that the Administration would prefer that application of the Hamburg-American Line be not granted. That company draws a subsidy from the German government, and in case of war its steamers would be available for use by the German government as auxiliary cruisers. A coal pile near Cartagena would be of immense value, as a fleet using it as a base would, if sufficiently strong, be able to dominate the Carribbean Sea for the eastern terminus of the isthmian canal. The strategic importance of a coaling station at or near Cartagena is hard to overestimate. The application of the Hamburg-American Line is regarded not only in official, but in diplomatic circles, as the thin edge of the wedge intended to split the Monroe Doctrine.

PHILIPPINES.—During October and November about 550 teachers have arrived in the Philippines and have been assigned to various places throughout the archipelago, making about 750 teachers in the field. These are assisted by about 200 soldiers, who have been detailed. About 75,000 Filipino children are having English instruction. There are about 4,000 or 5,000 Filipino teachers and the majority of these are having one hour a day of English. A normal school has been opened with an attendance of about 250 Filipinos, and a trade and agricultural school has also been opened. . . . . General Smith has issued orders forbidding the purchase of hemp in the Island of Leyte except in small quantities for food, which purchases must be under the supervision of the military authorities. All the ports of Leyte are closed and traffic is forbidden where it cannot be supervised by the military.

GENERAL FOREIGN NEWS.—Bubonic plague has reappeared at Glasgow, Scotland, and Liverpool, England. . . . . Earthquakes of from moderate to strong force occurred every night in western Nicaragua from October 6 to 14 inclusive. The disturbances of October 6 were followed by tidal waves, causing the drowning of five or six natives and many cattle, and the destruction of several houses. The waters, in receding, carried into the ocean a large number of valuable dyewood logs which had been prepared for export. . . . . Li Hung Chang, the distinguished Chinese diplomat, died at Pekin November 7. Earl Li had a longer and more thorough knowledge of foreign affairs than any other Chinaman. In the early sixties he was the only high official that advocated closer relations with foreign nations and the adoption of western methods and western ideas. Ever since then he has been identified with the conduct of the foreign relations of China. His frankness in conversation in his dealings with foreigners with whom he was thrown in contact made him more acceptable to the West as the representative of China than other officials, who had more of the peculiar mannerisms of their race. His death is a great loss to the liberal and progressive party in China. . . . . A circular note has been addressed by the Sultan of Turkey to his representatives abroad, announcing that the Porte has satisfied all the French demands, and expressing a hope that France will appreciate the conciliatory spirit thus displayed and resume the relations so unfortunately interrupted. . . . . Earthquake shocks continue to be felt at Erzeroum, Armenia. There have been many casualties. The foreign consuls have jointed the inhabitants and are living in tents.

FARM AND GARDEN.—Following is a list of the farmers' institutes announced by the Missouri State Board of Agriculture for three weeks, beginning November 11: Aux Vasse, November 11 and 12; Mokane, November 12 and 13; Marthasville, November 13 and 14; Ste. Genevieve, November 13 and 15; Perryville, November 15 and 16; Altenburg, November 16; Jackson, November 18 and 19; Lutesville, November 19 and 20; Yorley, November 20 and 21; East Prairie, November 21 and 22; Kennett, November 22 and 23; Piedmont, November 23; Lesterville, November 23; Ironton, November 25 and 26; Fredericktown, November 26 and 27; Farmington, November 27 and 28; Potosi, November 28 and 29; Festus, November 29 and 30.

The first snow of the season fell in Kansas November 4, but it melted quickly, and no injury to crops is expected..

The New York State Breeders' Association will hold their show at Buffalo December 17-19.

The Missouri State Swine Breeders' Association will meet at Chillicothe December 9-10; Secretary F. H. Schooler, Rockport, Mo.

The twenty-ninth annual session of the New York State Grange will be held at Olean, N. Y., February 4, 1902. Applications for accommodations should be made in advance by writing Brother F. N. Godfrey, Olean, N. Y. Arrangements have been made with the Trunk Line Association by which all attending the State Grange can secure passage and return for one and one-third fare for round trip, on the certificate plan. On purchasing ticket take a certificate from ticket agent, showing full fare has been paid to Olean for the purpose of attending State Grange. On arrival at Olean present this certificate to W. N. Giles, who will certify to your attendance, and you will then be entitled to a return ticket at one-third regular fare. Persons intending to attend State Grange should make application to the office where they intend to purchase tickets some days in advance, so that the office may have opportunity to provide itself with certificates. Tickets are positively not transferable, and the State Grange must redeem at full fare all tickets found in the hands of scalpers.

The forty-sixth annual meeting of the Illinois State Horticultural Society will be held in the Agricultural Building of the University, Champaign, Ill., December 10 to 12. The programme will be filled by men of prominence in their respective lines, in this and other States, and will include those practical and scientific subjects, which are of timely importance. The usual liberal premium list will probably bring out a fine show of fruit. The display of spraying appliances and horticultural tools which attracted so much attention last year will be a feature again this, and we are promised some of the latest and best things in this line; secretary, L. R. Bryant, Princeton, Ill. The three Illinois district societies will hold their annual meetings as follows: The Central Society, at Quincy, November 20-21; J. C. Blair, secretary; Urbana, Ill. The Southern Society, at Carbondale, November 26-27; E. G. Mendenhall, secretary, Kinmundy, Ill. The Northern Society, at Dixon, December 4-5; Jacob Friend, secretary, Nekoma, Ill.

The Wisconsin Legislature has passed a law requiring dealers in concentrated feeds to take out a license, and give analyses of all mixed feeds.

I. N. Barker, of Thorntown, Ind., died at his home November 3, aged 62. Mr. Barker was one of the best known breeders of Berkshire swine in Indiana, and was deservedly esteemed by a wide circle.

S. H. Todd, the well-known breeder (now retired) of Shropshire sheep and Chester White hogs, will give two of his lively talks before the Pennsylvania Live Stock Breeders' Association at the Monongahela House, Pittsburg, December 18 and 19. Breeders of Pennsylvania, West Virginia and eastern Ohio should not miss this opportunity to hear him. Pennsylvania breeders invite those of all neighboring States to participate in the good things at their meetings.

The annual meeting of the American Cheviot Sheep Society will be held at the Transit House, Union Stock Yards, Chicago, Ill., December 4, 1901.

SELLING MANURE AT THE STOCKYARDS.

Dumped Into River at Kansas City.

There has never been any manure sold here. The farmers could have same for the taking away. We clean pens once a week. We have 14 double carts that hold three yards that are kept in use six days in a week; they take from 20 to 25 loads each day, making from 1,500 to 1,800 yards per week, and this is dumped into the river. The farmers of this county do not seem to appreciate the value of manure, as we do not have a dozen loads per year hauled out by them. J. W. MITCHELL.

Kansas City Stock Yards.

Good Sale at Chicago.

The larger part of the manure from this yard is shipped to truck farms within a radius of 75 miles of Chicago, principally northern Illinois and southern Wisconsin, and to the fruit district in southern Michigan. The demand from these points is increasing annually. We ship between 600 and 1,000 cars a year, and charge $5 for old well-rotted manure and $3 per car for fresh manure. These price are f. o. b. Union Stock Yards, switching and freight in addition. About one-third of the manure shipped comes direct from the pens, and the remainder is loaded from the dump. A. G. LEONARD.

Union Stock Yards, Chicago.

Fair Prices at Pittsburg.

There is a large sale of manure from here, or rather a heavy demand, at a fair price. We have for sale about 200 to 300 cars annually. We get $12 per car f. o. b. on our siding at our yards. It is shipped on orders in the Pittsburg district only a few miles, probably from five to 30. We have a force of men who attend to the cleaning out of the pens and alleys regularly each week as soon as the main market day is over, and this is loaded directly on to the cars. We have an elevated platform arranged so that we can dump our carts into the car. I might state, however, that we had an order last Summer for 100 carloads, provided they could get a shipping rate, the distance being about 90 miles into West Virginia, where a man was fitting up a nice country home and stock farm. We have not heard from him lately, and suppose he did not get a rate low enough in price.

Manager Pittsburg Stock Yards. SIMON O'DONNELL.

Facts About the Florida Orange Crop

The number of boxes produced for the season of 1899-1900 was about 1,000,000; the crop now going forward and to be shipped will run at from 1,100,000 to 1,200,000 boxes. Possibly 100,000 boxes will be consumed within the State and nearby cities and towns. There will be a falling off in the output from the older bearing groves, and the increase will be made up from young trees coming into bearing, and from the rebuilt groves of the older orange district. About 50 per cent of the old groves in the central orange section have been worked and taken care of since the destructive freeze of 1895, and with no further setback these will largely add to the State's production in the next few years, as age of tree tops and bearing surface increases. About one-quarter to one-third of the present crop will be shipped from points north of a line running east and west through Tampa. Orange County produced about 25,000 boxes last season and will double the output for the present; Lake County 4,000 to 5,000 boxes in 1899-1900, and will ship 15,000 to 20,000 boxes this season. Crescent City, in Putnam County, in the northern part of the old orange section, shipped less than 100 boxes last year and will ship about 2,500 boxes this. Estimates of the Indian River crop run up to 50,000, although we think this is excessive. Throughout the State the fruit is said to be somewhat smaller in size but of better quality. Complaint has been made early in the shipping season for twenty years past that producers were marketing fruit which was immature or too green. We see no reason for thinking that this will be different in the future for several reasons: Many growers who are poor or living on credit need the money and ship when the fruit begins to turn in color; fruit in some locations either in rich hammocks or lower lands split and drop from the trees in the fall and are boxed at once to save them; early picking relieves the trees, which blossom more heavily in the Spring, and hold them, increasing the following crop; it pays the shipper, as prices rule higher early, and slowly drop as shipments later increase. The Florida orange is not at its best until the middle of December, when it is fully matured and its juices have been perfected. For the week ending November 2 50 carloads of fruit left the State, and by the middle of the month the output will be doubled to meet the demands of Thanksgiving. C. S. GOWEN.

Jacksonville, Fla.

Michigan Crop Matters

The weather has been ideal for Fall work so far, clear and warm, but too dry for Fall grain. But very little wheat was sown and that was put in late to avoid the fly. There is a large acreage of rye as prices have been good and the yield fair for a number of years back. The stand is poor on account of dry weather,. Corn is a booming crop this Fall. Mecosta County never had better; through this section the yield is from one-third to one-half above the average, and a large acreage was planted. It is nearly all husked and in the crib. Potatoes are away below the average this year, a few small pieces turning out fairly well. Prices are soaring, and the largest part of the crop is gone now. The man that buys potatoes next April will pay good money for them. Apples are something we read about here this Fall. Prime varieties will bring $1 per bushel in our home markets. There are but very few for sale. The bean crop is good. They are worth $1.65 per bushel now. They are taking the place of potatoes here, and will be raised to a greater extent in the future.

Mecosta County, Mich. W. B.

Down on Vermont Deer Laws.

I think the general opinion of all back farmers is in accord with mine; that is, that the deer law is an imposition on the farmer, and a nuisance, and we have no respect for it. We pasture the deer, and the dudes with high-topped boots and hunting jackets come in deer season and tramp over our premises. If so be that we can leave our work at that time we may share the general privilege of running the risk of getting a bullet in the head, or possibly, but not probably, a shot at or get a deer, for farmers as a rule are too busy to practice so as to be expert marksmen. We have had one-quarter acre of squashes destroyed one year, to say nothing of their tramping down oats and lying in newly seeded pieces every year. I hear of one farmer who has lost a lot of cabbages and another a garden by the deer this year. Our stock is hardly safe in hunting season, and even our pet cat came in a night or two ago dragging a leg horribly mangled, the result of a bullet after deer

Healdville, Vt. B. E. G.

Honesty Among Hay Balers

Here are two sides to the hay baling business:

The stories you hear regarding false packing of square baled hay are the sober truth, as we know from our experience, having at our Brooklyn plant broken up many hundred tons of these bales. Besides stones and sticks, we have found the hoofs and horns of oxen with an occasional dead chicken, all placed in the bales, presumably to add to the weight. PLANTERS' COMPRESS CO.

New York.

Relative to the putting of rocks, sticks and similar things in baled hay, I beg to advise you that my experience of twenty years in the hay business has led to believe that this is nearly all a matter of ridicule. I have sometimes found sticks and stones in baled hay. The horse rake picks up more or less stones and sticks, which are not seen by the loader. However, this is a matter of very small account in the amount of hay that is put up. As a general rule baled hay is put up with as much honesty of purpose as any other commodity which we buy. Baled hay is not a gamble when bought in bales, and I would much rather take my chances in looking over a lot of baled than loose hay, as it enables me to see the larger proportion of it and get more closely to the whole amount.

Towanda, Pa. E. D. RANDALL.

Woman and Home

From Day to Day.

OPTIMISM.

Just around the corner, as you travel through this life,
Is some spot that's bright with sunshine and forever free from strife.
The lane may be a long one, but its course will change some day
And lead you to the gates that keep our sorrows all at bay.
You'll find tasks not so difficult; no lessons hard to learn,
Just around the corner, if you know the way to turn.

The winds will breathe sweet music and forget their stormy way,
And the rose that died in August in your heart will smile for aye.
The babble of the high road will be left far, far behind,
And you'll greet the restful twilight with a calm, contented mind.
You will reach the land of pleasures, if the right you care to earn,
They are just around the corner, if you know the way to turn.
—Washington Star.

*

ONE of the strengthening foods often ordered for invalids or convalescents is a raw egg beaten into milk, with or without some stimulant. No form of food grows more monotonous; the patient soon feels like the man who undertakes upon a wager to eat so many quail in so many days. An occasional variation may be made by giving the raw egg in a cup of coffee. Prepare a cup of coffee in the ordinary manner, stand it in a pan of boiling water to keep it very hot, and then quickly stir in the egg, which has been previously beaten very light. It is very palatable and, if quickly stirred in, the effect of the egg is little different from rich cream.

*

A WESTERN editor gives notice to the birds that if they want to know what became of their missing friends, they can find out at any time by hovering over a crowd of women with their new Fall hats on. Unfortunately, this ugly and barbarous fashion of using birds as trimming seems more prevalent than ever, in spite of the Audubon Society. It is useless as well as barbarous, for there is such a wide range of choice in millinery that no woman need make the silly excuse that she must follow others, or look out of date. The simple fact is that she wears such trimmings because she wants to, and thereby permits her thoughtless vanity to become an agent for the destruction of innocent life.

*

A FRENCH entomologist, M. Dagin, has recently written an article recommending various insects as food material. He has the courage of his convictions, for he himself has eaten hundreds of species, raw, boiled, fried, roasted and hashed. He has even eaten spiders, but does not recommend them, and we indorse his judgment. Cockroaches, however, he considers excellent, either made into a bisque soup, or shelled and eaten like a shrimp. Personally, though it may be merely a matter of conventional prejudice, we shall continue to prefer shrimps, although, in point of personal beauty, the shrimp possesses few advantages over the genial, though obtrusive, cockroach. M. Dagin says that caterpillars are light food and easy of digestion, a view that will be corroborated by any experienced hen. The use of locusts as food is less of a novelty, as they are eaten in several parts of the world, though as a rule Europeans only take to them under stress of hunger. Thus, during the long siege of Mafeking, in South Africa, the imprisoned British used locusts as an addition to the scant monotony of their fare. The Piute and Digger Indians have a weakness for grasshoppers, but they are not generally regarded as gastronomical experts, and we do not think that M. Dagin's recommendations will be generally approved. The use of insects in medicine was very common in old times, and we have known cases in progressive New Jersey where spiders and angleworms were administered of recent years as a remedy for chills and fever.

*

STATE and Nation now make public acknowledgment of their official thankfulness for continued prosperity, and we in private life follow the same custom. It may be merely perfunctory—a matter of habit rather than feeling—but surely no one is the worse for making an effort towards personal thanksgiving: it is in season all the year round, even if we only acknowledge that fact officially on the last Thursday in November. There are few among us who cannot find one cause, at least, for thankfulness. The power to turn duty into pleasure—to extract personal happiness from the trivial round of daily life, and to give of our best ungrudgingly to others—these are the surest foundations for our own thanksgiving. A thanksgiving merely for personal security or happiness is human enough, but it is not the best; even our own well-being is often the gift of a prayer denied. Ruskin says: "To watch the corn grow, or the blossoms set; to draw hard breath over plowshare or spade; to read, to think, to love, to pray, are the things that make men happy."

3965 Girl's Coat,
6 to 12 yrs.

The Rural Patterns.

The girl's long coat may be made with or without the cape and hood. As shown, it is made of kersey cloth in tobacco brown, the hood lined with figured silk, but covert cloth, broadcloth and velvet are all correct. The cape and hood may also be made as a separate garment. The coat proper is half fitting at the back, but loose at the front and includes coat sleeves and pockets finished with overlaps. The cape is circular, fitted with single darts at the shoulders. The hood falls over the shoulders in graceful folds and finishes in double points at the back. At the neck is a collar that can be made in roll-over or military style as preferred. To cut this coat for a girl of eight years of age 4½ yards of material 27 inches wide, 2⅞ yards 44 inches wide or 2¼ yards 54 inches wide with ½ yard of silk to line hood will be required when cape and hood are used; 3½ yards 27 inches wide, 2½ yards 44 inches wide or 1¾ yard 54 inches wide when coat is made plain. The pattern 3965 is cut in sizes for girls of six, eight, ten and twelve years of age; price 10 cents.

The fancy waist shown is made of pale pink Sapho satin, with bolero and deep cuffs of cream lace over white and bands of black panne satin; but all white, white with color, or any color banded with the same shade in velvet would be effective; in addition to which the bolero and cuffs could be made of panne or Persian brocade in place of lace. The lining includes double darts, under-arm gores and side-backs, and fits snugly. On it are arranged the several portions of the waist, and the two close together at the back beneath the center box pleat. The yoke is simply banded with folds, but the lower portions of backs and front are laid in narrow box pleats that extend from its lower edge, beneath the bolero to the belt. The bolero can be made entirely separate and the waist worn with or without or caught at the upper edge and included in the arm's-eye seams. The sleeves are novel and becoming. The lower portions are covered smoothly to form cuffs that flare over the hands, while the pleats of the upper portions fall free to form puffs at the elbows. When desired low neck and with elbow sleeves the yoke and cuffs can be omitted. To cut this waist for a woman of medium size 3¼ yards of material 21 inches wide, 2⅞ yards 27 inches wide, 1¾ yard 44 inches wide or 1⅝ yard 50 inches wide with 1¼ yard of all-over lace for bolero and sleeve facings will be required. The pattern 3962 is cut in sizes for a 32, 34, 36, 38 and 40 inch bust measure; price 10 cents.

SUPPOSE you say to yourself: "This is an ordinary, shabby life of mine to look at—no great thing to do or be or hope for or grow to. I have just got to content myself with drudgeries that must be every day the same and never advance me beyond themselves. But I mean to put great cheer into all I do; I mean everything shall show integrity, shall speak of honesty, shall prove my truth; nothing that I touch that I will not adorn by some grace of soul." What will be the result? Where will be the paltriness, the worthlessness, of your life?—J. F. W. Ware.

3962 Fancy Waist
32 to 40 Bust.

TRY GRAIN-O! TRY GRAIN-O!

Ask your Grocer to-day to show you a package of GRAIN-O, the new food drink that takes the place of coffee. The children may drink it without injury as well as the adult. All who try it, like it. GRAIN-O has that rich seal brown of Mocha or Java, but it is made from pure grains, and the most delicate stomach receives it without distress. ¼ the price of coffee 15c. and 25c per package. Sold by all grocers

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Between now and Christmas you can earn enough money to make all your family and friends handsome Christmas presents.

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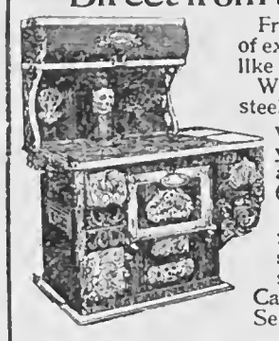

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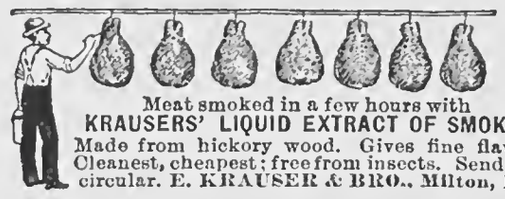

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10 Weeks for 10 Cents.

You have several neighbors and friends who need THE R. N.-Y. We are going to help you to see that they get acquainted with it. For our part we will send the paper to them now 10 weeks for 10 cents—a cent a week. We ask you to call their attention to this offer. Perhaps you can get up a club. The 23 largest clubs will each get a cash premium January 1. Will you be one of them?

Mrs. Marchant's Best Thanksgiving.

"She ain't no kind of a neighbor, Mis' Marchant ain't, not for going round amongst us here. At first along we used to go and see her and return our own calls, but after a while we got sick of that, and now we leave her mostly alone. But for all she's so unsociable, she's the very first person anyone thinks of when there's sickness, and I never knew her to refuse to come at such a time. Mr. Marchant, he's one of these easy-goin', handy men, and he gets along and looks after their two orphan grandchildren when she goes away nursing. She is a dreadful good nurse, and I don't know what we should have done without her while Janet has been so sick with pneumonia."

Mrs. Pryor was talking to her sister, who had just come to help her.

"Is she here now?"

"Yes, but she's just going home. Janet is so much better that we thought we could let her go. Here she is now."

A door opened and Mrs. Marchant came in. She was a quiet little woman, with a gentle voice, and a face whose placid expression changed often to one of anxiety.

Mrs. Pryor introduced her sister. "I'm real glad she's come," she said, helping Mrs. Marchant on with her things, "for now you won't have to worry about us a bit. And I know you must want to be at home to do up your work and get ready for Thanksgiving. I s'pose you expect all your folks home?"

"Yes, they're all coming. I suppose I'm wicked, but somehow I always dread Thanksgiving. There is so much to do, and especially with only my one pair of hands to do it. And this year I dread it more than common, for you know Richard is going to bring his new wife that I've never seen, so I'm more than ever anxious about having things nice."

"It is a lot of work," said Mrs. Pryor sympathetically, "but I suppose Frank's and Will's wives take hold and help."

"Oh, yes, to be sure. I've got good daughters-in-law, extra good, and I don't expect my new one will be any exception, but it seems a little strange at first."

Although she was so loyal to her sons' wives, Mrs. Marchant in her secret heart admitted that they were not quite so efficient as she could wish, and as she walked home from Mrs. Pryor's she sighed a little at the work before her. She was not a violently energetic housekeeper, but she prided herself on having faculty and being able to do a great deal of work by keeping steadily at it. Her home and her family occupied all her thoughts and time, and from year's end to year's end she hardly so much as had a book or paper in her hand, unless it was to dust the former or put away the latter. When she got home she set to work at once on her house-cleaning. That was to be done first, then she would give her attention to the preparing of the Thanksgiving feast.

"It's lucky that Janet Pryor decided to get better just when she did," said Mr. Marchant that evening.

"Why so?"

"I've got to go to the city Friday to attend to the settling of Father's property and some other affairs, and I may have to stay a week or two. Can't you get somebody to stay with you while I'm gone?" His eyes twinkled, for he knew what her answer would be.

"I don't want anybody to stay here. I'd be ashamed if I couldn't stay alone. I can see to the hens, and Johnny is old enough to milk the cow. The harvesting is all done, and you can go as well as not. It couldn't have happened at a better time."

Friday came, and after Mr. Marchant had started for the city, his wife went to work at the cleaning. Of course she missed him, but there would be one less in the family to do for, and she would have more time to work. Johnny and Mary were no trouble, and they were at school most of the time, too. She would get along nicely. Mr. Marchant had told her as he went away, that he would be home by Thanksgiving Day sure, but that he should probably come before that.

Saturday the children were at home. It was a cold stormy day, and they played out more than was good for them, with the result that Sunday they were almost sick with croupy colds. Mrs. Marchant dosed them and kept them in the house, but they were so far from well on Monday that she decided to keep them home from school for a week. They improved as fast as could be expected, and by Wednesday she let them play out of doors a little while. The next day they begged so hard to go out that, although it was cold, she bundled them up and let them go, telling them to stay in the sun as much as possible.

"Now," she said, when they were gone, "I will finish the cleaning, and then I can plan what to do about the dinner next week. It is fortunate Thanksgiving comes late this year. I never could have got through if it hadn't, what with taking care of Janet and the children being sick."

She had washed the last door in the kitchen, but there was one more thing to do. In the ceiling overhead in the kitchen was a kind of step, so that one side was lower than the other. Where the step came was a long board, going the whole way across the kitchen. She always left this board till last, but she was very particular to wash it carefully, as it got rather smoky from one housecleaning to the next. She rolled the kitchen table into position, and climbing upon it, began to scrub the board. It was very warm in the upper part of the room, so she climbed down and opened the door into the dining room. It was cold in there, as she had not built a fire except in the kitchen since Sunday.

"Now I must be very careful," she said, as she climbed back to her place on the table. "It would be terrible if I should fall and be laid up. What would I do?"

She worked on and had got the board half cleaned. "I wonder if I feed that turkey enough," she was thinking. "I don't want it to be too fat, but just right. I must send Johnny to Mr. Gill's this afternoon to get some meat for mince pies. I can make the mincemeat this week. It is better for standing a little after it is made. Then I think I will make cranberry jelly this time. It is richer than sauce. I wonder if Dick's wife is one of the fussy kind. I must see if I can't get Mary and Johnny to help me some. They are old enough, and perhaps I can get things to going so that when the folks come I won't have to hurry so."

Just then she paused. She seemed to hear something at the back door. Yes, some one was coming in. She stood still in the center of the table and waited. Perhaps it was the children.

The door flew open and in came Mr. Marchant and his three sons and their three wives.

How Mrs. Marchant got down off the table she never knew, but in a moment she was being hugged and kissed and Richard had presented his wife.

Mrs. Marchant was in a flutter. She laughed nervously. "This is quite a surprise," she said. "I didn't look for you till Thanksgiving Day."

"Why, *this* is Thanksgiving Day," the answer came in chorus.

She looked wildly from one face to another, then towards the calendar on the wall.

"Oh, dear!" she wailed. "How could I have made such a mistake. I thought it was the last day of the month, but I see now that the last day is Wednesday instead of Thursday. Oh, how could I have done it! I was just finishing cleaning—she glanced at the ceiling—"and there isn't a thing cooked in the house, and it's as cold as a barn here."

For a moment there was dead silence. There was a look of agonized despair on Mrs. Marchant's face. Mr. Marchant was plainly filled with consternation. The sons were surprised and embarrassed, and Frank's and Will's wives looked on helplessly.

Then Dick's new wife stepped forward and put her arms about poor Mrs. Marchant. "Never mind, Mother," she whispered softly. "It will be all right."

No one could tell how she did it, but in two minutes Dick had his coat off, his shirt-sleeves rolled up, and standing on a chair was finishing the scrubbing of the board his mother had abandoned. Mr. Marchant was stuffing wood in the kitchen stove, Will was rushing out to the shed for kindlings, and Frank was crumpling up an old newspaper and putting it in the dining-room stove.

A moment more and all the women folks had disappeared, but by the time Dick had emptied the pail of water and hung up the cleaning cloth, and as the fire began to send out a welcome heat, they all came back, the three daughters-in-law dressed in calico wrappers—some of them misfits, it must be confessed—and Mrs. Marchant with a tremulous smile on her face and a sparkle in her eyes. Then in response to a look and a word from his wife, Dick brought out the best rocking-chair for his mother, and she was made to sit in it.

"Your part is just to tell us where things are, and how to do things," she was told.

The two daughters who had been considered inefficient proved quite the contrary, and Mrs. Marchant looked on in amazement. Mr. Marchant went on a murderous errand to the chicken yard. The sons were sent to the cellar and were pressed into the service in paring vegetables, but after a time Dick's wife, who was the recognized leader, told them that they could help most by taking themselves and the children out of the way. "Can't you get some evergreens and holly or something for a center-piece?" she asked, and they took the hint and went racing away like young boys towards the woods. At exactly two o'clock there was a long blast blown on the dinner horn, and the men folks, who had been wandering over the farm, came in to find the dinner ready and the misfit calico wrappers replaced by the owners' well-fitting gowns, said owners with unusual color in their cheeks.

That was a marvelous dinner. To be sure, some of the regulation dishes were absent, notably the turkey, but there was a perfect chicken pie, delicious croquettes, all sorts of vegetables, a wonderful apple pudding, sparkling currant jelly, with coffee and cookies for the finale.

"Well," said Mr. Marchant with a satisfied sigh at the end of the feast, "that's the best Thanksgiving dinner I ever ate that was got up in so short a time with nothing to start with but bread, cold corned beef and a jar of cookies."

"I can say more than that," said his wife, beaming on the faces around the table. "It's the best Thanksgiving dinner I ever ate in all my life, and what's more, this is the happiest Thanksgiving Day I ever spent," and for a moment her glance rested gratefully on the face of Dick's wife. SUSAN BROWN ROBBINS.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

A Christmas Gift From LESLIE'S MONTHLY

Art added to good literature makes this Christmas offer interesting to everyone who reads and has a nook wherein to hang a picture. Everyone subscribing **One Dollar** now will receive **Leslie's Monthly for 1902; the Double 25th Anniversary Number,** superbly illustrated; and the **Beautiful Christmas Souvenir Issue.** These fourteen numbers of **Leslie's Monthly** will contain **over 1500 pages** of the brightest and best reading, **over 900 illustrations, over 100 short stories,** many beautiful color plates, covers in colors, a different design each month. If you mention *The Rural New-Yorker,* we will send, charges prepaid, this remarkable combination of literature and art together with the

Elegant 1902 Art Calendar

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The Anniversary Issue and Christmas Issue of **Leslie's Monthly** are worthy of preservation as examples of the highest point attained in artistic magazine illustration in colors and black and white.

Among the fiction and bright special articles which will appear in **Leslie's Monthly** during 1902 are products of the pens of Nansen, Zangwill, Ballington Booth, Henry van Dyke, Owen Wister, C. G. D. Roberts, Ralph Connor, Booker T. Washington, Frank R. Stockton, Mary Wilkins, Margaret Sangster, Conan Doyle, Sienkiewicz, F. Hopkinson Smith, Ian MacLaren, Hamlin Garland, Quiller-Couch, Bret Harte and a multitude of others.

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FRANK LESLIE PUBLISHING HOUSE, 141-147 5th Avenue, New York.

Founded 1855.

MARKETS

THE WEEK'S QUOTATIONS.

WHOLESALE PRICES.

NEW YORK, NOVEMBER 16, 1901.

GRAIN.

Wheat, No. 1, N'th'n Chicago	—	@	80½
No. 1, hard, Duluth	—	@	87
No. 2, red elevator	—	@	79⅜
Corn, No. 2, mixed elevator	—	@	67¼
Oats, No. 2, mixed	—	@	45½
Rye, No. 2, W'n, f. o. b., N. Y.	—	@	67
Barley, feeding	55	@	57
Malting	63	@	68
Buckwheat, per 100 lbs	—	@1	17

BEANS.

Marrow, 1901, choice, bu	2 25	@2	30
Medium, 1901, choice	—	@2	00
Pea, 1901, choice	—	@2	00
Red kidney, 1901, choice	—	@2	25
White kidney, 1901, choice	—	@2	45
Black turtle soup, choice	1 80	@1	85
Yellow eye, 1901, choice	2 45	@2	50
Lima, California, 1901	3 25	@	—
Italian, medium	1 80	@1	85
Other foreign medium	1 70	@1	80

FEED.

Spring bran, coarse	19 00	@19	50
Winter bran	20 00	@21	00
Red dog	23 50	@24	00
No grade flour	—	@22	50
Unsound wheat, per 100 lbs	65	@	71
Linseed meal, ton	29 00	@29	50
Cottonseed meal, ton	—	@25	10

HAY AND STRAW.

Hay, No. 1	80	@	85
No. 2	70	@	75
No. 3	60	@	65
Clover	50	@	55
Clover, mixed	55	@	60
Straw, rye, long	60	@	80

SEEDS.

Clover, per 100 lbs	10 50	@11	25
Timothy, per 100 lbs	5 25	@ 5	50
Millet, per lb	2	@	2½
Sunflower, per lb	3½	@	3¾
Rape, German, per lb	3½	@	3⅝

MILK.

New York Exchange price three cents per quart in 26-cent freight zone.

BUTTER.

Creamery, extra, per lb	—	@	24
Firsts	21	@	23
Seconds	19	@	20
Lower grades	16	@	18
June, extras	21½	@	22
June, seconds to firsts	18	@	21
State dairy, tubs, fancy	21	@	22
Tubs, firsts	19	@	20
Tubs, seconds	16	@	18
Tubs, thirds	14	@	15
Tins, etc	14	@	20
W'n imitation creamery, fancy	17½	@	18
Firsts	15½	@	16
Lower grades	14	@	15
Western factory, June, fancy	15	@	15½
June, fair to choice	14	@	14¾
Fresh, firsts	14¾	@	15
Fresh, fair to good	14	@	14½
Lower grades	12½	@	13½
Renovated butter, fancy	18	@	18½
Common to choice	13	@	17
Packing stock	12	@	14

EGGS.

QUOTATIONS LOSS OFF.

State & Pa., avge. prime, doz.	28	@	29
Western, fresh gathered, average best per doz	—	@	28
Fresh gathered, fair to good	27	@	27½

QUOTATIONS AT MARK.

Nearby, State & Pa., fresh gathered, fancy selected, per doz	29	@	30
Average best lots	26	@	27
Fair to good	22	@	25
Western, fresh gathered, candied, selected	26	@	27
Regular packings	22	@	26
Kentucky, fresh gathered	22	@	25½
Tennessee, fresh gathered	22	@	25½
West'n, fresh gathered, dirties	16	@	17
Checks	13	@	14
Western, refrigerator, per doz.	15½	@	18½
Limed, Western, good to fancy	17½	@	18

COUNTRY-DRESSED MEATS.

Calves—Veal, prime, per lb	—	@	10½
Fair to good, per lb	9½	@	10
Common to medium, per lb.	5	@	8
Buttermilks, per lb	7	@	8
Grassers, per lb	5	@	5½
Pork—Jersey, dressed, light per lb	8	@	8½
Jersey dressed med., per lb.	7¼	@	7⅞
Jersey, dressed he'vy, per lb.	6	@	7
Roasting pigs, per lb	12	@	13

LIVE POULTRY.

Spring chickens, per lb	—	@	9½
Fowls, per lb	—	@	9
Roosters, per lb	—	@	5
Turkeys, per lb	8	@	9
Ducks, average W'n, per pair	60	@	70
Average Southern, per pair	50	@	60
Geese, avge. W'n, per pair	1 25	@1	37
Average Southern, per pair	1 00	@1	12
Pigeons, mixed, per pair	—	@	20

DRESSED POULTRY.

FRESH PACKED—ICED.

Turkeys, Spring, dry-picked, per lb	11	@	12
Scalded, per lb	10	@	11
Culls, per lb	5	@	7
Broilers, Phila., over 4 lbs. to pair, per lb	15	@	16
Phila., mixed sizes, per lb.	12	@	14
Penn., fair to good, per lb.	10	@	13
Ohio & Mich., scalded, per lb	—	@	11
Other Western, dry-picked, per lb	10	@	10½
Other Western, scalded, per lb	10	@	10½
Poor to fair, dry-picked or scalded, per lb	7	@	9½
Fowls, W'n, dry-picked, prime	—	@	9
Western, scalded, prime	8½	@	9
Southwestern, dry-picked, prime	—	@	8½
Western & Southwestern, poor to good	7	@	8
Old roosters, per lb	6	@	6½
Ducks, Spring, L. I. and other nearby, per lb	14	@	15
Western	9	@	11
Geese, Spring, Maryland & Jersey	12	@	13
Spring, Western, per lb	8	@	10
Squabs, choice, large, dark	—	@2	50
Mixed, per doz	1 75	@2	00
Dark, per doz	1 25	@1	50
Culls, per doz	50	@1	00

GAME.

Quail, prime, per doz	—	@3	00
Grouse, per pair	1 75	@2	00
Partridges, per pair	1 75	@2	00
Woodcock, per pair	1 00	@1	25
English snipe, per doz	—	@2	50
Golden plover, per doz	—	@2	50
Grass plover, per doz	1 50	@2	00
Wild ducks, canvas, per pair	2 50	@3	00
Red head, per pair	1 50	@2	00
Mallard, per pair	75	@1	00
Teal, blue wing, per pair	60	@	75
Teal, green wing, per pair.	40	@	50
Common, per pair	25	@	30
Rabbits, per pair	25	@	30
Venison, saddles, per lb	—	@	30
N. Y. State, clover, comb,			

HONEY.

fancy, per lb	15	@	15½
Clover, comb, fair to good, per lb	12	@	14
Buckwheat, comb, per lb	12	@	14
Extracted, clover, per lb	6	@	6½
Extracted, buckwheat, p. lb.	5½	@	—
California, extracted, per lb.	6	@	7½
Southern, extracted, per gal.	55	@	60

DRIED FRUITS.

Apples, evaporated, 1901, fancy, per lb	10	@	11
Evaporated, 1901, prime	9	@	9¼
Evaporated, 1900, fancy, per lb	10	@	—
Evaporated, 1900, prime, per lb	8¼	@	8½
Sun-dried, 1901, Southern, sliced	5	@	6½
Sun-dried, 1901, Western, quarters	4½	@	5½
Chops, 1901, per 100 lbs	1 75	@2	50
Cores and skins, 1901, per 100 lbs	1 50	@2	12
Raspberries, evaporated, 1901, per lb	23½	@	24
Sun-dried, 1901, per lb	20	@	21
Blackberries, 1901, per lb	7	@	7½
Huckleberries, 1901, per lb	17	@	18
Cherries, nearby, 1901, per lb.	15	@	15½
Southern, 1901	13½	@	14

FRESH FRUITS.

Apples, York Imperial, p. bbl.	3 50	@5	00
Spitzenberg, pri'e to fancy	4 50	@7	00
Winesap, per bbl	3 50	@4	50
Snow, good to choice, bbl	3 50	@5	00
King, per bbl	4 00	@6	00
Ben Davis, per bbl	3 50	@4	50
Greening	4 00	@6	00
Twenty ounce, hand-picked, per bbl	3 50	@4	50
Tallman Sweet, per bbl	3 00	@4	00
Baldwin, prime, per bbl	4 00	@5	00
Red winter sorts, fair to good	3 00	@3	50
Inferior, per bbl	1 75	@2	50
Pears, Bartlett, fancy, p. bbl.	—	@3	00
Bartlett, poor to good, bbl.	2 00	@2	50
Bartlett, per bu. box	1 25	@2	25
Seckel, fair to prime, bbl.	2 25	@3	50
Seckel, nearby, per bu. box.	1 25	@2	00
Beurre Bosc, per bbl	2 50	@3	50
Beurre Clairgeau, per bbl.	2 00	@3	00
Beaurre d'Anjou, per bbl	2 00	@2	75
Kieffer, per bbl	1 75	@3	00
Nearby, common, per bbl.	1 00	@1	50
Grapes, W'n N. Y., Catawba, case 10 3-lb. baskets	1 25	@1	50
W'n N.Y., Catawba, p.s. bkt.	11	@	12
W'n N. Y., Delaware, case 10 3-lb.. baskets	1 75	@	—
W'n N. Y., Niagara, case 10 4-lb. baskets	1 50	@2	50
W'n N. Y., Concord, case 10 3-lb. baskets	1 00	@1	15
W'n N. Y., Concord, small basket	10	@	12
W'n N. Y., Concord, per large basket	16	@	18
Wine grapes, Concord, per ton	38 00	@40	00
Wine grapes, Delaware, per ton	25 00	@50	00
Wine grapes, white, per ton	38 00	@45	00
Wine grapes, Clinton, per ton	40 00	@60	00

VEGETABLES.

Potatoes, Long Island, p. bbl.	2 00	@2	25
Maine, prime, per bag	2 10	@2	25
Western, prime, p. 180 lbs.	2 00	@2	12
State, prime, per bbl	2 00	@2	12
State & Western, poor to fair	1 50	@1	87
Jersey, per bbl	1 50	@1	75
German, good to prime, per 112-lb. bag	1 25	@1	50
Scotch, Magnum, per 168-lb. bag	2 00	@2	25
Sweet potatoes, So. Jersey, per bbl	2 00	@2	75
Yellow, Virginia, per bbl	1 00	@1	75
Beets, Jersey & L. I., per 100 bunches	1 00	@	—
Brussels sprouts, per quart	5	@	9
Cauliflowers, fancy, per bbl.	2 00	@2	25
Fair to good, per bbl	1 50	@1	75
Culls, per bbl	1 00	@1	25
Celery, State & W'n, per doz. roots	10	@	35
Jersey & L. I., per doz. flat bunches	75	@1	00
Carrots, L. I., per bbl	75	@1	00
Cabbages, L. I., Flat Dutch, per 100	2 00	@3	00
Cucumbers, Hot-house, No. 1, per dozen	60	@	75
Florida, per crate	1 00	@2	25
Florida, per basket	2 00	@2	50
Eggplants, Fla., per ½-bbl. crate	2 50	@3	50
Lettuce, Southern, p. bu. bkt.	50	@1	00
Boston, per doz	25	@	40
Onions, pickle, white, per bbl.	3 00	@4	00
Orange Co., white, per bag	2 00	@3	00
Orange Co., red, per bag	2 75	@3	25
Orange Co., yellow, p. bag.	2 75	@3	00
Orange Co., poor to fair, per bag	1 50	@2	50
Connecticut, white, per bbl.	2 00	@4	00
Connecticut, yellow, p. bbl.	2 75	@3	25
Connecticut, red, per bbl.	3 50	@3	75
State & W'n, yellow, p. bbl.	2 75	@3	25
State & W'n, red, per bbl.	3 25	@3	75
Peas, Va., per ½-bbl. basket.	50	@1	25
Squash, Hubbard, per bbl	1 75	@2	00
Marrow, per bbl	1 25	@	—
Pumpkins, per bbl	1 00	@1	25
String Beans, Va., per ½-bbl basket	50	@1	00
Charleston, per bush. bask.	2 00	@2	25
Charleston, inferior, p. bkt.	1 00	@1	25
Turnips, Jersey, Russia, p. bx	—	@	75
Canada, Russia, per bbl	70	@	75
Tomatoes, Florida, p. carrier.	2 50	@3	00

To January 1, 1903, for $1. New subscribers to THE R. N.-Y. will now get the paper from the time subscriptions are received until January 1, 1903. If you will send us a club of four subscriptions, new or renewal, with $4, we will advance your own subscription one year free.

BUSINESS BITS.

THE Orangeville Agr'l Works, Orangeville, Pa., this week for the first time asks the patronage of R. N.-Y. subscribers, for Daisy cutter and crusher, horse powers, thrashers, etc. This is a well-established house, and every machine is guaranteed to give satisfaction. Their special offer for November will interest you.

One of the greatest labor-saving implements for cutting ice is the double-row plow made by John Dorsch & Sons, 226 Wells Street, Milwaukee, Wis. This plow cuts any depth, cuts any size cake of ice, and it cuts the ice quick and easy. The manufacturers issue a 36-page catalogue which will be sent free on request.

A $3,000 Stock Book is offered absolutely free to readers of THE R. N.-Y. by the International Food Co., Minneapolis, Minn. This book is a valuable one for stock feeders—it contains 183 large colored engravings. All you have to do to get the book is to answer the three questions asked in the advertisement on another page of this issue.

THE A. B. Farquhar Co., of York, Pa., has been awarded gold and silver medals for machinery at the Pan-American Exposition. This company is perhaps the largest establishment in the country devoted to the manufacture of farming implements, including drills, sawmills, separators, traction engines, boilers, cultivators, corn sheilers and the like. This A. B. Farquhar Co. is well known to the farmers of this country, where numerous products of the celebrated York manufactory are used with great satisfaction.

PRUNE VINEGAR.—Tests at the Oregon Experiment Station show that a very fair quality of vinegar can be made from the prunes which are not fit for curing and have been allowed to go to waste in the past. From half a ton of these damaged prunes 600 gallons of juice were extracted. This was fermented in large vats and then barreled. It is stated that a bushel of prunes will make three gallons of merchantable vinegar.

VERMONT APPLES.—The Vermont Experiment Station claims that the following apples originated in Vermont at the stated places:

Balm.
Bethel—Bethel.
Blakely—Pawlet.
Burlington—Burlington.
Bunnough Greening—Vergennes.
Curtis Sweet—St. Albans.
Espy.
Fall Spitzenburg.
Fay Russet—Bennington.
Highlander—Sudbury.
Ketchum's Favorite—Sudbury.
Meach—Brandon.
Northern Sweet—St. George.
Platt's Sweet—Bennington.
Pownal Spitzenburg.
Robinson Sweet.
Rum—Pawlet.
Sable Sweet.
Seedless.
Scott Winter—Newport.
Tinmouth—Tinmouth.
Wood's Sweet—Sudbury.
Wright—Hubbardton.

It doesn't make so much difference where apples or men start from—it's where they bring up that counts.

CATARRH CAN BE CURED.

Catarrh is a kindred ailment of consumption long considered incurable; and yet there is one remedy that will positively cure catarrh in any of its stages. For many years this remedy was used by the late Dr. Stevens, a widely noted authority on all diseases of the throat and lungs. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all sufferers from Catarrh, Asthma, Consumption & nervous diseases, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail by addressing, with stamp, naming this paper W. A. Noyes, 847 Powers Block, Rochester, N. Y.

Wants, For Sale or Exchange

WANTED—Farmers and Dairymen, $30 to $50, with house or board. Only competent men with good references. The Rural Agency, Durham, N. H.

170 ACRES FOR SALE in Maryland.—Convenient to Baltimore and Philadelphia markets. Excellent location and improvements. MADISON MARINE, Law Building, Baltimore, Md

WANTED—Energetic, practical farmer; prefer one with sons or assistants to operate my farm at Weston, N. J. Applicant must understand cattle, pigs and poultry. To the proper person I will give a desirable situation—complete charge of a very extensive property. Nice home. What I am after is a plain, practical farmer.
C. E. W., Room 40, 130 Broadway, New York.

"I OWN MY HOME."
That's what puts nerve and backbone into a man. We sell them on the easiest terms. More than a hundred to choose from in our Illustrated Real Estate Catalogue Mailed free Write to-day.
W. P. Allen Land & Imp. Co., Salisbury, Md.

GLENN RANCH,

Glenn County, California,

FOR SALE IN SUBDIVISIONS.

This famous and well-known farm, the home of the late Dr. Glenn, "the wheat king," has been surveyed and subdivided. It is offered for sale in any sized government subdivision at remarkably low prices, and in no case, it is believed, exceeding what it is assessed for County and State taxation purposes.

This great ranch of 40,000 acres runs up and down the western bank of the Sacramento River for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

F. C. LUSK,

Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, of Chico, Butte County, California.

Barns of Plank save Timber and cash. Best, cheapest, strongest; 4,000 in use. Book for stamp. SHAWVIER BROS., Bellefontaine, Ohio.

WROUGHT IRON PIPE

Good condition, used short time only; new threads and couplings; for Steam, Gas or Water; sizes from ⅛ to 12 inch diameter. Our price per foot on ¾ inch is 3c; on 1 inch 3½c. Write for free catalogue No. 57

CHICAGO HOUSE WRECKING CO.,
W. 35th and Iron Sts., CHICAGO.

Oldest Commission House in New York. Established 1838. Butter, cheese, eggs, pork, poultry, dressed calves, game, &c E. B. WOODWARD, 302 Greenwich Street, New York

POULTRY SHIPPERS.

We make a specialty during the Winter months of handling Poultry, having a very extensive trade. Write us for any information you may wish regarding dressing, packing, etc., and we will be pleased to answer all inquiries.
Returns made on sale of each shipment.
ARCHDEACON & CO., 100 Murray Street, New York

POULTRY PORK AND DRESSED CALVES.

All conditions seem to predict high prices for Poultry, Pork and Calves, for corn is scarce. Pork will kill light. Poultry crop is light, and the times being so very prosperous, labor well employed, altogether should produce most satisfactory results.
S. H. & E. H. FROST, Produce Commission Merchants, 319 Washington St., cor. Jay, N. Y. City. Members of the Nat'l League of Com. Merchants of the U. S.

Can You

do a little pleasant and profitable work for us in your own town? No experience necessary. We will explain just what you have to do. The work will be light, and we will arrange for the time you shall be able to give to it. We can give you work for all your time or just for your spare time. Write for full particulars. THE RURAL NEW-YORKER, NEW YORK

Do You Wear Rings?

No. 77.

No. 81.

Perhaps you would like one to use as a holiday remembrance to some friend. We have been able to make arrangements with a manufacturing jeweler by which we can furnish handsome rings with stone settings at surprisingly low prices. These rings are rolled gold, with a five-year guarantee. We offer four styles. No. 77 is a single stone. You can have any color stone or any size ring. Price, 25 cents. No. 81 has three stones, Tiffany shape; you can have any combination of colors, and any size ring. Price, 40 cents. No. 79 is a three-stone baby and misses' ring, any combination of colors, and any size. Price, 25 cents. No. 66 is a cluster of imitation diamonds with center stone, which may be had in any color. Price, 75 cents. No. 55 is an Egeria diamond scarf pin. This is a gold-plated pin on German silver, which gives a high finish. The setting is new and gives a pretty effect. Price, 25 cents. We will send any one of these rings or the pin as a reward for one new subscription at $1, except No. 66. We will send this for a club of two new subscriptions, or with one new and 25 cents extra. Select ruby, sapphire, emerald, opal, turquoise or diamond. Measure size of finger carefully with narrow slip of paper, and send this with order. The rings are sold only to subscribers or their families.

No. 66.

No. 79.

No. 55.

THE RURAL NEW-YORKER, NEW YORK.

10 Weeks for 10 Cents.

We are getting a great many of those 10-weeks' subscribers; but there are thousands yet to hear from. Small lists are coming in very well, but there seems to be no one working for the cash premiums. We wish to remind those who have a little spare time that these premiums are in addition to all commissions. The premiums will be awarded January 1, 1902, for the largest 23 clubs of 10-week new subscriptions, and a new yearly subscription will count as .0 for 10 weeks each. Here are the premiums:

For the First Largest Club,	$25 00
For the Second Largest Club, -	15.00
For the Third Largest Club, - -	10.00
For the next 10 Largest Clubs, $5 each,	50.00
For the next 5 Largest Clubs, $3 each,	15.00
For the next 5 Largest Clubs, $2 each,	10.00

December is the best month in the year for taking subscriptions. Write us for a bundle of sample copies, and work up a club in your neighborhood. If you get a subscription from a neighbor who is not satisfied, we will return the whole of his money.

THE RURAL NEW-YORKER.

BOOK BULLETIN

FOR SALE BY THE RURAL NEW-YORKER.

THE INSECT BOOK, by Dr. L. O. Howard. This is a popular account of the bees, wasps, ants, grasshoppers, flies, and other North American insects, exclusive of butterflies, moths and beetles. It is especially adapted for the use of nature students. Typical life histories are given of the insects discussed; their habits and transformations are a revelation to most of us, who are likely to class all insects other than wasps and butterflies under the comprehensive title of "bugs." We are accustomed to look upon the bee as a standard model of industry, yet, as one writer recently remarked, the bee "knocks off" work on very trifling provocation, while the Insect Book describes one solitary wasp which was observed to toil continuously for 42 hours, from three in the afternoon on July 27, through that night and the day and night following until nine o'clock on the morning of the 29th. The female Ammophilia wasps differ in personal character, too, some being neat and painstaking, sweeping every particle of dust from their burrows, while others are decidedly slatternly in their habits. Many strange facts concerning the customs of the insect world are described in the book under discussion in a popular and instructive manner. Price $3; 300 pages, numerous beautiful illustrations.

MARKET NOTES

OREGON GRAIN SHIPMENTS for the week ending November 6 exceeded all previous records for the season, reaching a total of nearly 1,200,000 bushels, of which four-fifths were wheat and the remainder barley. One vessel for Hongkong carried 49,000 barrels of flour.

EXPORTS.—The Mexican Government has temporarily removed the duty on wheat. Dealers in the United States are taking advantage of this, and it is expected that 5,000 cars of wheat will be shipped over the border within the next few weeks. At a number of important border points the side tracks were blocked for several days before the new law went into effect, with cars to be rushed in, and thus take advantage of the new market as quickly as possible.

GAME NOTES.—With the opening of the game season the country in the vicinity of New York appeared all at once to be alive with hunters, and it looked as though the rabbits and birds that escaped the shower of shot might be scared to death by the fearful racket. Receipts of game for sale in this city are light, on account of the stringent laws which forbid shipments out of many States. I have noticed but few specimens of bear and deer. The State game protector is making it lively for violators of the law who have been snaring partridges on Long Island.

FARM LABOR MARKET.—The following from the letter of a Niagara County (N. Y.) reader states a problem that many people are facing at present: "Where can we get good farm help? We have 86 acres, 60 in fruit; a new tenant house with everything complete; and are willing to pay good wages by the year. Man's wife can earn in our house $50 per year at extra work. Where can we get a bright young German immigrant and wife, one who can be taught the care of orchards, etc.? Throughout this county many people want help. Tenant houses are empty, and a number of families could readily find homes here at good pay for their labor. Can't you assist us in getting help for 1902? The position will be permanent to the right parties."

At first thought it would seem that there should be no trouble in filling a place under conditions such as those named above. The difficulty in most cases seems to be that those who can do the work have some bad habit or are not trustworthy, and those who can be trusted either can't or won't learn how to handle work like the care of orchards, where the profits depend upon all details being attended to properly. W. H. Meara, Superintendent of the Labor Bureau, Barge Office, Battery Park, New York, says that by having a few week's notice he can often get desirable help for such positions. The best plan is to write him, giving full particulars as to what is needed, the conditions, and amount that will be paid. The letter will be kept on hand and referred to as immigrants come in. Italians have been employed satisfactorily on a few large farms, where a gang of them could be hired to work under an overseer. But few of the rank and file of Italian immigrants can speak English, so they would scarcely be suitable for general farm help, and they usually prefer working in gangs with their own people. Several of the extensive wholesale fruit dealers in New York are Italians, and very prosperous business men. One of them, on being asked whether an Italian country laborer could probably take hold of farm work readily as carried on in this country, said that he thought many of them could after learning the language to some extent. He appeared rather averse to saying much about it, and put on a scornful look when speaking of the immigrants. Evidently he, like many others who have struck prosperity, had learned the art of despising his poor relations.

W. W. H.

Chrysanthemum Show of the American Institute.

The annual Chrysanthemum show of the American Institute was held in the Berkeley Lyceum Building, New York, November 13-14. The entries were numerous, and the limited space too much crowded. It may be said that everything exhibited was above average quality, and many specimens really remarkable for size and finish. Nothing better than Timothy Eaton, the successful novelty of last year, was brought forward. It is truly a magnificent variety, the creamy white blooms shown being nearly 10 inches across and 7 or 8 deep. In foliage, stem and general finish it leads all the large-flowering Chrysanthemums. The blooms exhibited were much better than last season, the bright sunlight of the last six weeks having a very favorable effect on their development. The finest flowers were of well-known standard varieties, such as are offered in every catalogue of Chrysanthemum plants, and it is useless to recapitulate their names. There was a creditable collection of hardy garden varieties, which have reached great perfection this season. Good roses, violets and carnations were to be expected, and some fine groups were shown. The new forcing rose, Mrs. Oliver Ames, is very taking. While not large, the form is perfect and the coloring a pleasing blend of blush and ivory white. The fragrance is better than with most roses of its class. A vase of the new Barberton daisy, Gerbera Jamesoni, attracted great attention. The large size and novel color of vermilion daisies are not the only striking characteristics. The form is very graceful, the petals and disk being arranged in a vase form, and the stems long and stiff, with good foliage. It will soon become a favorite plant with those who learn how to grow it. A specimen of Solanum pyracantha was quite remarkable for the waxy brilliance of its large scarlet tomato-like fruits. The display of orchids and foliage plants was limited, but of excellent quality; some have not been exceeded in late exhibitions. There was a fair variety of vegetables and fruits. A collection of 21 varieties of apples from Vermont was most creditable, the fruits being of fine finish and brilliant in coloring.

W. V. F.

Cow Peas in Kentucky.

About April 10 I drilled in with a disk wheat drill six acres of Whippoorwill cow peas. In spite of the dry season a fair crop matured, and was mowed August 1. I picked enough dry peas to drill in one acre first of August. This second crop now (November 2) has peas fully matured, but not dry; just right to mow for hay—but too late in the season to cure. After frost kills the vines I shall plow the entire second crop under for a fertilizer. My invariable and fairly satisfactory practice is to sow thickly cow peas on the land I expect to plant in early potatoes. After the vines and peas are matured and dry I plow all under in Autumn. The result is excellent for ensuing potato crop, the tubers being bright and smooth; vines free from blight, and tubers with no sign of scab. I have grown Carman No. 1 on apparently poor red land by this system of which best specimens would weigh one pound, and I could make "pens" of them as (children do of corncobs). All stock have eaten peavines and peas with more avidity than any forage of which I know except peanut hay.

Hickman, Ky. D. W. R.

WITCH-HAZEL EXTRACT.—Last year we had some discussion about the value of witch hazel as a farm crop. T. S. Gold tells Meehan's Monthly something about the industry: "Agriculturally, the plant has no value, as it hardly grows large enough for fuel, but makes a bushy clump full of branches. It is found abundantly in bush pastures, and the only good thing to be said about it is that it acts as a nurse plant for better forest growth, to which it gives way. Medicinally, it has a great reputation. Pond's extract of witch hazel is manufactured by thousands of gallons in Middlesex County, Conn., as a remedy for wounds, bruises, etc. It is sold by the bottle and the barrel, and is in wide demand. Witch hazel brush—the whole plant, body and branches—is cut up short in a huge straw-cutter, and a fluid extract is prepared. The farmers get just enough for cutting and delivering the brush to pay for the labor, thus getting pay for clean pastures within the reach would like to share with Middlesex of the factories. Other parts of the State County, in this market for an otherwise useless product."

LYE AND RATS.—Poultry Monthly publishes this plan for getting rid of rats: "A most ingenious plan for driving away rats was worked recently by a friend who lives in the northern part of New Jersey. He had tried everything, including poison. The latter did kill a few rats—and a good many chickens. Some one told him to get some concentrated lye of the greatest possible strength, and mix it with butter. He did this and used the mixture with the result that, for several nights at intervals the rats about the place rent the air with their screams. But the rodents disappeared. When next signs indicated that some had returned, more of the mixture was used, with the pleasing result that they again became notable by their absence. The method of treatment was as follows: Every rat hole that could be found was smeared to the depth of about six inches with the mixture. Near at hand was placed a pan of water in which a few drops of capsicum (red pepper extract) had been dissolved. When the rodent made up his mind to emerge from his hole, inquisitiveness and the odor of the butter in the mixture impelled him to poke his nose into it. One poke was always enough, and Mr. Rat would dash out of that hole 'on the fly.' The water promised relief, and into it he would promptly jam his snout. More excruciating torture, and the rat would promptly shake the dust of those premises from his feet, even though he was unable to keep the mixture, over which he had walked, from fairly scorching those same feet."

House Work

Seems easy to a man, but there is a great deal of lifting and reaching to do; a great many trips up and down stairs to make in the course of day's house work. It's hard where a woman is well. For a woman suffering with some form of "female trouble" it is daily torment. There are thousands of such women struggling along, day by day, in increasing misery. There are other thousands who have found a complete cure of their disease in the use of Dr. Pierce's Favorite Prescription. It stops debilitating drains, cures irregularity, heals inflammation and ulceration, nourishes the nerves, and gives vitality and vigor. It makes weak women strong and sick women well. It contains no opium, cocaine nor other narcotic.

"For a number of months I suffered with female trouble," writes Miss Agnes McGowne, of 1212 Bank St., Washington, D. C. "I tried various remedies, but none seemed to do me any permanent good. The doctors said it was the worst case of internal trouble they ever had. I decided to write to you for help. I received a very encouraging reply, and commenced treatment at once. I had not used your 'Favorite Prescription' a week before I began to feel better, and, as I continued, my health gradually improved. It is improving every day."

Dr. Pierce's Common Sense Medical Adviser is sent *free* on receipt of stamps to pay cost of mailing *only*. Send 21 one-cent stamps for a book in paper covers, or 31 stamps in cloth, to Dr. R. V. Pierce, Buffalo, N. Y.

Consumption, Bronchitis and Bronchial Asthma.

Diseases Which Cause Almost as Many Deaths as Consumption.

From Dr. Robert Hunter's Lectures on Consumption.

A cold settling on the chest or grippe that goes down to the lungs produces bronchitis, and when it has continued for several months it becomes chronic bronchitis.

There is at first only trifling cough in the morning with slight chilly feelings, followed by a sense of feverishness towards evening. Walking rapidly or going upstairs cause shortness of breath with a general sense of tightness and oppression in the chest.

As the disease advances the patient begins to raise yellow or greenish-yellow matter; has hectic fever and night sweats and loses in flesh and strength. From this point, unless arrested by treatment, it goes on rapidly, soon exhausts the vitality and causes death with symptoms closely resembling consumption and yet not consumption at all.

By careful observation extending through many years, I am confident that fully TWO-FIFTHS of all the deaths charged to consumption are really deaths by consumptive bronchitis. On examining the sputum and the tissue of the lungs in these cases we find neither tubercle nor the bacilli germs that are always present in TRUE consumption.

This is a most important fact, for bronchitis is much easier to cure than consumption, every case being curable if properly treated. It is only a seated, chronic inflammation of the mucous lining of the air tubes, and at the worst is as certainly curable in the lungs as such inflammation in any other part of the body.

Consumptive bronchitis is not curable by medicine given in the stomach, nor by those hyperdermically injected, for they never reach its seat. It is only by the direct application of medicines to the lining of the bronchial tubes in the lungs that cure is ever effected. The disease is not in the stomach, nor in the blood, but in the lining of the lungs, and THERE THE REMEDIES MUST BE APPLIED.

Nothing but a direct application of healing medicines, antiseptics and germicides to the very seat of the disease will affect the cure of this or any other lung case, and they can be applied only by inhaling them in a gaseous state. The lungs constitute an air cavity, and can be reached medicinally only by medicated air. This treatment was discovered, perfected and first successfully applied by me. It is the only natural, scientific and common-sense treatment ever applied for the cure of bronchial and consumptive diseases. If it fails, nothing else could possibly succeed. But it never does fail, unless mortal injury to the lung structures has taken place before it is applied.

Readers mentioning THE RURAL NEW-YORKER can obtain Dr. Hunter's book, "The Lungs and Their Diseases," absolutely FREE by addressing Dr. Robert Hunter Association, 117 W. 45th Street, New York City.

FARM TELEPHONES

How to put them up—what they cost—why they save you money—all information free. Write for it to J. Andrae & Sons, 208 W. Water St., Milwaukee, Wis

"Our Thanksgiving Proclamation"

says the horse, "should be a united appeal to our masters on our urgent need for Veterinary Pixine." "Agreed," cry all! "Make it strong," says the cow. "Inspired by the sweet relief from scratches and grease heel of years' standing; old sores, wounds, cowpox, hoof rot, mange and swellings, we unanimously beseech our masters to investigate its healing power and win our heartfelt gratitude."

Money back if it fails.

2 ozs.,	25c.	At all Druggists and Dealers, or sent prepaid.
8 ozs.,	50c.	
5 lbs.,	$4.00	

TROY CHEMICAL CO.,

TROY, N. Y.

Live Stock and Dairy

FARM AND DAIRY NOTES.

Building the Dairy Barn.

A Business Subject.—Probably never in the history of dairying has there been so much interest in barn and stable construction as at the present time. Dairying has developed into a science, and a business of splendid proportions. The barn and stable are to the dairyman what the office is to the merchant and trader; a place of business, where his best efforts should be put forth. Did you ever see a successful and satisfied dairyman who had cold, dark, damp cow stables, who spends as little time as may be consistent with pushing in the feed and pitching out the manure? Such a man needs to repair his office, that is, if he is able to do so. After all, did you ever see a man with an ideal constantly before him who did not sooner or later reach it, or approximately so? A dairy farmer with a daily determination to have a warm, light and well-ventilated stable, gets it. We always subordinate every desire for our ideal.

The Fundamental Needs.—Great expense and elaborate construction are unnecessary, unless the means are at hand to accomplish the desired end. There are three fundamentals, however, not to be forgotten, that will insure success; light, which means sunshine directly upon the animals; warmth, above 50 degrees, and I am not sure but we may say 60 degrees, and last but not least, ventilation. Let us first look at the importance of light. Just why barn builders are so indifferent to glass surface in the stables I am unable to say. I might cite any number of cases, in fact, they are legion, where one small window furnishes light for 20 animals. I was passing a barn just completed, recently, size 30 x 60; two windows 2 x 3 feet furnish light, and both of them are nearly covered with slats, to prevent breakage of glass. Wisconsin barns are quite largely built with a hood or projection over the stable. That is, the superstructure above the stable is eight to 10 feet wider than the stable, forming a shed, which, of course, shuts out every ray of sunlight, without regard to glass surface. In order to secure free admission of direct rays of the sun, the points of the compass must be taken into consideration. A combined southern and western exposure provides a constant admission during the day when not cloudy. One does not need a studied knowledge of bacteriology to know the value of sunlight as a germicide. Several years ago I attended a session of the Chemung Co., N. Y., Medical Society, at which time Dr. Cooper Curtice delivered a very elaborate address upon tuberculosis, aiming to prove the danger to man from a free use of mixed milk, citing the condition of a herd which he had recently slaughtered. Members of the Association complimented the doctor upon his address, including one elderly M.D., who from his general make-up seemed to be a man of good judgment and sense perhaps, rather than one of long college training.

He said, in substance, that he had been much interested in the discussion; he had in mind, however, an instance in his practice which might serve to express his opinion of a cause of the dread disease and the danger from milk as a food. A family in his charge had been paying him annually over $100 for service on account of throat and lung trouble, including at one time a case of tuberculosis. He had finally advised them to cut down some of the shade trees around their house, trim up others, open up the shutters and let in God's sunlight, even though it did fade the bright colors in the carpet. Result, a yearly bill of less than $20; and the family continued to use milk just the same. Pretty good advice to home-keepers as well as cow-keepers.

The Tuberculosis Question.—I am not sufficiently learned to enter into a discussion of the relation of bovine to human tuberculosis; even if I could, it would be out of place here. I firmly believe that sanitation is the basis for healthy animals, and not a free use of tuberculin, and that more rapid advancement in animal health will be secured if our State authorities will use strenuous efforts to bring about improved sanitary surroundings rather than in slaughtering suspected animals. This is a pertinent subject in discussing barn construction. It is becoming a well-established principle in Government control of infectious and contagious disease that sanitation is far more effective than quarantine. We have been maintaining strict quarantine against Cuba for years, and as all know only moderately effective. As soon as Gen. Wood began his campaign against ages of Spanish filth accumulation we began to feel the effect of removing a cause. It is simply putting into practice the old adage that an ounce of prevention is better than a pound of cure. It is from this standpoint I reason that effective and permanent work along these lines can only be done by constantly agitating the necessity for light, warmth, and a dry pure air, as a foundation for health. Have you ever applied to your animals the feeling you have in the late Fall or early Winter days when complete saturation has taken place, and low temperatures are at hand? The shivering, disagreeable teeth chattering takes place that precedes a "cold," and you hasten to put on woolen. Your wife says: "What will you do in midwinter if you are cold now?" and sure enough the thermometer registers above freezing, and still you know that a zero day in January with a dry atmosphere will be as comfortable. What has this to do with stable construction? It has much by way of convincing proof, if such is possible, that cows need a dry air. They are not provided with extra woolens for immediate use, and are therefore obliged to sacrifice milk, flesh or vitality. H. E. COOK.

COWS AND THEIR CARE.

Fresh Cows.—Conditions have changed during the last 12 or 15 years. The time was when February and March were the best months in the year for selling butter. There was a scarcity at that season, and it paid to have plenty of fresh cows. Now prices begin to fall in January, and continue to go down for several months. For that reason it is doubtful whether cows that freshen after the first of December and before the first of March or April are as profitable as those that come fresh the last of August or early in September, or even in April and May. September, October and November are months when milk is bringing a good price, and can be produced at a very moderate cost. From April on prices are not so high as in the Fall, but the cost of keeping a cow for a year, if she freshens in April or May is less than when she freshens at any other time in the year. Either early Fall, or the Spring months are probably the best times to have cows come fresh. The cow that freshens in December will do little if any better in June and July than the one that freshened in September. Both fall off in the mess at that season. The August or September cow is the one that is likely to go dry the shortest time. The December cow must be fed liberally all Winter on grain if she is to produce a full flow of milk, just as much as the September cow, while the latter has already produced a nice lot of milk at a small cost, thus yielding a profit.

When to Stable.—We do not like to keep our cows in the stable nights until the weather becomes quite cool, so that the cows are more comfortable indoors than out. Sometimes we keep them in earlier, because we wish to get all the manure we can for some certain field. If the pasture is short and the nights not too warm it is all right. If the pasture is good, it is doubtful whether there can be as much milk obtained from feeding sowed corn without grain as from pasture; besides the corn is more costly than pasture. There is nothing better than *good* pasture, and on our cheap lands nothing is so inexpensive for cow feed. The only excuse for us to grow fodder corn, oats and peas, etc., for green feed is the fact that the drought, more or less severe, is quite liable to catch us most years. Even then, if we have a good range of pasture and are not overstocked, we get along very well with only a moderate amount of fodder corn. I find that many farmers are expressing doubts about the advisability of "intensive" farming on cheap land, at a considerable outlay for hired labor.

Profitable Cows.—It isn't always the largest income that gives the greatest profit. Looking over a list of creamery patrons where the cost of keeping the cows was given together with the income per cow, I notice that in different herds the returns for $1 cost in keeping, vary all the way from 50 cents to $1.66. In other words, one man got back from the creamery 50 cents for each $1 worth of fodder given his cows, while another man got $1.66 from the creamery for each $1 worth of fodder fed to his cows. These were the extremes, but there were many other examples very similar. Now, looking over the list carefully, it appears that those who fed the most expensive ration did not in many instances get the best returns. Doubtless much of the difference is due to the quality of the cow, but the dairyman needs to look out also for a ration that is not too expensive. H. H. L.

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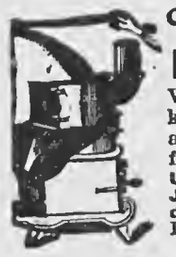

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HOW TO FEED SHEEP.

1. My farm is in southern Ohio. The last of March, 1901, I had seven acres of bottom land sown to Alfalfa, with beardless barley as a nurse crop. Both grew very well. The barley was cut with a self-binder the last of June. The Alfalfa was about 18 inches high at this time. In order to save this Alfalfa the barley was cured and put in the barn in the sheaf. I plan to feed it to breeding ewes. I have 36 open wool ewes bred for Winter lambs, and 39 Merino ewes for Spring lambs. We have hay, mixed clover and Timothy, and corn fodder. I may be able to have some fodder shredded. Have corn, but must buy more. What will make a balanced ration for these ewes? I can get bran at $16 per ton, corn at about 50 cents for 68-pound bushel, and oats at, I think, about 34 cents. Will the barley straw have any feeding value? It is bright, and was not very ripe when cut; butts of sheaves full of fine green Alfalfa. 2. I am feeding a carload of lambs. They are now on Blue-grass pasture, and will soon be on full feed, using corn and some whole wheat. I planned to put them in the feed lot about November 1. I have plenty of good corn fodder for roughage. Lambs will have a good open shed, part of the shed roofed with fodder, after John Jamison's plan. Plenty of good water pumped into a tank; somewhat warmed by a tank heater; have cured some ragweeds to let lambs run to this stack for a change in diet; plan to feed them corn for fattening. Will probably feed till in January. What will be a good ration for these lambs? Ration can include wheat if it seems best. I can sell wheat at 67 cents. M. L. P.

New Wilmington, Pa.

1. I should feed these ewes all the mixed clover and Timothy they wish, and then give them a grain ration of two parts wheat, one part oats and one part bran. Then I should like to flavor this with a bit of oil meal, one of the most highly-prized concentrated foods used by sheepmen. I do not think barley straw will be eaten by sheep very heartily. It has a feeding value only one point greater than rye straw, and considerably less than oat straw. Possibly there may be enough Alfalfa in the straw to make it a desirable feed in your case. If you can get some turnips or any sort of roots for the ewes they will be most acceptable and desirable. If the ewes are in good condition now, and are easy feeders, they should keep in nice shape on a pound of grain a day per head, if they find good clover picking in the hay. The shredded corn fodder will also be eaten with a relish, but it will not be eaten to so much advantage as the clover and Timothy. I regard clover in the East as the best of our dry forages for sheep. These ewes will do very well without any corn at all. 2. Let these lambs have what roughage they wish, and then feed a ration of two parts corn, one part oats and one part wheat, and a bit of oil meal. Towards the latter part of the fattening period I should increase the part of corn slightly and cut down on the wheat. With such a ration the lambs ought to fatten well. It is advisable to keep them in rather a restricted enclosure. Sheep can easily run off fat, and small feed lots and plenty of good feed are requisites where one wishes to feed on flesh rapidly. I should feed grain twice a day, and keep the feed racks filled with hay or fodder of the most appetizing sort. Sheep are so cheap now one must feed economically and make every bit count, and then turn off the feeders just as soon as they are ready. C. S. PLUMB.

BEEF-MAKING IN MINNESOTA.

What is known as Greenwood Prairie, a region in Wabash and Olmsted counties, which was settled in the early fifties, was at one time noted for its great wheatfields. Before the advent of the self-binder, the men who used to "follow the harvest" from Kansas northward all knew that Greenwood Prairie was a place where they might expect to find a "long job" of binding. As the yield of wheat grew less year by year, the farmers of this region turned their attention to barley and then to flax, but the wisest of them saw that something besides grain raising would have to be taken up if the farms were made to pay a profit. Many went into dairying, and several creameries were started. A great many have taken up the raising and fattening of beef cattle and hogs, and a majority of the farmers now have small flocks of sheep. One of the successful beef feeders of this neighborhood is Geo. E. Purvis, of Viola. He has been feeding several carloads of cattle every Winter for some time, and the following is his method: In the first place he says he prefers Polled Angus cattle to any others, and at present is paying as high as 60 cents per 100 more for them than for Durhams. He says that while his ideal feeder is "an Angus with a good broad back, large bony legs, low blocky build and a good paunch for carrying food," any Durham or Hereford with the same qualities will answer.

He begins feeding shock corn to the cattle about October 1, while they are still on grass. The corn is fed to them in yards near the barn, so that the hogs may be turned in to clean up after the cattle. They are given one feed of this shock corn per day for five or six weeks, care being taken not to give them all they want. Then they are put into the Winter feeding yards, where they have access to straw-covered sheds. These sheds are a good protection from storms, but it is a curious fact that the cattle prefer to lie outside in clear weather, no matter how cold it is. From the time the steers are taken from the pastures till about January 1 to 15 they are given one feed of shock corn per day and two feeds of meal. At the start they are given coarse crushed corn-and-cob meal. After three or four weeks, when they begin to show signs of not being very hungry for their meal, a change is made by grinding the corn and cob very fine, then, Mr. Purvis says, "They will come on the run after you when you go into the yard with the meal." This fine meal is continued till the cattle are ready for the market, but is varied whenever they show signs of being tired of it, by mixing in a two-bushel sack of bran in the meal for 40 cattle. The bran is thoroughly mixed with the meal, and the change seems to help their appetite, the same as the change from coarse to fine meal.

These steers are generally marketed in May or June. Last April Mr. Purvis sold one carload of Angus cattle in Chicago for $5.60 per 100 and one car of Durhams sold the same day for $5.40. He fed the remainder of his cattle till the middle of May, and shipped in company with a neighbor who had Durhams. The Angus cattle averaged 1,275 pounds and brought $5.75, and the Durhams averaged 1,285 pounds and averaged $5.55. In feeding shock corn to cattle there would be a very considerable waste if it were not for having something to follow them. Mr. Purvis now follows this plan: After allowing the 40 beef cattle to have what they will eat with a relish, he turns in a flock of 100 sheep, and leaves them two hours; then turns in the cows and young cattle for the same length of time, then gives the hogs what is left. At present he has 30 October pigs, six old sows and 12 60-pound shotes. Those who follow the plan of feeding shock corn to beef cattle and who do not have sheep, usually plan to have the same number of hogs as steers. J. M. DREW.

MILK NOTES.

The milk business at this point is rather mixed. About 40 cans are shipped daily, the rest being manufactured or consumed in the nearby towns. The milk from my own dairy is peddled in Sidney. A new factory for the manufacture of French cheese was started in Sidney October 1. The owner is Mr. Du Para. He pays 5 cents per 100 pounds in advance of condensery. Cows are generally in good condition and prices are well up in this section. The corn crop was good; oats were very light and of inferior quality. Potatoes rotted badly on some farms, but on an adjoining farm a good crop was harvested with very few poor ones. Apples no crop at all. Mill feeds are high. Cornmeal costs us $26 per ton, bran $20, and the others in proportion. E. M. P.

E. Guilford, N. Y.

Some of the farmers have creameries and some use separators. One man with a large dairy still uses small pans, and some contract their milk in the cities of Albany and New York. Others draw their milk to cheese factories and to the station. Most of the cows are common stock, but there are a few fair-sized dairies of registered cattle. Cornmeal is high, from $1.30 to $1.35 per 100 pounds; whole oats 45 cents per bushel. Hay is worth from $10 to $12 per ton. The price of milk at the station is from 60 to 70 cents per can; cheese from 9 to 10 cents per pound. J. B. M.

Richmondville, N. Y.

Prof. Babcock, on page 754, settles a portion of the adulterated milk and cream question in a satisfactory manner, but he seems to have lost sight of a part of the cause for complaint. He says that the use of lime water in milk is all right, because lime water makes it healthy and serves to keep it sweet. I think he is right, for lime water is very good; but, when we as consumers buy milk, we do not want to have to pay six cents a quart for lime water, when we can make lime water for six cents a barrel, I was about to say. I think any foreign substance added to milk is an aduiterant, even though it does improve the milk or add to its health-giviug qualities, and ought to be forbidden.

Troy, N. Y. G. W. W.

I ENCLOSE two more subscriptions at 10 cents for the remainder of the year 1901. Both were former subscribers, but had fallen from grace; I have rounded them up again on probation, and hope they will be taken into full membership at the end of the year. M.

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HUMOROUS

Little Miss Muffet
Sat on a tuffet—
Whatever a tuffet may be,
When along came a spider
And sat down beside her,
But she told it: "You can't scar[illegible],
For since women are taking
Men's places less quaking
And screaming is done than of
We go with heads bare
And defy sun and air,
We run things in office and store
And some of us bravely
Refuse," she said gravely,
"Since we've let old traits [illegible]h
And got to be mannish,
To have fits over mice any mo[illegible]
Sacramento Record-Union.

Cornell University Library 28 Dec 01

TURKEY: "Yes, I sympathize with the ballot box." Duek: "Why?" Turkey: "Well, you see, we both get stuffed in November."—What to Eat.

DEACON JONES: "Boys, you shouldn't play ball to-day. Sunday is a day of rest." Bad Boy: "Yes, sir; we know that; but we ain't tired."—Boston Herald.

"SURELY you are not afraid of the dark?" "No," said the small boy; "but I am a little seared of the things that might be in it that I can't see."—Washington Star.

"I SEE that they are reviving an old fashion at Niagara." "What's that?" "The lady who reeently went over the falls in a barrel wore hoops."—Cleveland Plain Dealer.

TEACHER: "Yes, 'revive' means to 'come to.' Now make a sentenee containing that word." Bright Boy: "If one apple eosts three eents what'll four apples revive?"—Philadelphia Press.

"ALL of you who never told a lie raise your hands," asked the teaeher of her small pupils. "Please, ma'am," piped little Jimmie, "is it a lie if nobody finds it out?"—Ohio State Journal.

NELL: "They said they were always going to be good friends." Belle: "And don't you think they will?" Nell: "Good gracious! Why, they've gone off and got married."—Philadelphia Reeord.

SILLICUS: "The Bible tells us that in heaven there shall be no marrying or giving in marriage." Cynieus: "Whieh proves that fools rush in where angels fear to tread."—Philadelphia Reeord.

CUSTOMER: "Say, a month ago you told me this material would wear, and here it is, nearly gone!" Snipps: "Nearly gone in a month? Well, if that isn't 'wearing,' what is?"—Chieago News.

MRS. GLOVER: "You told me that parrot I bought of you was the most intelligent bird in your colleetion; while the fact is he doesn't speak at all." Dealer: "That's what I meant when I spoke of his intelligenee."—Boston Transeript.

"JOSIAH," said Mrs. Chugwater, "when one of the big battleships runs aground how do they get her off?" "They pull it off with a tug of war," answered Mr. Chugwater. "I should think you'd know enough to know that."—Chieago Tribune.

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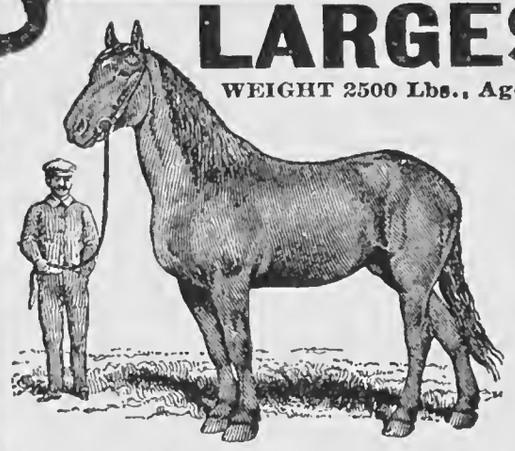
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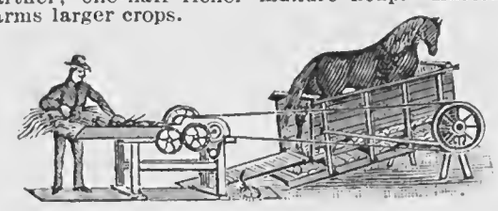
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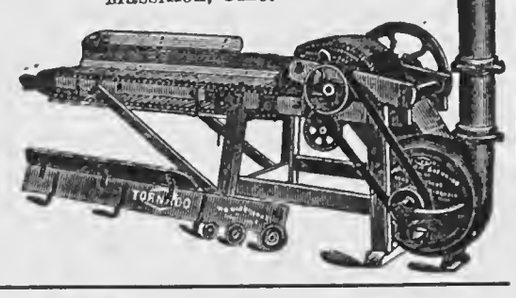

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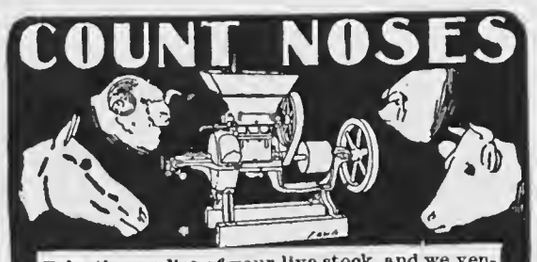
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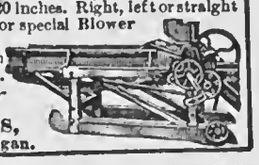
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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

PHOTO ENG. CO., N.Y.

VOL. LX. No. 2705. NEW YORK, NOVEMBER 30, 1901. $1 PER YEAR

REMODELING AN OLD ORCHARD.

WHAT TO DO WITH OLD TREES.

Practice and Helpful Suggestions.

ORCHARD VETERANS.—On almost every farm long settled are to be found old apple trees which seem to have outlived their usefulness. Dying and dead branches fill the tops; great gaping holes show where large limbs have been cut away, and the stump has rotted far into the center of the tree. Such trees are commonly worthless. They are cut down and burned, or the suckers are allowed to struggle with the dead branches and with each other in the battle for light and food. They often stand near the buildings or along the fences, where trees are wanted as long as they can be kept. Possibilities, not often suspected, still exist for these old trees. Here and there a thrifty young sucker has found a chance to grow and has soon come to be a vigorous branch. Fruit of good size and quality is often found upon it. Indeed, if the tree bears any good fruit it is likely to be on such branches.

A CHANCE FOR YOUNG BRANCHES.—An apple tree and a grapevine differ materially, yet it is possible to take a lesson in the management of the tree from the habit and treatment demanded by the vine. The vineyardist knows that he must depend upon young wood to get good grapes. He will tell you that it is better to replace the main vine every few years with a young shoot starting from the ground, because the old stock becomes "clogged." He may not be able to explain just what that means, but he knows that he gets better grapes from the young vine. Much the same thing holds true of an apple tree, though the time of renewal is much longer in coming than with a grapevine. The oft-repeated advice to avoid cutting large branches in pruning, while perfectly proper for young and vigorous trees, may be all wrong for these old veterans which have already begun to decay. Cut away the old decrepit branches and give some of the vigorous young suckers a chance. They will soon prove that they are not enemies to be cut down at every encounter, but friends ready to lend a hand and bear good fruit at the first opportunity. Fig. 362 shows such an old tree, with its top full of dead branches but no fruit. Fig. 363 shows the same tree as it appeared half an hour later. Nearly all the large branches are on the ground, but enough vigorous young sprouts are left to form a new top, which, barring accidents, they will quickly do.

OBJECT OF PRUNING.—But, some one objects, the tree will be short-lived, the wounds will not heal, and rot will enter the tree. Very likely, but what of it? The tree is nearly worthless as it is, and this treatment is likely to give a few, perhaps many, good crops. It is worth while to get them, for we do not want the tree to die now, and it will not unless we kill it. If left to itself it will linger on, occupying the ground just the same and doing nothing. The purpose for which an apple tree is grown differs radically from that for which a forest tree is grown. For the time being it matters little whether the heart of the tree be sound or hollow, so long as the outer wood and bark are in condition to perform their functions in carrying food and producing growth of leaf and fruit. I trust that no one will consider this an argument for lack of care in pruning young trees. Decay threatens the life of the tree, and should be avoided as long as possible. Fig. 365 represents a tree pruned much after the same manner, perhaps not quite so heavily, but severely enough that a bystander said the pruning would kill it. The tree was pruned in Spring. This picture, taken in the Autumn following, shows a fair crop of apples.

A TREE FULL OF DEAD BRANCHES. FIG. 362.

THE OLD TREE PRUNED FOR RENEWAL. FIG. 363

STARTING A NEW TREE.—Even if the whole top is worthless the case is not lost. Many of these old trees are seedlings, bearing fruit of little value. In such cases we may follow the vineyardist still further, and start a new shoot from the ground to take the place of the failing trunk. Fig. 364 shows such a sucker grafted the preceding Spring. The natural inference may be that a tree started in that way will have little value, but facts often disprove theories. If the old tree is cut away after a year or two the graft soon takes its place. At Fig. 366 is shown a larger tree started in the same manner. It is now about eight years old, and very vigorous. The owner says that it bore fruit the next year after the graft was set, and has borne nearly every year since. The method here outlined may not prove advantageous in commercial orcharding, nor in all parts of the country, but the results seen certainly indicate that they are worthy of consideration oftener than they are used. The same methods of renewal are applicable to peaches and pears. It goes without saying that wherever applied they should go hand in hand with other methods of treatment needed to produce good fruit.

FRED W. CARD.

A TALK ABOUT PEDIGREE TREES.

What Grant M. Hitchings Thinks.

We have had several articles about the famous orchard of Grant M. Hitchings, of Onondaga Co., N. Y. The following opinions will interest most apple growers. We asked Mr. Hitchings whether he believes in using wood from first-class bearing trees for budding and grafting:

The theory is certainly all right, and I am watching and experimenting along that line.

What, in your judgment, has most to do with fine fruit production?

The evidence thus far seems to indicate that the soil and location, and principally the way the fruit buds have been nourished, has more to do with producing fine fruit than anything else.

What evidence have you of this?

We have four Northern Spy trees about 30 years, set in squares 25 feet apart each way. Two of them on the south side invariably gave larger and finer fruit than those on the north side, which were crowded by other trees. Five years ago one of the trees on the north side was broken down, also those that were crowding the remaining one. Since that time this tree has given just as good fruit as the two south trees, showing in this case that it was lack of nourishment from limited root pasture, instead of bud variation.

We understand that you have trees which began to bear six years from setting.

The six-year-old trees (Spy) that bore this year were purchased of a Syracuse nursery. There were 150 in this lot; nearly all had a few apples on them this year, and all of them were similar in type. They have all been carefully mulched to strengthen bud formation. The eleven and nine-year-old trees that bore heavily were from different nurseries, and I could see no difference in type.

Do you observe much difference in the same variety?

I have a Fameuse that always produces pale fruit, and also those that produce red fruit. Next Spring I am going to graft a Ben Davis that produces bright red fruit with a graft from the pale Fameuse, and a graft from the red Fameuse, and see whether the type holds good in the new surroundings. The pale Fameuse is crowded by a Trancendent crab, which is a gross feeder, and that may be the trouble with the color.

You think, then, that crowding the trees too close together will give light-colored fruit?

A Wealthy tree at first gave high-colored fruit, but its root pasturage is becoming restricted by other trees, and I notice that each year its fruit is becoming paler. I observed this year that when a tree is heavily loaded the lower apples remain pale until the upper ones are picked; then the lower or pale ones color up, showing that the tree didn't have strength to color up all at once. I notice that the same variety behaves differently in different locations, in size, color and quality.

What can the orchardist do then to know that his fruit will be first class?

It seems to be a case of each one finding out for himself what is best for his particular location. Now, as to what I am doing this Fall, I have ordered 125 Spy, 75 from a Syracuse nursery, 50 of Rogers pedigree trees. The trees from Syracuse are grown on heavy clay, rich in potash, and are full of vitality. The pedigreed trees are smaller, but have a known parentage. I shall watch their development with interest. The trees from that heavy clay have always started better with me than the trees from other nurseries.

What would be your advice to a beginner?

I would hunt for trees four or five years old, one and one half to two inches through, that stand from four to six feet apart in nursery row; have had good root pasturage and appear very healthy. These trees must have stored up in their tissue a good deal of vitality, and I think they would soon come into bearing if one would nourish the buds during Summer and Fall and not stimulate wood growth by Spring cultivation. Mulch the trees when first set to hold moisture until roots become established, and then let grass in Spring take up fertility and prevent excessive wood growth. Letting this grass decay on ground during Fall to feed the fruit buds is the keynote of my practice. Doing this saves a lot of labor, and I believe it is in the long run the best way.

Then you would not bud or graft with wood from your best trees?

I have hardly confidence enough in the plan to warrant me in going to all the bother of doing it for myself, the results from so many varieties being satisfactory the other way. I have tried some pedigree strawberry plants alongside of others, and the pedigree failed to pan out. The plants that didn't have any pedigree were rather the better in fruiting. Yet, notwithstanding the evidence seems to indicate that it does not appear to pay to bother with "pedigree trees," I am buying them, and paying more for them, for the theory seems all right, and if there is anything to it I want to be in line.

Shall you make any change in your plan of setting the trees?

I am setting the rows 38 feet apart and 30 feet in the row, every other one a Spy. I shall use Wagener, Sutton Beauty and Rome Beauty as fillers. I am also setting 400 plums this Fall, and intend setting 1,000 peach trees in Spring, and shall follow the same method of culture with all. I have 200 pears, 1,800 apples now set, and am planning to increase apples up to 2,500.

TOMATOES IN MEXICO.—The latest idea for getting rich at farming is reported by an Oregon man, E. P. Cadwell, who is reported as saying: "Tomatoes will be 10 cents a pound in January, and we have already 50,000 plants set out in Mexico that will bear fruit by that time. We will ship the tomatoes in refrigerator cars and land them in Chicago, within a few days after they are picked. On arriving at their destination the cars will be run into warehouses heated to a degree that will enable the shipments to be unloaded without danger of freezing. One of my acquaintances has made $100,000 in five years raising tomatoes for the American Winter supply. Labor is cheap and the Mexican government is not averse to American capital being invested there, and so we anticipate smooth sailing." Tomato talk costs no more than any other sort.

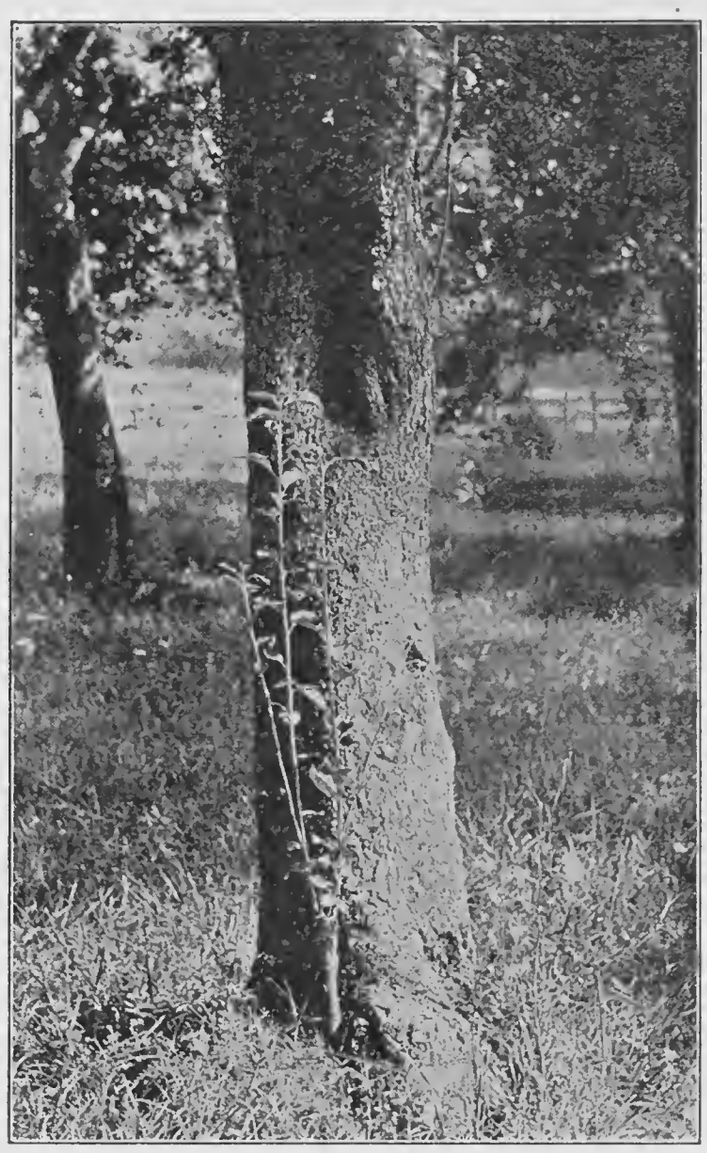
A TALK ABOUT FERTILIZERS.

PART I.

I wish to use chemical fertilizers but am not able to decide what my land needs. It seems to me fertilizer manufacturers would help to a more intelligent use of their goods if they would give a farmer some method by which he could determine what chemicals his different fields and crops need. Many farmers are condemning artificial fertilizers and saying that the old method of manuring with lime and barnyard manure will be resorted to again and chemicals dropped largely. What wonder is this when two farmers will use the same kind of fertilizer and have different results? Others say that they have used the chemicals and have seen no benefit. One man claims that the use of South Carolina rock has rendered his land sour, and clover will not thrive on it. What constituents of chemical fertilizers have a tendency to make land acid? I believe nitrate of soda and barnyard manure have a tendency to sweeten the soil. This latter is proved in potatoes grown on ground manured with stable manure and showing scab. The scab does not show on a sour soil. Are there any trees, plants, grains, or grasses, that are usually grown by farmers, that show by their condition of growth what plant food they have a surplus of or what they are deficient in? If not, what can be planted as an experimental plant in cultivated crops that would indicate what the soil needed? If the soil is acid, what crop removes this acid more than others? I have heard a strawberry grower say clover always came in the ground profusely where he grew strawberries. Did the strawberries take an acid out of the soil and make it sweeter for clover? Is there not a work on clover and its uses?

West Chester, Pa. G. R. L.

Our experience is that there is not much complaint from those farmers who use fair amounts of high-grade complete fertilizers in systematic rotations.



BEGINNING ALL OVER AGAIN. Fig. 364.

By "complete" fertilizer we mean one containing nitrogen, potash and phosphoric acid in proportions suited to the crop. By "high-grade" we mean mixtures in which the nitrogen and the phosphoric acid are in several different forms.

We observe that complaint usually comes from those who use very small amounts of these high-grade fertilizers or from those who use low-grade or "cheap" goods. By "low-grade" we mean a mixture which usually contains only one form of nitrogen and but little of it, and a small amount of some crude form of potash. A mixture of dissolved phosphate rock with a small amount of tankage, or fish scrap, with enough kainit to give a low per cent of potash, would be what we call a low-grade fertilizer. On a heavy clay soil with a rotation including clover such a mixture might give fair satisfaction for some years. Another farmer on a lighter soil might find it very unsatisfactory. This result would not prove that all chemical fertilizers are useless, but it would show that the soil of that farm needed more nitrogen and potash than the low-grade mixture supplied. If a farmer on poor, light soil were to use manure that had been leached out by rain, so that the liquids ran away, he would find that it gave little better satisfaction than the low-grade fertilizer. This would be for about the same reason, for in one case Nature washed the nitrogen and potash out of the manure, while in the other case the manufacturer never put these substances into the fertilizer. Few farmers who use the high-grade complete fertilizers in fair quantities and in a reasonable rotation, seriously talk of giving up chemicals entirely. There should be no "wonder" about it, for it is simply impossible to make an excess of phosphoric acid supply a deficiency of nitrogen and potash.

There are various ways of testing the soil to determine what element is needed. What is known as the "litmus test" will indicate the need of lime. We have explained this test several times. A surer test is to put the lime on parts of the field and thus give a chance for comparison. To make this test a farmer should use a complete fertilizer, so that any shortage in the crop will not be due to a lack of either of the three elements. Then take strips through the field and use, in addition to the fertilizer, lime at the rate of 1 to 1½ ton per acre. This lime should be put broadcast on the furrows and harrowed in. Make these strips large enough so that they will represent a fair share of an acre. Observe the growth of the crop on these limed strips and measure it accurately; do not guess or trust to the eye. This will give a sure indication as to the need of lime.

To test the soil as to its need of nitrogen, potash and phosphoric acid, four such strips may be used. On one we would use a mixture of nitrogen and phosphoric acid; on another potash and nitrogen; on another potash and phosphoric acid, and on another all three. Fair comparisons of the crops produced on these strips ought to tell the story as to which element is most needed. To furnish potash for this experiment we should use muriate or sulphate of potash at the rate of 200 pounds, or one bag, per acre. We would use dissolved phosphate rock or bone black at the rate of 600 pounds per acre to furnish phosphoric acid, and nitrate of soda at the rate of 300 pounds per acre to furnish nitrogen. In such an experiment we should sow broadcast these chemicals after plowing, and harrow them in At the experiment stations, plots of various sizes would be used for this experiment, but for a farmer it seems to us more desirable to use strips of several rows directly through the field. This is more practical as regards the crop, and also gives a better test of the whole field. It is true that dissolved phosphate rock, when used in large quantities, does tend to sour the soil. The same is true of sulphate of ammonia and probably to some extent of muriate of potash, though these are not always used in large enough quantities to show any injurious effect. The ammonia in farm manure is alkaline and will, to a certain extent, "sweeten" the soil much as lime does. It is true that potato scab appears to thrive best when the soil is alkaline. The plowing in of a green crop, or the use of dissolved phosphate rock in the hill or drill, may keep the soil acid and thus reduce the growth of scab, or the use of lime or manure may so "sweeten" the soil as to increase the action of the scab. We will try to answer the questions regarding the behavior of plants in an acid soil next week.

COW PEAS IN DELAWARE.

I read with interest the article on page 770, entitled Cow Peas at the North. I hope that S. B. Robbins will not make a failure of his peas by planting too early next year. The first week in June is early enough to begin planting cow peas here, and our seasons are nearly a month earlier than Massachusetts. The Mt. Olive is a good variety for the North, as it will mature pods in 65 to 70 days, and makes a good, strong, bushy vine. They grew vines over four feet high and heavily branched this season. The seeds of Mt. Olive are much smaller than the large Early Black peas, and one bushel of Mt. Olive seed is plenty for three acres. I drill them in rows 32 inches apart, and cultivate about three times. W. L. M. will find that both his cows and hogs will eat peavines with great relish if he feeds very lightly at first, until the animals acquire a taste for them. I find that it pays well to drill in about 300 pounds per acre of acid phosphate and potash mixture with the cow peas. The present Fall weather has been very favorable for securing cow-pea seed of excellent quality, but these seeds will never be grown on a large scale, or become less than $1 to $1.50 per bushel in price, until a practical steam-power thrasher is introduced, which will bull out the peas without breaking them.

PLOWING UNDER THE VINES.—W. L. M.'s plan is a good one where a hand plow is used, and I formerly practiced it, but with the extremely heavy growth which we obtain here it was a slow and tedious job to turn them under. This year we used a double disk plow drawn by four horses and turning two 11-inch furrows. The operator rides, and any boy who can manage the horses can do good work with it. This plow will turn under the heaviest growth of vines without any clogging whatever. It covers the vines completely and leaves the surface almost as smooth as if harrowed. This plow will also do excellent work in plowing under clover, tomato vines, corn stubble, wheat stubble, etc., but does not work well in sod. E. G. PACKARD.

THE PRINCIPLE OF REFRIGERATION.

Having my ice-house floor to repair, with adjoining refrigerator room, will you aid me by stating the scientific principle and practical arrangement regarding circulation and drainage of same? E. P.

Mt. Lebanon, N. Y.

The principle of cold storage or refrigeration by ice is very simple. From the fact that cold air is found in the lower strata and warm air in the upper, we see that the cold air is heavier and so gravitates, crowding out the warmer air, which at once is forced to seek a higher level. The practical application of the principle in refrigeration is found in first building a room thoroughly insulated by a series of air chambers in the walls and ceilings, each one independent of the other, made so by matched lumber thoroughly seasoned and a good quality of building paper. These air spaces need not be over two inches, and for best service probably not less than five of them should be placed in the side walls. The windows will need be trebled, or better, four in each space.

These dead-air spaces are non-conductors of heat, and an absolutely uniform temperature can be maintained. The ice is packed in the upper part of the building. The whole surface remains exposed to air action. This space is in direct communication with the storage room below. There are different systems of flue communication; for the cold air downward and the warm air upward. It is nothing more or less than a perfect system of ventilation. The flue construction must be so built that a continuous change of air is going on in every point in the rooms; otherwise the temperature could not equalize. The cold-air flue may be the inside dead-air space opened at top and bottom, or a separate flue may be built into any part of the room. The outlet or warm-air flue is built in some opposing direction from the cold-air flue. These flues work with certainty, because the room is so thoroughly insulated that no counter air currents are formed.

In cold storage, of course the ice is not disturbed after it is packed. I might add that a man of experience should be consulted in order to have structural strength to support the great weight of ice above. A large cold storage plant near here came near collapsing under its heavy burden of stored ice above. One is safe in figuring on a temperature of 38 to 40 degrees with the above system. If a freezing temperature is required, galvanized iron tubes a foot in diameter, or perhaps if much work is to be done, a trifle larger, may be placed at intervals in the room, coming to the floor with a drip and extending above to ice chamber, where salt and crushed ice are filled in as fast as melted. In the northern latitudes, where ice is a certainty, the system is a safe and economical one. Where a higher temperature than 40 degrees is all that is needed, and it is not convenient to pack the ice above, a rack may be built in the room from the ceiling down two or three feet, and occupying perhaps one-tenth of the size of the room. Provide a galvanized drip under the rack leading to the drain, and if the room is carefully and thoroughly insulated good results will be obtained. The system, however, necessitates heavy labor to handle the ice. A very good work on this subject is published and may be had from the author, Madison Cooper, Minneapolis, Minn. H. E. COOK.

THE MILK SITUATION IN NEW YORK.

Result of a Co-operative Enterprise.

Conceding the fact that not all of your readers are familiar with the coöperative movement among the farmers at this place and around here in various directions, I will say that it began to take form in a common-sense way a little short of two years ago, through the organization of a stock company, capitalized at $3,000. The company at once began the erection of a plant to be owned and operated by themselves, which was ready to receive milk April 1, 1900. All but two of the producers of milk were united. The consequence was that the man who had received the milk at his own price and terms, without the producer having a word to say, was compelled to buy the milk at 10 cents off condensery price for six months. At the expiration of his time, being a memmer of the Exchange, he refused to buy except at Exchange prices. The Association took their own milk and made it into cheese for several weeks, when they sold to another buyer at satisfactory prices for remainder of six months. By this action they about paid for their plant by what they received above Exchange price. The same persons continue to buy our milk under contract till April next. The old station was torn away last Spring, but a feed building was bought last Summer and changed to a shipping station by another man, and receives only about four small dairies. Milk is being shipped from our plant drawn from another association of farmers at Poolville. Price for October was $1.06 per 100 pounds; November, $1.17 per 100. Cows are in good condition to go into the Winter. Nearly every producer has a silo, and as a rule will not feed much extra on account of its being so high in price that it will not give a profit. Many of the Winter milkers have been brought up at good prices and shipped away, owing to the fact that farmers would rather sell than pay the high prices for feed, and as a result not as much Winter milk will be shipped as heretofore. At this season of the year the milk is only drawn once a day. All the producers of milk to ship should organize into associations, and take steps at once to build plants under direction of the F. S. M. P. A., so they will be in position to make

HEAVY PRUNING DID NOT KILL. Fig. 365.

prices on their own product, and in this way compel the buyer to meet it and become a party to its sale. W. F. JAQUITH.

Earlville, N. Y.

Handled by a Creamery.

Our milk here is not shipped; it is made into butter by the Standard Butter Company of Owego, the largest creamery company in the world. The skimmilk is made into sizing. Farmers get the whey and buttermilk back free of charge. It makes a good feed for hogs. They pay what they call road prices; that is, the same as the shipping stations. Our creamery is on the main line of the D. L. & W. Railroad; that is the reason they pay road prices. Seventy cents per 100 pounds is the lowest they have paid this year. November 1 the price went up to $1.12 per 100. Cows are in fine condition to begin Winter. Feeds of all kinds are very high; gluten $23 per ton, bran $20 per ton. Nearly every dairyman here has a silo. Some of the dairymen are talking

YOUNG CHILD OF AN OLD TREE. Fig. 366.

of feeding beet pulp the coming Winter on account of grain being so high. We get our beet pulp from the factory at Binghamton. Potatoes are a good crop; some pieces rot quite badly, shippers paying 45 cents at the car. Oats are a poor crop; buckwheat good, some pieces yielding as high as 40 bushels per acre. Weather fine; we had no rain since October 6 until November 12. F. L.

Lounsberry, N. Y.

HANDLING DRY CORN FODDER.

Snapping Off the Ears.

For the past 10 years I have practiced picking the ears off my corn at the cutting time, that is when the corn is glazed, throwing four rows into one and letting it stay until cured. I cut the fodder, put it into the silo, and my stock eat it all. The corn cures nicely. I have 400 bushels in the crib now of as nice corn as anyone ever saw. G. B. H.

Moodus, Conn.

Varying Results as Silage.

Four years ago I was in Schuyler County, N. Y. A well-to-do farmer there had a large field of corn. He got a corn husking machine that was owned in the town, and had the corn husked and stalks cut in one operation. They were run in a silo, plenty of water poured on and a little salt sprinkled in at intervals of about every half hour in steady running. The machine did fine work; the corn was husked nearly as well as by hand. The silage was fed to young cattle and sheep with clover hay once a day, and they seemed to eat it about as clean as though it had been green corn silage. It was a big saving from the old way of feeding the stalks whole, and having the stalks in the manure. Another farmer near there had his dry stalks shredded and stacked. About a week after the stack reminded one of an Indian tepee, as there was smoke rising from the center of the stack all the while for over a week. When he opened the stack the center was burned up and half the stack worthless. J. S. J.

Elmira, N. Y.

"Dry Silage" or Hay Sandwich.

I was much interested in reading the article by E. G. O. on page 754 in The R. N.-Y. Being obliged in some respects to use my cornstalks dry to feed, I am always interested in reading anything pertaining to it. I am very much in favor of green silage, but being so situated that I cannot have a silo, I have to resort to the dry silage, as some call it. I have to hire most of my pasture for my small herd of cows, and I find by using dry silage I can keep them through the six Winter months for about as much as I can through the Summer months. A very good plan to handle dry fodder is followed by one of my neighbors, who cuts all of his fodder at one cutting, though most of them in this vicinity cut about what they will feed in two or three weeks. On about July 1 he cuts his meadow grass, such as is grown on smooth meadows, and lets it cure one day; then it is hauled to his barn and immediately cut long; then placed where it will be handy to get at when his fodder is out. As soon as his corn is fit to cut, when the ears are glazed over, he cuts the corn in the ordinary way in shocks. About three weeks after cutting it is husked and bunched, about eight or nine shocks to the bunch. After it stands this way about three or four weeks, so that it is quite dry, he draws it to the barn and cuts it one-quarter inch, mixing in, as he cuts it, the meadow hay, which is about one-fifth of the quantity of his fodder. This mixture is put into a shed which is built adjoining his barn. He does not use any water, and is not particular to have it trampled very hard. At the time of feeding, about December 15, it has heat enough to make the hard part of the cornstalks soft and easy for a cow with poor teeth to eat. He feeds this to all his cows and young stock, and some to his horses. I do not know how long he has done this, but for at least five years to my knowledge. C. C. Z.

Norwich, Conn.

RAISING SQUABS.—I think Johnson & Reed, page 745, have not done as much in the squab business on the producing end as the selling end. It is not the age of the squab that makes the fat, as after about 25 or 30 days from shell they will begin to grow poorer. It is the breed and the feed. Homers are the best breed, all things considered, and corn, peas, wheat and hemp seed the feed that makes the birds. J. E. S.

SMALL FRUIT PACKAGES.—We have always shipped grapes in pony baskets till this year. We are using pony baskets with no handles or covers, and put 10 in a crate for our bagged grapes. We have tried the bushel boxes this year in a small way for pears and apples for our local trade. We are much pleased with them and expect to use more next season. In our experience the fruit carries much better. B. J. CASE.

New York.

POULTRY FOR WOMEN.—The suggestions to the young girl who wishes to make money on her father's farm are both interesting and helpful. In urging her to try poultry I hardly think sufficient prominence is given to the incubator and brooder method, which, after one season's experience, seems to me to be the method when profit as well as pleasure is desired. In my case the chickens were raised in addition to housework, care of a dairy, etc., and the conditions may easily be made more satisfactory. The feed, too, was bought at too high a rate. Taking these facts into consideration, besides the absence of knowledge and experience, I am well satisfied with the little venture. At 10 weeks old Light Brahma broilers weighed 1½ pound. The feed had cost five cents per head, and they were selling at 25 cents per pound in the neighborhood. They do not raise themselves, but I believe time and care are very profitably spent upon them. A. E. F.

Baltimore Co., Md.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Vinegar in a Wine Barrel.

E. S. B., Connecticut.—I put a lot of cider temporarily in a barrel which had contained wine, and am now told that it will never make vinegar, even though I put it into another cask. Is this so?

ANS.—If any large quantity of wine were mixed with the cider, it might hinder it from becoming vinegar, but merely to put the cider into an empty cask which had contained wine will not affect it in the least, and there should be no difficulty in getting as good vinegar from it as the cider would make under any other conditions.

Some Peaches for New Jersey.

W. D. H., Deckertown, N. J.—When will Crothers peach ripen in northern New Jersey? How is it for size and beauty? Also, when will Cooper's Late ripen, and would you recommend it for this section. Can you tell me about Matthews and Emma?

ANS.—The Crothers peach ripens about with Smock, which in northern New Jersey is not far from October 1. It is a white-fleshed peach, having red cheek, and of excellent flavor. Cooper's Late I do not know. Matthews is a medium early peach of general good qualities. I think it well worthy of trial to say the least. Emma is much like Elberta, but a week later. It has no points that would make it more desirable than Elberta, unless one a little later is desired. H. E. V. D.

Is Spring Budding Practical?

G. H. K., Knoxville, Tenn.—I have some peach seedlings that I did not have time to bud in August. Can I do so early next Spring or Summer? If so, how must I get buds and how set them and care for them afterwards?

ANS.—Spring budding is done occasionally and it is practicable, although my own work at it has not been very successful. The bud sticks or scions should be cut before severe Winter weather and stored where they will be both damp and so cool that they will not start in the least, until after the Spring is so far advanced that the bark will peel on the stocks. The best place is in some good cold storage house, but they may be packed in moistened moss or some other material that will not dry out easily. The buds should then be set in the ordinary way, and very securely tied. A friend told me lately that he slightly waxed them over to prevent the sap from drying until the healing process was completed. I have never tried this plan but mean to do so. Tying with waxed cloth would seem to me equally good and a little more economical of time. The tops of the stocks should be cut away as soon as the buds have set, and the sprouting and tillage should be the same as for any budded stocks. H. E. V. D.

What to Do for Peach Trees.

G. E. L., Afton, Va.—I have about 100 peach trees, two years old, which made poor growth the past season on account of not being cultivated early. The land is fairly good and somewhat gravelly. What treatment would you suggest for them next season? What fertilizers should be applied and what amount?

ANS.—These trees should be cultivated without stint from now on. The lack of tillage is given as the chief cause of poor growth, and the most important thing to do is to try to make amends for the neglect. It will doubtless be wise to apply fertilizers, and the sooner potash and phosphoric acid are put into the soil about the trees the better it will be; for the materials that are most generally used that contain them, such as muriate and sulphate of potash, will dissolve slowly and need some time to become available. Fall applications are very timely. But it is not so with nitrogenous manures. The nitrogen, if in an easily soluble form, as in nitrate of soda, will be lost to a considerable degree before the growing season comes. I would suggest making a mixture of 500 pounds of muriate of potash to 1,000 pounds of dissolved phosphate rock, and give each tree 10 pounds of it, scattering it well and cultivating, plowing or digging it into the soil. This I would do without any unnecessary delay. Then next May I would apply one or two pounds of nitrate of soda to each tree, working it into the earth in the same way.

H. E. V. D.

The "Ox-Eye Daisy" in Minnesota.

Several Readers.—It is reported that the Legislature of Minnesota has made the common daisy a "legal outcast." Is that a fact?

ANS.—Yes; the Legislature passed the following bill, which was approved April 14, 1901:

SEC. 2. Any person who shall encourage, permit or allow the weed commonly known as the "Ox-eyed Daisy" to grow upon any land owned, controlled or in the possession of such person within this State, or who shall transport such weed from one place to another within this State except from one place to another on the same farm, lot or estate for the purpose of its destruction, or who shall allow the same to grow in any greenhouse or garden under the control of such person, or who shall exhibit for sale or have in his or her possession for sale, or shall sell any of such weed; and any person who shall have in his or her possession for exhibition, or shall exhibit at a public or private flower sale or flower show, or place where flowers are kept for sale or show any of such weed, shall be guilty of a misdemeanor, and, on conviction thereof, shall be punished by fine of not less than ten (10) dollars, nor more than one hundred (100) dollars, or by imprisonment in the county jail for not to exceed ninety (90) days.

That bill is certainly what one may call "a daisy." As one of our correspondents remarks: "It seems to me that imprisonment for 90 days is a pretty severe offence for allowing Ox-eyed daisies to survive on a farm. To enforce such a law would mean, I imagine, that a large portion of the population of New England would go to jail; the decision also to extend the punishment to those who grow the weed in hothouses and who sell the same is to my mind high-handed legislation. I fear that some of our legislators have not quite enough of work to keep them busy."

Rye as a Money Crop.

G. H. E., Peace Dale, R. I.—I am considering the improvement of a run-down farm. I have noticed several articles in THE R. N.-Y. which seem to indicate that when properly handled rye is a profitable crop to grow. Will you please give me information regarding the best time to cut for market, that is, before the grain is mature or after maturity; the size, shape and weight of bale, with the form of press best suited for baling? If allowed to mature the grain how should it be thrashed? Will the same press which is used for straw also prove to be the best for baling hay, or is a smaller, more compact bale required.

ANS.—On poor land near the large cities rye ought to prove a good crop. It is a good crop to start with in improving poor land, for it responds well to fertilizers, and is a fine crop in which to sow clover seed. Near a large market the straw may be sold in small bundles, for it brings more in this form than in bales. Our rye straw is bound as it comes from the thrasher, which delivers it without crushing or breaking. The heads are thrashed out, and at the back of the machine is a device much like that on a twine binder, which ties the straw into bundles of about five pounds each. If it is possible for you to sell the straw in bundles, we would advise you to do so. We cut the grain at maturity—when the straw is a bright yellow and the heads are thoroughly ripe. This gives stiffer and harder straw, which is what stable keepers want. We understand that in sections where the straw is baled the same press is used for both hay and straw. Small lots of straw are thrashed out by hand with flails, but the machine we have mentioned will do the work well without breaking the straw.

Is Rubber-Growing Profitable?

W. E. B., North Baltimore, Ohio.—There are a number of companies advertising rubber, coffee, and other plantations in Mexico, Central America and the West Indies, and, while I understand that you cannot say anything as to their responsibility, etc., your reading and observation will doubtless allow you to answer the following through THE R. N.-Y.: Is a rubber plantation practicable? At what age are the trees first tapped and what is an average product per tree? Are there well authenticated examples of successful plantations? What are the objections against risking investment in such enterprises?

ANS.—After a careful investigation of the subject of rubber culture, through some of the foreigners at the Pan-American Exposition and a specialist of our own people who has been in the tropics of America on purpose to study this subject, it may be said that the culture of the trees which produce rubber is perhaps practicable in some peculiarly favorable locations in the tropics of Mexico, Central and South America and in the West Indies. There are a number of plantations of Ficus elastica and some other species, made with a view to commercial profit, but up to this date none of them is old enough to make a fair test, so far as I have learned. As there have been very few attempts at tapping these planted trees, it is impossible properly to estimate the amount that each may produce or the proper age at which tapping ought to begin. It may be a wise thing to invest money in a rubber plantation in a suitable place, as in the moister parts of Cuba or Porto Rico, but that is a question that is not well settled. The increasing demand for rubber, because of the many new uses to which it is constantly being put and the rapid extension of marine electric cables would lead one carefully to investigate the whole subject and invest if deemed advisable. Our own Government is now investigating, and it should not be long before something definite ought to be known. H. E. V. D.

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The washer I received from you is the best I ever saw. It will do all you claim for it. I can do the washing in three to four hours, where it took a colored woman a whole day to do it. We have 10 boys and three girls, and you can judge from that that we have large washings. Myself and daughter would not part with this machine for twice what it cost. We live on a farm.
MRS. LEVI H. HARRISON.

THROW OLD STYLES AWAY.

FIVE MILE, Tex., Aug. 9, 1900.
The washer just received. Tried it, and am very highly pleased with it. Four women tried the machine and all like it. It does not take a man to turn it. A farmer will save time and money by buying it, and throwing old style washers away.
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EVERYBODY'S GARDEN.

PROFIT IN THE HOTBED.—It must be admitted that with farmers in general, and even the dwellers on village or suburban lots, the idea of utility in hotbeds usually meets with little favor, and in so far as personal acquaintance extends their use is almost unknown. Whatever the reasons assigned for this almost total neglect, it is practically certain that in general they are not well founded, and a thorough trial of the work for a season or two would in most cases sweep all the objections aside. Were we to figure the cost of the hotbed and labor necessary for its care, and offset against that the value of the products, not merely in dollars and cents, but in family comfort and convenience, the argument would be entirely on one side. This being the case, cannot more farmers and more families in general be induced to give the idea a fair trial? By reference to page 751 the hotbed products were principally radishes, lettuce, tomato and cabbage plants, which totaled $23.09. The lettuce was not all matured in the bed, but in part was transferred to the open ground. On the other hand, onions and beets not credited, were started for transplanting in the open ground, and the space occupied for both hotbed and cold frame was only 12 x 24 feet. Even this showing was not the full capacity, as not a seed was sown until April 1, and the beds were laid aside early in June. Operations might have been carried on in the same beds for half the Winter, and by judicious rotation the receipts would have been much augmented. But laying aside what might have been, the fact still remains that the hotbed may be made a substantial source of profit, and ought to be an adjunct of every farm home at least. We hope also, that the New England farm girl, and perchance many more, may find in these suggestions a stepping stone to a larger base of operations.

UTILIZING GARBAGE.—The following experiment, while perhaps not conclusive or safe to follow on all occasions, is nevertheless worthy of note. While on a visit to a neighboring city two years ago, I was not a little surprised to see a gardener allowing the city garbage to be hauled and dumped on his land. I was not favorably impressed with the idea, but decided to await results before expressing opinions. The soil was a light gravel, and as he informed me, had been nearly worthless for growing ordinary crops. Corn had been planted the Spring previous, which as to results was almost a total failure. The garbage was the regular city accumulations, from wood and coal ashes to everything conceivable, and was hauled out and dumped in piles from the large cans used for the purpose. Being near the henhouse a large flock of hens had free access to the heaps, from which in the mild weather their living was chiefly obtained. It was usually forked over and spread out as fast as hauled, but it looked to be from two to four inches deep after being spread. The effort was to distribute the ashes, of which there was a large contingent, as evenly as possible through the mass, with the idea of plowing under deeply to form a more lasting subsoil, which in that land was sadly lacking. Now as to results: In the Spring the idea of the deep plowing was fully carried out, and corn was again planted, with the result that the crop was enormous. The conditions and results as above stated are entirely authentic, but other soil conditions might give vastly different results. While not advocating the practice for others to follow, I would with my present experience feel perfectly safe, with proper precautions, to try it on almost any soil. In extensive gardening localities, where the manure supply is always a serious question, this use of garbage might to some extent help to solve the problem both for the cities and the gardeners.

J. E. MORSE.

Cow Peas Over Winter.

J. E. S., Columbus, N. J.—I have a fair stand of Crimson clover on nearly all my corn and garden ground. Have you noticed the effect of cow peas allowed to lie on top of ground all Winter and plowed down in early Spring in the succeeding crops? There does not appear to be much left of them in the Spring. If they do as much good this way I should prefer them to clover, as they can be plowed earlier and we can be more sure of a stand in dry weather. I sowed a small plot in sweet corn at last working in June and they made a thick covering for the ground, but am afraid there will not be much to be seen to plow under by Spring, although the good may be there.

ANS.—"The good is there" safe enough. We have usually left the cow peas to die down on the ground. It is true that the leaves fall, and that by Spring only a few brown vines or sticks are to be seen. We know of people who became disgusted with this Spring showing of cow peas, and declared that they never would try them again. The crop grown after these "little sticks" was so large that these people changed their mind. The most scientific method with cow peas is to plow them under early and sow rye or some other Fall and Winter crop. This can be plowed under in Spring. It is not always desirable to have a heavy crop for Spring plowing. In such cases the cow peas may be left to die down on the ground. They will surely be heard from. Or, oats may be sown in place of rye. The oats will make a heavy growth through the Fall, cover the ground and die before Spring so as to make easier plowing.

For the land's sake, use Bowker's Fertilizers. They enrich the earth.—*Adv*

A Few Hundred Dollars a Year
FOR YOUR INFLUENCE.

While I am doing the largest business in my line in the world I am not satisfied. I want to make it ten times larger even at a greatly reduced percentage of profit.

I want to sell ten times as many farms as any other half dozen real estate brokers in America.

With this end in view, I want to enlist the help of every influential farmer who wants to make a few hundred dollars a year by occasionally giving me a few tips and attending to a little easy dickering for me.

W. M. OSTRANDER.

My proposition to you is this:

If, when you hear that one man has decided to buy another man's farm, you will arrange to have the deal closed through me, I will give you one-half of my commission.

You will go to the prospective buyer and tell him that it will be a personal favor to you if he will close the deal through me.

You will tell him that, if he has not definitely promised to buy, I can probably buy at a lower price than he can. I will give him the full benefit of the reduced price. I will collect my commission from the seller and send one-half of it to you. Or I will, if you prefer, authorize you to collect your share of the commission direct from the seller.

You will tell the prospective buyer the reason why I can buy the farm for less than he can. It is because the owner will know that, if I cannot buy his farm at my price, I am in a position to hunt up plenty of other good farms which I *can* buy at my prices. And he isn't going to refuse a fair offer from me if it is definite.

Thus, by closing the deal through me, you will make something, I will make something, and your friend (the buyer) will save something.

You will readily appreciate the fact that this is a gilt-edged proposition. It involves no real work, no canvassing, no expense, and no risk of any kind, on your part.

You might make fifty or a hundred dollars, or more, by a single five minutes' talk with a friend or acquaintance, or by writing a single letter.

You are pretty sure to hear of a number of your neighbors who are going to buy farms in your locality during the coming year.

And, if you put this proposition to each one, fully and clearly, I am sure that each one will accept. I am sure that no one is going to refuse to let me save a hundred or several hundred dollars for him.

If *you* are going to buy a property of any kind, anywhere, and if you have decided upon the property, I am practically sure (for the aforementioned reasons) that I can buy it at a lower figure than you can.

In that event, if you have positively decided on a certain property which is not now listed with me, *I will give you all I can save and one-half of my commission*, if you will put me in communication with the owner and let me close the deal.

No other real estate man in America will make such a liberal offer to you.

No other real estate broker is in a position to successfully carry out such a plan.

It is the magnitude of my business, my unequalled facilities, my force of more than fifty capable assistants, and the prestige gained through many thousands of dollars' worth of judicious advertising, that enables me to operate in such a manner, and to buy at lower prices than any other individual.

If you want to buy any kind of a property, anywhere, and if you have not selected it, tell me what you want so that I can send descriptions, prices, terms, etc.

I have all sorts of desirable properties in all parts of the United States, besides a few excellent farms in Canada and investments in Mexico.

If you want to sell any kind of a property anywhere, send me a good description, including the selling price, and learn my successful plan.

If you think you will be able to coöperate with me in closing a few sales during the next few months, please write to me about it at your earliest convenience.

Do any of the following properties interest you?

W. M. OSTRANDER,
1440 North American Bldg., Philadelphia, Pa.

A Fine Farm in Delaware Co., N. Y.

Here is a genuine bargain. It contains 215 acres, 50 of which are in native timber. The remainder is good, rich soil under a high state of cultivation. The orchard contains apple, pear, cherry and plum trees. Good, convenient house, with lawn in front and four barns. All necessary outbuildings. Fine spring water; ½ mile from Northfield post office and two miles from railroad station. The price, $5,000, is less than the cost of the buildings.

39 Acres in Saratoga Co., N. Y.

This is a good rich farm situated on the east side of Saratoga Lake. The location is very desirable and the large farmhouse is used for the accommodation of Summer boarders. Great abundance of fruit. Good buildings and fences; two miles from White Sulphur Springs and six miles from Saratoga Springs. Price, $5,300.

21 Acres in Tompkins Co., N. Y.

This farm overlooks the city of Ithaca which is one mile distant. All the land is under a high state of cultivation. Good buildings; new double house; abundant fruit, and fine water; ⅛ mile to railroad station. A very desirable property. Price, $15,000.

24 Acres in Ulster Co., N. Y.

Nearly all the land is under cultivation. There are about 1,000 fruit trees of choice varieties. Good boating and fishing. About 20 minutes from the railroad station and the New York boats. This is a fine location for a large boarding house or Summer hotel. Price, $10,000.

Good Store Property in Ulster Co., N. Y.

This was built for a general store, but can be used for any kind of business. Any live man can build up a prosperous business in this location. The store building is 20x40 ft.—two floors and basement. The adjoining house is 24x24 ft.; ¼ mile from post office; two miles from railroad station. Church and school convenient. Price, $2,000.

In Hannibal, N. Y.

On this four-acre property are a comfortable dwelling, a mill with water-power of 10 to 30 h. p., and an excellent orchard of apples, pears and small fruit. The property is only 80 rods from the New York Central Railroad station, in the pleasant little village of Hannibal, Oswego Co., N. Y. Price, $3,000—easy terms. Full particulars if you will write.

An Excellent Farm in Greene Co., N. Y.

It contains 100 acres of fine farming land and is considered one of the best farms in Greene Co. Excellent buildings, nearly new, and all modern improvements. House contains 15 rooms and bath. Has hardwood floors. There are about 1,500 fruit trees—pears, apples, peaches and cherries. Good schools and store nearby. The location, in the Catskill Mountains, is especially desirable because of health, scenery and good water. Price, $15,000.

44 Acres in Oneida Co., N. Y.

This is a finely located farm near the town of Trenton. Good rich soil. Abundant fruit and shade. Attractive lawn. Convenient to schools and churches. Very desirable neighborhood. Price, $4,000.

A Bargain in Manheim, N. Y.

This comfortable and attractive cottage is situated in the center of the village of Manheim, Herkimer Co., N. Y. It contains 15 rooms and bath. Has electric lights, modern plumbing and all conveniences. Fine shade. Lot 41x115 ft. Price, $1,600—$900 down.

This is but one of more than three hundred advertisements of mine which appear in all the leading periodicals. I am advertising properties in every State in the Union. I can sell your property no matter where it is located. I have especially desirable properties in Florida and California. Write to me to-day.

A Residence in Suffern, Rock. Co., N. Y

Here is an attractive, well built residence in a pleasant locality. It contains 13 rooms and bath and has a laundry in the basement. There is a large porch on three sides. The lot has a frontage of 150 ft. and is 120 ft. deep. Ten minutes' walk from railroad station. Church and school convenient. Price, $5,500—$2,500 cash; balance, mortgage.

450 Acres in Washington Co., N. Y.

Seventy-five acres are in timber; 200 acres can be cultivated. Orchard contains about 75 trees. House, two barns, ice house, granary and other buildings; two miles from post office and railroad station. Price, $8,000.

A Fine Residence in Cortland, N. Y.

This house was built entirely by day work and is most carefully and substantially erected. The interior is finished in cherry, ash, butternut and curly maple. Handsomely carved mantels. Plate glass and stained glass windows. Steam heat and all conveniences. Contains 14 rooms and bath. Large stable. Abundant shade and fruit trees. Lot 140x278 ft. Price, $15,000—$9,000 cash.

Two Acres in Patchogue, N. Y.

This property has a frontage of 120 ft. on Swan Creek, and is admirably adapted to poultry raising. The land is especially good for truck and vegetables of all kinds for which there is a ready market. Patchogue is about 1½ hours from New York on the Long Island R. R. Price, $1,100—the value of the ground alone

W. M. OSTRANDER,
1440 North American Building, Philadelphia.

Ruralisms

NOTES FROM THE RURAL GROUNDS.

THE VALUE OF VARIETIES.—There is a well-founded objection to the indiscriminate introduction of new varieties of economical and ornamental plants. Unless the newcomer is distinctly superior in some important particular to well-known kinds, there is little excuse for unloading it on the public, though the temptation to disseminate a new plant showing local excellence is always strong. As plant cultivation becomes more specialized and intensive, greater discrimination is needed to find varieties having the desired qualities of product, and in addition resistant to parasites and diseases such as appear to be favored by high cultivation. An important work of the near future will be the breeding of such resistant varieties by the selection of seeds or propagating stock from individuals appearing to resist the invasion most successfully, and continuing the selection through generations enough to render the new strains sufficiently immune for practical cultivation, and to create summarily new resistant varieties by hybridization whenever such result may be possible. While waiting for these vigorous new kinds, earnest investigators are looking over our stock on hand, and find here and there a standard or obscure variety already possessing, from some peculiarity of constitution, the needed resistant qualities. Thus the Ives grape is successfully grown where other kinds are destroyed by rot, the Argenteuil and Palmetto asparagus resist the rust to a considerable degree and so on. The discovery of a peach immune to "yellows" is announced in a bulletin of the Bussey Institution of Harvard University and reports of a cow pea, the only one of 75 varieties, entirely resistant to the "eel worm," so common in southern soils, which kills the plants by forming knots on the roots, comes from the Agricultural Department at Washington. The peach is known as White Magdalene, and has been grown for nearly 160 years in the family of Edmund Hersey, Hingham, Mass., the original tree having been raised from a seed brought from southern Europe about 1740. It is of medium size, white-fleshed, freestone and good flavor, and remains essentially the same after repeated generations have been raised from seeds, withstanding all the vicissitudes of the harsh New England climate. The seeds germinate as readily as in the early days, and always reproduce the parent, it not appearing to cross with any other near-by variety. The wood ripens well, and is rarely killed by cold weather. No tree has ever shown the slightest indication of yellows, though some have grown so near other peach trees that have died of the disease that the branches of the two have intertwined. Peach yellows is so prevalent in the vicinity that trees of other varieties, grown both from seeds and buds, live but a short time. The White Magdalene does not appear to be widely disseminated, though it is spoken of in Downing as a foreign variety of fine quality, ripening by the middle of August.

The resistant cow pea is named the Little Iron, and is apparently too hard a customer for the minute and almost invisible worms causing the root-knot disease. The Department's experiments with certain strains of the Little Iron cow pea have been so satisfactory that an extensive distribution of the seed for widespread trials will be made as soon as a sufficient quantity can be procured. Root-knot galls infest a wide variety of useful plants, such as roses, violets and peaches, as well as cow peas, though different species of "eel worms" may be concerned in the injury. At any rate it is comforting to hope for a resistant cow pea to be used as a cover crop in peach orchards, if for no other purpose, though the cow pea root-knot has hitherto been quite limited to southern soils. Eel worms and root-knots must not be confounded with the nitrogenous nodules and their accompanying bacteria normally found on the roots of healthy cow peas. The latter is a friendly partnership, of the greatest value to the cow-pea plant and to the cultivator by determining the fixation of nitrogen from the air, while the former is a dangerous and often fatal disease.

THE CAUSE OF PEACH YELLOWS.—The various theories as to the cause of the obstinate and fatal disease of yellows are thoroughly overhauled in the Bussey Institution bulletin by Prof. E. W. Morse. There is not yet sufficient evidence to fasten the distinctive process on microbes, unsuitable conditions of soil or climate, or injuries from insects or of mechanical origin. The only remaining factor seems to be infection by a poisonous enzym conveyed to the seed germs through pollen from diseased trees, or more directly by budding, grafting or possibly pruning with tools used on affected trees. The strange thing is that few young trees show any signs of the disease, else they would not be transplanted to orchards, but after attaining bearing size, and especially after producing a crop or two of fruit, they sicken and die. The explanation is that the enzym, which is a secretion or alteration of the protoplasm of the living plant cells, lies practically dormant, or at least is unable to provoke its characteristic alteration of nutrition, ending in the phenomenon known as yellows, until the vigorous youthful growth has been checked by maturity or cropping. The reason why a potent variety like the White Magdalene is immune to the yellows contagion may be sought in the thorough acclimatization it has obtained by being grown for successive generations in one place before the yellows appeared and to its harmonious internal organization, enabling it to resist chance infections from outside sources. Prof. Morse thinks that the use of seeds or pits from southern localities where the life struggle against climate is not so severe is an important factor in the progress of the disease in the North.

THE CLOSE OF THE GARDENING YEAR.—It remained for the night of November 10 to bring a killing frost, or rather light freeze to the Rural Grounds. All flowers except a few hardy Chrysanthemums in a particularly well-sheltered place were blasted, and the most brilliant late Autumn display we have yet seen quickly ended. All crops, including late celery, are safely housed, and only a little grading, covering and tree planting remains to wind up the season's operations. Instead of raking up and burning all rubbish and leaves, as generally advised, we are covering exposed slopes not in grass or Crimson clover to protect the soil from Winter rains. We have allowed few, if any, weeds to seed, and are convinced that the soil is benefited by a light covering during Winter, even if only of the past Summer's dead growth. Such trash will greatly diminish in bulk and weight by next Spring and be easily removed.

W. V. F.

SENSIBLE FRUIT NOTES.

What I say and think about the Stringfellow method of planting trees is this: While it may be a success or partially so under some conditions, the principle is radically wrong for general application. If it would succeed anywhere I should say it would on rough, stony hilly soil. If we should plant trees here on our level sandy and loamy soils with little or no cultivation we would have a sorry looking orchard. I went several years ago to Berks Co., Pa., to Christopher Shearer, to see the Globe peach. He had the finest show of peaches anyone ever saw, growing on the hillsides, with practically no cultivation, and an enthusiast would jump at the conclusion that peaches did not need cultivation, but a very long practical experience has taught me differently, and should you succeed with the Stringfellow method it would by no means be conclusive that the principle was right for general application.

Wet soil is not fit to plant any kind of a fruit tree, and the stone fruits least of all. I would not advise one to plant quinces on it if at all wet; if it is not fit to grow potatoes it is not fit for quinces. The prevalent idea that the quince needs a moist or wet soil is an erroneous one, and I have seen many failures from the practice. Tree agents advise people to plant quince trees where it is too wet for general purposes, and they invariably fail. I have grown more or less quinces for several years, and my best success with fruit and the trees has been on good sandy loam.

New Jersey. CHAS. BLACK.

A Superior Grape.

Several years ago Prof. Munson, of Texas, sent me a grapevine, the name of which I have lost. I planted it at a place very much exposed to all kinds of weather. Last year it bore a few bunches. I made a bottle of wine from it. Judging from the small quantity of wine made, I think it will make a first-class claret, superior to Virginia or Missouri Riesling. This vine, which bore about 18 pounds of grapes this year, grows in close proximity to about 1,500 Concord vines, which owing to the wet Spring and the inability to spray them, were all spoiled by the black rot; but on this vine not a berry is affected. The wood and leaves are perfectly healthy. I may add, this vine grows at an elevation of about 925 feet above sea level at the foot of the Alleghany Mountains; has never received the least Winter protection, and seems in our climate perfectly hardy.

Hollidaysburg, Pa. F. J.

The grape is either a Carman or an America, or possibly R. W. Munson. If the variety has much very dark violet red juice, it is America. If it has white juice, or only rosy red when fermented on the skins, it is Carman, or possibly, R. W. Munson. Neither of these is troubled with black rot, and all of them make good wine. America, very dark violet juice, R. W. Munson, clear claret red, Carman, white or pale rose. All excellent for market.

T. V. MUNSON.

GATHERING LEAVES.—Those who live near forests have a supply of excellent bedding at hand; and, unless rains are too frequent, the leaves may be gathered to advantage and stored for Winter use. They are bulky and difficult to handle. Readers give the following methods of doing this work, which have been found satisfactory. Of course, the leaves must first be raked into piles. Then take large bran sacks, and, while one holds the sack, another can stuff in the leaves. By treading them down once or twice while filling a surprising amount can be put in. The sacks need not be tied, and can be loaded on to a hay rigging. If one has a wagon with a large box, like those used in hauling charcoal, and can drive close to the piles of leaves, they may be thrown in quickly with a barley fork, or a special rack can be made for holding them on a hay rigging. Where it is not convenient to get close to them with the wagon, a four-bushel basket works well (this is also handy to have around the barn for handling chaff or other light stuff); or a sheet may be made of coarse sacks, which, when the corners are brought together, will hold a good many leaves.

BEFORE BUYING A NEW HARNESS write for our 200 Page Illustrated Catalogue giving full description and prices of all kinds of single and double harness and save 25 per cent.
King Harness Co. 510 Church St., Owego, N.Y.

WELL DRILLING Machines
Over 70 sizes and styles, for drilling either deep or shallow wells in any kind of soil or rock. Mounted on wheels or on sills. With engines or horse powers. Strong, simple and durable. Any mechanic can operate them easily. Send for catalog.
WILLIAMS BROS., Ithaca, N. Y.

BRAND NEW STEEL ROOFING

Bought at Receivers' Sale. Sheets either flat, corrugated or "V" crimped. No tools except a hatchet or hammer is needed to lay the roofing. We furnish free with each order enough paint to cover and nails to lay. Price per square, $1.75
A square means 100 square ft. Write for Free Catalogue No. 57 on General Merchandise. Chicago House Wrecking Co., West 35th and Iron Sts., Chicago, Ill.

FARM TELEPHONES
How to put them up—what they cost—why they save you money—all information free. Write for it to J. Andrae & Sons, 208 W. Water St., Milwaukee, Wis

ICE PLOWS $12 Also Ice Tools. Write for discounts. H. PRAY, No. Clove, N.Y.

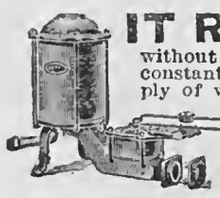
ICE CUTTING is quickly done with DORSCH Double-Row STEEL PLOW. Cuts faster, easier, and with less expense than any other plow made; cuts any size cake and depth; marks and cuts at the same time. Pays for itself in less than two days. For Eastern States we ship from Albany, N.Y. Get catalogue and prices.

Made in three sizes.
John Dorsch & Sons 226 Wells St. Milwaukee, Wis.

On Rough Ground
use PAGE Fence. It fits any surface perfectly.
PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

WIRE FENCE AT WHOLESALE.
Also Coiled spring, plain and Barb wire. Send for Cat. and prices. W. H. Mason & Co., Box 67, Leesburg, O.

Cider Machinery.—Send for catalogue to Boomer & Boschert Press Co., 118 West Water St., Syracuse, N.Y.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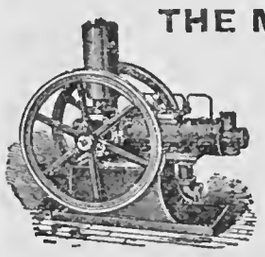
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LAND DRAIN TILE
(Car-loads or less).
Sizes, 2, 2½, 3, 4, 5 and 6-inch.
WILLIAM T. LEGGETT & CO.
1025 Liberty Avenue, Pittsburgh, Pa.

HOPE FARM NOTES

FAIR EXCHANGES.—The miller offers to take my rye straw at $15 per ton in exchange for bran at $20. By delivering the straw in small lots to people who keep one or two horses I could get more for it, but the hauling would make about the difference. Figuring on this proposed exchange gives a pretty lesson in fertility and feeding values. Here are the figures to start with:

FEEDING VALUES.

POUNDS IN ONE TON.

	Protein.	Carbohydrates.	Fat.
Wheat bran.....	200	970	62
Rye straw.....	16	730	8
Corn	168	1,212	96

FERTILIZING VALUES.

POUNDS IN ONE TON.

	Nitrogen.	Potash.	Phosphoric Acid.
Wheat bran.....	45	31	54
Rye straw.....	8	18	5
Corn	32	8	12

In figuring the feeding values I have given only the parts that are digestible by the average animal. For example, in a ton of rye straw there are really 60 pounds of protein, but the straw is so tough and hard that barely 16 pounds are digestible. Even if you could get an animal to eat a ton of the straw it would be too much like the man who drank a bucket of water to get one drink of whisky which some one had poured into it. I ought to get more than 1,500 pounds of bran for a ton of the straw, but suppose I get only that much I receive nearly 10 pounds of protein and six of fat for each one I send away. I don't bother about the carbohydrates, because the corn fodder furnishes plenty of them. I also get over four pounds of nitrogen, nearly nine of phosphoric acid and 1½ of potash for each pound I sell in the rye straw. From both points of view it will pay to make the change.

THE OTHER MAN!—But is not some one cheated in the bargain? Where can you find people who are foolish enough to make such a one-sided deal? The men who buy this straw are not farmers at all. They have small stable room, and the manure pile is a nuisance. They want rye straw because it is hard and tough, and does not break up readily. With care it can be used again and again as bedding, while the life of oat or wheat straw would be barely half as long. If they used these straws the manure pile would be twice as big and they would need twice the storage room. Nature gave the rye plant a tough, hard hide, and it holds the few pounds of fertility that it takes from the soil as a miser grips his few dollars! I never realized how tough rye straw is until my neighbor pulled down an old stone house in order to build a newer dwelling. That house was at least 150 years old. When it was built no cement or mortar was used—but clay and straw were packed between the stones! I got specimens of this clay in which the straw is still straight and tough! That makes me more and more inclined to get rye straw off the premises. It is too tough, and does not decay readily in the soil. I can't wait a century for humus to decay! If it will hold the house together for 150 years it will hold the mortgage on to the farm if you depend on it for manure! Plowing under rye straw is too much like the man who hid his talent in the ground. You will find it where you put it, instead of finding it in other crops. For every reason, then, it pays us to sell rye straw and buy grain.

SELLING CORN.—Why not sell corn too? I can get at least $26 a ton for shelled corn, and this would buy 2,600 pounds of bran. By doing this I would get two pounds of protein and less than one pound each of carbohydrate and fat in exchange for one pound of each in the corn. In fertility I would receive a little less than two pounds of nitrogen, five of potash and nearly six of phosphoric acid for each pound in the corn! The 2,600 pounds of bran will make a better ration fed with the stalks that produce this corn than the yellow grain would! There seems to be sound argument in favor of the change, but I do not expect to make it. Say what you will about corn, there is no grain so convenient to feed and so generally useful for all stock. When you feed it you know just what you are doing, because it does not vary. When you buy bran or other mill feed you may or you may not have what you order. I may exchange some corn for whole wheat, but the business of parting with this standard grain is very different from that of the rye straw. I claim that it will seldom pay an eastern farmer to sell corn. I would rather buy linseed and bran, and feed them with my corn to pigs. I feel sure that with roots, rape or clover to help out, the pigs will pay more for the corn than the miller will!

"SCROOGE DOWN."—Last week I took the Sprout and the Bud up into Orange County, N. Y., to see O. W. Mapes, the hen man. These girls mean to start right with the Hope Farm poultry. I suppose Mr. Mapes has owned 50,000 different hens during the past 12 years, and a feather's weight of sound advice from him is worth a pound of talk from some "know-it-all." I will tell you about the hens later, but here is the point I want to make this time. On the train coming home the conductor stopped and gazed at the Bud. When a man has been told that his daughter resembles him he appreciates such attention—until he learns what it is all about.

"How old is that child?"

I began to see what was up, but there was no backing out.

"She is seven years old!"

"Then she will have to pay half fare!"

There was no getting around it. Poor little Bud—your days of free passage are over! You are a citizen now in the eyes of the corporations! I paid the fare, and as my purse lightened my years seemed to grow heavy. There flashed into my mind a little incident that I had not recalled before in 30 years. Strange, how these little things flash out of the past.

When I was a little boy I was "brought up" by an old couple who had some marked ideas of economy. Once, when I was nearly 10 years old, I rode with the old lady on a railroad train. As the conductor came in sight this command was sternly whispered to me:

"Scrooge down! Scrooge down! So he will think you are too small to pay fare!"

I ought to have been a hero and refused to "scrooge." In fact I suppose I should have stretched out an inch, but I was a cowed and homesick little boy, and I am ashamed to say that I did my best to shed five years of growth! The conductor came and eyed me for full half a minute. A sharp elbow nudged my ribs. I knew that meant another "scrooge" and I felt my little spine close up like a telescope. I saved the fare, but I lost self respect and courage which 20 years of pounding at the world hardly brought back. God help the children who are taught to "scrooge" and deny the truth about themselves. The world seems to have its fair share of people who, in order to save a few dollars, will obey the order to "scrooge down" and try to pass themselves with a spurious ticket. Some of these people I blame—others I do not, because I know what early example and "bringing up" will do for people. I am aware that I cut a poor figure myself in this episode, so it is not for me to criticise others. Had the Madame been in my place I think she would have tried to lengthen out an inch or two and given the old lady a piece of her mind to make the size more evident. There will be no "scrooging" around her!

QUESTIONS.—What roots do you raise for Winter feeding?

Yellow turnips.

Are not sugar beets better?

I am told so, but have never grown many.

Why not?

The chief reason is that the yellow turnips, with us, comes as a second crop. We can sow it after early peas, sweet corn or even early potatoes. The sugar beet requires a longer season, more care and is I think harder to grow. We feed most of these roots to the brood sows.

What are these sows eating now?

They have cabbage and flat turnips, with a fair feed of dried brewer's grains and a few ears each day of nubbin corn. Next month we shall begin feeding linseed meal with cooked turnips.

Why do you cook the turnips?

Chiefly because it gives a warm breakfast. The turnips would do well fed raw, but when cooked, a strong and healthful soup may be made by adding bones or small pieces of lean meat.

Do you not boil the small potatoes?

Yes, but this Fall they are largely fed to the hens. They are boiled and mashed and mixed with dried brewer's grains or bran, fed in the morning.

Are you not afraid to feed corn to brood sows?

No—not in small amounts when the sows have green feed like cabbage or rape. One trouble with corn for brood sows is the fact that it contains so little of the ash or bone-forming elements. To offset this we keep constantly before the sows a box of wood ashes with which small quantities of salt and sulphur are mixed.

Are you setting any trees this Fall?

About 150 peach and 25 quince for the purpose of testing the Stringfellow method of Fall planting.

Are you setting small peach trees?

No, the largest we can get. I am now satisfied that the little June buds are too small for our use.

Do you advise your friends to set trees on this Stringfellow plan?

No—nor my enemies either! It will make one of the most interesting experiments one can try. I shall plant more trees next year, but I do not yet know enough about it to give sound advice.

How is your Fall seeding of grass and grain?

Good. The Fall has been very dry, but our heavy soil holds moisture well and the crops have made a good start.

Does the loss of your potato crop discourage you?

Yes and no! I feel the loss of the crop sadly, but I am now well convinced that our hills are not well adapted to potato growing. Some of the lower fields may answer, but as a whole the farm cannot compete with many others in potatoes. I am sorry, for the potato crop suits us well, but I feel sure that we can find others that will prove more profitable and just as pleasant.

How are Cow-horn turnips?

Still thrifty. They look as though they might live till the middle of December. The Crimson clover among them is thick and green. I call it a good mixture for a cover crop.

H. W. C.

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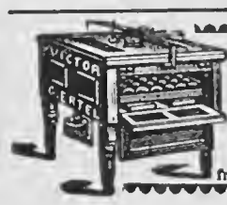
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The Rural New-Yorker

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THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, NOVEMBER 30, 1901.

ON page 747 a Connecticut farmer's wife gave some good advice to farm girls about poultry keeping. Her figures were attractive, and letters calling for details began to pour in upon her. She could not begin to answer all, and so she has written the whole thing out in a strong article for THE R. N.-Y. We guarantee a treat when it is printed.

*

THE meeting of the New York State Dairymen's Association at Olean, on December 11-12, will be a good one. We have heard many hard words thrown at the scrub cow and the filthy milk can. It is well to make dents and scars, not on cow and can, but on the men who are responsible for adding scrub to the cow and not giving it to the can. A bigger and blacker target than either looms up this year—oleo. The bull's eye on this target is painted on the back of the chairman of the House Agricultural Committee. Let there be no compromise with oleo at Olean.

*

THE prize contest for photographs showing helpful devices or scenes in women's work will close on December 1. Few pictures have been received thus far, but these are of a high order. There is still a good chance to win a prize. Possibly some woman with a camera has a husband or even a hired man who never permits the wood box to be without its fill of dry wood and who always wipes his feet on the mat. He would certainly be classed as a prize-taking household economy. Long years of married life may have convinced the farmer's wife that he will never be hung for his beauty, but none of us wants him hung, and in this contest the useful wins.

*

THERE is a little flurry of excitement in New York City just now over the proposed plan of permitting rumshops to keep open in the afternoon and evening of Sunday. It is not necessary for THE R. N.-Y. to give its opinion regarding Sunday saloons. Certain eminent "thinkers" and drinkers (including some clergymen) favor the scheme, but it is not likely to succeed. As one man sadly remarked last week: "The farmers up the State will kill a Sunday-liquor bill in the Legislature!" He was probably right in regard to that, but he was wrong when he went on to say this: "The farmers have no business to say what we shall do in this city! They have never done anything for us!" The farmers have a vital interest in what is done in this city. They have meat, fruit, fiber, grain and other food to sell. Take milk for example. There should be twice as much sold here as is now consumed, and even then thousands would be obliged to go without it. The one thing that does more than all others to prevent the sale of milk is the sale of beer and other liquors. Money cannot be spent for liquor and also for bread, meat, fruit or clothing. The New York saloon is as much a market competitor for the New York farm as the foreign factory is for the shop where American goods are made. The farmer has a perfect right to object to any increase of competition. He would be a poor stick if he did not. But what has the farmer ever done for the city? We may answer this question by asking another. What would the city be without the farm and the farmer? Let the farmers of the country decide that for one year they will raise only enough to feed and clothe their own families, and grass would grow in Broadway so thick that you could cut it for hay. Why? Because there would be nothing left for city people to *handle* and make over. All that the workers in this great city do is to manipulate and change the things which originally came out of the soil. What have the farmers done for New York? Why, without them, the city, with all its wealth, would not be possible. You might as well ask what the heart in a man's body has ever done for the tongue and hand which receive the credit for the man's work.

*

THE time is close at hand when the farmer must once more *vote with the postage stamp*. How do you use the postage stamp as a ballot? You write a fair, respectful letter to your Congressman, Senator or State legislator, telling him in plain terms what you would like to have him do. The postage stamp carries it to him and if he pays no heed you send him another, and keep at him until he responds. When Congress adjourned many of the Senators looked like the figure which we printed last Spring, for they have been well plastered with stamps of protest against oleo. These stamps stuck to them well, and reminded them of their duty, but during their vacation they have been able to scrape most of these stamps off. Now is the time to begin to stick them on again. *Vote with the postage stamp.* Let no dodger escape.

*

IN a recent test case the California Supreme Court decided that a member of the Cured Fruit Association who sold his prunes to an outsider was liable to the Association for only the two per cent of the sale price mentioned in the contract; and that no penalty other than the payment of this two per cent could be inflicted upon him for disposing of his prunes elsewhere. The controversy arose out of dissatisfaction with the prices obtained by the Association. This decision upsets its calculations, and will render a different form of contract necessary in order to prevent members from dealing with outside parties. Of course the most binding contract is necessary to hold an organization of this sort together, though members naturally hesitate to put themselves so completely in the power of a board of directors.

*

THERE is a great and real need of fractional currency. Any man who has ever done business by mail with country people knows what an annoyance it is to receive postage stamps in payment of small bills. People send these stamps because they have no other way to send small sums of money without paying an extra price for doing so. A good proportion of the people who live in the country are a long distance from money order or express office. It would cost more than the small amount of money involved to obtain a postal note or an express money order. As a result the desired small order is either not sent or postage stamps are put into the letter. These frequently reach their destination stuck fast to the paper. With a fair amount of fractional currency in circulation we are confident that these small mail orders would be quickly doubled. Why have the people been deprived for so many years of this useful and necessary money? The only answer thus far given is the fact that the great express companies oppose it, because it would take much small money order business away from them! What an argument! Is this country to be run in the interests of a few big express companies, or for the benefit of a great many people outside these powerful corporations?

*

WE have lately had further tangible evidence of the good work being done by the officials of our National Department of Agriculture. In years gone by we have seen the introduction of the sorghum cane; the best of all oranges, the Washington Navel; and more recently the Australian ladybird beetle, that has been the salvation of the Citrus fruit industry in California. We have scarcely done reading of the introduction of the fig insect, that has made fig culture of the highest type an assured success in the same State, and perhaps elsewhere. And now, we have within less than a week's time received, through the efforts of the students of nature and science at Washington, under the encouraging leadership of Secretary James Wilson, three more most important friends of our rural industries. We have a dread enemy to our enemy, the San José scale, ready to do battle for us. We have a parasite of the Olive and Oleander scale and one of the Asparagus beetle and Grain plant-louse. The three latter, it is true, have not had time to prove their friendship, but we have good reasons for believing that they will do it in due time. We, as farmers and fruit growers should lay before our Members of Congress the necessity and wisdom of upholding the hands of those who are laboring in the Department of Agriculture. There is a plan to erect a new building in which to work at a cost of over $2,000,000, and the appropriation for it should be made without fail. This is less than some of our warships have cost, and there is no doubt of the comparative benefits being in favor of the more peaceful use of the money.

*

REPORTS come from various parts of New York State of a so-called "Farmer's Company" which is fishing for agricultural suckers with a most alluring bait. Promoters go about rural districts pretending to sell shares in a mammouth coöperative concern which is to control pretty much all the farm produce which is raised in this country. They offer 12 per cent interest on the investment, high prices for all the farmer has to sell, and low prices for all he buys, with no middleman's profits. They offer these shares at $50 each, and we are told that $60,000 worth were subscribed for in Greene County alone. Of course no reader of THE R. N.-Y. will touch one of these shares any more than he would touch a creamery shark, a buzz saw or a wild cat. We are informed that this concern is the same Buffalo seed company which we exposed last year. We printed their grain-growing contract, and showed the folly of signing any such document. We now repeat the warning, and urge all readers to refuse to sign petitions or requests for shares. Here is a part of the bait on the hooks of this company:

> Parties signing the petition will be termed charter members and will receive their shares at par value. After the petition is closed, parties desiring shares will have to pay the market price for the same, and it is calculated that it will never be less than twice their par value, as the dividend has never been less than three per cent quarterly, equaling an annual dividend of 12 per cent, and this amount, of course, makes a good investment on shares at twice their par value.

Let a farmer stop for a moment and think how silly it is to say that the coöperative sale of the products of his neighborhood will bring about any such result. If it were possible a good Grange or a live creamery association would accomplish the work for less than half the cost. As a specimen of pure, unadulterated "nerve," the following is entitled to the blue ribbon:

> This is a National corporation of farmers, by farmers and for farmers. There is no need of incurring the expense or necessity for any imaginary assistance which commercial agencies might think they could render by a rating. There would be as much sense for a large railroad corporation having each of its depots rated, or for a rating on the Post-office Department.

"Imaginary assistance" is good. We are asked if those who have subscribed to these shares can be forced to pay for them. We do not think so, and our advice would be to refuse payment after giving fair notice that you desire to withdraw. We have watched and fought these schemes for years, and we are convinced that while a man loses his reputation for hard sense by going into one of them, there is no reason why he should lose his hard-earned dollars also.

*

BREVITIES.

LIFE'S target—A high ideal!

IT does us good to see a bully cowed.

THE rooster sends his invoice through his bill.

IT'S a good thing to sit down on the sitting habit!

ONE way to dry up a cow is to dry up her pasture.

THE way to empty your character and purse is to get full.

Too many fat men develop a streak of leaning against the fence!

A KICKING mule may be described as a practitioner of the heeling art.

THE man who admits that he has much to learn is usually a good teacher.

SHELLING corn with a feed cutter is a novelty, as described in a poultry note on page 815.

OUR good friend Mr. Corn Fodder is keeping the wolf from many a stable door this Winter.

NOW, then, eastern farmer, with your smaller farm and field, how near can you come to matching those western corn figures?

THE farmers won a victory in that little milk war in Connecticut—page 809. That's what you get by hanging together.

THE plan mentioned on page 815 of running ear corn through a cutter before feeding to hens is a good one. We find that our hens can easily pick the kernels from the small ears.

THESE useful box measures may be made at home. Of course the figures given are for inside dimensions. For one bushel the box should be 24x11.2x8 inches; and boxes 12x 11.2x8, and 8x8x8.25 inches contain half a bushel and a peck respectively.

SPEAKING of the cost of raising corn, a reader in Indiana writes: "In regard to corn raising on prairie land, it is likely some of the renters near here, who pay 25 bushels per acre rent, and are now husking 18 bushels per acre, could give more pointers than I could."

Events of the Week

DOMESTIC.—Five cases of lockjaw, which proved fatal, occurred at Camden, N. J., up to November 18, believed to be the result of vaccination. . . . . In a cave-in at Oronogo, Mo., November 13, the entire plant of the Aurora Mining Company, one of the greatest zinc producers in the district, was swallowed up. No lives were lost. The plant comprised a hundred ton mill, office building and engine house, all of which were engulfed, together with six gravel cars and an immense tailing pile. On entering the ground a short time before the cave-in occurred workmen heard the timbers cracking, and signaled to be drawn up. The last man had reached the surface only a few minutes before the timbers collapsed, the earth yielded, and with a crash the whole plant sank into the abyss. Further cave-ins are feared, and work in that vicinity has been suspended. It is impossible to estimate the damage. . . . . A theater at Grand Rapids, Mich., was destroyed by fire November 13; one man killed and loss of $100,000. . . . . A fire in the business section of Clevelaud, O., November 12, caused a loss of $350,000. . . . . A fire in a varnish factory at Boston, Mass., November 12, resulted in damage reaching $150,000. . . . . November 12-14 a severe blizzard prevailed through the Mohawk Valley in northern New York; there was a heavy snowfall. . . . . In furtherance of the Government proceedings against Oberlin M. Carter, Attorney Stone, representing the convicted army officer, turned over $60,000 in railroad bonds, a note for $11,000 and $700 in cash. This makes the total amount received to date about $400,000. Another portion still to be transferred will bring the total to almost $500,000. . . . . November 12 a big office building was destroyed by fire in Cleveland, O.; one woman killed, six persons injured; loss $500,000. . . . . Fire, quickly followed by an explosion, in the Baby mine, at Pocahontas, Va., November 14, resulted in the loss of several lives. Five bodies have been recovered, 10 more are supposed to be in the mine, while 25 of the rescued were severely burned. Most of the victims had entered the mine to fight the flames. . . . . Defalcations amounting to $60,000 have been discovered in the Williamsburg Savings Bank, New York. The money is said to have been lost in speculation and was obtained by collusion between the paying and receiving tellers. One of them is now dead and the other has confessed. . . . . Full reports from Richfield, Sevier County, Utah, state that the damage to property in that county from the earthquake of November 14 will amount to almost $100,000. Scarcely a building escaped damage of some kind. The Mormon Tabernacle at Richfield was damaged to the extent of $2,000. In many parts of the country landslides have occurred, blocking railroads, changing the course of streams and causing general disorder. . . . . A dense fog was responsible for numerous accidents and collisions in Chicago November 20. In a collision between two Metropolitan Elevated trains one person was killed and 12 injured. In another collision a conductor was killed while trying to signal an approaching train. . . . . The Hardwick bill, providing for the disfranchisement of the negro, was killed in the Georgia House of Representatives November 19, by a vote of 113 to 17. . . . . At Vincennes, Ind., November 19, 300 union miners marched to the shaft of the Protest Hill Coal Mine Company where non-union miners are employed, and closed the shaft. They destroyed property, assaulted a number of miners, stopped the pumps, burned all the tools they could find, and after leaving instructions that they would return in case the mine was started and the scale not paid, marched back to town and disbanded. . . . . The Reciprocity Convention opened at Washington, D. C., November 19. Nearly every mercantile and manufacturing interest in the country was represented. The real work of the Convention began with the afternoon session, when A. B. Farquhar, of York, Pa., and Charles Heber Clark, of Philadelphia, opened the discussion of the general subject of reciprocity. Mr. Farquhar led in the presentation of the theme with a strong and eloquent appeal for reciprocal fairness in international trade relations. He made frequent allusions to President McKinley's Buffalo speech, which he called a "farewell address," and the Convention responded repeatedly with hearty cheers. Mr. Clark followed Mr. Farquhar with an off-hand speech based on a most careful study of the commercial history of the last quarter century. He was opposed to reciprocity, and he made a strong argument against what he called "kulfing one industry to benefit another." "What is really meant by reciprocity," said Mr. Clark, "is that you ask Germany, France or England if we can go over there and assassinate some one of their industries on condition that they can come over here and put the knife into some one of ours." The trite reasoning that the tariff is a local issue was verified in every speech made. The lumberman wanted reciprocity, because he had cut off his pine at home and wanted to get at the Canadian forests. The wool men looked askance at the idea of reciprocity with Argentina, while the hide men took an opposite view. The kult-goods people extolled the virtue of the Dingley Tariff, and saw little to be desired in any sort of reciprocity.

ADMINISTRATION.—The new Hay-Pauncefote Canal Treaty was signed in Washington November 18 by Secretary Hay for the United States, and Lord Pauncefote, the British Ambassador, for Great Britain. It gives to the United States power to guarantee the neutrality of the canal at all times, and removes the restriction on the power of the United States to fortify it. The Clayton-Bulwer treaty of 1850 is abrogated. Coaling stations for the use of the American men-of-war, which will defend the Nicaragua Canal, will be acquired by the United States now that the Isthmian Canal Convention is signed. These stations will be established at Almirante Bay, Chirlqui Lagoon, Colombia; Gulf of Dulce, Costa Rica; Danish West Indies and Gallapagos Island, off the coast of and belonging to Ecuador. While the treaty permits the erection of fortifications by the United States, the uselessness of going to such a tremendous expense is apparent to officers of both the army and navy. The great initial cost of this means of protection would be but the beginning, as it would be necessary to keep the fortifications in repair and to maintain a large garrison, which would be subjected to the ills prevalent in Central America. . . . . Suit has been brought by a London firm to obtain a return of duty paid to the Collector of the Port of New York upon imports of sugar brought from Iloilo, Island of Panay, in the Philippines.

PHILIPPINES.—Diaz, the presidente of Tacloban, Island of Leyte, who has been proved to be an agent of the Filipino junta at Hongkong, has been arrested. Many incriminating papers, implicating numerous officials, were seized at the time of his arrest. The gunboat Leyte has discovered a signal station working on the Island of Leyte and communicating with insurgents on the Island of Samar by the flashlight system. Three operators were arrested, and the station was destroyed. The men confessed that many recruits have been sent from Leyte to Samar.

GENERAL FOREIGN NEWS.—Great gales extended over the British Isles and northern Europe November 10-14. On the latter date a lifeboat and 11 men were lost at Yarmouth. The lifeboat was on its way to the rescue of a distressed vessel, when it was struck by a great wave and capsized. The crew were imprisoned and only three of them succeeded in making their escape. Innumerable cases of minor casualties continue to be reported on the coasts of the United Kingdom, marking the storm as the most disastrous that has occurred in many years. An incomplete list of the persons who have lost their lives by drowning during the storm aggregates over 160. It is still impossible to estimate with any exactitude the total loss of life and property resulting from the protracted gale, and probably the full extent of the damage will never be known. Tons of wreckage of unidentified vessels was thrown up. Altogether, it is known that about 50 vessels have been wrecked along the British coasts. Thirty-four of these have been absolute wrecks, involving, it is believed, a loss of more than 180 drowned. The Yarmouth lifeboat disaster alone leaves 44 fatherless children. There was a heavy snowstorm in Scotland and a fall of snow generally throughout the United Kingdom, especially in the hilly districts, where several shepherds lost their lives. . .

FARM AND GARDEN.—The Denver Chamber of Commerce and Board of Trade has sent President Roosevelt a letter concerning the dependence of the beet sugar industry upon the Dingley Tariff. The petitioners represent that at least 10 years are needed to put the beet sugar industry upon a basis which will be strong enough to enable it to compete with the cane sugar product raised by cheap labor. They say the beet sugar industry is the first and only industry in the West in which the farmers and producers are directly interested which has received the benefit of American policy of protecting infant industries.

The report emanating from the National Live Stock Association that the country is threatened with a shortage of beef cattle has stirred up considerable interest, and an effort is being made to have the Census Office announce the result of the live stock census made last year in time for the meeting of the National Convention of Stockmen. At the present time there are no trustworthy figures to show the condition of the visible supply of cattle in the country, but the census figures of last year will give a basis from which to make close estimates. While local packers admit a scarcity of high-grade corn-fed beef, they say the supply of ordinary cattle is equal to all demands being made.

The twenty-fifth convention of the Iowa State Dairymen's Association opened at Dubuque, November 12, with fully 500 delegates present. A delegation of 40 arrived from Chicago on a special car in charge of T. F. Gallagher and J. W. Cook, secretary of the National Buttermakers' Association. At Machinery Hall there was a display of everything in the way of creamery and dairy supplies, and all the latest inventions for making good butter were shown. The city was in gala attire, flags with the golden color of butter attached, flying everywhere.

The Michigan Merino Sheep Breeders' Association will hold a show at Detroit, December 17; secretary, E. N. Ball, Grand Blanc, Mich.

Thomas Meehan, of Philadelphia, the well-known nurseryman, and one of the most eminent of vegetable biologists, died at his home November 19, aged 75 years. He had been for many years a member of the Philadelphia Common Council, and was an earnest promoter of public education; he was also active in city tree planting, and in the formation of parks and breathing spaces in the crowded sections. Mr. Meehan was born near London, England, in 1826, and published his first scientific paper (on the stamens of the Portulacca) when about 15 years old. The devotion of the lad to botany and general science attracted the attention of a number of eminent scientific men in England, and through their efforts he became a student in Kew Gardens, where he completed a full course. He came to America more than 50 years ago, and in 1853 started in the nursery business. For a time William Saunders, founder of the Patrons of Husbandry, was his business partner. He was a prolific writer on agricultural and horticultural subjects, and was connected editorially with several publications. He was an officer or member in numerous scientific associations, and was State Botanist of Pennsylvania. Last August the Veitch Memorial Association, of England, presented him with its silver medal for "distinguished services in botany and horticulture," only the third American to be so honored. Few men of scientific pursuits have so fully identified themselves with the public good; his civic usefulness, accentuated by a genial personality, was not less eminent than his distinction in his chosen field of botanical investigation.

The National Grange assembled at Lewiston, Me., November 13 for its thirty-fifth annual session. Prosperous conditions were reported by the Master, Worthy Lecturer and Secretary Trimble. The meeting was a most impressive one.

A NEW CHAPTER ON THE SAN JOSE SCALE.

About 25 years ago there appeared on the premises of James Lick, at San José, Cal., a new species of scale insect ravaging his fruit trees. Having been a very wealthy man, and enterprising as well, he imported fruits, flowers and other things of a horticultural nature from many parts of the world, and it was finally and very correctly supposed that he had unwittingly imported this new pest on some of those foreign plants. Tahiti was at one time thought to have been the source from which it came, and latterly Japan. The spread of this new scale was very rapid, and the Californians were greatly alarmed, and tried various ways to destroy it. In that dry climate they found that a preparation called "resin wash" would hold it in check, and that is why it is not considered so serious a trouble as in the Eastern States, where it was eventually brought on fruit trees, and where this remedy is not effective because of the moister climate. As is generally known, the spread of the San José scale in the Eastern States, from a bundle of trees sent from California to New Jersey about 1886, has been so rapid and steady that now the whole country is in dread of the destruction of or very serious injury to their orchards. Legislation, official inspection, fumigation and other means of fighting the terrible evil are familiar to all progressive horticulturists.

In the course of our warfare against the San José scale the United States Department of Agriculture sent one of its most skillful entomologists, C. L. Marlatt, to Asia to hunt out, if possible, the home and the natural enemy of this insect. It was supposed that where the evil originated there might also be its antidote. Japan was visited by Mr. Marlatt last Summer in his quest, because it has long been known that this scale existed there. But he found that in every case where it existed there it could be traced back to importations of trees or plants from America. From Japan he went to Chefoo and other places in China, where he also found it in destructive numbers. He then hunted northwestward, and between Tientsin and Pekin he found it diminishing, that is, present but in small numbers, and, happy to know, along with a species of ladybug called by scientists Chilocorus similis, that was keeping it in check. This is the treasure for which the trip was made. Mr. Marlatt made the most careful study of the whole matter, and when he was sure (and he is one of the most accurate and conservative of scientists) he wrote a long letter giving all the facts to Dr. L. O. Howard, Chief of the Division of Entomology at Washington, D. C., and sent a number of the parasites of the scale to the Department of Agriculture as a trial shipment. Others will follow in due time. We have, therefore, every reason to believe that the days of the San José scale are probably numbered, or soon will be, and that we will in due time experience similar relief from the ravages of this dire enemy that the orange and lemon growers of California did from those of the Fluted scale by the introduction from Australia of the Vedalia cardinalis, which is another of the ladybug friends of fruits and humanity. While it would be wise to continue every present effort to suppress the San José scale it would seem to me unwise to cut down valuable orchards until this new means of fighting it had been given a thorough test. It was not more than three years from the introduction of the Australian ladybug until the Citrus orchards of California were safe, and it may be that the Chinese species will prove equally effective in our apple and other orchards. The brief announcement last week of this good news was from a telegram that I sent from Washington just in time to be inserted before THE R. N.-Y. went to press.

H. E. VAN DEMAN.

A SUCCESSFUL MILK STRIKE.

The daily papers recently reported a strike on the part of certain Connecticut farmers who ship milk to Providence, R. I. The following note from one of our readers shows that in this case the farmers won.

"Milk from this place goes to Boston and Providence. Those who struck here were men sending to Providence. The association, or union, as some might call it, is known as the Providence Dairy Association. The farmers here are a branch of that union. On account of the rise in the price of grain they felt as though they were justified in asking an advance of five cents per can, 35 cents for 9½ quart can; 36 for 10 quart and 37 for 10½ quart cans. The union agreed not to send any milk after Thursday, November 14, unless the milk buyers in Providence would agree to their demands. As no milk of any consequence could be got, the milk buyers agreed to give the union its price, and Sunday morning the car was carrying the usual quantity. In less than two days the strike was ended, and the farmers are happy. The milk buyers say if the union had asked 40 cents per can they would have had to pay it. The farmers only wanted a fair thing, and they feel as though they had got it. There is no strike on the Boston branch, and none likely to occur. Each organization is independent of the other. The farmers have tried several times in the years gone by to have the price advanced, but with little success, the farmers not holding together. This time the victory is complete; they feel the milk question is solved, and that in the future good prices may be obtained for it." D. C. K.

The Providence Milk Association runs a milk car from Willimantic to Providence, and the Providence Dairy Co. takes it by express from Colchester via Willimantic to Providence. The cans hold 9½ and 10 quarts, and they made the price 30 and 31 cents from October 1 to April 1. There was so much dissatisfaction that the Providence Milk Producers' Union was formed. Every shipping station has one director appointed by the members at that station. They asked the contractors on November 14 (Thursday) for a raise to 36 and 35 cents per can (this means delivered on the station platform) and to let them know by Friday or there would be no milk on Saturday. Saturday the strike went on; Sunday they wanted the milk, but too late for that day's milk. Monday morning every man's cans sent were tagged "Tell all milkmen the price of milk will be 35 and 36 cents from November 17 to April 1." The producers also asked and demanded, if the price of grain kept up to present prices, that the price of milk be kept up until May 1. We sell here at a straight price and no surplus, and when they have more milk than the market demands they simply tag the cans: "Don't send any milk to-morrow," which system we like better than the Boston way, as we can use it at home at better advantage. This station ships from 75 to 120 cans per day, and they carry on the milk car from 1,000 to 1,600 cans per day. L. P. A.

Baltic, Conn.

A "SECOND CROP CRANK."—I am just through harvesting about one acre second crop Triumph potatoes. I send one of the largest tubers. Seed planted August 10; harvested November 12. How is this for a 92 days' growth? One season I grew two crops Shoe-peg corn; first crop planted about April 1, ears from same pulled and dried above kitchen stove and planted July 15. The result was thoroughly matured ears before a frost. The grain from these was planted following year with no marked difference in yield from first and second crop seed. But, in my opinion, second crop Triumph potatoes double the yield of first crop. You perceive I am a kind of "second crop crank." I have now four or five varieties second crop potatoes, bush beans, tomatoes, etc. D. W. R.

Hickman, Ky.

R. N.-Y.—The specimen of Triumph sent us weighed 14 ounces. A lively speed that for 92 days' work! What an advantage to live in a country where two crops are possible, and where cow peas can be grown between two crops of grain!

Woman and Home

From Day to Day.

THE ORCHARD STREETS.

Over the orchard the children pass,
In and out 'mong the old brown trees;
Searching for apples among the grass,
None in the cellar are equal to these.
Sweetened by frost they are juicy and rare,
Colored by wind, they are tempting to see;
All the delights of the sun and the air,
Meet in these apples that fall from the tree.
City-bred Nell in her scarlet cloak,
Stoops as she picks up a ruby prize;
"This must be Apple Street," dreamy she spoke,
While she contemplated color and size.
"When the Spring comes 'twill be Blossom Street all.
Streets in the city don't change so, you know;
But 'twill be Brown Street along in the Fall,
And in the Winter this street is called Snow." —Annie L. Jack.

*

THE commonest form of extravagant cooking is the neglect to make the best use of simple materials. It often seems easier to concoct an elaborate dish than to make a simple one so delicious that those who eat of it shall desire nothing better.

*

GOOD authorities recommend that a turkey, during roasting, be placed in the pan with the breast down. This adds very materially to the flavor, because all the rich juices and the flavor of the dressing flow down into the breast of the fowl. As ordinarily cooked, the white meat is rather lacking in flavor. At first thought it may seem awkward and inconvenient to cook the bird in this position, but it is really as easy as any other.

*

HENRY J. Allen, chairman of the Kansas State Board of Charities, is constantly importuned by young women who desire to obtain positions in public institutions. He advises them to go home and learn housekeeping and says:

There are thousands of homes in Kansas where a girl who knew how properly to cook and sew and make beds and do ironing might make $4 to $5 a week, with board and washing. The reason why domestic help gets no better wages is because most of them are ashamed to become competent in their service. A majority of girls who seek positions in homes have not fitted themselves to excel in the work they seek to do; hence, they do it poorly and get low wages for it. Any level-headed girl who will study cooking and general housework and master it, can secure pleasant employment, at profitable wages, and the service is just as honorable as measuring calico or answering hello calls in a telephone or teaching in the school room or playing on a typewriter. All honest service is honorable, and the experts in any branch of it can always get wages commensurate with their skill.

*

RECENT experiments conducted at the University of Minnesota for the purpose of studying the nutritive value and digestibility of bread made from different samples of flour gave results differing decidedly from popular impressions. According to the chemical analysis of graham, entire-wheat, and standard patent flours milled from the same lot of hard Scotch Fife Spring wheat, the graham flour contained the highest and the patent flour the lowest percentage of total protein. But according to the results of digestion experiments with these flours the proportions of digestible or available protein and available energy in the patent flour were larger than in either the entire-wheat or the graham flour. The lower digestibility of the protein of the latter is due to the fact that in both these flours a considerable portion of this constituent is contained in the coarser particles (bran), and so resists the action of the digestive juices and escapes digestion. Thus while there actually may be more protein in a given amount of graham or entire-wheat flour than in the same weight of patent flour from the same wheat, the body obtains less of the protein and energy from the coarse flour than it does from the fine, because, although the including of the bran and germ increases the percentage of protein, it decreases its digestibility.

*

DURING the middle of the Winter many large stores make special sales of white goods and table linen, and this is the most favorable time to replenish a stock. It is much easier to buy a piece of linen occasionally, thus keeping up the stock, than to allow it all

3968 Misses Double Breasted Coat, 12 to 16 yrs.

to become worn, necessitating an entire new supply. Fringed cloths, often used for luncheon sets, are handsome at first, but they soon look ragged, because, with the best of care, the fringe breaks and wears in washing. Plain hemming (hand work, of course) is always best and most durable, or hemstitching where time or inclination permits. Although many busy women think that they cannot take time to hem table linen by hand, and must always rush across it with the machine, the hand work is really a gain in the end, for if properly done, it never whips out at the ends; it irons more smoothly and certainly looks better. Plain butcher's linen with hemstitched borders makes very satisfactory covers for trays, serving table or sideboard. Colored silk embroidery would better be omitted from all such articles intended for daily use, because such decoration requires too much care in washing, and the plain linen, well washed, is always in good taste. Anyone who thinks that "washing" silk may be washed just like anything else will have a sad awakening. White coronation braid is very easily applied to linen designs, and gives an effect fully as handsome as embroidery; this may be washed without any risk.

The Rural Patterns.

Severely plain, double-breasted coats are much worn by young girls, and have the merit of being eminently serviceable as well as stylish. The model shown combines the box front with the half-fitted back and regulation coat collar. The original is made of tan-colored kersey cloth with smoked pearl buttons; but cheviot and plain cloth are equally appropriate and blue, brown, black and Oxford are all correct colors. The fronts of the coat are loose, but are curved at the under-arm seams to follow the outline of the figure. At each side a pocket is inserted, the opening being finished with a stitched overlap. The back includes a curved center seam and under-arm gores. The neck is finished with a collar, faced with velvet, that rolls over with the fronts to form lapels. The sleeves are in regulation coat style stitched to simulate cuffs. To cut this coat for a miss of 14 years of age 1½ yard of material 54 inches wide will be required with ¼ yard of velvet for collar facing. The pattern 3968 is cut in sizes for misses of 12, 14 and 16 years of age; price 10 cents from this office.

No other coat worn by small boys quite takes the place of the reefer. Chinchilla, kersey, melton cloth and cheviots are all appropriate, and fashionable colors include dark blue, brown, Oxford and tan. The smart little model illustrated is in box style, with curved under-arm seams. The fronts are double-breasted, with a liberal supply of pockets that are finished with overlaps. The neck is finished with a collar of generous width that rolls over with the fronts to form lapels. The coat sleeves are stitched to simulate cuffs and the coat is closed by both buttons and buttonholes. To make this coat for a boy of 8 years of age 1⅜ yard of material 44 inches wide or 1½ yard 50 inches wide will be required. The pattern 3969 is cut in sizes for boys of 4, 6, 8, 10 and 12 years of age; price 10 cents from this office.

An Old-Time Thanksgiving Dinner.

A holiday dinner in all of its complexities is quite an arduous transaction in any time or age. But if a modern housekeeper was at the mercy of a fire-place, with only a brick oven in the background which had to be heated by first building a huge fire in it, and then cleaning out the débris before using, in lieu of the ample range with its many convenient appliances for controlling the temperature, she would certainly feel that a Thanksgiving dinner was a more serious affair than she usually accredited it to be. Also, that she had much spare time in the preparation of a dinner in which to return thanks for many hitherto unacknowledged blessings. But this same old oven, as a reward for the trouble it gave in getting it ready to do its part towards the Thanksgiving dinner, never played its mistress false. All the pastry which came out of its cavernous depths was all that pastry should be. None of the flaky tarts, mince, apple, or pumpkin pies was ever burned to a cinder by a forgotten valve left inadvertently open, and the wholesome brown bread and rich cakes were always triumphs of culinary skill.

Again it must have been an unenviable task to achieve the correct shade of brown in the pigs and turkeys, when roasting before a blazing fire, where scorching was not an unknown quantity. Or the handling of the huge pots which were suspended from cranes over the fire and held the vegetables, puddings, and other delectable things; what innumerable scalded fingers must have been the outcome of the drainage of those pots!

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This good old-fashioned Thanksgiving dinner, if handicapped in the cooking, was much more simply served, and would seem as unique now as one of many courses in days long gone by. If the desserts, all manner of sweetmeats and dainties were loaded on the table at one time, sandwiched in between meats and vegetables promiscuously, with no respect to the general fitness of particular dishes, all eaten haphazard from the same plate, utterly regardless of the laws which govern the digestion, the good will and jovial cheer which prevailed was as bountiful as the food, and served out in much the same manner.

Thanksgiving, though essentially the American season for home gathering, meant more, especially an old-time festivity, than it usually does now, when so many holidays are celebrated. The Thanksgiving of our grandfathers was an annual reunion of all of the separated members of the family, from far and near, who came together on this day for the only time, while often distant wanderers with slight claims to kindred found their way back and were received with warmth. Each added member meant more merriment, and was welcomed accordingly, rather than more work, which is too frequently the case with the modern guest.

After the dinner the wildest amusements were participated in with no fear of despoiling a too elaborate apartment or sacrificing useless bric-a-brac, and no one was addicted to nerves. Perhaps there would be less hazing with our college boys if a little of their riotous mirth was occasionally let loose in the bosom of their families, necessitating less abroad. It is much to be regretted that the good old-fashioned Thanksgiving dinner with the accompanying hilarity belongs to the buried past. SARAH RODNEY.

Garden Talk from Ohio.

A warm, bright day the last week in October enabled me to get into the cellar all plants that I wanted to keep over Winter. The Canna roots were shaken free from soil and put into a tub of dry sand, along with some "gilt-edge leaf" geraniums, pretty to use for border plants next season. A large rose geranium bush was also put into a bucket of sand. The Coleus, all battered and bruised by wind and weather, were thrown away. I then spaded the bed up and raked it smooth in readiness for the tulips; their brave, flaming beauty is very cheering, I think, when Spring—in northern Ohio, the most tempestuous and treacherous of seasons—seems determined to make us wear mittens and overshoes until the bells ring in the Glorious Fourth. As a nerve tonic, digging flower-beds is a thousand times better for women than any golden specific on the market. And the more you take the better you like it. The tulip bulbs were planted about five inches deep and five inches apart, a little sand being put into each hole before inserting the bulb, and a little more after. The bed was then raked over and covered with leaves, then brush on top to keep the wind from blowing them away, and lastly encircled with wire netting to keep the chickens out.

There was no need to cover the pansy bed, for only one little plant had survived the drought of August and September. Up to that time there were over a hundred plants doing fairly well; the blossoms were small, but of great variety, and I felt sure that, with a little protection, I could keep them over Winter and they would make a fine showing in the early Spring, having done the trick successfully two years ago. But the fruit business interfered with my flower show. I could not keep that bed watered, and Dame Nature would not, so it must be written down a failure. Pansy plants in good condition should be covered lightly with dry leaves quite late in the season—after hard, freezing weather—and when the mercury drops down to zero add a light covering of straw; remove this gradually in March, and a few warm days will coax the dearest flowers on earth out to greet you. Sweet peas failed the past season, though I never had a more promising looking row. But on the Fourth of July, just as they were coming into blossom, a great wind and rainstorm whipped and beat them nearly off the trellis. The heads blighted, and it seemed no amount of coaxing could bring back their lost vitality; still I might truthfully say that we had sweet peas from July till November, for one or two stalks let us know, by an occasional blossom, that they were still in the battle of life. California poppies (Eschscholtzia) were also a disappointment. Perhaps they were planted too late; perhaps they did not get enough sun; at any rate, the bed of "gleaming gold" failed to materialize. The plants look thrifty now, and a neighbor has told me that, with some protection, they will survive the Winter and blossom all next season. If I can, I like to hold on to anything that I've watched and hoed and watered for three or four months. I wonder how many friends we let slip away from us in a year through sheer neglect! But of course we're not going to pet people as we do flowers; they would never understand it in the world! Not a failure were the Zinnias—the curled and crested sort. The scarlet ones were so large and double as to be mistaken for Dahlias, and there were some lovely clear pink ones. A bed of scarlet Zinnias alone is most effective. They are cheap and sure.

A few warm days the latter part of April lured me into setting out my geraniums. They were stocky little plants, most of them blooming, and I had hardened them on the porch for several days. But it was a bad move. The mercury went down almost to the freezing point shortly after, and there was no more warm weather till June. By that time my poor geraniums had become so *hardened* that the hot weather knocked them right out; i. e., some of them died and none made any showing to speak of all Summer. I think I shall wait patiently hereafter until the last week in May before bedding out geraniums.

The prettiest thing on the place the first week in November was a Kieffer pear tree, its luxuriant, glossy foliage gleaming with all the various tints of brightest to darkest crimson. Could an artist paint it true to nature on canvas, the critics would talk about the color being laid on with a trowel, I am sure.

A 10-cent can of red paint will cover a multitude of old discolored flower pots and boxes, and add 50 per cent to the neatness and attractiveness of your house plants. I know it has been held that plants do best in porous pots, but I believe that theory has been turned down. Too many fine, thrifty plants in tin cans have held up their heads and declared that they did not have to breathe through their pots. But I will not paint flower pots with yellow ochre as some people do; neither would I paint them sky-blue; red, dark green or very dark brown are colors best suited for this purpose. DOCIA DYKENS.

ONAISY is th' head that wears a crown? They'se other heads that 're onaisy too; but ye don't hear of thim.—Mr. Dooley.

SINS of the tongue are especially dangerous because people do so little in the way of restitution or reparation for them.—Francis De Sales.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

Rural Recipes.

—O! now doth come the jocund Fall
With ripened nut and apple;
The harvest's big and best of all,
It bringeth luscious scrapple!
—Phila. Record.

Tomato Chips.—One-half peck of green tomatoes, three onions. Chop them separately, the onions quite fine, but the tomatoes coarser. Put together, and mix with them one-half cupful of salt. Let stand over night in granite dish. In the morning drain through a colander. Take one pint of vinegar and one quart of water, add the tomatoes, cover and boil 20 minutes. Drain again. Take two cupfuls vinegar, and 1½ pound light brown sugar, one-fourth pound white mustard seed and one-eighth teaspoonful cayenne pepper. Add the prepared tomatoes, and cook 15 minutes. This makes five pints. Put up in small glass fruit cans. This is not a pickle, but used as a sauce or relish. The color a fine amber.

Quince Conserve.—Four pounds of quinces, pare, quarter. Cook the quinces in little water, until tender enough to cut the quarters across in thin slices (not too thin), three pounds granulated sugar, one-fourth pound of candied ginger root (or you can use preserved ginger, sliced thin), two lemons, juice and yellow rind (grated). Put all together in granite kettle, add one-half pint of water. Boil the whole 2½ hours. Put in jelly glasses when cool, cover with melted paraffin, put on cover and seal. This is perfectly delicious. It is nice to serve a spoonful with ice cream or other dessert, or with cake. It is very rich, and a beautiful red color.

Apple Cream Cake.—Prepare the cake by beating the yolks of three eggs until light and creamy; add 1½ cupful of sugar, one tablespoonful of lemon juice, the grated rind of half a lemon and one small half cupful of water. Sift two teaspoonfuls of baking powder with two cupfuls of flour; cut them into the egg mixture and lastly add the beaten white of the eggs. Bake in two round shallow pans, and when they are done split them and spread with the apple cream, made as follows: Steam three large sour apples until they are soft, then rub them through a sieve. Beat the whites of three eggs stiff and gradually add three-fourths of a cupful of powdered sugar and a few drops of lemon juice. Add the apple and beat it until stiff enough to stand alone. Place on ice and spread it cold upon the cakes, which may be either hot or cold. Serve with whipped cream.

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35 styles and sizes—hand and power. Sold at hardware, housefurnishing and department stores. 4 cents brings "Enterprising Housekeeper"—200 receipts.
THE ENTERPRISE MFG. CO. OF PA., Philadelphia, Pa., U. S. A.

MARKETS

THE WEEK'S QUOTATIONS.

WHOLESALE PRICES.

NEW YORK, NOVEMBER 23, 1901.

GRAIN.

Wheat, No. 1, N'n Chicago	—	@	80¼
No. 1, hard, Duluth	—	@	88¼
No. 2, red elevator	—	@	80⅛
Corn, No. 2, mixed elevator	—	@	67⅝
Oats, No. 2, mixed	—	@	46
Rye, No. 2, W'n, f. o. b., N. Y.	—	@	66
Barley, feeding	55	@	57
Malting	63	@	68
Buckwheat, per 100 lbs	—	@1	22

BEANS.

Marrow, 1901, choice, per bu.	—	@2	25
Medium, 1901, choice	—	@2	00
Pea, 1901, choice	—	@2	00
Red kidney, 1901, choice	—	@2	10
White kidney, 1901, choice	—	@2	45
Black turtle soup, choice	1 80	@1	85
Yellow eye, 1901, choice	2 40	@2	45
Lima, California, 1901	3 25	@3	30
Italian, medium	—	@1	85
Other foreign, medium	1 75	@1	80

FEED.

Spring bran, coarse	20 50	@21	00
Winter bran	22 00	@23	00
Red dog	23 50	@24	00
No grade flour	—	@23	50
Linseed meal, ton	29 00	@29	50
Cottonseed meal, ton	—	@25	10

HAY AND STRAW.

Hay, No 1	80	@	85
No. 2	70	@	75
No. 3	60	@	65
Clover	50	@	55
Clover, mixed	55	@	60
Straw, rye, long	65	@	75

SEEDS.

Clover, per 100 lbs	10 50	@11	25
Timothy, per 100 lbs	5 25	@ 5	50
Millet, per lb	2	@	2⅛
Sunflower, per lb	3½	@	3¾
Rape, German, per lb	3½	@	3⅝

MILK.

New York Exchange price three cents per quart in 26-cent freight zone.

BUTTER.

Creamery, extra, per lb	25	@	26
Firsts	22	@	24
Seconds	20	@	21
Lower grades	17	@	19
June, extras	22	@	—
June, seconds to firsts	18	@	21
State dairy, tubs, fancy	22	@	23
Tubs, firsts	20	@	21
Tubs, seconds	17	@	19
Tubs, thirds	15	@	16
Tins, etc.	15	@	21
W'n imitation creamery, fancy	18	@	—
Firsts	15½	@	16½
Lower grades	14	@	15
June, fancy	15	@	15½
W'n factory, June, fancy	15	@	15½
June, fair to choice	14	@	14¾
Fresh, firsts	14¾	@	15
Fresh, fair to good	14	@	14½
Lower grades	12½	@	13½
Renovated butter, fancy	18	@	18½
Common to choice	13	@	17
Packing stock	12	@	14

EGGS.

QUOTATIONS LOSS OFF.

State & Pa., average prime, per doz.	29	@	30
W'n, fresh gathered, av. best per doz.	—	@	29

QUOTATIONS AT MARK.

Nearby, State and Pa., fresh gathered, fancy, selected, per doz.	—	@	30
Average best lots	27	@	28
Fair to good	23	@	26
W'n, fresh gathered, candled, selected	27	@	—
Regular packings	23	@	26
K'y, fresh gathered	22	@	26
Tenn., fresh gathered	22	@	26
W'n, fresh gathered, dirties	16	@	17
Checks	13	@	14
Refrigerator, per doz	16	@	18½
Limed, W'n, fancy	—	@	18

COUNTRY-DRESSED MEATS.

Calves—Veal, prime, per lb	—	@	10
Fair to good, per lb	9	@	9½
Common to medium, per lb.	5	@	8
Buttermilks, per lb	7	@	8
Grassers, per lb	5	@	5½
Pork—Jersey, dressed, light, per lb.	8	@	8½
Jersey, d's'd, medium, per lb.	7	@	7½
Jersey, d's'd, heavy, per lb	6	@	7
Roasting pigs, per lb	12	@	13

GAME.

Quail, prime, per doz	—	@3	00
Grouse, per pair	1 75	@2	00
Partridges, per pair	1 75	@2	00
Woodcock, per pair	1 00	@1	25
English snipe, per doz	—	@2	50
Golden plover, per doz	—	@2	50
Grass plover, per doz	1 50	@2	00
Wild Ducks—Canvas, per pair	2 50	@3	00
Mallard, per pair	75	@1	00
Teal, blue wing, per pair	60	@	75
Teal, green wing, per pair	40	@	50
Common, per pair	25	@	30
Rabbits, per pair	25	@	30

LIVE POULTRY.

Spring chicken, per lb	—	@	8
Fowls, per lb	—	@	8½
Roosters, per lb	—	@	5
Turkeys, per lb	8	@	9
Ducks—Average W'n, per pair	60	@	70
Avge S'n, per pair	50	@	60
Geese—Avge W'n, per pair	1 00	@1	12
Avge S'n, per pair	75	@1	00
Pigeons, mixed, per pair	—	@	20

DRESSED POULTRY.

FRESH PACKED—ICED.

Turkeys—Spring, W'n, dry-picked, per lb	10	@	10½
Scalded, W'n, per lb	10	@	10½
Culls, per lb	5	@	7
Chickens—Ohio & Mich., scalded, per lb	10½	@	11
Other W'n, dry-picked, p. lb.	9½	@	10
Other W'n, scalded, per lb	9½	@	10
Poor to fair, dry-picked or scalded, per lb	7	@	9
Fowls—W'n, dry-picked, prime	9	@	9½
W'n, scalded, prime	—	@	9
Southw'n, dry-picked, prime	—	@	9
W'n & S'thw'n, poor to good	7	@	8
Old roosters, per lb	6	@	6½
Ducks—W'n	9	@	11
Geese—Spring, W'n, per lb	8	@	10

DRY-PACKED.

Turkeys—Jersey & up-river, fancy	14	@	—
Jersey & up-river, fair to good	11	@	12
Md. & Del, fancy	13	@	14
Md. & Del., fair to good	11	@	12
State & Pa., fancy	12	@	12½
Ohio & Mich., scalded, f'cy.	12	@	12½
Ohio & Mich., fair to good	10	@	11
Other W'n, fancy	11	@	12
Other W'n, good to prime	10	@	10½
Poor	5	@	8
Chickens—Phila., selected, lge.	15	@	16
Phila., mixed sizes	12	@	13
Other Jersey, fancy	12	@	13
Other Jersey, fair to good	10	@	11
State & Pa., fancy	11½	@	12
State & Pa., fair to good	10	@	11
Ohio & Mich., scalded, fancy	11	@	—
O. & Mich., scalded, fair to good	9	@	10
Other W'n fancy	10	@	10½
Other W'n, fair to good	8½	@	9½
Fowls—Ohio & Mich., fancy scalded	—	@	9½
Other W'n, dry-picked, choice	9	@	9½
Other W'n, scalded, choice	—	@	9
W'n, poor to fair	7	@	8
Ducks—Md. & Del., fancy	13	@	14
Md. & Del., fair to good	10	@	12
Ohio & Michigan, fancy	12	@	12½
Other W'n, prime	10	@	11
Poor to fair	7	@	8
Geese—Md. & Del., prime	12	@	13
W'n, prime	10	@	11
Poor	6	@	8
Squabs—Prime, large, white, per doz	2 50	@2	75
Mixed, per doz	1 75	@2	00
Dark, per doz	1 25	@1	50

DRIED FRUITS.

Apples—Evap., 1901, fancy, per lb	10	@	11
Evap., 1901, choice	9½	@	9¾
Evap., 1900, fancy, per lb	10	@	10½
Evap., 1900, prime, per lb	8¼	@	8½
Sun-dried, 1901, Southern, sliced	5	@	6½
Sun-dried, 1901, Tenn., coarse cut	3¾	@	4½
Sun-dried, 1901, N. Y. & Mich., qrs.	5½	@	6½
Chops, 1901, per 100 lbs	1 75	@2	50
Cores and skins, 1901, per 100 lbs	1 50	@2	12
Raspberries—Evap., 1901, per lb	23	@	—
Sun-dried, 1901, per lb	20	@	21
Blackberries, 1901, per lb	7	@	7½
Huckleberries, 1901, per lb	17	@	18
Cherries—Nearby, 1901, per lb	15	@	15½
S'n, 1901	13½	@	14

FRESH FRUITS.

Apples—York Imperial, p. bbl.	3 50	@4	50
Spitzenberg, prime and fancy	4 50	@7	00
Winesap, per bbl	3 50	@4	50
Snow, good to choice, per bbl.	3 50	@5	00
King, per bbl	4 00	@6	00
Ben Davis, per bbl	3 50	@4	50
Greening, per bbl	4 00	@6	00
Twenty-oz. hand-picked, per bbl.	3 50	@4	50
Tallman Sweet, per bbl	3 00	@4	00
Baldwin, prime, per bbl	4 00	@5	00
Red Winter sorts, fair to good	3 00	@3	50
Inferior, per bbl	1 75	@2	50
Pears—Bartlett, fancy, per bbl.	—	@3	00
Bartlett, per bu. box	1 25	@2	00
Seckel, fair to prime, per bbl.	2 25	@3	50
Beurre Bosc., per bbl	3 00	@4	00
Beurre Clairgeau, per bbl	2 50	@3	50
Beurre d'Anjou, per bbl	2 25	@3	00
Kieffer, per bbl	2 00	@3	00
Nearby, common, per bbl	1 00	@1	50
Grapes—Catawba, case 10 3-lb. baskets	1 25	@1	50
Catawba, p. s. bkt	11	@	13
Niagara, case 10 4-lb. baskets	1 75	@2	75
Concord, case 10 3-lb. bkts	1 00	@1	15
Concord, small basket	11	@	13
Concord, per large basket	17	@	18
Wine grapes, Concord, per ton	40 00	@45	00
Wine grapes, white, per ton	40 00	@50	00
Cranberries—Cape Cod, fancy, large, late varieties, per bbl.	7 50	@8	00
Cape Cod, large, late, good to choice	6 00	@7	00
Cape Cod, Early Black, fancy, dark, per bbl	6 50	@6	75
Cape Cod, medium, per bbl	6 00	@6	25
Cape Cod, poor to fair	5 00	@5	50
Jersey, per bbl	5 75	@6	25
Jersey, per crate	1 50	@2	10

VEGETABLES.

Potatoes—L. I., per bbl	2 50	@2	75
Me., prime, per bag	2 50	@2	75
Me., per 180 lbs	2 50	@3	00
State, prime, per bbl	2 50	@2	75
Jersey, per bbl	2 00	@2	25
Germau, good to prime, per 112-lb. bag	1 40	@1	60
German, per 168-lb. bag	2 00	@2	50
Sweet Potatoes—So. Jersey, per bbl.	2 00	@3	00
Yellow, Va., per bbl	1 75	@2	00
Beets—Jersey & L. I., per 100 bunches	—	@1	00
Brussels sprouts, per quart	5	@	8
Chicory, N. O., per bbl	4 00	@5	00
Cauliflowers—Fancy, per bbl	2 00	@2	25
Fair to good, per bbl	1 25	@1	75
Culls, per bbl	—	@1	00
Celery—State & W'n, per doz. roots	10	@	40
Jersey & L. I., per doz flat bunches	75	@1	00
Carrots—L. I., per bbl	75	@1	00
Cabbages—L. I. Flat Dutch, per 100	2 00	@3	00
Cucumbers—Hot-house, No. 1, per doz.	60	@	75
Florida, per crate	1 00	@1	75
Florida, per basket	1 50	@2	25
Eggplants—Fla., per ½-bbl. crate	2 50	@3	00
Escarol, N. O., per bbl		@4	00
Lettuce—Fla., per basket	75	@1	75
New Orleans, per bbl	3 00	@3	50
Onions—Orange Co., white, per bag	2 00	@3	50
Orange Co., red, per bag	3 00	@3	50
Orange Co., yellow, per bag	2 75	@3	25
Orange Co., poor to fair, per bag	1 50	@2	50
Conn., white, per bbl	2 00	@4	50
Conn., yellow, per bbl	3 00	@3	50
Conn., red, per bbl	3 50	@4	00
State & W'n, yellow, per bbl.	3 00	@3	37
State & W'n, red, per bbl	3 25	@3	75
Peas—Fla., per crate	2 00	@2	50
Romaine—N. O., per bbl	4 00	@5	00
Squash—Hubbard, per bbl	2 00	@2	25
Marrow, per bbl	1 75	@2	00
Pumpkins, per bbl	1 25	@1	50

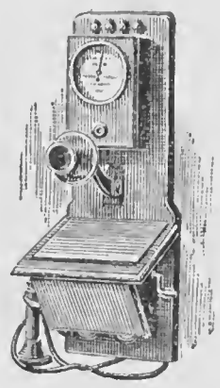
BUCKWHEAT averaged only a fair crop. Several carloads have been shipped from this place, prices ranging from $1 to $1.10 per 100 pounds. The best paying crop this year is potatoes, which are bringing good prices, and were truly an immense crop in some instances, and of a fairly good quality. There have been a goodly number of carload lots shipped from this station already, and it is said there are from 12,000 to 15,000 bushels still in sight in this town. Prices opened at 40 to 45 cents per bushel, gradually raised to 50 to 55 cents, and now dealers are scouring the hills offering 60 cents per bushel. This is the time that the "cautious" producer is doing a heap of thinking under his hat.

Erin, N. Y. G. E. M.

In answer to many inquiries reeeived from the farmers, we are making them a proposition, whieh is worth money to them.

WON'T YOU WRITE TO US?

Prolong your lives, save time and money by having a telephone system on your premises. Our



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WRITE US AND WE WILL TELL YOU ALL ABOUT IT.

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"Our Thanksgiving Proclamation"

says the horse, "should be a united appeal to our masters on our urgent need for Veterinary Pixine." "Agreed," ery all! "Make it strong," says the cow. "Inspired by the sweet relief from seratehes and grease heel of years' standing; old sores, wounds, cowpox, hoof rot, mange and swellings, we unanimously beseeeh our masters to investigate its hea ing power and win our heartfelt gratitude."

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To January 1, 1903, for $1. New subscribers to THE R. N.-Y. will now get the paper from the time subscriptions are received until January 1, 1903. If you will send us a club of four subscriptions, new or renewal, with $4, we will advance your own subscription one year free.

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WANTED—Farmers and Dairymen, $30 to $50. with house or board. Only competent men with good references. The Rural Agency. Durham, N. H.

170 ACRES FOR SALE in Maryland.—Convenient to Baltimore and Philadelphia markets. Excellent location and improvements. MADISON MARINE, Law Building, Baltimore. Md

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Glenn County, California,

FOR SALE IN SUBDIVISIONS.

This famous and well-known farm, the home of the late Dr. Glenn, "the wheat king," has been surveyed and subdivided. It is offered for sale in any sized government subdivision at remarkably low prices, and in no ease, it is believed, exceeding what it is assessed for County and State taxation purposes.

This great ranch of 40 000 aeres runs up and down the western bank of the Sacramento River for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre. address personally or by letter,

F. C. LUSK,

Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, of Chico, Butte County, California.

WANTED.—A Truck Gardener. Five aeres of garden and 20 acres of park to care for. A first-rate market for vegetables, besides the school of 60 persons to be supplied. Will pay $15 per month and 10 per cent on all stuff raised and disposed of. All supplies and help furnished. If man is married, can give employment to wife. WM. W. SMITH, Trinity Hall, Washington, Pa.

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Dutton Corn and Pop Corn, Canada Peas, Cattle and Poultry Feed, Grass Seeds, Rice Meal, etc. CHAS. H. REEVE, 187 Washington St., New York City

LOCAL AGENTS wanted in every section to sell my New Crop Seeds. New plan. Quick sales. Big profits. Splendid outfit. Write to-day. FRANK H. BATTLES, Seed Grower, ROCHESTER, N. Y.

For Sale—I have the New Era Cow Pea for sale. They have been tried from Maine to Florida, and are without a rival. It is the earliest and most prolific pea grown. J. C. LITTLE, Louisville, Ga.

Oldest Commission House in New York. Established 1838. Butter, cheese, eggs, pork, poultry, dressed calves, game, &c E. B. WOODWARD, 302 Greenwich Street, New York

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We make a specialty during the Winter months of handling Poultry, having a very extensive trade. Write us for any information you may wish regarding dressing, packing, etc., and we will be pleased to answer all inquiries.

Returns made on sale of each shipment.

ARCHDEACON & CO., 100 Murray Street, New York.

WANTED

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Two Rings Free!

We will give these two SOLID GOLD laid Rings, one set with large Garnet and three Pearls, one with Ruby and two Brilliants, *Free* to anyone that will sell 12 of our Gold Plate Enameled Brooches set with different colored stones at 10 cents each, and sends us the $1.20. No money required until brooches are sold. We take back all not sold. Address

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This is no catch-penny advertisement in which you are ensnared by the wonderful offers, "we trust you," "send no money," "free," &c. So if you are looking for "something for nothing" **don't waste any more time.** Ours is simply the business announcement of a factory making **six thousand Watches a day**, and wishing to tell the people about them in an **honest, straight-forward way.** It is true we want to sell you our goods, but by strictly business methods only, consequently we show an exact picture of the watch and tell you exactly its price. We prefer you to buy it of your dealer, but if not convenient for you to do so, **send us $1.00** and receive the greatest watch bargain ever known. Guarantee in every watch (see cut). Catalogue Free.

R. H. INGERSOLL & BRO. DEP'T. 220 67 CORTLANDT ST. N.Y.

MARKET NOTES

FEATHERS.—Readers ask how they can dispose to best advantage of the feathers from poultry dressed for the holiday trade. They may be shipped to the same dealers who handle the poultry in New York, who will hold them until picked up by feather buyers who come around the markets regularly. Those who have large quantities of feathers to ship would better write to dealers in bedding supplies, as Taylor & Ellis, 261-263 Canal St., New York.

A MILK RAID.—A number of Paterson, N. J., milk dealers had a visit from a force of State inspectors November 18, and the result was that large quantities of watered milk were dumped into the gutter, thus making a temporary milk famine. This is the result of the enforcement of the pure food law which went into effect November 1. The law is very severe, and, if it be thoroughly enforced, many New Jersey frauds will find it necessary to look for other pastures.

GLUCOSE HONEY.—The Chicago pure food inspectors are after those who are putting various adulterated products on the market. One of their latest finds was a lot of extracted honey from California, which chemical analysis showed to be more than half glucose. They gave the consignee the choice of selling it as a glucose mixture or sending it back, and he did the latter. Glucose is particularly adapted to the adulteration of syrups, honey and brown sugar, as it is of a beautiful light amber color and mixes in well. It is agrecable to the taste and not harmful, but is a fraud because it gives bulk without adding much sweetening power to these products. When brown sugar was used more largely than at present, people frequently complained that it took an unusual quantity to sweeten a cup of coffee. This was owing to the glucose, which has a habit of dissolving and disappearing without leaving a trace of itself by way of any peculiar flavor. At one time a large amount of what was called "corn syrup" was sold in Ohio and neighboring States. This was evidently largely glucose. It cost 40 cents per gallon, and was extensively used in boarding houses as a lubricant for pancakes.

APPLES.—Pacific coast apple men now have an unusual opportunity. Ordinarily California and Oregon apples are so expensive that they are considered luxuries, and comparatively few are sold in New York. This year the crop in the East was so short that Western boxed apples can nearly compete in price with the better grades of home-grown fruit. Of course in a season of plenty this trade would be impossible, for New England and the Middle States can produce as fine apples as are grown anywhere, and there are thousands of acres of land here particularly well suited to apple culture, which with intelligent handling could greatly increase the output of good fruit. The present high prices for apples are likely to stir up a good many people to go into the business who have but a dim idea of what is necessary to produce prime fruit. They think that an orchard can be set out and left to fight its own battles with tough sod, worms and diseases. About all that they do is to trim roughly now and then, and harvest the fruit. Such orchards, unless they chance to bear in an off year, are never profitable, for the low-grade fruit will hardly pay for handling in an apple year. What does find its way to market is a nuisance, and goes for almost any price that is offered. The margin of profit in an orchard producing the best apples is small in a season of plenty, and those whose fruit is better than the average are usually disgusted with the business, when they get only 40 or 50 cents per barrel, as is sometimes the case. The remedy lies in better fruit and improved methods of marketing. The small package (box or keg) has come to stay. The extent of this trade will depend upon the interest growers take in it and the pressure they put upon their receivers to bring this small package to the notice of consumers, so that they may know that a convenient quantity may be had in a package direct from the grower. I noticed a box of California Spitzenbergs. Each apple was wrapped in paper, and they had been so carefully handled that the natural bloom remained. There were four layers, each containing 32, all packed one way. The price asked for the box was $3. It is doubtful whether it would pay to take such extreme care in making shipments to New York from nearby points. In that case the two essentials would be good fruit and a package small enough to be handled by an ordinary family without facilities for storing a whole barrel. W. W. H.

LIVE POULTRY IN NEW YORK.

Probably few outsiders are aware of the extent of this trade, and doubtless a great many who have lived in New York all their lives scarcely know that live poultry is sold here at all. The reasons are that the trade is restricted to certain sections of the city, and practically to one class of people, the Jews. The city authorities try to keep this business bunched together, so that they may watch it and enforce sanitary rules. As is well known, the religious regulations of the Jews require that all meats eaten by them shall be killed by their own butchers and in their peculiar way. The following facts were obtained from Charles Collins, a live poultry dealer on Jay Street, New York:

"Where do the largest quantities of live poultry come from?"

"The West and Southwest. Indiana sends more than any other State."

"What proportion of the trade is with the Jews?"

"Practically all; dressed poultry is used for all but the Jewish trade. There are really no other butchers now who make a business of killing their own poultry."

"Is there any trade with suburban residents who want to keep a few fowls?"

"A very little. This is more especially with people who go to the country for a time during the Summer and take along a few to fatten and kill as they want them."

"How extensive is this live-poultry business?"

"The average weekly receipts are 35 or 40 cars. During the Jewish holidays of Spring and Fall, the demand is about doubled, 75 or 80 cars per week being used."

"What kinds of poultry are most desired?"

"Fowls, ducks and geese. More chickens than usual were used this Fall on account of the poor quality of many of the fowls, which were moulting. The quality for the Jewish holiday trade must be better than at other seasons. They prefer large, fat fowls, the larger the better. Those weighing eight or nine pounds are most desired. For the dressed poultry trade these are too heavy, four or five pounds being best. These extra large fowls come chiefly from Burlington County, New Jersey."

One reason why the Jews wish very fat poultry is that they use the grease in the place of lard, the latter being a product of swine, which is forbidden food to them. The receipts of live poultry from nearby sections show a large proportion of culls. Farmers go over their flocks and pick out the old and worn-out hens. Speculators come around and buy these up for shipment. In Indiana and other sections where a business is made of raising poultry for shipment alive, the conditions are different, and only a moderate proportion of culls is found in such receipts. But few pullets are sent, the majority being fowls and cockerels. Mr. Collins said he had just paid three cents extra per pound to get a lot of pullets.

Milk Notes.

The ground is white with snow, and has been for three or four days. Wild geese are flying South; the writer saw a flock of 60 to-day (November 18). Cows are stabled day and night; the sudden cold weather gives them a ravenous appetite. They consume as much food now, or more, than at any time during the year. The flow of milk has shortened one-third in the past few days, in spite of liberal feeding. It has been a very "milky" Fall; both the feed and the weather have been favorable for a large flow. The Chenango Valley Dairy Company receive about 110 cans of milk per day at their coöperative creamery. Some milk is shipped, the remainder is made into butter, and the skim-milk into curd. Patrons received for their milk during July 80 cents, August 88 cents, September 83.2 cents per can of 40 quarts. Cows are in good condition and health. Fresh cows bring from $30 to $45. Mill feed is high in price; Spring bran $20, Winter bran $21, middlings $22, hominy $23, cornmeal $26, gluten feed $23, malt sprouts $19, dairy feed $21 per ton. Farmers in this locality will not be obliged to purchase as much mill feed as last Winter, as the corn and hay crops were good. We have a great many silos in this section, and all are filled. The silo is indispensable to the dairyman making Winter milk. E. C. J.

Greene, N. Y.

National Horse Show.

The annual exhibition of the National Horse Show Association was held in Madison Square Garden, New York, during the week ending November 23. This show is gaining in popularity each year, the one just past eclipsing all previous records in attendance and the number of animals entered. There were 1,434 entries, 200 more than last year. One reason given for this increased general interest is the success attained by American racers during the past season, both here and in Europe. The performances of these speedy animals are so thoroughly advertised by the newspapers that new interest is aroused in many who have but little to do with horses ordinarily in business or pleasure. No common horses are shown here. They are the best of their types, and most of them have had special training for this work. They include all classes except the heaviest draft animals, to which but little attention is given. Probably there is no better place to study all kinds of horses, and the farmer and breeder within reasonable distance of New York can spend two or three days to good advantage in looking over the show. Opportunity is given to examine the animals in their stalls, as well as to see them on exhibition in the ring. But few farmers would be able to give the time and attention necessary to finish a horse for the class of trade here represented, but they can see what type of raw material is wanted, and those who intend to raise colts might as well produce those that will sell for $300 as $100. The Hackney has lost a little of the popularity which he had two or three years ago, but still he is a favorite with many people, and no one can help admiring his strength and beauty and the business-like way in which he handles his work. Of course, jumpers, trotters, high-school horses and other special performers, attract most attention. Probably next in popularity come light roadsters, of which a great variety is seen. They are clean-gaited animals with plenty of speed and life for general use, the kind that make driving a real pleasure. There is but little danger of overstocking the market with horses of this type. W. W. H.

BUSINESS BITS.

READERS having good hay for sale will do well to write to F. D. Hewitt, 120 Liberty St., New York.

THE week's wash still remains the hardest work confronting the farm housewife. It is possible, however, to lessen the exertion by adopting modern labor-saving appliances, and among these the "1900" washer holds a high rank. Write for catalogue and full particulars to "1900" Washer Co., 143 P State St., Binghamton, N. Y.

FARMERS and stock raisers who have used Brighton's Swine "V" highly commend it as the most effective and humane device for preventing hogs from rooting. It is also useful as a stock marker and calf dishorner. But write for circulars and then you'll know all about it. Address Farmer Brighton, Fairfield, Ohio.

SEVERAL weeks ago THE R. N.-Y. had an article on bone cutters, in which the fact was mentioned that strong power is required to turn the crank on some of these machines. People who know what they are talking about say that the newer cutters are fitted with ball bearings and other devices which greatly reduce the power formerly required. The manufacturers offer an easy solution of this matter. They send the cutter on 30 days' trial. That gives a poultryman plenty of opportunity to test his strength on them, and surely nothing could be fairer! No one can question the great value of cut bone for poultry.

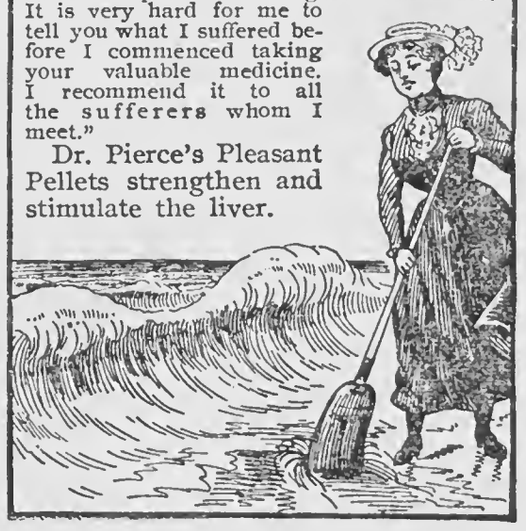
Do you turn your horses out for the Winter? If so, we want to call your attention to a very important matter. Horses which have been used steadily at work, either on the farm or road, have quite likely had some strains whereby lameness or enlargements have been caused. Or perhaps new life is needed to be infused into their legs. Gombault's Caustic Balsam applied as per directions, just as you are turning the horse out, will be of great benefit; and this is the time when it can be used very successfully. One great advantage in using this remedy is that after it is applied it needs no care or attention, but does its work well and at a time when the horse is having a rest. Of course it can be used with equal success while horses are in the stable.

It's Time Wasted

And strength wasted, to try to push back the rising tide with a broom. It's just as great a waste of time and a far more serious waste of strength to try to push back the rising tide of disease with the "nervines," "compounds" and "nerve foods" which simply drug the nerves into a drunken stupor. They make you feel good? So does whisky, while the feeling lasts, but the reaction is dangerous and deadly. Dr. Pierce's Golden Medical Discovery is a temperance medicine. It contains no alcohol, opium, cocaine or other narcotic. It strengthens the body by purifying the blood and increasing the supply of that vital fluid. It heals diseases of the stomach and organs of digestion and nutrition and thus removes the obstacles to a perfect nourishment of the whole body.

"Six years ago my stomach and heart troubled me so much I had to do something, as the doctors could not help me," writes Mrs. S. A. Knapp, of San Jose, California, Box 392. "I went to San Francisco and had treatment for catarrh of the stomach and was better for some time, then it came back. I then used Dr. Pierce's Golden Medical Discovery and 'Pleasant Pellets.' These medicines cured my stomach. I do not have the pain and indigestion as I did. It is very hard for me to tell you what I suffered before I commenced taking your valuable medicine. I recommend it to all the sufferers whom I meet."

Dr. Pierce's Pleasant Pellets strengthen and stimulate the liver.



BRONCHIAL CONSUMPTION.

From Dr. Robert Hunter's Lectures on Lung Diseases.

Of the many forms of Bronchitis, the one most alarming of all is that in which the symptoms closely resemble those of consumption, and hence called consumptive bronchitis, or bronchial consumption. You must not, however, understand from its name that it is really tuberculosis in character, or produced by the bacilli which cause true consumption.

In all lung cases I require a portion of the expectorated matter coughed up by the patient to be brought to me, or sent in a small bottle by express, before giving a definite opinion of the disease. If, on examination, I find the tubercle bacilli present, the case is consumption; and if no bacilli—Bronchitis. A large percentage of those who die of lung disease, supposed to be consumption, are really deaths by chronic bronchitis resembling consumption.

A remarkable instance in verification of this recently occurred. A lady was brought to me in what appeared the last stage of consumption. Her physicians had told her husband that she could not live a week. She had a bad cough, puriform expectorations, night sweats and was wasted almost to skin and bone. Judging by her symptoms and appearance, it was impossible not to fear that she had come too late. On sounding her chest, however, I was surprised to find no solidification by tubercles, and on examining her sputum a total absence of the bacilli. The history, too, of her sickness revealed that it had followed an attack of whooping cough and grippe. So, although her pulse was 120 a minute, and so feeble as to be hardly perceptible, and the wasting of her body so extreme that she could not stand without support, I did not hesitate to pronounce the disease bronchial, and give it as my opinion that, if we could sustain her strength long enough for remedies to act, she would be saved. She was immediately placed under medicated air treatment, with tonics to impart appetite and digestives to help the enfeebled stomach to transform nourishments into chyle and blood. Within a week she showed signs of improvement. Her progress was necessarily slow, as the healing powers of the body were nearly exhausted before the first inhalation was given, but she gradually acquired more and more strength, and within six weeks was able to take short walks in the open air. She recovered perfectly in about six months, and is alive and well to-day.

This case shows the importance of a correct diagnosis and proper adaptation of the treatment of the conditions to be remedied. Had the true nature of her disease not been discovered just when it was, she would have lost her life through wrong treatment, and been recorded as another death by consumption.

Every form of bronchitis is curable by local antiseptic and healing remedies applied directly to the lungs by medicated air inhalation, but none of them by stomach treatment. The stomach is not the part affected. The air tubes and cells of the lungs are the seat of every bronchial disease, and unless remedies capable of changing their bad secretions and healing the inflamed tubes are applied to them, cure is impossible.

Readers mentioning THE RURAL NEW YORKER can obtain Dr. Hunter's book, "The Lungs and Their Diseases," absolutely FREE by addressing Dr. Robert Hunter Association, 117 W. 45th Street, New York City.

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SAWS ANY WOOD IN ANY POSITION ON ANY GROUND 4 in. to 5 ft. Through

1 MAN with a FOLDING SAWING MACHINE BEATS 2 MEN with a Cross-cut Saw

5 to 9 cords daily is the usual average for one man.

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Live Stock and Dairy

DAIRY AND FARM NOTES.

Building the Dairy Barn.

PART II.

EFFECT ON DAIRY COWS.—The highly-bred animal, of course, is the first to succumb, because she is last to sacrifice milk, and the remark becomes current that the purebred is more tender and susceptible, which in a way is true. The animal possessed of a more selfish nature provides against such vicissitudes by laying on fat, as extra woolens, and by milk shrinkage. I do not think we should ignore entirely the habit of self-preservation, because we have not been able to make artificial conditions so perfect that the cow does not need some essentially so-called "hardiness." The happy medium seems wise in this instance as in most cases; a good strong constitution, made stronger by proper surroundings, which means increased available vital force for milk or beef, as the case may be, instead of a strong constitution for the purpose of withstanding unnecessary drain upon its vitality. It should be remembered that the greater effort and expenditure of vital force developed through food is for self-preservation in the animal, heat, energy and building of waste tissue, and the smaller proportion expended for available return. Every unit of vital force, therefore, given out to ward off the evil effect of cold, damp stables is taken from the profit side of the ledger in the form of milk, flesh or health. It is not alone the present generation with which we deal, but the offspring is most certainly affected by unnecessary drain of vital energy upon the parents. In animal life as in the human, the first effect of over strain is a "cold." I wish some would testify as to the origin of the word as applied. We are certainly not cold; on the contrary, the first evidence in both animals and man is a fevered condition. Call it what you will, this peculiar disease, or, more clearly stated, forerunner of disease, is caused by an over draft upon available vitality and a desire to meet it. The digestion is at once called upon with increased vigor and sooner or later is overtaxed; then comes the "cold" and then—why, of course, if there is a tuberculosis germ in the neighborhood he floats around and finds lodgment in the part of the animal which by virtue of his ancestry is weakest. No one will deny the force of the argument, but thousands will deny the practice of it to the animals in their keeping. Have you ever watched the steam gauge dial and observed the indicator fall 10 pounds at each stroke of the piston in some of the big fellows that run a large plant or on ocean steamers, and see it come back to its original position before another draft for a second stroke? All works well until the call for steam is beyond the capacity of the boilers to supply, and then if a storm overtakes the boat at this critical time she is at the mercy of the wind. Just such conditions as we have been discussing have made possible the protracted struggle between the old State Board of Health in New York, and bodies of a similar nature in other States on one side, and farmers chiefly upon the other, and, in order to carry out the respective notions, have in my judgment gone to extremes. It seems to me now that the chance for extreme action on the part of the State board having been eliminated, the conservative force should be felt in a way that will not antagonize, but bring forth fruit in a way of health and comfort to our animals, leading at the same time to increasing confidence on the part of city consumers, and consequently increased consumption of the crude product. This relieves the congested condition of the markets when overstocked with butter and cheese. At such times prices are always low, and low prices have a redeeming feature, in that they increase consumption. H. E. COOK.

ADVICE ABOUT GRAIN FEEDING.

One of our readers in Connecticut asks the following questions: "I keep a dairy and sell milk to the consumers direct. My cows are Jersey, of average size. I have plenty of corn and stalks, and can buy bran at $21, wheat feed at $22 and gluten at $30. Give me a proper ration for cows in full flow of milk. I wish also a suitable ration for work horses; they are used every day at ordinary farm work, and do not travel on the roads very much except in peddling milk, at which they take turns." What, with your experience and this feed, would you buy in his place? Let us know what you consider the most economical ration for such cows. What would you do with this ear corn, and how much grain per day would you feed?

BRAN AND SHELLED CORN.—We feed work horses about 20 pounds Timothy hay, with wheat bran and shelled corn equal parts, quantity governed by size of horses and amount of work being done. For cows we feed ears of corn ground fine and gluten, equal parts, with nearly as much wheat bran in weight as of gluten and meal, and as much good hay as they will eat up clean. We have never succeeded in curing cornstalks so they would be a good feed for cows. If we dry them in the fields sufficiently so they will not mold in the barn, the cows will not eat them; if fed when moldy, milk will have a taste which will be objectionable to customers. Regardless of price we have a rule to feed either wheat bran or middlings every day. The head of the herd is usually compelled to eat the stalks.

Portland, Me. J. H. R.

A RATION FIGURED.—We understand that the animals are Jersey cows of average size, in full flow of milk, with plenty of home-grown corn and stalks, presumably no other roughage. Wheat bran is $21 per ton; wheat feed $22, and gluten meal $30. We should give them all the corn stover they would eat up reasonably clean, and should prefer for better results that it be cut, and each feed allowed to soften 12 hours by pouring over the pile a few pails of hot water to which a little salt had been added, covering the pile with an old blanket. We should do all possible to make the food palatable without too great expense. For the grain part of the daily ration we should give two pounds coarse wheat bran, four pounds cornmeal, and four pounds gluten meal. The cows will eat about 20 pounds of the stover and with the grain the ration will analyze about as follows:

	Protein.	Carbohydrates.	Fat.
20 lbs. corn stover.	.40	6.68	.12
2 lbs. wheat bran.	.25	.88	.06
4 lbs cornmeal...	.27	2.74	.15
4 lbs. gluten meal.	1.36	1.67	.12
Total	2.28	11.97	.45

This will give nutritive ratio of 1:5.7, and the cash outlay for each cow's grain will be 8.11 cents per day. For cows giving the most milk we should increase the gluten, and decrease for those giving a lesser amount. An occasional meal of some other kind of roughage if possible will be appreciated by the cows. For the horses we should give what stover they will clean up, and in addition two quarts each of wheat bran and cornmeal three times daily. At present prices for oats, and having plenty of corn, we should hardly want to buy them. H. G. M.

Connecticut.

CUT THE STALKS.—To feed the average-sized cow in full flow of milk, with plenty of corn and stalks, bran $21, wheat feed $22, and gluten at $30, I should cut up the cornstalks. Place before each cow what she will eat clean; we do not expect they will eat the large, dry stalks; then wet the stalks and put on four quarts bran, 1½ to 2 quarts gluten for each cow. In this way they will eat most of the stover with the grain. We think it a better way than to feed the grain all by itself. The ear corn is not a profitable feed for cows; should surely want the corn on cob ground fine, and then it will not make so very much milk. But the ear corn makes a fine feed for horses. The dent varieties are better than the hard flint for them. Just how much one should feed depends on how much hard work you want them to do. Enough ears of corn to make three pints to two quarts shelled corn, and about the same amount of bran three times a day is a good feed. What this man should do if he expects to make milk right along is to build a round silo to keep his cornstalks. After using one a year he would wonder how he ever got along without one. E. B.

Wilbraham, Mass.

HAY BRICKS.—The Hay, Flour and Feed Journal refers to the need of pressing hay into small compass before shipping for a long ocean voyage. It says that in the South African war horses appeared with what seemed to be bricks strung around their necks. These were really "condensed rations." "A compound of hay, bran and oats is made and pressed until a ton equals but 35 cubic feet. Portions of this compressed material are then placed between iron plates and a tremendous pressure brought to bear upon the plates until the feeding material is of the requisite size of the brick. Clamps are then bound around the plates, and they, with the inclosed bricks, are removed from the press. Then, to overcome the inherent elasticity of the hay, which even after all this pressure would inevitably rebound, the clamped bricks, loaded on a truck, are run into an oven and raised to a moderate heat. This, it has been found, overcomes that difficulty. After being removed from the oven, the clamps are taken off, and the bricks are ready for transportation. These bricks weigh about six to eight pounds each, and measure nine by four inches."

Cure before cost, of course; but besides being a wonderful curative for Throat and Lung diseases. Dr. D. Jayne's Expectorant is about the least expensive remedy; it takes so little of it.—*Adv.*

Your Horse

may "throw a **curb**," "start a **splint**," "sprain a **cord**," "develop a **spavin, thrush,** or **grease heel**," etc. They are all bad, but don't be alarmed. Get a bottle or two of

Tuttle's Elixir.

It cures all these troubles and Colic, Distemper, Founder, Pneumonia, &c
Used and endorsed by Adams Express Co.

Dr. S. A. Tuttle. Wolcott, Vt., July 15, 1898.
Dear Sir:—I have doctored horses for the last 25 years, and I think your Elixir the best liniment I have ever used, and I would recommend it to any one. C. M. GUYER.

TUTTLE'S FAMILY ELIXIR cures rheumatism, sprains, bruises, etc. Kills pain instantly. Our 100-page book, "Veterinary Experience," FREE.

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Beware of so called Elixirs—none genuine but Tuttle's.
Avoid all blisters; they o er only temporary relief if any

NO SPAVINS

The worst possible spavin can be cured in 45 minutes. Curbs, splints and ringbones just as quick. Not painful and never has failed. Detailed information about this new method sent free to horse owners.
Write today. Ask for pamphlet No. 34.
FLEMING BROS., Union Stock Yards, Chicago, Ill.

Sharpen your own Horse.
THE BLIZZARD
the greatest of all
HORSE ICE CALKS
Agents Wanted. Address,
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THE CHAIN-HANGING
Cattle Stanchion
The most practical and humane Fastener ever invented. Gives perfect freedom of the head. Illustrated Circular and Price free on application. Manufactured by O. H. ROBERTSON, Forestville, Conn.

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A new thing. Write for the booklet before buying. Full information. It is mailed free.
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Breeders' Directory

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Yearling—registered, from a great show cow; almost faultless, by a producing sire. Farmer's price.
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DELLHURST FARMS, Mentor, Ohio.

Holstein-Friesian Bull
ready for service, and a fine lot of Bull Calves. Best of breeding, and from deep producing families.
C. K. RECORD, Peterboro, N. Y.

FOR SALE—Thoroughbred HOLSTEIN-FRIESIAN CATTLE of the best families. A so. 30 high-bred Bulls at reasonable prices Write the MAPLES STOCK FARM, Binghamton, N. Y., WM. ROOD. prop.

For Sale—PUREBRED HOLSTEIN-FRIESIANS from best families. Two registered bulls ready for service and bull calves. Also have purebred BERKSHIRE SWINE and SCOTCH COLLIE PUPS at low figures. Write for breeding and prices. W. W. CHENEY, Manlius, N. Y.

AYRSHIRES—Five head left; must be disposed of. Also the handsomest Bull of the breed, Oakum Lad No. 6590, three years old, weight close to 1,500 pounds. Cheap if sold soon.
A. F. GRINE, Homewood, Pa.

Springdale Farm, Adams Basin, N. Y.
E. J. ADAMS, Proprietor.
Breeder and Shipper of Red Polled Cattle, O. I. C. Swine and Dorset Sheep. Stock for sale.

Berkshire, P. China and C. White Pigs (also, serviceable Boars; sows bred), at farmers' prices. B. P. Rock Cockerels. 75c.; W. Holland Turkeys, $1.50. W. A. LOTHERS, Lack, Pa.

Reg. P. Chinas, Berkshires and C. Whites.

Choice Pigs, 8 weeks old, mated not akin. Bred Sows and Service Boars. POULTRY. Write for **hard times** prices and free circular.
HAMILTON & CO., Rosenvick, Chester Co., Pa.

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2000 FERRETS. First-class stock. Some Trained New Price-list free.
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25 choice pure Von Homeyer RAMBOUILLET RAMS for sale cheap. THOMAS WYCKOFF, Rambouillet, U. S. A., Orchard Lake, Mich.

Collie Pups—Spayed Females. Circulars. SILAS DECKER. South Montrose, Pa.

RHODE ISLAND REDS EXCLUSIVELY. The "Business Farmers'" fowl. Breeding Pens, Cockerels and Yearling Hens for sale. Eggs in season. C. A. Whitney, Upton, Mass.

There is Music in the crow of my R. C. Brown Leghorn cockerels, $1.25 each. They are good breeders. A. B. KATKAMIER, Macedon, N. Y.

Cockerels—Choice W. Wyan., P. Rocks, Brahmas, Cochins, Leghorns, from prize-winning stock. 23 varieties of land and water fowls. Satisfaction guaranteed. Big catalogue free. Pine Tree Farm, Box T, Jamesburg, N. J.

White Leghorn Cockerels.

We have 85 choice, large, thrifty, early-hatched cockerels, selected from a large number for breeding. They are from our best pnrebred egg-type stock. Prices right for quality.
Write for circular. State what you want
White & Rice,
Yorktown, West. Co., N. Y.

MAPES' VENTILATING DRUM *Utilizes Animal Heat.* Heat your hen roost with absolutely no expense for fuel. Warranted to secure a constant circulation of pure air, and a temperature above 40 degrees in zero weather. Full directions with each drum. Price, $3.50. MAPES' VENTILATING CO., Middletown, N. Y., Box 205.

Death to Lice on HENS and CHICKS 64-page book FREE.
D. J. LAMBERT, Box 307, Apponaug, R. I.

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GLENORA MFG. CO., Glenora, Yates County, N. Y. Infringements will be prosecuted.

Daily Rations for Hens.

Have you ever measured the grain feed required by a hen of average size? Various estimates have been made, and we would like to know what the practical poultry-keepers have to say about it. In our experience five ounces of dry grain have given good results as a daily ration.

My hens give better results on a daily ration of five ounces dry grain than when a larger or smaller quantity is given. H. H. C.

Franconia, N. H.

As I keep different breeds of poultry, I have never accurately measured the grain food required daily by the average-sized hen, and therefore cannot advise definitely, although it seems to me five ounces of dry grain as a daily ration is correct, according to your experience.

Delaware, N. J. A. J. M'C.

I cannot give any definite figures. I feed wheat, in the sheaf, to quite an extent, and have never made any attempt to weigh their complete rations for any day or length of time. Making a rough estimate I think it is about four ounces of dry grain daily. I feed some cabbage and clover hay through the Winter, which would make a difference in the grain. GRANT DAVIS.

New Jersey.

I have made two or three estimates and make it a fraction less than five ounces. Twenty-five years ago, when I commenced to keep hens, corn was about $1.45 per bag, bran $21 per ton—those are the only prices that I remember. The cost for grain, shell and everything they ate was—during the Winter—just two cents per hen per week. I feed all the hens—Barred Plymouth Rocks—will eat up clean three times a day.

Hanover, Mass. A. H. M.

Our rule is to feed all the hens will eat up clean, and no more. In several particulars, our method of feeding makes it difficult to form a correct estimate of the grain eaten. In the morning we feed a mash composed largely of small potatoes, turnips and cabbage, boiled up and mixed with bran and animal meal. At noon either a few heads of cabbage, or a little buckwheat is fed, and at about 4.30 P. M. they are given all they will eat of a mixture of wheat screenings and whole corn. The corn is of our own raising, and is fed in an unusual way. The corn is husked and instead of being shelled, is run through a Tornado feed cutter. This shells part of the corn, and cuts the ears, cob and all, up into lengths of about three-quarters inch. The hens have no trouble in picking the kernels from these pieces of cob. This saves us the expense of a sheller, is much quicker, and so far as we can see, is just as satisfactory in its results as any other way of feeding corn. Many of our hens are moulting, and consequently eggs are not as plentiful as we might wish. R. W. R.

Mill Brook, Conn.

I think your estimate of five ounces dry feed per hen too high for economical feeding. I am no poultry specialist, keeping only from 50 to 75. The most practical experiment I have recently made was with a flock of about 60 hens and chickens about equally divided, chickens full grown. I have had them confined in a yard for from six to eight weeks to keep them from my garden, as they were very fond of cabbage and tomatoes. I feed twice per day. Morning four quarts of oats, and at night four quarts of corn. During the day they would usually have a quantity of cabbage or refuse apples or pears, which they needed to get best results from grain. The fowls were contented and kept fat, and young ones increased in weight. They are of the Wyandotte breed. I did not get many eggs in the meantime, as they soon commenced moulting. Seven and one-half pounds of corn and 4½ of oats make a daily ration of 12 pounds or 192 ounces, which gives but little over three ounces per fowl. Had my experiment taken place earlier, expecting egg production, I might have added a little, if not in quantity, in variety; but with the necessary variety of food for the health of the fowls and for eggs, I believe four ounces would be a large daily ration.

Five Corners, N. Y. J. M. C.

Farm Hens in Ohio.

The 125 to 150 B. P. Rocks and White Wyandottes that I usually carry through the Winter have free range, and are divided into three flocks about equally; one at poultry house near the dwelling, one at horse stable, and the third at the large barn where the cattle are kept. The two latter flocks have, of course, abundant scratching facilities, and manage to pick up considerable loose grain. The home flock has scratching material furnished them. They all receive a feed of corn at night. After freezing weather they have warm mash mornings, consisting usually of cooked vegetables with enough bran or ground oats added to take up the extra moisture after mashing the vegetables. They have access to growing rye in pleasant weather. Green bone is fed only occasionally, as it is difficult to procure, aside from the grinding which must be done by hand. Water, shells and grit are, of course, convenient at all times. Surplus cockerels are disposed of or penned separately by January 1. This Winter I shall try about 25 hens and pullets of Buff Wyandottes. So far they have not bred very true, though the eggs from which the start was made were procured from a supposed reliable source. Laying and table qualities, however, show them to be equal to the Barred Rocks and White Wyandottes. M. E.

California, O.

HOLSTEIN AND JERSEY CROSS.

The Two Breeds Do Not "Nick."

Will you tell us whether you consider a cross between a Jersey and a Holstein practical, or is it likely to result in undesirable animals of no distinct type? If this cross were to be made, would you advise the Jersey bull and Holstein cow or vice versa?

A few years ago we tried to use a Jersey bull on our herd of grade Holsteins and grade Durhams, and met with such poor success that we had to abandon that kind of a cross, as the calves were not fit for anything. We also have used a Holstein bull on grade Jerseys with poor results. The breeds are so different that there is nothing common with them, hence the poor results. We are now using Holstein bulls on our grades (Holstein and Durham) the bulls being of the best registered stock, and the calves we are getting are not equaled by anything outside of purebreds found anywhere. We have heard Mr. H. B. Gurler say repeatedly that a Holstein and a Jersey cannot be crossed with any degree of success. H. B. GURLER CO.,

Illinois.

Tie to One Breed.

In my judgment one makes a mistake to cross-breed. Our experience is confined to the use of a single Jersey bull on grade Holstein cows. The heifers are now coming into milk. Their milk on the whole is better than the Holstein milk, and they are persistent milkers, but the flow is lessened. The most disappointing feature of the cross, however, is the lack of uniformity in type and size. We have Holstein heifers, Guernsey heifers, and Jersey heifers, and some not belonging to either class. Classified and put by themselves, they look well enough, and will make very good cows. They do not possess the vitality of the Holsteins, nor are they as large consumers. I do not regret the attempt, because I have been very much interested in studying results, but I would not do so again, nor would I advise anyone else to try it. I am satisfied if the trial is to be made that the Holstein should be the top cross. This idea is drawn from considerable correspondence with breeders during the past three years. I am indebted to S. Hoxie, superintendent of the Holstein Advanced Registry, and to H. B. Gurler, of Illinois, author of "American Dairying," for much valuable information. Mr. Gurler's experience was similar to ours; Mr. Hoxie's observation, that results would be fairly satisfactory with a Holstein as a top cross, owing to the greater vitality. I firmly believe that cross-breeding is a mistake. No one has yet succeeded in fixing the good qualities of each breed in the offspring, and probably they never will. On the contrary, the effect seems to be to intensify their weaknesses. Where one has a mixed herd without special reference to breed, the use of a purebred sire of any breed, if he is prepotent, will have a marked effect and a salutary effect on the young animals. The wise thing to do, it seems to me, is to tie to the breed that meets our demand, and then stick to it. There will be failures enough; we never hear of the blanks that are drawn, and every farmer and breeder gets a share.

H. E. COOK.

Training a Horse.

When I was 16 years of age I went to work for a farmer who had a horse which was continually getting the line below his tail. This he did most when the flies were troublesome. Otherwise the team, of which he was one, were well broken and obedient. The horses that I had used before were not well trained, and one might as well say "fly and dive" as say "haw or gee," but this team would step 12 inches to haw or gee as commanded, so I was very fond of them. The man who had "handled" the team just before I did had jerked the horse when he had the line under his tail, and had the under-surface badly cut. But pulling the line only made the animal worse. He was very kind, so when he got the line into the troublesome place I called him to stop still. I then lifted the tail and took the line gently out. At first, when I did this, he would cringe and make ready to jump, as he expected to get a slap with the lines, but I petted him a little to assure him that I would not hurt him after letting out the line. This continued for about two weeks, when the horse began to walk quietly with the line under his tail, and finally, when he did forget and switch it in he would walk along and shake it out himself. After the animal was cured of the habit the "boss" told me he had been watching to see how I would do with the animal, and complimented me on the success of my patience. I find that 90 per cent of the bad habits in domestic animals are the result of bad temper in those who handle them. The animal does something by nature or chance, and bad temper in some human being fixes the habit in the animal. This is very plainly so in breaking in a young cow to be milked. Have patience with her; don't retaliate, but stick to her and get her milk. Scratch her head and pat the udder, but two or three good kicks and you have gratified your temper but spoiled your cow. This advice I saw in THE R. N.-Y. some time ago and have ever since been grateful for it, as I break in a young cow nearly every year. A. C.

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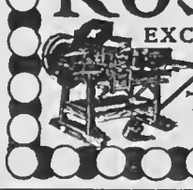
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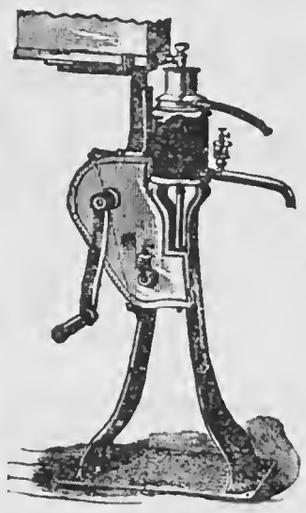
Prof. W. J. Spillman, of the Washington State Experiment Station at Pullman, in an article in the *Ranch and Range*, Seattle, Wash., of August 15, 1901, gives the record of the testing of five samples of milk from dairymen using U. S. Cream Separators.
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MRS. CHURCH: "Did you sa our husband liked these clinging s?" Mrs. Gotham: "Yes; he likes to cling to me for about four sea."—Tit-Bits.

PATIENT: "I have a terrib old, doctor." Doctor: "Yes, so I see. You'd better take a hot bath, and under no circumstances get your feet wet.—Credit Lost.

HEWITT: "I believe that the office should seek the man, not the man the office." Jewett: "So do I; I live in a country town where there's no rural delivery."—Judge.

"WHAT beautiful teeth Miss Smith has." "Yes, but they're false." "False? Why do you think so?" "She told me that she inherited them from her mother."—Boston Herald.

STRANGER: "Where can I find old Deacon Smith?" Little boy: "In the graveyard." Stranger: "What! Is he dead?" Little boy: "I dunno, mister, he was when he was put in there."—St. John Gazette.

AUNTIE: "Do you like school, Tommy?" Tommy: "I like Sunday school best." Auntie: "That's a good little boy. And why do you like Sunday school best?" Tommy: "'Cause it only comes once a week."—The Australasian.

DR. BROWN: "Well, did you keep the thermometer in the room at 70 degrees, as I told you?" Mrs. Murphy: "I did indade, doctor, but I had a hard toime to do it. The only place it would stay at sivinty was forninst the chimney-piece."—Life.

"IN your vermiform appendix," the surgeon told him after the operation was over, "we found strange to say a small brass tack." "That proves I was right," feebly answered the sick man, "when I said it was something I had eaten in mince pie."—Chicago Tribune.

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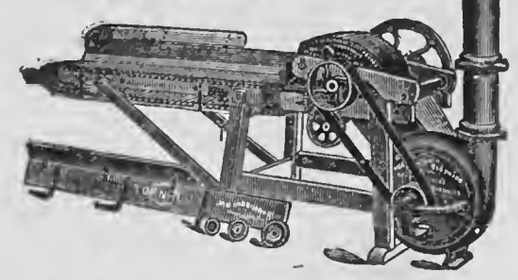

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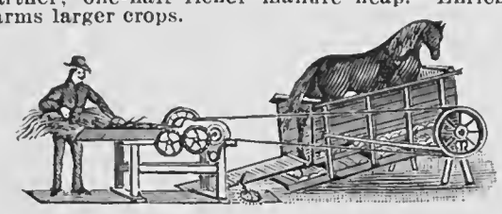

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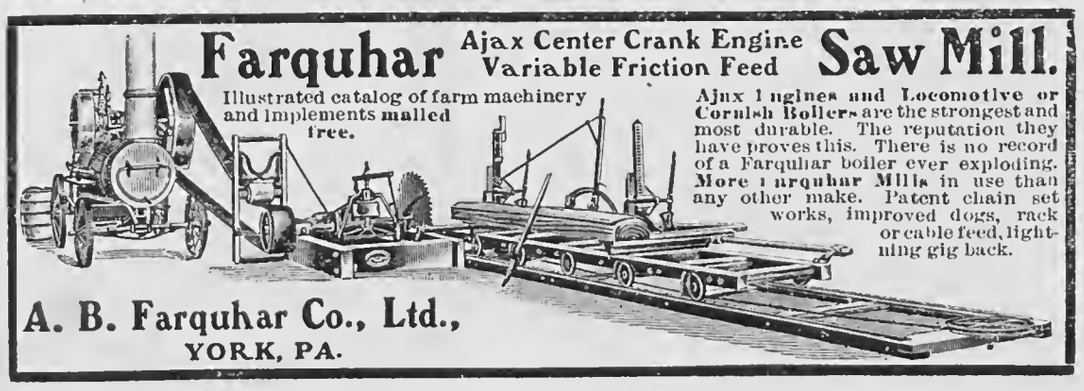

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DEC 6 1901

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

PHOTO ENG. CO. N.Y.

Vol. LX. No. 2706. NEW YORK, DECEMBER 7, 1901. $1 PER YEAR.

THE VALUE OF A SEEDSMAN'S GUARANTEE

FOUL WEED SEEDS IN GRAIN.

Who Pays for the Damage?

We give below a brief history of an interesting legal case which was tried last Spring in Niagara Co., N. Y. We venture to say that thousands of our readers have before now brought weed seeds to their farms in grain which was not properly cleaned. They will want to know what remedy, if any, there is at law for such damage. We are indebted to D. E. Brong, of Lockport, for the facts in this case.

W. H. Bell owns several farms near Lockport. In the Spring of 1900 he decided to seed a field of 22 acres, part of a farm containing 100 acres, to oats. He received a catalogue from F. B. Mills, a seedsman, and saw therein an account of the "Record Breaker" oats, which were highly praised. Mr. Bell had bought goods of Mills before with general satisfaction. The following statement was printed in the catalogue:

MY GUARANTEE.

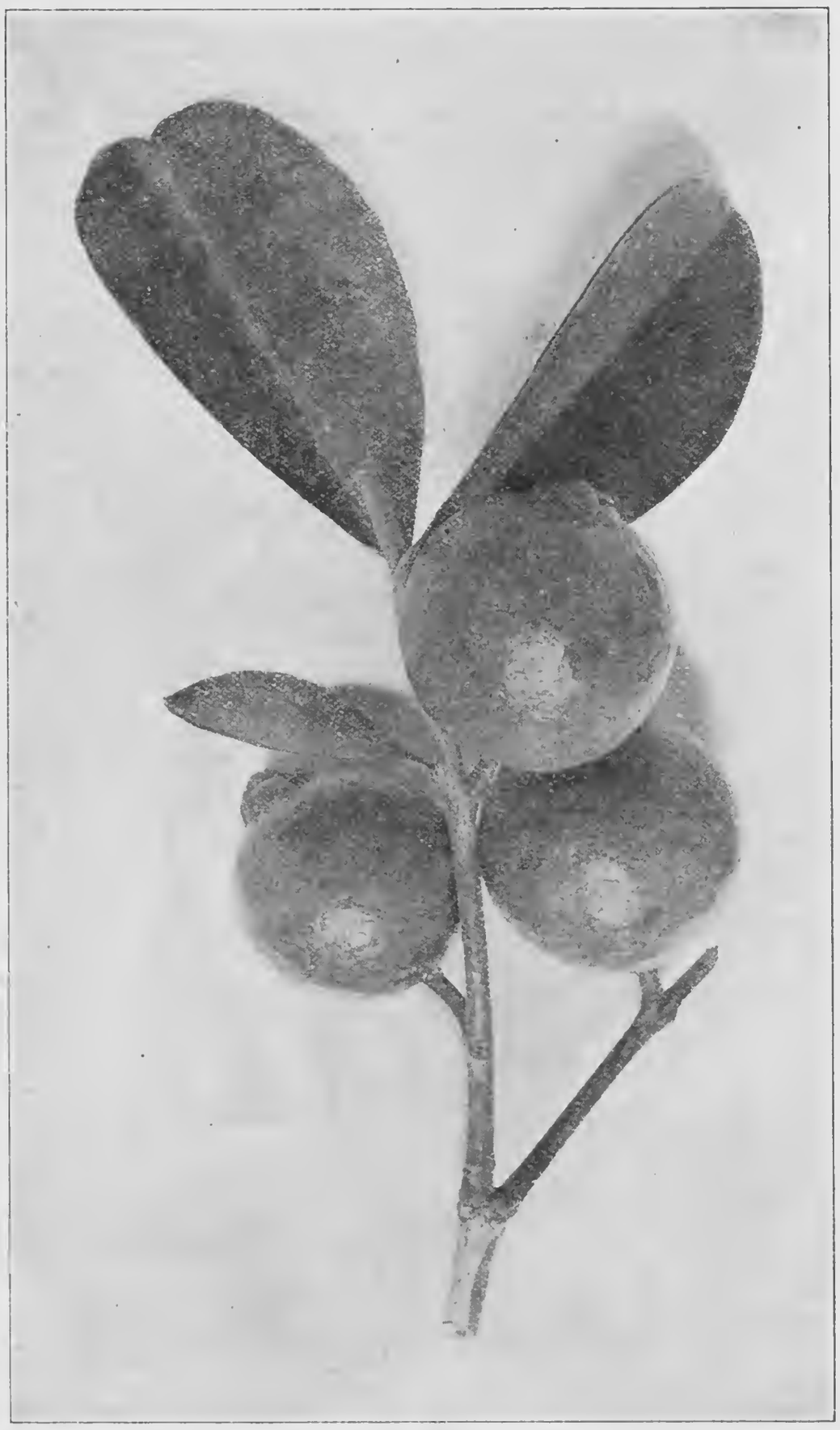
I guarantee that all seeds and other goods sent out from my establishment shall reach the purchaser safe, in good condition, be fresh and true to name, to grow if properly planted, and if such should not prove the case, I will refill the order free of charge, providing sufficient proof is given me within a reasonable time. I cannot guarantee crops and will not be held responsible for them.

After reading this Mr. Bell ordered 60 bushels of the oats—16 of which were for his son. There was so much delay about the delivery of the oats that Mr. Bell was obliged to write and then telegraph for them. They finally came in early May, long after the ground was ready. Mr. Bell hauled them himself from the railroad station, untied the bags, which held three bushels each, and poured half of each bag out into smaller bags so as to have 1½ bushel in each. The bags were then put at distances along the field so as to be handy for drilling. He did this himself, so that he knew that no weed seed got into the oats on his farm. In each bag he found a card which read as follows. He admits that he read this:

I exercise the greatest care to have all my seeds, potatoes, bulbs, plants, etc., fresh, pure, clean and true to name, and if such should not be the case, I will refill the order free of charge providing sufficient proof is given me within a reasonable length of time. I cannot guarantee crops and will not be held responsible for them. If these goods are not accepted on these terms, they must be returned at once. F. B. MILLS.

When the first few bags were opened Mr. Bell and two hired men sampled the oats—that is, they took up a double handful and let them run through their fingers. They were looking at the oats to see if they were plump and clean, and not looking for weed seed. At the trial much was made of this examination. The seedsman's lawyer claimed that if any weed seed had been there a careful examination would have shown it. He claimed that the statement made by Mr. Mills in his catalogue, where he said that the oats were "well cleaned" and the statement made on the card found in the bags, did not amount to a warrant, but that it was left with the farmer to accept or reject the oats as he saw fit after a thorough examination. He claimed in effect that Mr. Bell might have found the weed seed if he had made a proper search for it, and returned the oats without sowing them.

On the other hand, Mr. Bell's lawyer said that the law implies a warranty because a seedsman who has been for years in the business "is supposed to possess superior knowledge on the subject." The purchaser has the right to rely upon this superior knowledge and judgment. Therefore, when the seedsman states that the seeds are clean and pure or "well cleaned," the buyer has a right to rely upon his statement and make but a casual examination. One witness also testified that after the bags had been shipped and handled as these were the little seed would naturally work down, so that a very careful examination of the top of the bag would fail to show them. The judge who tried the case charged the jury that there was an implied warranty in Mills's statement, and it was for the jury to decide whether the farmer gave the oats a fair examination when he took up handfuls and looked at them as they trickled through his fingers.



FRUITS OF CATTLEY GUAVA. Fig. 369. See Page 822

It was so late in the season that Mr. Bell started seeding at once. His hired man drove the drill. When all but about three acres were seeded, the hired man discovered small seed in the oats. He had filled the drill too full, and in scraping the oats back from the cover he found the little black seeds. Mr. Bell was absent, and the hired man used his own judgment and went on seeding. When the owner returned the oats were nearly all in, the last two bouts going in with his consent. Mr. Bell then had some of the oats cleaned and sent the seed to Mills, asking what they were and stating that he was anxious to keep foul stuff out of his farm. To this Mills replied that the seeds looked like turnips, but that he could not see how it could possibly get into the oats, as he was careful to have all grain cleaned. On June 6 Mr. Bell wrote that he was sure that the oats were full of wild mustard. He had tried for years to keep his farm clean, and he felt that he had been damaged. Mr. Mills then sent a man to look at the field, and on his return advised Mr. Bell to hire help at once and pull the mustard out by hand. If proof could be furnished that the weed seeds were in the oats Mills said he would pay for the labor. In the meantime Mr. Bell had consulted with several good farmers, including our old friend, J. S. Woodward. These men found the field alive with the mustard, which was growing in the seed drills with the oats. They showed him the folly of trying to pull 22 acres of mustard by hand, and advised him to plow both oats and mustard under and cultivate frequently. Mr. Bell then consulted a lawyer, who after some correspondence with Mills (who still claimed that the crop could be pulled out) offered to turn the whole field over to Mills to clean in any way he saw fit. If Mills declined this offer Bell proposed to take the best and cheapest means for cleaning the field. To this Mills made no reply, so Bell plowed and cultivated, and finally brought suit for $2,000 damages against Mills.

At the trial Mr. Bell and his hired men told how the oats were bought, examined and drilled; how the mustard came up and how it was plowed under and cultivated. Mr. Woodward and other farmers testified to seeing the mustard, and showed the dangerous character of the plant, and how difficult it is to kill it out. These farmers swore that in their judgment the farm was worth at least $20 an acre less than it was before the mustard seed went into it. The various catalogues, circulars and letters were also put in evidence.

The defence consisted of a long series of objections and a statement by Mr. Mills. His lawyers objected to nearly everything. Every time a witness started to show that wild mustard or other weeds injured a farm the lawyers objected, but were overruled. They also objected when Mr. Woodward and other farmers told the best way of killing weeds. Mr. Mills made a general statement about his seed business. These oats were grown for him by a farmer. Mills himself never saw the sacks, did not personally know what was in them, and could not say that there was not weed seed in them when shipped. He expected the purchaser to examine them, but did not know whether his patrons were competent to detect

weed seeds or not. From his testimony it was not clear that he knew that the oats were really a new variety—or where they came from originally. He had no experience with wild mustard, and did not know how to get rid of it. He had advised pulling it because he knew that would get rid "of all that you pull." On the whole the defence seemed a very lame one—the lawyers evidently thinking that Mills had given no guaranty and therefore that Bell would be non-suited.

The judge, however, charged the jury that Mills had given in his catalogue an implied guaranty that the oats were "free from noxious weed seed that was not discoverable on an examination and inspection." The farmer was bound to give the oats a fair examination, and the jury must decide whether what he did do was fair. The judge also said that if the farmer was entitled to any verdict at all he could claim the value of the seed oats, and also the damage to the farm. The jury finally brought in a verdict for the farmer for $900 and $92.50 costs. The case has been appealed.

We have given full space to this matter because it is an important one to farmers generally. Every year we receive hundreds of complaints from farmers who have received grain and other seeds simply filthy with weeds and trash. These complaints seldom refer to the older and well-established seed houses, but the damage is usually done by the concerns that offer cheap seeds and are most extravagant in their claims for "novelties." Many of these people are mere jobbers, who buy seeds of others, and often sell them to their customers without opening the packages for inspection or recleaning. Several of them have admitted to us when an explanation was demanded that they bought grain or potatoes of some one else, and filled their orders from such bulk lots without even an examination to know whether the varieties were true to name or free from weeds or disease. They merely open the package to put their so-called "guaranty" inside! Such business is a contemptible crime and nothing else, and we rejoice to learn that there is now a legal precedent for action against such people. The trouble is that comparatively few farmers can afford to bring a lawsuit, and fewer still can make out a case as clear and strong as this one was.

It must be said too that farmers themselves are often at fault. They will often hunt for the cheapest seeds they can find, when they must know that the danger of buying weed seed and damaged goods is always increased by doing so. It costs money to clean and test seeds so that they may carry a guaranty that means something. Again, some farmers will wait until the last moment before sending their order. The seedsman is rushed, bad weather sets in, and danger of mistakes and delay is doubled. If when the seeds do finally come, there is anything wrong about them, it is too late to change. Most farmers, too, do not know the different weed seeds by sight. In buying clover seed they are often deceived through their inability to pick out the foul stuff. There is at the National Department of Agriculture at Washington a special department for seed testing. They will take a sample of seeds from any farmer and test it for quality and vitality. They will sort out the weed seeds and tell what per cent of the seeds will sprout. If a farmer will buy his seed early and send a sample of it to Washington for analysis he may know just what he is doing.

A TALK ABOUT FERTILIZERS.

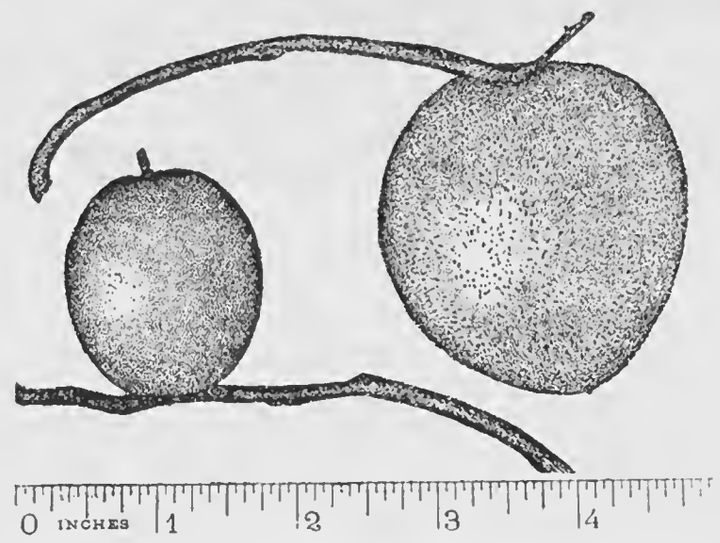
PART II.

Are there any trees, plants, grains, or grasses, that are usually grown by farmers, that show by their condition of growth what plant food they have a surplus of or what they are deficient in? If not, what can be planted as an experimental plant in cultivated crops that would indicate what the soil needed? If the soil is acid, what crop removes this acid more than others? I have heard a strawberry grower say clover always came in the ground profusely where he grew strawberries. Did the strawberries take an acid out of the soil and make it sweeter for clover? Is there not a work on clover and its uses? G. R. L.

West Chester, Pa.

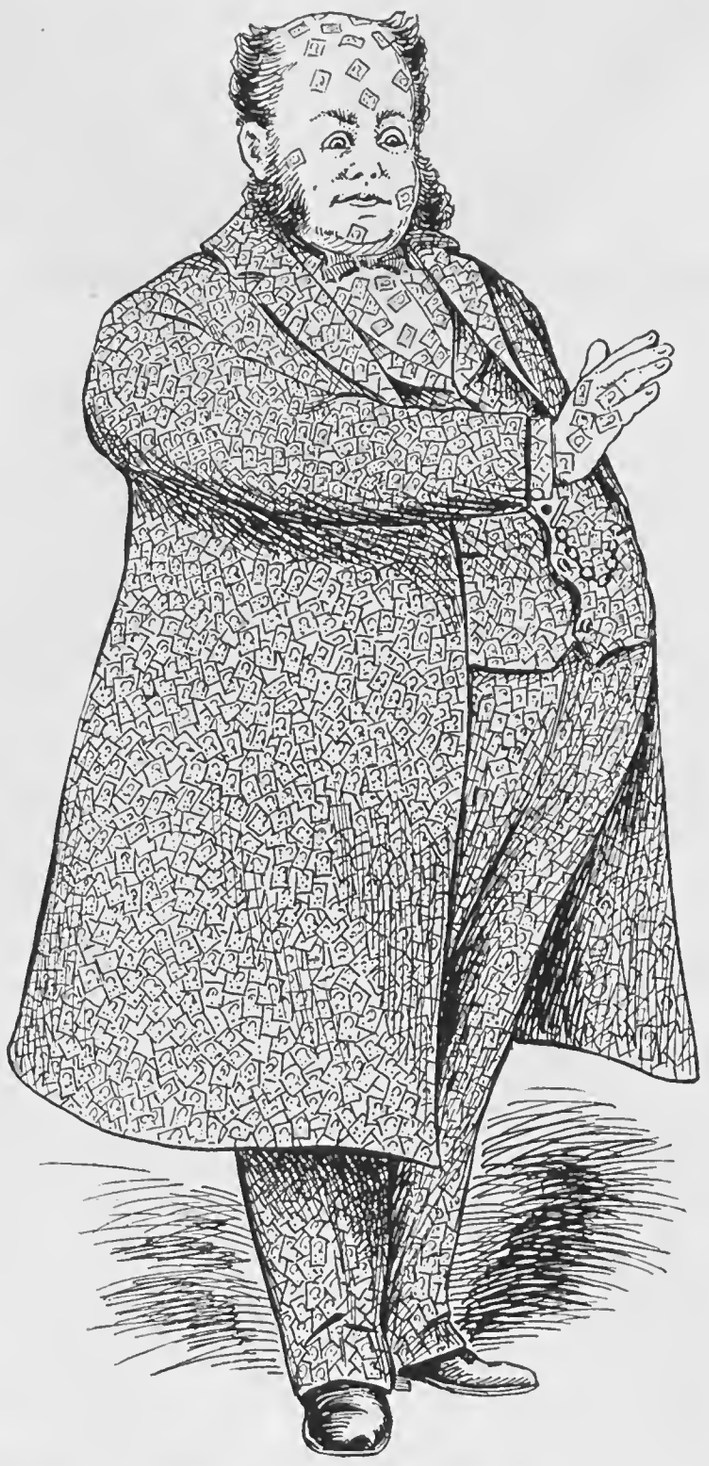
There is no sure way of telling what the soil needs from the growth of different crops. At the Rhode Island Experiment Station many experiments have been made to learn what plants, if any, do best on an acid soil. Lime was carefully used, and close watch was kept to see which crops were benefited by the lime, and which were injured. The list of those which gave a smaller crop when lime was used is most to our purpose. Common white beans, millet, Hungarian, cow peas, radish, carrots, watermelons, pumpkin, sorrel, rye and Red-top grass were the most common crops that seemed to prefer an acid soil. Most other farm and garden crops were helped by liming. Dr. Wheeler says that a test with beet seed will show the soil's need of lime, as the beet quickly responds when lime is added to an acid soil. Two plots or strips are used—each to receive the same fertilizer and preparation. On one strip lime at the rate of 2½ tons per acre is to be used, and beet seed planted in the usual way. If the soil is very sour the beet seed will often germinate, but will not make a full stand or grow properly. This test will indicate a sour soil, but so will the experiment outlined last week. Beets, turnips, cabbage or rape will in like manner show any need of phosphoric acid, but we do not consider such tests equal to the actual use of the fertilizing elements, mentioned last week.

Cranberries are much injured by liming, and blackberries are slightly helped if at all. Strawberries seem to do best on a neutral soil. Lime used when the soil was very sour would doubtless help the crop, but where there was only a small amount of acid it would do more harm than good. Sorrel is found on acid soil, and either disappears or is greatly weakened by liming. Red-top and Rhode Island Bent grass thrive well on acid soils, while Timothy and Kentucky Blue grass do not. This may explain why, in some sour, low fields the Timothy finally runs out and Red-top remains. Prof. Wheeler thinks that this ability of Rhode Island Bent to live on sour soils fully explains why Rhode Island became so celebrated for its grass. The soil being generally acid the other grasses could not succeed, and so the Bent occupied the land. On a natural lime soil other grasses would have crowded it out. Our own experience has been that cow peas do not respond to lime, and we would lime them when plowing under rather than when seeding. We have no evidence to show that a crop like cranberries or strawberries will "take an acid out of the soil" and thus leave it in better condition for clover seeding. Clover sometimes grows as a volunteer crop after lime or wood ashes are used. The explanation of this is that the clover seed remained in the soil for several years not germinating because the soil was too acid. When this acid was neutralized by the lime or ashes the seed sprouted and grew. The same explanation might be given for the appearance of the clover after strawberries. This berry usually receives a good quantity of stable manure plowed in before the plants are set or used for a Winter mulch. Manure is alkaline, and, when plowed into a sour soil would very likely fit it so that the clover will start. A little book by Henry Wallace, of Iowa, discusses clover culture in a very readable way.



SUPPOSED JUGLANS—HICORIA HYBRID NUT. FIG. 370.

See Page 822.



WELL PASTED WITH POSTAGE STAMPS. FIG. 371.

THE NORTHERN SPY FOR TOP-WORKING.

The experts often say that the Northern Spy apple gives the best stock for top-working other varieties. The reasons for this claim are not often explained, and the following article by Geo. T. Powell will be peculiarly interesting to many of our readers:

Nine years ago I began growing the King apple by selecting buds from strong individual trees and top-working them on Spy trees. The King is a weak tree constitutionally, is easily attacked by canker, and is short-lived, but when grown in this manner it gives promise of being a very profitable variety. The manner in which I arrived at this process of propagation was this: In pruning different kinds of trees in the orchard I found the King, Greening, Baldwin and other varieties cut easily, but when the Spy rows were reached it was very different work. The wood cut much harder. It seemed like cutting steel, the wood was so hard and fine grained. From this I reasoned that the Spy would be a valuable stock to work the King upon, as its vigor and freedom from disease might influence the scion when worked upon it. I feel quite sure that this will be the result, as thus far no Apple canker has appeared upon the King.

Believing there would be value in selecting buds with reference to individuality, I sent to Tompkins County for buds from the best trees to be found, that were not only free from disease, but that produced fine fruit, bore annually, and showed in every way superiority. The Spy does have a much stronger root system. The roots run deeper, and they are far more numerous. Colonel Evans, of the Olden fruit farm of Missouri, has also top-worked extensively on the Spy, and the strong root system was what led him to use this variety. He found in plowing out rejected trees in nursery blocks that one mule could plow out all other varieties readily, but when the Spy blocks were reached it took two to plow those out. I am planting only upon this principle, and have Jonathans top-worked but three years that bore fine specimens of that choice variety the present season.

GEO. T. POWELL.

TWO INSECT FRIENDS FROM ABROAD.

On entering the office of Dr. L. O. Howard, Chief Entomologist of the United States Department of Agriculture, recently, he said to me: "You know that it is said, that it never rains but it pours, and this seems to be true of our insect friends from abroad just now." Only two days before news came from China of the finding of the parasite of the San José scale, and now we have two importations from Europe in one day, November 18, of the present year, of parasites of more of our enemies belonging to the insect world. There is an insect known as the Black scale, that has for ages been one of the chief enemies of the olive in Italy, France and Spain, and it has been brought to America and is at present the principal obstacle to the culture of the olive in California. It also is a pest upon oleander plants in greenhouses. There is a little moth in Europe, known by the scientific name of Erastria scitula, which is a persistent enemy of the Black scale. Its larva, or the grub stage of this moth, eats its way under the scales and literally devours the minute insects that live there, and suck the sap of the olive trees, thus destroying them. Its introduction in America has often been attempted before, but in every case those little friends have died before arrival. This time they came in excellent condition, and are now in the insectary at Washington, D. C., in the larval or grub state, and will be promptly forwarded to California. In fact, one lot was sent there the next day after arriving in Washington. Other shipments will follow, and there is every reason to expect that this tiny friend of the olive growers, and of those who love the culture of oleander bushes, will soon be well established in America.

Another friend of the gardener and farmer has the distinction of arriving in healthy condition from Europe the same day, November 18. This is a species of ladybird beetle known as Coccinella septempunctata. It preys upon the larva of the Asparagus beetle; the latter being a very annoying and difficult enemy to fight. This parasite of the Asparagus beetle also destroys the Grain plant-louse that has done serious damage to the wheat fields of Texas the past year, and that is occasionally destructive to the wheat crop elsewhere. It was never before possible to get anyone to hunt this parasite out in Europe and send it over, but now it is here in perfect condition. It will be especially welcome to the asparagus growers, who are often sorely troubled by the beetle that defoliates their crops. This importation will be followed from time to time by others from the same source.

H. E. VAN DEMAN.

A WOMAN AND HER HENS.

Success with Farm Poultry.

On page 747 Mrs. Howard Smith, of Connecticut, gave some advice to girls, and mentioned poultry keeping as a source of income. She has now prepared the following full statement:

My hen house is a cheap affair, not costing over $15 when new, 12 or 15 years ago, but it is a good warm one, built of plain rough chestnut boards, two thicknesses of boards with building paper between, with a good cement floor. I use kerosene oil on roost poles and around the nests, so I never have any lice to bother with. My breed of poultry is nearly pure-bred White Wyandottes, as I have sent away to get good cockerels of that breed for a number of years, keeping my own hatched pullets, and I now have a beautiful flock of them. One can get good cockerels from the fancy breeders, not the prize winners, but good ones for $1.50 to $2 each. I have just received two good ones hatched in April for $4.

I never keep my hens shut up. They have the full range of the farm, but we put wire netting around the garden to keep them out of that, unless in Winter; when we are having a really bad snowstorm, I keep them shut in their house till it is over. There is a large open shed next to the henhouse, where my husband stores his farming tools, and the hens have that to get under in bad weather, and there is where I feed them in cold weather. My feeding in the morning is two quarts of wheat (I get what is called No. 2 wheat at $1.10 a bag, called 100 pounds), and one quart of oats that have been soaked in water 24 hours; feed that hot in cold weather. At noon I give them one quart of dry wheat scattered under this shed to keep them busy scratching, when the weather is bad, so they cannot get out to range. At night all the corn they will eat up clean. I feed well, so I can kill them at any time I have a market for them, or to use in the family; the chickens I feed four times a day with wheat and cracked corn. I soak that in curd and whey, sour milk curded, heated on the stove. I turn off most of the watery part and mix the thick curd with the chicks' feed. There is nothing that will make chicks grow like it. I try to hatch about 50 to 75 chicks the last week in March, or the first part of April; that is all I can give good warm quarters to, as the little chicks' house is small. I hatch by hens, and raise them by hens; make one hen take all the chicks that two hens hatch; that is, if she can cover them well. These early chicks I sell for broilers in June; they will weigh two or 2½ pounds by that time, and I get 50 cents each for all I can hatch. The buyers come to the house after them. The later ones I save, the pullets for my own use, and for some customers who come every year to replenish their flocks.

I do not hatch any chicks after May, as I do not like late ones. The little roosters I kill, or sell alive, and eat them in the family when wanted. My number is about 150 chicks each year; not a large flock. I do not believe in old hens, but do keep 12 or 15 till they are two years old, never any longer. I get rid of them before they begin to moult, the latter part of the Summer, and stock up with the pullets. I keep from 30 to 35 hens and pullets and two cockerels. I keep oyster shells by them all the time, give them warm water in Winter, also a basket of hayseed and rubbish off the barn floor, to scratch and peck over every few days. In bad weather in Winter you must keep them happy and busy if you expect to get any eggs from them. If I have it to spare in Winter I curd the sour milk and give the thick part to the hens. Last Winter I gave them some every day for three months, and how they did lay! I am getting now only eight or 10 a day; my flock is 12 hens that are one year old and 18 pullets. I do not keep a large flock, as my henhouse is small, and if you crowd them they will not do well. One year I kept 45, but did not get so many eggs from them as I did from the smaller number. Table scraps and vegetable peelings cooked are good for them if you have them, but on a farm there are dogs, cats and pigs to take them. Be on good terms with your flock, watch them, and study their wants, and they will pay you back with a good will. This is my statement for 1900:

DR.	
27 bags corn, two bushels in bag	$26.00
800 pounds No. 2 wheat	8.90
800 lbs. cracked corn	8.40
300 lbs. oats	3.87
1 bag oyster shells	.75
2 cockerels	3.50
Total	$51.42

CR.	
237 dozen eggs, 17 to 35c. a dozen	$62.89
68 pounds hens, 18 to 20c. a lb.	10.75
69½ lbs. chicks, 20 to 25c. a lb.	15.08
24 chicks alive, at 50c.	12.00
45 pullets at 60 to 75c. each	30.35
3 cockerels	3.00
Total	$134.07
Profit	$82.65

I make no account of what eggs and poultry I use in the family of four or five, as I set that down against the trouble in caring for them, and I think the poultry work the easiest of all the work I have to do.

MRS. HOWARD SMITH.

Connecticut.

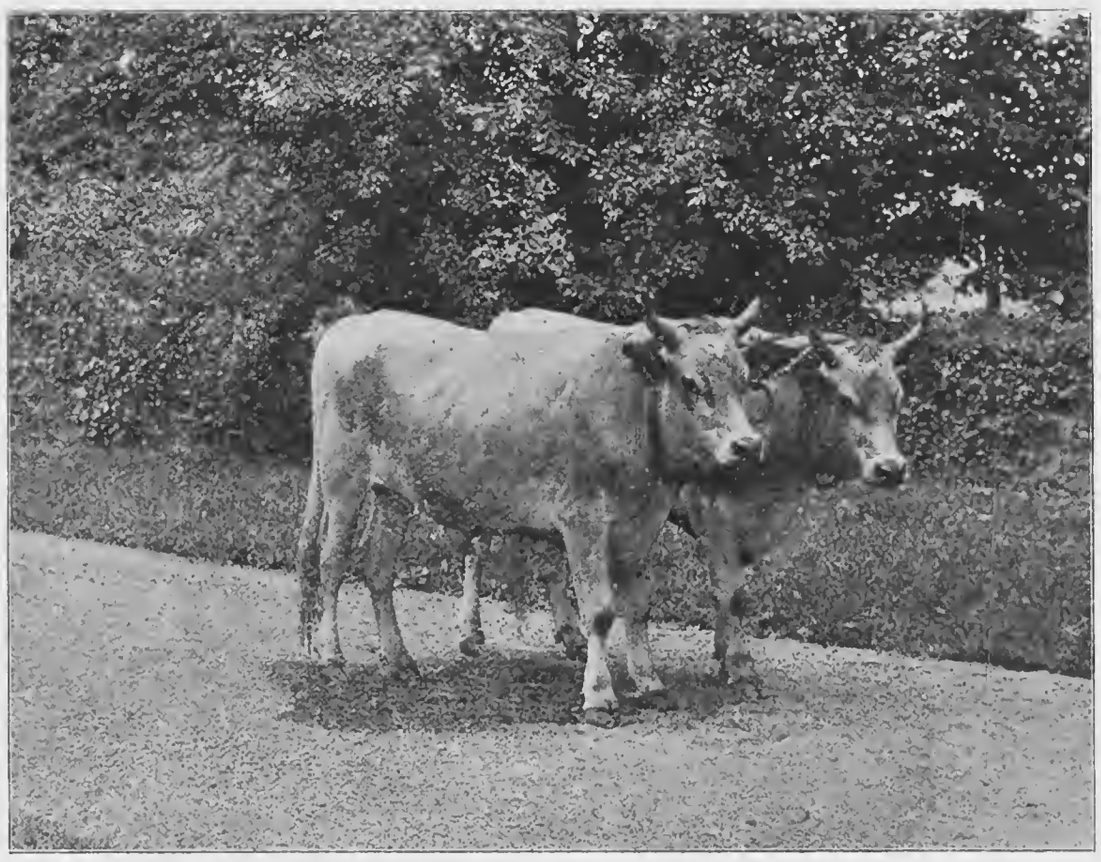
NOTES ON OLD AND NEW FEEDS.

It is a little strange, and hardly understandable, to find in one creamery that the feeding of cotton-seed meal is strictly prohibited, and detective measures used lest some farmer slide in a bag once in a while unawares. Not a great distance from this creamery is another whose butter is sold in the same market, and at the same price as the first, where the feeding of cotton-seed meal is encouraged, and the manager buys it for his patrons by the carload, furnishing it at the wholesale price. The latter creamery buys all kinds of feed for its patrons, helping them in every way possible to reduce the cost of the milk, and to increase the patrons' income.

We have never known of so many auctions of farm stock and utensils as have been held this Fall. High price of both coarse and concentrated feed, and low price for dairy products, have discouraged many farmers. Seven dollars per ton seems a pretty fair price for a feed containing only 18 pounds crude protein and 174 pounds carbohydrates. Yet we were offered such a bargain yesterday by a man representing a firm located in the New York Produce Exchange, sugar beet feed, otherwise known as beet pulp, refuse from manufacture of sugar from beets. It contains 10 per cent dry matter or about 160 pounds digestible matter in a ton; less than one per cent crude protein, no fat, and 8.7 per cent carbohydrates. When this man introduced himself as offering a new feed our first question was its analysis, and he replied he didn't know. He said he had never been asked that question before. We found he had been selling this feed for seven weeks, and his stock in trade consisted of a smooth tongue and a carefully edited eight-page pamphlet loaded with testimonials, but telling nothing as to the composition of the feed. We took him into the house, showed him the analysis, and read to him a few paragraphs from Dr. Jordan's book on "The Feeding of Animals," where beet pulp is given a value "about half that of silage, and that full-grown animals will consume 100 pounds daily" (35 cents per day). What an economical ration this year when feeds are high! We found out that he had sold a number of carloads to Connecticut Yankees, and had orders to stay in Connecticut until he had the feed firmly established. We must confess we are sorry for the dairyman who parts with hard-earned cash for such a feed at such a price. The retail price of this feed is $7 per ton; price to *one* dealer in a town $5.50 per ton. Unless farmers are near enough to the factory so that this feed can be bought at an expense not greater than $1.25 per ton we should let it alone.

H. G. M.

Connecticut.



A YOKE OF PUREBRED JERSEY OXEN. Fig. 372. See Page 830.

CORN FODDER FOR SHEEP.

We have fed cornstalks for years, and consider them as indispensable as hay. We find them especially useful for sheep when we do not have clover hay, and as a part ration with Timothy hay they have no equal. We would say that they are best for sheep and cattle, but are also good fodder for horses. Their usefulness depends much upon the time of cutting, curing and the method of feeding. To get the best results the stalks should be cut about the time that the grain is beginning to glaze nicely, but we have had excellent results also in their use, when we wanted the crop of corn as well. In this case, we cut them when the grain has all or nearly all dented, shock immediately, and let them cure. They do better when cut with one of the corn binders, such as are now found in all the markets. As to the method of feeding, much will depend upon the conditions and circumstances of the surroundings. We feed shredded or thrashed, having long since given up the idea of feeding them in natural form. When shredded or thrashed, much more of the stalk is eaten, and, therefore, it goes further and is cheaper. The refuse is still on hand, but it makes good bedding, then the best of manure, and is easily handled. Fed in this way then, it first serves an economical purpose as food, next as bedding, and finally as a by-product, the value of which must not be forgotten. Thus all the problems of handling and feeding are readily solved. The next question solves itself, for its storage capacity is so reduced that the question is scarcely to be considered.

We have had excellent results in feeding oats with corn fodder, and I find that a good many are feeding the corn itself with it with good results. If it can be had without too much extra cost, one feed a day of Timothy and clover hay mixed would help its use wonderfully. Sheep do not like to be fed on all one thing, but thrive best on a variety of foods. When the feed can be varied, I would suggest that bran and oats make a splendid feed. One feed a day of roots is beneficial. A friend, who is feeding 6,000 sheep this Winter, is feeding the corn on the stalk, just as it comes from the field, supplementing with oats for a change of grain. If help is high, and the fodder can be fed in an open field where the greater portion can be used without much loss, it may pay to feed without shredding or thrashing, but we could never succeed in its use in this way. Again, if an attempt is made to use the manure when fed in this way, the feeder will meet with serious difficulties which will probably discourage him in the use of it. Considering corn an average crop with help at the ordinary price, we would say that corn fodder is an indispensable feed for sheep, cattle and horses. When fed shredded or thrashed, it goes further, is more easily stored, better handled, and we think becomes better feed. It can be fed with almost any grain, but for sheep, we would suggest oats and bran. Taken from an economical standpoint, corn fodder is one of the cheapest forage plants, and when the American people have learned this, one of the great problems in cheap, coarse feeds will be solved.

Fillmore Co., Minn. JOHN C. MILLS.

SMALL COW PEA START.—Last Spring I bought a five-cent package of Warren's Extra Early cow peas, and they were planted on a high sandy knoll. They made a wonderful growth, and ripened a large quantity of seed. On one side of them were planted white beans (marrow, I think); on the other Soy beans. All did well, but no nodules could be found on the roots of the white or Soy beans, while the roots of the cow peas were full of the largest nodules I ever saw. The ground was seeded to clover and Timothy which looks fine now, and I shall watch next Summer to see whether there is any difference where the beans were. MARVIN FELLOWS.

Colorado.

THE DILUTION "SEPARATORS."—I was very much interested in the article in regard to the so-called water separators signed by E. D. R., and what H. E. Cook says about the dilution system. I have used an Aquatic cream separator three years; have never had to pay one penny for repairs. The first cost was $10. The cost of the centrifugal separator and power to run the same, either oil, gasoline or horse, will be about $350. The expense to run any of these powers is no small amount; then the extra work added would more than offset the small amount of butter fat which H. E. Cook says is left in the milk. He also says that the chief disadvantage of the dilution is spoiling the skim-milk. I have raised 10 calves each year that are worth, when five months old, $10 each; feed only the separator milk, and what feed they get in the calf pasture. The difference in the cost of the two separators and the power to run them and keep them in repair would more than balance the butter fat that H. E. Cook claims is left in the milk.

Talcottville, N. Y. D. W. M.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

The Mann Apple and Persian Walnuts.

C. A. H., Ringtown, Pa.—1. I have a block of Mann apple trees and I noticed some time since that you are not a very strong advocate of the variety. What are its faults, and would you advise me to top-graft my trees to some other sort? My trees are four years planted, but have not borne any fruit yet. They are about four inches in diameter. 2. Will Persian and Japan walnuts and peeans grow in our climate?

ANS.—1. The objections to the Mann apple are, as I see them, that it is usually very dull and unattractive in color, rather poor in quality, except where the conditions are very favorable for its full development, and it is not entirely satisfactory as a bearer. I would not advise top-grafting a small lot of the trees of this variety in Pennsylvania, but if there are many I would work over the greater part to Grimes and Rome Beauty. 2. Yes, the hardier varieties of the Persian walnut will grow and bear in Pennsylvania. There are trees now in good and productive condition in western New York and even farther north. But most varieties are too tender for those regions. The hardy ones are chance seedlings. The Japan walnuts are all hardy. Only the type called Cordiformis is valuable for its nuts. The northern types of the pecan are hardy, but those from the regions near the Gulf of Mexico are too tender.

H. E. V. D.

Fruits for Central New York.

W. H. L., Dunnsville, N. Y.—I am to set 500 apple trees next Spring, as follows: 200 York Imperial, 150 Baldwin, 50 Grimes Golden and 50 Arkansas or Mammoth Blacktwig. I can get them from a nursery in Pennsylvania for 10 cents, for three to four-foot size. I wanted 50 Rome Beauty, but they would not sell so many at that price, but offered Ben Davis instead. That apple will not sell in my market, which is Schenectady. Would you advise any other or different collection for this part of the State? I know the Baldwin does well, as I have 100 trees bearing; sold my apples all at $3 per barrel, both first and second grades, and retained the Esopus, which I sold in the local market at $4.50 for the firsts and $3 for the seconds.

ANS.—While York Imperial is a very good apple for many parts of the country, it has not been sufficiently tested in New York to warrant planting it largely. The time may come when it will be safe to plant orchards of it there, but I would not now advise anyone to do so. My main doubt regarding York Imperial in New York State is that it may not develop to a sufficient degree. Samples that I have seen grown in that State have not been so large as I had hoped to see, but some from Michigan that were at the Pan-American fruit show were much better, and it may be that when more trials have been made my opinion will change more in its favor. Specimens of York Imperial shown at Buffalo, N. Y., from Nova Scotia this Fall were larger than I had expected. It is a perplexing question to settle, when it comes to deciding what Winter apples to plant in any section, and central New York is no exception. Baldwin has long been the leading market variety for that region, but it has faults that make it desirable to find something better to plant. Sutton may be one that is more desirable. It surely is better in quality and of about the same size and color as Baldwin. Jonathan is still better in quality, more highly colored and a good bearer, but it may not be large enough for market when grown there. However, I think it will be of sufficient size, and would advise its trial in a moderate way. Grimes is of most superior quality, rich yellow color and fair size. It is well worth planting, for it already has been sufficiently tried in New York to prove that it is a good Winter apple, and will sell at a good price in the fancy markets. Rome Beauty is good for that region, and if trees of it cannot be obtained at one place they can at another. Arkansas is a new variety that is of doubtful value in New York. It is a seedling of Winesap that is larger but not so good in quality nor so bright red, but rather dull in color. Ben Davis made a far better showing in the New York exhibit at the Pan-American Exposition, and I was really sorry to see it, because we should encourage the growing of better apples. As H. E. Dosch, of Oregon, says of it: "Wherever we find Ben Davis it always has that delightful sawdust flavor," and this is even more true of it in New York than in the South and West. I cannot agree to the planting of Ben Davis in New York, although there may be money in it. Why not plant Esopus (Spitzenberg) which is one of the best of apples? With the use of modern help in the way of spraying it can be grown as well as in the days when fungus diseases and insects were rarely troublesome.

H. E. VAN DEMAN.

Fruits for Connecticut.

J. J. F., Rockville, Conn.—I intend planting about 125 apple trees next Spring, and about 50 pears, standard. Will you advise me what varieties to plant, and about in what proportion? I want to grow both apples and pears for market, but want them to be first quality, so if a purchaser buys once he will buy again. I want quite a few pears for Fall and Winter, to be planted in northeastern Connecticut; apples to be mostly all Winter varieties, and not too many kinds.

ANS.—I would name Baldwin, Sutton and Rhode Island Greening as Winter apples, and Hurlbut and McIntosh for late Fall. All very good in this section. I should use about one-third each of first two named, and make up the other third of the rest. As to pears, Bartlett and Anjou would be used, to which should be added Bosc if top-grafted trees can be obtained. Where mere profit is considered the Kieffer will come in, for it bears very young, gives large crops, and as yet sells well.

A. G. GULLEY.
Conn. Ag'l College.

Mr. Hitchings and His Orchard.

F. P. B., Dyer, Mass.—I am very much interested in the article on Grant Hitchings's orchard. Will you explain his method in full, from the time he puts the young tree into the ground? Does he set the trees in grass land? How does he fertilize? Do you think it is possible to use the same method on all kinds of land? I have a side hill with fruit on it that washes badly, and I would like to try his way.

REPLY BY GRANT M. HITCHINGS.

The best possible place to set a young orchard is in soil well filled with decaying vegetable matter or humus. If you will examine the soil in a field that has been used as a pasture for a number of years, you will find it in a very mellow and fine condition. This is just right for an apple tree to do its best in, provided you mulch it over its roots so that the moisture will not dry out until its roots are well established. The next best place is in a new seeding of one-third clover, one-third Timothy and one-third Red-top, 12 quarts to the acre. Mulch trees with straw when first set until grass is large enough to mow; then place what grows in orchard around trees, gradually extending as trees grow, until 10 years old; then let lie where cut. By doing this you soon get the ideal condition of looseness of soil and abundance of humus that tells so favorably in fruit production. After a few years the Red-top takes the place of the other grasses, and it makes a fine aftermath that covers the ground like a carpet. You notice by this method that you grow humus in the Spring, which checks excessive wood growth of trees, and that it decays during the Fall which stimulates fruit-bud formation; also that it is a very cheap method, requiring no fertilizers. Experts have told me that it was my soil that caused the results, but this same soil when cultivated for grain only showed ordinary results. My soil is a quite heavy clay loam, and would wash badly if cultivated. I have faith enough in the method so that I shall treat all kinds of fruit trees the same. But just how it will act in other soils and locations must be ascertained by trial.

Water and Stone Lime.

H. S., Pattenburg, N. J.—What is the difference between water lime and stone lime to mix with skim-milk for paint?

ANS.—As most readers know "lime" is obtained by burning limestone. The heat drives off carbon dioxide and leaves oxide of calcium, which is "lime." Some limestones contain a certain amount of clay. When they are burned this clay remains with the lime, and will "set" or form a hard cement under water. Such limestones are called hydraulic and the lime burned from them is hydraulic or water lime.

When to Plant Cow Peas.

L. E. W., Eden, N. Y.—Are cow peas a crop that will stand the Winter? I ask this question after reading what J. T. C. says on page 755. I am ignorant in regard to anything of this sort, because they have not been raised in this locality. We grow a large number of acres of peas for the canning companies here, and after the earliest are picked we plow the vines under and plant potatoes. In all accounts that I have read in THE R. N.-Y. eastern farmers cultivate their peas, an unheard-of thing here. We sow ours with either a 10 or 11-hoed drill, using every hoe, as we would with grain. If the cow peas are sown in April, as we sow other peas here, would they get large enough to plow under for potatoes by the middle of June? I have been in the habit of sowing rye in September and plowing that down for potatoes in June, but I have read so much of late in regard to cow peas that I think I would like to try them if it will not take too long for them to grow. What we want here is some quick catch crop to take the place of manure, because we do not keep stock enough, and have no faith in commercial fertilizers.

ANS.—We have tried to make it plain that the cow pea is a tender plant—just as liable to be killed by the frost as garden beans. They die at the first hard frost, and cannot be planted in April like field peas or canning peas. They should be planted just after corn. They make a quick growth, but occupy the land during June, July and August. They may be sown after wheat, rye or oats, and make a fair growth, but for the best results they should have the whole season to grow in. We do not see just where you could use them to advantage since your canning peas give you a good crop for plowing under. We recommend them especially for poor or "worn-out" fields which are not productive, and for which there is little manure or fertilizer. In such fields the cow pea will usually make a fair growth of vine, and if this is plowed under, the field will give about as much rye or corn as would be grown after a fair dressing of manure. The proper place for the cow pea, at the North, is on these poor fields. We would not plant it in a field already rich enough to grow a fair crop of corn, and *we do not advise its use as a forage plant.*

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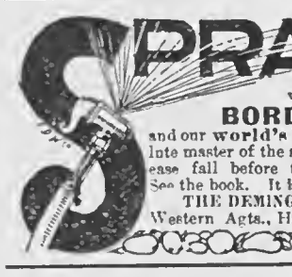

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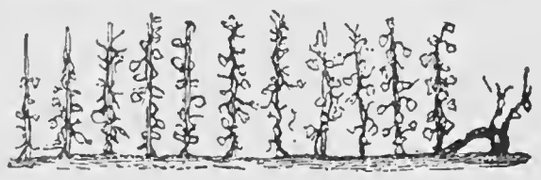

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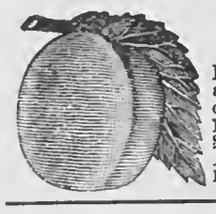

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EVERYBODY'S GARDEN.

QUESTIONS FROM A BEGINNER.—We are glad to use the following extracts from a letter received as a text from which to answer some questions which doubtless are facing many more at the present time, and the helps here suggested will aid in solving some of the many problems constantly looming up before us. The questioner's lot is simply the common lot of all. G. H. T., Bloomington, Ind., writes:

I commenced gardening last year, but with poor seed and drought have almost failed. I am depending on our village of 6,000 inhabitants (State University), for a market, with close competition. I wish to grow only what I can handle myself, using no help regularly.

A more careful statement of some particular conditions, as to soil, distance to market, whether depending on the open or private market, etc., would assist much in pointing out more definite helps. But general conditions can to some extent be answered. The drought was of itself a sufficient source of discouragement, but in general can be met only with the best of soil and cultural conditions, and where irrigation is not practical or is not followed, they are the only remedies at hand. Liberal fertilizing, good seed, early and well planted, with thorough tillage before and after planting, will to a great extent mitigate the dangers from the drought. But one of the most thoroughly disgusting and disheartening things to be met in all the field of horticulture is worthless seed, and no amount of fertilizing and culture will repair the damage. Some remedies have heretofore been pointed out in these columns, such as seed selection and plant breeding, and should be preserved for future reference. The immediate relief, however, is through some of the many reliable seed firms who advertise in THE R. N.-Y. A request by postal card will bring their catalogue, and many if not all can be relied upon for thoroughly good seeds.

CLOSE COMPETITION.—This we must all face, for there is now no getting away from it, and it must be met first by cheap production, remembering that profit comes only after the cost of production is deducted. Second, by early crops as to season, and superlatively best as to quality. These conditions will invariably create demand and correspondingly high prices. Third, by the very best of soil conditions with intensive culture. Make one acre if possible yield double the former product, and the cost will be but little in excess of the old half-crop culture. The foregoing rules will as nearly as possible solve the problem of competition.

I of course want the best paying crops, yet want to plant a succession, so I will have something all the season, and not be overstocked at other periods. I think it would suit me better to raise crops that take the least time to market.

Referring to the first proposition, it would be entirely problematical to one living so much farther north. Your seasons should be at least three weeks longer than in our location, and the safest advice is to study your market and its demands. For one with little experience, the wiser way will be to select crops of which you have some knowledge, and which you know will succeed well in your locality, and for the time being to do *special* rather than general gardening. A general line requires so much more time in producing and preparing for the market that this will be the wiser plan to start with, and let the more general work come as experience and market demand shall indicate. By a careful study of the markets and your ability to handle the work, successions will to a great extent suggest themselves. The root crops, potatoes excepted, will as a general rule require more work in producing and preparing for market than peas, beans, corn and other crops that require no hand weeding in growing or washing and bunching for the market. Some of the former will have to be grown in order to keep up a supply, but of these select what in your judgment will be the most available. Hotbeds and cold frames with plant protectors will be of great service in meeting the question of competition, but start in a small way at first with always a view to enlarging as experience comes.

MARKETING.—When the season for marketing approaches and you are reasonably certain as to what you will be able to supply, search out your customers. As to general or private markets, I have found the latter most satisfactory, and far more stable as to prices. Cater only for the best trade of the city, and resolve to furnish strictly gilt-edge goods, put up in the finest possible shape, and do not be bashful in asking and expecting gilt-edge prices. Reach your customers through a personal letter, stating what you can furnish, their quality and when you can deliver. If the very best quality of products with promptness and regularity can be relied on, your customers will soon learn to expect you and be glad for your coming, and by soliciting orders for future delivery the trade will soon be so well established that the uncertainty of market day will be reduced to the minimum.

"How much land can I tend, and how shall I arrange it that I may get two crops off a portion of it at least?" The first question will depend almost entirely upon the kind of crops grown and the facilities for rapid work. Small crops requiring hand weeding will require much more time than crops which can be cared for by hand tools and horse power. Study these matters carefully before beginning, as they will figure largely one way or the other in cost of production. Early sweet corn, peas, early potatoes, etc., may be succeeded by celery, late cabbage, butter beans and late beets or even carrots. Parsnips, late beets, salsify, etc., ought, in your country, to follow safely after early spinach, extra early peas and beans. But better to sow cow peas, Crimson clover, rye, etc., to plow down than double crop too much. These general rules, if followed, will, I hope, lead to some degree of success, although some failures must be looked for. Others doubtless are vexed with these, or similar questions, and the difficulties once known I shall be glad to help in removing them.

FROZEN RHUBARB ROOTS.—Quoting from a contemporary, "With asparagus and rhubarb roots there is no forcing without previous freezing." This is an entirely mistaken idea, as my successful crops are grown without it. True, the roots require a different method of handling, but very fine crops are grown without freezing, and by this means can be placed on the market before the crop can by any means be forced from frozen roots. This process, however, is very exhausting and kills the roots, but the gilt-edge prices fully compensate for their loss. Both methods are clearly and distinctively treated of in "The New Rhubarb Culture," for sale by THE R. N.-Y., price 50 cents. J. E. MORSE.

Michigan.

Naphtha for Grain Insects.

Several Readers.—It is reported in a Kansas Station bulletin that naphtha may be substituted for bisulphide of carbon in killing insects in stored grain. Is this correct?

ANS.—I have not seen the recommendations in the Kansas bulletin, and do not recall any records of careful tests of gasoline for killing stored grain pests. But an authority on such questions says: "Benzine and naphtha or gasoline are of some value as fumigants for some materials, but do not produce entirely satisfactory results with grain, their vapors being insufficient for the destruction of the adolescent stages of species which breed wholly within the kernel, while each of these reagents possesses an offensive and more or less persistent odor. They are open, moreover, to the same objections as bisulphide of carbon, the vapor being about equally inflammable and more explosive." M. V. SLINGERLAND.

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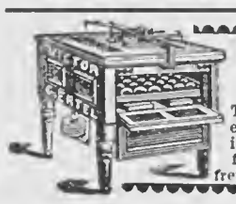

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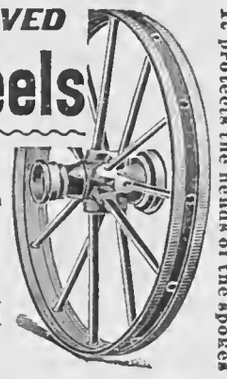

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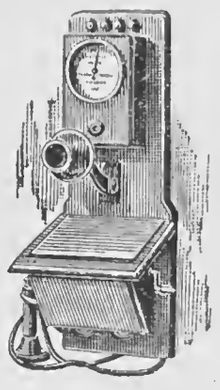

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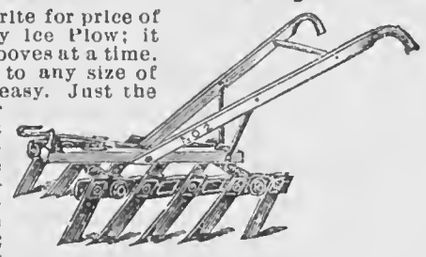

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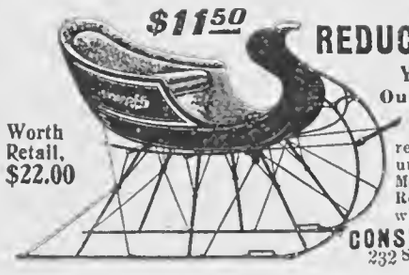

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Ruralisms

NOTES FROM THE RURAL GROUNDS.

DESIRABLE NEW CANNAS.—Seven new Cannas were received in May from J. C. Vaughan, Chicago, Ill. Varieties of both European and home origin seem to have been included in the collection. They were established in pots under glass and planted out early in June. The soil and cultivation was favorable for Cannas, while abundant Summer rain gave them a good chance to develop.

DAVID HARUM; over four feet high. Good bronzy foliage, flowers rather small, but very numerous, borne in branching spikes well above foliage; orange scarlet in color. Makes a good appearance all through the season. Foliage has a fine spreading habit.

RED INDIAN; four feet, large purplish-bronze foliage, medium sized blood-red flowers, standing up well on profusely branching spikes. A fine variety but suffered more from storms than some others.

N. JARRY DESLOGES; 4½ feet. Large, tough green leaves, good-sized scarlet flowers in rather narrow stiff spike. Comparatively a shy bloomer.

L. PATRY; four to five feet, medium flowers, of flimsy make-up, rather scattering and partly covered with the upright green foliage; salmon scarlet in color.

DWARF FLORENCE VAUGHAN; similar to the well-known tall variety of that name, but very dwarf, scarcely reaching three feet. Foliage very green and glossy. The yellow, crimson-spotted flowers are freely produced and carried well, but a little too near the foliage. A valuable sort where a dwarf Canna is wanted.

VICTORY; three to four feet; fine broad tough green foliage, handsome in form. Good large trusses of scarlet flowers with satiny finish, mottled and bordered with yellow. Seems to have characteristics of the orchid-flowering section. A profuse bloomer, and to our taste, the best Canna of the lot.

SOUVENIR DE MME. DE NARDY; seven to eight feet, large green foliage but with a slender effect from its height. Makes a huge clump; flowers carried high up, and none too profuse; scarlet, spotted with lemon yellow. It will be noticed that the best varieties of this collection do not have the longest foreign names.

A NEGLECTED TROPICAL FRUIT.—One of the most common and neglected fruits of warm climates is the guava, scarcely known to northern residents except as the base of guava jelly, a delicacy imported from tropical countries. The species producing edible fruits form small shrubby trees with handsome laurel-like evergreen foliage, and are found growing abundantly in thickets about inhabited places in tropical and even sub-tropical America. Though native to this continent guavas are now quite abundantly naturalized in warm places in Asia and in South Africa. The most common species, Psidium pyriferum, bears abundantly small pear-shaped fruits, of a russet yellow when ripe, containing a pinkish pulp in which are embedded many flat bony seeds. It is the source of the guava jelly of the West Indies which has been an article of commerce almost since the time of Columbus. The guava is one of the few tropical fruits containing enough pectin to make a firm jelly. As found in fancy groceries it has a pleasant but scarcely a distinctive flavor, though the raw fruits are agreeably acid, and have a quality that greatly improves on long acquaintance. Guavas are easily raised from seeds, suckers and cuttings, and often begin bearing when two years old. The flowers are of good size, white with a greenish tinge, and contain many curiously twisted stamens, and are so numerous as almost to cover the plants. The trees grow so readily and persistently in tropical countries as to become annoying weeds, especially in rich moist soils. A larger fruited species, P. Guajava, the Lemon guava, is cultivated to some extent in Florida and southern California, and though it is too tender to bear much frost, and is at times cut to the ground, it springs up rapidly and frequently bears the following year on the new wood, like a peach tree. There is another species of excellent quality in the highlands of Brazil, known as P. Araca. The writer can testify to the superior flavor of this species in its native habitat, and is glad to find it offered by a few dealers in tropical fruit plants. The fruits are rather large, greenish yellow in color, with white flesh and comparatively few seeds. Several other new types, most of them being horticultural varieties, have been brought to notice by the explorers for the United States Department of Agriculture, but have not yet been disseminated. The best known guava in the North is the Cattley or Strawberry guava, P. Cattleianum, which has been extensively sold in two varieties, red and yellow fruited, as window plants by mail plant dealers during the last five years. The fruits are an inch or more in diameter, and nearly round in shape, deep red with pink pulp in the one case and larger yellow fruits with white pulp in the other. They form attractive pot plants, of easy culture, bearing abundantly after two or three years' growth from the cutting. Fig. 369, first page, represents a fruiting twig of the yellow Cattley variety about natural size ripened in the Rural glass-house. The plant is three years old, and is established in a seven-inch pot. It set 138 fruits in May, which were subsequently thinned to 60. These have ripened thoroughly, but the later ones grew larger than those first picked, showing that more severe thinning would have been better. The flavor is quite agreeable to most persons who have tasted them, and there is a noticeable strawberry-like fragrance which is transmitted to the jelly and preserved fruits. The former takes some time to harden when made in the ordinary way, and is almost transparent from the lack of coloring matter in the fruits. The mild acid is very refreshing, and the appearance quite attractive. After ripening the fruits these potted guava trees become quite dormant if kept cool, and may be stored in a light warm cellar like an oleander until Spring. When in bloom it is best to keep them outside so that the bees may get at the flowers. Both varieties are desirable, and make good companions, but if only one is grown we should prefer the yellow-fruited kind. It is probable that the guava may be much improved in the future, when its needs have been better studied. Though of limited importance now, it is conceivable that larger-fruited varieties may be produced in time, and the number of seeds much lessened. Now that we have included tropical islands in our territory popular interest in such products may be expected to increase.

W. V. F.

A Supposed Pecan and Walnut Hybrid.

Fig. 370, page 818, is a reproduction of a cut appearing in a late number of the Observer, Fayetteville, N. C., representing an immature nut from a young tree grown from a Japan walnut, supposed to be pollinated from a nearby pecan tree. The originator, J. H. Breece, of Fayetteville, furnished the following account of its origin to his home paper:

In the Spring of 1894, a Japan walnut, standing 20 steps north of two bearing pecans, was observed to produce one cluster of pistillate flowers after the usual blooming season was past, but while the pecan trees were still in bloom. One nut resulted from the walnut blossoms, which was supposed to have been pollenized by the flowers of the pecans. The tree growing from this nut is now not more than five feet high. In 1895 I removed all the staminate flowers from the walnut, and although there were a considerable number of pistillate flowers only one nut was produced. The tree from this nut is vigorous, and would have yielded a lot of fruit but for the removal of its staminate flowers for the purpose of re-crossing with the pecan. As a consequence one nut only was produced, and is here exhibited in contrast with the nuts of its parent tree. No other bearing walnut tree was within a quarter of a mile except a small English walnut opposite the dwelling house. The Japan walnut tree has had its staminate flower buds removed each season, and since 1895 has produced from 40 to 70 nuts each year. All the nuts have been planted, and the trees are mostly vigorous. It is intended to destroy the Japan walnut tree this time, and hereafter cross the hybrids with the pecan. Such work is interesting if it had no more substantial object. The result already attained of an increase of 200 per cent in size is the most remarkable that might have been anticipated. If these characteristics can be blended with the pecan's quality of fruit and toughness of wood, it will be desirable.

The large nut at the right is the supposed hybrid, the smaller one on the left being a normal nut from the seed parent—the Japan walnut.

Subsequent correspondence with Mr. Breece develops the information that the nut, on examination after thorough ripening, has an outer hull and shell like the native Black walnut, though it was attached to the branch like the Japan walnut instead of by a distinct stem, as in the Black walnut. As the nut was to be planted the flavor and form of the kernel was not ascertained. It thus seems probable that the hybrid in question is really a cross between our Black walnut, Juglans nigra, and a Japan species, J. Sieboldii, or cordiformis, though in this case Mr. Breece says the pollen must have come from a distance as great as one-fourth of a mile, as no trees of the native species are growing nearer. There is apparently no physiological reason why genera so closely allied as Juglans, the walnuts, and Hicoria, the hickories and pecans, should not hybridize, though the relationship is more remote than between the various species of either genus, but it is not at all certain the union has been accomplished in this case.

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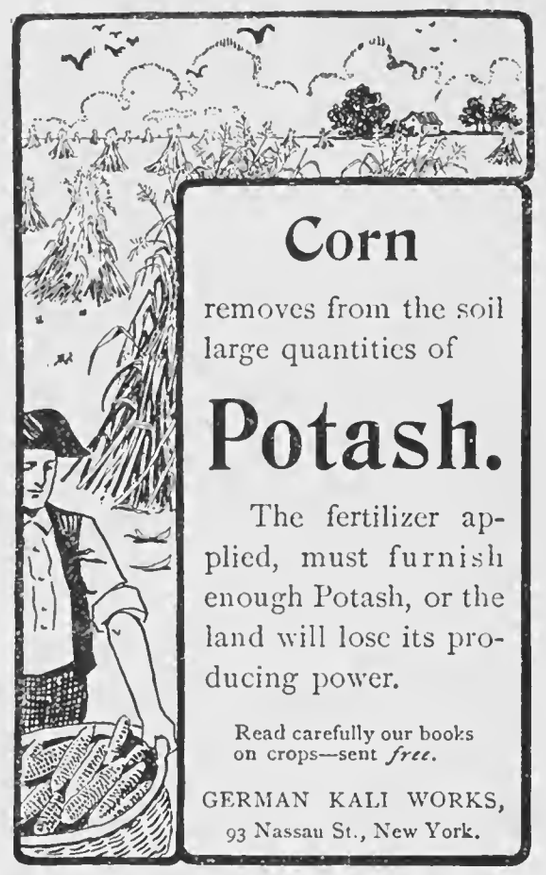

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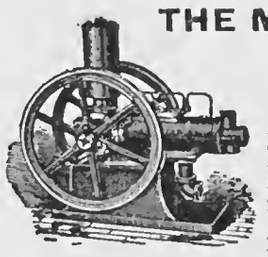

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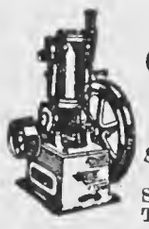

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HOPE FARM NOTES

THE WEATHER.—After several weeks of bright, clear weather the Sunday before Thanksgiving opened with a cold, driving rain. When morning came the clouds were racing along the sky and the rain was pelting hard at the windows. Hugh went to church alone, and the Graft and I delivered the milk, but the rest of the Hope Farm folks kept close under cover. The cows wanted to go out for a while, and a few of the hens walked out into the rain, but it was a comfort to know that there was warm shelter and food for everybody at Hope Farm, from the Madame down to the cat. There was a great mountain of golden ears in the granary, the corn fodder was all in barn or barrack, the fruit and potatoes were snug. The turnips were all in the hoghouse, and only a narrow strip of cabbage remained out doors. The growing grain and grass were happy. I was afraid the rains would catch us, but we got in ahead. These things lightened the gloomy outlook—for, say what we will about country living, a sad November rain washes all the brightness out of the landscape. When the early twilight of such a day comes you would better pull down the curtains, light the lamps and chase old memories out into the rain. Better make the present as comfortable as possible, and live right in it. On such a night I am in favor of lighting every lamp we have in the house. That's what I call burning kerosene in a good cause! The more light you get on a dark subject the better for you.

UNNATURAL THINGS.—My observation is that lots of us go on for years without really becoming acquainted with our families or farms. We go at them from an unnatural point of view, and thus fail to understand them. This thing came home to me recently on reading a very good little book entitled "Deafness and Cheerfulness." The author is so deaf that he has to use a trumpet, and he describes the growth of his trouble. Among other things he noticed that "few speak to the deaf man in pleasant tones." His wife seemed to be sharply ordering him about, neighbors and friends all seemed to be snapping and snarling at him. It seemed as if human tones had lost all kindness and sympathy! So they had—for him, but only because those who spoke to him were obliged to talk in unnatural tones in order to make him hear! They were as kind as ever—there was even more sympathy than before, but what he heard was a voice all out of tune with their sentiments. When I spoke of this at home the Madame gave me a queer little look and said: "There, I am glad you know now that I am not scolding you—that I am trying to make you hear!" Now the fact is that I have been in something of the position of the author of that book. I must confess that I have given the Madame undue credit for ability to use her tongue to inoculate her thoughts! Her voice has sounded out of tune, but I didn't realize that I was the one off the key. I refer to this to show how the wisest and strongest of us may fail to grasp the true relations between ourselves and the things that touch us. Blessed is the farmer who can understand his own limitations and quit adding his own faults and failures to the sins of others.

HOLLOW HEART.—The following question from Massachusetts is frequently asked:

> My Green Mountain potatoes gave a good yield, but the large ones all have hollow hearts. Does anyone know what causes this trouble? Will it be safe to use the hollow tubers for seed?

I wish our potatoes were large enough to show hollow hearts this year! I have never known this trouble except in large thick tubers. The long, slender kinds seldom have it. It is worst in varieties that are soggy and wet, though we have found it in Rural Blush, which we regard as the finest of cooking potatoes. It is what the scientists call an "obscure disease," but probably a too rapid growth is the usual cause. You take a young man and push him along too fast—puff him up with a sense of his own importance, and put too many rich opportunities in his way, and actual trial will find him hollow as a gourd. Crowd a potato on rich ground into a great size, or let it dawdle along in dry weather and then give too much rain, or let it be grown on rich, wet soil, and it will be quite sure to shrink at the center and leave a hollow space. I do not believe that a hollow-hearted tuber should be rejected as seed. "Black heart" is worse in potatoes or men. There is no hollow in this, but a dark lump surrounded by lighter colored rings. I regard this as a true disease, and would not advise using such tubers for seed.

FARM NOTES.—We are ready to begin shredding the corn fodder and shall probably get at it about the first of December. We are feeding a little uncut fodder now, and it surely is a wasteful method. . . . We have so much cabbage for the pigs this year that it is hard to find room for them all. The sows themselves make good warm storage for such crops, and we shall feed cabbage heavily during December with enough corn to give warmth and substance. After that the turnips come in, and we have enough for all Winter. I would not like to winter brood sows without green food of some sort. . . . I recently referred to a pear tree that gave a second set of blooms. The flowers amounted to nothing, but small bunches of leaves on that tree kept green until Thanksgiving. They were the only green things to be seen, and held their color in spite of several hard freezes. . . . . We are mulching around all the little trees with a good coat of manure—spreading a circle about four feet in diameter. I think this will help the Fall-planted trees to establish themselves, and will not injure those set out in the Spring. . . . . We consider it good economy to use dried brewer's grains for feeding. Just now we have no grain on the farm for the stock besides dried grains and ear corn. I think it would pay better to mix the dry grains with bran before feeding. . . . . Last Winter we sold several hundred chestnut poles. The tops and bark are still in the woods, and I intend to have them cut into stove wood during the Winter. There are two ways of selling this wood—one is to ship to the brickyards on the Hudson River and the other to peddle it out as fuel in the smaller towns, either in four-foot sticks or cut ready for the stove.

TERRIBLE TAXES.—I am pretty well ashamed of myself for saying a word about taxes after receiving this letter from Indiana:

> Nearly every 40 acres has or had ponds on it. I am draining and clearing 40 acres now that has 14 small ponds on it. Our drainage laws are very favorable for getting rid of these, and but very few now contain water. There is now soon to be let a ditch costing $5,500 with a 24-inch tile for outlet that I am assessed on. Some of the land benefited by this ditch is taxed $14 per acre. Just south of us is another ditch with 27 miles of tile (not including all of the branches), a 20-inch and a 30-inch discharging into a mile of open ditch. Part of this land is assessed $10 per acre. The ditch to cost $17,000, and it is this way all through this section. There are seven force ditches in this township under way now. In addition to this tax, the township is building a $20,000 school house, the county paying for a court house, the State for a State house; with a two-per-cent tax in perspective for an electric road through the township. From some cause the people most benefited or living the nearest a railroad are the most anxious for an electric line. Why? R.
> Tippecanoe Co., Ind.

They should change the old campaign song of "Tippecanoe and Tyler too" to "Tippecanoe and tile us too," for it looks to me as though every farm pocketbook in the county would be drained before they get through. Will all this expense pay? I have two fields that need draining, but when it comes to a whole farm I should certainly take to the hills where Nature wrinkled up her face on purpose to let the tears run easily away. Why do the people nearest a railroad want an electric road? In this county they want it to break up a monopoly. The reason that with an electric running alongside a steam railroad there will be competition, which will cut down freight and passenger rates and give better service. H. W. C.

"SAGO BEANS."—Cow peas are all right, but what is the matter with "Sago beans"? They look much like cow peas, are earlier, and the seed can be gathered by pulling the vines and thrashing like beans. The yield is good and the seed being small not much is required. I planted about a spoonful of seed and of course my experience isn't great, but I believe they may be as useful as cow peas. Who has tried the Sago bean?
Michigan. J. H. V.

CHEAP FARM POWER.—About a year ago I bought a Foos sweep grist mill and power combined, and a No. 11 Wolverine cutter, with 16-foot carrier, and they gave perfect satisfaction. I can grind out a grist while I could go to the mill and back and save the toll. The cutter and carrier work nicely and will cut an ordinary two-horse load in 20 or 30 minutes with power to spare. I wish I had bought a larger cutter. I have no doubt there are lots of small farmers fixed as I am who want to do their work with their own help. I fill a 25-ton silo and take my time for it. I can put a few loads in every day and carry my other work along at the same time; that gives the silage time to settle, and I get in a lot more.
Moodus, Conn. G. B. H.

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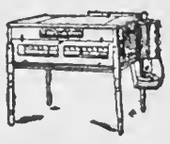
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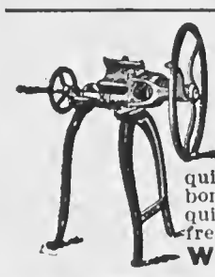
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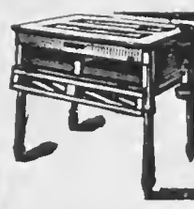
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SATURDAY, DECEMBER 7, 1901.

THE New York Milk Exchange is making something of a record by advancing the price to the producer twice in one week. This brings the gross price delivered at terminals here to $1.71 per 40-quart can, which nets shippers in the 26-cent freight zone about 3½ cents per quart, except where extra charges are made at shipping stations. These advances are made on account of the shrinkage in receipts, amounting to nearly one-fifth. The high prices of feed of all kinds have made it impossible to produce milk at a profit, and many farmers have been selling cows or feeding less grain.

*

"THE well-known farmer" is at it again acting as a small-sized Judas to betray his neighbors. He drives around with the creamery shark or promoter, introduces his friends and tells great stories of what the new enterprise will do for the neighborhood. His name heads the list for a good-sized bunch of stock, but he pays nothing for it. That is the price he receives for selling out his neighbors. There are cases where such work is perfectly legitimate and helpful, but to give character in this way to a stranger who tries to promote a wildcat scheme is nothing but clear betrayal.

*

ON page 801 Mr. Hitchings tells how he starts and cares for his apple trees. We venture to say that very few fruit growers will have the courage to follow the practice he advocates. They will not have the nerve to cut that fine growth of grass and leave it to rot on the ground. They will want to cut it and use it for hay, thus upsetting the very foundation of Mr. Hitchings's system. Don't! DON'T! DON'T attempt any such scheme with this mulching left out. Far better set your trees in the good old way—which has given good results for years. Why then do we ever refer to these new or strange things? So that people may study them and see whether they fit the home farm. They are *never* designed or recommended for general application!

*

IT sometimes happens that a public man takes a position which is directly opposed to the best interests of the farmers of his State. Such cases are not by any means rare. The man may be a strong politician who has reasoned shrewdly that there are no forces among farm organizations strong enough to injure him politically. Thus he feels secure and ignores the protests of individual farmers. Who is to fight the battle of the farmer in such a case? Suppose he appeals to the director of his experiment station. The answer would probably be about like this: "This is outside of my business. The station is supported by public funds. If I attacked this man he could probably defeat the appropriation for the station or college. This would cripple our work, which really has nothing to do with politics!" Let us suppose the farmer recognizes the justice of this and turns to the large State society to which he belongs. Here he receives much the same answer. "We cannot afford to attack this man, because we must have our State appropriation! If we lose this appropriation we cannot hold our annual meeting." The farmer then turns to the Department of Agriculture of his State. He is told that it was organized to "disseminate wisdom," and that it is not a part of wisdom to gain the ill-will of a strong politician. The farmer finds plenty of people anxious to hand him out large doses of knowledge, but what he wants is somebody to kick for him. Who is to do it? We believe this is one legitimate mission of the independent agricultural paper. We do not mean petty nagging, or ill-tempered general fault finding, but strong, well-considered and fair criticism. The farmer can only expect this service from a paper which derives a good share of its income from its subscribers. The paper which cuts its price far down below the cost of production and then depends upon its advertisers almost entirely for support cannot afford to be truly independent where the interests of its subscribers are concerned. Where the paper's support comes from there will its heart be also. The paper that charges a fair price, and is so well supported by farmers that it does not need to crawl after political patronage or shaky advertising wears no padlock on its pen or tongue, and can afford to fight the public enemies of agriculture.

*

WE reprint the picture of our postage stamp man on page 818. This is the way he looked at the close of the last session of Congress. His constituents had been *voting with the postage stamp.* Every mark you see on him represents a good letter of protest against oleo or some other evil which threatened the farmer. This is the way the man looked last Spring, but during the Summer he has rubbed most of the stamps off. We must put them on again at once. A man weighing 200 pounds will require $64 in postage to send him through the mails. That will mean 3,200 two-cent stamps, and that number of strong, earnest letters will bag him. This is the rate for first-class matter. An oleo Congressman can hardly be said to come under this class, but let's pay full postage on him in order to make sure. Just now we advise sticking every stamp that can be used on the Hon. D. B. Henderson, Washington, D. C. Write to him at once and say that you oppose the reappointment of J. W. Wadsworth as chairman of the House Committee on Agriculture on account of his stand on the oleo bill. Come now—lick a stamp for bossy and the babies!

*

A SEIZURE of eight "burrs" or prickly devices attached to the bit of driving horses, intended to torture the unfortunate animal into champing his bit and tossing his head in a stylish manner, was made one afternoon from the carriages of society people attending the late very fashionable horse show in New York. These burrs are leather pads nearly three inches in diameter, studded on one side with stiff bristles, or even tacks and sharp nails, and are placed on the bits with the sharp points next the tender skin outside the lips. When the lines are pulled or the horse moves his head to one side the irritation causes him to jerk about in a way considered very "swell" by the cruel or unthinking owner. The seizure was made by agents of the Society for the Prevention of Cruelty to Animals, and in every case the horses belonged to wealthy patrons of the horse show. The use of these torturing burrs is said to be an offence under the penal code of New York, and it is hoped prosecutions will follow. Poetic justice might require the horse owners and their coachmen to lunch on a chestnut burr or paper of carpet tacks, but a few convictions, with fines or imprisonment and the accompanying publicity, will go far to stop the detestable practice.

*

THIS is a great big country. There was a time when the States were put together like the big stones in a farmer's stone wall. Within the last 25 years all this has changed. Trade and competition have bound the stones together as with cement, and no farmer can say any longer that he does not fear the competition of distant farms. Farmers east of the great lakes know that products from every State in the Union come into their markets to compete with those grown on their own farms. California fruit, southern vegetables, western hay, grain and meat are all crowded upon them. The wisest of these farmers are tracing back these distant-grown products to see how they are able to compete after a journey of hundreds or thousands of miles. In this way they have learned about the California box for apples, and California methods of packing. They are using this knowledge to better their own business. Others have traced back the cheap fruit or other products from the South, and thus learned the true value of cow peas, Crimson clover and other plants. This knowledge has enabled them to reduce the bills for manure or fertilizer, and restore waste lands at a reasonable expense. Who will say that this knowledge of what their distant competitors are doing has not been useful to them? Twenty years ago a farmer could afford to narrow his methods and experiments down to the practices of the best farmers in his own State or county. At that time competition was also limited and narrow. Now competition has widened and become more fierce, and the farmer must also widen in his study and observation. We have spoken thus far of what the East may learn of the South and West. There are those who say that the West has no need of eastern methods or farm experience. Here is a letter which seems to us a complete answer to that argument:

> This used to be considered the garden spot for corn raising, but like some other things, it is worse for the wear. On the average cornfield you do not see two or three joints above ground thickly studded with brace roots. The land needs a tonic to thicken up its blood of fertility. That is the reason I take THE R. N.-Y., for I know we are treading the same path our forefathers in the East have trodden. E. H. T.
> Bates, Ill.

It is well known that there are farms in New Jersey which have been under the plow for 150 years, producing now more corn per acre than 90 per cent of the corn farms in the Western States!

*

IT is easy to remember when the annual report of the Secretary or Commissioner of Agriculture was regarded by the daily papers as a joke, or dismissed with a few lines. City people were then disposed to laugh at the efforts of organized agriculture to gain dignity and business standing. We realize what a gain has been made in the minds of those same people when we see how Secretary Wilson's report for this year is received. The leading papers devote columns to a synopsis of it, and discuss its suggestions seriously. The National Agricultural Department, once laughed at, is now respected, and its value is admitted. The careful work of the present Secretary is responsible for this gain in dignity. The common farmer may say that all this means nothing to him. He is wrong, for as the general business of farming gains in character and the power to command respect, the poorest man on the farm will find it a worthier profession.

*

THE statement of that "seed case" printed on our first page will attract general attention. Readers must bear in mind that it is quite possible to clean the weed seeds out of grain. There are machines for doing this which will leave the grain perfectly clean. That being the case, no seedsman has any right to state that he has "exercised every care" when any number of such seeds are left in the grain, because it is possible to take them out. In most cases the trouble comes in selling seeds without inspection. The seedsman buys from the farmer, and with scarcely a glance at them turns them over to his customer under his so-called "guarantee." We have received nursery stock which came in the original packages through three different hands without inspection or any effort to show that the stock was clean and true to name. We are glad that the courts give the farmer a chance to hold the dealer on his warrant. The principle is a far-reaching one. If wild mustard seeded on the farm gives just cause for damages, the introduction of the San José scale, being even more dangerous, may render the nurseryman liable unless he use great care in his guarantee. Of course the trouble is that most farmers will not press cases of this sort through the courts, though we believe that there would be a wholesome effect if more of them would follow Mr. Bell's example. The Grange or some other farm organization might well establish a legal department, and put good lawyers on the trail of some of these careless dealers!

*

BREVITIES.

SURPLUS roosters are crow curs!

NO—don't get your mind set on infertile ideas.

A VIGOROUS constitution is required to stand a rigorous climate.

WHO blames turkey for taking French leave at Thanksgiving time?

WORKS without faith—the drudge; faith without working—the crank.

"THRASHING" stone is the latest name for fitting stone for road metal.

A WORD to the whys! Write your questions on one side of the paper.

YOU do not need to be a crank in order to do your friends a good turn.

HAVE you had any trouble with adulterated stock food? If so, let us know about it.

SOME folks would be better off if they stopped exercising care and exercised their muscles a little.

PAPER from cornstalks doesn't seem to be a very solid proposition yet. However, there are plenty of other uses for cornstalks.

SECRETARY WILSON suggests that it would be wise for this country to imitate England and prohibit the importation of live stock.

A BLACK heart is worse than a black skin. Would that we could make a majority of the men of this country believe that. Do they not believe it now? Do you think they act as though they did?

Events of the Week

DOMESTIC.—Seventeen cases of smallpox developed at New Hartford, Minn., recently, the result of exposure to the disease at a wedding. This disease is reappearing in many sections, and there is reason to fear a serious outbreak during the Winter. The number of vaccinations has fallen off in some of the large cities, owing to the fear excited by reported cases of lockjaw following it. . . . . Twenty-five lives were lost by a fire in the Bullion tunnel of the Smuggler Union Mining Company, at Telluride, Col., November 20. The buildings at the mouth of the tunnel were burned, filling the mine with smoke. . . . . Two limited passenger trains on the Santa Fe Line crashed together, 20 miles east of The Needles, Cal., November 20, killing seven trainmen and injuring 17 persons, three of them passengers. . . . . The Secretary of the Interior has been asked by the homesteaders in the Kiowa and Comanche country, in Oklahoma, to decide whether or not their homestead entries, which conflict with alleged mining districts therein, will be recognized. The decision will affect 1,000 homesteads in the vicinity of the Wichita Mountains. . . . . The cost of the trial of Assassin Czolgosz was $1,799.50. Of this sum $1,000 was paid to the insanity experts, who examined him, and $500 to the attorneys who defended him. . . . . November 23-24 a furious storm did much damage along the Atlantic coast. The New Jersey coast was strewn with wreckage, and much loss of life is feared. Great property loss occurred at Long Branch and vicinity; the big iron pier was totally destroyed, for the third time, carrying one man out to sea. . . . . The beet sugar manufacturers of Michigan, Ohio, Wisconsin and Minnesota met in Bay City, Mich., November 26, to formulate a plan of action with regard to the efforts being made to abolish the tariff on sugar imposed by the Dingley law. . . . . A boiler explosion in the Penberthy Injector Works, at Detroit, Mich., November 26, caused the death of 26 men, and serious injuries to 24 others. The building was totally wrecked, the crash coming without warning, and fire followed immediately. The property loss is $180,000; cause of the explosion unknown.

ADMINISTRATION.—It was stated in Washington November 20 that President Roosevelt, in his message to Congress, will not only recommend the reënactment of the Chinese Exclusion act, but will recommend that it be strengthened to increase its efficiency. . . . . The Secretary of War has directed that the order granting free admission of Christmas presents to the Philippines and Cuba shall extend only to the officers and men and civilian employees of the army and navy, but not to the civilian employees of the civil governments. . . . . A delegation of Cubans called upon the President November 25 and presented a petition adopted by the industrial organizations of the Island, urging upon his attention the necessity of reduction in the American tariff upon Cuban products, particularly upon sugar and tobacco.

PHILIPPINES.—The force of marines, under Major Waller and Captains Porter and Bearss, attacked an almost impregnable position at Sojoton, Samar, November 17, destroying three camps, killing 30 men, capturing 40 bamboo guns, rice and stores. The men had to scale a cliff 200 feet high. . . . . Aguinaldo has written General Chaffee, asking permission to go to Washington with eight Filipino friends, whom he designates, to lay before Congress the desires of his people. . . . . An epidemic of smallpox is reported to be hampering military operations in the Island of Leyte. The Philippine Commission has decided to prepare a law ordering compulsory vaccination throughout the Archipelago.

GENERAL FOREIGN NEWS.—The State Department has received official confirmation of the capture of Colon by the Liberals. Transit was interrupted for a brief period, but is now restored. Captain Perry, of the Iowa, at Panama, has been instructed to land marines if necessary to maintain transit across the isthmus. A despatch received at the Navy Department from Commander McCrea says that 100 blue jackets were landed from the gunboat Machias at Colon, and took charge of the railway station. . . . . The Bulgarian Foreign Office resents the insinuations that the Government is acting in bad faith in the matter of effecting the release of Miss Stone, and explaining its attitude toward Mr. Dickinson, the diplomatic agent of the United States, affirms its entire readiness to take any action suggested by him. Mr. Dickinson has sent an ultimatum to the brigands, who are still claiming a high ransom, and say they can hold the prisoners as long as they please. . . . . John Goodnow, Consul-General at Shanghai, reports to the State Department that there are over 500,000 people in the Yangtse Valley who will starve this Winter unless they get help from outside. A committee of foreigners and Chinese has been formed to relieve the conditions of these people, and all foreigners are subscribing liberally.

FARM AND GARDEN.—The annual meeting of the American Shetland Pony Club was held at Chicago, Ill., December 3.

The National Grange has reëlected Aaron Jones, of Indiana, as Worthy Master.

The Ontario Fruit Growers' Association met at Cobourg, Ont., December 4-6.

In his annual report, which will be completed soon, Postmaster-General Smith will ask for an increase of the appropriation for the rural free delivery service from the present sum of $3,500,000 to $6,000,000, and will advocate the extension of the service as far as practicable. He will express the opinion that this branch of the work of the department is of the greatest utility, and will plead for most liberal consideration on the part of Congress.

The Michigan State Horticultural Society met at Fennville December 3-5.

The Minnesota State Grange will hold its annual meeting at Minneapolis December 17.

The Nebraska State Horticultural Society will meet at Lincoln January 7, 1902; secretary, C. H. Barnard, Table Rock, Neb.

The Minnesota State Dairymen's Association will meet at Sauk Centre December 10-12; secretary, Robert Crickmore, Pratt, Minn.

The Massachusetts State Grange will meet at Springfield December 10-12; secretary, C. A. Dennen, Pepperell, Mass.

The Vermont State Grange will meet at White River Junction December 11-12.

The New Hampshire State Dairymen's Association met at Claremont, N. H., December 5-6.

The New Hampshire State Grange will meet at Concord December 17-19.

The Kansas State Horticultural Society will meet at Topeka December 26-28; secretary, William H. Barnes, State Home, Kan.

The Kansas State Grange will meet at Topeka December 10; secretary, Geo. Black, Olathe, Kan.

The Winter wheat yield in Kansas this year was 90,045,514 bushels, valued at $50,479,570. This breaks last year's State record by 13,450,070 bushels. The area now sown in Winter wheat is nearly 6,000,000 acres, which, with favorable weather, will yield more than 100,000,000 bushels. The corn crop in Kansas this year was only 42,605,672 bushels, but the value of the combined wheat and corn crops was but 11.3 per cent less than that of the same crops in 1900.

The National Association of Nursery Inspectors met in Washington recently, President Forbes, of Illinois, presiding. Among those present were Prof. J. B. Smith, New Jersey; Prof. W. B. Alwood, Virginia; Prof. Atwood, New York; Prof. Forbes, Illinois; Prof. Throop, Indiana; Prof. Scott, Georgia; Prof. Green, Ohio; Prof. Webb, Delaware; Prof. Summers, Iowa; Prof. Fernald, Massachusetts.

The annual meeting of the Pennsylvania Dairy Union at York December 4-5, included many excellent speakers. Among the subjects treated were: "Commercial Food Stuffs," Dr. W. H. Jordan, director of the New York Experiment Station. "Protein—Can it be Produced on the Farm Profitably?" Professor H. J. Patterson, director of the Maryland Experiment Station. "Why do the Milk and Cream Tests Vary So?" Professor J. L. Hills, director of the Vermont Experiment Station. "The Essentials of Success in Breeding Live Stock," Mr. E. A. Sibley, of Prospect Hill stock farm. "The Importance of Hygiene in the Dairy," Dr. M. E. Conard, of the University of Pennsylvania Veterinary College. "The Future of Condensed Milk," Mr. C. L. Peck, Coudersport, Pa. "The Oleo Laws of Pennsylvania," Secretary John Hamilton. "Soiling Dairy Cattle," illustrated by stereopticon views, Dr. Voorhees, director of the New Jersey Experiment Station. "Home Buttermaking," Mr. L. W. Lighty. "The Influence of the Cream Separator Upon the Dairy Industry," P. M. Sharples, West Chester, Pa. Mr. R. A. Pearson, Assistant Chief of the Dairy Division of the Bureau of Animal Industry of the United States Department of Agriculture, delivered an illustrated address on "Dairying in Porto Rico and Cuba."

The twenty-third annual meeting of the Ontario Agricultural and Experimental Union will be held at Guelph, Canada, December 9-10. The Ontario Provincial Winter Fair will be held at Guelph December 10-13.

A. Q. Spaugh, a Wyoming cattleman, has been ordered to remove the fencing he has erected around 225,000 acres of Government land. There are more than 100 miles of fencing, and Spaugh declares it will take a force of 30 men a month to remove it.

THE COST OF AN ACRE OF CORN.

Estimates by Western Farmers.

The following is a very fair estimate of the cost per acre: Plowing, $1; harrowing three times, 30 cents; seeding, 30 cents; cultivating three times, 96 cents; total, $2.56. This does not include seed grain. F. M. G.

Hawarden, Iowa.

At present prices for labor plowing costs about $1 per acre; harrowing three times, 30 cents; planting, 25 cents; cultivating three times about $1.25; husking, $1, making a total cost of $3.80 per acre. The harrowing is done once before and twice after planting. J. S.

Corning, Iowa.

In this locality to raise 50 acres of corn would cost about as follows: Plowing, $50; dragging three times, once before and twice after planting, $12; planting, $15; seed, $6; cultivating four times, man and team, 25 days at $2.50 per day, $62.50; husking and cribbing 2,500 bushels, at 3½ cents per bushel, $87.50; rent for land, $175; total cost, $408, or $8.16 per acre, and about 16 3-10 cents per bushel. The price I have charged for labor is the going wages around here. Fifty acres are about the amount I raise each year. Corn, oats and barley are our main grain crops.

Benson, Iowa. H. R. B.

The cost per acre on my farm for growing corn is about as follows: Plowing, per acre, $1; harrowing, 20 cents; seed, 15 cents; planting, 20 cents; harrowing, 20 cents; cultivating, $1.40; rent of land, $5; total, $8.15. It must be remembered that the plowing and harrowing are mostly done with four-horse teams, a two-row planter is used, and a whole-row cultivator, which economizes labor. The estimate is made on the basis of $1 per day per man, and 50 cents for each horse. The item of rent must advance, for the average price of land has passed the hundred-dollar mark. E. E. C.

Champaign, Ill.

We have two methods of raising corn here; one is surface planting and the other is listing. We consider 50 bushels to the acre is an average crop on good ground during a medium season. The past has been a very bad season, and we will not have over 40 per cent of a crop. I will give you cost of surface planting first: Plowing the ground, $1 per acre (50 acres, $50); harrowing ground twice, four days, $12; planting, $12; seed, $6; cultivating three times, $50; gathering corn, 50 bushels to acre, 50 acres, three cents a bushel, $75; harrowing corn when it first comes up, before the first cultivation, two days, $6; total, $211. The cost will be about eight cents per bushel. Land rents for about $5 per acre best land. That would bring the cost up to 18 cents per bushel if you rented the land. Cost of listing corn is as follows: Listing and planting, done at same time, six days, $18; seed, $6; one harrowing, two days, $6; three cultivatings, 17 days, $50; husking 2,500 bushels, three cents per bushel, $75; total, $155. I think one man in a good season could tend 70 acres by listing as easily as he could 50 by surface planting with the same cost, except that the gathering would amount to more; 70 acres, 50 bushels per acre, would be 3,500 bushels, at a cost of about $225, which would be about 6½ cents per bushel; rent, 10 cents per bushel, making 16½ cents by listing. G. W. D.

Waverly, Ill.

We estimate the following to be about the average cost of the various operations necessary to brug a crop of corn to maturity, on a scale of 40 or more acres: Cost per acre for plowing, 80 cents; harrowing, 18 cents; seeding, including cost of choice seed, one bushel to eight acres, 30 cents; four (usual number) cultivations, $2; total cost per acre for plowing, harrowing, seeding and cultivating, $3.28. This estimate is given presupposing the use of four-horse (most practical) implements for plowing and harrowing and two-horse implements for seeding and cultivation; also the absence of any trash that might have to be removed, and it does not include the wear of machinery—it includes only labor and care of horses. All things considered, we would place the average practical cost of producing one acre of corn on a 40 or more acre scale at $5. This includes the little jobs, such as replanting, weed pulling, etc., which are always more or less abundant, wear on machinery, and cost of husking; but allows that the horses used will pay their own way when not needed on this crop. R. O.

Bluffs, Ill.

A great deal depends upon condition of soil at time of planting, as some seasons it requires more labor properly to prepare it for planting corn than in other seasons. It also depends upon the wages paid in the vicinity. I believe it pays to put the soil in the best possible condition before planting. If the soil breaks up a little lumpy or dry I use a roller after the plow, and then harrow thoroughly before planting. I never roll the ground if it is the least bit wet, but wait until it begins to whiten, then start the roller. Two harrowings will not put the ground in as good condition as the roller, unless the soil breaks up very fine; then the roller is not necessary. We generally cultivate our corn five times, and more if necessary. We never allow a crust to form after a heavy rain if we can help it. Basing the price of man and team at $3 per day, not counting board, harrowing the ground after the plow, and following with the planter, as is the custom, I believe where a large acreage is planted the cost would be about as follows: Plowing, $1.75; harrowing, 30 cents; planting, 40 cents; cultivating three times, 90 cents; total, $3.35. S. M. R.

Belleville, Ill.

Apples in Southern Illinois.

Apples sold last year at 20 to 25 cents per bushel, track, at small stations. This year they are selling at from $2 up to $3.50 per barrel; varieties, Ben Davis, Minkler, Jonathan, Grimes, etc.; crop small. T. K. D.

Vernon, Ill.

The principal variety here is Ben Davis; some Limbertwig, Rome Beauty and Winesap, but mostly Ben Davis. As to crop I am not able to say, perhaps one-sixth of a crop. A great many are faulty and dropped from trees on account of extreme heat. One orchard of 40 acres sold in this vicinity for $2,000; others in the county much higher, and from 40 cents to 90 cents per bushel, delivered at shipping point. O. P.

Palmersburg, Ill.

Selling Apples in Boxes.

The Niagara Falls Journal in its report of a meeting of the Niagara Farmers' Club says:

"W. H. Outwater, manager of the Outing Park at Olcott, gave a practical and valuable demonstration of shipping Niagara County apples in boxes. He exhibited a half-bushel box packed with the favorite fruit of this county, and it made a very attractive display. In 1896, the year of the great crop, Mr. Outwater shipped a carload of apples in boxes from his orchard to California. They were consigned to a commission house at Los Angeles, Cal., and found a ready sale. After paying all expenses the apples netted him at the rate of $1.36 a barrel, while apples were ordinarily selling at from 60 to 90 cents, including the barrel, that year. During the same season he shipped a carload of apples to Atlanta, Ga. Some were packed in barrels and others in boxes. The commission men were loath to receive the boxes, but they were urged to do so, as an experiment at least. When these boxes were placed on sale in the grocery stores in the southern city, with the covers removed, showing the bright red and green fruit in layers, they immediately attracted attention, and there was a big demand for more apples in boxes. Mr. Outwater explained the many advantages of placing apples on the market in this manner; how they would find a more ready sale in cities, where many families have not the means to buy a barrel of fruit at a time, nor a place to store such a quantity. But the box, he said, was always attractive and convenient. The cost of boxes is no more than that of barrels, for the same quantity of fruit and more can be shipped in a car loaded with boxes than with barrels."

ILLINOIS CORN.—We are not in the great corn belt of Illinois. It is from 50 to 75 miles north of us. While there are some large farms here, they are mostly worked by tenants. Most of our corn is raised on river and creek bottoms. Prairies are devoted to hay and small grain mostly. We raise something of all kinds of grain and grass; also stock peas, which usually do well, and we find they improve our land. Some are cut for hay, some pastured and some plowed under. This is the poorest crop since 1881. The Spring was very dry, so that oats and hay did not get a good start; then we had several heavy rains in June and July. We have not had a rain that wetted cultivated ground two inches since July 5. We could have stood the drought, but the hot winds from the southwest struck us when our corn was in tassel, blasting that, and in many cases the stalk down to the ear. Then early in September we had a killing frost, so you can see we are not shouting over our prospects—at least not very loud. Corn is worth anywhere from 50 to 75 cents per bushel, and not very good quality. Oats 35 cents, wheat 75 cents, hay $11 per ton on track. Hogs, which are our main money crop, five cents per pound. We never have two failures in succession, so we will pull through the Winter as best we can, and hustle in the Spring for all we are worth. R. W.

Mason, Ill.

Apples, cabbages, beans and wheat are staple crops in Orleans Co., New York, and some immense cabbage crops are being harvested. One farmer I talked with had 20 men at work, and was putting in the storage house 60 tons of cabbage per day. He said that it would take at least seven days to clear up his crop of over 400 tons. P.

Woman and Home

From Day to Day.

If living is a joy to you,
Because your soul is sound,
And life seems good and sweet and true
That you have haply found,
Then sing no false and hopeless strain
Of doubting and despair,
But lift your voice all clear and plain
And sing that life is fair!

Sing of its beauty and its worth,
Its bright and sunny skies,
Sing all the loveliness of earth
As seen by happy eyes;
For then the souls despondent born
Shall find them brave and strong,
Their way less gloomy and forlorn,
Because of your glad song!

—St. Louis Republic.

*

This Winter heavy dogskin gloves of reddish tan are likely to be greater favorites for women's general wear than the gray castor or mocha which have been so popular. The dogskin gloves are made exactly like those worn by men, with spearhead stitching on the back, lapped seams, and large gores let in at the thumbs which form part of the body of the glove. They fasten with one clasp, and cost $1 a pair. They wear excellently, and are warmer than kid.

*

Feather dusters are not ordinarily regarded as ornaments, but those made of peacock feathers are almost gorgeous enough for the Queen of Sheba. They are very oriental looking, the feathers being fastened to the handle with gold and silver threads, and the gorgeous eyes of the feathers fully displayed. They cost 75 cents each, and are often hung by the side of an open grate, to remove any dust flying over mantel and bric-a-brac, after stirring the fire. For such use the feather duster has its place; as often used, however, it is a hindrance rather than a help, since it only sends dust flying from one place to settle in another.

*

A kitchen convenience noted recently was a spoon holder for the large iron spoons used in cooking. It held them suspended from hooks over a tray, so, while in use, each spoon could be hung up separately, without dripping upon the table. Asbestos mats to stand upon the stove are indispensable (especially when a gas stove is used), and we now see asbestos table mats, to prevent hot dishes from marring a polished table when no tablecloth is used at luncheon. The asbestos has a linen cover made to fit; two pieces of linen of the right size are stitched together around the edges, the lower piece being cut through the middle crossways to permit the asbestos to be inserted.

*

A Quakeress of Revolutionary times, Ann Whitall, kept a little diary or book of "meddatations," as she quaintly phrased it. She was a very earnest and devout woman, full of good works, but like many of later date she regarded consistent melancholy as her ideal of conduct. She writes in her diary: "I often thinks if I could be so fixt as never to laugh nor to smil I shud be won step better; it fils me with sorrow when I see people so ful of laf and of prate." In Mrs. Whitall's opinion, godliness and gloom should go together hand in hand. She is not alone in this idea; many good people still believe that gaiety of heart and personal piety are mutually opposed. It is surely a mistake to confound cheerfulness with levity, and to regard melancholy as a state of grace. The serious long-dead Quakeress laments in her diary the vanity of some girls in Pennsylvania, who "has got thare necks set off with a black ribbon —a sorrowful site indeed," but it is pleasant to believe that she fell from grace so far as to smile occasionally, in spite of her effort to cover her busy, useful life with gloom.

*

A belt and stock to match gives a finish to a very simple gown. A soft stock recently seen was of white satin edged at top and bottom with round black braid, while the satin was decorated with French knots worked in pale pink and pale green silk. The stock formed a simple band, with a pointed end, fastening a little to one side of the front. The belt had pointed ends, which crossed in the front, and widened out at the back. Like the stock, it was edged with black braid and embroidered with knots. Where a stock is tied, a decided preference is shown for the four-in-hand knot rather than the bow. A great many women still wear their ribbon stocks tied in a bow in the back; always rather an untidy fashion, and often a very unbecoming one. Every time a coat is put on or off, the bow at the back is either cowering down as flat as though pasted on, or else it rears up defiantly, and refuses any attempts to coax it into place. Knots of white illusion or tulle at the back of the stock are still worn—by women who don't know any better; they are even seen on some of the made stocks, and very "mussy" they look, in most cases. The wearers forget that this soft, cloud-like knot is totally wrecked by the touch of an out-door wrap, and that it is entirely unfitted for general wear. Nothing makes a woman look shabbier than perishable finery that has lost its freshness. One can respect a well-brushed threadbare gown of plain material, but not a dirty and crumpled chiffon frill, or a pretentious trimming of ragged lace.

The Rural Patterns.

The Norfolk waist illustrated is now a favorite mode, and can be made with or without the pointed yoke, as preferred. The material of which the original is made is reseda green flannel with embroidered dots of black; but

3957 Norfolk Shirt Waist,
32 to 40 bust

flannel of all sorts, corduroy, velveteen and all waisting materials are appropriate. The foundation lining is fitted snugly and smoothly and extends to the waist line only. The waist proper is laid in wide box pleats that are stitched at their underfolds and again at each edge. The yoke is stitched firmly to position under the center front pleat and over the other box pleats, but both front and back pleats extend to the shoulders when yoke is omitted. The sleeves are in modified bishop style with cuffs that include pointed portions which match the stock collar. To make this waist for a woman of medium size 3⅝ yards of material 21 inches wide, 3⅛ yards 27 inches wide or 2⅛ yards 44 inches wide will be required, when yoke is used, 3¾ yards 21 inches wide, 3½ yards 27 inches wide or two yards 44 inches wide when yoke is omitted. The pattern No. 3957 is cut in sizes for a 32, 34, 36, 38 and 40-inch bust measure; price 10 cents.

Yoke waists are returning to favor, and the model shown is quite characteristic. The deep point of the front portion of the yoke is becoming, and the groups of tucks below provide graceful fullness at the lower portion of the waist. The back is smooth, with a desirable tapering effect produced by the

3970 Yoke Shirt Waist,
32 fo 40 Bust.

line of the tucks. As shown the material is doeskin flannel in submarine green, with gold buttons; but all flannels and waist cloths, plain, striped and figured taffeta and other simple silks, velveteen and corduroy are appropriate. The fitted lining is smooth and extends to the waist line only. The fronts of the waist are tucked in groups, of three each, that are stitched a short distance below the yoke, and include the full length center box pleats. The back is tucked in groups to the waist line. The sleeves are in bishop style, with narrow pointed cuffs; and at the neck is a collar with turn-over portions under which a ribbon stock is worn. To cut this waist for a woman of medium size 3¾ yards of material 20 inches wide, three yards 27 inches wide, 2¾ yards 32 inches wide, or 1¾ yard 44 inches wide will be required. The pattern No. 3970 is cut in sizes for a 32, 34, 36, 38 and 40-inch bust measure; price 10 cents from this office.

A Disabled Man

is certainly not in it, and

Sprains and Bruises

disable, but this is where

St. Jacobs Oil

comes in for a prompt, sure cure.

It Conquers Pain

Price, 25c. and 50c.

SOLD BY ALL DEALERS IN MEDICINE.

Easy Money-Making

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A Trek to the South.

PART III.

Lumbering was the business of the country through which we had passed for many miles—lots of sawmills; and at Conklingsville many factories for making things of wood. Then came a stretch of poor roads and farms, till we reached Broadalbin, when the country from there on grew lovely; such fine farms. At Johnstown we saw the Belgian hares; at one place a lot of them; and here the farms went into market gardening. It was a beautiful sight to us, as we had never before seen anything of the kind on so large a scale. All small fruits and vegetables. Our enjoyment of the city, however, was spoiled by the trolleys and McKinley getting into a fight with another dog right under the horses' feet, and we ran over them. McKinley got hurt and had to ride, and he first stood a "spell" on Fred's toes, and then a "spell" on mine. At Johnstown they buy large quantities of ginseng and pay high prices, and lots of people make a living gathering it. They saw our large carriage and a man asked Fred if we were ginsengers. We had passed lots of it, and Fred said that it would dry nicely on top of our carriage, and coming down hill he could tie strings of it to the carriage buttons. It sold at Cooperstown for $5 a pound, and if we could have taken care of what we passed that week it would have brought over $50. From there on to Fonda it was just one big hop field—miles of hops, with houses for curing the flowers and houses for the hands scattered through it; and we passed the hop-twine factory. Our road was a pike, beautifully smooth, and we made good time on it, and found a nice, quiet hotel to put up at. Fonda is a great railroad center, and the next morning as we drove along by the Mohawk River, it was a sight to look across and see the wires and the trains. At Palatine we crossed the bridge to Canajoharie. That town was a wonder to me! All factories and breweries.

In the afternoon we reached Cherry Valley (among the Dutch now). We passed many nice places, but they were all fenced in. We drove miles looking for a camping spot. At last I said to Fred:

"Some folks own the earth and put a strong wire fence around it."

He laughed and said it looked that way. But very soon then we came to a nice place, the horses had a good stable, and the children from the house brought us a bowl of delicious strawberries, and were much interested in the oil stove and our preparations for supper. All the way on to Cooperstown it is really a beautiful country, and the farms are fine; Jersey and Holstein cattle, and the products, dairy, hops and hay. At Cooperstown we left the level land behind us, it was now all hills. To reach the city we had to go up a long one. Fred did not like it, and asked a woman if there was not an easier road. She said there was not, and then added: "Well, if you go up, why you have to come down, you know." We found the truth of what she said. I took Mary's advice: "When you reach a bad hill, get Fred out, and get out yourself; and if things go to pieces, why—let them!"

We reached Milford that night, and all the next day we still traveled through a dairy country; such large stock farms! As we drove along by the Susquehanna River, we saw some beautiful pink locusts, and both of us spoke of the "Hawk." Fred borrowed a spade and dug up a little tree, and when we reached Oneonta he mailed it to her. (It has grown over a foot this Summer.) Oneonta is a large, lovely town, and we went down the hills on one side to get to it and up hills on the other side to get away from it. We had driven on a hill, under a tree, and then we climbed and went down hill and over a toll road—the fourth one we have gone on. Fred was mad, and thought it hard in a free country to tax people so. At five o'clock, when we reached Franklin, they said we were but seven miles from our dear Northfield friend; but somehow we took a wrong turn, and after driving through a wild country till about 11 o'clock, and rousing up two families to inquire the way, we put up for the night; and at four the next morning off we started. It was a lovely ride, and we reached Shady Lawn just as Will was milking. I asked him if he would take in some tramps, and he laughed and said yes, and brought me right to the house. Aunt Emmie was getting breakfast, and I went upstairs and had a wash and brush, and when I came back and sat down to that breakfast table and looked in the faces of my friends I tell you it felt good. We have traveled 272 miles between June 6 and June 21 with our team.

Northfield is a suburb of Walton, and is largely owned by good old New England stock, whose ancestors emigrated there when Delaware County was a wilderness, and cleared the land and built their homes. Walton is one of the banner temperance towns in the State, and the way the men turned out two years ago in a blizzard to fight for "no license," struggling through drifts and stinging cold, and almost impassable roads, shows what stuff they are made of; and it is not surprising that they have outstripped threefold in population the old, nearby license Oxford, with its two railroads and other superior advantages. As Will says:

"Drink seems to have a paralyzing effect on most villages, especially where given an air of respectability by hotel use. Liquor selling does pay best (i. e., brings more money) to those who sell it, but not to the hundreds who drink it. When it comes down to selfishness, pure and simple, these dealers take the cake every time!"

Shady Lawn is a dear old home, and a fair type of the best grade farms here. There are such a lot of springs on the farm. One runs right into the kitchen. I felt all the time as if it was a waste of water and must turn it off, but my, how Mother would enjoy it! The barns are so nice and well built and convenient, and a spring there, too—a fine place for the milk.

We have had a truly good time, and I would not have missed the trip for anything. We are getting our things fixed now so it will not be half the trouble to keep house; have lots of provisions for ourselves and horses, and all of us have had a nice rest. It has seemed good to be in a house once more and get cleaned and mended up. I cannot tell you what it has been to me to get among Christians again, and have prayers and grace, and to sit at a nice clean home table. Will is going along with us for a half day. I am to ride with him and have a last chat and visit. F. E. W.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

Rural Recipes.

Fruit Tapioca.—Add two cupfuls of water to half a cupful of tapioca, and let it come slowly to boiling point; cook gently until the tapioca is clear and soft. Stir in half a cupful of sugar and when dissolved a glass of currant, or a tart red jelly, and stir and cook until you have a clear jelly. Remove from the fire and pour into a mold wet with cold water to prevent sticking. Set where it will get thoroughly chilled. Any kind of ripe fruit may be used instead of the jelly.

Scrapple.—The liver of a hog, cut in small pieces, the meat from the head and the scraps that will not grind up in sausage. Cook till all the bones will drop out readily, then remove to the chopping bowl and cut very fine. Season with salt and pepper to taste and add a tablespoonful of sweet marjoram and half a tablespoonful of sage. Return to the stove, having strained the liquor in which the meat was boiled. The liquor should be sufficient to more than cover it. Take equal parts of cornmeal and buckwheat flour and stir in until it is a thick mush. Let it cook thoroughly, then put into shallow pans or dishes, and run lard over it, just as you do over sausage, to keep until used.

Scalloped Apples.—Three cupfuls of bread crumbs, one quart of chopped apples, one-fourth cup of butter, one-fourth cup of sugar, one-quarter teaspoonful of grated nutmeg, one-half lemon (grated rind and juice). Do not use hard, dry crumbs; a stale loaf from which the crusts have been cut is better. Melt the butter and add to it the crumbs, stirring lightly with a fork. Butter a pudding dish, covering the bottom with some of the crumbs, and add half the apple. Make a mixture of sugar, spice and lemon juice and rind, divide into two quantities, and add one to the top of the apples, then repeat with crumbs, apples and spice, finishing with the remaining crumbs. It is well to reserve one cupful of the crumbs for the top. Bake for 40 minutes in a good oven, covering the dish the first 20 minutes to prevent the crumbs from browning too fast. Serve with foamy sauce.

Cranberry Roly-Poly.—Sift two cupfuls of flour, a rounded teaspoonful of baking powder and a half-teaspoonful of salt. Cut into this one tablespoonful of butter and one of lard. Mix into a biscuit dough with three-fourths of a cupful of milk. Roll out half an inch thick and spread with a layer of two cupfuls of chopped cranberries, cover with half a cupful of granulated sugar, add a tiny rose geranium leaf, roll up, pinch the ends together, lay on a buttered plate and steam for 40 minutes, then place in the oven for 10 minutes to dry off. Serve with maple sugar sauce. Pour a cupful of boiling water over a half-cupful of maple sugar cut into shavings. Cook until the sugar is dissolved. Add one tablespoonful of cornstarch rubbed smooth with a tablespoonful of butter and boil eight minutes longer, stirring constantly. Serve very hot.

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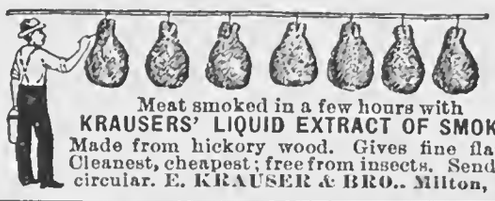

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MARKETS

THE WEEK'S QUOTATIONS.

WHOLESALE PRICES.

NEW YORK, NOVEMBER 30, 1901.

GRAIN.

Wheat, No. 1, N'th'n Chicago..	—	@	81
No. 1, hard, Duluth.....	—	@	87¾
No. 2, red elevator.....	—	@	80½
Corn, No. 2, mixed, elevator...	—	@	65½
Oats, No. 2, mixed.....	—	@	48
Rye, No. 2, W'n, f. o. b., N. Y.	—	@	68
Barley, feeding	55	@	57
Malting	67	@	72
Buckwheat, per 100 lbs.....	—	@	1 25

BEANS.

Marrow, 1901, choice, per bu...	—	@	2 25
Fair to good.....	2 00	@	2 20
Medium, 1901, choice.....	2 00	@	2 05
Pea, 1901, choice.....	1 95	@	2 00
Medium and pea, fair to good..	1 75	@	1 90
Red kidney, 1901, choice.....	2 00	@	2 05
Fair to good.....	1 75	@	1 95
White kidney, 1901, choice.....	2 40	@	2 45
Black turtle soup, choice.....	1 80	@	1 85
Yellow eye, 1901, choice.....	2 30	@	2 35
Lima, California, 1901.....	3 25	@	3 30
Italian, medium	—	@	1 85
Other foreign, medium.....	1 75	@	1 80

FEED.

Spring bran, coarse.....	20 50	@	21 00
Winter bran	22 00	@	23 00
Red Dog	—	@	24 50
No grade flour.....	—	@	24 25
Linseed meal, ton.....	29 00	@	29 50
Cottonseed meal, ton.....	—	@	25 10

HAY AND STRAW.

Hay, No. 1.....	82½	@	87½
No. 2	70	@	75
No. 3	60	@	65
Clover	50	@	60
Clover, mixed	60	@	70
Straw, rye, long.....	60	@	80

MILK.

New York Exchange price 3½ cents per quart in 26-cent freight zone.

BUTTER.

Creamery, extra, per lb.....	—	@	25½
Firsts	22½	@	24½
Seconds	20	@	22
Lower grades	17	@	19
June, extras	—	@	22
June, seconds to firsts.....	18	@	21½
State dairy, tubs, fresh, fancy..	23	@	23½
Tubs, firsts	20	@	22
Tubs, seconds	17	@	19
Tubs, thirds	15	@	16
Tins, etc.....	15	@	21
W'n imitation creamery, fancy.	18	@	18½
Firsts	15½	@	16½
Lower grades	14	@	15
W'n factory, June, fancy.....	15	@	15¼
June, fair to choice.....	14	@	14¾
Fresh, firsts	14¾	@	15
Fresh, fair to good.....	14	@	14½
Lower grades	12½	@	13½
Renovated butter, fancy.....	18½	@	19
Common to choice.....	13	@	17
Packing stock	12	@	14

EGGS.

QUOTATIONS LOSS OFF.

State & Pa., avge. prime, doz.	29	@	30
W'n, fresh-gathered, avge. best, per doz.....	—	@	29

QUOTATIONS AT MARK.

Nearby, State & Pa., fresh-gath'rd, fancy, selected, doz.	—	@	30
Average, best lots.....	27	@	28
Nearby, State & Pa., f'r to g'd.	23	@	26
Western, fresh-gathered, candled, selected	—	@	27
Regular packings	22	@	26
Kentucky, fresh-gathered	21	@	26
Tennessee, fresh-gathered	21	@	26
W'n, fresh-gathered, dirties....	—	@	17
Checks	—	@	14
Refrigerator, per doz.....	16	@	19
Limed, Western, fancy.....	—	@	18

GAME.

Quail, prime, per doz.....	—	@	3 00
Grouse, per pair.....	1 75	@	2 00
Partridges, per pair.....	1 75	@	2 00
Woodcock, per pair.....	1 00	@	1 25
English snipe, per doz.....	—	@	2 50
Golden plover, per doz.....	—	@	2 50
Grass plover, per doz.....	1 50	@	2 00
Wild ducks, canvas, per pair...	2 50	@	3 00
Red-head, per pair.....	1 50	@	2 00
Mallard, per pair.....	75	@	1 00
Teal, blue wing, per pair.....	60	@	75
Teal, green wing, per pair....	40	@	50
Common, per pair.....	25	@	30
Rabbits, per pair.....	25	@	30

LIVE POULTRY.

Spring chickens, per lb.....	—	@	7½
Fowls, prime, heavy, per lb.....	—	@	9
Light	—	@	8
Roosters, per lb.....	—	@	5
Turkeys, per lb.....	9	@	10
Ducks, average Western, pair..	60	@	70
Average Southern, per pair...	50	@	60
Geese, average Western, pair..	1 00	@	1 12
Average Southern, per pair...	75	@	1 00
Pigeons, mixed, per pair.....	—	@	20

DRESSED POULTRY.

FRESH PACKED—ICED.

Turkeys, Spring, W'n, dry-picked, prime, per lb.....	—	@	11
Scalded, prime, W'n, per lb...	—	@	11
Fair quality, per lb.....	9½	@	10½
Poor, per lb.....	7	@	9
Chickens, Ohio & Mich., scalded, per lb.....	10½	@	11
Other W'n, dry-picked, lb....	9½	@	10
Other W'n, scalded, per lb....	9½	@	10
Poor to fair, dry-picked or scalded, per lb.....	7	@	9
Fowls, W'n, dry-pickd, prime..	9	@	9½
Western, scalded, prime.....	—	@	9
S'th'wn, dry-picked, prime....	—	@	9
W'n & S'th'wn, poor to good..	7	@	8
Old roosters, per lb.....	6	@	6½
Ducks, Western	10	@	12
Geese, Spring, W'n, per lb.....	8	@	10

DRY PACKED.

Turkeys, Jersey & up-river, fcy.	12½	@	13
Jersey & up-river, fair to g'd.	11½	@	12½
Md. & Del., fancy.....	12½	@	13
Md. & Del., fair to good.....	11½	@	12½
State & Pa., fancy.....	13	@	13½

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Ohio & Mich., scalded, fancy.	—	@	12½
Ohio & Mich., fair to good...	11	@	11½
Other Western, fancy.....	—	@	12
Other W'n, good to prime.....	11	@	11½
Poor	7	@	9
Chickens, Phila., select'd, large.	15	@	16
Philadelphia, mixed sizes.....	12	@	13
Other Jersey, fancy.....	12	@	13
Other Jersey, fair to good....	10	@	11
State & Pennsylvania, fancy..	11½	@	12
State & Penn., fair to good...	10	@	11
Ohio & Mich., scalded, fancy.	10½	@	11
Ohio & Mich, scalded, fair to good	9	@	10
Other Western, fancy.....	10	@	10½
Other Western, fair to good..	8½	@	9½
Fowls, Ohio & Mich., fancy, scalded	—	@	9½
Other W'n, dry-picked, choice.	9	@	9½
Other W'n, scalded, choice....	—	@	9
Western, poor to fair.....	7	@	8
Ducks, Md. & Del., fancy.....	13	@	14
Md. & Del., fair to good.....	10	@	12
Ohio & Mich., fancy.....	13	@	13½
Other Western, prime.....	12	@	13
Poor to fair.....	7	@	10
Geese, Md. & Del., prime.....	12	@	12½
Western, prime, ...	10	@	11
Poor	6	@	8
Squabs, prime, large, white, doz.	2 50	@	2 75
Mixed, per doz.....	1 75	@	2 00
Dark, per doz.....	1 25	@	1 50

HONEY.

N. Y. State, clover, comb, fancy, per lb.....	15	@	15½
Clover, comb, fair to good, lb.	12	@	14
Buckwheat, comb, per lb.....	10	@	12
Extracted, clover, per lb.....	6	@	6½
Extracted, buckwheat, lb....	—	@	5½
California, extracted, per lb....	5¼	@	6
Southern, extracted, per gal....	55	@	60

FURS AND SKINS.

Black bear	15 00	@	25 00
Cubs and yearlings.....	5 00	@	10 00
Beaver, large	7 00	@	8 00
Medium	6 00	@	7 00
Small	3 00	@	4 00
Red fox	2 00	@	3 00
Gray fox	75	@	80
Wolf, prairie	1 25	@	1 50
Marten, dark	4 00	@	8 00
Pale	2 50	@	4 00
Skunk, black	1 10	@	1 20
Half-striped	70	@	80
Long-striped	75	@	85
Striped	30	@	40
White	15	@	20
Raccoon	90	@	1 10
Opossum, large	40	@	50
Medium	25	@	30
Small	10	@	15
Mink	2 50	@	3 00
Muskrat, Winter	12	@	13
Fall	9	@	10
Kits	2	@	3

DRIED FRUITS.

Apples, evaporated, 1901, fcy, lb.	10	@	11
Evaporated, 1901, prime.....	8⅞	@	9¼
Evaporated, 1901, poor to good.	6½	@	8½
Evaporated, 1900, fancy, lb....	10	@	10½
Evaporated, 1900, com. to prme.	6	@	8½
Sun-dried, 1901, W'n, quarters.	4½	@	5½
Chops, 1901, per 100 lbs.....	1 80	@	2 50
Cores and skins, 1901, 100 lbs..	1 60	@	2 12
Raspberries, evaporated, 1901, lb.	—	@	23
Sun-dried, 1901, per lb.....	20	@	21
Blackberries, 1901, per lb.....	7	@	7½
Huckleberries, 1901, per lb.....	17	@	18
Cherries, nearby, 1901, per lb....	15	@	15½
Southern, 1901	13½	@	14

FRESH FRUITS.

Apples, York Imperial, bbl....	3 50	@	4 50
Spitzenberg, prime to fancy.	4 50	@	7 00
N'n Spy, good to fancy, bbl.	3 50	@	4 50
Winesap, per bbl.....	3 50	@	4 50
Snow, good to choice, bbl...	3 50	@	5 00
King, per bbl.....	4 00	@	6 00
Ben Davis, per bbl.....	3 50	@	4 50
Grecning, per bbl.....	4 00	@	6 00
Baldwin, prime, per bbl.....	4 00	@	5 00
Red Winter sorts, fair to good, per bbl.....	3 00	@	3 50
Inferior, per bbl.....	1 75	@	2 50
Pears, Bartlett, per bu. box..	1 00	@	2 00
Seckel, fair to prime, bbl....	2 00	@	3 50
Seckel, nearby, per bu. box..	1 25	@	1 75
Beurre Bosc, per bbl.....	3 00	@	4 00
Beurre Clairgeau, per bbl...	2 50	@	3 50
Beurre d'Anjou, per bbl.....	2 25	@	3 00
Kieffer, per bbl.....	2 00	@	3 00
Grapes, W'n N. Y., Catawba, case 10 3-lb. baskets.....	1 25	@	1 50
W'n N. Y., Catawba, per small basket	12	@	14
W'n N. Y., Niagara, case 10 4-lb. baskets	1 75	@	2 75
W'n N. Y., Concord, case 10 3-lb. baskets	1 00	@	1 15
W'n N. Y., Concord, sm. bk.	12	@	13
Wine grapes, Concord, ton..	40 00	@	45 00
Wine grapes, white, ton.....	40 00	@	50 00
Cranberries, Cape Cod, fancy, large, late varieties, bbl..	—	@	7 50
Large, late, good to choice..	6 00	@	7 00
Early black, fcy, dark, bbl.	—	@	6 50
Medium, per bbl.....	6 00	@	6 25
Poor to fair.....	5 00	@	5 50
Jersey, per bbl.....	5 75	@	6 25
Jersey, per crate.....	1 50	@	2 10

VEGETABLES.

Potatoes, L. I., per bbl.....	2 50	@	3 00
Maine, prime, per bag.....	2 50	@	2 75
State, prime, per bbl.....	2 50	@	2 75
Jersey, per bbl.....	2 00	@	2 25
German, good to prime, per 112-lb. bag	1 40	@	1 60
German, per 168-lb. bag.....	2 00	@	2 50
Scotch, Magnum, 168-lb bag..	—	@	2 50
Sweet potatoes, So. Jersey, bbl.	2 00	@	3 00
Yellow, Va., per bbl.....	2 00	@	2 25
Beets, Jersey & L. I., 100 bchs..	—	@	1 00
Brussels sprouts, per qt.....	5	@	9
Chicory, N. O., per bbl.....	2 50	@	3 50
Cauliflowers, fancy, per bbl.....	2 50	@	3 50
Fair to good, per bbl.....	1 75	@	2 25
Culis, per bbl.....	1 25	@	1 50
Celery, State & Wn, doz. roots.	10	@	40
Jersey & L. I., doz. flat bchs.	75	@	1 00
Carrots, L. I., per bbl.....	1 00	@	1 12
Cabbages, L. I., Flat Dutch, 100.	2 00	@	3 00
Cucumbers, Fla., per crate.....	1 00	@	1 75
Florida, per basket.....	1 50	@	2 25
Eggplants, Fla., ½-bbl. crate..	2 25	@	2 75
Escarol, N. O., per bbl.....	3 00	@	4 00
Lettuce, Fla., per basket.....	1 00	@	2 00
New Orleans, per bbl.....	3 00	@	4 50
Onions, Orange Co., white, bag.	2 00	@	4 00
Orange Co., red, per bag.....	3 00	@	3 50
Orange Co., yellow, per bag..	2 75	@	3 25
Orange Co., poor to fair, bag.	1 50	@	2 50
Connecticut, white, per bbl...	2 00	@	4 50
Connecticut, yellow, bbl.....	3 00	@	3 50
Connecticut, red, per bbl.....	3 50	@	4 25
State & W'n, yellow, per bbl.	3 00	@	3 25
State & W'n, red, per bbl.....	3 50	@	4 25
N. O. shallots, per 100 bchs...	2 50	@	3 00
Peas, Fla., per crate.....	2 00	@	2 50
Romaine, N. O., per bbl.....	4 00	@	5 00
Squash, Hubbard, per bbl.....	2 50	@	2 75
Marrow, per bbl.....	1 75	@	2 00
Pumpkins, per bbl.....	1 25	@	1 50
String beans, Fla., green, p'me, per bu. basket.....	6 00	@	8 00
Turnips, Jersey, Russia, box...	—	@	75
Canada, Russia, per bbl.....	75	@	80
Tomatoes, Fla., per carrier.....	2 50	@	4 00

BUSINESS BITS.

WHY not make your wife a Christmas present of one of those washing machines offered in this issue? If the men folks did the washing they would have a machine before the second week. Look up the advertisements and write for information about these labor-saving machines.

E. KRAUSER & BRO., Milton, Pa., have succeeded in liquefying hickory wood smoke, so that meat can be cured at home in a few hours. Smoke from hickory has a peculiar property that cannot be obtained from any chemical process or from burning any other substance. It not only perfectly cures meat, but gives it a sweetness and flavor that is peculiarly its own and perfectly wholesome. Put it on with a brush—a minute or two to a piece of meat; no more trouble than painting a board and no opportunity for insects to contaminate the meat. Full information will be sent free on application to E. Krauser & Bro., Milton, Pa.

OWING to the comparatively recent death of Geo. D. Harder and the still more recent death of his father, Minard Harder, the Empire Agricultural Works of Cobleskill, N. Y., will hereafter be conducted under the name of the Harder Mfg. Co. The business has passed into the hands of Edgar S. Ryder, and his son, Frank H. Ryder, who have superintended and managed it successfully for the past year. The foreman and trained force of employees have also been retained, and there is every assurance that under its present ownership and management this company will retain the enviable reputation that it has established and maintained during a period of 30 years.

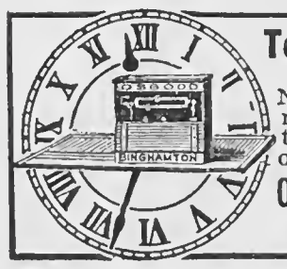
PEOPLE who write letters should keep copies of them. Business men do this by means of a letter press or the use of carbon paper on the typewriter. Those who have neither of these conveniences have heretofore found it necessary to write out by hand copies of such letters as it was thought necessary to keep. The Pen Carbon Letter Book advertised in our columns is an excellent device for such people. Every letter written with pen or pencil is copied perfectly in this book while writing it. Without extra trouble a copy is kept of everything written, which is often invaluable for reference. No man or woman who writes letters can afford to be without one. Write Pen-Carbon Manifold Co., 145 Centre St., New York.

CUTTING CORN FODDER.—Farmers are unusually late with their husking on account of scarcity of help. I am through and stalks cut and blown up in barn. I think it pays in convenience and quality of manure even though we get no more feeding value. I like the cutter much better than the shredder, as it leaves the stalks in better shape for cattle picking them over. This is the third year I have had it done, each year a different machine, and this was the best, leaving stalks well mashed and cut up, and much of the fodder in longer length, and it blew it right up to peak of barn, so required no one to level it all the time and throw back as with elevators. J. E. S.

New Jersey.

A STATE AIDED NUISANCE.—I have been interested in the discussion of game laws, and wonder whether our Vermont man, page 738, may not find some hint in a story told me by a neighbor. A man in Iowa was bothered by the prairie chickens, which were doing much damage to his corn. At last he began shooting them, was arrested, pleaded guilty and fined. He paid his fine, but began suit against the State for damages, and got them on the ground that as the State protected the birds it must pay the damage caused by them. Your correspondent, who speaks of the will of the majority in respect to the game laws, seems to me to be astray. In this State the game laws are dictated and engineered through the Legislature by a few rod and gun clubs for their own benefit. I believe if the farmers would act in unison the objectionable features could be done away with. Again, the question of the right of the State to force a nuisance upon one class to provide for the enjoyment of another. It seems to me it comes under a different head from abating a nuisance for the benefit of the public. S. T. W.

Oregon.



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In Use 35 Years.
No experiment. You run no risk. 30 days' trial. For special offer and terms write
OSGOOD SCALE CO.
103 Central Street, Binghamton, N. Y.

Wants, For Sale or Exchange

WANTED—Farmers and Dairymen, $30 to $50, with house or board. Only competent men with good references. The Rural Agency, Durham, N. H.

170 ACRES FOR SALE in Maryland.—Convenient to Baltimore and Philadelphia markets. Excellent location and improvements. MADISON MARINE, Law Building, Baltimore, Md

"I OWN MY HOME."
That's what puts nerve and backbone into a man. We sell them on the easiest terms. More than a hundred to choose from in our Illustrated Real Estate Catalogue Mailed free Write to-day.
W. F. Allen Land & Imp. Co., Salisbury, Md.

Cash for REAL ESTATE no matter where it is. Send description and cash price and get my wonderfully successful plan. W. M. OSTRANDER, North American Bldg., Philadelphia, Pa.

GLENN RANCH,

Glenn County, California,

FOR SALE IN SUBDIVISIONS.

This famous and well-known farm, the home of the late Dr. Glenn, "the wheat king," has been surveyed and subdivided. It is offered for sale in any sized government subdivision at remarkably low prices, and in no case, it is believed, exceeding what it is assessed for County and State taxation purposes.

This great ranch of 40,000 acres runs up and down the western bank of the Sacramento River for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

F. C. LUSK,

Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, of Chico, Butte County, California.

PROFITABLE WINTER WORK
You can make big money taking orders for and selling my SEEDS in your section. New plan, quick sales, splendid outfit. Agents, Farmers, Gardeners and others write to-day for terms, etc.
FRANK H. BATTLES, Seed Grower. ROCHESTER, N. Y.

WE BUY AND SELL
Dutton Corn and Pop Corn, Canada Peas, Cattle and Poultry Feed, Grass Seeds, Rice Meal, etc. CHAS. H. REEVE, 187 Washington St., New York City

For Sale—I have the New Era Cow Pea for sale. They have been tried from Maine to Florida, and are without a rival. It is the earliest and most prolific pea grown. J. C. LITTLE, Louisville, Ga.

Best Fruit Paper.
Read a paper devoted solely to fruit culture, monthly, illustrated, 16 to 48 pages, 50 cents a year, 10 cents for three months, trial subscription.
Western Fruit-Grower, Box 3, St. Joseph, Mo.

Drivers Have the safest and neatest Tug Holder on the market. Set nickel, 35c.; black, 25c. Illustrated circular free. Need some good agents. LESTER M. LOVELESS, Dept. A., Baldwinsville, N. Y

$23.75 for top Poland-China sow, bred for Spring. These are the mellow, easy keepers. $10 for Sept. pigs. K. HAWK, Mechanicsburg, Ohio.

Registered Berkshires.
I have for sale young Boars and Gelts that weigh over one pound for each day old; farrowed in May and June last. No better bred stock living. Address J. E. WATSON, "Springbank," Marbledale P. O., Ct.

Cider Machinery.—Send for catalogue to Boomer & Boschert Press Co., 118 West Water St., Syracuse, N. Y.

Oldest Commission House in New York. Established 1838. Butter, cheese, eggs, pork, poultry, dressed calves, game, &c E. B. WOODWARD, 302 Greenwich Street, New York

POULTRY SHIPPERS.
We make a specialty during the Winter months of **handling Poultry**, having a very extensive trade. **Write** us for any information you may wish regarding dressing, packing, etc., and we will be pleased to answer all inquiries.
Returns made on sale of each shipment.
ARCHDEACON & CO., 100 Murray Street, New York.

How to Drain Land Profitably.
On every farm there is probably some land that could be made more productive by underdrainage. Properly drained land can always be worked earlier, and more profitably. The best and most economical way to drain is explained in the book, "Benefits of Drainage and How to Drain," which is sent *free* by JOHN H. JACKSON, 76 Third Avenue, Albany, N. Y.

ROUND TILE

GRINDS EAR CORN, SHELLED CORN, OATS, RYE, BARLEY, KAFFIR CORN, ETC.
Fine or coarse, for feed or family purposes. Has **shake feed. Burrs** are made of white metal, so hard that neither file nor tool will touch them. They will open and let nails or hard substances through without breakage. We furnish this mill with or without crushers and elevators.
CAPACITY 10 to 45 bu. an hr., according to power used, kind of grain and fineness you grind. The only mill that grinds ear corn and all other grain successfully. With 2, 4 or 6 H. P. Made in 3 sizes for power up to 12 horse. **Guaranteed** to grind more ear corn than any mill made with same power, because crusher and grinding plates are on separate shafts, reducing friction. We have 40 styles of grinders, adapted to power wind mills, engines and horse powers of all sizes. We also furnish powers of all kinds for driving all kinds of machinery. Write for our Large Free Catalogue of 15,000 other articles.

Marvin Smith Co., 55-59 N. Jefferson St., Chicago, Ills.

As We Go to Press.

A GOOD TURN.

During the past few weeks we have received letters from Maine, Maryland, Pennsylvania, Ohio and New Jersey, of which the following is a fair specimen:

Thinking that one good turn deserves another, as you so kindly answered my query in regard to the shredder business, I retaliate by renewing my subscription and sending you another. R. R. B.
Pennsylvania.

This man sent $2 and the name of a neighbor. The Maryland man sent the money and names with his question. He was so confident that THE R. N.-Y. would do its part that he got in his "good turn" ahead. The Maine man did his good turn on general principles, for he says that he helps the business of farming whenever he helps increase the circulation of THE R. N.-Y.

Such little things are very encouraging. The best of it all is the thought that our friends are ready to help without any urging on our part. They know that we are prepared to turn the crank when such a turn will do them good. They are not selfish enough to pocket all the good, but they proceed to turn a notch on our subscription list. There is another side to all this, too. Every dollar we get for subscriptions helps us to stand close to the interests of our *subscribers*. Where a paper is forced to depend largely upon political patronage or advertisements for support no one can expect that it will put the interests of its readers ahead. THE R. N.-Y. is published for its subscribers first of all, and thus the man who picks up a new subscriber not only benefits his friend, but indirectly benefits himself.

BOOK BULLETIN.

THE FORCING BOOK, by L. H. Bailey. A full description of the appliances and methods necessary for the cultivation of fruits and vegetables in glass houses, with list of plants which can be grown in this way to advantage; 266 pages, illustrated. Price, postpaid, $1.

THE NEW RHUBARB CULTURE, by J. E. Morse. A guide to the field culture and Winter forcing of rhubarb, giving the experience of practical growers in various parts of the country. Numerous receipes for preparing this plant for table use. Price, postpaid, 50 cents.

CUT-PRICE BOOKS.—Any of these 20-cent pamphlets mailed postpaid for 10 cents:

Milk Making and Marketing.
Country Roads.
Chemicals and Clover.
Fertilizer Farming.
Memory Training.
Cooking Cauliflower.

THE RURAL NEW-YORKER,
409 Pearl St., New York.

MARKET NOTES

BUTTER.—Extra creamery is selling at the same figure as last year, 25½ cents, and occasionally a superior lot brings a half-cent more. The June creamery now being received appears to have kept unusually well. The exports from this city since May 1 amount to nearly 7,000,000 pounds.

HAY.—Trade is quiet at present, the most active item being clover mixed, a grade which is always popular for general feeding purposes. Very little strictly prime hay is received, a large part of what is shipped for prime being graded here as No. 1. Rye straw shows a very wide range on account of the quantity of poor stuff offered. Long bright straw would bring 80 cents per hundred. There is practically no sale for oat straw at prices which will pay for shipment.

THANKSGIVING SPECIALTIES.—Turkeys and chickens do not have a monopoly of this business of helping people to express their annual thankfulness, for what is Thanksgiving without pumpkin pie, cranberries, grapes, celery or cress? There is great activity in the trade in these products. Cranberries, celery and grapes are the chief items, and large quantities are shipped to out-of-town points. Some business is done in greens for decorations, but this is a small item as compared with the Christmas trade. Prices on the better grades of cranberries are as high as $7.50 per barrel. Figures on celery are moderate, running from 10 to 40 cents per dozen roots. Considerable tough, stringy and inferior stuff is disposed of, and an attempt to eat it is likely to make one wish for the machinery with which the cow grinds her hay and cornstalks. There is still plenty of grapes in the market, Catawba, Concord and Niagara. They retail at 20 to 25 cents per four-pound basket. They lose in flavor by storage, and more or less withered and decayed ones are found in every basket.

DRESSED POULTRY.—Many shippers who previously sent their poultry for the holiday trade dry packed now ice it. This is on account of the severe losses they have had owing to warm weather in transit. As a result there was a real scarcity of dry poultry, and high figures were obtained. After the rain of Monday the weather was clear and cold, and in every way favorable for handling poultry. Local retailers were slow in stocking up, waiting until the last minute to see whether later receipts would not bring prices down. Out-of-town buyers were on hand, and considerable business was done in this line. Large quantities of poultry are every year re-shipped from New York to towns within a radius of 50 to 100 miles. Of course, poultry is brought into these places by neighboring farmers, but, unless dealers engage it in advance, they never know just how much they can get. Many dealers prefer to order supplies direct from New York, as they then know just what they will have and when it will come, although this is a rather roundabout way of getting at it, and the poultry is inferior to that fresh killed. Iced poultry was plentiful, 11 cents being an extreme price for both turkeys and chickens, while dry packed brought as high as 14 to 15 cents. As is usually the case there was a surplus of low-grade stuff. No matter how fine poultry may be when shipped, icing injures its appearance and sale. When opened it is wet and slippery, and no amount of wiping and fixing up can remove the white-livered look and disagreeable odor that it gets by being soaked with the melting ice. W. W. H.

Robbing Bumblebees' Nests.

In his admirable work, "The Insect Book," Dr. L. O. Howard gives the following interesting story: "Marlatt, in the proceedings of the Entomological Society of Washington, tells how the boys in Kansas avoid stings and gather honey. He said that they (and he was one of them) were led to rob these nests more from the excitement caused by the danger of being stung than to secure the honey, which, in fact, was not only rank and unpalatable, but in the early Fall, during the haying season, was small in quantity. The method followed was to take a one or two-gallon jug, such as is commonly used to carry water to haymakers, fill it partly with water and place it, with cork removed, within two or three feet of the nest. The bees were then thoroughly aroused by beating the nest, immediately after which the brave boys removed themselves to a safe distance. The enraged bees would swarm out and begin flying about in widening circles to discover the enemy. The jug would at once attract their attention and numbers would fly about it and over its open mouth, which, by reason of the air set in motion by their wings, would give an answering roar to their angry humming. Excited beyond measure by this noise, the bees would fly at the mouth of the jug, and one after another would pop into it (the noise produced by those within still further attracting those without), until all had entered. A second disturbance of the nest would serve to draw out and dispose of any remaining fighting worker bees, after which the robbing of the nest was easy. After robbing the nest the water and bees in the jug were emptied out on the ground, and the bees, although apparently drowned, would soon recover, and start off to found new colonies, which other boys would probably rob. In later years, when Mr. Marlatt became interested in collection and study of insects, this method was employed with unvarying success in the examination of bumblebees' nests, in order to secure parasites and the guest insects which inhabit these nests. This method seems to be a discovery of the western farm boys, since the writer, although he robbed bumblebees' nests in central New York when a boy, was never ingenious enough to invent such a capital method of avoiding stings."

Report of Secretary of Agriculture.

Following is a synopsis of Secretary Wilson's report for the year ending June 30, 1901:

Rural delivery has aided in getting weather forecasts promptly to farmers, 42,000 families having received these reports. It is expected to extend this service during the coming year, giving warning of approaching frosts and storms in time to be of real service. The value of animals exported was $253,000,000. Inspectors have examined 385,000 cattle, 228,000 sheep, and 48,000 horses and mules for export, and 37,000,000 animals for slaughter in this country. Animal diseases are being treated by vaccines sent out by the Department. Special studies in plant diseases have been made to learn resistant varieties, and various commercial seeds were tested for germination. Valuable seeds and plants adapted to our climate have been imported, including macaroni wheats, date palms and Egyptian cotton. About 4,500 pounds of tea were raised on the experimental farm at Summerville, S. C. Efforts are being made to extend our foreign fruit trade, particularly in high-grade apples. Investigations have been made of the composition, nutritive value and adulteration of food products. Extensive work has been done in forestry, both in improving Government lands and in advising private owners of the best means of handling their forests. Commercial trees, tree planting, forest fires, forest productions and lumbering are discussed. Experiment stations have been established in Hawaii and Alaska, and arrangements are being made to carry on this work in Porto Rico and the Philippines. Agricultural education by college extension work has made decided gains. Farmers' Institutes are held in 43 States and Territories. Irrigation and improvements of the grazing lands of the West have received increased attention. In the work in entomology is noted the introduction of numerous useful insects, such as the fig-fertilizing insect, and several natural enemies of pernicious plant pests. Object lessons in road making have been given. Sample roads were built in nine States under the direction of the Department. The machines were loaned by the manufacturers, railroads carried them free, and the local communities furnished the materials and labor. The publications issued amounted to nearly 8,000,000 copies. Of these 3,500,000 were farmers' bulletins. The value of all agricultural products exported was $950,000,000. Of all the merchandise sent abroad 65 per cent originated on the farm. The amount appropriated by Congress for the work of the Department for the year was $3,303,500.

RAKING LEAVES.—I made my leaf carrier of two-inch mesh poultry wire six feet wide by eight feet long, nailing two fairly heavy cedar stakes to each end. I laid the wire out flat and raked until I got a large heap of leaves on it; I then took one end and drew it toward the center and did with the other end likewise, thus rolling the leaves very tight and enabling me to carry a large load.
Westfield, N. J., C. H. K., JR.

A Liberal Proposition.

Thrice-a-Week World and The Rural New-Yorker { **$1.65** A YEAR

One of our special offers is the Thrice-a-Week World and The Rural New-Yorker combined for $1.65 a year. By this arrangement you are sure to obtain all the news of the day, and information of special interest to the farm and home at the same time. The Thrice-a-Week World is a clean, reliable newspaper, and the low figure at which it is offered, in conjunction with The Rural New-Yorker, should make the combination unusually attractive.

STEVENS
Anti-friction, Bridge tree, Automatic adjusting, Self-sharpening, Covered gears, Light draft, Non-choking Hand, Sweep, and Power farm mills, for all purposes. Will grind all grain to any degree of fineness. Thousands in daily use everywhere. Send for free catalogue C. Agents wanted.
STEVENS MFG. CO.,
Fisher Bldg., Chicago, Ill.

WELL DRILLING Machines
Over 70 sizes and styles, for drilling either deep or shallow wells in any kind of soil or rock. Mounted on wheels or on sills. With engines or horse powers. Strong, simple and durable Any mechanic can operate them easily. Send for catalog.
WILLIAMS BROS., Ithaca, N. Y.

BRAND NEW STEEL ROOFING

Bought at Receivers' Sale. Sheets either flat, corrugated or "V" crimped. No tools except a hatchet or hammer is needed to lay the roofing. We furnish free with each order enough paint to cover and nails to lay. Price per square, **$1.75**
A square means 100 square ft. Write for Free Catalogue No. 57 on General Merchandise. Chicago House Wrecking Co., West 35th and Iron Sts., Chicago, Ill.

Clubbing List.

We can save you money on any paper or magazine. We give you a list below. If you do not find all you want here, send us a list, and we will quote you price by return mail. It will save you trouble to send all your orders to us at one time. The price opposite each paper is our price to you for it. Every order must, of course, include a subscription to THE RURAL NEW-YORKER at $1. To make up a list start with THE R. N.-Y. at $1, then take as many of the others as you need at price opposite each.

American Bee Journal, Chicago, Ill	$0.95
American Poultry Journal, Chicago, Ill	.30
American Sheep Breeder, Chicago, Ill	.80
American Swineherd, Chicago, Ill	.30
American Queen, New York	.45
Arena, The, New York	1 30
Atlantic Monthly, Boston, Mass	3.25
Ave Maria, Notre Dame, Ind	1.70
A Few Hens, Boston, Mass	.20
American Boy, Detroit, Mich	.60
Babyhood, New York	.90
Blade, Toledo, O	.60
Blooded Stock, Oxford, Pa	.15
Baptist Union, Chicago, Ill	.80
Cincinnati Weekly Gazette, Cincinnati, O	.40
Cosmopolitan Magazine, Irvington, N. Y	.85
Courier-Journal, Louisville, Ky (begin Jan. 1)	.60
Cleveland Daily World, Cleveland, O	1.30
Century, New York	3.60
Christian Herald, New York	1.10
Constitution, Atlanta, Ga	.75
Commercial Tribune, Cincinnati, O	.45
Cleveland Leader, Cleveland, O	.80
Conkey's Home Journal, Chicago, Ill	.25
Courier, Buffalo, N. Y	.75
Chronicle Telegraph, Pittsburg, Pa	.60
Cleveland Plain Dealer, Cleveland, O	1.40
Courant (Daily, Hartford, Conn	6.50
Courant (Semi-Weekly), Hartford, Conn	.85
Columbus Press Post, Columbus, O	.85
Dispatch, Pittsburg, Pa	.55
Drainage Journal, Indianapolis, Ind	1.00
Demorest's, New York	.95
Designer, New York	.95
Democrat and Chronicle, Rochester, N. Y	.55
Enquirer, Cincinnati, O	.55
Evangelist, New York	3.00
Everybody's Magazine, New York	.90
Examiner, New York	1.85
Examiner (Daily) San Francisco, Cal	6.40
Examiner (Weekly) San Francisco, Cal	1.20
Every Where, New York	.40
Forum, New York	2.60
Free Press, Detroit, Mich	.75
Frank Leslie's Monthly, New York	.85
Farm Poultry, Boston, Mass	.70
Family Herald and Weekly Star, Montreal, Can	.80
Gleanings in Bee Culture, Medina, O	.60
Globe Democrat (Weekly), St. Louis, Mo	.80
Golden Days, Philadelphia, Pa	2.35
Grape Belt, Dunkirk, N. Y	.90
Good Literature, New York	.25
Household, New York	.70
Horse Review, Chicago, Ill	1.60
Horse World, Buffalo, N. Y	1.20
Harper's Bazar, New York	.90
Harper's Magazine, New York	3.30
Harper's Weekly, New York	3.30
Housekeeper, Minneapolis, Minn	.40
Housewife, New York	.25
Hoard's Dairyman, Ft. Atkinson, Wis	.65
Holstein-Friesian Register, Brattleboro, Vt	.90
Home Journal, Boston, Mass	2.35
Independent, New York	1.90
Inter Ocean, Chicago, Ill	.75
Inter-State Poultryman, Tiffin, O	.25
Journal, Boston, Mass	.95
Judge, New York	4.10
Jersey Bulletin, Indianapolis, Ind	1.10
Journal, Indianapolis, Ind	.55
Little Folks, New York	1.30
Lippincott's Magazine, Philadelphia, Pa	1.75
Ledger Monthly, New York	.80
Living Church, Milwaukee, Wis	1.60
Leslie's Weekly, New York	3.10
Motherhood, New York	.60
National Tribune, Washington, D. C	.95
North American Review, New York	4.10
News and Courier, Charleston, S. C	.60
Ohio Poultry Journal, Dayton, O	.30
Our Grange Homes, Boston, Mass	.75
Outlook, The, New York	2.85
Poultry Keeper, Quincy, Ill	.30
Press, Philadelphia, Pa	.85
Poultry Monthly, Albany, N. Y	.30
Pioneer Press, St. Paul, Minn	.85
Post Express, Rochester, N. Y	.60
Puck, New York	4
Review of Reviews, New York	
Register, Wheeling, W. Va	
Reliable Poultry Journal, Quincy, Ill	
Republican, The (Weekly), Springfield, Mass	
Sabbath Reading, New York	
Scribner's Magazine, New York	
Scientific American, New York	
Spirit of the Times	
Star, Kansas City, Mo	
Sentinel, Indianapolis, Ind	
Swine Breeder's Journal, Indianap	
Sunday-School Times, Philadelp	
St. Nicholas, New York	
Success, New York	
Table Talk, Philadelphia, P	
Tribune Review, New Yor	
Thrice-a-Week Tribune,	
Times (Weekly, Cincin	
Toledo Bee, Toledo, O	
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THE RURAL NE

Live Stock and Dairy

MAKING SKIM-MILK CHEESE.

How many quarts of skim-milk does it take to make one pound of cheese? What is it worth per pound? W. B. B.
East Greenwich, R. I.

To embark in the manufacture of skim cheese you will require the services of a skilled man. More skill and judgment are required than in the manufacture of a full cream cheese, because the effort put forth from first to last is to assimilate water in the place of fat removed. Only the very finest quality of milk can be safely used; that is, milk free from objectionable gases or taint germs. Any gas development is very hard to manage after removing the fat, which is the life and heart of milk. The quantity of milk required for a pound will depend upon the amount of fat remaining and the casein content of the milk. If you have 3.8 per cent milk, which will require about 10 pounds for a pound of cheese, full cream, and we remove all of the fat, we have left casein only. Dry casein will assimilate nearly 2½ times its own weight of water; in other words, if we have 3.8 per cent fat in the original milk, the same milk would contain about 3.1 per cent casein; .2 of a pound would be wasted in the manipulation, leaving 2.9 per cent. This, multiplied by 2½ would give us 7.25, the amount of cheese in 100 pounds of the original milk. This will vary somewhat in milk of similar composition, on account of varying degrees of water assimilated.

Milk of this kind should be set at 88 to 90 degrees Fahrenheit, and not heated after cutting to exceed four degrees, and good results can often be obtained without any further increase in temperature. The skill of the maker alone can determine. Only a slight trace of acid should be given the curd when drawing the whey, and stirred gently, salted at the rate of one pound to 1,000 of milk, pressed, and cured at 60 degrees, not over 65. After all of this effort the market will pay from two to five cents a pound; with beginners usually the minimum price. In my experience and observation skim-milk is worth more to feed than to use in any other form. Very many so-called quarter skims are made, and are a very eatable cheese when properly made, and are profitable when prices are high. If the retailer is forced to raise his price above 15 to 17 cents, as he generally does when cheese is selling at 12 cents in the country, he often meets the objection that prices are too high. His only alternative therefore is to buy a light skim, known in the New York market as "store cheese" at from one to two cents less, and thus holds for the time at least, his trade. The objection to these cheeses is found in their rapid drying out. The fat being out, the maker tries to make the cheese soft, so assimilates all the water he dare to put in, and not have free moisture. Until cut the rind prevents rapid evaporation, but after being exposed to the air the water passes out rapidly, and this all happens in the hands of the consumer. We have fooled the trade and the final buyer as a buyer, but as a consumer he knows just what he has on hand. To give every detail would re- 10 columns of THE R. N.-Y.

H. E. COOK.

...NING OUT HOG CHOLERA.

be done to clear the disease ...s in which hogs have died

hogpens are so con- ...lete disinfection is In such cases, the burned or torn ...t to discontinue ...ecanse if they ... cholera this ...nembers on the ...ts, boots of men, etc. A great deal of the so-called disinfection is worthless, and worse than worthless; worthless, because it does not destroy the disease germs that it is intended to destroy, and worse than worthless because it gives a false sense of security. The best disinfectant is fire, the next best is cleanliness, the next best is sunshine and following these come chemicals for destroying germ life. All of the loose bedding and dry manure, together with loose boards and rotten woodwork about an infected pigpen, should be gathered together and burned. The loose manure and soft earth from the yards and from beneath the buildings should be buried two feet below the surface. The pens themselves should be scrubbed out with hot water and washing soda. All of the doors and windows should be kept open to admit sunshine and fresh air; following this, all of the woodwork and fixtures should be sprayed with a five-per-cent solution of carbolic acid applied by means of a spray pump, such as is used for spraying fruit trees. This solution should cover every square inch of surface, and should get into every crack. Following this the same surfaces should be sprayed with whitewash containing chloride of lime; one pound of chloride of lime to each two gallons of whitewash. The gutters, the floors, the space beneath the floors and the yards should be flooded with a saturated solution of sulphate of iron. Disinfection that has been carried out in this way has in numerous cases that have come under my observation been entirely effective in preventing a return of hog cholera from infected premises. A source of considerable danger that should not be overlooked, is the hog that has apparently recovered from cholera. Chronic ulcerated processes sometimes remain in the bowels for a long time, and after the hog appears to have regained perfect health, it may still be discharging germs of hog cholera in its manure.

Pennsylvania. LEONARD PEARSON.

The germ of hog cholera is no more difficult to destroy by germicides than most germs of other infectious diseases. Proper disinfection depends upon the construction of the building. A comparatively new building with a cement floor, or even a tight board floor, may be disinfected without much difficulty, while if the building is old, with a ground floor, it will be difficult to do this. To burn it would be the safer and better way to disinfect, as the chances are that the germs would never all of them be reached by whatever germicide was used. With tight floors and sound sides of wood, stone or brick a five-per-cent solution of carbolic acid used in water near the boiling point will kill the germs. This can be applied with an old broom or a mop made of cloths. The user should wear old boots that can be burned and clothing that can be washed by boiling when he is through with his work. Chloro-naptholeum or any of the so-called sheep dips can be used and take the place of the acid; also a preparation called by its manufacturers Baccillol. In most cases these last-named are cheaper than the carbolic acid, of which the pure should be used, the crude being of too uncertain strength to depend upon. Again, referring to the clothing worn by those who care for infected swine, I will say that in my opinion there is no more ready means to spread the disease in communities than for people to visit the place where swine are suffering with the disease, and then without changing all outer garments and boots or shoes go among other swine. Hog holera has been known to be conveyed for 100 or more miles by those who had simply walked among diseased swine, and without changing their boots visited other swine herds. It is a disease that need not spread over large areas, if people would practice the precautions mentioned. C. D. SMEAD.

Logan, N. Y.

Purebred Jersey Oxen.

The picture at Fig. 372, page 819, shows two purebred Jerseys of the finest breeding adding a little dignity to labor. The engraving is taken from The Jersey Bulletin, the excellent publication which champions the Jersey breed. Jersey oxen are seldom seen, yet they are quick and active, if light, and on many farms a yoke of such cattle would prove very useful. On our steep hill farm we think the active Jerseys would be more useful than the duller and heavier breeds. Surely nothing could be handsomer, under the yoke, than these fawn-colored workers.

HEN FEEDING.—It has always been my practice to feed my hens from a tin dish holding about 1½ pint. This dish full of oats and cracked corn, half and half, to eight hens. I have weighed this grain lately, and I find I am feeding about 2¾ ounces of dry grain to each hen for supper. They get the same measure full of a mash of bran and meat meal in the morning. I have come to the conclusion that it is the same with hens as with humans; no matter how you feed, some will be fat and some will be lean. V. E. H.

Lakeport, N. H.

"An ounce of prevention is worth a pound of cure." That is the way with a Cold. A few little doses of Dr. D. Jayne's Expectorant often saves a long sickness, if not something more serious.—*Adv.*

Breeders' Directory

JERSEY BULL
Yearling—registered, from a great show cow; almost faultless, by a producing sire. Farmer's price. R. F. SHANNON, 907 Liberty St., Pittsburg, Pa.

123 HOLSTEINS all ages, for Sale
DELLHURST FARMS, Mentor, Ohio.

Holstein-Friesian Bull
ready for service, and a fine lot of Bull Calves. Best of breeding, and from deep producing families.
C. K. RECORD, Peterboro, N. Y.

FOR SALE—Thoroughbred HOLSTEIN-FRIESIAN CATTLE of the best families. Also, 30 high-bred Bulls at reasonable prices. Write the MAPLES STOCK FARM, Binghamton, N. Y., WM. ROOD, prop.

For Sale—PUREBRED HOLSTEIN-FRIESIANS from best families. Two registered bulls ready for service and bull calves. Also have purebred BERKSHIRE SWINE and SCOTCH COLLIE PUPS at low figures. Write for breeding and prices. W. W. CHENEY, Manlius, N. Y.

Springdale Farm, Adams Basin, N. Y.
E. J. ADAMS, Proprietor.
Breeder and Shipper of Red Polled Cattle, O. I. C. Swine and Dorset Sheep. Stock for sale.

Berkshire, P. China and C. White Pigs (also, serviceable Boars; sows bred), at farmers' prices. B. P. Rock Cockerels, 75c.; W. Holland Turkeys, $1.50. W. A. LOTHERS, Lack, Pa.

Reg. P. Chinas, Berkshires and C. Whites.

Choice Pigs, 8 weeks old, mated not akin. Bred Sows and Service Boars. POULTRY. Write for hard times prices and free circular.
HAMILTON & CO., Rosenvick, Chester Co., Pa.

2000 FERRETS. First-class stock. Some Trained New Price-list free.
N. A. KNAPP, Rochester, Lorain Co., O.

ANGORA GOATS are handsome, hardy and profitable. Prize stock. Low prices. Large cir. E. W. Cole & Co., Kenton, O

25 choice pure Von Homeyer RAMBOUILLET RAMS for sale cheap. THOMAS WYCKOFF, Rambouillet, U. S. A., Orchard Lake, Mich.

For Sale—300 Choice Barred and Buff P Rocks; also White and Silver Wyandottes. Price reasonable. DR. S. C. MOYER, Lansdale, Pa.

There is Music in the crow of my R C. Brown Leghorn cockerels, $1.25 each. They are good breeders. A. B. KATKAMIER, Macedon, N. Y.

Cockerels—Choice W. Wyan., P. Rocks, Brahmas, Cochins, Leghorns, from prize-winning stock. 23 varieties of land and water fowls. Satisfaction guaranteed. Big catalogue free. Pine Tree Farm, Box T, Jamesburg, N.J.

MAPES' VENTILATING DRUM *Utilizes Animal Heat.* Heat your hen roost with absolutely no expense for fuel. Warranted to secure a constant circulation of pure air, and a temperature above 40 degrees in zero weather. Full directions with each drum. Price, $3.50. MAPES' VENTILATING CO., Middletown, N. Y., Box 205.

PROLIFIC SWINE Three sows just farrowed 14, 13 and 12 pigs. The Cheshires are equally kind and good milkers. "Norwalk, Conn., Nov. 14, 1901. 'Pig came all right, and I am perfectly satisfied with him.—J. A. G.'" Try some. *Low prices for quick sales.* A few beautiful large Bronze Turkeys; young 20-lb. toms. 111'd Cat. H. of B. M. of Feeding sent free for 2-cent stamp.
C. E. CHAPMAN, Peruville, N. Y.

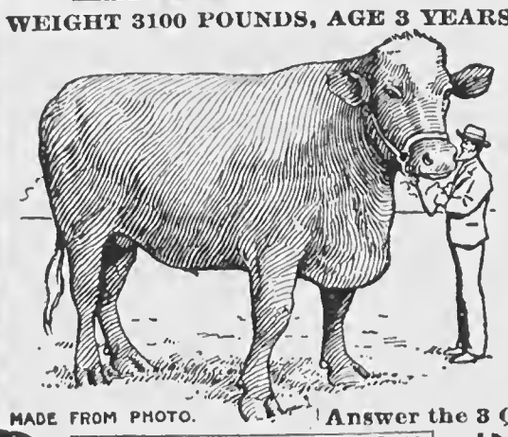
You Can Save Your Horse
from Spavin, Ringbone, Splints, Curbs and all forms of Lameness by a prompt and liberal application of that old reliable and well known remedy—

Kendall's Spavin Cure
It has the unqualified endorsement of every man who has ever used it. Here is a sample of what thousands say for it.

CURED FIVE BONE SPAVINS.
Montrose, Colo., July 14, 1899.
Dr. B. J. Kendall Co., Dear Sirs:—Please send me one of your "Treatise on the Horse." Your Kendall's Spavin Cure is the best in all the world. I have cured five bone spavins on my horses and would not be without it for anything. Yours truly, G. W. ROBUCK.

It is a most valuable liniment for family use—splendid for bruises, sprains, lame back, rheumatism, etc., etc. Sold by all druggists at $1; six bottles for $5. Our book, "A Treatise on the Horse," mailed free. Write at once and address
DR. B. J. KENDALL CO., Enosburg Falls, Vt.

LARGEST THREE YEAR OLD STEER IN THE WORLD
WEIGHT 3100 POUNDS, AGE 3 YEARS, SHORTHORN.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INTERNATIONAL FOOD CO., MINNEAPOLIS, MINN., U. S. A.
3 FEEDS FOR ONE CENT

FEEDING BONE MEAL TO COWS.

Have you ever found it necessary to feed fine ground bone to milch cows? We are told that under some circumstances, especially where cows are fed largely on corn, that a light feeding of bone meal will prove very useful. I know from my own experience that this is true in feeding hogs, but we would like to know whether the same thing is true in feeding cows.

I feed my cows a small amount of ground bone about three times a week, during the Winter. Several years ago I was troubled with abortion in my herd, but since feeding as above it has not appeared. I do not hold that it is a remedy, however. J. S. WHITEFORD.

Maryland.

We have fed, very successfully, boiled, specially-prepared bone meal to cattle, especially to young, growing stock. Without a doubt it is valuable to feed to dairy stock, especially if much carbohydrate grain is fed. It can be successfully fed with cornmeal or any food high in carbohydrates. W. M. BENNINGER.

Pennsylvania.

I have never experimented with ground bone, however, I am impressed with the belief that under certain conditions, an occasional feed would be beneficial. This opinion is partly based on the fact that I have very often seen cows greedily chew bones, and I have known cows to be choked by so doing.

Pennsylvania. JAS. L. HENDERSON.

Feed for Cows and Horses.

Referring to the question from Connecticut about feeding cows and horses (page 814) one of the best dairymen in this county says that the best feed to produce milk is six parts wheat feed to one part gluten. The wheat feed was what is called "mixed feed"; that is, bran and middlings together. One gets it in this way. The wheat feed he weighs, six pounds at a feeding, morning and night, with one quart of gluten at each feeding. This ration is for large Holstein cattle; for Jerseys it would probably be a rather heavy ration. His other feed was cornstalks, hay and millet. The inquirer from Connecticut says he has plenty of corn. If he will take his corn in the car, have it ground fine, cob and corn together, take four quarts of this cob meal, and four quarts of his wheat feed and mix them together for each feeding, he will find this a good ration for milk production. The coarser wheat feeds are better for milk than the flour middlings. A good ration for work horses is wheat feed of any kind, with a little cornmeal; say three quarts of wheat feed and one quart cornmeal, three times a day. I give my own horses ground rye and oats, half and half by measure, 12 quarts a day, and my horses work hard every day. G. W. H.

Columbia Co., N. Y.

Daily Rations for Hens.

I have never measured or weighed the grain required by a hen each day. In my experience the amount of grain a hen seems to require daily varies greatly, depending on the season and condition of the bird. For instance, when a hen is moulting she will seldom eat much more than half the amount she will when laying her best. My rule is to feed all they will take up promptly and with relish, except in the morning, when I give a scant ration.

New York. H. J. BLANCHARD.

We have two or three most excellent cows, the result of crossing the Holstein upon the Jersey, and in another case the Jersey male on the Holstein. The latter cross appears to be preferable, and I see no reason why a variety of animals might not be produced which would give a larger amount of milk than the Jerseys, and richer milk than the Holsteins. Of course we would get a great mixture of colors. Our experience is that the tendency is to produce animals that are quite dark, but I think this would soon disappear after a generation or so. The Holstein male, when bred to common stock, in our experience, tends to produce offspring that are darker colored than either the sire or dam. By many the Holstein cow is considered a little large, and the Jersey cow often too small and delicate. The cross-bred animal should be one that is intermediate between these two prominent characteristics of the breeds named. Of course it would take a little while to get the blood mixed harmoniously, because both breeds are strong ones, but when success is attained an ideal cow should be the reesult. I. P. ROBERTS.

Notes from Milk Producers.

The two milk-receiving stations at this place are taking in quite a large amount of milk for the time of year; the Tuttle station receiving about 55 cans daily and the White station about 45 cans. Prices range from $1.10 to $1.25 for 40-quart can, according to the test of butter fat; 10 cents per can is added to the above prices if the producer delivers two-thirds as much milk during the months of November and December as was delivered during June. These prices are considerably higher than formerly paid at this place, on account of competition, although the actual profit is but very little better on account of the higher cost of feed, it being from one-third to one-half higher than usual. Wheat bran is selling at $22 per ton, and cornmeal $27 per ton. W. J. W.

Cobleskill, N. Y.

Milk is $1 per can of 40 quarts at the local station, when it should be at least $1.20 per can, taking into consideration the price of the feeds for milch cows. A number of the farmers in this section raise a great many turnips for Fall and early Winter feed, which materially reduce their feed bills. They are mostly raised with corn sown at the same time; the corn is drilled or planted by mixing the seed with the fertilizer. One of our progressive farmers has fed two wagon-loads a day since July 15, and has 1,000 bushels in the cellar for Winter feed. They are fed without cutting, simply pulled and scattered in lot or manger just after milking. The kind principally grown is the Strap-leaf Purple-top for Fall and the Germain Sweet for Winter. They are certainly great milk producers. Cows are very high; that is, nearby springers from $40 to $65 each. More turnips will be raised in this locality next year than ever before. B.

McGraw, N. Y.

It would seem the milk business has reached a situation where the margin of profit (if such there be), if seen, will have to be looked at through a microscope. With meal selling at $25 to $28 per ton, and bran and middlings proportionately high, a fair quality of hay selling readily for $12, how is it possible to make milk at the present prices? The Horseheads Creamery Company is receiving about 700 quarts of milk daily from this place. Such of the patrons as are paid "station" prices are receiving at this time 94 cents for 40-quart cans, this being the net price in this zone. Of course, the price of hay has little or nothing to do with the cost of milk, as very little hay is being fed these days. It is the corn fodder that makes it possible for the dairyman to exist. Corn in this vicinity made a most magnificent growth, and the fodder kinds were especially well cared. Hundreds of bushels of fine ears went into the silos, and are now safely housed till such time as needed. I hear of a number of cows being offered for sale.

Erin, N. Y. G. E. M.

LEGHORN HENS.—The Mediterranean varieties will probably stand more abuse in the matter of overfeeding than will the larger breeds. It is claimed by physiologists that nervous persons should eat largely of animal food. The Leghorns represent this temperament among fowls, and I am accustomed to make their daily ration partly of meat regularly. F. W. P.

THE HEN'S MASH.—I would like to dispense with mashes for poultry altogether, but for the difficulty in getting the meat ration properly fed out. When some enterprising firm puts up a choice article of lean meat screened to the proper size to throw into the litter, and at a reasonable cost, I shall be glad to dispense with mashes, as I believe them to result in less action of crop and gizzard and diminished vigor. F. W. PROCTOR.

Can You

do a little pleasant and profitable work for us in your own town? No experience necessary. We will explain just what you have to do. The work will be light, and we will arrange for the time you shall be able to give to it. We can give you work for all your time or just for your spare time. Write for full particulars. THE RURAL NEW-YORKER, NEW YORK.

Juggling of Separator Facts

— AT THE —

BUFFALO EXPOSITION.

One of our desperate would-be competitors persists in its unscrupulous juggling of Separator facts and records at the Buffalo Exposition. One lie or misrepresentation stamped out it bobs up the next week with another. But everything must come to an end, and as a correspondent pertinently writes us "long after both these second-rate imitating machines and their projectors are turned into poor fertilizer the De Laval will continue—as in the past—to demonstrate its all-round superiority to anything else ever made in the shape of a cream separator."

The De Laval Cream Separators having been awarded the Gold Medal at Buffalo and the concern in question a gold medal on its *combined exhibit* of churns, separators and Babcock testers, it at once brazenly advertises having received "the Gold Medal and Highest Award" on its "separators," without qualification, in the hope to thus influence some possible separator buyer.

Next it proceeds to put out what purports to be a skim-milk record of the work done by the "U. S." machines in the Model Dairy at Buffalo. As a matter of fact this is not a record of the full run of the machines but simply of a selected part of it. Much of the "U. S." work during the first month of their run would not compare favorably with ordinary gravity setting. It was so bad that one machine was thrown out altogether. Their average for the full time shows a skim-milk loss of *nearly three times* the published figures.

Even then these so-called "skim-milk" records were but mere jugglery and show absolutely nothing as to the practical work of the machines. These "records" were achieved only through excessive speed, excessive power, cutting down capacity and running so thin a cream that more fat was lost in churning than saved in separating. The following voluntary statement from the engineer of the Model Dairy tells its own story in this regard:

BUFFALO, N. Y., November 2, 1901.

THE DE LAVAL SEPARATOR CO.,
74 Cortlandt St., New York, N. Y.

Gentlemen:—As engineer of the Model Dairy at the Pan-American Exposition, Buffalo, I was impressed with the following points of merit in the running of your Cream Separator. It did its work very smoothly and quietly, showing by its running its mechanical excellence. I could run it with a much smaller consumption of fuel and lower steam pressure. In fact, it took *but one-fourth as much steam to do our work with it as the "United States" separator used to do the same work*, and at no time did I have to force my fire or boiler to keep up the supply of steam as I did when the latter machine was in use.

We were sorry to see the De Laval leave on June 28 and glad to see it returned on August 9th, as it made less labor for all. Your representatives let the regular Dairy force handle it, while your competitor, the "United States," *had an expert to run their machine during the greater part of the time of their run*, and even then he could not make a record for close skimming *except by running his machine at an excessive speed of* 11,000 *to* 12,000 *revolutions a minute, cutting down the capacity, and making a thin cream.* One morning in particular the cream was so thin that I had to run the churn two hours and twenty minutes before the churning was done.

While I am not an expert in creamery work, I hold a first-class engineer's license, and I want to say that your separator, from a mechanical standpoint, in the design and finish of the parts and in the economy of fuel and labor, *easily ranks first*, and I do not wonder that your competitors would rather not place their machines alongside yours.

Yours very truly,
JAMES F. DOWNY,
Engineer Model Dairy.

The published records of the De Laval machine in the Model Dairy at Buffalo were made *under practical use* conditions, such as may be duplicated by any De Laval machine in everyday use, and the machine was run by the Exposition employes themselves and not by a manipulating expert juggling for "skim-milk" records.

THE DE LAVAL SEPARATOR CO.

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1102 Arch Street, PHILADELPHIA
108 & 105 Mission Street, SAN FRANCISCO

General Offices:
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NEW YORK.

327 Commissioners Street, MONTREAL.
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248 McDermott Avenue, WINNIPEG.

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CREAM SEPARATOR
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WESTERN OFFICE FISHER BLDG CHICAGO

SHARPLES
Cream Separators
Have Tubular Bowls, use no disks, easy to run, reliable, durable and effective. Catalog 163 and treatise, "Business Dairying" free. *The best dairymen say they are the best separators.*
Sharples Co., P. M. Sharples, Chicago, Ill. West Chester, Pa.

CATTLE STANCHION.
Keep cattle comfortable and clean. Can turn head and lay down naturally. A new thing. Write for the booklet before buying. Full information. It is mailed free.
FRAGNER & COMPANY, Box 18, Monroe, Mich.

The Best Dishorner.
The easiest on both operator and cow, because it makes the smoothest, quickest cut, is the
CONVEX DISHORNER.
My Bucker Stock Holder and calf dishorners are equally good. All dishorning appliances.
Illustrated Book Free.
GEO. WEBSTER, Christiana, Pa.

HUMOROUS

If the farmer who tills
Makes his living by tillage,
Does the doctor who pills
Make his living by pillage?
—Philadelphia Record.

Miss Flummery has such beautiful hair! Why, she can sit on it." "How careless of her to leave it lying around on chairs."—Cleveland Plain Dealer.

LADY: "Where is your son to-day, Mrs. Murphy? I hope he isn't ill." Mrs. Murphy: "Sure, Mike is to be married to-morry, ma'am, an' he's gone to bed to-day whoile Oi wash his troosow for him."—Tit-Bits.

"LOT'S wife wuz turned inter a piller er salt," said the old colored citizen, "en ef de days er miracles wuzn't pas' en gone I'd lose my temper some day en ax de Lawd ter turn mine inter a week's groceries!"—Atlanta Constitution.

UNCLE: "What are you crying for, Georgie?" Georgie: "Teacher caned me because I was the only one—boo-hoo—able to answer a question to-day." Uncle (indignantly): "This is scandalous, my poor boy! What was the question? Georgie (between sobs): "Who put the bent pin in the teacher's chair."—Tit-Bits.

I THOUGHT you guaranteed that suit of underwear you sold me not to shrink?" said the customer who entered the store and stood in a somewhat cramped attitude. "I did," replied the merchant; "if it shrinks bring it back." "I have brought it back," said the customer in evident embarrassment, "but I got caught out in the rain and can't get it off."—Ohio State Journal.

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PROFIT FARM BOILER
With Dumping Caldron. Empties its kettle in one minute. The simplest and best arrangement for cooking food for stock. Also make Dairy and Laundry Stoves, Water and Steam Jacket Kettles, Hog Scalders, Caldrons, etc. Send for circulars.
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THE BLIZZARD
the greatest of all
HORSE ICE CALKS
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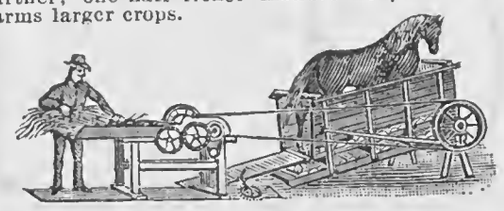
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The United States Separator awarded Gold Medal at Buffalo and excelled all others in separating the cream from the milk of the ten dairy herds in the *Model Dairy* at the Pan-American Exposition. The DeLaval Separator left 25 per cent. more fat in the skimmilk than the United States.
The United States Separator received medal and highest prize at the World's Fair, Chicago, 1893.

At the Paris Exposition the United States Separator received a Gold Medal.

The DeLaval Co. received no prize there. In their attempt to get around this, they advertise that the award they claim was the award given to the "Société Anonyme Separator," which they claim

"is the French translation of 'Separator Corporate Company,' the name of their European organization."

The "Société Anonyme Separator" exhibited a Butter Radiator. Their circulars read as follows:

"Le Radiateur produit directement du beurre pasteurise." The English translation is "The Radiator produces pasteurized butter direct from the milk." In this country this machine is called a "Butter Accumulator" or a "Butter Extractor."

The DeLaval Separators, like those sold by the DeLaval Company in this country, were exhibited at Paris in the name of the Aktiebolaget Separator. They had a very large exhibit, over 100 machines in two places. But regardless of these large exhibits the official list of awards distributed at Paris contained no award whatever to the DeLaval Co. or their European Co., the Aktiebolaget Separator. The name of the separator on the circulars they distributed at Paris is the Alfa-Laval.

The claim of the DeLaval Company that the award given to the "Société Anonyme Separator" was an award to them is an admission that none was given in their name or their European Company, the Aktiebolaget Separator.

The award which they now claim was on a machine making pasteurized butter direct from the milk and not a cream separator.

We ask all readers who, in their opinion, is the guilty party making "All sorts of lying and unscrupulous misrepresentations."

For further information about separator awards, we refer to the official published lists.

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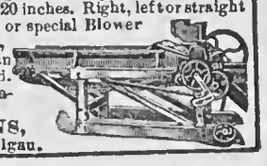
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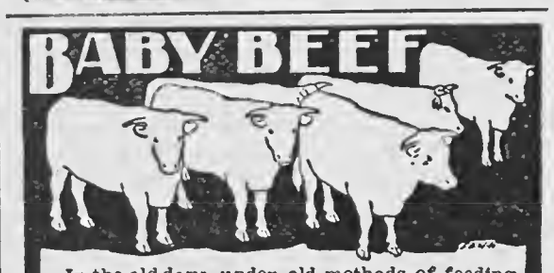

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and get ready to make your share of it. They crush and grind ear corn shucks on or off and all kinds of small grain, separate or mixed. Send for catalogue R Mailed free.
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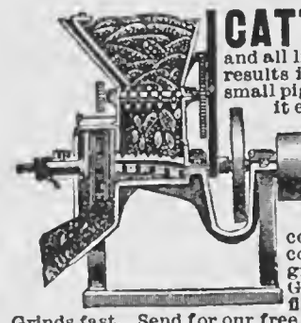
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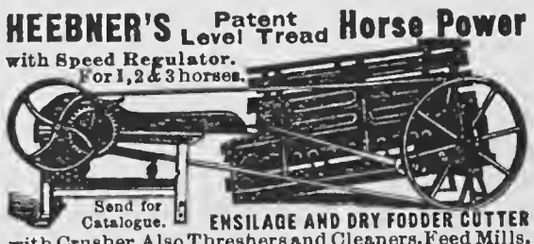
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DEC 13 1901

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

PHOTO ENG. CO. N.Y.

VOL. LX. No. 2707. NEW YORK, DECEMBER 14, 1901. $1 PER YEAR

MULCHING FOR APPLE TREES.

WHY SOIL WARMS UP.

Best Plan for Spring Budding.

There has been so much interest shown in the account of that famous apple orchard owned by Grant G. Hitchings that we print more of his opinions:

You do not place much dependence on bud variation?

The theory seems all right, but as yet I have seen no distinct case of the variation being constant. I have noticed that the same tree will vary its fruit, some years being better than others, depending on the season and the supply of available plant food.

You lay great stress upon the need of humus in the soil. Why not keep this up by plowing under green crops as many recommend?

It occurs to me that we can keep up the humus supply much better and cheaper by adding it on top of a sod in the orchard, by letting what grows go back, and, if necessary, by growing Alfalfa in our back lots that are hard to cultivate, and drawing and applying that where needed. In starting a young orchard you can accumulate humus before the trees get large, and with this accumulation and what grows each year it seems to be sufficient to keep the trees producing good apples each season. How long it will last is of course a question. To guard against a possible shortage of humus last Spring I seeded down 20 acres to Alfalfa, and will use this as a mulch for strawberries, and if needed in the orchard.

What would you do with an old orchard?

In an old orchard the best thing to do to renovate it is first to tear up the old sod and decay it, then reseed and apply the cheapest available humus; if trees are close cut down one-half of them, and if you want to keep the orchard permanent set young trees near where old ones were cut. By applying the vegetable matter they appear to do just as well as those set on new ground. When these get to bearing cut down the remaining old trees and reset. By this method you are obtaining all the apples your ground is capable of, and gradually changing from an old orchard to a new one.

Are you not troubled in buying from nurserymen with trees untrue to name?

I never have had much trouble about trees proving untrue to name. In fact, I can tell a good many kinds by the trees; they have certain characteristics of growth and appearance that are reliable. I think the trouble is caused by buying of agents who claim they are selling certain nurserymen's trees, but in fact are buying where they can the cheapest.

What about root-pruning trees?

I agree perfectly with Mr. Stringfellow in his after treatment of trees. But there are two objections to the severe root pruning. First, in our stony soil, the tree may stand surrounded by stones, and second, after a year or two, when the tree is full of foliage, the wind would injure those fibrous roots more by rocking the tree than if they started eight or 10 inches from the body, the larger roots acting like an anchor to hold the trees until the new roots become well established, and of course the surface to heal would not be so large. This is only opinion, however; the method may be all right. The roots on apple trees go deep enough the other way of setting. In sinking stones I noticed roots from seven-year-old trees three feet below the surface in heavy clay. I believe the roots that do the tree the most good are near the surface, and I don't think it would be any better to start them deep unless you cultivate.

We hear reports from those who sow Alfalfa in their orchards. Is this good practice?

I would not grow Alfalfa in the orchard; it grows too vigorous in the Fall. It would rob the soil of available plant food at the time the trees needed it most. There are two orchards near here seeded with Alfalfa that I have watched all Summer. This Fall the trees showed very plainly that the Alfalfa robbed the trees of needed plant food. The aftermath of weeds and hay does not draw on the soil in the Fall like Alfalfa.

BUDDLEIA VARIABILIS. FIG. 375. SEE PAGE 838.

SPRING BUDDING.—G. H. R., page 804, will not be likely to succeed with the so-called Spring budding. If he will cut his trees down in early Spring before sap starts much, and let one young shoot grow, and June-bud that, he will succeed if it is properly done. The trees should be cut as close to the surface of the soil as possible. This can be done better by removing some of the soil, and cutting the stock off near the roots, so that too many shoots will not start. Let them grow until about six inches high, and then pull off all but the strongest and most upright, as early as it is possible to secure young shoots from the trees he wishes to get his buds from, say when they are six to eight inches long. No matter if they are soft, so that the buds are formed. Take them and put the buds in the young shoots from four to six inches from the ground. Be sure to leave a few leaves on the stock below the bud, and as soon as the bud is put in cut the top off within six or eight inches of the bud, so that there is some foliage below and more yet above the bud. Tie the bud in as in ordinary budding. We use common cotton twine, such as the merchant uses to tie up his sugar, etc. Let this remain about 12 days, and then cut the top off even with the bud. This will cause several shoots to start from the stock. When they have started out a few inches we go over and pinch or pull the tops off these shoots, so as to retard their growth and permit the bud to grow. After the bud is three or four inches long cut off all the shoots below it, and let the bud grow. The buds must be gone over the second time if they start out. By this treatment the orchardist will get good stocky trees from two to four feet or more, according to conditions. Buds can be obtained earlier from young orchard trees than from the nursery. The trees will be ready as soon as it is possible to get the buds. Ripe buds are not necessary in this case; no matter how young so that they are firm enough to be taken from the shoots. This is one of the surest modes of budding when conditions are at all favorable.

CHAS. BLACK.

New Jersey.

TEMPERATURE OF SOIL.—H. L. D., of Tennessee, page 774, makes a mistake in thinking that "the ground being compact, the sun did not penetrate, and the blooms were late." As a matter of fact, the heat rays penetrate compact soil much more readily than a cultivated surface. The loose soil acts as a shade and mulch, thus preventing the absorption of heat, for which reason we cultivate in Summer, as well as to prevent evaporation of moisture. I give an instance on page 32 of the New Horticulture, where I lost several hundred dollars on melons by disregarding these facts in early Spring. Experiments have shown that the temperature of the soil has little or nothing to do with the starting of tree growth in Spring. A grapevine planted on an outside border and trained into a hothouse, will leaf out the same time that one planted on the inside will. It is the temperature of the air and action of the sun on the branches that regulate Spring growth and blooming. The true reason of his success on the uncultivated crop was that the entire surface root system being let alone, his peach trees were able to resist the action of frost and hold on to their fruit, just as Grant G. Hitchings's apple trees do, when cultivated orchards around shed theirs. The well-known "June drop" of the peach is also due to continued destruction of growing surface roots by the cultivator. Who ever heard of "June drop" on trees standing in hard ground? As Mr. Hitchings says, the roots that do the tree most good are near the surface.

H. M. STRINGFELLOW.

EVERY HEN HER OWN STOVE.

New Plan for Housewarming.

I think it is probable that O. W. Mapes, of Middletown, has owned over 50,000 different hens during the last 15 years. That ought to give him a pretty fair insight into a hen's character and wants, particularly as he has studied Mrs. Biddy as few other men have. We have told the story of Mr. Mapes's poultry business so many times that older readers know that he keeps from 1,500 to 2,000 layers. They are kept in small houses scattered about a rocky farm on what is known as the "colony plan"—that is, there are no fences or runs and no large houses. Each little house shelters 50 to 60 hens. In Summer the hens all run together—each returning to its own little house at night. In Winter they are closely housed.

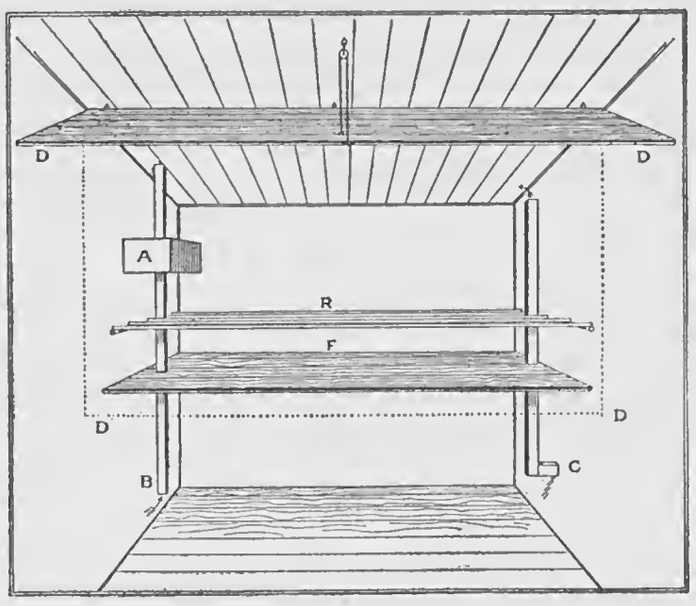
Mr. Mapes spent many years in trying to learn how to feed a hen properly. He thinks he knows, but he found, as most poultrymen do, that no matter how well you feed a hen she cannot do her best so long as she is chilled by the cold. You may set a greenhouse plant in the richest soil and feed it all it needs, yet if the temperature go too low the plant will not thrive. This same thing is true of a hen. You may feed her all the elements necessary to produce an egg, but if her feet are cold and her comb is nipped by the frost the egg will not be forthcoming. The little houses scattered over the farm are warmly built, of good material. They are comfortable in ordinary weather, but there are many weeks during the Winter when, if fair ventilation be given in the ordinary way, water will freeze in them, and that means frozen combs. Aside from the fact that no cold hen can be expected to lay well, Mr. Mapes believed that too large a share of the food went to supply animal heat. When you are feeding 2,000 cold hens this means something, and Mr. Mapes began to study the heat question as he had the food problem. Reports come now and then of houses in which stoves or steam have been used for heating, but even if they were satisfactory they could not be used in Mr. Mapes's system, for that would mean heating 40 separate houses.

"I have it at last—every hen her own stove."

That is what Mr. Mapes wrote after a long study of the problem and so, one cold night in November, I went up to see a hen act as a stove. It was quite cold enough to nip a nose or freeze the water in the average henhouse. After supper we started out to see the hens. As we opened the door of the first house not a hen could be seen. The room seemed to be cut in two. Investigation showed that a large hinged door or shutter just wide enough to play up and down inside of the house had been let down in front of the hens. There was just space enough at the bottom for a medium-sized man to crawl under. It was quite cold enough to freeze water in front of this shutter, but as we straightened up inside of it we found the air evidently warmer. The thermometer registered 52 degrees a little above the perches where the hens were roosting. Strange to say this warm air seemed as fresh and pure as the air outside—and the nose is a pretty good test in such matters! The hens were certainly keeping the air warm with the animal heat from their own bodies, but how was it possible to keep this air pure, without letting this heat escape? In order to understand what was going on, turn to the little picture at Fig. 376. We are supposed to be looking into the house. The arrangements are not exactly as here pictured, but the principle may be made clear. F is a platform under the perches, R. D D is the hinged door or shutter. When we entered the house this was down, covering the dotted lines so as to shut the hens into a little room by themselves. The space above the hens was boarded over and packed with straw to make all airtight and the sides were also perfectly closed.

As all know, 50 hens crowded into this small space would quickly warm it, yet if left there for any length of time many of them would die, and all would suffer because, without ventilation the oxygen of the air would be consumed. To overcome this Mr. Mapes had arranged the devices shown at A, B and C. B is a box of wood about five inches square. It starts about a foot from the floor of the house and runs into A, which is a larger box with sides of thin copper. Another section of B continues on from A—out through the roof. Now see what happens when D is shut down and the hens are on their roosts. As the air becomes warm the copper sides of A become slowly heated, while of course the wood of B is not affected. As a result the air inside A becomes warm, rises, and passes out through the opening to the roof. This creates a draft, so that air is sucked up through B from near the floor. This action keeps up as long as the heat around the copper at A is greater than that near the floor. At C is an opening from the outside with another wooden box running up to near the top of the house, or about a level with the hens. This intake is regulated by a slide so that the pure air is gently let in, supplying the place of the foul air sucked up through A and B. Thus the hens are shut in, away from severe drafts, and still supplied with pure air. As is well known, expired air is heavier than that taken into the lungs. In badly ventilated places the greatest danger is near the floor. You will observe that in this system of Mr. Mapes the air is sucked from the bottom so that little if any pure air is removed. To show the force of the air current at B, Mr. Mapes put a feather near it and this was sucked instantly up the box. The current of pure air at C was very gentle—creating no dangerous draft.

It would be hard to pick serious flaws in this system as it operated that cold night. Most henhouses are, I regret to say, so full of cracks and holes that the hen cannot possibly warm them, but for a tight house, where the hens can be tucked into bed behind a wooden shutter, they really seem to be able to carry their own stove around with them. Mr. Mapes says that he obtained the germ of his plan from a lecture on stable ventilation by H. E. Cook. With small animals like hens the barn system will not work—so he devised the scheme of crowding the hens together at night in the warmest possible place, and using the copper to pump out the foul air without creating a draft. I will try to tell about Mr. Mapes's new plan of feeding next week. H. W. C.



EVERY HEN HER OWN STOVE. Fig. 376.

FUTURE OF CULTIVATED CHESTNUTS.

Several years ago quite an interest was developed in growing Japan chestnuts for market. We should judge that many trees were planted, and it was thought that in a few years the markets would be well filled with these nuts. We do not find many of them on sale. What, in your opinion, is the cause of this apparent failure? Do you think chestnut culture will ever be a profitable enterprise in this country, and if not, why?

The Japan chestnuts have failed in Maine because of the rigorous climate. Several varieties were planted upon the station grounds in 1892, but none of them survived more than three years. The American species is grown in some parts of the State, and I believe that improved varieties of this class may be grown with profit, as there is a large demand for the nuts in the Fall and early Winter, and large quantities are shipped in from Massachusetts and New York.

"UNCLE DICK" HALEY. Fig. 377.

Maine. W. M. MUNSON.

Considerable grafting of the large varieties of chestnuts has been done here for several years past, and these grafted trees are now bearing. Some of them bear in two years from grafting. This present season the chestnut crop was exceedingly light all over the peninsula, as far as my observation extends. The local markets consume large quantities of these nuts at remunerative prices. I think it would take a very large crop of these nuts to make much difference in city supply, because so many are consumed at home. There has been no failure in this line, and it pays those who have the bearing trees.

Delaware. E. G. PACKARD.

While there are thousands of people interested in every section of the United States where the chestnut can be grown, the comparatively high price of the trees has deterred people from buying any number. Most of my customers I know have bought in lots from three to 10 trees; have cultivated liberally, but have cut away all the wood each year for grafting native chestnut sprouts, and so are obtaining little fruit as yet. The Japanese chestnuts unite more freely with our native stocks than do those having European blood like Paragon, Ridgely, etc., but even the Japans do not grow as readily as apples and other stocks easily grafted, and so it has been rather a slow process building up commercial orchards, and I think it will be some years yet before any considerable amount of the nuts are on the market. I had about 100 bushels of nuts in a five-year-old orchard in Georgia this year, but the warm weather when they matured in September down there, caused a large majority to turn rancid almost before we could get them into market. Those that did get to market in good order sold for $10 or $12 a bushel, which, of course, is an extreme price, but I believe the large size and great beauty and good quality of these nuts would have caused them all to sell at least $8 per bushel, had it not been for turning rancid as they did. I have had no trouble with these same varieties here in Connecticut. J. H. HALE.

Connecticut.

The fact that the large chestnuts like the Japan, Paragon and others are not more plentiful in the city markets may be due to several causes. The grafted trees have been and are still comparatively high priced, and somewhat uncertain to grow when transplanted. They seem to be more particular as to soil than most trees. Growers hesitate to plant largely for these reasons. Another reason why the nuts are not more plentiful is that the trees grow slowly, and the grower must wait quite a while before paying crops can be gathered. It requires quite a good-sized tree to produce a bushel or even half a bushel of nuts. The best method of getting a paying orchard seems to be to graft chestnut sprouts, as the trees grow much more rapidly and produce paying crops sooner. The method has its drawbacks, too, as considerable cash must be paid out for keeping underbrush down. We know of several large tracts on this plan, but they have all been started within the last six or seven years, and only the oldest of them are bearing anything like a crop. In our opinion it will be several years before the market is well supplied. If they could be grown as easily as Kieffer pears the market would soon be overstocked. Another drawback to chestnut growing is the weevil, and it will be a drawback until some effective method of destroying the insect is found. The grubs in the nuts can be destroyed by fumigating with carbon bisulphide, but as some escape from the nut before it drops there are always enough left for seed. The orchards started on sprout land are generally contiguous to chestnut timber, where the beetles multiply and easily find their way to the grafted trees. We are not prepared to say whether chestnut growing will be a profitable industry for this country or not. It will require some time, we think, to solve that problem.

Pennsylvania. H. M. ENGLE & SON.

THE WOODCHUCK.—I wish to enter a protest against the woodchuck; it is a very destructive pest in this section. There should be a bounty paid or some other means taken to exterminate these animals, as they are of no benefit to the world either dead or alive, and do a great deal of damage to growing crops every year. I would have the much-despised skunk protected by law, as it does a great deal towards keeping in check the white grub (larvæ of the May beetle); also destroys a great number of mice, grasshoppers and other destructive pests. The damage done by his occasional visits to the henroop is nothing compared with the good work he carries on in the field. GEORGE G. WALKER.

Massachusetts.

FAVORS KIEFFER PEAR.—The Kieffer pear is beyond doubt a poor pear to eat from the hand, and especially so unless great care is given to its handling, but nevertheless it is used largely on our market, we believe, with an increasing demand year by year. This year the crop is of better quality than usual, and we think they are at this time drawing better prices than any previous year since there has been any considerable quantity on the market. We recognize it as a coarse, common pear, but commercial orchards are very productive. The fruit being hardy will transport to any part of the country, or can be kept well into the Winter, and for those reasons it has been and, we believe, will continue to be a good money maker, even when sold at very moderate prices. I have great faith in it for the above reasons, and so have an orchard of 1,100 trees.

Philadelphia. J. D. HENDRICKSON.

A PIONEER OF THE BACKWOODS.

How the Forest was Trained to Fertility.

With the great flow of Irish emigration to this country about the middle of the last century, came Richard Haley, "Unele Dick," as we familiarly eall him. Like many of his eountrymen, he sought work in the tanning industry, whieh was then being developed in the hemlock forests of Sullivan County, in New York State. But his love of independenee and of nature soon indueed Uncle Diek to turn to the soil for a means of livelihood. He bought 50 aeres of land, and set himself to the task of making a farm and a home. What remains of his first home in Ameriea after weathering the storms of more than 50 years, is shown in Fig. 378, taken from a reeent photograph, while at Fig. 377 is a pieture of the old gentleman himself. To make a farm in this wilderness, 40 miles from the nearest railroad, was no easy task. The land had to be eleared of timber by hand, as he had no team, and no money with which to buy one. The timber piled and burned, the stones must be removed, and finally the virgin soil stirred by rude hand implements, and the crop planted and eultivated amid the green stumps and tough rootlets of the reeently felled timber. From this modest beginning Mr. Haley has developed a small farm with suitable improvements and a eomfortable home, which he still lives to enjoy. The efficient partner of his early struggles, Aunt Kitty, went to her eternal home about 20 years ago. May rest and peace abide her gentle patient soul! Four children and numerous grandehildren live to comfort his declining years. Unele Diek has been a man of keen observation and great imaginative powers. He knew nothing of books, but he learned philosophy from nature. True, his logie is sometimes faulty, and his conclusions often misleading, but there is an attraetive originality about his reasoning, and his descriptions are always vivid and at times decidedly romantic. As a boy, he terrorized me with aecounts of spooks that pursued him on the road, and of fairies that led him astray through a wood and meadow; but he found soothing drops for my toothache,helped me mount the load for a ride, and gave partial evidence, when the paternal judgment was about to descend on my youthful pranks. His feminine gentleness won my affeetions when a lad, and his simple life, fearless eourage, and sterling honesty eommanded my admiration and respect in maturer years. To the modern readers there is little in the subject of this sketch to suggest an idea of hospitality. Yet of the complete and costly homes that now dot the country, I doubt if a single one has ever sheltered so many weary travelers as this rude cabin. Immigrants without means eame to this strange country to seek employment. In this humble home, they shared the frugal meal, and found shelter and welcome. It is a tradition of the neighborhood that at one time, the representatives of seven families made this house their home. Yet with all their hardships and privations, these early settlers were not without their ambitions and their sentiments. In the legends of the place, "Diek's log house" is the center of some spiey romanees. It is said that here the blushing widow pursued and won her timid lover, and that here eoy maiden stole from the glare of the tallow dip to the shelter of nearby woods, there to lend a willing ear to the awkward but fervent whisperings of the rugged swain, who had followed her from their native County Cork. J. J. D.

A LANDMARK OF THE LAST CENTURY. Fig. 378.

THE "PROMOTER" AND THE FARMER.

Last week we made some remarks about a company that is trying to sell shares of stock in a mammoth storage concern. Here we have some comments on the scheme from a local farmer who has not been victimized.

Of eourse, a "well-known resident" takes the promoter around, thus getting tips on where to call, but I must give him the credit of being fully able to blow his own horn without even a word from another. Somehow the promises he made of being able to sell a $5 grade of flour for $3 and other things in proportion, and selling apples for $7 per barrel, etc., for the farmers, were so attractive that, coupled with his 12 per eent ineome, they allured or mesmerized the farmers about here and they fell into his trap at once, and without investigation, before their sober second thoughts warned them of the absurdity of his statements. "Down the trusts, farmers, by my ideal trust of your own making." Queer, isn't it, that babies and monopolies are wholly wrong till you have one of your own! The point of view makes a lot of differenee. Among farmers he was a prosperous farmer near Buffalo, and to others he was a millionaire, several times over, desirous of getting stock in this wonderful company, and to do so he would buy up the shares of all dissatisfied parties. Some time in January next a meeting of the shareholders is to be ealled, when ground will be broken for the store (or silo), and one-fourth of the subscriptions must be paid in. Rather a cold time we fancy for a lot of eountry lambs to be rounded up and shorn. In the Winter, when the farmer eannot work, the sharper works the farmer. Less than a year ago our village could have seeured a cash milk-buying creamery at no expense whatever if some of these same farmers would agree to sell their milk; but no, they were afraid of a well-known man and cash payments. Now, a stranger bags all of them on an investment scheme.

OBJECTS TO THE "KID WAGON."

I saw in a recent issue of The R. N.-Y. a short article on centralized schools. The writer did not tell all the grievances, nor could he in one paper. My son is a patron of such a school, and we can speak from experienee which proves a dear lesson. Our little boy is nine years old, and we live 1½ mile from the school, but he is obliged to get up before daylight to be ready for the old rickety "kid wagon," for the driver will not wait a minute. Then he is drawn around the country five miles to get 1½ mile. There are from 18 to 20 in the load, mostly large seholars. Some are making love to one another, some are down on the bottom of the wagon pounding eaeh other, some are singing some vulgar song, some are tired of riding and are trying it on foot with mud up to their knees. This erowd does not arrive home again until long after night. Oh, how ean anyone think this the proper way to send ehildren to school! I will admit the transportation is the worst thing about it, although who is there that would like to have a little one six years old five or eight miles from home sick, with no one to eare for him? This happens in the Winter quite often, but they are obliged to stay at school until the "kid wagon" goes at night. I have said "kid wagon"; they are drawn in open sleds through all the worst weather, with no robes but a horse blanket that has been over the old horses through the day, stiff with dirt and filth. Some wise men say all this decreases our taxes. Please figure it right. The transportation costs nearly as mueh as our good old distriet schools used to, and that is a very small part of the expense, but I for one care nothing for the cost if they would only make the children comfortable. If that man or body of men who made this law eould be placed back in their lives at the age of six, and obliged to attend such a school, it would serve them right. Yes, attend in this way or not at all. There were three frail little children who could not go at all last Winter; they lived five miles from school. MOTHER.

Portage Co., O.

There has not been much rot among potatoes about here. The crop has been good in this county. Some big yields have been reported. I see some report very large tubers. I will send you weight of sweet potatoes that I have this season grown in my garden here in Chemung County, N. Y. One weighed 3 pounds 9 ounces, next largest 2½ pounds. What is the use of going South to grow sweets?

Elmira, N. Y. A. D.

COW CARE AND CATALPAS.

A Tree that Sows Itself.

It is a rare thing that I read a copy of The R. N.-Y. without congratulating myself that it is on my list. Especially do I wish to thank Mr. Van Alstyne for the artiele in the November 23 issue upon dairy eows and their management. We heard and read so much about tying eows to their mangers for six months in the year, and some even wanting to keep them there the year round, that it is a comfort to find one who speaks as one having authority in favor of air, sunlight and exereise for the poor eows. The man who, to save a few pounds of feed, will tie his cows to a manger and squirt tubereulin into them to see how fast he is killing them may think he is humane, but he isn't.

Mr. Van Deman failed to answer E. A. G., Norfolk, Mass., in the same issue, as fully as he might in regard to the Catalpa tree. What he said was all right. It grows large and grows quickly, but once grown it becomes a nuisance. A good-sized tree will grow thousands of seeds that the wind will distribute, and every one will sprout, and instead of dying out as young maples and seedlings of other desirable trees will in 99 cases in a 100, the young Catalpa sends down a tap root so deep that one trying to pull it at the end of the first season would think a Chinaman had hold of the other end, while in good soil a single stalk will grow up nearly as large as a bean pole. The leaves are pretty enough, but the odor is decidedly disagreeable. A neighbor living a quarter of a mile west of me had a Catalpa tree, and if anyone wants a thousand young Catalpas I'll donate the trees and contribute liberally toward digging them up. The old tree, I am thankful to say, is done for, and before the young ones get to bearing seed I hope to get them out of the neighborhood.

Connecticut. R. S. HINMAN.

CENTRAL N. Y. MILK FARMING.

I am much pleased that the dairy department of The R. N.-Y. makes the production of milk for the New York market a prominent feature. This is the principal business in our locality. We are in the southern part of Madison County,on the Chenango braneh of the West Shore Railroad, and on this road there is a shipping station every five or six miles, owned by those who buy the milk. At present we are getting 2¾ cents per quart delivered onee a day, getting our pay the 15th of eaeh month for the milk delivered the month before. On our street, in a distance of a mile, there are 185 eows and nine silos. Almost the entire income is from the milk, about as mueh being produced in the Winter as Summer. No one raises as mueh grain as fed, and the feed dealers are making a good thing, the grain bought being gluten feed, bran and eotton-seed prineipally. Many of the dairymen have water in the barn, and all the modern conveniences. The cows are nearly all grade Holsteins, about every farmer owning a purebred bull. The cows are all reared at home on the farm. and there are a number of earloads shipped from here every year to buyers living near New York.

There is complaint from some of the dairymen about the feed bills being so near the size of the milk eheek, but there are many who are making money, and, so far as I can judge, the heaviest feeders are those that are making the most. There was paid through a local bank last year $200,000 for feed, and there were two other banks within five miles that perhaps did as much. It seems as though there ought to be some way to stop this, but no matter how much hay and silage we feed, we cannot get the milk without the grain, and if we try to raise all we feed we must keep fewer cows. One benefit that we ean see is the better erops we are raising each year where attention is paid to the saving of all the manure. While there are some drawbacks to the business, one is sure of a steady ineome during the whole year, and also of steady employment. The question as to whether the quality of milk can be ehanged by feed eomes up every year, the experiment stations not having settled it in the minds of all. Those who buy the milk say many of the dairies test lower this year than last, and as a general thing the corn for the silos did not have one-quarter as many ears on as last year. Does Mr. Cook think that the differenee in quality could be aeeounted for by this?

Madison Co., N. Y. D. B. UTTER.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Automobiles for Farm Work.

Mrs. T. H. Hoskins, Vermont.—I hail with joy the prospect of this sure to come, blessing on the farm, the automobile. When it reaches here with its adaptability to do all kinds of work the church bells shall be rung in its honor. A real Fourth of July celebration should be held in the vicinity. I could have saved $200 or $300 this year if I had owned or hired such a machine. With such a machine a woman with a large orchard to oversee can do most of her work, especially if some frame can be devised to load and unload barrels and boxes. I gathered this year nearly 300 bushels of apples and had only a wheelbarrow to bring them in, except when a neighbor gave an occasional lift. It is next to impossible to get help here this year, and poor and high-priced then. I did more work than two hands I hired to help me, in one day, and my apples were sorted and theirs not as a rule. Are there automobiles for farms made yet in America?

We have corresponded with makers of automobiles, and all but one say that their vehicles are made for road work alone. They are very expensive thus far, and run well only on hard, smooth roads. As there has been little if any demand for farm work yet, manufacturers have hardly thought of a machine strong enough to do all the work required. One manufacturer when asked whether his autos had been used for turning farm machinery said:

We have heard of a few cases where automobiles are put to such usage. They are not built for this usage and would not advise the use of an automobile for other work than that for which it is constructed. It would be much more economical to buy a small engine for such work as you desire, than to use a high-priced automobile, as there is undoubtedly more or less injury to the machine from this kind of work.

Another replies as follows:

The attempt to make use of the automobile, independent of the road service, for which it is built, we think entirely wrong. It does injury to the venicle, and it is shortly unfit for either service. Our steam automobile is constructed to take city and country roads, and hills, and with the ordinary road conditions to make 12 or 18 miles an hour. Our engines are about 5½ horsepower with the boiler sufficient capacity to supply steam. Fittings and all connections are constructed of best material that we can make, and attached and fastened securely to do this work. Suppose you run this wagon back to the mill grinder, or saw, raise the hind wheels, and attach belt from this power to do the other work, the tendency of course will be and perhaps must be to run the engine right up to its limit with perhaps 500 or 600 revolutions, in order to get sufficient steam and power at the other machine. The natural result then is to rack the entire construction in the carriage, disturbing and loosening all connections, and in fact, very soon put it entirely out of commission. It has been done to be sure (not to our personal knowledge) but it is entirely wrong. You are using possibly a $1,000 investment in a splendid wagon to do ordinary farm work, when nothing is required but a simple engine and boiler. We could fit a party up to saw his wood, or grind his feed, and do such other work as you suggest with our machinery in splendid shape at a quarter of the cost of attempting to get this work out of a carriage.

The time may possibly come when a very strong machine, capable of doing all kinds of farm work, will be put on the market at a reasonable price. Most of the machines made at present are apparently fitted only for road work.

Alfalfa Hay for Horses.

B. T. C., Kansas City, Mo.—Is Alfalfa a good hay for hard-worked horses? How does it compare with an equal weight of prairie hay? What is a balaneed ration, including Alfalfa hay, for heavy work horses? What especial danger is there, if any, connected with the feeding of Alfalfa hay to heavy work horses?

The first cutting of Alfalfa cut late, just as it is going off bloom, makes the best of feed for hard-worked (not driving) horses. It is worth, according to reliable tests, a trifle over three times as much as an equal weight of prairie hay. This is not generally known, but it is a fact. I kept over 60 horses one season hard at work from July to October on Alfalfa hay without any grain. I do not know just what is a balanced ration for a work horse when he is under constant strain. When not worked much horses will get hog fat on plain Alfalfa. I feed when my horses are working constantly on the plow and other heavy farm work about three quarts of corn a day and what Alfalfa hay they will eat. If you had asked me for the proper ration for a cow I would have replied 7½ pounds corn and 19½ pounds Alfalfa hay for a 1,000-pound cow, but I have not yet looked into the science of horse feeding. H. D. W.

Kearney, Neb.

Good Alfalfa hay is the very best of feed for hard-worked horses. Prairie hay has no more virtue than wheat straw that is usually allowed to go to waste, and is simply a filling, or roughness to assist in digesting corn. Sheep will starve on prairie hay. As for a comparison of 100 pounds Alfalfa to 100 pounds prairie, it is worth double the prairie hay. Many farmers work horses on Alfalfa without any grain at all. A balanced ration with Alfalfa is the usual amount of corn (two quarts or oats) with salt. When Alfalfa is cut green enough to be at its best, care should be used in getting the horses used to it, and always plenty of salt handy. I don't think Alfalfa, when cut at the right time, is so likely to give horses the heaves as the other clovers. The heaves is a rare complaint in the West.

Moran, Kan. J. C. N.

Fruits for Central New York.

W. F. H., Sherburne, N. Y.—1. Where only a few plums are to be planted, would you recommend the Japans in preference to the European or Domestica varieties for central New York? What can you say of the German prune for general planting in this section as compared with the Japan and other sorts? I have an exceedingly strong recommendation in favor of this variety from a grower at Hoosick Falls, who says he prefers it to all other plums and is the only fruit tree that gives him no trouble. Would it be likely to be fertile if planted alone? 2. Will you name a few of the most desirable apples for this section, both for home use and for market? Whether they are old varieties or new it makes no difference. I find in general opinion Spy takes the preference, with Rhode Island Greening and King closely following. For very early use Yellow Transparent is becoming a great favorite. McIntosh is highly recommended by some.

ANS.—1. As central New York is a region where the European plums succeed quite well it would seem to me to be unwise to lay them aside entirely and plant the Japan kinds instead. The varieties of the European type are the better of the two in quality except in a few cases, and when only a few plum trees are to be planted quality ought to be a prime factor. Such varieties as Princess Imperial (the old Green Gage), McLaughlin and Washington, ought to be grown wherever they will succeed. It is necessary to jar them to prevent the trees being ravaged by the curculio in most sections east of the Rocky Mountains. The name German prune is a class name rather than that of a variety; because there are a number of varieties going under this title. Fellenberg is one of the best of these and is one of the surest to bear. It is self-fertile, so far as I have seen. The Japan plums are well worthy of culture. Red June is one of the very early kinds, but it is not so good in quality as some of the others that ripen later, such as Abundance, Burbank and Wickson. Climax is a very new variety of fine quality. 2. As to apples, it is probable that only Winter varieties are wanted. Northern Spy is one of the best in quality and bears well when it gets started, but it requires some patience to wait until that time comes. Rhode Island Greening is excellent, and finds ready sale because it has an established reputation on the market. For home use it is equally good. Tompkins King is a good apple, being large, bright red and rich in quality, but the tree is very badly affected by disease in most sections and the fruit falls off easily. Sutton is one of the coming apples, and is likely to supplant Baldwin, being of about the same size and color but better in quality. The tree is hardy and productive. Boiken is another of the newer kinds that is finding favor among those who are growing it. The tree is remarkably desirable because of its hardiness, healthy foliage and reliable bearing qualities. The fruit is of fair size, yellow with a brilliant blush and of good quality. It also keeps well. Grimes is gradually making its way into public favor because of its many sterling qualities. I do not know of a bad trait about it, either in tree or fruit, only that it is not a late keeper south of New York and Michigan, where it will keep under ordinary conditions well on towards the end of Winter. It is of the very first quality in flavor and will always demand a fancy price in market for this one reason. Besides, it is one of the most beautiful yellow apples to be found. I saw it recently in Central Market in Washington, D. C., selling at $2.50 per 50-pound box. Jonathan is a match for Grimes in almost every respect, except that it is brilliant red and more tart in flavor. It brings a high price in market. It does not grow quite large enough in New York to suit some buyers, but its color and quality are excellent. McIntosh is good in color and quality, being brilliant red, very tender in flesh and of pleasant flavor. It is a seedling of Fameuse, is larger, is not so subject to scab and in my opinion so far surpasses that old standard as to make its culture practically needless. It has all its good qualities and more besides. In regard to Summer apples, the Yellow Transparent is a very precocious bearer, but it is not of high quality and will not bear distant shipment well, because of its very delicate flesh and light color; the latter showing bruises very plainly. It is good to use as a filler between permanent apple trees, but only a limited quantity should be grown. Oldenburg is later, but it is a good market apple and will always sell fairly well. Its quality is poor, but the bright red stripes, ability to endure rough handling and the ruggedness and productiveness of the tree will always give it a prominent place as a market apple. It makes an excellent filler between other trees. H. E. V. D.

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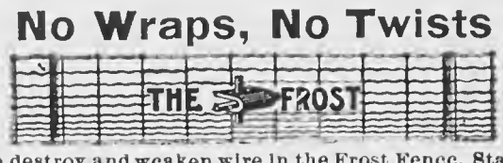

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THE STORRS & HARRISON CO., Painsville, O.

EVERYBODY'S GARDEN.

HORSERADISH.—With favorable soil and accessible markets there is no question as to the profits in growing horseradish. The Fall being the most favorable time to secure the roots for next season's planting, it is now a timely subject to discuss. It is well, however, before undertaking the work, carefully to consider the above points, as, lacking either favorable soil conditions or accessible markets, the results will prove disappointing. The principal markets are, of course, the cities or large pickling factories, but thousands of bushels are annually shipped for long distances, and there is no valid reason why it may not be grown in any locality where potatoes are grown. Growing on a large scale would be somewhat expensive for the first year, as the roots or settings would require quite an outlay. After that, however, no outlay is necessary, as the small ends of the roots and the lateral shoots will keep up the root supply for the next season's crop. It is well to bear in mind that no time need be wasted upon the ordinary wild product growing in the fence corners or gardens, as it will not produce a salable article, and once started, is almost impossible to get rid of. The cultivated roots or sets can be obtained from most of the seedsmen, but consult only those of known reliability, as worthless stock would mean heavy losses. The ideal soil is a deep clay loam, and very rich, other soils, provided they are deep enough, may be sufficiently enriched to grow a good crop. Do not attempt to grow it on a poor thin soil, as the ground must be rich enough to produce a large root growth in one season. The cultivation is very simple, but requires the ground to be plowed very deeply and thoroughly fitted. When ready for setting, which ordinarily should be early in May, the ground is marked off in rows three feet apart, the roots to be set two feet apart in the rows. The holes are made with a long dibber or crowbar eight or ten inches in depth, but always sufficiently deep to admit the entire root. A set is dropped in each hole and the soil pressed around it. The shoots will soon appear above ground, and after that all the care necessary is to keep the ground free from weeds. As the principal root growth is made late in the season, many growers plant the horseradish between rows of early peas, beans or sweet corn, thus securing two crops in the one season. Other growers sort the sets, planting the larger ones by themselves to secure an early crop. From $2 to $3 per bushel is often obtained for large roots during the pickling season. The main crop should be left in the ground as late as possible, but should be lifted before heavy or continued freezing sets in. The roots may be stored in pits or in sand in a root cellar, so that they are available at any time. A conservative estimate as to yield would be 80 bushels or upward per acre, and as good stock seldom commands less than $1.25 per bushel in this market at least, it will be seen that the profits are good. These suggestions are thrown out as a basis for a profitable side line for many farmers and gardeners whose surroundings are favorable for the work.

BILLION DOLLAR GRASS.—I tried it last Spring, but somehow the grass failed to materialize owing, I think, to defective seed. I needed it for soiling purposes, and the seed was put in under ideal conditions. The weather was as if made to order, and I reasonably hoped for satisfactory returns; but I waited patiently until the "pusley" and round-top was a foot high and too thick for a mouse to crawl through. The growth of weeds was plowed under, but fearing the excessive heat would cause too much fermentation I topdressed with lime at the rate of 3,000 pounds to the acre. I decided to plant out late celery, but being disappointed in the plants, I next turned to late cabbage. It was July 18 before I had the ground fitted as I desired, and the weather was very hot and dry. The neighbors said it would be useless to set out the plants until it rained, and the ground did look like an ash heap on the surface, but I knew that beauty was only skin deep, for below it was moist. I planted out the cabbage in the evening and my wife followed with the shears, clipping off all the leaves, leaving only the head formations. Next morning they were watered and left to their fate, but less than two per cent of them died. Now it was later than I would advise setting cabbage ordinarily, but rich ground and thorough culture both before and after setting brought the crop along nicely although the rain held off for days. In August one-half of the ground was entirely covered with manure, and the results in yield were greatly in favor of the mulching theory. The Cabbage worms were very destructive at one time, but an application of fine salt and wood ashes in the proportion of one to three in the order named, settled the matter once for all. All in all, this is the most effectual remedy I have ever used. The late Fall was favorable and a fair crop was secured, but generally speaking, such late planting is not safe. Although the grass was a failure, it was by no means a hopeless discouragement, but next year, with better seed, I hope for better results.

RHUBARB ROOTS.—As predicted by the writer several years ago, rhubarb roots for forcing would, at no distant day, be in demand, and the growing of roots to meet that demand would assume no mean proportions. As proof of this, orders come to this section every few days from nearly all parts of the country only to be refused as the home demand is far ahead of the supply. The grower who is so fortunate as to have the roots would find ready market for them provided he cared to sell, but he, wisely, prefers to force them. A nearby gardener, going out of business, recently sold at auction 21,000 roots at prices ranging from $7.75 to $9 per 100, as they stood in the ground. This number of roots can easily be grown on one acre, so it will be readily seen that the crop is highly profitable, even if no use were made of the Spring crops of leaf stalks. We are not advising a wholesale rush into this new enterprise, but nevertheless it seems reasonably certain that the demand will come, and for those favorably situated, the way is open into a profitable field of labor. J. E. MORSE.

Michigan.

GRAIN-O! GRAIN-O!

Remember that name when you want a delicious, appetizing, nourishing food drink to take the place of coffee. Sold by all grocers and liked by all who have used it. Grain-O is made of pure grain, it aids digestion and strengthens the nerves. It is not a stimulant but a health builder and the children as well as the adults can drink it with great benefit. Costs about ¼ as much as coffee. 15c. and 25c. per package. Ask your grocer for Grain-O

WE LEAVE IT TO THE READER TO SAY

"WHO JUGGLES,"

AND

Who "Bobs Up With One Lie After Another."

It is characteristic with that class of people to lose their tempers and call names because they have no good arguments and must depend on **bluffing.**

Our "would-be competitors" are squirming terribly because the United States beat the DeLaval in the Model Dairy at the Pan-American, and are resorting to all sorts of **schemes** to break the force of the victory of the United States over the DeLaval Separator.

They say we put out "what purports to be a skimmilk record of the work done by the 'U. S.' machines in the Model Dairy." We gave the exact statement signed by the Superintendent of the Model Dairy, namely: Average test of the U. S.--**.0138.**

They published a statement also signed by the Superintendent of the Model Dairy showing average of .0161. The Superintendent afterwards found he had made an error, and stated over his own signature the correct average for the DeLaval was .0172; but these "would-be competitors" do not correct the error, but continue to advertise the figures which they know to be wrong.

The DeLaval Co. published their second period of running, which was in the best season of the year, from August 9th to September 28th inclusive. We published our second period from September 29th to October 30th inclusive. All experienced dairymen know that the U. S. had the hardest milk to separate, as the cows were longer in milk, giving less quantity, and cold weather coming on; yet, with all these conditions against the U. S., it excelled the DeLaval, as the Superintendent's reports show. (It also beat the DeLaval in the first period, after adjustment.)

The DeLaval statement reads "Tests were from August 9th to September 28th," but the record books of the Model Dairy show no record was made until the 11th of August. This gives them two days to adjust the machine under the friendly expert operators before any tests were recorded.

Our statement includes the first run of our machine with no time allowed for adjustment.

The records after adjustment of the first period show that the United States beat the DeLaval on these runs also.

The DeLaval Co., being aware they were beaten in the first period, sent their machine back to the factory to be fixed over and improved, if possible, for a second trial. Their machine was one made special for that work. The U. S. was taken from regular stock and was returned to its booth after the first run and remained there until we were requested by telegraph from the Superintendent of the Model Dairy to put in the U. S. to make a second run. We wondered why the necessity for telegraphing such a request, but telegraphed back we would comply with the request. We learned later that the DeLaval was shaking so badly that it was not deemed safe to run it longer, therefore the necessity for arranging by telegraph to replace it with the U. S.

The DeLaval Separator is a top-heavy machine filled with 40 to 50 metal discs, and when they get out of balance, cause trouble if continued in use. Therefore the necessity for immediate change when it begins to shake. They claim to run on slow speed, but always, when in competition with the U. S., attempt to run at very high speed—sometimes more than 50 per cent higher than they advertise to run. They know that their separator cannot run at high speed long, so run it at high speed only in tests with the U. S.

The U. S. is made more substantially, and does stand high speed, and runs longer and easier at its speed than the DeLaval does at its claimed lower speed.

The DeLaval Co. advertise a "voluntary" (?) statement purporting to be from the engineer of the Model Dairy in which he says "it took but one-fourth as much steam to do our work with it (DeLaval) as the 'United States' used." Such a statement is so ridiculous on its face that no experienced dairymen would doubt that it was *voluntary* on the part of the DeLaval Co.

We have hundreds of statements from dairymen, who have used both separators, that the U. S. runs easier than the DeLaval, and wears much better.

The truth is that Engineer Downy was never present when the U. S. was running, with one or two exceptions, when his Department was unable to get sufficient steam to run so much as a Babcock Tester until very late in the forenoon. The work in the Model Dairy was done before he got around in the morning.

Now read what Mr. Van Alstyne, Superintendent of the Model Dairy, over his own signature, says in reference to power in September when the DeLaval was running:

> "We found the power insufficient, and were obliged to put a cut-off in the pipe leading upstairs to prevent the herdsmen drawing on our steam at times when we needed it for the dairy work, and as the weather became colder the latter part of September, this trouble increased to such an extent that one day, with both burners lighted, we found our steam entirely out, so that *we intended making a change before your machine was put in*, and we were delayed a week in order to get the consent of the proper authorities. We then used soft coal, which did not give satisfaction, because it filled up the flues of the boiler, and we changed to coke, which has been eminently satisfactory."

Remember this was when the DeLaval Separator was running and before the U. S. was put in. They could not get steam enough to run the DeLaval.

This "voluntary" (?) statement says further "that the 'U. S.' had an expert to run it." He was in no sense an expert, had never worked in a creamery or dairy or attended a Dairy School or Experiment Station. The DeLaval did have experts to run theirs. Both operators were graduates and rank partisans of the DeLaval, and were angry because we objected to having unfair and prejudiced operators run the U. S.

The DeLaval Co. advertise that our Gold Medal was awarded on "combined exhibit of separators, Babcock Testers, Davis Swing Churns, and other apparatus." The official record reads: "Gold Medal on U. S. Separator, Babcock Tester, Davis Swing Churn." It does not read on "combined exhibit" and does not use the word "exhibit" in any way. The reader will notice the DeLaval Co. add the words "combined exhibit" and "and other apparatus," of course, to mislead in their endeavor to break the force of their defeat.

We had in our booth nine separators, two Babcock testers, and a model of the Davis Swing Churn, but no full-sized churn. Our booth was 15 feet long by 10 feet deep.

We applied for larger space, but were informed that the building was limited in size and we must be content with what was assigned us. We had the smallest space of any exhibitor of separators. The DeLaval Co.'s booth was 35 feet long by 10 feet deep, and contained sixteen separators; therefore, if our Gold Medal was on the exhibit, it is equally true the DeLaval's was on their exhibit, and as our exhibit was less than half as large as theirs, will the intelligent reader believe the DeLaval statements that with less than half the space and about half the amount of goods, our award was on display?

The work in the Model Dairy was not finished until long after the Gold Medals were awarded by the judges. If the awards had been given on the result of the work in the Model Dairy, the United States would have had the *only Gold Medal*, and the DeLaval an award of second merit only, a Silver Medal, as it came out second on the work there.

The DeLaval Co. advertise "that more fat was lost in churning (by the U. S.) than saved in separating." The records show that

Average test of the buttermilk from the United States was - - .109

Average test of the buttermilk from the DeLaval was - - - - - .121

The DeLaval was badly beaten again in this line. The U. S. proved to be superior in every way.

The reader must not forget that the DeLaval Co. have been advertising for over a year that the DeLaval Separator was awarded a Grand Prize at Paris, but now admit in their advertisements that this award was to the "Société Anonyme Separator," which company exhibited at Paris a butter extractor called a radiator, and did not exhibit a cream separator.

For Proof of our Statements we Refer to the Official Records.

VERMONT FARM MACHINE CO., Bellows Falls, Vt.

Ruralisms

NOTES FROM THE RURAL GROUNDS.

AN INTERESTING CATALOGUE.—The Fall catalogue of the Eastern Shore Nurseries, Denton, Md., is of unusual interest to plum growers and lovers of stone fruits. J. W. Kerr, the proprietor, has long been known as an enthusiastic "plum crank," and he has here systematized his vast information and experience in a valuable way. The varieties offered are grouped together according to their botanical affiliations, and the descriptions are very concise and guarded. The Wild Goose group is regarded as preëminent for commercial planting among native plums, and the Wayland varieties for domestic and culinary uses, though the Americanas are conceded to have the best flavor. The list of recommended Japans is brought down to three, Abundance, Berckmans and Chabot, though more are offered for trial. Where a high degree of atmospheric moisture usually prevails during the ripening season, the brown rot is so destructive as to preclude all hopes of profit. Burbank is worthless on that account on the Chesapeake and Delaware Peninsula, though often satisfactory at the North, and the same may be said of Satsuma, Hale and many others. All the Japans rot some, but all the fruit on a given tree of the three recommended varieties does not rot as a usual thing, and fair crops often result. As may be expected the hybrid plums, of which there is now a rather formidable list, are given much prominence. The acme of plum excellence, both from a commercial and amateur standpoint, is here presented. Gonzales, a large, red and very productive variety from Texas, is regarded as most valuable for market. It originated in the Texas town of that name, but the parentage is not given. A new Chabot-Wayland hybrid, originating with Mr. Kerr, is offered with much confidence. It is named Waugh, after the talented author of "Plums and Plum Culture," and is described as a large, dark purple in color, with rich, high-flavored yellow flesh. It colors up 10 days before it ripens, and is profusely borne on a vigorous upright tree with tough, resistant foliage. Mr. Kerr is hopeful of the future of the Beach plum, Prunus maritima, and has hybrids between it and many Japan and native varieties as well as cherries and peaches. As his Beach plum trees are completely self-sterile, there is no uncertainty about the work of cross-breeding, and the results already attained are gratifying, but the new combinations are not yet ready for dissemination. In addition several interesting hybrids between plums, cherries and the Sand cherry, Prunus Besseyi, are offered, as well as some pedigree hybrid peaches of much promise. Incidentally there is a good assortment of standard and new fruit trees and plants. The work of such horticultural "cranks" as Mr. Kerr is certain to be of great and permanent value, and they should be heartily encouraged.

A HANDSOME NEW SHRUB.—Seeds of Buddleia variabilis, a beautiful flowering shrub newly introduced from China, were offered probably for the first time in America, in the Spring catalogue of Henry A. Dreer, Inc., Philadelphia, Pa., with the statement that they might be expected to produce flowering plants in four months. A packet was procured for trial, and germinated well, but the plants did not bloom until October, six months after sowing, though more stimulating treatment of the seedlings might have shortened the period. Fig. 375, first page, shows a bloom spike somewhat reduced in size. The blossoms are rosy lilac with an orange-yellow "eye," and are quite fragrant. They are produced with great freedom at the termination of the numerous slender arching branches. Our plants grew about 18 inches high, and were covered with bloom when the first November freeze checked further development. The foliage is bright green above and velvety white below, clothing the plant in an attractive manner. This species of Buddleia grows from three to eight feet high, but is variable both in habit and bloom, a peculiarity which is indicated by its name. Although called hardy, and able to withstand much frost, it has been killed to the ground in the latitude of Boston, but freely pushes young shoots again, which mostly flower the same season. Buddleia is quite an extensive genus, comprising about 70 species growing in warm and temperate regions of America, Asia and South Africa. Only four or five species are cultivated for ornament, and of these B. variabilis seems freest in bloom. B. Japonica has lilac blooms, B. Lindleyana is purple violet in color, and comes from China, while the former is a native of Japan. B. intermedia is a garden hybrid between the above, and has quite an erect habit, and produces many long racemes of violet flowers. Other species with yellow or purplish crimson flowers are very handsome, but only adapted t places free from sharp frosts. B. Colvillei, with flowers almost crimson, is thought to be the best, but is tender, and only strong old plants bloom freely.

UNSEASONABLE FRUIT BLOSSOMS.—For many weeks the local papers have contained accounts of the belated blooming of fruit trees, chiefly apple and pear, though instances of similar behavior of cherry and plum were reported. So numerous and conspicuous were these unusual Autumn blooms that much comment has been excited, but a consideration of the abnormal character of the growing season, with the early destruction of foliage from excessive rain and accompanying fungus troubles, and the prolonged hot weather in the early Fall, it is not really surprising that occasional branches, or in some cases whole trees, should be stimulated into an untimely growth. The result can only be a weakening of the parts concerned to a certain degree, though a good growing season will doubtless restore the wasted vitality. On the Rural Grounds several currant bushes that had dropped their leaves in August bloomed profusely in October, and set fruits, while a Simoni plum developed two plums to nearly half size before freezing stopped their growth. A number of ornamental shrubs, such as Japan quinces and Spiræas, produced a scattering bloom, and one lilac pushed a flower truss almost to the point of opening the buds.

W. V. F.

Opinions of Apples.

On page 788 I notice that Mr. Van Deman has something to say about the Ontario, Salome and Scott apples. His remarks suggest to me that the quality and commercial value of a variety may largely be a matter of personal opinion. For instance, he says that Ontario is not as good as Spy, nor is it as late a keeper. If this statement refers solely to the fruit, I might be inclined to agree; but if it refers in general terms to the value of the two varieties, tree as well as fruit being considered, I cannot concur. The Ontario bears much younger and is generally more productive than the Spy. I am not sure that it is inferior in quality, and I am fairly certain that the tree is hardier. I do not quite think that Salome had full justice done it in the statement that it is "neither large nor high in quality." It is of medium size, large enough—as large as Jonathan. The tree is productive, the fruit is handsome, smooth, a long keeper, and of very fair quality, and the tree is fairly hardy. Again, Scott (commonly known as Scott's Winter) should have its full measure of usefulness outlined. This for certain parts of Vermont, northern New York and Canada, I believe is an exceedingly valuable sort. It is a regular annual bearer. The tree is very hardy and the fruit keeps through Winter without any difficulty. As a late cooking apple, it is unexceled by any I know. The principal fault of the variety is its small size, and in the early season its sharp acidity. But in late Winter, when apples are scarce, it is certain to be appreciated. These points are not made in a spirit of criticism, but merely to suggest that it is difficult in a few words to do justice to the merits of varieties of apples. JOHN CRAIG.

AN UNUSUAL PEAR.—From Ellwanger & Barry, of Rochester, N. Y., I secured a pear tree, no name, but numbered 1,405. This year the tree fruited for the first time, and had about 125 pears. The pears had the shape of a well formed Bartlett, about the same size, short stem, hanging well to the tree, and ripening the middle of September; color, intense yellow with a dark red blush nearly covering five-eighths of the fruit. Flesh, juicy, mellow and rich, vinous. Tree, an upright grower, resembling Seckel, and thus far free of blight. F. J.

Hollidaysburg, Pa.

R. N.-Y.—Ellwanger & Barry write us as follows. "We have referred to the order in question, and find that the buyer had a number of varieties of pears from us in 1887, among which was a Chinese pear, called De la Chine 1,405. We have not cultivated this variety for some years. We had at that time several varieties of Chinese pears under numbers, but they are not now propagated."

Can You

do a little pleasant and profitable work for us in your own town? No experience necessary. We will explain just what you have to do. The work will be light, and we will arrange for the time you shall be able to give to it. We can give you work for all your time or just for your spare time. Write for full particulars. THE RURAL NEW-YORKER, NEW YORK

If You Are Sick

Let Me Know It.

I wish simply your name and address—no money. Tell me which of these six books you want.

I will send with it an order on your druggist to let you have six bottles Dr. Shoop's Restorative. He will let you take it for a month; then if it succeeds, he will charge you $5.50 for it. If it fails, he will send the bill to me. He will trust to your honesty, leaving the decision to you.

Such an offer as this could not be made on any other remedy. It would bankrupt the physician who tried it. But in five years I have supplied my Restorative on these terms to 550,000 people. My records show that 39 out of each 40 paid for it, because they were cured.

This remedy alone strengthens those inside nerves that operate all vital organs. It brings back the only power that can make each organ do its duty. No matter how difficult the case, it will permanently cure, unless some organic trouble like cancer makes a cure impossible.

I have spent my lifetime in preparing this remedy. I offer now to pay for all you take if it fails. I cannot better show my faith in it. Won't you merely write a postal to learn if I can help you?

Simply state which book you want, and address Dr. Shoop, Box 570, Racine, Wis

Book No. 1 on Dyspepsia,
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Mild cases, not chronic, are often cured by one or two bottles. At all druggists.

Death to Lice on HENS and CHICKS 64-page book FREE. D. J. LAMBERT, Box 307, Apponaug, R. I.

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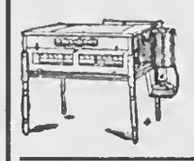

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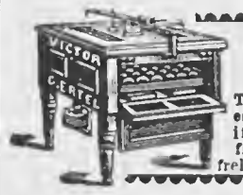

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The increase in eggs for one week after feeding Bowker's Animal Meal was 25 per cent daily more than the week before, and the second week it was 37½ per cent, and still increasing. Have got eggs every day all Winter. I recommend Bowker's Animal Meal to poultrymen for an egg-producing food. CHAS. J. SETTLE.
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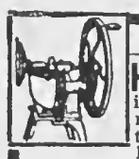

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Orders with cash filled from Chicago if desired Send for circulars. M. T. Phillips, Pomeroy, Pa., (Successor to A. C. Brosius)

HOPE FARM NOTES

STRAWBERRIES.—Thanksgiving came with a cold snap on her teeth. The mercury went down to 12 degrees at one time, and the ground froze over four inches deep on the lower part of the farm. On the hills there was merely a thin crust. This was much earlier than we looked for severe weather. Our weakest defence against Jack Frost is at the barn, where the water pipe enters from the pump. This was well banked and so nothing suffered but some young roosters that ran out of their coop and would not go back. The firm, solid crust on the ground decided me to mulch the strawberries at once. Usually we do not put the mulch on until just before Christmas, but this year we will try it a month earlier. The plants are so large and fine that we feel like taking every precaution to carry them through the Winter well. We use our coarsest manure for this work. This contains the long cornstalks which have been fed while waiting for the shredder. We put a thick, heavy mat over the rows. . . . The strawberry plants which were set between the cabbage plants in August have made a good growth without sending many runners. They ought to produce a small crop next year. They have been well mulched. We plan to work up the soil between the rows next Spring and sow two rows of onions between each two rows of strawberry plants. . . . After a few days of severe cold the weather moderated, and drove Jack Frost out of the ground except on the north side of the house and under the mulch. That was one reason why I wanted the strawberries covered. It seemed too early for settled cold weather, and every freeze and thaw means bad business for the strawberry roots. I propose to imprison Jack Frost under that mulch from now until next April if I can. He won't teach the roots any bad habits, and if I can't keep him I will make it so hard for him to get away that he won't have any force left to pull the roots out with him. I now believe that the settle and heave of early Winter are as bad as the thaw and freeze of Spring. Therefore mulch at the first hard freeze!

FARM NOTES.—We are also putting a light mulch of coarse manure around all the little trees. Those that were set this Fall come first in this treatment. Unlike the strawberries the little trees are mulched while the frost is out of the ground. We do not want to hold the frost around their roots, but to hold it out as long as we can, so that the little tree may have as long as possible to establish itself. The peach orchard is on light land near the top of a high ridge. With this manure mulch I think the trees will be wriggling their toes long after the soil in the valley has closed round the tree roots like a shoe one size too small! . . . For the first time in the history of Hope Farm we have all the celery we can eat. I feel rather ashamed to say that in former years our celery crop never got into our mouths except in the Spring when we told what great things would be done with it *this year*. This year Philip took it in hand and staid by it through wet and dry. As a result we have a comfortable lot packed away for the Winter. One field at the lower part of the farm seems well suited to such crops as onions and celery, and I feel tempted to let Philip try his hand on a larger scale with these crops next year. . . . The boys have begun work on the new house. What house is that? A little cottage that we expect to build at Hope Farm this Winter. Charlie and Aunt Emma are to occupy it. It is a small house, but will be neat and cosy for a small family. This will give us a good Winter's job. We dig the cellar with our own labor, and haul stones from the old walls for the foundation. The mason does his work on contract. I shall buy the lumber and hire two good carpenters by the day. They with Charlie and Philip will put the house together. Hugh expects to take the short course at Cornell this Winter and learn how to study a tree.

FEED NOTES.—I decided to exchange the rye straw for bran and whole wheat. I think these give us the best bargain at present. The wheat is for chicken feed. The dried brewer's grains have been quite satisfactory for horses, hens and hogs, but the cows do not like them. In fact they refused to eat them unless mixed with bran or cornmeal. They fell off in milk when fed the grains alone, but when bran was added the whole ration was eaten and the milk increased. The brood sows eat the grains well. We use them in preparing a mash for the hens. One trouble with all these by-products is the fact that they are not uniform. I think they vary considerably in analysis. One great advantage in buying whole grains is that you know for sure what you have. I have been asked why we do not have our corn ground cob and all. In spite of what the chemists say I have never considered that the cob contains any great amount of available food. Young and thrifty horses will get about all there is to be heard from in the ear by gnawing it off the cob. Vigorous sows will do the same. I would rather let a sow gnaw the grain and then burn the cob and feed her the ashes than to grind both together into a coarse meal. It might be different with fattening animals, but we plan to sell ours for some one else to fatten.

CRIMSON CLOVER.—The following note from J. H. Hale is worth thinking over:

I have about 100 acres of Crimson clover here in Connecticut that has made a great growth this Fall, and looks fine now; don't care whether it winterkills or not. I want to plow the land early in the Spring, anyway, and if the clover lives through there is an awful temptation to let it grow awhile and pump the moisture out of the soil. In my nursery work I find I can grow more and better small fruit plants or better trees after a heavy crop of cow peas than any other fertilizer I have ever used, and if any of my strawberry propagating beds happen to be left over for fruiting I find the cow-pea fields retain moisture much longer than fields that have not had the peas. This applies particularly to sandy loam soil.

I know how hard it is to plow the little clover under when the plowing ought to be done. It looks so thrifty and green, and grows so fast that it seems a shame to put it under. You pull up a plant and see the nodules on the roots, and get to figuring how many bags of nitrogen it is sucking out of the air—and the result is you let it go too long. From this year's experience I feel sure that it pays to sow rape or Cow-horn turnips with the clover. These crops are still alive with us, and have made a tremendous growth. I expect they will be well rotted by Spring, and that they will protect the clover. Mr. Hale knows far more about cow peas than I do. Much of my first information came from him. My experience goes to show that what he says about cow peas and fertility is sound as a trumpet.

SPRING EXPERIMENTS.—Another Connecticut man who knows his business sends these suggestions:

When you sow oats next Spring try a little patch with the stable manure, harrowed in on top with the oats and grass seed, and when you plant your potatoes try a good handful of fertilizer on top of hill after planting. I got 200 bushels of sale potatoes this year from $25 worth of fertilizer, and think there is enough left in the soil to give me a crop of rye, and this in a locality where the potato crop was so poor that some of my neighbors didn't dig. I have a couple of acres of grass seed sown as advised by Geo. M. Clark. One acre I put on stable manure, and on the other acre $20 worth of commercial fertilizer. As it is all in one piece and about as level a a house floor, I hope to learn something, and if I do will report.

I do not expect to sow any oats next Spring—as I feel quite sure that beardless barley is a better Spring grain for our purpose. I shall try this plan if possible. I cannot understand why such results should follow putting the manure or fertilizer on top of the ground. However, I have come to the point where I don't care for the why if I can get the potatoes. I didn't get them this year, and there is another lost "why," for I can't figure out any exact reason for it. I'll put fertilizer anywhere you say if you will guarantee the crop. As for the two acres of grass, I should say from my own experience that the manured acre will give the best yield the first year, but will gradually fall behind the other in subsequent crops.

A GOOD JOB.—The following letter has nothing particular to do with Hope Farm—yet it is a part of the Hope Farm man's correspondence, and the practical people will no doubt excuse me if I take space for this matter. Mr. Hubbard is a New York State boy who went to Cuba after the war, and started a school and home for Cuban orphans. The Spaniards did strong work in killing off the Cubans, and our own soldiers sent a few Spaniards after them. Mr. Hubbard went to Cuba not to kill but to help live:

I think you can call me a kind of a latter-day Mormon, even though I am not married at all, for I have three homes with about 80 children in all in one city, and now I am thinking of branching out into another city. The City Council of Cardenas, a city of about 22,000, about 30 miles east of Matanzas, has leased to me for the term of three years for the nominal rent of $36 a year the buildings where the Government last year maintained an asylum for over 100 children. The land there is excellent for vegetable gardening, and there is a windmill on the place to supply water for irrigating. With all my other duties I have very little time to look after this work myself, and I want to find a hustling young market gardener or old market gardener to come to help us. If we cannot find anyone to come permanently, a man who could come for only three or four months this Winter could have his living while here and some valuable experience, and could do us lots of good and give us a good start in the business. The second-class fare from New York to Matanzas or Cardenas, Munson Line, is about $20. We could probably arrange to give the man a share of the crops if necessary to pay his way coming and going. Several men and women who like our kind of work for the pay we are getting could find plenty of work with us this Winter or longer. The sooner they can come the better. ELMER E. HUBBARD.

Matanzas, Cuba.

Now there is a good job—perhaps for you!

How much is there in it?

Why, you can pay your own fare both ways, put in a few months hard work for nothing and make the school a cash present when you come away. That's the "going wages" for such a job!

Do you take me for a fool?

No, I take you for a wise man, old enough to know that the stuffing in the most satisfying moral turkey contains little gold dust. I picture you as a man who has made enough to last you in fair comfort through your life. You are wise enough to know that if you go on toiling and slaving and saving the money will not add to your happiness, and may put the stain of laziness or unthrift upon your children. You understand the gardening business. As you dug and pawed in the dirt your ambitions and thoughts have soared away from the soil, and you have longed for a larger and broader field, where you might help make history and leave a thumb mark on the page of progress. If you are that sort of a man—here is your chance.

How do you make that out?

The man who helps show those Cuban boys something of the dignity of labor makes himself a part of the mainspring of civilization. There are some who hustle and slave to wring the last dollar out of human life. They wring so close that manhood and honor follow the dollars. The Spaniards have done this for thousands of Cubans. Americans are now needed to untwist these wrings, shake out the cramped lives and put into their hearts the germ of honest, self-supporting labor. You go down there and help Elmer E. Hubbard in his noble work, and Congress will not vote you even a leather medal. You won't get your name in the paper and have a brand of cigars named after you. That is reserved for those who kill their fellow men—not for those who try to save the pieces of humanity that are left behind. Congress won't pat you on the back, but conscience will tap on your vest.

Why, I have met retired farmers who grieved because they "had nothing to do!" Here's your job! This is a fair honest call. Do I hear anyone say "Here am I?" Come now, we must have American agriculture represented in the uplifting of Cuba! H. W. C.

For the land's sake, use Bowker's Fertilizers. They enrich the earth.—*Adv.*

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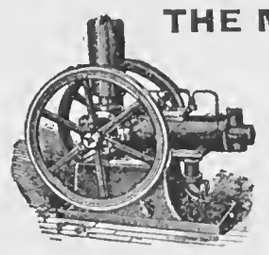

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The Rural New-Yorker

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THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, DECEMBER 14, 1901.

IN theory the plan of a centralized school is about perfect. In practice there are several sides to it. For instance, before we would let a little child make daily trips in such a "kid wagon" as is described on page 835, we would surely keep him at home!

*

WE advise farmers to attend every institute they possibly can this year. Make these meetings as large as possible. There is every reason for it. Even if you think you cannot learn a thing from the speakers you can add one to the crowd, and help give importance to the meeting. It pays to have every meeting that is called in the interest of agriculture well attended. That gives power and dignity to the business, for whenever people see a room full of farmers they realize that a strong and steady force has started, and that it will pay them to notice it. By all means go to the institute and help show that farmers are taking more interest in their business.

*

As stated last week, the New York Milk Exchange raised the price of milk twice in one week. There was no benevolence about this—or about anything else the Exchange may do. They were forced to increase the price in order to obtain milk. Owing to the high cost of grain many farmers were unable to make milk at a profit. They sold cows or quit feeding grain, and this created a shortage. The Milk Exchange hopes by increasing the price to induce farmers to feed more grain or buy cows. This will increase the milk supply, and when it reaches a certain point they can cut the price again! The facts are that the Exchange can well afford to pay more than it is now doing. The margin between its price and the price paid by the consumer is too wide, and the dealers are still making an unfair profit. The expenses of the handler have not increased, for the increased price which he pays for milk is more than offset by the increase of his price to the consumer. On the other hand, the expenses of the farmer have increased out of all proportion to the increase in his price.

*

THE results of the recent boom in improved chestnuts seem slow in materializing. The markets are not yet flooded with the big, handsome nuts we were led to expect, but the opinions of experts given on page 834 show that the outlook is still hopeful. Chestnuts are more difficult and expensive to propagate than most nursery trees, and planting has gone on in a gradual way. It takes several years to grow a tree large enough to bear paying crops, though such varieties as Paragon begin to bear a few nuts as soon as fairly established. The Chestnut weevil has been very destructive among plantings in brush or woodlands, but less so under orchard conditions, and will continue a serious menace until some practical means for its suppression is worked out. Mr. Hale's experience with spoiled nuts makes it plain that some method of curing, such as is practiced in southern Europe, must be adopted for our use if we are to save the nuts for market after we raise them. It seems the nuts are eagerly consumed in the localities where grown, which makes still another factor in keeping the home product out of the city markets. Altogether no valid reason for discouraging further conservative plantings has been given, though it is well not to entertain notions of extravagant profits. The improved chestnuts all make handsome and interesting trees, sure to increase the value of a country place. They are worth planting for their own sake, and when the great burrs begin to come much comment is certain to follow.

*

"With the sole exception of the farming interest, no one matter is of such vital moment to our whole people as the welfare of the wage-workers. If the farmer and the wage-worker are well off, it is absolutely certain that all others will be well off too." — President Roosevelt.

True; and the President might well have said outright what he implies, viz., that the prosperity of the farmer is the foundation of *all* National prosperity. We do not refer to the large landholders or those with abundant capital or superior powers of body and mind. They do not represent the truest type of the American farmer. We refer to the smaller freeholders—the men of middle class—those who fight the battle of life with weapons which they have been forced to forge for themselves in the fire of hardship and self-denial.

*

IT is often noticeable that educational movements especially designed for self-improvement take firmest hold in the country. The same is true of great moral movements; the country is usually the keeper of the city's conscience. Writing to a trade paper of a recent trip through remote sections of the Adirondacks, William Scott, who was chief of the department of floriculture at the Pan-American Exposition, remarks:

> I have frequently noticed that people living in the rural districts of our State, and doubtless other States, though lacking the flippant manners of our city boys and girls and perhaps considered hayseeds by them, are invariably better read and informed. They have the long Winter evenings to read and they get the weekly papers and "read, mark, and inwardly digest," while the average city boys or girls read the red letter headlines of the yellow journals and think they have absorbed it all. Don't make fun of the log school houses, they have produced Presidents of the United States, and the leading men of our great cities have nearly all been country born boys.

Those who are best informed as to rural conditions will agree heartily with what Mr. Scott says. A weekly paper well digested is better mental food than seven consecutive dailies swallowed whole. Reading without reflection soon becomes a disease—a form of mental dyspepsia. The city man who devours morning and evening papers, with several shrieking extras hot off the press between meals, is less able to form sound habits of thought than the farmer whose paper is not only read, but reflected upon afterwards.

*

THE new anti-oleo bill to be fathered by Mr. Tawney, of Minnesota, will be the first introduced at this session of Congress. That honor was awarded at a party caucus. This proves what we have repeatedly claimed—that the demand for this bill is stronger than ever among farmers. During the Summer the friends of honest butter were not idle, but they forced the fighting at every possible point. As a result the public has a better knowledge of the subject, and with this clearer view has come a greater respect for the farmer's position. It is understood that colored oleo is a counterfeit, and all men who are engaged in selling an honest product realize the importance of restricting a fraud. Many of those who formerly wondered why the farmers demanded this form of legislation now recognize its justice and importance. This gain in public sentiment gives the bill a much better chance than it had at the last session of Congress. Some public men are learning that the smear of oleo cannot be easily wiped out. For example, a correspondent sends us the following from a local Illinois paper:

> An Elgin correspondent says that "a cyclone of public sentiment" is developing among the dairymen in the northern part of the State which is likely to play havoc with the political prospects of Congressman Hopkins. The cause of the cyclone is the Congressman's alleged affiliation with ex-Congressman Lorimer and the oleomargarine interests. The butter and milk men say that they have evidence against Hopkins sufficient to defeat his return to Congress. If they are against him he would have no show in a contest for the Senate.

Of course the politicians bewail any effort on the part of farmers to carry such matters "into politics." For many years the farmers came, hat in hand, and asked these same politicians for favors. Now, they have learned their power—when they can get together in a just and fair demand. It will be a sad day for the oleo Congressman who gets in the way of their boots this year.

*

PRESIDENT Roosevelt discusses the "trusts" question at some length in his message to Congress. He says rightly that the American people are convinced that certain features and tendencies of the great corporations are harmful to the general welfare. The remedy he suggests is publicity. He would make these vast concerns show the people what they are doing and what becomes of the money they acquire. If Congress at present lack the power to enforce such publicity, then the President favors a constitutional amendment which shall confer such power. We feel sure that a majority of Americans will regret on first thought that the President did not go further than this in suggesting restrictive measures. On second thought, however, it is probable that most conservative people will conclude that the suggestions are wise. Perhaps they go as far as we may wisely go at this time. The trusts are here. They form a part of American industrial life, and a violent warfare against them might cause a calamity. Personally, we are opposed to the plan of giving these great corporations any benefit of a high tariff, because they restrict or kill home competition, while the tariff was supposed to stimulate it! There is great merit in publicity. Sunshine kills filth and foul disease germs, and clean printer's ink will drive both big and little rascals from cover. The people of this country are just aching to get a chance to vote on a constitutional amendment giving Congress power to regulate and control the trusts. Turn on the light—then we can tell better what to do!

*

LAST week we made some general remarks about the value of a *postage stamp vote.* Now for more definite suggestions. Here is a list of the Congressmen from New York State who are most likely to be influenced by a postage stamp. Address them at Washington.

Hon. Cornelius A. Pugsley.
Hon. Arthur S. Tompkins.
Hon. John H. Ketcham.
Hon. William H. Draper.
Hon. George N. Southwick.
Hon. John K. Stewart.
Hon. Lucius N. Littauer.
Hon. Lewis W. Emerson.
Hon. Albert D. Shaw.
Hon. James S. Sherman.
Hon. George W. Ray.
Hon. Michael E. Driscoll.
Hon. Sereno E. Payne.
Hon. Charles W. Gillet.
Hon. James W. Wadsworth.
Hon. James B. Perkins.
Hon. William H. Ryan.
Hon. De Alva S. Alexander.
Hon. Edward B. Vreeland.

We suggest that our New York readers write all these men if possible, or at least some of them, and request them respectfully to do all in their power to push the Tawney bill through the House. Most of these men need little urging, but a letter will do them no harm. The two men most in need of the stamps are J. W. Wadsworth and Sereno E. Payne. They should be plastered an inch thick. That is the way to brand and round them up. Come, gentlemen —*lick a stamp for bossy and the baby.*

*

BREVITIES.

It's an awful disease,
And its symptoms are these:
Your hat gets four sizes too small;
You see a big I
On land, sea and sky.
And think that you hear people call:
"Here he comes! Clear the way!
Speak in whispers to-day;
The great man of earth passes by.
His words weigh a ton,
And his wisdom's the won-
Der of millions of us poor small fry."
Sad delusion we fear;
But a remedy's near;
A man whacks some sense in your brain,
Give him thanks, suff'ring friend,
With disease at an end,
When the outcome for you is great gain.
For it's true as a try-square you'd better be dead,
Than to live on for ages, a case of large head.

THE nearsighted man is off on vision.

"EVERY hen her own stove"—page 834.

FEW farmers are well supplied with fuel.

READ "Shall We Grow Wheat?"—page 841.

THE kicker engages in a sole stirring business.

IT'S a good plan to root-prune some pedigrees.

A FAMILY tree is none the better for being shady.

YES, a brush with Jack Frost gives a hen a frozen comb.

AWARDS in the photographic prize competition given on page 842.

THE idle horse would better eat his head off than to eat the fat all off his ribs.

SHOW me the man and let me gaze my fill—the chap who really likes to pay a bill.

HOW does that statement of the cost of an acre of wheat—page 841—compare with a page from your own books?

SEE that your young orchard trees go into Winter quarters in good condition. The trees carry their Summer clothes in their trunks.

IN California, asparagus is packed loose in boxes, and then retailed to the consumer by the pound. This seems a very satisfactory plan, though the product may not look so attractive as in symmetrical bunches.

Events of the Week

DOMESTIC.—Clement Studebaker died November 27 at his home in South Bend, Ind. He was born in Adams County, Pa., March 12, 1831. He made his start in life in South Bend in 1852 in the blacksmith business with an elder brother, Henry. A Government contract for a hundred wagons was obtained, and the young firm from this beginning grew to be the present Studebaker Brothers' Manufacturing Company. Mr. Studebaker was twice a delegate to national Republican conventions, United States Commissioner for Indiana to the Paris Exposition of 1878, president of the Indiana Board or World's Fair Managers and a member of the Pan-American Congress during the Winter of 1889-90. . . . . A fire on the East River front of New York City November 28 started in a lumber yard, and by the crash of a big wall, released a torrent of naphtha in the adjoining property of the Standard Oil Company. A sea of fire flowed down the street, and only the most strenuous exertion saved a big gas plant. The total loss is believed to reach $750,000. . . . . November 27 a collision occurred at Seneca, Mich., between two passenger trains on the Wabash Railroad. Both trains were wrecked, taking fire immediately; 80 persons were killed, and 135 injured, many of whom will die. Of the dead, 50 were Italian immigrants. . . . . The ferryboats Sausalito and San Rafael collided in a dense fog in San Francisco Bay on November 30, and the San Rafael sank. It is known that three of her passengers were drowned, and it is feared that others were lost. . . . . Near Altoona, Pa., December 1, Mrs. C. W. Burk and her four children were burned to death in their home, the house burning so rapidly that escape was impossible. . . . . The South Carolina and West Indian Exposition at Charleston was formally opened December 2. Senator Depew was the orator of the day, and a message of greetings was sent by President Roosevelt. . . . . The British ship Nelson, from Astoria for Cape Town, with lumber, turned turtle off the Oregon coast on December 3, and went down with her entire crew of 28 men. . . . . The barges Gypsum Queen and Gypsum King are adrift in the Bay of Fundy with 10 men on board, having broken loose from a tow during the gale, December 2. Grave fears are felt for the safety of the men.

CONGRESS.—The first session of the Fifty-seventh Congress was opened December 2. Resolutions respecting the late President McKinley were introduced in the House by Representative Grosvenor, simultaneously with the introduction by Mr. Foraker in the Senate of the same resolutions. The Secretary of the Interior sent to the House a copy of a resolution of the Legislature of Hawaii asking a duty on coffee, in order to protect the coffee industry of Hawaii. The presentation and reading of the President's message and the adoption of resolutions for a joint committee to consider by what token of respect and affection Congress might express the sorrow of the nation upon the tragic death of the late President McKinley was the only business in Congress December 3. Both Senate and House adjourned as a further mark of respect, the House until December 6. The message occupied about 2½ hours in reading. While there are differences in regard to the utterances of the President on some of the subjects treated, all agree that it is a strong, well-written document, characteristic of the writer. The first five of the 45 printed pages covered are taken up with the assassination of President McKinley and discussion of measures that are needed to punish anarchists. After strongly eulogizing the late President and denouncing the assassin, the message urges action by Congress that will suppress anarchists at home, and prevent the coming to this country of persons professing principles hostile to all government and justifying the murder of those placed in authority.

The question of trusts was touched upon. There is a popular belief that the great corporations known as trusts are in certain features and tendencies hurtful to the general welfare. This is based upon sincere conviction that combination and concentration should be supervised, and within reasonable limits controlled, and with this judgment the President agrees. He believes that a law can be framed which will enable the Federal Government to exercise control along lines indicated in the message, but if Congress should decide that it lacks the constitutional power to pass such an act, he recommends a constitutional amendment. Immigration laws were pronounced unsatisfactory. An educational test is recommended, which would "tend to decrease the sum of ignorance so potent in producing the envy, suspicion, malignant passion and hatred of order out of which anarchistic sentiment inevitably springs. Finally, all persons should be excluded who are below a certain standard of economic fitness to enter our industrial fields as competitors with American labor." Tariff revision is not recommended. The President says the condition of the merchant marine is such as to call for remedial action by Congress and the advocates of the Ship Subsidy bill are encouraged by his utterances on this subject, although there is no positive recommendation for the grant of subsidies as a direct means of reviving our commerce on the sea. Several pages are devoted to urging action for the preservation of the forests and the wild game, and measures for establishing a system of irrigation for the reclamation of the arid lands of the West. With regard to the colonies, the President says all legislation should be shaped to establish healthy American communities who would own and till the farms, and that the land policy for the islands should be modeled on the United States homestead system. Cuba will soon be established as an independent Government, and "there are weighty reasons of morality and of National interest why the policy of reciprocity should be held to have peculiar application," and the attention of Congress is directed "to the wisdom, indeed, the vital need of providing for a substantial reduction in the tariff duties on Cuban imports into the United States." The Philippine problem is discussed at length. The earnest effort of this Government is being directed to assist the Filipinos along the stony path that leads to self-government. "We hope," says the message, "to make our administration of the Islands honorable to our nation by making it of the highest benefit to the Filipinos themselves, and as an earnest of what we intend to do point to what we have done." Additional legislation is recommended for the introduction of industrial enterprises. Recommendations are made for upbuilding the navy and for an increase in its personnel. This is regarded as essential to our honor and material welfare, as well as to our peace in the future. The establishment and organization of a strong naval reserve is also recommended. 'The navy offers the only means of making our insistence upon the Monroe Doctrine anything but a subject of derision to whatever nations choose to disregard it.' It is not deemed necessary to increase the army beyond its present size, but it is necessary to keep it at the highest point of efficiency. He recommends that provision be made for field exercises by at least a division of regular troops once a year. An extension of the Chinese Exclusion act, which expires next year, was advised.

PHILIPPINES.—On account of insurgent activity in Batangas Province more troops are being sent from Manila to reënforce the garrison there. . . . . The financial situation in the Philippine Islands is causing considerable alarm. The United States post office at Manila now refuses, except to Government employees, to issue money orders in exchange for Mexican silver, but merchants and others are forced to carry their accounts in Mexican silver. The commercial community had relied upon the United States Philippine Commission to continue accepting two Mexican dollars for one gold dollar, but the Commission is unable to act without the authority of Congress. The stores of Manila are compelled to accept two Mexican dollars for one gold dollar, while Chinese speculators are paying as high as six per cent premium in American paper money for American gold. . . . . American deserters are becoming very bold on the island of Samar, and are believed to have planned the massacre of Company C, Ninth Infantry. It is generally understood in Manila that deserters from the Ninth Cavalry, colored, are causing the trouble in the Province of Batangas.

GENERAL FOREIGN NEWS.—The United States is preserving order on the line of the Panama Railroad, preventing either Colombians or Liberals from using the railway. Order is being preserved at Colon by American, English and French warships. . . . . Miss Stone and Mme. Tsilka are still held captive, and measures for their relief are no further advanced.

FARM AND GARDEN.—The New York Experiment Station at Ithaca is preparing to send out weather reports to farmers, which will be furnished through the rural mail delivery. By this means farmers will receive warning of storm or frost in time to take precautions demanded by their work.

Secretary Snow, of the State board of sheep commissioners of Wyoming, reports an almost total absence of scab and other infectious diseases among the range flocks. During the year the Government inspectors have condemned only two droves.

The National Live Stock Association will approve a bill to be submitted to Congress reserving to the Federal Government the exclusive right to prepare and sell antitoxins.

The Association of Agricultural Colleges and Experiment Stations met in Washington recently. After the adjournment of the convention, the Association of Agricultural Chemists spent three days in discussing questions of chemistry dealing with adulterated foods and food products and other allied subjects. At the concluding session, Dr. Wiley, the Chief of the Bureau of Chemistry of the Department of Agriculture, was chosen the secretary for the forthcoming year.

A part of the coming short course in agriculture at the Agricultural College of Kansas, at Manhattan, January 7 to March 28, 1902, is live stock judging. Competent instructors, for years judges at the great live stock fairs, have been secured for this work of the short course, which is also to include instructions in butter making and milk testing under competent instructors.

Indiana breeders of Aberdeen-Angus cattle organized a State breeders' association November 21. Thirty-six breeders joined the association. The election of officers resulted as follows: President, W. R. Pleak, Greensburg; vice-president, F. C. Fleming, West Lebanon; secretary and treasurer, Geo. Henderson, Lebanon; directors, T. C. Phelps, New Castle, and Geo. Swain, Pendleton. The annual meeting will be during the week of the meeting of the State Board of Agriculture.

Representatives of the dairy boards of trade in New York met at Syracuse last month and organized a State Board of Trade, to look especially after State and National legislation. Organization was perfected and the following officers elected: R. P. Grant, Clayton, president; W. A. Rogers, Watertown, secretary; B. D. Gilbert, Clayville, treasurer. Executive committee: The three officers named, C. W. Richardson, Little Falls, and A. D. Martin, Canton. The president of each local board of trade becomes vice-president of the State association by virtue of his office.

Symptoms of renewed discrimination against American meat are manifest in the new imperial inspection laws of Germany, which, when passed, it is generally supposed, will affect domestic as well as foreign produce. The new laws will become effective April 1, 1902, but only as far as imported meat is concerned. The date on which German meat will be subjected to the rigid new system is left open. The new law will absolutely exclude pieces under four kilos' (eight pounds) weight. The American trade in these goods is not specially extensive but very valuable. The feature of the law providing for inspection at the boundaries of the country is desirable, but it makes possible a considerably earlier examination of meat than is possible under the present system of inland inspection.

The Wayne Co. (N. Y.) Fruit Growers' Association met at Newark, N. Y., December 11, for the purpose of electing officers.

The champion trotter Directum, with a record of 2:05¼, has been purchased by the International Stock Food Company, of Minneapolis, Minn., the price paid being $12,100.

The Virginia State Horticultural Society will meet at Richmond January 7-8, 1902. Secretary, Walter Whately, Crozet, Va.

The New York State Breeders' Association will meet at Rochester December 17-19.

The next meeting of the Eastern New York Horticultural Society will be held in New York City, February 12-13, 1902. Full notice of it will be given later.

SHALL WE GROW WHEAT?

The farmers in central New York have received such an impressive lesson this season, in the growing of wheat, that profit and loss in the business is now, for the first time, a subject of serious consideration. Whether to continue the buying of costly fertilizers and trying to raise a crop of wheat in competition with the great and growing West and the Hessian fly, or adopt some other system of farming, and if so what, is a question of serious, special and immediate interest to the farmers in, at least, 20 counties of central and western New York. Aided by farmers' institutes, experimental stations and the practical presentation of farming methods by acknowledged standard publications, the agricultural people all over our country, and especially in the Empire State, are beginning to "keep books," and in the account book of one of our practical farmers is found, for the season of 1901, the following estimated cost of growing one acre of wheat: Plowing, $3; harrowing, rolling, drilling, $3; seed, $1.50; phosphate, $2; thrashing, $1; total cost, $10.50. The product of the field was an average of 20 bushels, which is probably a liberal average in central and western New York, and the charge for thrashing does not include the feeding of horses nor a dinner for hungry men. The credit side had 20 bushels of wheat at 70 cents a bushel, or a balance for one acre of $3.50. Deduct from this the interest on the land at $50 an acre—which is $2.50—and we have $1 left for taxes, insurance and a new point for the plow.

The continued low price for wheat in all of this section, taken in connection with losses by the chinch bug, the sparrows and the Hessian fly, has compelled our farmers to consider whether there may not be some product substituted in the place of wheat, in at least a part of farm management. The discussion has not yet become general, but up to this time, the predominating opinion is for the raising of cattle for the dairy or beef, or for both, and the inducement for this change is the belief that beef, in average price, will never be lower, and that wheat will never be higher; that the ranges on the vast plains of the Middle West are fast decreasing as pastures and are being taken up as farms for the growing of wheat and corn. A discussion of the subject is not intended in this article, but simply and very briefly to call attention to a matter of increasing interest in this State. Figures and facts in dairying and in stock raising as contrasted with the growing of wheat, can be fully presented, and surely should be in a full and fair investigation of such important departments in our agricultural industries. C. F. B.

Auburn, N. Y.

Crop Reports.

The past season has been a good one in some ways for farmers. We realized a little over $100 from seven hogs this season. Gilt edge separator butter made on the farm is growing more in demand than ever before. A string of private families as consumers of it make a good market, and you don't have to contend with the middleman. M. E. G.

E. Smithfield, Pa.

Some localities throughout what is called the fruit belt of Illinois report an abundant crop of apples of good quality, while others have only a fair crop. The amount of salable fruit is evidently above the average; of those grown for market Ben Davis would head the list; then would come Jonathan and Minkler. The price this year has ranged from $2.50 for firsts to $1.50 for seconds per 2½-bushel barrel. The culls go to the evaporator for from 15 to 40 cents per 100 pounds, according to quality. Good apples at the present time would bring $1 per bushel in bulk. Of course, we see times that we would be glad to get 25 cents per bushel for all Summer and Fall apples. J. W. M'C.

Kinmundy, Ill.

MICHIGAN NOTES.—We have been having very fine weather for Fall work. In our immediate vicinity this has been one of the best seasons in years. On our farm six acres of potatoes gave over 900 bushels of good tubers, without fertilizers. They were Sir Walter Raleigh, for main crop, with Pat's Choice for a trial, which did remarkably well, and for early we had 275 bushels of Early Wonderful, certainly the finest eating potato we ever tried. Our corn crop was also good, about 125 baskets per acre. We have our stalks in the barns and stacks, and cut all fodder as fast as we use it. Early in July we drilled three acres of Evergreen sweet corn on some new muck ground, drilling in rows 28 inches apart with grain drill. It made a wonderful growth, completely covering the ground. The fodder did not dry out sufficiently to put into a stack or barn, and we have it in large shocks. In cutting fodder we cut a few bundles of this and a few of the husked stalks, and it makes a most excellent feed for sheep and cattle. We have had a very dry Fall, and pasture is thus short, and we are having to feed all stock now, although the weather is open and fine. Our Shropshires are in fine shape, and while the ram trade has not been quite up to expectation, the trade in choice breeding ewes gives promise of the best since we have been breeding them—about 15 years. It is certainly the proper time to start a good flock of sheep, as better animals can be bought now for the same money than in times when all sheep are high, and as the price of wool is becoming stronger, and sheep are being marketed faster than produced, I believe that another year will see great activity in sheep, and much higher prices prevailing. It is the great mistake of the American farmer to sell out when stock is cheap, and buy back when it is high. A few good sheep can be kept on any farm turning weeds and other stuff that would otherwise go to waste into money, and they produce two good crops a year. A few of them on a farm will almost take care of themselves. It is only when they are kept in large numbers that they require special care, and the cost of keep becomes considerable. Choice animals of any kind or breed always bring paying prices, while the common to culls always have to be sold at a loss. A. H. F.

Allegan Co., Mich.

Woman and Home

From Day to Day.

DEAR UNSELFISH DAN.

'Most every one that knew our Dan
Agreed he was the kindest man
They ever see. He had the knack
Of takin' on his own broad back
The burdens an' the slaps and pokes
Belonged by right to other folks.
If anyone was in distress
An' went to Dan, he'd say: "I guess
We'll pull you out all right; let's see.
Suppose you leave all that to me."

Was nothin' finer than the way
He cared for poor old Uncle Jay,
Who was the most unlucky han'
For havin' trouble with his lan'
'Bout taxes, or the early Spring
Plowin', or some other thing
That plumb upsot the poor old man.
Then, in the nick o' time, our Dan
Steps in, and says, "Oho!" says he,
"Suppose you leave all that to me."

It got to be that Uncle Jay
He couldn't git along no way
Without our Dan, an' our Dan he
Jest cared fur him unselfishly.
An' when the old man come to die
Our Dan, o' course, was right close by.
Says Uncle Jay: "I'm worrit, Dan,
'Bout what's to come of all my lan'
An' all my money out at loan,
An' in the bank, when I am gone."
Then Dan, he ups an' says, says he:
"Suppose you leave all that to me."

—Catholic Standard and Times.

*

ONE of our friends who has been interested in the discussion of home work for country girls, says in a recent letter:

I have lately discovered a new field for women. I fixed up a buggy, painting and varnishing it and oiling the top, etc. A neighbor saw the vehicle after it was finished, and he asked me how much I would ask to do his for him. Carriage painters charge $8 or $10 for such a job.

*

A CUP and plate rack, composed of two shelves, fitted into some little recess in the dining room, is not beyond the skill of a home carpenter, and is an attractive convenience. Midway between the two shelves a rod, fitting into brackets at the sides, prevents the plates from slipping. Brass screw hooks are put under the bottom shelf to hold cups, and the upper shelf is kept for tall pieces of china, such as pitchers or bowls. The rack should be painted or stained to match the woodwork of the room.

*

IN the modern wardrobe or clothes closet, a number of hooks are put under the shelf, on which to put coat hangers for the dress waists. Skirts go back along the wall, while the waists are hung separately. Coat hangers for women's use seen in the shops now are almost as elaborate as pincushions, but they are easily made, and are pretty and useful gifts. The ordinary wire hangers are padded with cotton batting, scented with sachet powder, and covered with gay silk, shirred on. The loop by which it is hung is twined with narrow ribbon, and a rosette is put where the loop and hanger join.

*

ONE noticeable thing about the photographs sent in for the competition recently announced in this department is the wide range of country they represent, coming from as far away as the Pacific coast. Another thing is the comfortable living they imply. Conditions are still hard for the housewife on many farms, and conveniences are often lacking, but the general standard of comfort has greatly advanced. The greatest drawback, in many cases, is the lack of help. It is not only difficult, but often impossible for an overburdened farm housewife to secure help in the home, and since there is so much unavoidable work, it is absolutely necessary that her convenience be considered, and her work simplified. We often see some slight inconvenience, some error in arrangement, which entails extra labor, permitted to remain year after year, when a trifling outlay of money or time could rectify it. The nervous and muscular force wasted in this way means much in a woman's life; unfortunately, it is a form of extravagance many mistaken people look upon as economy.

*

A READER asks whether it is difficult to make chocolate creams. The recipe is very simple. Put the white of one egg and an equal quantity of cold water into a bowl; add a teaspoonful of vanilla, and beat until frothy. Stir in sufficient confectioners' sugar to make a stiff paste (about 1¼ pound). Work until smooth, form into small balls the size of a cream chocolate, stand on greased paper, and put in a cool dry place to harden (about two hours). Put one-half pound chocolate into a small bright tin basin, and melt over boiling water; then stand in a basin of boiling water to prevent it from cooling. Place one ball on the end of a fork, dip it down in the melted chocolate, so that it is well covered, scrape off the fork carefully, then slide the cream back on the greased paper. When all are dipped, stand in a cool place over night. They are very nice.

A RAINY-DAY VISIT ON A RURAL WIRE. FIG 379.

A Telephone Talk.

The picture shown in Fig. 379 is a genuine rural telephone scene, photographed in a home where THE R. N.-Y. is a valued weekly visitor. When the picture was taken little Bernice was in the attitude of listening to an entertaining talk that was then going on over the wire. She is a five-year-old resident of Cuyahoga Co., Ohio, but is not too young, however, to use the telephone all by herself. That is one of the beauties of the rural telephone. The little tots just shove a chair up to the 'phone, call up central, and get their little friends, and have as jolly a visit as the older ones. In stormy, disagreeable weather when they cannot go out it greatly relieves the monotony and tediousness of the day. The rural telephone has a great and increasing value in relieving the solitude of farm life, apart from its convenience and utility in transacting business.

A. R. PHILLIPS.

The Photographic Competition

The competition for prize photographs of domestic subjects first announced October 19, is now ended. The winners are:

First Prize, $7.00, Mrs. S. J. Perry, Michigan.

Second Prize, $5.00, Mrs. Hugh Aiton, New Brunswick, Canada.

Third Prize, $3.00, F. Housholder, Oklahoma.

So many excellent pictures were received that the final judgment required much thought on the part of the jury of five persons forming the decision. It must be remembered that *domestic* subjects were called for; hence this point was the first considered. Several fine pictures, which will appear later in THE R. N.-Y., were precluded from participation in the prizes merely because they were general, rather than domestic, in interest. The second consideration was the value of the picture for reproduction in a half-tone engraving. We were obliged to put aside some excellent domestic views because they were deficient in this point. The three prize-winners meet the requirements of the competition; they are fine photographs, and effective pictures. Most of the other pictures will, however, be used; some of them are so admirable that they are entitled to a prominent place in our pages. Indeed, the results of the competition are so excellent that we shall feel impelled, at no distant date, to offer further prizes for another series of rural photographs.

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For the Church

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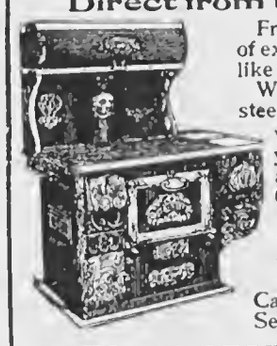

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Wisconsin Traveling Libraries

Wisconsin is rich in libraries. The very extensive city libraries of Milwaukee and other cities are patronized and appreciated by the student body and urban residents generally. Even country towns in the older settled portions of the State support very respectable libraries. These, however, reach only the city and town people. The thousands of families in the pine woods of northern Wisconsin and in other remote regions, miles from a railroad, are not benefited by these libraries. The pitifully scant supply of literature available in these regions, has led certain large-hearted people to establish traveling libraries. The first of these was set in motion in 1896. In that year J. H. Stout, a wealthy lumberman of Dunn Co., Wis., purchased 500 volumes of good books, and accepted from his neighbors hundreds of copies of magazines, etc. These were divided into 16 lots, each put up in a strong case with a shelf, double doors with a lock and key, a record of the books and copies of the rules, etc. These miniature libraries were then sent to points in Dunn Co., each accompanied by the following letter from Mr. Stout:

You may have the use of these libraries under certain conditions. You must form local library associations of responsible people, and elect a secretary to represent you in dealing with me, and a librarian to deal with you. You must agree to have the books well cared for, and to keep them in a convenient place where every resident of the neighborhood who uses the books carefully, can get them without cost. Persons who misuse the books or destroy them, must pay proper penalties. When most of the readers have read as many of the books as they wish, the library may be exchanged for another. For each library sent you will pay a fee of $1. In consideration of this fee I will pay all transportation expenses for the first library, and all the expenses of furnishing the libraries, repairing the books and keeping up the supply of blanks.

It is needless to say that these were gladly received and the demand for more became so urgent that Mr. Stout soon sent out 20 more libraries under similar conditions. Following this lead, others have started similar libraries in other sections, until at the present time 215 are in operation. These are all under the supervision of the Wisconsin Free Library Commission, a body created by legislative enactment in 1895. The Commission is composed of five members and its duties are to "give advice and counsel to all free libraries in the State, and to all communities which may propose to establish them, as to the best means of establishing and administering such libraries, the selection of books, cataloguing and other details of library management."

A wide range is covered in the selection of books. Biography, travel, fiction and juvenile literature, all of the highest order, are selected. Eggleston, Scudder, Dickens, Conan Doyle, Scott and Louisa Alcott are some of the names one meets in looking over a catalogue. The libraries are located mainly in farmhouses and country stores. They are, without exception, well received and patronized. Each is in charge of a librarian, who requires the patrons to observe certain regulations, similar in many respects to those of city libraries. For instance, a book may be retained but two weeks without renewal or the payment of a fine. The borrower is liable in full for the loss of a book or damage to the same. The books sent out in the earlier libraries were mainly light literature. In the later ones these have been replaced in part by more solid reading, in the endeavor to create a taste for the best. It is probably too early yet to judge definitely of the merits or demerits of the system, but the tendency so far is all in the right direction.

The location of the libraries as indicated on an outline map of the State in the office of the secretary shows them as clustered mainly about the points of origin, that is near the homes of Mr. Stout and others in the pine woods regions, but a few are seen straggling into the southern part of the State, and one within 20 miles of cultured Madison. Fifty dollars covers the entire expense of one of the libraries and there is but little doubt that within a few years thousands will be in operation.

FREDERIC CRANEFIELD.

The Rural Patterns.

Golf capes are very serviceable as extra wraps, especially when driving. The model shown is simple and tasteful, made of double-faced cloth simply stitched; but plain cloth with hood alone or with cape and hood silk lined is also in vogue. The cape is seamless and closes at the front with buttons and buttonholes. The hood folds becomingly over the shoulders. At the neck is a turn-over collar of the cloth. To cut this cape for a girl six years of age 1¼ yard 50 or 56 inches wide will be required. The pattern No. 3988 is cut in sizes for girls of 2, 4, 6, 8 and 10 years of age; price 10 cents from this office.

A cap and muff to match are pretty and useful. The pretty little models shown are made of velvet cord in Napoleon blue, with an edge of chinchilla fur, but all velvet, velveteen, corduroy, heavy silk and soft cloths are appropriate, and ruchings of silk or net may take the place of the fur. The little cap fits snugly and is drawn in at the back edge to fit the circular crown. The neck frill is gathered and seamed to the lower edge, but can be omitted when preferred as shown on figure. Attached to the lower edges are ties which are bowed beneath the chin. Soft silk or satin is used for lining. The muff is simply constructed and can be easily made. Over the satin lining the material is arranged and both stitched together some distance from the edge to form a casing, through which elastic is inserted to draw up to the proper size. The frilled edges thus formed are trimmed with fur, but may be plainly finished if preferred. Bows of ribbon, animal heads and tails may be added if a more

3988 Girl's Golf Cape.
2 to 10 years.

elaborate muff is desired. To cut this cap and muff for a child two years of age 1¼ yard of material 20 inches wide, ⅝ yard 44 or 50 inches wide will be required, with 1⅝ yard of fur for edging and one yard of silk for lining. The pattern No. 3990 is cut in sizes for children of 1, 2, 4 and 6 years of age; price 10 cents from this office.

Rural Recipes

Hungarian Chicken.—Clean and cut up a large chicken as for fricassee, put it in a small pan with two ounces of butter and two onions cut into small pieces. When beginning to color add two ounces of flour, mix well with your other ingredients. Moisten with one cupful of milk, add a teaspoonful heaping of salt, one-eighth of pepper, two cloves of peppercorns, ditto of bay leaves, and tie all together. Boil very gently, skim off the grease, remove the spices and serve.

Fried Cornmeal Puffs.—Mix one-fourth teaspoonful of salt and one-fourth teaspoonful of soda with one cupful of fine white cornmeal and scald it with boiling hot water, adding it gradually until the meal is all wet and swollen, not at all soft, but barely damp enough to hold it together. Cover it and let it stand over night. In the morning

3990 Child's Muff and Cap
1, 2, 4 and 6 years

stir in two eggs, the yolks and whites beaten separately. The mixture should be a soft dough, not thin enough to spread when dropped on the pan, and as meal varies in its thickening quality, it will be well the first time to add the egg gradually, lest the mixture be too soft. Take it up in small spoonfuls and drop into a kettle of hot fat and when brown turn like doughnuts.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

The Girl on the Farm

It seems to me that there is no way in which a young woman can earn money with so little outlay of time and strength as in keeping bees. I have found from my own experience that there is no comparison in the amount of work involved between poultry raising and work in the apiary. The lack of knowledge need not keep one from trying it if she will study some good work on the subject, such as Root's A B C of Bee Culture. The more one studies this subject the more interested she will become, and not only are you able to furnish your own table with an abundance of pure honey, which is the most delicious and healthful of all sweets, but your friends will be glad of the opportunity to buy any surplus that you may have to sell. The fact that bees do not require any care through the Winter is one that recommends itself to any woman who has tried keeping poultry. From the time they are put into their Winter quarters in November, until the warm April days tell us that it is time to bring them out into the sunshine, we need hardly give them a thought. I have often wondered why this subject has not been discussed in THE R. N.-Y. from a standpoint that would interest the wives and daughters of the farmers and fruit growers in this healthful and profitable way of earning a little extra money.

MRS. W. S. W.

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THE ENTERPRISE MFG. CO. OF PA., Philadelphia, Pa.

MARKETS

THE WEEK'S QUOTATIONS.

WHOLESALE PRICES.
NEW YORK, DECEMBER 7, 1901.

GRAIN.

Wheat, No. 1, N'th'n Chicago..	—	@	83⅝
No. 1, hard, Duluth	—	@	90
No. 2, red, new	—	@	85
Corn, No. 2, mixed, elevator	—	@	70¾
Cats, No. 2, mixed	—	@	50½
Rye, No. 2, W'n, c. i. f., Buffalo.	—	@	64
Barley, feeding	60	@	62
Malting	67	@	72
Buckwheat, per 100 lbs	—	@	1 25

BEANS.

Marrow, 1901, choice, per bu	—	@	2 35
Fair to good	2 00	@	2 30
Medium, 1901, choice	2 00	@	2 05
Pea, 1901, choice	—	@	2 00
Medium and pea, fair to good	1 75	@	1 95
Red kidney, 1901, choice	2 05	@	2 10
Fair to good	1 75	@	2 00
White kidney, 1901, choice	2 40	@	2 45
Black turtle soup, choice	1 80	@	1 85
Yellow eye, 1901, choice	2 30	@	2 35
Lima, California, 1901	3 30	@	3 35
Italian, medium	1 85	@	1 87½
Other foreign, medium	1 75	@	1 80

FEED.

Spring bran, coarse	—	@	24 00
Winter bran	23 00	@	24 00
Red Dog	—	@	26 00
No grade flour	—	@	25 00
Linseed meal, ton	—	@	30 50
Cottonseed meal, ton	—	@	25 10

HAY AND STRAW.

Hay, No. 1	82½	@	87½
No. 2	70	@	75
No. 3	60	@	65
Clover	50	@	60
Clover, mixed	60	@	75
Straw, rye, long	60	@	80

MILK.

New York Exchange price 3½ cents per quart in 26-cent freight zone.

BUTTER.

Creamery, extra, per lb	—	@	25½
Firsts	23	@	24½
Seconds	20	@	22
Lower grades	16	@	18
June, extras	21½	@	22
June, seconds to firsts	18	@	21
State dairy, tubs, fresh, fancy.	23	@	23½
Tubs, firsts	20	@	22
Tubs, seconds	17	@	19
Tubs, thirds	15	@	16
Tins, etc	15	@	22
W'n imitation creamery, fancy.	18	@	18½
Firsts	15½	@	16½
Lower grades	14	@	15
W'n factory, June, fancy	—	@	15
June, fair to choice	14	@	14¾
Fresh, firsts	14¾	@	15
Fresh, fair to good	14	@	14½
Lower grades	12½	@	13½
Renovated butter, fancy	18	@	19
Common to choice	13	@	17
Packing stock	12	@	14

EGGS.

QUOTATIONS LOSS OFF.

State & Pa., avge. prime, doz.	—	@	29
W'n, fresh-gath'd, choice, doz.	—	@	28

QUOTATIONS AT MARK.

Nearby, State & Pa., fresh-gath'd, fancy, selected, doz.	—	@	30
Average best lots	26	@	27
Fair to good	23	@	25
W'n, fresh-gathered, candled, graded	—	@	26
Regular packings	22	@	25
Kentucky, fresh-gathered	20	@	25
Tennessee, fresh-gathered	20	@	25
W'n, fresh-gathered, dirties	—	@	17
Checks	14	@	14½
Refrigerator, Fall packed	18	@	22
Refrig'r, early packed, doz	16½	@	19
Limed, Western	17½	@	18

GAME.

Quail, prime, per doz	2 50	@	2 75
Grouse, per pair	1 75	@	2 00
Partridges, per pair	1 75	@	2 00
Woodcock, per pair	1 00	@	1 25
English snipe, per doz	—	@	2 50
Golden plover, per doz	—	@	2 50
Grass plover, per doz	1 50	@	2 00
Wild ducks, canvas, per pair	2 50	@	3 00
Red head, per pair	1 50	@	2 00
Mallard, per pair	75	@	1 00
Teal, blue wing, per pair	60	@	75
Teal, green wing, per pair	40	@	50
Common, per pair	25	@	30
Rabbits, per pair	12½	@	15

LIVE POULTRY.

Spring chickens, per lb	7½	@	8
Fowls, prime, heavy, per lb	—	@	9½
Light to medium	—	@	8
Roosters, per lb	—	@	5½
Turkeys, per lb	7	@	7½
Ducks, average W'n, per pair	60	@	70
Average Southern, per pair	50	@	60
Geese, average W'n, per pair	—	@	1 00
Average Southern, per pair	75	@	90
Pigeons, mixed, per pair	—	@	20

DRESSED POULTRY.

DRY PACKED.

Turkeys, Jersey & upriver, fcy.	12	@	12½
Jersey & up-river, fair to g'd.	10	@	11
Md. & Del., fancy	12	@	12½
Md. & Del., fair to good	10	@	11
State & Pa., fancy	—	@	11
Ohio & Mich., scalded, fancy.	—	@	10½
Ohio & Mich., fair to good	9	@	10
Other Western, fancy	—	@	10
Other W'n, good to prime	9	@	9½
Poor	7	@	8
Chickens, Phila., selected, large.	15	@	16
Philadelphia, mixed sizes	12	@	12½
Other Jersey, fancy	12	@	12½
Other Jersey, fair to good	9	@	11
State & Penn., fancy	10½	@	11
State & Penn., fair to good	9	@	9½
Ohio & Mich., scalded, fancy.	—	@	10
Ohio & Mich., scalded, fair to good	8	@	8½
Other Western, fancy	9	@	9½
Other W'n, fair to good	7½	@	8½
Fowls, Ohio & Mich., fancy, scalded	—	@	9
Other W'n, dry-picked, choice.	8½	@	9
Other W'n, scalded, choice	8½	@	9
Western, poor to fair	7	@	8
Ducks, Md. & Del., fancy	12	@	13
Md. & Del., fair to good	10	@	11
Ohio & Mich., fancy	11	@	12
Other Western, prime	10	@	11
Poor to fair	7	@	9
Geese, Md. & Del., prime	10	@	11
Western, prime	8	@	9
Poor	6	@	7
Squabs, prime, large, white, doz.	—	@	2 50
Mixed, per doz	1 75	@	2 00
Dark, per doz	1 25	@	1 50

ICED.

Turkeys, Spring, W'n, dry-picked, prime, per lb	8½	@	9
Scalded, prime, W'n, per lb	8½	@	9
Fair quality, per lb	—	@	8
Poor, per lb	7	@	7½
Chickens, W'n, dry-picked, lb	8	@	8½
Western, scalded, per lb	8	@	8½
Poor to fair, dry-picked or scalded, per lb	7	@	7½
Fowls, W'n, dry-picked, prime	—	@	8
Western, scalded, per lb	—	@	8
S'th'wn, dry-picked, prime	—	@	8
W'n & S'th'wn, poor to good	7	@	7½
Old roosters, per lb	5½	@	6
Ducks, Western	—	@	10
Geese, Spring, W'n, per lb	7	@	7½

COUNTRY-DRESSED MEATS.

Calves, veal, prime, per lb	9½	@	10
Fair to good, per lb	8½	@	9
Common to medium, per lb	5	@	8
Buttermilks, per lb	7	@	8
Grassers, per lb	5	@	5½

FURS AND SKINS.

Black bear	15 00	@	25 00
Cubs and yearlings	5 00	@	10 00
Beaver, large	7 00	@	8 00
Medium	6 00	@	7 00
Small	3 00	@	4 00
Red fox	2 00	@	3 00
Gray fox	75	@	80
Wolf, prairie	1 25	@	1 50
Marten, dark	4 00	@	8 00
Pale	2 50	@	4 00
Skunk, black	1 10	@	1 20
Half-striped	70	@	80
Long-striped	75	@	85
Striped	30	@	40
White	15	@	20
Raccoon	90	@	1 10
Opossum, large	40	@	50
Medium	25	@	30
Small	10	@	15
Mink	2 50	@	3 00
Muskrat, Winter	12	@	13
Fall	9	@	10
Kits	2	@	3

DRIED FRUITS.

Apples, evaporated, 1901, fcy, lb.	10	@	11
Evaporated, 1901, prime	8¾	@	9
Evaporated, 1901, poor to good.	6½	@	8½
Evaporated, 1900, fancy, lb	10	@	10½
Evaporated, 1900, com. to pme.	6	@	8½
Sun-dried, 1901, O. & Mich., qrs.	5	@	6
Chops, 1901, per 100 lbs	1 80	@	2 50
Cores and skins, 1901, 100 lbs.	1 60	@	2 12
Raspberries, evap'rat'd, 1901, lb.	—	@	23
Sun-dried, 1901, per lb	20	@	21
Blackberries, 1901, per lb	7	@	7½
Huckleberries, 1901, per lb	17	@	18
Cherries, nearby, 1901, per lb	15	@	15½
Southern, 1901	13½	@	14

FRESH FRUITS.

Apples, York Imperial, bbl	3 50	@	4 50
Spitzenberg, prime to fancy	4 50	@	7 00
N'n. Spy, good to fancy, bbl.	3 50	@	4 50
Winesap, per bbl	3 50	@	4 50
Snow, good to choice, bbl	3 50	@	5 00
King, per bbl	4 00	@	5 50
Ben Davis, per bbl	3 50	@	4 50
Greening, per bbl	4 00	@	6 00
Baldwin, prime, per bbl	4 00	@	5 00
Red Winter sorts, fair to g'd.	3 00	@	3 50
Inferior, per bbl	1 75	@	2 50
Pears, Seckel, nearby, bu. box.	1 00	@	1 50
Seckel, Boston, per box	1 00	@	1 50
Beurre Bose, per bbl	3 00	@	4 00
Beurre Bose, Boston, per box.	1 50	@	2 00
Beurre Clairgeau, per bbl	2 50	@	3 50
Beurre d'Anjou, per bbl	2 25	@	3 00
Kieffer, per bbl	2 00	@	3 00
Common, per bbl	1 50	@	2 00
Grapes, W'n N. Y., Catawba, case 10 3-lb. baskets	1 10	@	1 25
Per small basket	12	@	14
Small basket	12	@	13
Cranberries, Cape Cod, fancy, large, late varieties, bbl	7 50	@	8 00
Good to choice	6 00	@	7 00
Early Black, fancy, dark	6 50	@	6 75
Medium, per bbl	6 00	@	6 25
Poor to fair	5 00	@	5 50
Jersey, per bbl	6 00	@	6 50
Jersey, per crate	1 60	@	2 15

VEGETABLES.

Potatoes, L. I., per bbl	2 75	@	3 00
Maine, prime, per bag	2 50	@	2 65
Maine, per 180 lbs	2 87	@	3 12
State, prime, per 180 lbs	2 75	@	2 87
State, prime, per sack	2 50	@	2 60
Jersey, per bbl	2 00	@	2 25
German, good to prime, per 112-lb. bag	1 50	@	1 60
German, per 168-lb. bag	2 50	@	2 60
Scotch, Magnum, 168-lb. bag.	2 50	@	2 65
Sweet potatoes, So. J'sy, bbl.	2 25	@	3 25
Yellow, Va., per bbl	50	@	1 75
Beets, J'sy & L. I., 100 bchs	—	@	1 00
Brussels sprouts, per qt	6	@	10
Chicory, N. O., per bbl	3 00	@	4 00
Cauliflowers, fancy, bbl	3 00	@	4 [illegible]
Fair to good, per bbl	2 00	@	2 75
Culls, per bbl	1 00	@	1 50
Celery, State & W'n, dz. roots.	12	@	40
Jersey & L. I., doz. flat bchs.	75	@	1 00
Carrots, L. I., per bbl	—	@	1 00
Cabbages, L. I., Flat Dutch, per 100	2 00	@	3 [illegible]
State, per ton	12 00	@	13 00
Cucumbers, Fla., per crate	1 00	@	2 00
Florida, per basket	1 50	@	2 50
Eggplants, Fla., ½-bbl. crate.	3 00	@	5 00
Escarol, N. O., per bbl	4 00	@	4 50
Lettuce, Fla., per basket	1 00	@	2 50
New Orleans, per bbl	3 00	@	4 00
Other Southern, per bskt	50	@	1 25
Onions, Orange Co., wh., bag.	2 00	@	4 00
Orange Co., red, per bag	3 00	@	3 25
Orange Co., yellow, bag	2 75	@	3 25
Orange Co., poor to f'r, bag.	1 50	@	2 50
Connecticut, white, bbl	3 00	@	5 00
Connecticut, yellow, bbl	3 00	@	3 50
Connecticut, red, per bbl	3 50	@	3 75
State & W'n, yellow, bbl	3 00	@	3 25
State & W'n, red, per bbl	3 50	@	3 75
N. O. shallots, 100 bchs	3 00	@	3 50
Romaine, N. O., per bbl	3 00	@	4 00
Squash, Hubbard, per bbl	2 25	@	2 50
Marrow, per bbl	1 75	@	2 00
Pumpkins, per bbl	1 25	@	1 50
String beans Fla., green, per bushel basket	4 00	@	8 00
Turnips, Jersey, Russia, box	—	@	75
Canada, Russia, per bbl	75	@	80
Tomatoes, Fla., per carrier	2 50	@	4 00

SEEDS.

Millet, per lb	2	@	2⅛
Mustard, Cal., brown	4	@	4¼
Sunflower	3½	@	3⅝
Flax, ground	3¼	@	3½
Hemp, Russian	2⅝	@	2¾
Celery	7½	@	8
Rape, German	3¾	@	3⅞

BUSINESS BITS.

THE Chicago House Wrecking Co., of 35th and Iron Sts., Chicago, has purchased the buildings complete of the Pan-American Exposition, Buffalo, N. Y. It is understood that the purchase price was $132,000. The buildings will, of course, all be dismantled and removed from the grounds, and the above company will dispose of the material through their mail order business.

IT may seem incredible that a good time-piece can be bought for the small sum of $1. The Ingersoll dollar watch is now famous in Europe as well as America. Two million of these watches were purchased during the past Summer by an English house. A handsome and interesting catalogue may be had free by addressing R. H. Ingersoll & Bro., Department 230, 67 Cortlandt St., New York.

THE Home Correspondence School has prepared a very careful, conscientious and thorough course on all phases of the great farm industry. The head of the school is Prof. W. P. Brooks, of the Massachusetts Agricultural College. This fact alone speaks volumes for the stability and high character of the instruction offered. A thorough course is taught by mail. A portion of the spare moments and long evenings devoted to this study, will gain the knowledge to enable you to get from the farm those profits which have been going to waste. The Home Correspondence School of Springfield, Mass., will send catalogue and a pamphlet, "Money in Farming," with other valuable points, free. We feel sure it will pay you to send for them.

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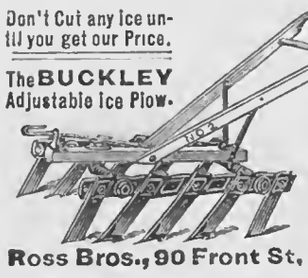

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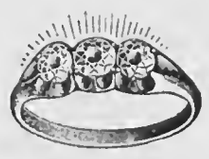
No. 77.

Perhaps you would like one to use as a holiday remembrance to some friend. We have been able to make arrangements with a manufacturing jeweler by which we can furnish handsome rings with stone settings at surprisingly low prices. These rings are rolled gold, with a five-year guarantee. We offer four styles. No. 77 is a single stone. You can have any color stone or any size ring. Price, 25 cents. No. 81 has three stones, Tiffany shape; you can have three combination of colors, and any size. Price, 25 cents. No. 66 is a cluster of imitation diamonds with center stone, which may be had in any color. Price, 75 cents No. 55 is an Egeria diamond scarf pin. This is a gold-plated pin on German silver, which gives a high finish. The setting is new and gives a pretty effect. Price, 25 cents. We will send any one of these rings or the pin as a reward for one new subscription at $1, except No. 66. We will send this for a club of two new subscriptions, or with one new and 25 cents extra. Select ruby, emerald, opal or diamond for single stone, and for the combinations two emeralds and one diamond; two rubies and one diamond; or two opals and one diamond. Measure size of finger carefully with narrow slip of paper, and send this with order. The rings are sold only to subscribers or their families.



No. 81.

No. 66.

No. 79.

No. 55.

THE RURAL NEW-YORKER, NEW YORK.

As We Go to Press.

STRONG ARGUMENTS.

We have all heard of "women farmers." THE R. N.-Y. has a number of them on its list. They are usually good farmers and ideal subscribers. What do we mean? Well, read this note from a Connecticut woman who has just sent us a new subscription:

The man came to ask me if he could sell me any milk. He asked how many head of cattle I kept, and I told him 30, besides my three horses. He wanted to know how long my feed would last. I told him I expected it would last until I turned out in May. Well, it was fun to look at him. He owns 130 acres and I only 20, and five of that are of no use. I told him I depended on THE R. N.-Y. to help me, and he guessed he would try it, so send it to him as soon as you can.

Certainly, Madame—it goes at once! Now this lady is a good farmer—as is evidenced by the fact that her barns and silos are well filled with the products of her small farm. We call her an ideal subscriber because she does not hesitate to say, right out, that THE R. N.-Y. has helped her. You see she gave that man to understand that the dollar which she invested in THE R. N.-Y. had swollen so that it nearly cracked the silo and hay mow. Of course the man had a dollar to invest in the same way. Her remarks were certainly "words fitly spoken," and every reader of THE R. N.-Y. might easily do as much. Some men say they will never let a woman beat them! In a case of this sort they ought to get two new subscriptions in order to keep ahead!

10 Weeks for 10 Cents.

We do not want our friends to forget these trial subscriptions this month. The cash prizes for clubs will be distributed January 1. The clubs are yet small, and anyone who can do a little work now for the remainder of the month can earn one of these prizes. This is the best time of all the year for the work. Our regular subscribers are responding nicely with these trial subscriptions. Small lists are coming in every day, but there are many yet to hear from. Every reader can certainly send at least one, and we still hope to hear from those who have not responded yet. We want to reach that 20,000 mark for trial subscriptions before the close of the year. We will send samples if you want them.

THE RURAL NEW-YORKER,
New York.

BOOK BULLETIN

FOR SALE BY THE RURAL NEW-YORKER.

THE AMERICAN STANDARD OF PERFECTION contains the authorized description in detail of all purebred varieties of poultry. It is the Bible of the Breeder, and no one who pretends to be up to date can afford to be without it. By its aid you can determine the quality of the birds you buy or sell, or the probable chance of winning of any you wish to send to a poultry show. It will be sent postpaid from this office for $1.

ASPARAGUS CULTURE, by F. M. Hexamer. This is a concise volume of 168 pages, which treats its subject very fully, discussing the most approved methods of growing the product, and preparing it for market. The methods given are not confined to any one locality, but extend over a wide range, from the Atlantic coast to California. Up-to-date methods of forcing asparagus are described, as well as outdoor culture, and insect enemies and diseases are discussed. It will be a valuable aid to any grower of asparagus. Price, postpaid, 50 cents.

A DEFINITE program for the weekly issues of The Youth's Companion for 1902 has already been arranged and printed, from which one can readily judge if the paper will be worth its cost for the coming year. The names and writers of the principal contributions are given, and one cannot look through the 28 pages of this prospectus without feeling that The Companion will be more interesting, more instructive and more inspiring than ever in the past. The Youth's Companion has now entered upon its fourth quarter of a century. As in the past so for 1902 the foremost men and women in the English-speaking world have been enlisted as contributors, while the work of an unprecedented number of new and promising writers has also been secured. Thus the constantly increasing demand for the best reading suited to all members of the intelligent American household will be fully met. More than 50 special articles by such men as President Roosevelt, Secretary Long, Bishop Potter and Lyman J. Gage, Secretary of the Treasury, will be given during the year, besides fully 200 stories by the most popular writers of fiction. Every issue of The Companion will possess real interest for every member of the family. Those new subscribers who send their subscriptions to the publishers at once will receive all the weekly issues of The Companion for the remainder of 1901, as well as the beautiful Companion Calendar for 1902.

THE RURAL NEW-YORKER,
409 Pearl St., New York.

MARKET NOTES

POTATOES are 50 to 75 cents per barrel higher than three weeks ago. The cause appears to be the disinclination of farmers to sell at present. Those who had made up their minds to sell early, either because of lack of storage facilities or the belief that prices would not be higher, have disposed of their crop, while others have decided to hold until Spring. These high figures, however, are likely to change the minds of some holders, and draw out extra supplies. Just at present is a favorable time to dispose of potatoes in this market, though there is no certainty that these conditions will last long, as considerable foreign and western stock is on the way.

POP-CORN NOTES.—A reader asks about the market for this in New York. Dealers have had such severe losses on account of the corn getting wormy that they are cautious about stocking up heavily, and few can be found who care to take any large quantity unless they see an immediate outlet for it. Most of the corn retailed is shelled and put in packages holding about one pound. If in good condition when put up, and kept airtight the corn saves very well, although we have seen packages where the contents when emptied would remain solid, being full of webs. To be best the corn should be at least a year old, as the new crop is not considered fit for use. A man who handles large quantities of corn gave me the following startling explanation as to why it becomes wormy: "Now that corn, if it is kept cool, will be all right until next Summer. Then the heat will make the life of the corn change to a worm which will eat its way out and turn into a moth miller, the same kind that eats your clothes in Summer. It's easy enough, just simply vegetable life changing to animal life." This way of accounting for it seemed perfectly reasonable to him, although it reminds one of the snake that swallowed himself, and would hardly pass muster with the scientific men.

LATE COMERS.—"Yes," said a poultry man on November 29, "there are 10 barrels of turkeys that should have been here three days before Thanksgiving, and there are more on the way now that were meant for this trade. It is hard to get people who make shipments for the holidays to send them early enough. If that poultry had been here in time, we could have sold it all, but now it will have to be held over for several days." Trade after a holiday is usually dull, but little being done during the remainder of the week following Thanksgiving. The market was badly upset for several days on account of the large quantity of left-over stock, the heavy receipts and mild weather. Prices dropped three to five cents per pound, and considerable quantities had to be put into storage, although so poor as to be scarcely worth holding. There is a general complaint that poultry is thin this year, as the prices of grain have been too high to feed heavily. Of course, the transportation companies are often responsible for the delay of shipments on account of the extra work at such times. The safer plan in shipping is to make allowances for such things and send a little earlier than seems necessary rather than run the risk of being too late. Those who have poultry for the Christmas trade can make money for themselves and accommodate their selling agents by bearing this in mind. W. W. H.

Apple-Eating Birds.

In the issue of November 16, page 770, H. S. M. makes serious charges against certain members of the Apple Consumers' League, and asks the League for its aid in getting rid of the objectionable members, even to the extent of adopting the southern policy of shot-gun tactics. I am strongly inclined to believe that H. S. M. has not been a very close observer of the habits of the woodpecker family, and more especially of the menu from which they choose their daily diet, else he would not ask aid in a movement looking towards their extermination. I have seen a member of the family work for 10 minutes to get at the larvæ of some insect in the wood of a maple tree, when the tentless caterpillar fairly covered the outside of it. As a family the woodpeckers are most diligent and persistent workers, and almost invariably in the interests of fruit growers and horticulturists. Their bill of fare is largely made up of foods which are beyond the reach of other species, as nature has given to them special implements (a chisel-like or wedge-shaped bill and elongated tongue with barbs near the end) with which they can supply their daily needs. In August I saw a Downy woodpecker alight on an apple and peck into it. When he had flown away I secured the apple, and on opening it, found evidences of the recent work of the larvæ of the Codling moth. It might be possible that those members of the A. C. L. whom H. S. M. desires to have expelled or exterminated are, after all, the most useful members of the organization, and that their work, of which he so bitterly complains, was protective, rather than destructive, and at that late day, they were trying to make amends for what he failed to do earlier in the season. They dig insects and their larvæ out of trees, and contrary to prevalent impressions, their boring does not seem to injure fruit trees. The numbers of noxious insects these birds destroy is simply incalculable, and what little fruit some of them steal is not to be mentioned in the same connection.

New York. A. R. E.

Oleo and Milk Rogues.

The following parties have received a small slice of justice at the hands of the State Department of Agriculture:

MILK.

Warwick Valley Milk Association, 1279 Broadway, $75 and costs.

Ed. D. Pierson, 325 E. 120th St., $100 and costs.

Ed. Shoemaker, 316 Willis Ave., New York City, $50 and costs.

Benjamin Wacht, 53 Moore St., Brooklyn, $50 and costs.

Jos. A. Rudoif, 513 42nd St., New York City, $100 and costs.

Wm. Jordan, 207 East 36th St., New York City, $50 and costs.

Manhattan Dairy Co., 1315 Amsterdam Ave., New York City, $100 and costs.

Wm. Schmidt, 138 7th St., New York City, $90 and costs.

Henry Schneider, 402 East 12th St., New York City, $100 and costs.

Mutual Milk & Cream Co., 322 East 103d St., $250 and costs.

OLEOMARGARINE.

Gustave Strunck, 359 First Ave., New York City, $25 and costs.

Michael O'Brien, Jersey City, (wagon), $250.

Ernest Lentz, 146 Fulton St., Brooklyn, $75 and costs.

Otto Ling, 116 Myrtle Ave., Brooklyn, $50.

Henry Dunker, 3009 Third Ave., New York City, $100 and costs.

Grandpa

Everybody's proud of this sort of Grandpa, and he's proud of himself; proud of his clear brain and active body. There are other kinds of grandparents that we can't be proud of. Weak of body and feeble of mind, we can only pity them. They no more live; they only exist. What makes the difference between these two classes of old men? A sound stomach and a plentiful supply of pure, rich blood. Dr. Pierce's Golden Medical Discovery strengthens the stomach, purifies the blood, and increases the activity of the blood-making glands. It won't make old men young, but it will enable old men to assimilate the food they eat, and so strengthen them for a life of reasonable exertion.

"I suffered for six years with constipation and indigestion, during which time I employed several physicians, but they could not reach my case," writes Mr. G. Popplewell, of Eureka Springs, Carroll Co., Ark. "I felt that there was no help for me; could not retain food on my stomach; had vertigo and would fall helpless to the floor. Two years ago I commenced taking Dr. Pierce's Golden Medical Discovery and little 'Pellets,' and improved from the start. After taking twelve bottles of the 'Discovery' I was able to do light work, and have been improving ever since. I am now in good health for one of my age—60 years. I owe it all to Dr. Pierce's medicines."

Old people often need a laxative medicine. The best for them is Dr. Pierce's Pleasant Pellets.

WHEN you write advertisers mention THE R. N.-Y. and you will get a quick reply and "a square deal". See our guarantee 8th page.

A CURE FOR ASTHMA.

Asthma sufferers need no longer leave home and business in order to be cured. Nature has produced a vegetable remedy that will permanently cure Asthma and all diseases of the lungs and bronchial tubes. Having tested its wonderful curative powers in thousands of cases (with a record of 90 per cent permanently cured) and desiring to relieve human suffering, I will send free of charge to all sufferers from Asthma, Consumption, Catarrh, Bronchitis and nervous diseases, this recipe in German, French or English, with full directions for preparing and using. Sent by mail. Address with stamp, naming this paper, W. A. Noyes, 847 Powers Block, Rochester, N. Y.

BRAND NEW STEEL ROOFING

Bought at Receivers' Sale. Sheets either flat, corrugated or "V" crimped. No tools except a hatchet or hammer is needed to lay the roofing. We furnish free with each order enough paint to cover and nails to lay. Price per square, $1.75

A square means 100 square ft. Write for Free Catalogue No. 67 on General Merchandise. Chicago House Wrecking Co., West 35th and Iron Sts., Chicago, Ill.

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brings quick relief. Scratches, Grease Heel, Mud Fever (that defied treatment for years); Abscesses, Stinging Sores, Hoof Rot, Mange, all Inflammatory Swellings, Old Sores and Skin Disease

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2 oz., 25c.; 8 oz., 50c.; 5-lb. pkge., $4.

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The "P. S. Bartlett" Waltham and the "G. M. Wheeler" Elgin are as good watch works for men as we have ever seen.

Men's Size Watches.

"P. S. BARTLETT" OR "G. M. WHEELER."

We give you your choice. They are full 17-jeweled watches. They are adjusted by experts and are first-class in every respect. They come cased at following prices, including free safe delivery:

In solid ore-silver case, open face	$12.25
In sterling silver case, open face	13.88
In sterling silver case, 3 oz. case, open face or hunting	16.15
In 25-year gold filled case, open face	18.56
In 25-year gold filled case, hunting	21.37

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14-K. GOLD-FILLED CASE.

FULL 15-JEWELED WORKS.

No. 7 is a lady's full 15-jeweled hunting case watch. The works Waltham or Elgin. The case is 14-Kt. gold filled, guaranteed to 25 years. Price delivered in good running order, $14.50.

All watches are fully guaranteed. Money returned if not satisfied. The watches are sold only to subscribers. You can get any watch free by getting up a club of subscriptions.

Address

THE RURAL NEW-YORER, NEW YORK.

Live Stock and Dairy

HOLSTEIN BREEDERS TALK.

Are Holstein breeders generally satisfied with the results in the Model Dairy at Buffalo? Should the value of the skim-milk be added to record of each cow, and if so, why?

Our opinion is that a cow should be credited with all that she produces, and hence we think the Holsteins would have made a better showing in the Model Dairy, for they gave much more milk, and the skim-milk, fed to Holstein calves or even to pigs, would have been quite an amount in this case.

East Claridon, O. KNAPP & PIERCE.

I do not find the Holstein people dissatisfied with the results or the system and management of the Model Dairy test, as they had prizes giving credit for total products, and which you will note were won by Holsteins, which shows that the Holsteins are the most profitable for farmers to keep, as they not only made the most profit in total products, but also made largest net gain in weight. The only objection which I can make, and which is made by the majority of Holstein breeders, is the manner in which those results were published, as the column for total products was always omitted. You will note that the prize for net gain in total solids was won by Holsteins by a net profit of $26.44 and the prize for net profit in total solids and gain in live weight was also won by Holsteins by a net profit of $31.63. Prizes for net profit in butter fat were won by Guernseys by a net profit of $4.66, and prizes for net profit in churned butter were also won by the Guernseys at a net profit of $5.86. This not only shows that Holsteins are the most valuable "all-purpose cows," but also that Holsteins are the only "dual-purpose cows." W. M. BENNINGER.

Benningers, Pa.

In simple justice, as long as every pound of food the cow consumes is charged to her, why should she not be credited with every cent's worth of her product which has a distinct market value? Skim-milk is selling in the Cleveland market at 55 and 60 cents per 10-gallon can. There is a demand upon Dellhurst Farm for more than they can produce at 40 cents delivered on the cars in Cleveland; it costs us 15 cents per can to deliver. We think the only fair way to make a comparison of the business value, without prejudice as to the breed of cattle, is to charge them with all they consume and credit them with every cent they produce. The test of the value of butter fat is what it can be sold for on the market, and skim-milk should be judged on the same basis. Perhaps this is putting my favorite breed, the noble black and white, on too cold a business basis; but it seems to me eventually they must stand or fall accordingly. H. B. VAN CLEVE.

Mentor, O.

MARKET VALUE OF FEEDING STUFFS.

How do we determine the value of the component parts of a ration (separately)? What is the market value of the protein, carbohydrates and fat as shown in the table in THE R. N.-Y. of November 2? If I knew the price per pound on the various elements, I could use the feeding tables more intelligently. G. H. T.

Bloomington, Ind.

There is no market value in the ordinary sense, placed on the protein in a feeding material, or carbohydrates and fat. Chemists, however, on the basis of numerous feeding trials and chemical analyses, regard the digestible protein in one feeding stuff to be of the same value pound for pound with that in another feeding stuff. In the same way, the carbohydrates in one feed have the same food value that those in some other feed have. There is no market value, however, for a pound of protein, although those foods richest in protein are nearly always the highest priced. The market value of a food is largely based on its abundance. For example, when bran is very abundant, and other feeding stuffs quite common, bran will be cheap. I have bought it in Lafayette, Ind., for as low as $8 a ton. Now, however, it is scarce, and is $20 a ton. Further, the price of bran seems to have no essential relationship to a large or small wheat crop. Several experiment stations, notably those of Connecticut, Vermont and Wisconsin, have endeavored to place a money value on the nutrients in concentrated feeding stuffs, but thus far no satisfactory results have come from this. As Henry says in his work on "Feeds and Feeding": "At present it is impossible to state the value of one feeding stuff in terms of another, from calculations based upon the nutrients contained in each." We do know, however, that if 1,000 pounds of cornmeal contain 80 pounds of digestible protein for an animal, and 1,000 pounds of gluten meal 250 pounds, then the latter contains three times the feeding value of the former so far as protein goes. In such a case, where there is so much difference, the one having the least protein contains the most carbohydrates, so it is necessary to consider the other nutrients besides protein, if buying in the market. It, however, is quite well understood that those foods containing the most protein have their greatest value for producing lean meat or muscle, or milk, or supplying work, while the carbohydrates and fat have their chief values in fattening. Protein foods are also of great value for growing animals that are not to be fattened, or for breeding animals. But as I have said before, we have no satisfactory money standard to establish uniform food values by.

The feeding value of foods was originally determined through feeding experiments on animals. Samples of the foods used were first analyzed by the chemist, and later the manures and excretion carefully collected and analyzed. The gains in weight or in animal product showed the amounts of digestible nutrients in the food, after deducting the losses in excretion from the original food analyzed. From such analyses and experiments our feeding tables have been prepared. C. S. PLUMB.

The Winter Lamb.

Following is an interview with Clark Allis, who has made a success of this business:

How long have you been raising early lambs?

I always liked sheep, and have been at it since I was a boy 10 years old. Of course I have tried many breeds. From Henry Stewart's book I got the idea that the Tunis would be good for Spring lambs, as there was no difficulty in getting them to breed early, and I have found them by far the best of any breed tried.

How do they compare with Shropshires?

The Tunis is an ordinary farm sheep, and has not been fitted for exhibition purposes so thoroughly. It is in raising early lambs that they show their true worth. We killed eight lambs for New York Thanksgiving trade. Six were Shropshires and two Tunis grades. The Tunis had as much fat on one caul and kidney as two of the Shropshires. All of the lambs had been on good pasture, and only one, a Shropshire, had had any grain.

How about Dorsets?

I used them for several years, but a comparative test with the Tunis showed that the latter brought from $1.50 to $2 more per head. I now have about 60 Tunis, the fattest lambs I ever saw together, and neither they nor the ewes have had any grain. I never saw a Tunis grade that was not fat on his kidneys, and that is what sells a Spring lamb.

How are they for wool?

Tunis wool brings the highest price of any I produce.

How do they compare in live and dressed weight with others?

In lambs of the same live weight a Tunis will dress from two to four, and, in case of fine wool lambs, six to eight pounds of the highest quality of mutton more than any other breed I have tested.

Notes from Milk Producers.

Skimming station paid producers for the month of October 90 cents to $1 per 100 pounds, station returning skim-milk to producers. The milk shipping station paid 94 cents net per 40-quart can for October; November they pay $1.05. About 75 cans are handled daily by shipping stations. Our creamery has not been rebuilt. Oats held firm at 45 cents per bushel; yield very light and very inferior in quality. Corn, 60 cents per bushel; wheat bran, $21; wheat middlings, $22; gluten, $26; hay $8 to $10 per ton; stock generally in good condition. Cows are selling for $25 to $35; sheep, $2 to $3 per head; lambs, 3½ cents per pound; choice or extra, four cents per pound. Many farmers are selling their entire flock with the view of going into the dairy business. M. D. W.

Spencer, N. Y.

The milk from this locality is all shipped to New York and to the Borden Condensery at New Berlin. At our station at River Forks we have a contract with the Mutual Milk & Cream Co. of New York, for six months beginning October 1. The price for October, February and March is 2¼ cents per quart; for November and January, 2½ cents, and December, 2¾ cents. At present there are about 95 cans per day received and shipped. They pay monthly on or before the 10th of each month. Cows are in good condition and fodder plenty; some hay is being baled and shipped from this section. Feed of all kinds is very high; cornmeal, $26 per ton; hominy and gluten, $25; bran, $22. Farm hands are geting from $13 to $15 per month and board and washing. The farmers are wondering what the end will be.

Unadilla Forks, N. Y. H. P. C.

The milk business is conducted about the same as last reported. We are shipping from Stanton Station about 15 cans daily. The majority of this goes to Perth Amboy. The price received is $1.20 per 40-quart can (net to the shipper) for the six Winter months. The shipping station at Sunnyside is operated by James Wyckoff, who also operates a station at Clinton, the same shipping from 15 to 20 cans daily. The producers patrons of the shipping station receive New York Exchange price, less one-half cent per quart as station charges. Cows will go into Winter quarters in good condition generally. The price of feed is high; corn and oats feed, $1.35 per 100 pounds; bran, $20 per ton; shorts, $24; brewer's grains, 26 cents per 100, which makes the price of milk too low when compared with the price of feed. J. B. Anderson, one of our progressive dairymen, is laying the foundation for a new house on the top of the mountain to correspond with the round barn erected three years ago. The place is known as Rockland Farm. He has a herd of 30 grade Jerseys. W. A.

Stanton, N. J.

Anybody

can keep his horses free from all forms of **Lameness**, curbs, splints, contracted cord, thrush, grease heel, etc., by treating promptly with

Tuttle's Elixir.

Used internally it cures Colic, Distemper, Founder, Pneumonia, etc. **Used and endorsed by Adams Express Co.**

Dr. S. A. Tuttle.—Dear Sir:—I have used your Elixir on one of the worst spavins that I ever saw on a horse, and it entirely cured the lameness. I also used it for rheumatism in my family, with just as good a result, and will cheerfully recommend it to anyone in want of a liniment. O. B. GOVE, Waits River, Vt.

TUTTLE'S FAMILY ELIXIR cures rheumatism, sprains, bruises, etc. Kills pain instantly. Our 100-page book, "Veterinary Experience," **FREE.**

Dr. S. A. TUTTLE, 30 Beverly St., Boston, Mass.

Beware of so-called Elixirs—none genuine but Tuttle's.

Avoid all blisters; they offer only temporary relief if any.

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do a little pleasant and profitable work for us in your own town? No experience necessary. We will explain just what you have to do. The work will be light, and we will arrange for the time you shall be able to give to it. We can give you work for all your time or just for your spare time. Write for full particulars. THE RURAL NEW-YORKER, NEW YORK.

Breeders' Directory

JERSEY BULL

Yearling—registered, from a great show cow; almost faultless, by a producing sire. Farmer's price. R. F. SHANNON, 907 Liberty St., Pittsburg, Pa.

123 HOLSTEINS all ages, for Sale DELLHURST FARMS, Mentor, Ohio.

FOR SALE—Thoroughbred HOLSTEIN-FRIESIAN CATTLE of the best families. Also, 30 high-bred Bulls at reasonable prices. Write the MAPLES STOCK FARM, Binghamton, N. Y., WM. ROOD, prop.

For Sale—PUREBRED HOLSTEIN-FRIESIANS from best families. Two registered bulls ready for service and bull calves. Also have purebred BERKSHIRE SWINE and SCOTCH COLLIE PUPS at low figures. Write for breeding and prices. W. W. CHENEY, Manlius, N. Y.

Jersey Bull—18 months; solid color. No further use. Good size; dam 14-lb cow; sire better; kind & fine; won 6 prizes. Cheap: write at once

Mammoth Bronze—No better; y'g toms, 20 lbs. Shine like metal fine; $6 pair

Prolific Swine—3 sows, farrowed 39 pigs. Pairs not akin. CHESHIRE. Send 2-c. stamp for illust'd catalogue. history, etc. C. E. CHAPMAN, Peruville, N. Y.

$23.75 for top Poland-China sow, bred for Spring. These are the mellow, easy keepers. $10 for Sept. pigs. K. HAWK, Mechanicsburg, Ohio

Reg. P. Chinas, Berkshires and C. Whites.

Choice Pigs, 8 weeks old, mated not akin. Bred Sows and Service Boars. POULTRY. Write for **hard times prices** and free circular. HAMILTON & CO., Rosenvick, Chester Co., Pa.

2000 FERRETS. First-class stock. Some Trained. New Price-list free. N. A. KNAPP, Rochester, Lorain Co., O.

ANGORA GOATS are handsome, hardy and profitable. Prize stock. Low prices. Large cir. E. W. Cole & Co., Kenton, O

Light Brahmas and White Plymouth Rocks. Fine birds of each fit to show. Thirty years a shipper of Fine Poultry. J. A. Roberts, Malvern, Pa

For Sale—300 Choice Barred and Buff P Rocks; also White and Silver Wyandottes. Price reasonable. DR. S. C. MOYER, Lansdale, Pa.

BARGAINS—200 cockerels at $1 each. Buff Wyan; Buff Rocks; S. C. White Leghorns; R. C. Brown Leghorns. Everyone a thoroughbred. A. B. KATKAMIER, Macedon, N. Y.

Cockerels—Choice W. Wyan., P. Rocks, Brahmas, Cochins, Leghorns, from prize-winning stock. 23 varieties of land and water fowls. Satisfaction guaranteed. Big catalogue free. Pine Tree Farm, Box T, Jamesburg, N. J.

MAPES' VENTILATING DRUM *Utilizes Animal Heat.* Heat your hen roost with absolutely no expense for fuel. Warranted to secure a constant circulation of pure air, and a temperature above 40 degrees in zero weather. Full directions with each drum. Price, $3.50. MAPES' VENTILATING CO., Middletown, N. Y., Box 205.

HOMING PIGEONS—Twenty-five pair, guaranteed. Stock at $1 per pair. S. B. ARTHURS, Brookville, Pa.

Collie Pups—Spayed Females. Circulars. SILAS DECKER, South Montrose, Pa.

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DAIRY AND FARM NOTES.

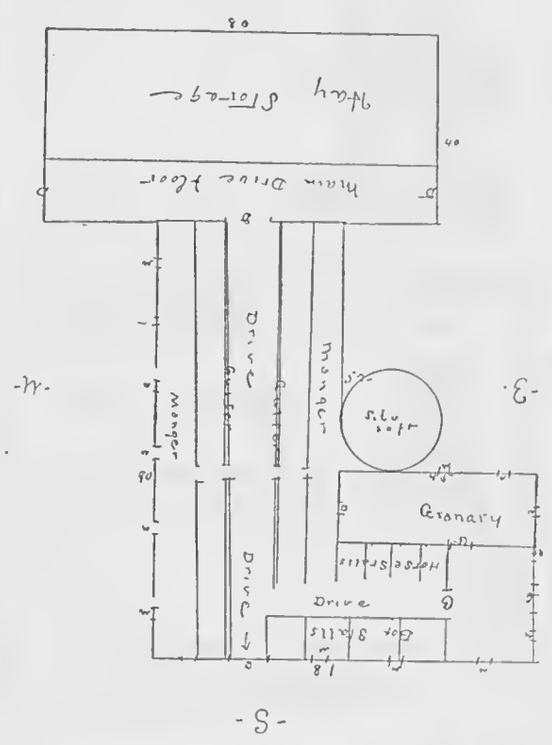
Building a Dairy Barn.

PART III.

COST AND CONVENIENCE.—It is always useless to write about impossibilities when discussing questions from a business standpoint. Value comes to us not from what we know, but from its execution. In talking about barns I hope the impression may not remain that buildings must be expensive to be valuable. At the same time, remember that a good job cannot be done cheaply. I write for those like myself, who have moderate means. A lack of working capital is our greatest agricultural hindrance today. I have some ideas upon associated farming which in a way are being carried out on Union Home Farms, that I hope some time to put into print, that bear directly upon the point in question. Some of the most ill-planned and unsatisfactory barn construction, particularly the stabling, has been upon farms owned by wealthy men. Return for a moment to the idea given on page 798 relative to disease. The question of temperature, as a rule, takes precedence over moisture, or, more clearly stated, farmers seem to think that an animal is under greater strain and discomfort out in the zero day even though the atmosphere is quite free from moisture, than upon a day 20 degrees warmer but in an atmosphere full to saturation. In my judgment this premise is wrong, and I am not sure but it may be a cause of frequent cold and subsequent lung trouble and tuberculosis.

DAMPNESS AND DISCOMFORT.—I have in mind the New Jersey cows one year ago during November and the first half of December, as seen from carriage and railroad out of doors from early morn till close of day, and frequently all night unhoused, simply because it was not cold. Yet their attitude evidenced the fact that they were not comfortable; the cause, damp air. Arriving home about December 15 I found our section in the throes of midwinter weather and zero temperatures. At this same time our own cows were far more comfortable, housed in light, dry, warm stables, and anyone seeing the marked contrast in weather conditions would at first hardly believe my story, but I know I am right. Now this cool damp air is much the same, whether found in the outdoor air of the Middle Atlantic coast and adjacent regions, or in a cow stable anywhere, and our first effort should be to get rid of it. In my experience it has been difficult to build all parts equally satisfactory. There must be more or less subordination of the working parts, with some one feature leading. The leader on a dairy farm should always be the stable, for it is in use every day, and our machinery, which is locked up in the vital force found there, if not in working condition develops friction and consequent loss. Hay storage, silos, granary and all appurtenances connected with the building must take second place. Since silage has come to be a dependent stock food the immense hay storage of former years has not been needed, and again early cutting of hay reduces space required. Not much more than half the space is required for storing a given amount of food when cut before July 1 in our latitude as delayed three or four weeks.

LABOR-SAVING DESIGNS.—This brings us to form. Shall the building be round, square or rectangular, with greater length than breadth? In some measure these questions are answerable only by the builder, who should first study his needs and limitations. I have no experience whatever with the round barn, and am therefore not qualified to discuss its merits or demerits. I have always studied to save steps in daily work about the barn, because what is performed daily, although the saving seems small at the time, may in the aggregate far outweigh some apparent extra cost in crop handling which comes but once a year. The diagram of the working parts of barn built in 1900, Fig. 382, may serve us best. First notice points of compass, giving a southern and western stable exposure, admitting light and direct sun's rays as previously mentioned. It will be observed that the working parts are all upon the ground, quite contrary to the accepted designs for a strictly modern barn. I worked out this plan, however, after using for 12 years a two-story barn possessing equivalent or slightly greater capacity, and the use of the two barns under quite similar demands rather favors the more recent plan. The only added expense in first construction is the roofing, but this is offset by the very cheap frame, and general construction of the hay storage. Much of the labor is thus saved which we find involved in a double floor. This barn is not without storage capacity over the stable—used mainly for straw after thrashing and hay for horses. It was first planned to build the stable without floor above, bringing the eaves low and having really a warm shed. A



PLAN OF DAIRY BARN. FIG. 382.

very serious objection appeared, and the plan was not matured.

HIGH CEILINGS.—The ancient cow stable was not intended for a tall man, six feet being the usual space between floor and upper joists. The modern stable is too often built with the other extreme, 12 to 16 feet in the clear, and the greater the effort to build wisely and expensively the higher the ceiling. I would like to ask the reader whether he ever went into a stable of this description and met that warm comfortable feeling at the door that one should meet on a wintry day, or, in fact, any time? In my observation these stables may have been clean and sanitary from every other point of view, but here we find throat and bronchial troubles, and I could cite several cases of tuberculosis that developed in these cool, damp, high-ceiling barns. I could not see any way out of the shed system and not have this same objectionable feature. In them it becomes an impossibility to maintain a relatively high temperature without artificial heat. A good, well-fed cow should lie down at least half of the time. She is within three feet of the floor, the coolest place in the room, having no use for the warmer air 12 feet above. I concluded that nine feet was a happy medium, considering both appearance and utility; for utility alone eight feet is sufficient, and a small stable holding 10 or 15 cows will not have a low appearance, but a room 100 or 150 feet long with a suitable width will appear out of proportion with that height. A safe working principle always is, first utility and secondly appearance, but general appearance should always be kept in view. H. E. COOK.

Bone-Making Food Needed.

I have never fed ground bone to my cows. I do not believe it could be necessary, from the fact of my soil being on limestone hills and clay. The hay, grass and fodder thus grown carries sufficient lime and bone material. Horses raised on this soil have very good feet and bone. It might appear to be a needful material to supply in the ration of growing young stock if fed heavily on corn and cornstalks and Timothy hay. To a full-grown, mature cow requiring but very little to maintain bone growth I would expect but little benefit from feeding ground bone. The hen requires it because of the lime and bone material in her production. The hog gets but very little bone material from his ration of corn and water. The hog on pasture does not require the bone meal as much as one kept on corn ration. I can see where a cow supporting an embryo calf, and fed largely on corn and grasses and fodder grown on very low wet land might produce a larger-boned calf by being well supplied in her feed with some bone meal. It is not the heavy ration that injures the dairy cow as much as it is the unbalanced ration, and to balance the ration perfectly or nearly so for a working dairy cow the whole year through in our climate should be very carefully studied and her condition observed.

Oxfordville, Wis. H. C. TAYLOR.

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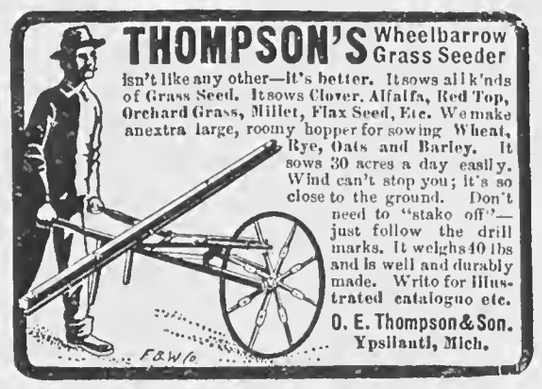
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Cornered and beaten in its misrepresentation as to the Buffalo separator awards, one of our desperate would-be competitors now reverts to its lying misrepresentation as to the Paris Exposition awards in 1900.

The following official statements speak for themselves:

STOCKHOLM, December 5, 1900.

By request the undersigned hereby testifies that Aktiebolaget Separator [the European De Laval organization] was awarded the GRAND PRIX on its exhibition of cream separators by the International Jury.

(Signed) HENNING ELMQUIST,
Secretary Royal Paris Committee.

(Cablegram) STOCKHOLM, April 2, 1901.

We hereby positively certify that Aktiebolaget Separator of Stockholm [the De Laval European organization] were awarded the GRAND PRIX for their Alpha-De Laval separators at last year's Paris Exposition.

(Signed) THE SWEDISH PARIS COMMITTEE.
(Signature legalized through the Anglo-American Telegraph Co.)

U. S. CONSULATE GENERAL,
STOCKHOLM, Sweden.

From evidence this day furnished me I am able to certify that the Separator Company, Ltd. [Aktiebolaget Separator] of this city did receive the "GRAND PRIX" for their Alpha-De Laval separators at the Paris Exposition, in the year 1900, as per announcement in the "Journal Officiel", Paris, of Aug. 18th, 1900, this day presented at this office.

In witness whereof I have hereunder set my hand and affixed my seal of office on this 17th day of April, 1901.

(Signed) CARL P. GERELL,
[OFFICIAL SEAL] U. S. Consul General.

Any assertion by anyone and however made that the De Laval separators did not receive the Grand Prize at Paris is simply and wholly a vicious lie, and is particularly aggravating in the case of the concern now insinuating such a thing because its manager was in Paris at the time the separator awards were originally announced and begged and pleaded through the American Government representatives that its own third grade award (on "U. S." cream separators) be changed to a second grade one, which out of special courtesy the French authorities finally conceded.

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HUMOROUS

These are the saddest days; once more,
In spite of all advice,
Dear little Willie hies away
With little Reginald and they,
Of course, break through the ice.
—Chicago Record-Herald

RECTOR: "Remember, my you friend, there are things in life bet than money." Young Friend: "Yes know that; but it takes money to them."—Tit-Bits.

MISS RURAL: "And were you never in the country during the season for husking bees, Mr. Sappy?" Sappy: "No. The idea! How do you husk a bee, anyway?"—Philadelphia Press.

"WOULDN'T we be surprised if we could see ourselves as others see us?" "Yes; but the others would be surprised, too, if they could see us as we see ourselves."—Philadelphia Press.

"YOU sparrows look gloomy this morning," remarked the tree toad. "Why shouldn't we?" replied the poor sparrows in chorus, "our bills are all over dew."—Philadelphia Press.

"ADMIRAL Schley improved in punctuation later on." "How was that?" "If he didn't wipe out the Colon when he should have done so, he put a full stop to it shortly afterward."—Cleveland Plain Dealer.

"I AIN'T done took de grippe myself yit, Brudder Gooseberry. My ole woman been poorly wid it, but she got ober it sho'tly." "I'se glad to heah dat, Bruddah Orchad." "Yes, she died wid it."—Christmas Lippincott's Magazine.

"Now I have an impression in my head," remarked the teacher. "Can any of you tell me what an impression is?" "Yes, I can," replied a little fellow at the foot of the class. "An impression is a dent in a soft spot."—Kansas City Star.

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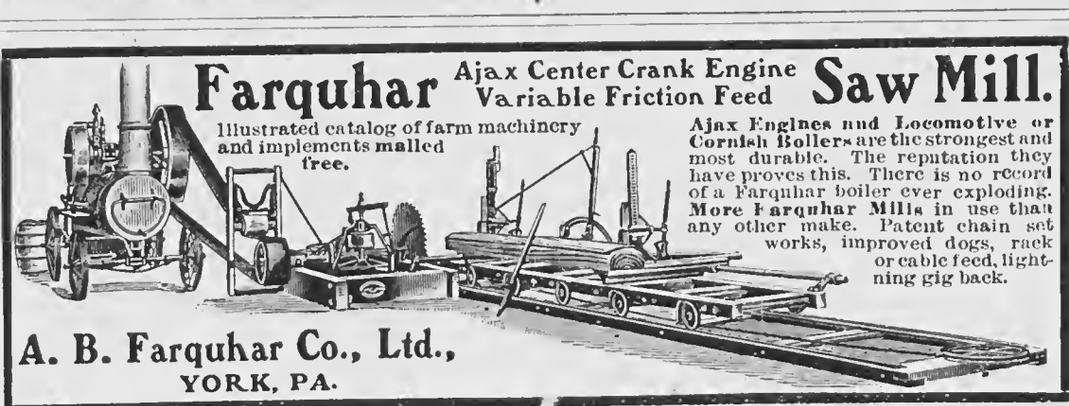

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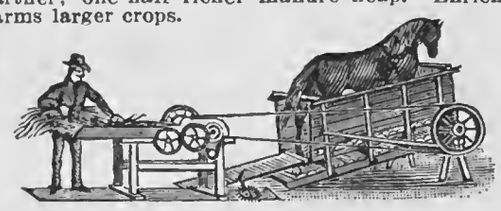

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DEC 20 1901

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

PHOTO ENG. CO. N.Y.

VOL. LX. No. 2708. NEW YORK, DECEMBER 21, 1901. $1 PER YEAR.

A QUARTER CENTURY WITH FERTILIZERS

THEY HAVE KEPT THE FARM PRODUCTIVE.

Must Use Enough of Them.

I see that on page 760 you call for the experience of those who have used commercial fertilizers to maintain the fertility of land in farming. I have used fertilizers as the chief source of plant food in my farming for 25 years, and have used most of the time from 10 to 20 tons per year. As the result of my experience I should have no hesitation in undertaking to grow crops and maintain soil fertility with fertilizers under almost any conditions where I should be willing to attempt the same results with stable manure. To secure success with fertilizers one must inform himself as to the qualities of fertilizers, and select such as will do the work he desires. If properly selected and used, I think the results are as lasting with fertilizers as with manure, and I have tested them side by side for the purpose of observation. When fertilizers are used sufficient provision must be made to maintain the supply of humus in the soil, and also to correct soil acidity, which is more likely to occur with fertilizers than with stable manure. This is especially true of fertilizers as they have been compounded heretofore. It may be possible so to compound them as to obviate their tendency to produce soil acidity. In the present light on subject I have concluded to discard the use of forms of potash containing chlorine, hoping thus to attain that result. I think many cases of supposed soil exhaustion by the use of commercial fertilizers are only soil acidity. My own experience leads me to this conclusion. After I had used fertilizers several years I found the results were not as good as at first. Neither would crops grow as well when stable manure was used. From statements about liming land to correct soil acidity, given out by the agricultural stations (more especially the Rhode Island Station) I was led to test my soil with litmus paper for acidity. I found the soil was quite sour. I then sought to find the least expensive way to supply lime for the cure. I live where lime cannot be obtained cheaply; the best I could do was about $9 per ton for caustic lime at the railroad station. If I bought air-slaked lime, the increase of weight for actual lime, and the consequent increased cost of freight, made the cost of actual lime just about the same. I found, upon investigation, that wood ashes were about one-third lime, and, allowing for the value of potash and phosphoric acid in the ashes, and considering also that the ashes are already in good condition for spreading, I decided to use Canada ashes. I applied about one ton per acre with good results, and the next year I repeated the dose.

The result is, my land, some of which never had as much as one good dressing of manure in the 18 years I have cultivated it, now grows fine crops of hay. One lot produced three tons per acre at first cutting, and one ton per acre of rowen this year, which has been very favorable for hay in this vicinity. I use each year in Spring on grass a dressing of fertilizer costing from $5 to $7 per acre. One great reason for the belief that the use of commercial fertilizers produces exhaustion of the soil is the fact that users do not generally apply *enough*. Farmers who do not think of applying less than five cords of manure per acre for corn, and spread most of it broadcast, will expect 400 to 600 pounds of fertilizer per acre dropped in the hill to produce equally good results without exhausting the soil. If they should rot down the manure to make it fine and quickly available to the crop, and then try to grow corn by using only a small shovelful to each hill, they would find soil exhaustion approaching just as rapidly as by the use of 400 to 600 pounds of fertilizer per acre. When using fertilizer for corn I try to get one that will yield up its plant food gradually throughout the growing season, and apply 1,000 to 1,500 pounds broadcast; then use a small quantity of some more quickly-acting fertilizer in the hill. Such an application will be likely to bring a good crop of corn and leave the soil improved instead of depleted. For potatoes I use a more active fertilizer, 1,200 to 1,800 pounds per acre, and apply in the drill. Potatoes have only a short growing season, and need their food near by and ready for use. So in all cases, the farmer who aims to get best results must consider the needs of his crops and select the fertilizers to supply those needs, and make the supply *abundant*. I formerly kept 12 to 15 cows and three horses, but a few years ago I sold all my cows but one, and now rely almost entirely upon fertilizers to keep up the fertility of the farm. My reason for selling the cows was inability to attend to the dairy, and also to the fruit growing, which I now make my leading farm crop. I still cut as much hay as ever, but sell it. This present year I cut about 55 tons. I will recapitulate the points which I consider necessary to secure success with fertilizers:

Select such fertilizers as will supply the needs of the crops, and use them *abundantly*, and mainly broadcast. Watch for acidity of soil, and correct it by applying lime in some form. Keep the land covered with some crop *all* the time, Summer and Winter, which will go far to keep up the supply of humus, but if humus becomes deficient plow in a crop of some kind, preferably some legume.

M. MORSE.

Massachusetts.

R. N.-Y.—Mr. Morse gives a very clear statement of the method of farming that is followed by many eastern farmers. We do not consider that further argument is needed to demonstrate the *possibilities* of fertilizer farming. Still, it must be admitted that this system is a matter of locality, convenience or inclination. A younger man or one naturally inclined to stock raising might do better with cows, sheep or hogs — obtaining his supplies of plant food from manure. That is a matter which each farmer must settle for himself. The yearly profit on these fertilizer farms will probably average higher than that from farms employing equal capital in stock raising or general farming. That is our conviction after going over many farm figures carefully. If a man decides to use chemicals as his chief source of plant food he may well keep in mind the points made by Mr. Morse. Only high grade chemicals should be used and *enough* of them must be applied. The supply of humus in the soil must be kept up and this can usually be done by means of "catch crops," or crops grown between two money crops. The tendency of this sort of farming is to sour the land and lime or ashes should be used at intervals. Mr. Morse finds wood ashes best for his locality but this may not be true in all cases.

LOAFING AT THE BRICK BAKE OVEN. FIG. 383. SEE PAGE 858.

Winner of First Prize in Photographic Competition.

SEEST thou the man with the chip on his shoulder? Let him carry it. You will probably hurt your hand if you try to knock it off.

FEEDING HORSES ON WHEAT BRAN.

Is It a Dangerous Food?

We recently received the following letter:

I feel impelled to write to you about the horse feed question. I should feel guilty if I did not, knowing and seeing what I do. I should advise against feeding bran, as I have seen a number of horses die from the effects of it, and consider it very dangerous to feed it in much quantity, as it wears the intestines thin, and when inflammation sets in they burst easily. I think I feed my horses as cheaply as anyone can on bran and meal. I feed four quarts of corn and four quarts of oats to a large team, three quarts corn and three quarts oats to a 2,200 pound team. Cost for four horses, 57 cents a day. Cost on the average, 14½ cents a day. Our horses do about six or seven hours' work a day, generally very hard, as I pull a heavy load or else use a sulky plow in heavy sod. I have a friend who for two years has kept three horses weighing about 1,200 pounds apiece. His method is this: He feeds at noon four quarts of oats, at morning and night he feeds two quarts of whole corn soaked in scalding water for 12 hours. His horses look as well as any I ever saw, and work exceedingly hard. I consider this better than taking the risk of killing some of my horses, which would be certain with bran or cornmeal. I feed 12 pounds hay, three pounds in morning, one at noon, and eight at night. H. J. B.

Marion, Conn.

This was so contrary to our own experience that we wrote H. J. B. asking him for further facts. He then wrote as follows:

Three years ago I lost a horse from the use of bran. At that time I had a middle-aged New Yorker working for me who had had a great deal of experience around the country. He said he knew of a good many cases of it. Since that time I have been on the outlook for cases of this kind, as we do most of the doctoring of farm animals about here, and also conduct a bone yard or skinnery. I have had a good chance to observe such things. Since my horse died I have skinned and opened four horses which died of colic, all but one from the effects of bran. We have also had two very bad cases caused from it. I also notice that a large number of horse books advise against the use of bran as a regular food for horses; also against the use of bran of any kind.

We have also consulted some of the best horsemen in the country:

What a Veterinarian Said.

Bran is a perfectly wholesome, nutritious and easily digested food for horses, provided it be clean. If evil effects have followed the feeding of bran, it must be because the bran is heated or because it is contaminated with some foreign substance. A warm bran mash is prescribed by veterinarians for horses that are ill and that need to be tempted by a specially dainty food, and to be nourished by food that is exceptionally soothing to the digestive tract and easy of digestion. To my knowledge no harm and much good has resulted from this product. The only objection to the heavy feeding of bran to horses is that it is likely to cause looseness of the bowels. One can readily tell by experimenting how much bran a horse will stand. The laxative effect of bran is more noticeable on horses that are working than on horses that are resting in the stable. It is well to remember that the diet of the working horse should contain a large quantity of carbonaceous material, and that bran is altogether too rich in proteids to be used as a large constituent of the diet of the horse.

Pennsylvania. LEONARD PEARSON.

A Horse Trainer's Experience.

In regard to feeding horses bran, we always prefer putting in a quart of dry bran to about three quarts of oats for general feeding, or in about that proportion. The reason for this is, that the animal masticates the oats better and eats more slowly, and we believe it wholesomer than the four quarts of oats alone, and get better results. In feeding weanlings, the hardest season to make the little fellows grow is through the cold weather. We boil the oats twice a day for them, and while they are hot we put in about one-third Winter wheat bran, thoroughly mixing and then let it stand about an hour before feeding. In our opinion this is one of the best feeds for growing young horses. You can winter a horse very nicely on bran and good hay, if he is not working hard. I do not believe it would give entire satisfaction to feed too much bran for regular road use, as it is liable to cause loosening of the bowels, and cold and inflammation set in. I think I have answered all your questions and given you Village Farm's experience. You well know we have been successful in breeding the best race horses that have been bred in this country, also the most successful farm in bringing out prize winners in the country. VILLAGE FARM,

East Aurora, N. Y. John Bradburn, Supt.

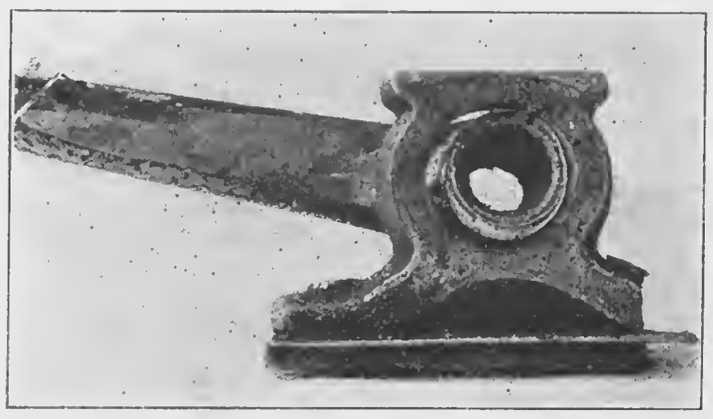
Bran Feeding Used for Roadsters.

We use bran for everything on the place, horses, cows, sheep, pigs and even chickens, and have done so since I was a boy. We feed our colts and brood mares half bran and half oats as a staple; with this about two tablespoonfuls of oil meal. No matter what ration of bran and oats we give this amount of oil meal. To older horses we feed less bran but like a little all the time. I have never had any bad results from its use, but have never fed over four quarts at a feed to a horse. I should think one might feed enough to scour a horse if the horse was a glutton, and possibly to any horse. I never tried to kill anything with it, or even tried to see how much they could stand. We would as soon think of getting along without any kind of feed as without the bran to any young growing animals. I think it is used on all stock farms. I would not expect to keep a work or driving horse on bran alone, for the reason that we do not believe there is enough fat and muscle in it. It is too bulky a feed to be a sustaining food for hard work. I do not handle as many horses as some, only sold 20 the past year; they were all light driving horses but one, he was a work horse. They all had more or less bran most of the time.

Vermont. C. A. CHAPMAN.

HINT TO BUYERS OF MOWING MACHINES.

The accompanying cut, Fig. 384, is from a photograph of the pitman connection of a mower. It is shown as an example of what may be expected to happen to any machine with the old-fashioned hook and eye pitman connection. Notice that both the sickle-head and the sickle-bar are broken. There is a quarter of an inch "play" in the connection, and this is what gave the pitman a chance to break the sickle. The agent for this machine said: "When the connection gets loose let the blacksmith heat up the end of the pitman and swell it out to fit the sickle-head by driving a big punch into the hole." Anyone who has run a mower knows that the only way to keep the pitman from knocking the sickle-head off or breaking the bar is to *keep* the connection tight. There should be on every mowing machine



PITMAN CONNECTION OF A MOWER. FIG. 384.

a ball and socket or some other easily-tightened joint at this place, so that all wear may be taken up as fast as it occurs. This point should not be overlooked by the purchaser of a mower. J. M. D.

Minnesota.

WORLD-WIDE WAYS OF FARMERS.

The well-known novelist, H. Rider Haggard, is a large farmer in Norfolk, England. In reading his published record of the year 1898, which he calls "A Farmer's Year," one meets with frank statements of the difficulties confronting the English agriculturist, which show how uniform is human nature the world over. Speaking of the encroachment of the sea on the sandy soil of the coast line, and of the inability of the land owners to combine to protect themselves, he says: "If we were Dutchmen the case would be different, but here in rural England, unless they are forced to it by act of Parliament, it is almost impossible to oblige people to combine to win future profits or ward off future dangers. Many farmers, to all appearance, would prefer individual failure to the achievement of a corporate victory." Will some philosopher please explain this common trait of the farmer mind the world over? If a remedy can be suggested and successfully applied, we shall not have such melancholy reading as this further extract from the same work—words that might have been written with equal truthfulness of our own Government at Washington: "In to-day's Times I see that a deputation waited upon Mr. Chaplin, the President of the Local Government Board, to urge, among other things, the prohibition of the artificial coloring of oleomargarine to resemble or imitate butter, and the prohibition of the mixing of oleomargarine and butter for sale. From Mr. Chaplin they got uncommonly cold comfort. He told them that he had 'heard the arguments of the other side,' and that if this fraudulent coloring—for the object of the coloring is fraud—were prohibited, it was urged that it would 'practically destroy the trade.' Is it not rather hard that such an answer should be given to an influential deputation by a minister supposed to sympathize with the distress of farmers?" Without doubt it was a little hard on the poor British farmer, but his case will be no easier until he overcomes his constitutional disinclination to organization. Let him go up to London and convince Mr. Chaplin that votes are behind him, and note the different reception that will be given him. Here in America the politician trades on what he believes to be the farmers' inability to combine to force their own interests, and so long as he is sure of that he will have no hesitation in flouting the farmer's demand for simple justice. F. W.

Massachusetts.

R. N.-Y.—We have always insisted that the only way for farmers to obtain what is due them is to show their voting power, so that the politicians will understand that they mean business. *Vote with the postage stamp!* That is the form of ballot to be used just now!

ALFALFA HAY FOR HORSES.

Alfalfa hay is an excellent roughage for heavily worked horses. It keeps them in good flesh, and Alfalfa-fed horses have glossy coats of hair such as are secured by feeding linseed meal. Teamsters who have given Alfalfa a trial for several months usually prefer it to other hay, while those who have fed it for a short time only strongly condemn it. When hard-working horses are first fed Alfalfa they sweat profusely, have loose bowels, and often urinate excessively. If the Alfalfa is properly fed these symptoms pass away in from three to six weeks, and the animals get in good condition and remain so. The writer recently saw a team of heavy Percheron mares that had been fed no other roughage than Alfalfa for 12 years, and were in nearly what breeders call show condition, although they had been fed little grain. In getting a horse on feed with Alfalfa hay not over two pounds should be fed the first day, and the horse should be given the same kind of hay as usual. The amount of Alfalfa fed should be slowly increased and the amount of roughage correspondingly decreased until at the end of three or four weeks the entire rough feed becomes Alfalfa. With a good grain ration 10 to 15 pounds of Alfalfa hay is sufficient for a day's ration for an average farm horse. When grain is high priced 18 to 20 pounds, and sometimes more, may be safely fed, but after 12 pounds per day is reached the increase in amount should be made very gradually, and a careful watch kept on the condition of the horse. If any of the symptoms mentioned as occurring when the horse is first fed Alfalfa appear the amount fed should immediately be reduced and kept down to 10 or 12 pounds until the animal gets in good condition, when an increase may again be slowly made.

Alfalfa makes the best feed for cattle, sheep and hogs when cut when only one-tenth of the plants have reached full bloom. It makes the best feed for horses when cut when in full bloom or even a little later. On large farms it is customary to start cutting when the Alfalfa is in proper condition for cattle, the work will not be completed until some of the Alfalfa is matured too much for cattle. That cut late is fed to horses. Alfalfa that has been over cured and thereby lost part of its leaves is better for horses than for cattle. The fourth and fifth cuttings of Alfalfa have a much greater percentage of leaves than the earlier cuttings, the hay is very laxative, and should not be fed to horses. Under ordinary western farm conditions either corn or Kaffir corn is the grain fed with Alfalfa. Equal parts of corn and oats makes a good grain feed. It is difficult to give the comparative values of prairie hay and Alfalfa hay. With a good grain ration a careful feeder will give a horse as many pounds of Alfalfa hay as he would prairie hay, but he will secure a condition of flesh, skin and hair that cannot be secured in feeding prairie hay without the addition of linseed meal. On the other hand, if grain is scarce or high the quantity fed may be limited and an increased amount of Alfalfa will take its place. The writer has seen a few teams this Fall that were doing ordinary farm work and were in good condition that had no other feed than Alfalfa hay, but the drivers knew how to work and care for their teams, and most teamsters would fail on Alfalfa alone. H. M. COTTRELL.

Kansas Ag'l College.

OILING WAGON TIRES.—After a wagon tire is loose oil will never tighten it. There is only one salvation when the tire gets loose, and that is to have it reset in the proper manner. We manufacture about 75,000 to 80,000 vehicles a year, and we seldom have any complaints of loose tires. The proper way to keep the tire from getting loose is to have the timber well seasoned, and then have the felloes immersed in hot oil before the tire goes on. Have the tire properly set, then the farmer should give his wagon or buggy wheels a coat of hot oil about twice a year, and he will not be troubled with loose tires and the felloes will last much longer, but as there are few concerns that adopt the course referred to, the farmer will use hot oil in oiling his felloes when the tires are not tight, and when the tires are tight, it will have a tendency to keep them so, and they are not so liable to get loose. J. M. STUDEBAKER.

TESTS OF CREAM SEPARATORS.

On 771 we printed a request from a Pennsylvania reader for some experiments to test the value of the so-called dilution cream separators. This is what he wanted done:

Use 400 pounds of milk, all mixed together. First, water 110 pounds, milk 100 in water separator. Second, 100 pounds milk run through a standard separator. Third, 100 pounds milk in Cooley-Stoddard or any standard creamer. Fourth, 100 pounds milk set in small pans. Fifth, after milk has been watered in No. 1, wait four hours or more, and then very slowly draw off about 100 pounds of milk and water, warm it and run the product through a De Laval, United States or other separator, and see how much butter can be extracted therefrom. Then, when these results are tabulated, we shall know *why*. Meantime, I will read and love THE R. N.-Y., water the milk and wonder whether I'm an old stupid or *why* watering is of "doubtful utility." E. D. R.

Pennsylvania.

The experiment station directors consider that this question has been fully settled—therefore they did not care to repeat their experiments. Prof. C. L. Beach, of the Connecticut Station, has made a careful experiment—the results of which are given below:

	Lbs. of 4 p. c. milk.	Lbs. fat in milk.	Lbs. skim-milk.	Test of skim-milk.	Lbs. of fat lost.	Per cent of fat lost.
Separator	100	4.	85	.025 p. c.	.02125	.62
Cooley creamer	100	4.	80	.29 p. c.	.232	5.8
Shallow-pan	100	4.	85	.55 p. c.	.4675	11.68
Aquatic separator	100	4.	165	.5 p. c.	.825	20.6

In addition to the skim-milk the separator milk includes 15 pounds bowl wash, causing further loss. In the aquatic separator 100 pounds warm water were added. The skim-milk from the aquatic separator was warmed up to 90 degrees and was then run through a centrifugal separator; 16.5 pounds, which were caught from the cream spout of the separator, tested 4.8 per cent fat, equivalent to .9 of a pound of butter. C. L. BEACH.

Conn. Exp. Station.

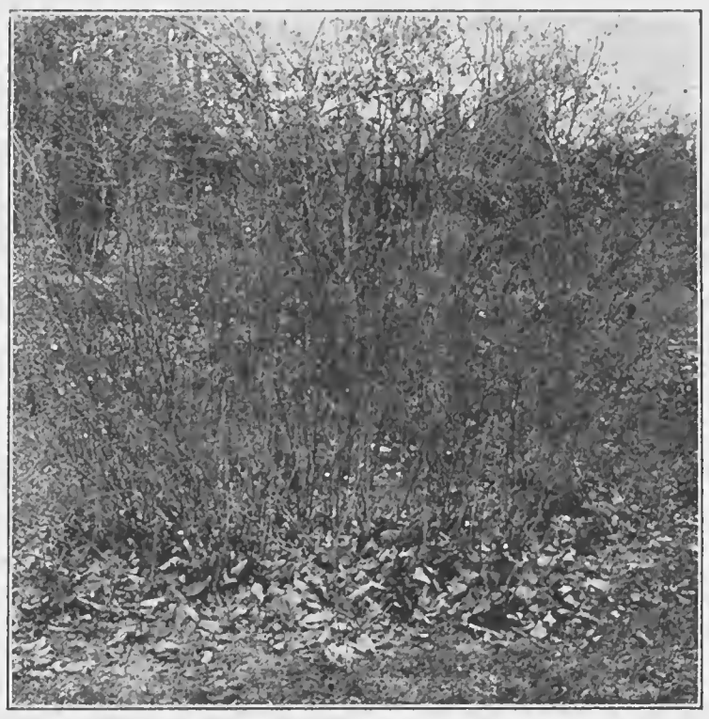
EXPERIENCE WITH ICEHOUSE AND ICE.

In almost all directions for building ice houses I read "provide proper drainage," which always puzzled me, for I could not imagine any need of it, for the ice, if properly put in, would not melt enough to run out at the bottom. It was several years before it dawned upon me that this advice was meant for the outside instead of the inside of the building. A ground floor is the best floor for an ice house, and should be filled in or have a natural elevation just enough to keep away surface water from the sides, and prevent water from raising to the ice from beneath the surface. Level off and spread a thin coating of oat-chaff or sawdust and it is ready for the ice. The simpler the scheme of the building the more satisfactory it will be. It is an easy thing to keep ice if a few principles are observed. The building should be of wood, as stones or bricks draw heat, and white is the least objectionable of all colors. The frame should be ceiled up on the inside at least a foot from the outside, and the space filled with sawdust. "Why not put sawdust between the outside and the ice, and save cost of the ceiling?" asks one. Because the damp sawdust will rot the frame, and in a few years your building will fall down. The ceiling has nothing to do with keeping the ice; it is to keep the house. A roof that will shed rain and the sun's rays is enough. The air above the ice should be dry, and to be kept so must be kept in circulation, and two small open windows on shady sides accomplish this end.

The first layer of ice should receive a good deal of attention, and the most intelligent and careful hand should be put at this part of the work. The ice should be cut true and packed level and close. Fill in six or eight inches between the sides and the ice, packing firmly, so the cakes cannot move, and then level off the surface with an adz, filling all cracks. Sprinkle on water and freeze all solid. It pays to handle ice in quite cold weather, as it is dry to handle, and can be packed better. If air-holes are left the air will, as it gets cold, settle to the bottom and warmer air will follow. There should be no movement of air, a perfect expulsion of all air, and the nearer one comes to it, the less will be the loss by melting. The second layer should be packed smooth side down and the long side of the cake out, so as to make as few cracks at the side as possible. Adz off and pack sides and fill cracks with fine cold dry powdery snow that will run down and fill air spaces. Pour on water and freeze solid; keep on till full. Sawdust is the best material for packing, and the drier the better, but do not make the mistake of throwing away the old, unless rotten, for new. The new is liable to ferment and heat some, while the old has the fire all taken out, and is the best for several years. The bottom must be absolutely airtight and have no drains or air passages under it. A covering six inches deep of the sawdust on the bottom and sides, with the layers solidly frozen, makes all airtight, and there will be no melting. The covering on the top should be two feet thick, and kept dry at the surface. In the warming days of Spring the surface should be tramped over and all air-holes filled to keep all airtight. One should shovel over the sawdust a few times, now, and air and dry it ready for use. Some haul it out to an open shed or building, and then have to haul it back again while filling it. One is usually busy then, and the team is needed to haul ice, and I like my plan better. Put a temporary partition across one end, say a third of the space, and shovel the sawdust to that end, piling it up as high as needed to hold it. Commence filling the space, and use the sawdust nearest to you as long as you can, and then pile the remainder on top of the ice and commence at the bottom again. By this method some labor is saved, the sawdust is always handy, and the litter of it over everything is avoided. Cakes weighing about 100 to 130 pounds, 18 inches long and 12 inches wide by 12 inches thick, are handy to handle, and ordinarily are as large as one wants at once. C. E. C.

AUTUMN REFLECTIONS; NATURE'S MULCH

The Autumn is one of the most interesting periods of the year, and it ought to be from every nature observer's standpoint. At this season one has an opportunity to study the peculiarities of trees in a way not presented at any other time. To me one of the most interesting features about Autumn is the manner in which nature protects her own against the vicissitudes of Winter. The many precautions she exercises go on regularly, smoothly and unfailingly. For instance, let us watch the processes attending the maturing of leaves. Note how with the gradual changing of color tints the leaves become less pliant,



NATURE'S MULCH AROUND SHRUBS. FIG. 385.

grow papery; how the little joint appears at the connection between the leaf stem and the twig to which it is attached, how finally an easy and natural separation takes place at this point. At this time the twig has withdrawn practically all the food content of the leaf, which is then really a skeleton made up of fibrous tissue composing its veins, cell walls and epidermis. To the orchardist the fall of the leaf should not in itself be an uninteresting phenomenon, for its mission is not completed as soon as it drops from the tree. Let us observe what happens after the leaf comes whirling to the ground. Take a walk through a park, an orchard, or a cornfield. In the park, unfortunately, the enforced rules of tidiness which apply to leaves as well as waste paper, prevent one from noting the natural disposition of the trees' Summer suits, but in undisturbed places is it not fitting, appropriate and even thoughtful, the way in which the wind carries the leaves off the lawn and tucks them in little banks and billows about the base of the shrubs, as at Fig. 385, or covers the herbaceous border, or wraps them around the feet of a stray weed in the orchard. They are the plaything of the wind, and in their dried condition are whisked here and there until they finally find lodgment and are at once protected and protector—a resting place for themselves and a blanket for their guardian. One may be interested in knowing the weight of the Summer dress of a 10-year-old Norway maple for instance. Summer gowns, as a rule, are not weighty. In this case the condition is reversed. I was astonished to find the other day on carefully gathering and weighing the dried leaves which fell from 10-year-old Norway maple trees that the crop amounted to 130 pounds, or an average of 43 1-3 pounds apiece. While this weight of vegetable matter does not represent a large amount of plant food it does represent an agent of considerable value in its relation to the physical quality of the soil. No one who has composted leaves and has used this compost as a mulch for the herbaceous border, the rose or lily bed, can fail to recognize the great ameliorating influence of this sort of a dressing upon the physical properties of the soil. Its protective value in keeping out frost is also considerable. These notes are simply dropped by the way in order to suggest that a much better use can be made of nature's mulch than is the case when the lawn is religiously raked every second day during the Autumn, and the rakings carefully burned. When this is done the carbon is simply returned to the atmosphere from whence it came, and the almost inappreciable amount of ash is wasted entirely.

JOHN CRAIG.

NATURAL GAS ON THE FARM.

How a Kansas Farmer Uses It.

PART I.

We have had an extraordinary warm and dry Fall, and last night (December 2) it was warm and pleasant. The barometer had begun to rise, indicating a cool wave, and when I went to bed I set the cool wave signal, so that when the wind changed to the north, the large sail would fill out and strike an alarm on the farm bell. The big 16-horse steam thrasher had finished thrashing millet for me, and stood in the hogyard, and if a cool wave came up I had promised the owners I would keep it from freezing up. At 2:30 A. M. the farm bell tolled its alarm, and I got up to find a veritable cold wave bearing down upon us. I started a fire under the boiler of the thrasher engine, saw that the pigs were warm and comfortable, shut the storm door to the sheep shed, saw that the Shorthorns were all right in their barn, the bulls in their stalls, the horses in theirs; then crossed the yard and saw that the two herd boars and the several youngsters were warm; looked into the brooder and read the temperature, visited the incubator, making sure it was going along on the even tenor of its way, then entered the house, turned up the lights, started the four stoves at a merry clip and now I am at my desk near a warm fire, under two powerful incandescent lights, with the telephone receiver hanging within reach, the large bunch of daily mail delivered at the door every day by Uncle Sam, near at hand, and the great storm howling without.

Could an eastern reader of THE R. N.-Y. come along just now he would see about 26 windows in the house throwing out that intensely white light due to incandescent burners that are never turned out night or day, the great light in the door yard that lights up several acres and sometimes the stand flue over the hoghouse is light, which lights up the five corrals and all the sheds and barns; the light in the feedhouse is always burning and a warm glow is sent out through the windows, and now at this early hour I will tell R. N.-Y. readers all about the uses of natural gas on the farm, for this farm and thousands of others in this and other western States have all the natural gas they wish to use for farm purposes.

So many have such an erroneous idea of this country. They think it is in the great Staked Plain; that it is a desert; that we have no comforts, and many other ideas. Kansas is not "out West," but is the center State of the Union, the exact geographical center being three miles from Junction City, Kan., 120 miles from here. We have all the luxuries that any farm community has, and some that few of them have. Two steam railroads run east and west on my south line; an electric car goes every hour in the daytime, and two steam roads go north and south only 1½ mile from the farm, while two long-distance telephone lines pass the door, giving each farmer communication with the outside world at any hour. Daily rural delivery of mail and the daily visit of the creamery wagon make our lives easier and pleasanter, while the abundant use of natural gas on the farms here and in adjoining counties, gives us positive luxuries that only the very rich city people can possibly afford. From the Gulf of Mexico to the Canada line there is a strip of country that abounds in natural gas, artesian water and oil, and thousands upon thousands of farmers in the great gas belt use the gas, so I do not want anyone to think that what I do with gas is at all unusual, but on the contrary, is common here. Five years ago the Standard Oil Company secured leases on all this land through independent parties that they bought out, built a dozen large 1,600 retort smelters and rolling mills, also acid plants about six to 10 miles west of here, developed the gas field and are now holding this part for future use, not expecting to drill here for 30 years or more, but they have laid large gas mains along every lease, and they pay $50 per year royalty for the lease on each 40 acres, and give all the gas wanted for use on the farm. The main that passes my door comes from a well eight miles away, and has a pressure turned on of 290 pounds per square inch. This enormous pressure is entirely too much and all the gas we can use, hardly relieves the pipe any, and as these wells have not diminished in 20 years we do not think of being very economical with the gas. All the farmhouses and school houses near here have a chance to use the gas, and it is so common that we think nothing of it, so I do not wish any reader to think I am trying to boom up my farm, for it is not for sale at any figure. All the towns near here burn gas, and this is truly a well lighted and warmed county indeed.

Allen Co., Kan. J. CLARENCE NORTON.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Starting Persimmon Seeds.

L. A., Benton Harbor, Mich.—At what time and how deep should persimmon seeds be planted?

ANS.—Plant soon after fruit is ripe, placing four inches apart and about two inches deep in rows three feet apart in good mellow soil. It is a good plan to cover rows with a board during Winter to keep out vermin.

Linseed Oil for Wheels.

Reader.—The tires of my carriage wheels are loose. Can I remedy this by soaking the rims in hot linseed oil, or is there danger of this treatment injuring the wheels?

ANS.—Carriage makers say that when a tire becomes loose the proper thing is to have it set by a mechanic who knows his business. Soaking in oil would not be a permanent remedy and might do damage by lubricating the joints so that the spokes would work loose.

Wood Ashes for Wheat.

D. W. H., Topeka, Ind.—Would it pay to put wood ashes on drilled wheat; also Timothy that I expect to mow? I can get ashes for asking. When would be best time to put it on, and how much?

ANS.—We would use all the ashes we could get. You may use two tons per acre. That is about the limit when they are bought. On level land we would apply the ashes at any time when the snow is absent. On land inclined to wash we would use the ashes early in Spring.

Value of Sawdust.

J. F. C., Maryland.—Is there any objection to the use of sawdust as bedding for stable? It must make a good absorbent.

ANS.—No, except when there are sharp splinters or old nails in it. Sometimes the dust from an old ice house contains sharp substances which injure stock. Fresh sawdust contains an acid which is injurious to most plants when the dust is used too freely. This acid is overcome when the dust is rotted or used as an absorbent in manure. The ammonia in the manure neutralizes it.

San Jose Scale.

B. L. H., Campbelltown, Pa.—What are the insects or scales of which I send sample? Are they the San José scale? If so, what can I do to exterminate them? Some trees of little value I burned. The shavings sent are of the apple, currants and peaches. Currants are all coated. The twigs have reddish spots with minute grayish scales.

ANS.—The scale on the twigs received is the San José, or Pernicious. Cut the currants to the ground and spray the stumps. Trim the trees back and spray late in March with crude petroleum or whale-oil soap, two pounds to a gallon of water. Use same on currants at the same time.

Cutting Asparagus Tops.

A. S., Ooltewah, Tenn.—When should the bushy growth of asparagus be cut? After the drought of June and July our crowns sent up a good growth of new shoots, and we allowed the whole to grow until December. Should the first growth be removed earlier? Is it of any benefit to the crowns (five years old) to take only the largest spears during the cutting season, allowing the smaller to burst and branch? What is the proper time and method for applying commercial fertilizer to crowns set two years ago?

ANS.—As a general rule the bushy growth of asparagus should not be cut during the growing season, or until it has thoroughly ripened after frost. It is not only of no benefit but positively detrimental to cut the strong shoots from the crowns, leaving the weaker ones to grow during the cutting season. It is much better to cut everything that appears above the soil while the season lasts, allowing all the shoots to grow as they are afterwards. Commercial fertilizers are best applied in Spring just at the close of the cutting season, or in young plantings before growth starts, and thoroughly plowed or cultivated in.

Rot-Resisting Grapes.

G. L., Pomerania, N. J.—Can you give me the names of several varieties of grapes that do not rot? It does not make any difference whether they are wine or table grapes. Can you advise me where I can buy Norton grapevines? Nurseries do not keep them in stock it seems; at least they are not catalogued.

ANS.—There are few grapes that are of such character as to be entirely exempt from rot, but Norton is one that I have never known to be thus affected. Cynthiana is exactly like it, and is thought by many to be the same variety with another name. Clinton rarely has any rot and the same is true of some of Munson's new seedlings, although the latter have been but little tested. The three kinds named are all poor for table purposes. Norton is rarely offered by the nurseries because few customers want it, and it is very hard to propagate. It will not grow from cuttings, and vines must be layered from which plants are to be obtained. Some of the largest nurseries advertising in THE R. N.-Y. may have them to sell. H. E. V. D.

How to Keep Pears.

A. F., Moriches, N. Y.—What is the proper method for keeping and ripening Winter pears, after they are picked? I give the care of the fruit my personal attention, and have followed minutely the directions given me by a popular nursery, but every year my pears shrivel and become hard, without ripening. The varieties are the Lawrence, Easter, Mallnes and Anjou. So far I have had no difficulty in growing the pears, but have failed utterly in ripening them.

ANS.—Pears should be kept in closed packages, so the fruit cannot evaporate to such a degree that it will shrivel. If each specimen is wrapped in paper the possibility of evaporation will be still further lessened. In ordinary cellars or fruit houses the ripening of pears will go on in the way that is characteristic of each variety, but this will vary according to the warmth or coolness that may prevail. If the pears are put in cold storage the process of ripening will be very much retarded. When it is desired to have them ripen all that is necessary is to change a box or other package to a warmer room, but by no means exposing the fruit to the open air, because it would cause shriveling and loss of flavor. For family use I think it pays to wrap each pear in paper. It not only preserves the fruit from losing moisture, but flavor as well. H. E. V. D.

"White Ants" on Apple Roots.

R. O., Bluffs, Ill.—1. I enclose some ant-like insects which I find on the roots of dead apple trees, which were set last Spring. What are they, and did they cause the death of the tree, or attack it after it is dead? 2. Could I select better varieties of apples for sand in western central Illinois than York Imperial and Ben Davis? How would Stayman Winesap do on deep sand?

ANS.—1. The ant-like insects were what are commonly known as "white ants," because they look like true ants and have somewhat similar family relations, but structurally they are quite remotely related to the true ants in the insect world. White ants usually live in colonies in dry or decaying wood, or in books, and they often destroy libraries and buildings in the South and the tropics. They usually work in old logs or stumps in the North, but there are several records of their tunneling into living plants, such as geraniums. I do not recall any report of their working in trees in the North, but in the South they sometimes do much damage by eating into the roots of orange trees. Hence, the white ants may have been the cause of the death of the trees, or they may have just begun to work in the dead roots, but as the trees were only set last Spring, I should be inclined to attribute their death to the insects. I would remove the infested trees carefully, so as to get as many of the white ants as possible with the trees and then burn them. Thoroughly disturb the surrounding soil and do not allow any vegetation to grow there until you set new trees in the Spring. 2. Prof. Craig says that no varieties of apples will do as well in sand as in heavier soil. The trees may come into bearing a little earlier on sandy soils, but they usually do not last as long. Haas is a good variety to grow in sand, but it is not of high quality. He thinks the varieties mentioned will do as well as any others. Note what varieties your successful neighboring orchardists use, and study your market's needs.

M. V. SLINGERLAND.

Peaches for Central Illinois.

J. M'C., Havana, Ill.—1. What varieties of peaches would you advise for central Illinois, one-third to be extra early and the remainder continuous in ripening? Name the best three clings for the latter part of the season. I expect to put out about 200 trees. My soil is quite sandy. Do June budded peach trees come into bearing as soon as older trees, or, what is the difference? 2. How can grub worms be kept out of composted stable manure? They damaged my sweet potatoes seriously. Is fresh manure adapted to sweet potatoes, plowed under early in Spring?

ANS.—1. Of the very early peaches Triumph, Sneed and Greensboro are three good ones. Following these the Bishop, Mountain Rose, Elberta, Emma and Chairs are good. Of the very late clings the Henrietta, Wilkins and McDeavitt are the best I know. Sandy soil is good for peach culture. June-budded peach trees are a little behind those of the usual character in bearing. They are small and of feeble growth when set, and could not be expected to grow so rapidly and bear so early as the older and stronger trees do. 2. The beetles which lay the eggs that make white grubs are almost sure to find every pile of manure whether in heaps or scattered, and I know of no way profitably to keep them out. Mosquito netting would be costly, but it would protect the piles from the beetles getting to them. It might pay to cover the compost heaps in this way. I have often seen fresh stable manure put into the land which was planted to sweet potatoes the same year, but it did not prove as suitable as that which was well rotted. Stirring it in with the soil by repeated plowing or deep cultivation before planting would have an excellent effect.

H. E. V. D.

Dr. D. Jayne's Expectorant certainly does go directly to the root of all Throat and Lung troubles. There is abundant evidence of this in its sixty-two years' record of cures.—*Adv.*

WHEN you write advertisers mention THE R. N.-Y. and you will get a quick reply and "a square deal." See our guarantee 8th page.

SPRAYING with the "incomparable" BORDEAUX NOZZLE and our world's best outfit you are absolute master of the situation. Insects and disease fall before this all conquering outfit. See the book. It is free. Write for it now. THE DEMING CO., SALEM, OHIO. Western Agts., Henion & Hubbell, Chicago.

Agents and Dealers Wanted to sell Rippley's 3 and 5 Gallon Compressed Air Sprayers, also large orchard sprayers. We have the best, and sell them under a guarantee. A card will bring catalogue and terms. Rippley Hardware Co., Box 223, Grafton, Illinois

Potatoes—Bovee, Carman, Cobbler, Harvest, 6Weeks Ohio, Rose, Th'bred. 85 kinds. C.W. Ford, Fishers, N.Y.

POTATOES—Selected Seed. Price-List Free. E. M. MARVIN, Sun, Mich.

GRAVES New Early Yellow FREE STONE PEACH Price list free. W. J. GRAVES, Originator, Perry, O.

Don't Forget Kevitt!—No one now does forget Kevitt for Strawberry Plants. *List free.* T. C. KEVITT, Athenia, N. J.

Trees, Plants and Bulbs Price-list free. See our Bulb Offer in October Rural New-Yorker. T. C. FURNAS & CO., Sheridan, Ind.

STARK TREES SUCCEED WHERE OTHERS FAIL. Largest Nursery. *Fruit Book Free.* Result of 76 years' experience. STARK BROS., Louisiana, Mo.; Dansville, N.Y.

NORTHERN-GROWN FRUIT TREES Best market varieties. Free from disease. All conveniences for packing dealers' orders. My prices as low as the lowest; my stock as good as the best. Write for free catalogue. Instructive; Interesting. MARTIN WAHL, 351 Gregory St., Rochester, N.Y.

THE FAVORITES in all markets are the YORK IMPERIAL and BEN DAVIS apples. Large yielders and good keepers. We have a large stock of fine trees. Thirty five other varieties: Peaches, pears, etc. Send for catalogue. HARRISON'S NURSERIES, Box 29, Berlin, Md.

NOW While you have the time to attend to it, and the Nurseries have a Full Stock to select from, make out your orders for Fruit Trees, and send direct to some reliable Nursery for them. Hundreds of our best Fruit Growers say, the best trees that they ever received came from Call's Nurseries, Perry, O. Write them for Price List.

The October Purple Plum and Green Mountain Grape are among the best fruits ever introduced. We are headquarters for both, and have a full assortment of other Nursery Stock. A fine stock of Shade Trees. Write for our catalogue before buying a tree of any kind. It's free. STEPHEN HOYT'S SONS, New Canaan, Conn.

DREER'S GARDEN CALENDAR for 1902 A complete catalogue of Seeds, Plants, Bulbs, etc. It will contain 208 pages, 4 colored plates of Flowers and Vegetables, and bound in highly illuminated covers. Send 10 cents now, and have your name enrolled for a copy. This amount you can deduct from your first order. HENRY A. DREER, Philadelphia, Pa.

Rogers Trees are Safe Trees. FRUIT TREES The VALUE of my trees is *Demonstrated* by the *Truth* of the variety. Order now. Get *first choice.* 12 PEACH TREES, choice kinds, mailed to any part United States, $1. 12 plants MERSEREAU BLACKBERRY, mail, $1. Stock saved for you till Spring. Easy terms. For further information write me now. *Cayuga Nurseries. Established 1847.* H. S. WILEY, CAYUGA, N. Y.

OUR TREES etc., advertise themselves. The best always cheapest. Have hundred of car loads of Fruits and Ornamentals. 40 acres of Hardy Roses. 44 greenhouses of Palms, Ficus, Ferns, Roses, etc. Correspondence solicited. Catalogue free. 48 years. 1000 acres. THE STORRS & HARRISON CO., Painsville, O.

BURPEE'S SEEDS ARE THE BEST THAT CAN BE GROWN If you want the choicest vegetables or most beautiful flowers you should read Burpee's Farm Annual for 1902—so well known as the "Leading American Seed Catalogue" It is mailed *FREE to all.* Better send your address *TO-DAY.* W. ATLEE BURPEE & CO., PHILADELPHIA.

HIGH GRADE FERTILIZERS OUR PRICES LOW. QUALITY PURE. Write for Memorandum Book, Prices and Samples. The Scientific Fertilizer Co., HERR'S ISLAND, PITTSBURG, PA.

Weevil in Beans; Stringfellow Planting.

W. J. S., Albion, N. Y.—1. Our bean crop was quite badly damaged by weevil here last Spring, many pieces being plowed up. Is there any way to tell whether this year's crop now stored for seed is infested? I have many times seen the holes in peas, but not in beans. 2. Your article on old orchards comes at a seasonable time for me, as I have just commenced cutting the dead wood out of about 30 trees. I shall also set half a dozen peach trees by the Stringfellow method. Do I cut off everything but the tap root?

ANS.—1. We would send a fair sample of the beans to Prof. M. V. Slingerland, Ithaca, N. Y., for examination. As a precaution we would use bisulphide of carbon in the way so often described on all the seed beans. 2. In setting trees on the Stringfellow plan this Fall we left short stubs—not pruning as closely as we did last Spring.

Good Apples for Maine.

C. H. C., Wells Branch, Me.—I think of setting out about 100 apple trees. I shall set one-half Baldwins and want some other good red Winter apples. What would you recommend? What do you think of Ben Davis, Wagener and Arctic?

ANS.—It is difficult to find a more satisfactory commercial apple than Baldwin, as grown in western Maine. For purposes of cross-fertilization, however, I would include 25 Sutton Beauty and possibly 25 Ben Davis—planting in alternate rows with the Baldwins. Ben Davis is hardy, vigorous and productive, and is at present one of the profitable commercial varieties. Its quality, as grown in the North, is, however, so inferior that it is hardly to be recommended. Wagener is a good apple but is not as large as in Massachusetts and New York, and is not equal to some other sorts for commercial purposes. Arctic may be characterized as a hardy Baldwin. The tree is of vigorous spreading habit, and the fruit, when well colored, is attractive. Trees set eight years ago in the orchard of the Maine Experiment Station bore two bushels of fruit this year. It will not supersede Baldwin in southern New England, but is valuable for sections demanding greater hardiness. W. M. MUNSON.

Maine Exp. Station.

Paper from Cornstalks.

Is it a fact that paper of fair quality has been made from cornstalks? Nearly everything else seems to be made out of the corn plant!

Experimental trials of the material have been made from time to time, and there is no doubt that paper stock of excellent quality, although rather short-fibered, can be made from the stalks by chemical treatment. The principal difficulty in the way of its utilization is the low yield as compared with wood. We doubt whether the fiber could be sufficiently disintegrated by purely mechanical methods to be available, on account of the siliceous character of the epidermis. LITTLE & WALKER.

Boston.

There has been considerable talk in the papers about the use of cornstalks as paper-making material, but we think it has been pretty much all talk, as we do not know of any mills that are using the material, and if it is being used at all it is in a very small way. We don't know anything about the pith either, other than the notices we have seen in the papers, and which seem to have gone the rounds, but we really believe there is very little basis for any such comment. About 20 years ago there was a considerable amount of straw used for making fine papers, but wood in later years has almost entirely displaced it. Sorghum cane was used for making book paper in at least one mill so long ago as 1867. There are enormous quantities of what is known as bagasse, being what is left of the sugar cane after the juice is expressed, in the sugar-cane districts, and at various times attempts have been made to use this material, but without much success. We understand there is one mill in Louisiana making a small amount of coarse grade paper. There is, however, more interest being taken in the use of plants that grow up each year for paper-making purposes, and there has been a lot of experimenting in the way of using these annual plants, and with some probability of its being done successfully on a commercial scale. Wood, however, is so extensively used that it would probably take a number of years to displace it. WEST VIRGINIA PULP & PAPER CO.

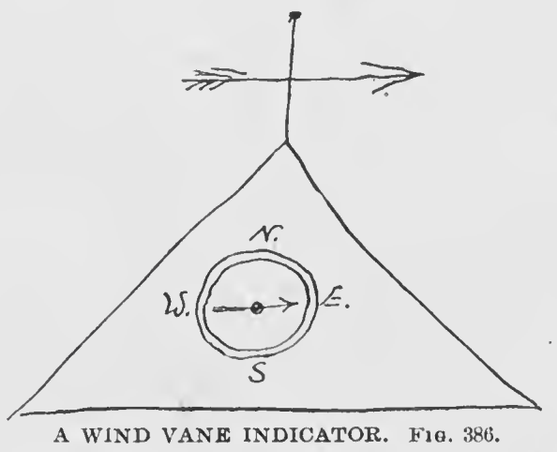
New York.

Can You

do a little pleasant and profitable work for us in your own town? No experience necessary. We will explain just what you have to do. The work will be light, and we will arrange for the time you shall be able to give to it. We can give you work for all your time or just for your spare time. Write for full particulars. THE RURAL NEW-YORKER, NEW YORK.

A Wind Vane Indicator.

While riding near China Lake, in this county (Kennebec), not long ago, I saw a peculiar weather vane or indicator. In order to read aright the ordinary vane, one needs to be almost under it. In this case, however, a glance shows the direction of the wind, as the face of a watch shows the time. The



A WIND VANE INDICATOR. FIG. 386.

rod to which the vane is fastened passes down through the roof in a short piece of gas pipe, and is geared at the bottom to a longitudinal rod upon which is the indicator. It is said not to be patented, and is very simple. I make a rough illustration, Fig. 386. When once adjusted the hand and vane always work together. C. S. P.

Maine.

Peaches for Northern New Jersey.

The following facts were brought out in a recent correspondence with a large peach grower in Sussex Co., N. J.:

Do you like to plant June-budded trees?

No, we have never planted them and I do not consider it worth while giving them a trial. We prefer the largest trees that we can safely plant.

What varieties do you find most profitable?

I shall plant next Spring, Emma, Late Crawford, Chairs Choice, Iron Mountain and Beer's Smock; this list is given in order of ripening, Emma gives us fruit about September 18, Iron Mountain and Beer's Smock fruiting up to the middle of October.

Do you not grow Elberta?

I tried to buy 500 Elbertas for next Spring, but the trees were all sold, and so I bought 500 extra Emmas.

Do you recommend these varieties for general use?

No. Differences in location will make differences in varieties; for example, Stevens Rareripe has been a money-maker with me, while with other nearby growers it has not done so well.

Which have been your best paying varieties?

Elberta, Chairs Choice and Beer's Smock have paid the best; really I have made more money per package out of Beer's Smock than from any other variety.

Are there two kinds of Smock peach?

Yes; there is a Smock shaped like an egg but very small, this is of little value with us, but the true Beer's Smock is a fine peach; it is also the best canning peach we grow. Some of our growers have planted Wonderful in place of Beer's Smock, claiming it is better because it is less liable to overbear. The season of Beer's Smock with us is from October 1 to 10.

What do you think of Crosby?

I would not advise its planting as it ripens here at the same season with Elberta, is much smaller and tends to overload. When Elberta is selling for $1.12 to 85 cents Crosby can be bought for 60 to 45 cents, and it was hard to get enough fine fruit to fill the packages. I have no Iron Mountain but it does well here, having the same season as the Smock, and I shall try it.

What is the best market demand for your peaches?

There is always a demand for a late white peach, and the Iron Mountain will fill the bill. I would not advise planting for the New York market any varieties later than Elberta, which finishes with us about September 15. The Emma comes in after Elberta, and that is why I ordered that for next Spring.

AN ACTIVE CHINAMAN.—The Pacific Rural Press gives this report of a Chinaman who raised tomatoes for a canning factory: "A certain Chinaman was induced by the superintendent of the cannery to plant five acres to tomatoes. From those five acres he has sold to the cannery over 50 tons of first-class tomatoes, at $10 per ton, and at this writing he is still hauling them in. Now, what could have been done on a 100-acre patch had white men given the care and attention to their business that this Chinaman knew his business had to have? This sleepy-eyed Celestial seems to be personally acquainted with each individual plant in his patch, and to know about the day and hour he can depend on it to ripen its fruit. And he is carrying away in some unknown part of that garment of his which passes for his 'pants' the good dollars that ought to be going into a white man's pocket. But the white man, even with the advice and under the direction of the able and experienced horticulturist, failed to show up the stuff. Hence these tears."

BARNS—Write for free book how to build. FRANK BRYAN, Mechanicsburg, O.

Use Mapes' Warming and Ventilating Drum

in your hen roost, and prevent all freezing. Utilizes animal heat. Fifty-hen size, $3.50. Full directions with each drum. THE MAPES VENTILATING CO., Middletown, N. Y.

WHEN you write advertisers mention THE R. N.-Y. and you will get a quick reply and "a square deal." See our guarantee 8th page.

Brains on the Farm

As much needed there as anywhere to be successful. Don't plod; learn to farm intelligently through our home study course in MODERN AGRICULTURE. Treats of soils, tillage, drainage, fertilizers, crop rotation, stock feeding, dairying, etc. Wm. P. Brooks, Ph. D. (Mass. Agr. College), Head of Dept. Text-books free to our students. *Send for 36-page booklet telling all about it.* The Home Correspondence School, Springfield, Mass.

PAGE

IF IT'S MADE

in a better way, and of better material, as it really is, then you can see how it has become so popular. PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

A READY BUILT FENCE

A better fence than you can build, all ready to stretch and staple. The ELLWOOD STEEL WIRE FENCE Is low in price, high in quality—lasts a lifetime. Fully guaranteed. Sold everywhere. If your dealer hasn't it, write to AMERICAN STEEL & WIRE CO., Chicago, New York, San Francisco, Denver.

LEE'S EGG MAKER

makes fowls healthy and profitable all the year. If not sold in your town send 25c. for big package, or $2 for 25-pound pail. GEO. H. LEE CO., Omaha, Neb., or 8 Park Place, New York. Use Lee's Lice Killer for lice & mites on chickens & hogs

LOCAL AGENTS wanted in every section to sell my New Crop Seeds. New plan. Quick sales. Big profits. Splendid outfit. Write to-day. FRANK H. BATTLES, Seed Grower, ROCHESTER, N. Y.

Crushed Oyster Shells.—100 lbs., 50c. Mica Crystal Grit, 100 lbs., 65c., both for $1.10. Poultry need both. Order soon. WISE CO., Butler, Ohio.

Drivers Have the safest and neatest Tug Holder on the market. Set nickel, 35c.; black, 25c. Illustrated circular free. Need some good agents. LESTER M. LOVELESS, Dept. A., Baldwinsville, N. Y.

THE DE LAVAL COMPANY

Acknowledge that they

Have been Lying About Paris Separator Awards

Qne of their latest advertisements is headed

"More Lying as to Paris Separator Awards"

which is one of the most truthful statements they have made lately, as we believe the readers will acknowledge if they try to reconcile some of their statements in the advertisement referred to with some in their previous advertisements.

In the advertisement headed "More Lying as to Paris Separator Awards" they publish what purport to be three "official" statements, dated Stockholm, Sweden. A careful perusal of these will show that they are what the courts call secondary evidence and never accepted by any court if there is primary evidence. The Paris Exposition was not held in Sweden.

Two weeks ago they advertised as follows:

> "At the Paris Exposition the DeLaval machines received the Grand Prize, or highest award * * * being entered and receiving such award in the name of 'Société Anonyme Separator,' which is the French translation of 'Separator Corporate Company,' the name of the DeLaval European organization."

Notice by this advertisement they claimed "Société Anonyme Separator" to be their European organization, thus acknowledging that no award was given to Aktiebolaget Separator.

But when we proved that "Société Anonyme Separator" exhibited a Butter Radiator or Butter Extractor, and not a Cream Separator, they lose their tempers again and accuse us of "lying and misrepresentation" and advertise the three statements referred to above in their efforts to prove that the Aktiebolaget Separator did get an award at Paris and claim it as their European arganization.

We call special attention to the dates of these statements, viz.: December 5, 1900; April 2, 1901, and April 17, 1901, then ask the reader to bear in mind that it was in the last of November, 1901, that they advertised that the award they claim was given to "Société Anonyme Separator." From which it will be seen that they pay no attention to facts or their previous statements when caught in a trap.

Being cornered on one claim, they abandon it and claim another; cornered again, they go back to their first abandoned claim. We recommend our "would-be competitors" to try once more.

An expert remarks that the DeLaval Company will have to "eat hair" in order to make their statements hang together.

We still say that the official list of awards distributed at Paris did not contain an award to the DeLaval Separator Company or the Aktiebolaget Separator.

To be continued in our next.

The United States Separator still leads the World. To-day it has no equal.

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Ruralisms

NOTES FROM THE RURAL GROUNDS.

SWEET POTATO TRIALS.—Plants of the following varieties of sweet potatoes were forwarded for trial by F. S. Newcomb, Vineland, N. J., and received on the Rural Grounds June 5. They were immediately planted in a suitable plot of sandy loam in ridges three feet apart, the plants being set 20 inches apart. Well rotted manure was incorporated in the ridge at the rate of one bushel to 20 feet. The plants all made a strong growth, and the resulting crop was better than the average in the neighborhood. The potatoes were dug October 9 on account of threatened frost while most of the vines were still growing.

VINELESS BUSH.—Short, stubby, but vigorous growth; rank foliage but true bush habit. Not one of the 20 plants showed any inclination to run. Large yield of long, light yellow, well-formed potatoes. Good table quality. A very desirable variety but a little late for our locality.

VINELESS GOLD COIN.—Very heavy broad foliage; grows about one foot high. Not quite so compact as Vineless Bush. Large yield. Tubers spindle shape, light buff, or creamy white in color. Evidently later than Vineless Bush and less agreeable in quality.

BIG STEM.—Apparently a sport of Jersey Yellow, with enormously thick red stems. Large heart-shaped foliage, rampant grower. Moderate yield of long spindling, light yellow tubers, stringy and irregular in form. Apparently too late for us. Quality very fair.

EARLY GOLDEN.—Moderately vigorous. Heart-shaped foliage, with slender creeping stems. Very heavy yield of long, smooth, well-formed deep yellow tubers growing compactly in hill. Easy to dig and store. High quality, cooks sweet and dry. One of the earliest and best.

NEW SWEET COREY.—A strong but not rank grower. Fine yield of golden yellow tubers, smooth and fair. Rather blunt and short in form. Set close in hill and dig easily. Medium early. High quality. Good in every way.

GEN. GRANT.—Strong grower with rather small foliage. Good yield of large, bright buff, irregular potatoes growing in a scattering manner. Good table quality.

UP-RIVER.—Slender but a vigorous grower, ripens early. Probably the best yield of all. Smooth, fair, slender tubers of wonderfully even size, deep yellow in color. Grows compact and digs well. Excellent quality.

PIERSON.—Vigorous, large, coarse, vines and heavy foliage. Good yield of large, light-buff tubers much scattered in hill. Long and rather irregular in form. Medium early. Quality very good.

RED BERMUDA.—Strong grower with heavy foliage. Good yield of long, large, dark-red tubers; set compactly and dig well. Medium early. Quality sweet but rather watery when boiled. Very good when baked.

BRAZILIAN.—Plants seemed to be tender. Several rotted at collar when half grown, apparently from excessive rain. Light yield of long, light buff, irregular tubers. Quality only moderate, though claimed to be the sweetest. Evidently too late for northern New Jersey.

JERSEY RED.—This and the next variety are much grown locally, and are market standards. Slender vine but a rapid grower. Fine yield of deep red, smooth tubers; grows compactly. Late medium in season.

JERSEY YELLOW.—Slender but vigorous. Good yield of fair bright yellow potatoes, early and compactly set. Dig well. Most popular sort here, but divides honors with the preceding. Both are of excellent table quality, but we always prefer the yellow sorts.

All the varieties tested can be recommended with the exception of Brazilian, which appears to require a longer season and less humidity than we had last Summer. The medium-sized early, bright yellow kinds like Up-River, Corey and Early Golden suit us best in manner of growth and table quality, while they would be very attractive in market. The large light sorts of the Gen. Grant and Pierson type probably yield better in deep rich soils, but are rather too slow in development for latitudes north of Philadelphia. The new Vineless Bush impresses us very favorably where sweet potatoes must be grown in narrow limits, but we think it should have as early a start as practicable.

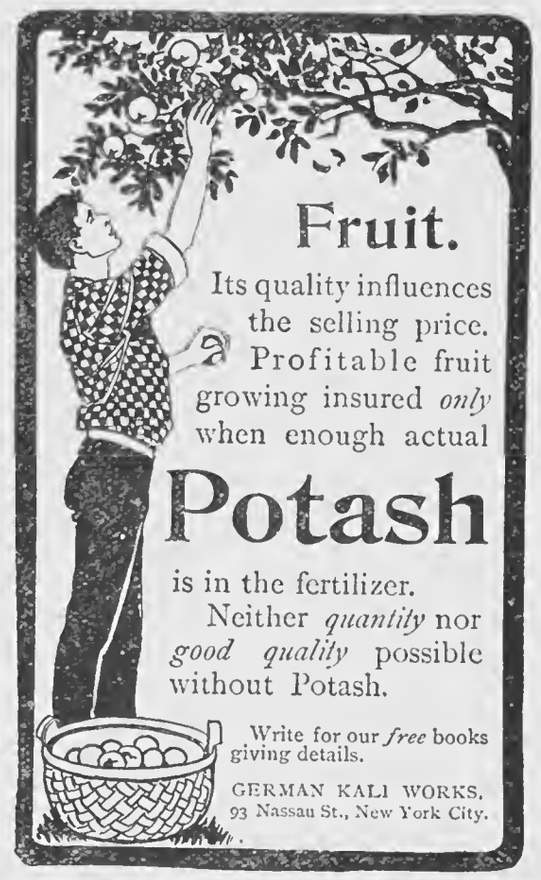
NEW ANNUAL SUNFLOWERS.—Sunflowers have long been conspicuous objects in country gardens, but the kinds grown have usually been confined to the large-seeded, tall-stemmed type, varieties of Helianthus annuus. Although a native plant, occurring wild from Minnesota to Texas, it is largely grown in all temperate countries for its seeds, which are used as food for poultry and also cattle after the oil is expressed. In Russia the seeds are much eaten as we use peanuts, but without roasting, and are freely sold by street vendors. The gigantic flowers of the single and double varieties are very striking but rather too coarse in outline for planting in near situations. They come in splendidly for backgrounds and other places where tall vegetation is wanted. Another native annual species, the Cucumber-leaved sunflower, H. debilis, has been greatly improved by European plantsmen, and is now offered in many dwarf, free-flowering varieties. They are usually catalogued under the name of Helianthus cucumerifolius, this name being just displaced by botanists under the rules of priority. The species grows wild in rich moist places throughout the warmer parts of the United States, and is generally found three or four feet in height. The improved varieties are much lower and more spreading in habit. H. Perkeo, a novelty of the season, was said to grow less than 12 inches high and cover circles of more than 18 inches in diameter. Our trial plants proved quite variable, growing from 10 inches to two feet high, and branched profusely. The dwarfer ones were true miniatures, and were covered with very bright and handsome flowers from late June until frost. When this low-spreading propensity becomes thoroughly fixed the Perkeo type will be a very useful garden flower. The blooms are single, nearly three inches across, dark yellow with a blackish purple "eye" or center. Among the taller types may be found quite extensive variations of color, from almost clear white, through creamy white to yellow and deep orange. All have the dark eye. There is another class announced for the coming year imitating the Cactus Dahlias in the odd forms of their quilled, twisted and fluted ray florets, usually spoken of as petals. The colors run through cream and lemon to deep yellow, and there are both dark and light gray central disks. One of the best known of these "cut and come again" sunflowers, so-called from their continuous bloom and usefulness as cut flowers, is sold as Stella. It is quite variable, and often comes fairly double. Planted as a background about two feet apart it makes a fine show throughout the long blooming season. Last year hybridization was effected on the Rural Grounds between a selected single bloom of Stella and a large double-flowered Russian variety. The hybrid thus obtained bloomed profusely the past season, some of the plants growing nearly six feet high, forming well-shaped bushes four feet across. The semi-double blooms averaged more than six inches across, and were borne on particularly long stems. Altogether it made a fine plant and looked like a good thing, but turned out almost completely sterile, only three plump seeds being secured from the many hundreds of blooms. The graceful habit and spotted stems of H. debilis were retained. It is possible that further attempts may produce seed-bearing plants having the same characteristics. W. V. F.

For the land's sake, use Bowker's Fertilizers. They enrich the earth.—*Adv.*

J. H. Hale on Peaches.

On page 804 I notice a reference to peaches, which should be corrected. Matthews peach is almost a reproduction of Smock and ripens fully as late. Emma is in no respect like Elberta (except it is yellow, but so is Triumph), and to suggest that it is will do great harm in tempting people to plant it, thinking to have a peach as fine as Elberta, only later. Emma is a *very poor growing* tree of Early Crawford class; has sickly yellow foliage, is quite unproductive, has a few large peaches and more very small ones. A few growers in the South have made some money out of it, as the few large peaches that were produced coming in just after Elberta, brought very high prices; all the same, it is a peach for planters to let alone. Elberta peach is being too largely planted, and in Elberta season in future years you are going to see flooded markets, and no mistake. Consumers are going to be all right, while growers who like to work for fun will have their hands full, and most likely empty pockets. Georgia will plant from 2,000,000 to 3,000,000 Elberta trees this Winter, and probably 1,000,000 or 2,000,000 more would be planted if the trees were to be had. For months now my nursery has had daily calls for Elberta in lots of from 5,000 to 50,000, while there is only a moderate call for more profitable earlier and later varieties. We nurserymen expect a picnic in the sale of Elberta trees for a year or two more, when a "busted" market will teach the orchardists that it is even possible to have too much of a good thing. J. H. HALE.

HYDROCYANIC ACID GAS.—In some recent issues of THE R. N.-Y., Prof. E. D. Sanderson, of Delaware, explained how the gas spreads in fumigating houses. He has now received the following note from C. P. Lounsbury, Entomologist, Cape Colony, S. A.: "In our work here, we have often been puzzled by the behavior of the gas. For instance, on one occasion a caged rat survived an hour's exposure in one ounce to 180 cubic feet of gas, when a large dog tied in another part of the room succumbed in a few minutes; and again three rats in a cage left almost beside the generator were still alive (though they died later from the effects) after an hour in one ounce to 150 cubic feet of gas. We did not understand such vitality, when at other times we saw rats gasp their last in a few minutes—presuming as we did that the uniform dissemination of the gas was complete in a few minutes. On principle I have had the government 'fumigatoriums' built with the ceilings highest at the center so as to throw back the ascending gas and placing the dish in the center of the space is practiced."



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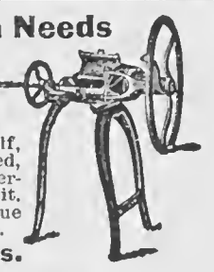
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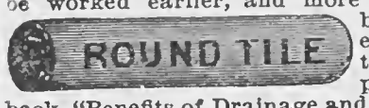

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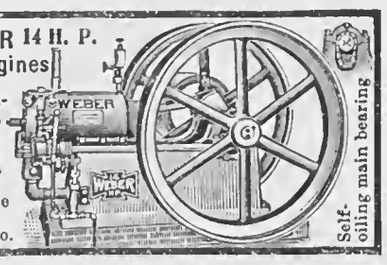

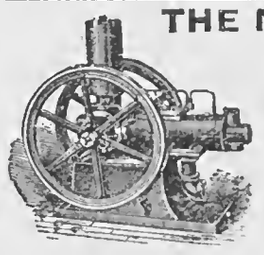
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HOPE FARM NOTES

RYE STRAW MANURE.—I have the following letter from Yates Co., N. Y.:

In Hope Farm Notes, page 807, you speak of selling rye straw. We sold ours, and many of our neighbors also, not for $15 per ton, but for $7 baled. We paid $1 per ton for baling and boarded men and teams. Did this pay at this price after hauling to market? Would our land be better off with this straw worked into manure; or this straw money spent for chemicals? If rye straw will stand 150 years in mortar, how long will it take to rot into manure? Our rotation is rye, clover and beans, the clover being plowed under for beans, and rye sown after beans without plowing. After getting two crops of beans we put in a hay, corn and wheat rotation, seeding to clover again after the wheat. From your figures that rye straw is worth $2.40 per ton as fertilizer, at the price of chemicals here. Is there $2.50 or $3 worth of humus in it that will pay quick returns for the trouble of handling long rye straw in manure? We use our manure on the corn, but have to help it out with a potash and phosphoric acid mixture. The serious question with us is humus. Our soil gets lumpy and hard after rains, and when in this condition the chemicals do not show results. H. E. M.

I have always regarded rye straw as the poorest of all humus crops except in some cases on heavy clays. It is so tough and hard that it does not rot readily. I have told how my neighbor, in tearing down his old stone house, found in the clay which was used for mortar, pieces of rye straw which were still quite tough. They were put in that clay nearly if not quite 150 years ago, and had never rotted. Of course that is not a fair test for the straw as humus, for in any cultivated soil the air and water would be admitted so as to rot the straw. It would be slow work, however—in fact, I think rye straw will stay in the soil without yielding up its plant food longer than any other ordinary humus crop.

USES OF HUMUS.—On some stiff, heavy clays this might be desirable, for these soils are naturally rich and do not need plant food as much as they need shaking up. The stiff, hard rye straw holds them open—makes them porous and admits air and water. There may be one case in 50 where such a thing as delaying the decay of humus would be desirable. In the other 49 the best plan would probably be to make it available as quickly as possible. Humus is not unlike money. There may be some cases where it is desirable to lock it up so that we cannot obtain the principal for years, and where the interest will be almost too small to count, but in the great majority of cases, we like to have our property *available*, so that we may turn it easily and obtain a quick income from it. I would certainly sell the rye straw at $7 and buy potash and dissolved rock with the money. It is true that analysis shows that the rye straw contains some fertility, but that fertility is locked up so tight that it is not worth $2.40 as compared with the same value in rock and potash or in clover, because it is not so available. At the same time I believe in green rye as a humus crop under some conditions. We often use it, but we would plow it under while it is soft enough to cut for hay. You can adopt a child while its habits are soft and pliable, and it may help nourish your family tree. If you wait until these habits have hardened and stiffened your tree will need something stronger than Bordeaux Mixture. I prefer to use humus that decays quickly.

BUCKWHEAT OR COW PEAS.—This leads up to the following question:

I would like to ask some of your people who are growing cow peas in the North, whether they think it would pay me in southern Cayuga County to sow peas on a meadow that is cut early, say June 15, and plow in the next Spring for potatoes, or as I am doing now, sow to buckwheat July 1, and after this sow rye about October 1 and seed with clover, which is cut once and then plowed again. I can generally grow about 25 bushels of buckwheat at 50 cents a bushel. Do you not think this money invested in chemicals would do more for the land than cow peas?

If I lived in Cayuga Co., N. Y., I should go to Cornell University and get Dr. I. P. Roberts to look at the tongue of that farm. I don't feel like giving direct *advice* about cow peas for any farm north of my own. I know that with us cow-pea vines make the most quickly available humus of anything we can put into the ground. Get a good mat of them, let them lie on the ground over Winter and plow under in the Spring. They equal well rotted manure in their effect on the next crop. I am on record as saying that I would not sow cow peas on land that is already good enough to grow a fair corn crop. I will stick to that, although men who should know more than I do about it say it is not good advice. With my present experience, if I had that meadow at Hope Farm, I would cut it early anyway. If my other crops were such that I expected to be short on grain I should sow buckwheat, but add to it a peck of Crimson clover seed per acre. If, after the buckwheat were cut, the clover looked well, I would let it alone—plowing it under in the Spring for potatoes. I would double the $12.50 obtained for the buckwheat (it would bring more with us), and buy high-grade fertilizer to go on each acre of potatoes. The clover would, I think, be far ahead of the green rye for fertility. Would it equal a crop of cow peas? I do not think so, still we use fertilizer for potatoes anyway, and the old meadow and the clover supply plenty of humus. The 25 bushels of buckwheat will remove 22 pounds of nitrogen, four of potash and nine of phosphoric acid. With the $12.50 I can buy 225 pounds nitrate of soda, 125 muriate of potash and 400 pounds of dissolved rock, or 35 pounds of nitrogen, 60 of potash and 50 of phosphoric acid. If this were not a piece of meadow land, or if Crimson clover did not do well here I should certainly omit the buckwheat and sow cow peas—spending most of the money that the buckwheat *would have bought* for potash and rock to use with the cow peas. I would not think of planting potatoes in soil that was lacking in available humus. I don't believe there is anything equal to cow-pea vines for this purpose. What comes next? In our experience Crimson clover and coarse manure are about equal! Of course all your fields are well covered at present with a humus crop? I regret that truth compels me to say that there are several bare fields which ought to be covered. Why do you not practice your own preaching? I fear I am like the minister who said he preached so much that he didn't have time to practice. Most of Hope Farm is well covered this Winter, but the wet season crowded work so that part of the land could not be seeded.

WOMAN'S WAYS.—Winter is usually a hard time for the women on the farms. They are often shut in for days or even weeks at a time. We have no telephone yet at Hope Farm, though we ought to have. The Madame doesn't like the cold, and the wind over the hills is so fierce that she doesn't go out unless there is some urgent need for it. A lady in New York State sends me this bit of opinion:

If farmers' wives would help with the chores, be on familiar terms with cows and horses, also the poultry, go out to the barn every day, no matter what the weather, happier women would be the result, for with health comes happiness.

A. E. V.

I'll leave that for some one else to discuss. No thank you—I know better than to attempt to tell the women folks what they ought to do. As I get older and better able to fill the largest chair in the house it becomes a source of regret to me that I wasted so much time in attempting to give advice. Do they prefer to have those of their own sex advise them? Now you won't get a word of opinion out of me except the fact that I would like to ask if women doctors usually have a very large practice. I suppose most men conclude at one time or another that their wives have no such thing as judgment. If it is possible to make them comprehend the truth they will wake up some day to learn that their much prized "judgment" is like brass beside the golden instinct which prompts a woman to know what is best.

A lady in Michigan writes that she is much interested in Billy Berk and the other black boarders because they have Berkshires on their farm. But she says:

Those same little pigs that I think so much of rooted out my Ruby Queen rose so that it died. I felt so bad about that, but those pigs got shut up, so they do not root out any more roses for me.

I'll warrant they were kept shut up after that. When a rose is so fine that Berkshires want to use it for a nose-gay we may conclude that it is worth rooting for. If I may be permitted to make an observation right here, I will say that it is too bad that more of our farm women do not make a firm stand against things they are justified in opposing—*before the pigs root up the roses.*

FARM NOTES.—The weather continued cold through the first week in December, giving our part of the country the coldest Thanksgiving season for 30 years. The frost crawled deep into the ground and drove all hands out of the cellar for the new house. A warm wave followed, but that cold snap will crackle all through history as a time for frosted window panes, red noses and chilled fingers out of season. Charlie's speed as he brings in the morning's milk is a good index to the rise or fall in the mercury. . . When the cellar froze up the boys began to haul wood. We expected the steam engine in a few days to run the shredder and circular saw and so it was necessary to haul a big pile of logs from the woods. Coming down our steep hill with a heavy load was dangerous business, for the face of the hill was coated with ice. We use a low-down, wide-tired wagon. It is excellent for most purposes, but out of place on our hill in an icy season. It is difficult to lock these low, broad wheels so as to hold back. They slide like a wide-runnered sled. In very deep sticky mud these broad wheels pull hard, for the mud piles up over them. For all other kinds of work we prefer the low-down wheels. . . We find December, January and February the best months for feeding shredded fodder. I am speaking of the fodder that is usually brought to barn or stack. As a rule, it is not well cared for, being put in large shocks and not well cured. By March such fodder is usually moldy. It surely pays us to take pains with our fodder. It is, of course, all under cover and is green—not brown or dull yellow. It was cut into small shocks and left open to the air and sun. Of course our Fall has been very favorable to the proper curing of this fodder. Still, there is a right and a wrong way to do it, just as there is with everything else.

H. W. C.

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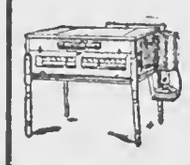

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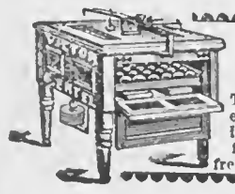

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The Rural New-Yorker

THE BUSINESS FARMER'S PAPER.

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THE RURAL NEW-YORKER,
409 Pearl Street, New York.

SATURDAY, DECEMBER 21, 1901.

We Are All Ready

to fill your orders for any papers or books you may need for next year's reading. We have taken a great deal of pains to develop a system by which we can send orders for other papers the day we receive them. Make out a list of what you want and send us with your order for THE R. N.-Y. We can save you money by sending the whole order to us in one remittance, and there will be less chance of errors and delays than if you send separate orders to the different papers. Orders for subscriptions should, however, always be sent as early as possible, as most large publishers get a week or two behind after the first of the year. We have perfected our system and have a trained force of assistants, and are prepared this year to care for every order the day it is received; but to secure other papers promptly orders should be in from one to two weeks in advance.

*

CONSUMPTIVE immigrants are now debarred from entering the United States, a consumptive pupil was recently ordered out of the public schools of Greater New York, and several States are said to be considering legislation which will prevent tuberculous persons from entering their borders. According to these indications, the consumptive will soon be ordered to get off the earth.

*

A TELEGRAM from Washington states that Speaker Henderson has organized the Committee on Agriculture so that it stands 12 to 5 in favor of the Grout anti-oleo bill. We do not yet know the exact make-up of the committee, but it is evident that one great point has been gained at least. THE R. N.-Y. returns thanks to the thousands of its readers who evidently voted with the postage stamp. Now keep it up until the victory is won!

*

WE are still receiving questions about the use of dry corn fodder in the silo. In theory it would seem as though dry stalks after husking might be cut into the silo and wet down with water so as to start a mild fermentation and make a sort of silage. We have repeatedly asked for experience in this line, but it is not forthcoming. We conclude, therefore, that this shock silage will shock a cow about as a dried-apple pie shocks a pronounced pie eater!

*

AT present bricklayers in London, England, lay one-third the number of bricks that they did for a day's work 30 years ago. The policy of some labor unions has been to reduce the day's work to the smallest possible amount and discourage the use of machinery that would displace hand work. The result has been to send large quantities of work out of that country. Speaking of this the Journal of Commerce says:

> Germany and Belgium have not only been getting iron and steel business that England used to have in foreign countries, but have been underbidding Englishmen in England itself. If this were due to the fact that the Germans were willing to work unreasonable hours at starvation wages one could regard the resistance of the English workman with high respect. But that is not the reason for German success, which is mainly due to the willingness of the German workman to use machinery, and, without working harder himself, to turn out a larger product. Machinery which is being rapidly introduced into American yards can either not be got into English yards without a strike, or can only be got in subject to conditions which reduce the work done by the men and do not increase the output.

Of course it seems very hard that a man who has spent the best part of his life at a trade should suddenly find that the inventor has hatched out a machine which does more work than he can, and at less cost, but this is one of the results of living in a country where progress and free thought are permitted. Any man, whether farmer, mechanic, editor, or statesman, who resists real improvement, will find himself swept aside. It is a wise plan for one to try to adjust himself to such new conditions rather than fight them; and better still, by looking ahead, to see the conditions and do the adjusting before they arrive.

*

A GOOD friend says he regrets that the farmers of the country do not take a more dignified way of making their wants regarding oleo known! With some people dignity becomes a disease. It would probably please the politician better if the farmer would take off his hat and stammer out a half-hearted request for a vote in favor of the anti-oleo bill; according to some standards that might be dignified, but the farmers know that it digs up very few votes. We admit that it will take most of the dignity out of an oleo Congressman to plaster him from head to foot with postage stamps, but he may bring it back with interest if he will support the bill.

*

WE have referred to the future of the automobile as a farm machine. We learn of cases where these vehicles, after doing their work on the road, have been used for turning farm machinery by raising the hind axle and running a belt from the wheel. The makers of automobiles, with one exception, discourage such double work. They say that the auto was made for speed and light travel—not for work that should be done by an engine costing less than one-fourth as much. As well put a light, swift trotter on the plow or heavy wagon when a stout heavy horse will do such work much better. It seems true that the present autos are not well fitted for farm use.

*

THE present high prices for grain come hard on the man with idle horses to feed. The cow gives her daily mess of milk and we feel that we are receiving immediate returns for the money spent for grain. With the horse we must often wait weeks or months for our return, and then receive it indirectly, often through the cow, sheep or hog! That is no reason why the horse should be starved, for we must keep him in good condition through the Winter if we expect him to do our work in the Spring. We must, however, feed him a less expensive grain than oats if we can find a grain that will keep him in good spirits for less money! We are gathering facts from horse feeders and would like to have *your* experience. What is the cheapest horse dinner at your barn boarding house?

*

WHAT is the value of a five-year-old child? In New Jersey the courts held that one dollar was fair value for a child that was killed by a trolley car. The plea was that the child had no earning capacity, and hence had no pecunary value to its parents! In New York City a jury allowed $300 for a little child killed by a cable car. The judge set this verdict aside. He said that the funeral and other necessary expenses cost $181, which would leave a trifle over $100 as the price of a human life! This, he said, was so low as to shock the moral sense. It is said to be almost impossible to obtain anything like a fair verdict for damages against one of the larger transportation companies in the great cities. As a rule they enjoy franchises which the people have given them, and which are worth millions. Yet, they will fight the payment of just damages in case of an accident with every trick and quibble of the law.

*

PRESIDENT Roosevelt in his message to Congress argues strongly in favor of Government irrigation of the arid lands of the Far West. In this he takes direct issue with the National Grange and the vast majority of farmers east of the Mississippi River. As most of our readers know, there are great tracts of desert land in the Far West where the rainfall is so scanty that cultivated crops will not grow without irrigation. Some of these lands are sterile or clogged with alkali, but if water were available for irrigation millions of acres would become productive. Through these lands run streams of good size, and irrigation is followed to some extent along the borders of these streams. If the water could be held back in storage reservoirs in the mountains and applied systematically to the land the area under irrigation would be vastly increased. The President favors the construction of such reservoirs at public expense, and, as we have said, thus places himself in direct opposition to the expressed wishes of a large majority of American farmers. If this land were actually needed by any generation now in sight there might be an excuse for some such scheme. Farm lands in the older settled parts of the country are now cheap enough—far cheaper in fact than good land would be on these irrigated plains. Those who desire farms can now obtain them, and we submit that it is far better from all points of view to repopulate and revive our present agricultural communities before we jump across the continent to build new ones. The opening of this arid land to productive culture would flood the country with food products far in excess of our present needs. That would mean further depreciation of our eastern farm lands which are now gaining in value. The building of these reservoirs and the sale or disposal of the irrigated lands would give occasion for one of the greatest political "jobs" in the world's history. The chances are that in the end the greater part of the lands would be controlled by great corporations, thus bringing the direct competition of the trust into the business of farming. For these and other reasons THE R. N.-Y. opposes Government irrigation—but chiefly because it is not necessary. We shall do our best to argue the matter in a fair and conservative way.

*

THE latest agricultural "fake" is the story of an Italian in New Jersey who tapped a trolley line and applied the electricity to his garden. It was said that he had "a vast net-work of wires" running all through the ground. According to the tale the trolley cars lagged, but the cabbage and potatoes jumped three weeks ahead of those in other gardens! People who would be tempted to take a nap if you talked the principles of plain agriculture to them jump at this story as a sure cure for their troubles. For example here is part of a note from New Hampshire:

> Give us the cost of any old dynamos and fixtures suitable for water power. There are hundreds of brooks among our New Hampshire hills that are murmuring and shouting to work for us farmers; gurgling and singing to grab the lightning and fling it into these rocky fields if that is the stuff which corn and onions want for dinner.

Investigation of the case mentioned shows that there is no trolley within three miles of the farm mentioned. The "electricity" used by the Italian seems to have been generated by a mixture of elbow grease and brain sweat! It is safe to say that there is at present no practical way of utilizing electricity to promote plant growth. That it will do this under ideal conditions seems to be demonstrated by experiments in greenhouse culture. We feel quite confident that some day the electric current will be used in a practical way for obtaining fertilizer nitrogen from the air. At present its use for agriculture appears to be limited to lighting, heating and providing power.

*

BREVITIES.

Let's be loyal to our calling,
Thus may we make farming pay,
So spell out your agriculture
With your very biggest A.

BOILED oats for the colt—page 850.

ARE hide growers joining the Free Hide League?

CUT hay early for cow feed—later for horse or market.

HOW would you like to be a Kansas natural-gas farmer?

IT is given to every man to live so that he need never fear the face of any other.

PROF. C. L. BEACH (page 851) found too much fat in the skim-milk. How the true "separator" did shake the fat out of its rival's work!

THE woodpecker has an elongated tongue with barbs at the end. We meet people who appear to have tongues of the same variety, but they use them to destroy characters rather than caterpillars.

A DISTINGUISHED entomologist says that the native New Jersey mosquito does not bite. Jerseymen should get out Federal injunctions compelling other States to keep their venomous insects at home.

OWING to delay in obtaining an engraving, the article on Mr. Mapes's plan of feeding hens will be held until next week. His conclusions will probably startle many good hen men.

LAST week we described a new plan for warming a henhouse. Mr. Mapes writes that he recently tested the device on a very cold night. The mercury stood at seven degrees below zero out doors and at 43 in the hen roost!

THE sugar refiners are said to be making overtures to the fruit growers in their efforts to obtain a repeal of the duties on raw sugar. They point out the fact that cheap sugar means an increase in the preserving industry, and a larger outlet for fruit. Beet sugar seems to have a chastening effect on the aforetime haughty sugar octopus.

SLIPPERY pavements in cities make poor footing for draft horses, and we frequently see them fall so heavily that it seems as though bones must be broken. The animals, often fine specimens of horseflesh, know their helplessness, and usually lie still until the harness is loosened. Then they scramble to their feet and go on as though nothing had happened, but there is no doubt that they carry lame spots for several days as a result. The look of fear on the face of one of these big horses when he feels that he is losing his footing and is about to fall, is pitiful. Many unnecessary accidents of this kind are caused by drivers who carelessly drive on dangerous places.

Events of the Week

DOMESTIC.—The range country for many miles northwest of Chadron, Neb., has been swept by a great prairie fire. The grass and weeds by reason of drought had become as dry as tinder, and when they were accidentally ignited the flames rushed across the prairie with great velocity. Live stock and flocks were driven from the path of the flames as fast as possible. The damage to the range has been very great, but very little stock is reported as lost. . . . . A despatch from Engle, N. M., says that oil borers have struck an artesian well at a depth of 200 feet which swept 1,000 gallons per hour through a two-inch hole. Engle is in the heart of the famous Journey of Death Desert, one of the most arid regions known, and the strike of water will prove far more valuable than an oil gusher. During the Mexican War out of a column of 165 soldiers, who attempted to cross the desert, all but 14 perished. Great excitement has been created by the strike. . . . The William McKinley National Memorial Arch Association has determined to change its plan of operation so as to appeal to Congress instead of to the public for the erection of the proposed McKinley memorial at Washington. . . . The State of Michigan has instituted proceedings against the A. Booth Packing Company, of Chicago, to enforce the penalty of $1,100 per month for six years for the company's failure to file articles of incorporation in this State and pay the franchise fees. The fine, if imposed at this rate, will amount to $79,200. The action resulted from the discovery that it was impossible to make proper service against the company in Michigan on counts of alleged illegal fishing. . . . . C. S. Hurter, Dominion Government metallurgist at Vancouver, states that among the millions of dollars worth of Yukon gold brought to him for purchase by the Government this season there was an abundance of platinum unknown to the miners. Hundreds of little nuggets of platinum were mixed with the coarse gold. Mr. Hurter declares that the miners of the Yukon have been throwing away thousands of dollars' worth of platinum daily. The Dominion Government is sending an expert to the Klondike to investigate.

CONGRESS.—In the executive session of the Senate, December 4, the new Hay-Pauncefote treaty was received and referred without comment to the Committee on Foreign Relations. . . . . Senator Jones, of Arkansas, introduced, December 4, without amendment the Anti-Trust bill which passed the House during the last session of Congress, but failed to pass the Senate. . . . Mr. Pearre, of Maryland, has introduced in the House a bill directing the suspension of tariff duties upon imports when their sale or manufacture is monopolized. . . . The report of the Isthmian Canal Commission was sent to Congress December 4. It says the Commission is of opinion that the most practicable and feasible route for the canal is by way of Nicaragua. Two bills providing for the construction of the canal were introduced in Congress December 4. . . . . In the Senate, December 5, Mr. McComas, of Maryland, made an extended speech on the subject of anarchy and the punishment of anarchist assassins, and was followed by Mr. Hoar, of Massachusetts, on the difficulties in the way of dealing with such criminals. The most effective remedy, he suggested, would be to have the civilized nations of the world agree upon some isolated spot to which all anarchists who upheld assassination or the overthrow of government should be transported. . . . . Senator Penrose, December 5, introduced in the Senate a bill for the regulation of immigration prepared by himself and the Commissioner-General of Immigration. The measure provides for a duty of $3 per head on all persons coming into the United States from foreign countries, except those who are citizens of this country or of Canada or Mexico, the fund thus raised to be applied to the payment of expenses incident to the regulation of immigration. . . . . Senator Depew introduced a bill in the Senate December 9 to establish the University of the United States. It will be for post-graduate work, and make use of the Government scientific collections, libraries and laboratories. It is reported that Andrew Carnegie is to make a gift of $10,000,000 to carry on the work, and a message from the President on this subject is expected shortly. . . . . The Senators and Representatives interested in the legislation for the irrigation of arid lands have determined to make the Hansbrough-Newlands bill the basis of action. It provides that the proceeds of the sales of public lands shall be set aside as a fund for arid land reclamation and irrigation. . . . . As the time approaches for final action on the Isthmian Canal project the complications begin to make their appearance. It is now asserted that before the United States can acquire the right to construct the canal a bargain must first be made with the Maritime Canal Company of Nicaragua, a New Jersey corporation, which claims to have spent $1,172,000 for lands and concessions along the proposed Nicaragua route. This company claims to own every foot of land between the Pacific and Lake Nicaragua. The supposition on the imperfect information attainable here is that this company is a successor of the Eyre-Cragin syndicate, which forfeited its concession after paying $100 000 and failing in October, 1900, to pay a further amount of $400,000. . . . . Senator Morgan introduced, December 10, a bill providing $180,000,000 for the construction of the Nicaragua Canal, of which $5,000,000 is made immediately available, and of which aggregate sum such amounts as are necessary are to be appropriated by Congress from time to time. The control of the canal and of the canal belt is vested in a board of eight citizens of the United States, in addition to the Secretary of War, who is to be president each member of the board to be paid $8,000 a year and to be chosen regardless of political affiliation. There is a provision authorizing the establishment of a regiment from the regular army on the canal belt to guard it properly, and courts also are authorized conformable to the powers granted by the governments of Nicaragua and Costa Rica. There is also a provision making three divisions of the canal during the construction, and there is to be a chief engineer and two assistants on each division, the chief to receive $6,000 a year and the assistants $3,000.

PHILIPPINES.—A member of Congress, who has just returned from the Philippines, has brought back a copy of the civilian pay roll at Manila. He insists that it shows great extravagance on the part of this Government, and that Congress should prune the list The civilian salary rolls at Manila carry 4,606 names of Americans and Filipinos, who draw an aggregate annual stipend from the Government of $3,086,989. Of these, 2,044 are Americans, whose yearly compensation foots up $2,280,044. There are 2,562 Filipinos, all with a few exceptions occupying minor places, which yield a total of $806,945 to the incumbents. Following is a list of some of the salaries paid to civilian officers: Governor Taft President of Commission, $20,000; each of four Commissioners, $15,000; secretary to the Commission, $7,500; Chief Justice, a Filipino, $7,500; six Justices, two of them Filipinos, $7,000; Treasurer, $6,000; Auditor, $6,000; Collector of Customs, $6,000; head of Department of Post, $6,000; Chief of Educational Bureau, $6,000; Chief of Health Bureau, $6,000; Attorney-General, $5,500. Up to September 1 last, Governor Taft was receiving $12,000 annually and $15 per diem. After that date his salary was fixed at $5,000 a year as Commissioner and $15,000 additional as the head of a bureau. His other colleagues on the Commission also are paid $5,000 a year as members of the Commission and $10,000 more each as heads of bureaus. Their compensation therefore is $15,000 annually. . . . . After leading a band of rebels for two years, during which period he used his knowledge of the methods of the Americans to great advantage, David Fagin, a negro who deserted from the Twenty-fourth Infantry (colored), has been killed by native scouts near Bangabon, Province of Nueva Ecija. A number of serious ambushes into which the American troops were led are known to have been the work of Fagin, and in many instances he is said to have ordered the assassination of prisoners who had fallen in his hands. . . . . The American and Fusion Federals elected their full ticket at the local elections held in Iloilo, Island of Panay. The constitutional code, allowing soldiers to vote, played an important part in the elections. . . . . Thousands of people are leaving Batangas Province for places of safety. Gen James M. Bell reports an important engagement between a force of insurgents at Labo, Province of Camarines, and a detachment of the Twentieth Infantry. Three Americans were killed. The loss of the enemy is not known, but is believed to have been heavy. Gen. Bell anticipates a speedy extermination of the irreconcilables. A large force of insurgents recently attacked the town of Lipa, Province of Batangas, killing one soldier and several Americanistas. Troop F, First Cavalry, killed 10 of the enemy before the remainder of the insurgent force escaped. The natives are stirred by the closing of the ports, and bitterly object to reconcentration. A Filipino force, consisting of 200 riflemen and 400 bolomen, recently attacked Nagpartian, Province of North Ilocos. Company M, Eighth Infantry, acting on the defensive, drove off the enemy, killing 11 of them, with no loss to themselves.

FARM AND GARDEN.—Orlando Harrison, president of the Peninsula Horticultural Society of Berlin, Md., who has spent his past life in horticulture, has engaged some of the best men in the country to talk on different subjects at their meeting to be held at Berlin, Worcester Co., Md., January 8-9-10. All horticulturists and agriculturists are invited.

Professor F. Lamson Scribner, the agrostologist of the Department of Agriculture, has been appointed Chief of the Insular Bureau of Agriculture in the Philippines.

The Pennsylvania Dairy Union has elected the following officers: President, William F. McSparran, Furniss; first vice-president, A. Leonard, Troy; second vice-president, W. E. Perban, Niagara; treasurer, S. F. Barber, Harrisburg; secretary, H. Hayward, State College directors, Henry W. Comfort, Bucks County; J. P. Sharpless, Chester County; C. L. Peck, Coudersport; S. J. McCoy, Elk City; E. P. Forney, Hanover. Secretary of Agriculture Hamilton demanded that the report of the Committee on Resolutions, which reflected upon his administration, be amended, and insisted that his department had performed it full duty to the dairymen.

The Secretary of Agriculture has designated Professor W. M. Hays, of the Minnesota State Agricultural College and Experiment Station in the Bureau of Plant Industry, to direct the work in organizing the State experiment stations in the middle Northwest, Minnesota, the Dakotas, Iowa and Wisconsin, into a coöperative union for improving the yield and quality of wheat and other grains, grasses, clovers and field roots.

Many prominent cheese makers from the counties of Brown, Calumet, Sheyboygan and Manitowoc met at Manitowoc, Wis., December 1. The object of the meeting was to solidify an organization—the Wisconsin Protective Cheese Manufacturers' and Buyers' Association—the purpose of which shall be the protection of cheese manufacturers and dealers throughout the State against frauds in adulteration of milk and cheese, also the encouragement of the manufacture of a more uniform and better grade of cheese in the counties above named, and a building up of a better market for the same The system used in this section in making cheese is the "ten to one," and the Babcock test was advocated.

The Northern Illinois Horticultural Society, in session at Dixon, elected the following officers for the ensuing year: President, J. F. Thompson, Marengo; vice-presidents, J. L. Hartwell, Dixon; A. D. Havenhill, Fox, and L. H. Cutler, East Dubuque; secretary, J. Friend. Nokomi; treasurer, Charles Hey, Dixon. Mr. Hey declined the office of treasurer and S. G. Soverhill, of Tiskilwa, was elected.

A report just issued by the Kansas State Agricultural Department places the total value of all farm products and live stock in the State last year at $350,000,000, an increase of $17,000,000 over last year. The total increase in two years is $45,000,000.

The Connecticut State Board of Agriculture held its annual meeting at Bridgeport December 17-19.

The Pennsylvania State Horticultural Association will meet at Bloomsburg January 14-15, 1902. A large attendance is expected.

The Wayne Co. (N. Y.) Fruit Growers' Association met at Newark, N. Y., December 11.

WAYNE CO. (N. Y.) GRANGE.

Waynes County (N. Y.) Pomona Grange held a two-days' session at Newark December 3-4. In spite of the disagreeable weather the attendance was good. The first day was occupied with election of officers and delegates to the State Grange, as follows: Officers: Master, E. P. Taylor, Lyons; overseer, G. P. Norton, Ontario; lecturer, Mrs. E. B. Norris, Sodus; steward, O. M. Lincoln, Newark; assistant steward, J. O. Wadsworth, Wolcott; chaplain, E. H. Clark, Palmyra; treasurer, D. A. Emeigh, Clyde; secretary, Mrs. B. S. Durfee. Macedon; gatekeeper, C. F. Swezey, Marion; Pomona, Mrs. P. S. Aldrich, Palmyra; Flora, Mrs. J. H. L. Roe, Wolcott; Ceres, Mrs. W. P. Rogers, Williamson; lady assistant steward, Mrs. F. A. See, Newark; member executive committee, Abram Garlock, Newark. Delegates to State Grange: E. P. Taylor, Lyons; Frank A. See, Newark; Mrs. F. H. Tuttle, Walworth; T. J. Bridges, Macedon; Mrs. D. A. Emeigh, Clyde; H. R. Paddock, Wolcott; Mrs. W. P. Rogers, Williamson; Rowland Robinson. Sodus; Mrs. G. W. Sweezey, Marion, and Edward Harrison, Lakeside.

At the morning session on Wednesday, the fifth degree was conferred in full form on a class of 10, making a membership of 325. Hon. T. W. Collins, of Lyons, introduced a resolution calling upon our representative to favor the Oleomargarine bill and oppose the Ship Subsidy and Irrigation bills. C. E. Clark introduced a resolution, asking Speaker Henderson to appoint some other person than James W. Wadsworth as chairman of the Committee on Agriculture. At the afternoon public session, assessment and taxation were discussed, and the accompanying answers made to the following questions sent out by the State Grange:

1.—If taxation is necessary for the enforcement of laws for the protection of property, individual or corporate; should any kind of property, either real or personal, which is protected by law, be exempt from taxation? No.

2.—Do you approve of exempting mortgages from taxation? No.

3.—Can you cite any case where bankers, loan associations or individuals have ever offered to loan money at any lower rate per cent on account of exemption from taxation? No.

4.—If personal property is entitled to exemption from taxation on account of the indebtedness of the owner thereof, why is not real estate entitled to the same exemption? It is.

5.—If one-half the property of the State be exempted from taxation, how much does it increase the rate per cent upon the remainder? 100 per cent

6.—Do you approve of taxing mortgages only by taxing real estate and requiring the mortgagee to pay such proportion of taxes as his mortgage value is to the land value, thereby dividing the land tax between owner and mortgagee? Yes.

7.—Do you approve of the State taxing mortgages for State revenue, and exempting them from local taxation? No.

8.—Do you approve of the State taxing mortgages for State revenue, while they are still taxable for local purposes? Yes.

9.—Do you approve of the State taxing corporations for all needed revenue, thereby relieving the individual citizen from all State taxes and exempting said corporations from local taxation? No.

10.—Do you approve of the State taxing corporations for all needed revenue, thereby relieving individual citizens from all State taxes and not exempting said corporations from local taxation? No. C. E. CLARK.

LICK A STAMP FOR BOSSY AND THE BABY.

Last week we printed a list of New York State Congressmen who are supported or elected by farmers. We wrote each one a personal letter asking him respectfully to use his best energies to help push the oleo bill through the House. Here are the answers received to date:

In regard to the oleomargarine bill introduced by Congressman Tawney, of Minnesota, it will give me great pleasure to take this matter into consideration, and if I find this bill will be of advantage to the farmers of our State, I shall certainly do all in my power to aid in the passage of the measure. C. A. PUGSLEY.

I shall be in favor of the Tawney Oleomargarine bill. JOHN K. STEWART.

I will surely support and vote for the Tawney Oleomargarine bill, at this session of Congress. A. S. TOMPKINS.

I shall be in favor of the Tawney Oleomargarine bill. J. S. SHERMAN.

I shall be in favor of the Tawney Oleomargarine bill. L. W. EWING.

I am heartily in favor of the Grout Oleomargarine bill and always have been. Shall do all I can to further it. GEO. W. RAY.

Your letter received and the subject will have early consideration. S. E. PAYNE.

I have not yet seen Mr. Tawney's bill, but I supported the Grout bill in the last Congress and favor its provisions now. M. E. DRISCOLL.

I have not examined Mr. Tawney's bill I think the Grout bill was favored by most of the farmers of my district, and for that reason I should vote in favor of a measure that sought to accomplish the same results. J. R. PERKINS.

I shall keep your letter on file and will give the same careful consideration when this measure comes before the House. W. H. RYAN.

It will be seen that the majority of these men favor the bill and will vote for it. Let us waste no stamps on them except to thank them for taking the position they do. Messrs. Pugsley, Payne and Ryan evidently need a few stamps. We appreciate the fact that they are going to "consider" the bill, but what we want them to do is to *vote* for it. Mr. Pugsley, for example, isn't quite sure that the bill will be of advantage to the farmers. Who is to change his mind? The farmers themselves. How are they to do it? The glue on a postage stamp will stick many an idea to a Congressman!

Woman and Home

From Day to Day.

IF SANDY CLAWS WAS PA.

I've often thought what fun 't would be
If Sandy Claws was pa.
He surely would be good to me,
If Sandy Claws was pa.
He'd let me see the million toys
He makes fer little girls an' boys;
An' every single Winter's day
I'd ketch on to the reindeer sleigh,
An' he'd be good an' wouldn't mind,
But jes p'tend that he was blind,
An' wouldn't never *whip behind*,
If Sandy Claws was pa.

The reindeer'd takes us 'way up high,
If Sandy Claws was pa,
They'd trot right through the air an' sky,
If Sandy Claws was pa.
An' pa would tell me how the deer
Could do a thing so awful queer,
An' why tney stay up in the air
Without balloons to keep 'em there;
He'd tell me how they fly all night
Up past the stars so big an' bright,
Without a single wing in sight,
If Sandy Claws was pa.

The pole explorers would be blue,
If Sandy Claws was pa.
We'd find the pole before they do,
If Sandy Claws was pa.
Fer we'd go there jes like a streak;
It wouldn't take us half a week
To make the trip, ner half a day,
Ner half a night while on the way.
It's great ole time them reindeer make
When their slim legs gits wide awake—
Not half a hour it wouldn't take,
If Sandy Claws was pa.

Each night there'd be a Christmas tree,
If Sandy Claws was pa.
An' one each day, besides, fer me,
If Sandy Claws was pa.
He'd tell me how he climbs right down
The red-hot chimbleys in the town.
An' how he ever, ever learnt
To never git his whiskers burnt.
But what's the use of thinkin' so?
These dreams is nice, but they don't go,
Fer pa ain't Sandy Claws, you know,
An' Sandy Claws ain't pa.

—Century Magazine for December.

*

We heard recently of a school teacher who tried, on her first day with the second grade, to gain the children's interest by questioning them as to what they already knew. Some of their explanations were a trifle unexpected.

"Now, who knows what a skeleton is?" asked the teacher, smiling coaxingly.

The little girl wearing the pink gingham apron and occupying the back seat waved her hand wildly and worked her mouth in frantic endeavor to get "teacher" to look at her.

"Well, what is it?"

"A skeleton," said the tot, twisting her apron in her fingers, "is a man who has his insides outside and his outsides off."

*

This season women's jackets are usually finished with a velvet collar—often with cuffs and revers of velvet, and when black or dark colored the dye rubs off the velvet in a most exasperating manner, smudging light-colored stocks or waists distressingly. One of life's little mysteries is the reason why such dye parts so willingly from the original fabric, and then refuses to move afterwards when its presence is undesired. A tailor tells us, however, that steaming the new velvet will prevent the color from rubbing off. A hot flatiron is rested up on its end, and a damp cloth put over it; the velvet is held in the steam until wet, and then brushed well with a soft hat brush. After the fabric is dry, it is treated to a second steam bath, and there will be no further trouble with the color rubbing off. A similar flatiron steam bath, applied to the under side, is our plan for renovating crushed or wrinkled velvet.

*

A small girl of our acquaintance, discoursing recently about Christmas, observed that her chum Lenore still believed that there was a truly Santa Claus. "I haven't believed in Santa Claus for years and years," continued Inez, she having reached the ripe age of 10.

"And did you tell Lenore that you don't?" we asked.

"Oh no," said Inez, in a shocked tone. "I think it's wicked to stop people from believing things that make them happy."

There is a good deal of Christmas philosophy in the little girl's opinion.

3971 Child's Costume, 4 to 10 yrs.

Most of us are foot passengers in a working world; there is no great destiny before us, and the plain and homely surroundings of our busy lives show nothing heroic, or romantic, or picturesque. We are the privates who march in the ranks. And yet, without building idle castles in Spain, and mourning because we can't live in them afterwards, it is possible to believe in a good many things that will make such lives happy. Perhaps some one who reads this looks forward to a Christmas from which necessity has stripped the customary gifts—a Lenten festival, bare of its traditional good cheer. Francois Coppée, the French poet, tells an old legend of a little orphan who, hearing of the gifts anticipated by his companions, determined to place his sabots by the fireplace on Christmas Eve, in full faith that Noel, the French Santa Claus, would fill them with gifts. But, as he left the church, after midnight mass, he saw, lying asleep in the porch, a carpenter's boy, his bag of tools by his side, and his bare feet exposed to the nipping frost. The orphan paused in pity of one poorer than himself, then, drawing off his sabots, slipped them on the feet of the sleeping stranger, and limped home barefooted through the snow. Reaching his poor room he cried himself to sleep, because he had not even the sabots to hold the gifts of Noel. But, in the morning, he saw, by the empty fireplace, his old sabots, piled high with gifts, while throughout the village the people talked eagerly of a miracle—a golden crown showing in the time-worn pavement of the church porch. The orphan had placed his sabots—all he had to bestow—upon the sacred feet of the Child of Bethlehem.

Whatever our private or personal beliefs—whether we welcome Christmas festivities or turn away from them like the sad-visaged Puritans—we are all alike the better for public recognition of a season of peace and good will. If our purses are light, there is all the more reason to make our hearts correspond with them. After all, being happy is largely a question of habit; not so easily acquired, perhaps, as a habit of looking on the dark side, but none the less a matter of personal choice. If we can't get what we like, we may at least like what we can get, and that cheery philosophy will spread a spirit of Christmas joy over every month in the year.

The Rural Patterns.

The kilted suit shown is made of blue serge, with collar, tie and shield of red cloth trimmed with narrow black braid; but white, dark red, green, brown and fancy plaids are all used, and flannel, cashmere and similar wool goods are appropriate. The skirt is laid in backward turning pleats from each side of the front to the center back where they meet. The upper edge is stitched to a body lining, that closes with the skirt at the back, over the front of which the shield is applied and which is finished with a standing collar at the neck. The blouse is made separately and in double-breasted style, closing at the edge of the box pleats. The back is laid in two box pleats and the fronts in one each, while the neck is cut away to reveal the shield and is finished with a sailor collar. The sleeves are full, and gathered into narrow cuffs, or bands, at the wrists. To cut this costume for a girl of six years of age five yards of material 27 inches wide or 3¼ yards 44 inches wide will be required, with ⅝ yard 27 inches wide or ½ yard 44 inches wide for collar, shield and tie. The pattern No. 3971 is cut in sizes for children of 4, 6, 8 and 10 years of age; price 10 cents.

Loose three-quarter coats are very desirable for children. In the model shown, the fronts are cut in box style and hang free from the shoulders, but the back includes a center seam. To the neck is joined a sailor collar, that is square at the back, but rounded over the fronts, which are cut away to close closely to the neck, where there is a simple turnover collar that is seamed to both the coat and the sailor collar. The sleeves are in regulation style and pockets, with pocket laps, are inserted in each front. The coat is closed, in double-breasted style, with handsome pearl buttons and buttonholes. To cut this coat for a child of four years of age 3⅝ yards of material 20 inches wide, 2⅞ yards 27 inches wide, 1⅝ yard 44 inches wide or 1½ yard 54 inches wide will be required. The pattern No. 3984 is cut in sizes for children of 2, 4, 6 and 8 years of age; price 10 cents from this office.

3984 Child's Three-quarter Coat, 2 to 8 yrs.

Earning Money

Any one—man, woman, boy, girl—can do it and no experience is necessary.

The Ladies' Home Journal and The Saturday Evening Post have made it sure. All you need is faith in yourself. If you think you're going to amount to something, write to

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We will sell you the best steel range in the market at wholesale price, saving you agents' commissions and travellers' expenses. 62 styles to choose from.
We are the only manufacturers of steel ranges, selling direct to the consumer at wholesale price. Catalog and price list free. Send for them to-day.

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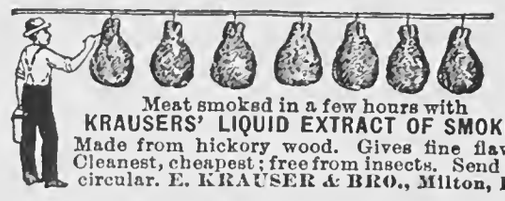

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POULTRY-HOUSE
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A Steel Washer—galvanized—never rusts, never leaks, never falls apart, is cleanly and will last a lifetime. That is why the

Syracuse Easy Washer

is made of steel. It is **easy to operate**, because it washes by air pressure. Air forces soap and water through the clothes and takes out the dirt. No rubbing on washboards, no wood or metal pegs to destroy clothes, as in other machines, but simply air pressure, without hard work, without friction, wear or waste, making washing easy.
It washes fast, washes clean, washes everything. It is on rollers to move about easily.
Thousands in use, each one a testimonial.
You take no risk on the EASY washer. **Try it four weeks,** then **return it if you wish.** Write for full information.

DODGE & ZUILL, 539 S. Clinton St., Syracuse, N. Y.

A Brick Bake Oven.

THE FIRST-PRIZE WINNER IN OUR PHOTOGRAPHIC COMPETITION.

The picture shown on our first page, Fig. 383, received first prize in the recent photographic competition. It is needless to enlarge upon the beauty of the photograph, for that is fully shown in the engraving. The first qualities that strike us in the picture are the skill of the grouping and the sentiment displayed, the latter quality being, from an artist's standpoint, too often missing from a photograph. The shining milk pails, the clump of hollyhocks, and the plump little maid with the cushiony loaf, would bring back recollections of wholesome country living to many who have drifted far from the soil. The sender of the photograph, Mrs. S. J. Perry, of Michigan, has this to say of it:

"Such a brick bake oven is used in Ohio and Pennsylvania for baking bread, pies, cakes and cookies. A fire is built inside of dry hard wood, and left to burn to coals; then raked out and a wet mop used to clean out the ashes. The large loaves of bread go in first, then pies, cakes and cookies. Bread requires but one hour to bake, and other things less. In fruit time large board trays are filled with apples or peaches sliced, or any fruit one wishes to dry, and put in after the bread is out. The door is closed and the fruit left until next day, when it is generally dry enough to put away. The bread is fine-flavored, and in generous-sized loaves as you can see. Eight to 10 loaves, half a dozen pies, cake, biscuit, etc., are generally a baking. The Pennsylvania Dutch know well how to make such things."

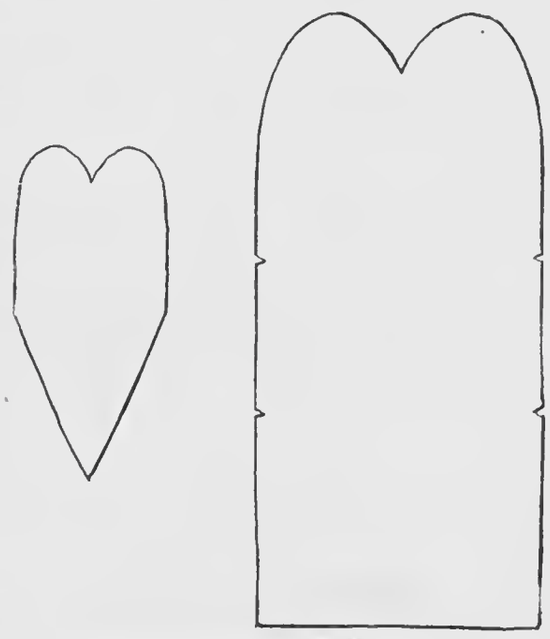
Christmas Holly.

Readers of THE R. N.-Y. may wish to know more of the holly they see at Christmas. Some of the best comes from Delaware. Late in November and early December is a season of activity to a number of holly workers. It grows in the woods and damp places; is a tree, when at its best. The most beautiful holly has a thick, waxy dark-green leaf, edged with sharp thorns. It bears bunches of bright scarlet berries, smooth and shiny. They ship small branches of leaves and berries in boxes or cases. This is called loose holly by the trade. Crosses and anchors are made in various ways; one style by wiring twigs of green and bunches of berries to wooden forms; another by the tacking of each leaf and sprig of berries to flat wooden cross or anchor. While the latter is pretty, the former is the more natural looking. Men, women and children go holly hunting, on foot and with team; sometimes go miles. Reckless, greedy gatherers will cut down trees or cut the limbs and top; leaving the poor denuded stump to testify to their meanness. Others clip twigs, leaving the tree to bear a crop for next year. Some steal, some beg; others buy. Holly has a money value; so have potatoes; why steal more of one than the other? The twigs are carried home in bags. Often the wreath-maker has helpers. The husband or children will "trim" for her. Bad leaves, and extra leaves are clipped off. The hoop is made of a switch bent, tacked and tied, or wired. The maker has spooled the wrapping wire upon a small stick; taking the hoop in her lap, placing some twigs upon it, she holds them with the left hand, while she wires them round and round with the right. The berries have been freed from the leaves and tied into bunches; one of these is wrapped on to the hoop as often as the maker chooses. Five to the wreath, if a small one, is the common arrangement. Wreath making is not play. Considerable strength is required for good work, and the hands are continually coming in contact with the sharp holly points. Many a child has warmer clothing or an extra Christmas gift due to holly work. Each year finds it scarcer than before, and will increase the cost of decoration. It is a pity to rob the trees of their beauty! Upon a background or carpet of snow the dark-green leaves and bright berries are a beautiful sight to the eyes of a lover of nature's handiwork. Nevertheless, it would give me joy to transplant some of them in their brightest beauty, where the city people could enjoy them in their perfection of loveliness. Each wreath or sprig of holly could tell you of your fellow beings in the country if it could speak. Some holly buyers see only dollars and cents in holly from first to last; others see beauty all the way, though money be the object for which they labor. No, not money but what money will buy. LUCY E. HORTON.

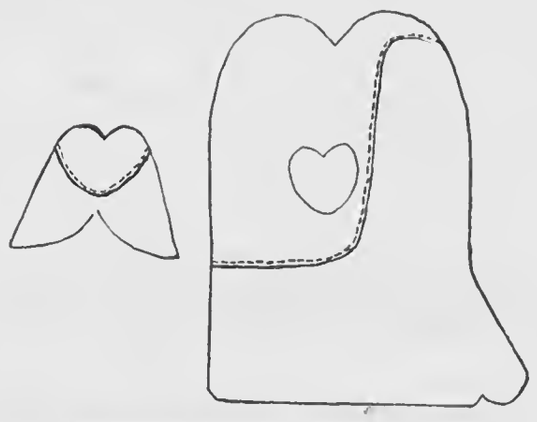
MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

Homemade Mittens.

Jack Frost is with us once again, and there is a general demand for mittens, large and small; and in one home at least there is no lack, although there is not a good knitter in the family—not one who has ever mastered the art of knitting to such an extent as to be able to knit and read at the same time, as Grandmother used to do. As the reading must not be neglected, the sewing machine is pressed into the service with very satisfactory results, turning out mittens at a rate that would astonish the housekeepers of "ye olden time." For the men, who work all Winter with their mittens on, and must therefore have such as are warm, pliable and durable, we make them of heavy denim or duck, and line them with old knit under-



CHILD'S STOCKINET MITTEN. FIG. 388.



MAN'S WORKING MITTEN. FIG. 389.

wear. These are so cheap, and quickly made, that to mend them would be a waste of time. The hands are made double as shown by dotted line in Fig. 389; being applied on the outside, when the "hand" wears through, it is ripped off; and this is all the mending they ever get. Made of wool goods (a piece of an old coat for instance) with the backs nicely stitched, they are very neat; and one pair, made from some pieces of an old fur cape, with calfskin hands, is quite fine, and just the thing for driving. The little boys have each a pair made of astrachan, lined with eiderdown, and finished around the tops with fur.

For Spring and Fall wear, we omit the lining; and for the children, very good ones are made from pieces of their old bicycle hose, (there is usually a little left between the knee and ankle) cutting them as shown in Fig. 388. They will wear these cotton mittens—thus preventing chapped hands—when woolen ones would be too warm. Now I imagine some sister holds up her hands in holy horror, and exclaims: "How shiftless!" But I deny the charge. Only those who cling to Grandmother's ways are shiftless; and if some one can suggest a better way I am ready to shift about at any time. MARION LAWRENCE.

Rural Recipes.

In Maryland we're happy—
The nor'west breezes pipe;
The canvasback is blooming
And the terrapin is ripe.
The hardshell crab is tempting
The jaded appetite;
The oyster makes us joyous—
The world is running right.
—Baltimore American.

Raisin Gingerbread Without Eggs.—One cupful brown sugar, one-third of a cupful of shortening (part butter and part nice beef suet), one cupful of molasses, two-thirds of a cupful of buttermilk, three cupfuls of flour, one cupful of seeded raisins, one rounding teaspoonful soda, one teaspoonful each of ginger and cinnamon, and one-third teaspoonful each of cloves and allspice. Bake in a shallow pan and eat warm.

Indian Pudding.—An old-fashioned apple Indian pudding, known to every one who remembers grandmother's cooking, calls for two quarts of milk, one cupful of molasses, one cupful of Indian meal, one tablespoonful of finely-chopped suet, two teaspoonfuls of salt and one quart of pared and quartered apples. Heat the milk in a double boiler, and when it boils pour it over the meal. Put the mixture in the double boiler and cook for three-quarters of an hour, stirring it often. Add the molasses, apples and suet and a half teaspoonful each of ginger and nutmeg. Butter the pudding dish, turn the batter into it and bake it in a slow oven for three hours. Serve it with cream. If butter is used in place of suet three tablespoonfuls will be required. Sweet apples are the best for this pudding.

WHAT'S IN A NAME?

Depends upon the name. Scott's Emulsion is a name that has value. Maybe it doesn't mean much to you—but to the consumptive who has been strengthened and fattened, to the sickly children who have received good health, to the weak mothers and babies who have grown strong—to these Scott's Emulsion means something.

To all of them it has meant an easy and natural return to health.

We'll send you a little to try, if you like.
SCOTT & BOWNE, 409 Pearl street, New York.

EVERY MAN
WOMAN AND CHILD

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High-Grade Watches.
WALTHAM AND ELGIN ONLY.

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The "P. S. Bartlett" Waltham and the "G. M. Wheeler" Elgin are as good watch works for men as we have ever seen.

Men's Size Watches.
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We give you your choice. They are full 17-jeweled watches. They are adjusted by experts and are first-class in every respect. They come cased at following prices, including free safe delivery:

In solid ore-silver case, open face..... $12.25
In sterling silver case, open face..... 13.88
In sterling silver case, 3 oz. case, open face or hunting..... 16.15
In 25-year gold filled case, open face.. 18.56
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14-K. GOLD-FILLED CASE.
FULL 15-JEWELED WORKS.

No. 7 is a lady's full 15-jeweled hunting case watch. The works Waltham or Elgin. The case is 14-Kt. gold filled, guaranteed to 25 years. Price delivered in good running order, $14.50.

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have earned a world-wide reputation. Sales increased over two millions last year. Not made by the trust. Refuse imitations which are being forced on the market. Look for the **red ball,** in the trade mark on genuine "Ball-Bands." Sold everywhere.

Get them of your local dealer.

MISHAWAKA WOOLEN MFG. CO.,
Mishawaka, Ind.

MARKETS

THE WEEK'S QUOTATIONS.

WHOLESALE PRICES.

NEW YORK, DECEMBER 14, 1901.

GRAIN.

Wheat, No. 1, N'th'n, Duluth, spot	—	@	84⅞
No. 1, hard, Duluth, to arrive.	—	@	92⅞
No. 2, red, new	—	@	86⅝
Corn, No. 2, mixed, elevator	—	@	69⅞
Oats, No. 2, mixed	—	@	51
Rye, No. 2, W'n, c. i. f., Buf	—	@	66½
Barley, feeding	63	@	65
Malting	67	@	70
Buckwheat, per 100 lbs	—	@1	27

BEANS.

Marrow, 1901, choice, per bu	2 37½	@2	40
Fair to good	2 00	@2	30
Medium, 1901, choice	—	@2	05
Pea, 1901, choice	—	@2	00
Medium and pea, fair to good	1 75	@1	95
Red kidney, 1901, choice	—	@2	15
Fair to good	1 75	@2	05
White kidney, 1901, choice	2 40	@2	45
Black turtle soup, choice	1 80	@1	85
Yellow eye, 1901, choice	2 30	@2	35
Lima, California, 1901	—	@3	30
Italian, medium	1 85	@1	87½
Other foreign, medium	1 75	@1	80

FEED.

Spring bran, coarse, spot	—	@25	00
Winter bran, bulk	—	@26	50
Red Dog	—	@26	75
No grade flour	—	@26	50
Linseed meal, ton	—	@30	50
Cottonseed meal, ton	—	@26	10

HAY AND STRAW.

Hay, No. 1	85	@	90
No. 2	70	@	75
No. 3	65	@	67½
Clover	60	@	65
Clover, mixed	65	@	75
Straw, rye, long	70	@	85

MILK.

New York Exchange price 3½ cents per quart in 26-cent freight zone.

BUTTER.

Creamery, extra, per lb	—	@	25
Firsts	23	@	24
Seconds	20	@	22
Lower grades	16	@	18
June, extras	21½	@	22
June, firsts	20	@	21
June, seconds	18	@	19
State dairy, tubs, fresh, fancy	23	@	23½
Tubs, firsts	20	@	22
Tubs, seconds	17	@	19
Tubs, thirds	15	@	16
Tins, etc	15	@	22
W'n imitation creamery, fcy	18	@	18½
Firsts	16½	@	17½
Lower grades	14	@	15½
W'n factory, June, fancy	15	@	15½
June, fair to choice	14	@	14¾
Fresh, firsts	15	@	15½
Fresh, fair to good	14	@	14¾
Lower grades	12½	@	13½
Rolls, fresh, choice	16	@	17
Common to prime	13	@	15
Packing stock	12½	@	14

EGGS.

QUOTATIONS LOSS OFF.

State & Pa., avge. prime, doz	—	@	29
W'n, fresh-gath'rd, choice, doz.	—	@	28

QUOTATIONS AT MARK.

Nearby, State & Pa., f'sh-gathered, fancy, selected, doz	—	@	30
Average best lots	26	@	27
Fair to good	23	@	25
W'n, fresh-gathered, graded	—	@	26
Regular packings	20	@	25
Kentucky, fresh-gathered	20	@	25
Tennessee, fresh-gathered	20	@	25
W'n, fresh-gathered, dirties	—	@	17
Refrigerator, Fall packed	18	@	21
Refrigerator, early pckd, doz.	16	@	19
Refrigerator, dirties	15	@	16
Limed, Western	16½	@	17

COUNTRY-DRESSED MEATS.

Calves, veal, prime per lb	—	@	9½
Fair to good, per lb	8½	@	9
Common to medium, per lb	5	@	8
Buttermilks, per lb	7	@	8
Grassers, per lb	5	@	5½
Pork, Jersey, dressed, light, lb	7½	@	8
Jersey, dressed, medium, lb	7	@	7½
Jersey, dressed, heavy, lb	6	@	7
Roasting pigs, per lb	10	@	13

LIVE POULTRY.

Spring chickens, per lb	—	@	9
Fowls, prime, per lb	—	@	10½
Roosters, per lb	—	@	6½
Turkeys, per lb	—	@	8
Ducks, average W'n, per pair	60	@	70
Average Southern, per pair	50	@	60
Geese, average W'n, per pair	—	@1	00
Average Southern, per pair	75	@	90
Pigeons, mixed, per pair	—	@	20

DRESSED POULTRY.

DRY PACKED.

Turkeys, Jersey & up-river, fcy.	12	@	13
Jersey & up-river, fair to g'o.	10	@	11
Md. & Del., fancy	12	@	13
Md. & Del., fair to good	10	@	11
State & Pa., fancy	—	@	11
Ohio & Mich., scalded, fancy.	—	@	10½
Ohio & Mich., fair to good	9	@	10
Other W'n, good to prime	9	@	9½
Chickens, Phila., selected, large.	15	@	16
Phila., mixed sizes	12	@	12½
Other Jersey, fancy	12	@	12½
Other Jersey, fair to good	9	@	11
State & Pa., fancy	10½	@	11
State & Pa., fair to good	9	@	9½
Ohio & Mich., scalded, fancy	10	@	10½
O. & Mich., scalded, f'r to g'd.	8½	@	9½
Other W'n, fair to good	7½	@	8½
Fowls, O. & Mich., fcy, scalded.	—	@	9
Other W'n, dry-picked, choice.	—	@	9
Other W'n, scalded, choice	8½	@	9
Western, poor to fair	7	@	8
Ducks, Md. & Del., fancy	12	@	13
Md. & Deld, fair to good	10	@	11
Ohio & Mich., fancy	11	@	12
Other Western, prime	10	@	11
Geese, Md. & Del., prime	—	@	10
Western, prime	—	@	8
Poor	6	@	7
Squabs, prime, large, white, dz.	—	@2	50
Mixed, per doz	1 75	@2	00
Dark, per doz	1 25	@1	50

ICED.

Turkeys, Spring, Western, dry-picked, prime, per lb	—	@	8½
Scalded, prime, W'n, per lb	—	@	8½
Fair quality, per lb	—	@	8
Poor, per lb	7	@	7½
Chickens, W'n, dry-picked, lb	8	@	8½
W'n, scalded, per lb	8	@	8½
Poor to fair, dry-picked or scalded, per lb	7	@	7½
Fowls, W'n, dry-picked, prime	—	@	8
W'n, scalded, per lb	—	@	8
S'th'wn, dry-picked, prime	—	@	8
W'n & S'th'wn, poor to good.	7	@	7½
Old roosters, per lb	5½	@	6
Ducks, Western	—	@	10
Geese, Spring, W'n, per lb	6	@	7

GAME.

Quail, prime, per doz	2 50	@2	75
Grouse, per pair	1 50	@2	00
Partridges, per pair	—	@1	50
Woodcock, per pair	1 00	@1	25
Wild ducks, canvas, per pair	2 50	@3	00
Redhead, per pair	1 50	@2	00
Mallard, per pair	75	@1	00
Common, per pair	25	@	30
Rabbits, per pair	12½	@	18

HONEY.

N. Y. State, clover, comb, fy, lb.	15	@	15½
Clover, comb, fair to good, lb.	13	@	14
Buckwheat, comb, per lb	10	@	12
Extracted, clover, per lb	6	@	6½
Extracted, buckwheat, per lb.	—	@	5½
Cal., extracted, per lb	5¼	@	6
Southern, extracted, per gal	55	@	60

HOTHOUSE PRODUCTS.

Lettuce, per case	1 00	@1	75
Cucumbers, No. 1, per doz	—	@1	00
No. 2, per box	2 00	@4	00
Mushrooms, good to fancy, lb	40	@	60
Poor to fair, per lb	15	@	35
Tomatoes, per lb	20	@	25

DRIED FRUITS.

Apples, evaporated, 1901, fcy, lb.	10	@	11
Evaporated, 1901, poor to g'd.	6½	@	8½
Evaporated, 1900, fancy, lb	10	@	10½
Evaporated, 1900, com. to pme.	6	@	8½
Sun-dried, 1901, N. C., sliced	5½	@	6½
Sun-dried, 1901, O. & Mich., qrs.	5	@	6
Sun-dried, 1901, W'n, qrs	4½	@	5½
Chops, 1901, per 100 lbs	1 80	@2	40
Cores and skins, 1901, 100 lbs.	1 60	@2	12
Raspberries, evaporated, 1901, lb.	—	@	23
Sun-dried, 1901, per lb	20	@	21
Blackberries, 1901, per lb	7	@	7½
Huckleberries, 1901, per lb	17	@	18
Cherries, nearby, 1901, per lb	15	@	15½
Southern, 1901	13½	@	14

FRESH FRUITS.

Apples, York Imperial, bbl	3 50	@4	50
Spitzenberg, prime to fancy	4 50	@7	00
N'n Spy, good to fancy, bbl	3 50	@4	50
Winesap, per bbl	3 50	@4	50
Snow, good to choice, bbl	3 50	@5	00
King, per bbl	4 00	@5	50
Ben Davis, per bbl	3 50	@4	50
Greening, per bbl	4 00	@6	00
Baldwin, prime, per bbl	4 00	@5	00
Red Winter sorts, fair to g'd.	3 00	@3	50
Inferior, per bbl	1 75	@2	50
Pears, Seckel, nearby, bu. box.	1 00	@1	50
Beurre Bosc, per bbl	3 00	@4	00
Beurre Clairgeau, per bbl	2 50	@3	50
Beurre d'Anjou, per bbl	2 25	@3	00
Kieffer, per bbl	2 50	@3	00
Common, per bbl	1 50	@2	00
Grapes, W'n N. Y., Catawba, case 10 3-lb. baskets	1 00	@1	15
Catawba, per small basket	9	@	12
Niagara, case 10 4-lb. bkts	1 75	@2	75
Concord, case 10 3-lb. baskets	1 00	@1	15
Concord, small basket	11	@	13
Cranberries, Cape Cod, fancy, large, late varieties, bbl	7 50	@8	00
Good to choice	6 00	@7	00
Early Black, fancy, dark, bbl.	6 50	@7	00
Cape Cod, poor to fair	5 00	@5	50
Jersey, per bbl	6 00	@6	50
Jersey, per crate	1 60	@2	15

VEGETABLES.

Potatoes, L. I., per bbl	2 62	@ 2	75
Maine, prime, per bag	2 30	@ 2	40
Maine, per 180 lbs	2 75	@ 2	87
State, prime, per 180 lbs	2 50	@ 2	62
State, prime, per sack	2 25	@ 2	30
Jersey, per bbl	1 75	@ 2	00
German, good to prime, per 112-lb. bag	1 40	@ 1	50
German, per 168-lb. bag	2 15	@ 2	25
Sweet Potatoes, So. J'y, bbl	2 25	@ 3	00
Beets, Jersey & L. I., 100 bchs.	—	@ 1	00
N. O., per 100 bunches	2 50	@ 4	00
Brussels sprouts, per qt	6	@	10
Chicory, N. O., per bbl	3 00	@ 3	50
Cauliflowers, fancy, per bbl	4 00	@ 4	50
Fair to good, per bbl	2 00	@ 3	50
Culls, per bbl	1 00	@ 1	50
Celery, State & W'n, doz. rots.	12	@	40
Jersey & L. I., doz. flat bchs.	—	@	75
Carrots, L. I., per bbl	—	@ 1	00
Cabbages, L. I., Flat Dutch, per 100	3 00	@ 4	00
State, per ton	10 00	@12	00
Eggplants, Fla., ½-bbl. crate	3 00	@ 5	00
Escarol, N. O., per bbl	4 00	@ 4	50
Kohlrabi, N. O., per 100 bchs.	3 00	@ 5	00
Kale, Norfolk, per bbl	50	@	60
Lettuce, N. O., per bbl	3 00	@ 4	00
Florida, per basket	1 00	@ 2	00
Other Southern, per bskt	50	@ 1	00
Onions, Orange Co., wh., bag.	2 00	@ 4	00
Orange Co., red, per bag	3 00	@ 3	25
Orange Co., yellow, bag	2 75	@ 3	25
Connecticut, white, bbl	3 50	@ 5	50
Connecticut, yellow, bbl	3 00	@ 3	50
Connecticut, red, per bbl	3 25	@ 3	75
N. O. shallots, 100 bchs	2 50	@ 3	00
Romaine, N. O., per bbl	3 00	@ 4	00
Spinach, Baltimore, bbl	—	@ 1	25
Norfolk, per bbl	1 50	@ 1	75
Squash, Hubbard, per bbl	—	@ 2	00
Marrow, per bbl	1 75	@ 2	00
Pumpkins, per bbl	1 25	@ 1	50
String beans, Fla., green, per crate or bushel basket	3 00	@ 4	50
Wax, per crate or basket	3 00	@ 4	00
Turnips, Jersey, Russia, box	—	@	75
Tomatoes, Fla., per carrier	2 50	@ 3	50

FURS AND SKINS.

Black bear	15 00	@25	00
Cubs and yearlings	5 00	@10	00
Beaver, large	7 00	@ 8	00
Small	3 00	@ 4	00
Red fox	2 00	@ 3	00
Gray fox	75	@	80
Marten, dark	4 00	@ 8	00
Pale	2 50	@ 4	00
Skunk, black	1 10	@ 1	20
Half-striped	70	@	80
Long-striped	75	@	85
Striped	30	@	40
White	15	@	20
Raccoon	90	@ 1	10
Opossum, large	40	@	50
Medium	25	@	30
Small	10	@	15
Mink	2 50	@ 3	00
Muskrat, Winter	12	@	13
Fall	9	@	10
Kits	2	@	3

The best Grain-thresher, Fanning-mill, Feed-mill, Rye-thresher, Land-roller, Dog-power, Steam-engine, Clover-huller, Saw-machine (circular & drag), Sweep-power, Fodder & Ensilage Cutter, Round-silo,

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RIPLEY Hardware Co, Grafton, Ill., is looking for hustling agents and dealers to handle its compressed-air pumps. The Eclipse spraying outfit is on this list, which is one of the best made for orchard work.

THE Banner root cutter is one of those machines that it is extravagance to be without, for any farmer who feeds roots. It cuts the roots in very fine slices, and is equipped with a shaking device which removes all dirt or gravel before the roots reach the knives. Write O. E. Thompson & Sons, Ypsilanti, Mich., for copy of their handsome free catalogue.

THE Rife Hydraulic Engine seems to be the most effective outfit to insure a constant water supply. The manufacturers guarantee every machine to the extent that if after 30 days' trial any machine is not entirely satisfactory (no conditions attached), it may be returned and the money paid will be refunded, or, if rated, the engine will be shipped on 30 days' trial. Write Rife Engine Co., 22 Liberty St., New York, for catalogue and full particulars.

SPROUT, Waldron & Co., Muncy, Pa., are making some remarkably fine portable mills for use on farms. They grind all kinds of dairy feed and every kind of grain—oats, rye, corn, barley, provender, clover, hay, cornstalks, corn and cob—anything suited to live stock feeding. One of these mills will be sent to any responsible person for a free trial of 15 days. Or if you prefer to know more of them you may have a descriptive catalogue, free, by sending your name and address to Sprout, Waldron & Co., Muncy, Pa.

FLEMING'S Lump Jaw Cure, Fleming's Spavin Cure and Fleming's Fistula and Poll Evil Cure must be known by name at least to every reader, for these famous stock remedies are advertised in our columns. Fleming Bros., Union Stock Yards, Chicago, are eminent chemists who believe in a separate remedy for each class of disease they treat. The Lump Jaw Cure cures lump jaw, the Spavin Cure cures spavin, and the Fistula and Poll Evil Cure cures these diseases, so Fleming Bros. assert, and prove it by offering to refund all money paid if their medicine fails to cure.

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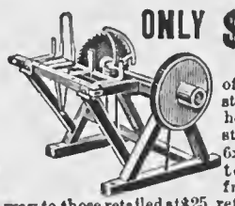

ONLY **$14.30** for our No. 12 tilting table wood saw, saws any kind of wood. The frame is made of seasoned oak, shaft of cold rolled steel. Castings and wrought iron parts heavy, braced extra well, making it stiff and strong. 95 lb bal. wheel. Pully 6x6 in. Wt. 320 lbs. **We guarantee** this machine to be the best saw frame made. If not found equal in every way to those retailed at $25, return at our expense. Price—24 in. saw **$5.75**; 26 in., **$6.70**; 28 in., **$7.65**; 30 in., **$8.60**. **Send for our Large Free Catalog**, it shows 8 styles saw machines. All sizes circular saws, lowest prices ever offered.

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WANTED.—Reliable man to help handle small dairy farm. Must be good milker, and able to do general farm work. Good home, good wages and steady job for right party. D. A. KNEELAND, Mountain Home Farm, Waitsfield, Vt.

POSITION WANTED by young married farmer who understands the case of all farm animals and poultry. Can make butter, handle engines, cream separators, compound rations, care for fruit and vegetables. No expert, but *thoroughly practical*. Wife also has extensive knowledge of all kinds of poultry, and incubators and brooders. References exchanged. J. D. PRICKETT, Archbold, Ohio.

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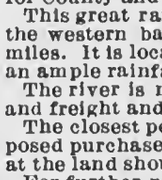

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The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

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THE RURAL NEW-YORKER, NEW YORK.

10 Weeks for 10 Cents.

The time is nearly up for those 23 cash prizes that we have been talking about. The contest closes January 1. We have received clubs from every State in the Union, and Canada. The clubs are small, but we expected them to be; yet as a whole they count up into a great many names. We are, however, yet short of our 20,000 new names for 10 weeks each. We would like to have enough to make up the full 20,000 new names by January 1. If two out of every five old subscribers would send one name we would get the 20,000 before the close of the old year. Besides, there is time enough even now for anyone to start in and win the first prize by New Year's. We are ready to send samples, blanks, etc., to anyone who will send us a postal card for them.

THE RURAL NEW-YORKER,
New York.

MARKET NOTES

THE NORTH WOODS are sending down their usual delegation of Christmas trees, which are piled up high along the docks on West Street. The trees are mostly of the spruce and hemlock family, and are put up with great care, the smaller in bunches, and the larger ones with limbs tied together. The packing is done so nicely that when loosened the limbs spread out and look nearly as well as wher in the woods. Retail prices run from 50 cents to $5 according to size. This year there was a large pile of ordinary hemlock twigs two or three feet long, for use in trimming the interiors of houses and churches. Of course, there are large quantities of holly and various mossy running evergreens, both loose and made up in ropes, wreaths and other forms. Much of the mistletoe comes from England, and at this writing has not arrived. Last year the bulk of it heated and spoiled on shipboard. What was fit for sale brought enormous prices, a little spray selling for 75 cents.

PUMPKINS AND SQUASHES of the better sorts are scarce, and sell at prices double last year's figures. There is no doubt that the use of corn-cutting machinery has lessened the growing of pumpkins, which are in the way of the harvester; and ordinarily pumpkins do not bring enough to pay a farmer for hauling them to market. Squashes sold so low last year that many growers were disgusted and reduced their acreage. It is reported that Minnesota has a fair crop of squashes, which have been bought by Boston parties. The size of the pieces of pumpkin pie in New York eating houses has not visibly diminished, but then there are schemes for adding other stuff to the filling. I have found apple sauce adulterated with mashed potato. The lack of flavor was a mystery until the cause was discovered. The potato appeared to mix very well and would hardly be noticed except by looking closely.

GROWER AND CONSUMER.—The following letter is from a New Jersey fruit man:

"This is a fruit-growing section, mostly small fruits. Our local market here is very small. Consequently we have to ship our fruit and produce mostly to the large cities by rail, to be disposed of through commission houses, which as a rule is very unsatisfactory to the growers. We are aware that the prices the consumers pay for our fruit and the prices returned to the growers are altogether too far apart. Is there any way to come closer in contact with the consumer? We can get along very well with insects, scales, fungus diseases, blights, etc., but the greatest trouble is in the market end. Often it makes but little difference in price whether we put our fruit upon the market in first-class or inferior condition. Can you suggest a plan to remedy this great difficulty in marketing?"

This question has been often discussed, but it is one in which interest is constantly growing. When a fruit grower compares the retail price at which his goods sell with the net that he gets, he feels, and often justly, that the difference is too great, and that somebody is getting more profit than his share. Of course, a man who lives at some distance from the city must have an agent here to handle his goods. There is no one better qualified for this than the commission man who has had years of experience in distributing produce throughout the city. The trouble is that in this commission business there is so much opportunity for dishonesty in various ways that can hardly be detected that rogues find it an easy field to work in. These people and the dead beats who receive goods without making any returns whatever, have brought the business into disrepute. There are enough honest commission men in New York to handle all the goods shipped here. Of course, they do not promise extravagant and unwarranted prices, and they sometimes make mistakes in selling too quickly or holding goods too long. It is for their own interest to get as high prices as they can, and make quick and fair returns, for upon these principles their business has been built up, and they know that there is no other way in which it can be continued. The difference between the wholesale and retail prices is not all profit to the handler, for waste, cartage and store rent must be considered. The complaint that it makes but little difference in price received whether fruit is first-class or only ordinary, shows that the receiver is dishonest or does not know his business. Of course, owing to the freakish state of the market during the fruit season, it may happen that, owing to a temporary scarcity, inferior lots on one day sell for more than better grades the next, but this is exceptional, and the rule is that quality and appearance count largely in the price obtained. We do not know how one farmer at quite a distance from the city can get any closer to the consumer to advantage than by having a reliable commission man act as his agent. It looks like a feasible plan, however, for associations of farmers to open depots for distributing their own goods at retail in cities. It is doubtful whether much more money would be made for a time than by selling through the better class of commission dealers, but features could be made of small packages for family use, and a trade mark standing for real merit, which would be a constant advertisement to increase the demand for the goods of the association. W. W. H.

NEW YORK STATE DAIRYMEN MEET.

A Good Meeting at Olean.

The meeting of New York dairymen at Olean on December 11-12 will pass into history as one of the most helpful of the long series. Olean lies in the heart of a great dairy section—a section in fact where cows are the chief farm machines and milk is a staple product. The interest in the oleo discussion and the fact that some of the most noted dairy authorities in the country were to be present served to attract a large audience. There was probably a larger proportion of actual cow men present than is usual at the New York meeting. By cow men we mean those who actually milk the cows, as distinct from creamerymen and manufacturers. This goes to silence one argument of the oleo men, who have claimed that the common farmers take no interest in the passage of the Grout bill, but that only a small class of creamerymen demand it. The way these same "common farmers" pour out and express themselves whenever they have an opportunity ends that argument. It was thought best not to have a display of of dairy machinery and fixtures at this meeting, and it was doubtless a wise move, for the speakers thus secured larger and more attentive audiences.

Mayor J. H. Waring, of Olean, welcomed the dairymen. He said that Allegany and Cattaraugus counties can supply as good dairy products as can be found anywhere. Yet bogus butter and filled cheese have come into the market as a menace to the dairy industry. It is legitimate for dairymen to get together and learn how to make better products, or how to cheapen and improve methods of manufacture. It is equally important for them to learn how to prevent fraud and unfair competition for, unless this can be done, their labor and skill will be largely wasted, and the incentive to study and develop new methods will be destroyed. The Mayor's address served to show how all who come in touch with dairymen quickly recognize the strong demand for legal protection from fraud. Jared Van Wagenen, Jr., responded, and referred to the business-like methods of organized farmers. Dairying is the greatest industry of the greatest State of the Union, and no excuses are needed when dairymen seek to combine, and thus pick up the successful methods of other lines of business. President Geo. E. Smith said that the Association in 25 years of work had met with varying fortunes, but on the whole had done its share in uplifting the dairy interests of New York. He spoke of the exhibits of cheese at Buffalo. New York had a total of 409 exhibits and scored 97.39. Canada with 200 exhibits scored 96.79, while Wisconsin with 219 exhibits scored 96.04. This shows how close the competition was, and while New York led it must be remembered that the exhibition was at her home, and that only the hardest work can win abroad. New York won a gold medal on butter and cheese, thus showing that it is possible to make the finest of dairy products in the State when the conditions are right.

Prof. H. H. Wing, of Cornell, gave an excellent talk on "Some Results from Feeding a Herd of Poor Cows." He said that for the past 10 years they had been trying at Cornell to feed fat into milk—that is, increase the per cent of fat by special feeding. They conclude that it is not possible to make any permanent increase of fat per cent by changing the feed. It was argued that the Cornell cows were not fair specimens for such a test, so a herd of 20 cows was selected that seemed to be better suited. The owner was in debt and could not buy the required grain feed. The cows were mostly young—giving from 10 to 20 pounds of milk per day. This milk was tested before the feeding began, and from March to November weekly records were made. Then 10 of the cows were bought for $25 each—best and poorest included. They were fed silage and hay and from four to six pounds of bran, corn and oats and cotton seed mixed. After calving they had all the grain they could eat—from eight to 14 pounds per day. This grain was fed while the cows were at pasture, the plan being to see if they would give richer milk than before, and how much. As a result of all this one cow made an average gain in butter fat of one-half of one per cent. Three others gained .44, .41 and .41 respectively—others less. One cow actually gave a poorer milk under the heavy grain feeding. One cow gained heavily in milk, giving 2,476 pounds in 1900 and 5,049 pounds for the period in 1901 while under test. This cow ate 14 pounds of grain per day. This does not show any great increase in butter fat as the result of heavy feeding. Prof. Wing drew the conclusion that all such tests show that each cow has a certain individuality of her own. What one will do is no rule for another. It pays to know what each cow is doing, and then vary the feed and care if results show it to be desirable.

Prof. I. P. Roberts read a thoughtful paper on "How May the Profits from Our Dairies Be Increased?" The profits of dairy husbandry are not what they should be. Suppose the eight-hour system were established in the dairy. Other lines of business have prospered on an eight or 10-hour day, but dairying has always required long and arduous hours of toil. It would be impossible to meet the shorter day unless the economics of milk production can be simplified and improved. The cows in the Pan-American test showed a profit, excluding the calf, of $41.56 per cow for six months. That is, the selling price of the butter was that much greater than the actual cost of the food—not counting labor. The butter in this case brought 25 per cent more than the average price received by dairymen in the State. Many practical dairymen work from early morning until after sundown at night, and at the end of the year have but a few hundred dollars surplus. Prof. Roberts believes that much of this lack of success is due to bad management or carelessness. At least one-half of the cows in the State do not pay. At Cornell some years ago the herd averaged scarcely 3,000 pounds of milk per year. In 1898 the descendants of these cows averaged 7,575 pounds. These cows are largely grades, but good bulls have been kept at the head, the cows have been well fed and selected by the scales and Babcock test. The Binghamton beet sugar factory sold its old machinery for scrap iron and put in a new plant at a cost of $200,000. The result is that the company will be able to pay dividends while the old machinery meant sure failure. Dairymen may learn a lesson from this. If half a million cows could be sent to the fertilizer heap the situation would be relieved and prosperity given to a struggling industry. Prof. Roberts says that our stations, institutes and conventions do not reach and convince the man with the unprofitable cow. We make laws to exclude cheap labor, but forget the cheaper labor on the farms of New York State who work 12 hours per day at five cents an hour, and whose products compete in every market with those of better paid labor. Teachers must be sent to the homes of those men, and even then the work of education will be painfully slow. Prof. Roberts did not attempt to tell how this work is to be done. He painted the picture in dark colors, and called for volunteers to show how it may be remedied.

The following officers were elected for the ensuing year: President, D. P. Witter; vice-president, H. E. Cook; secretary, W. W. Hall; treasurer, F. E. Dawley; directors, Jared Van Wagenen, W. H. Jordan, R. P. Grant, M. T. Morgan, Geo. W. Sisson and J. C. Sibley. The honorary vice-presidents are: B. B. Odell, of Albany; T. L. Woodruff, of Brooklyn; C. A. Wieting, of Sehoharie; E. J. Burrell, of Herkimer; C. H. Royce, of Dutchess; F. H. Merry, of Oneida; W. E. Daud, of Livingston; J. P. Clark, of Chautauqua; R. H. Bent, of Jefferson; E. J. Preston, of Dutchess; F. A. Converse, of Jefferson; A. D. Harrington, of Chenango; F. W. Borden, of Montgomery; V. C. Beeby, of Wyoming; F. N. Godfrey and F. W. Higgins, of Cattaraugus. Resolutions were adopted stating the justice of the Sherman cheese bill and the Grout oleo bill, and urging all New York State Congressmen to vote for these measures. Secretary Wieting's administration of the State Agricultural Department was commended, and the thanks of the Society to the citizens of Olean, and particularly to F. N. Godfrey, who worked hard to make the convention a success, were given with a rising vote. The convention also denounced the scheme of Government irrigation for the arid lands.

In The Summer

Of life a woman may find herself fading and failing. She doesn't understand it. She goes to doctors, who treat her for this or for that, but she gets no better. She grows frail and pale. She can just "drag about the house," but has no pleasure in life.

Many such women have taken advantage of Dr. Pierce's offer of *free consultation by letter*, and have been restored by Dr. Pierce's treatment to perfect health. There is no more wonderful medicine for women than Dr. Pierce's Favorite Prescription. Its action upon the womanly organs is at once apparent in the decrease of pain and the increase of strength. It cures female weakness and such diseases as take away the strength and beauty of women.

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"Before I commenced to use your medicine I was in a bad condition (for eight years) and four doctors treated me," writes Mrs. Bettie Askew, of Garysburg, Northampton Co., N. C. "They, of course, gave me at the time some relief, but it did not last long. I was some days in my bed and some days I dragged about the house. I have used five bottles of Dr. Pierce's Favorite Prescription and five of the 'Golden Medical Discovery,' and four vials of the 'Pellets.' Now I feel like a new woman, and I want the world to know it."

The action of the "Favorite Prescription" is assisted by the use of "Pleasant Pellets" when the bowels are irregular.

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Bought at Receivers' Sale. Sheets either flat, corrugated or "V" crimped. No tools except a hatchet or hammer is needed to lay the roofing. We furnish free with each order enough paint to cover and nails to lay. Price per square, $1.75
A square means 100 square ft. Write for Free Catalogue No. 67 on General Merchandise. Chicago House Wrecking Co., West 35th and Iron Sts., Chicago, Ill.

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Absolutely Cured.

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Live Stock and Dairy

DAIRY AND FARM NOTES.

Building a Dairy Barn.

PART IV.

WARMTH AND THE COW.—While we are speaking of warmth, it may not be out of place to ask what is the correct temperature for a milch cow. I am willing to confess ignorance, and as willing to say that in my judgment formerly-accepted Winter temperatures have been too low. Probably 40 to 50 degrees would represent a range as usually given by practical men when discussing the subject in institute work. No doubt the temperature in these same cases would be found lower by actual test. It is easy to guess, and just as easy to be wrong, and easier. My judgment had until recently been in accord with the general view, but since having a chance to give nearly perfect ventilation, the whole question has changed, and now I easily see why I did not care for a higher degree, and I believe the same reason will stand true generally. We could not maintain a pure atmosphere and make the doors, windows and walls tight enough to maintain this high degree. To tell it all, we could not carry even a 40 to 50-degree average and have anything like pure air. Pure air in stables has been in the past only a relative term. We say, yes, the air seems very pure and free from odors not because we compare it to the well ventilated rooms we live in, but we compare to some other stable much worse, and from that

PLATFORM IN COW STABLE. FIG. 390.

position we may be right. The actual condition of things, however, must govern, and not comparative conception.

WARM AIR AND PURE AIR.—We have grown up to expect a stable odor in our clothing and think nothing of it. My conception now of a pure air is one in which a man may work without the objectionable stable odor; a pure stable air just like a pure house air. It appears to me that the limit of warmth has not been reached. We find a Summer temperature of 70 degrees usually the most satisfactory, all other things being equal, for milk flow. It is not the hot, sultry day that gives the big mess, nor is it the other extreme ranging in the forties or fifties, so the question comes to me, why a lower Winter temperature, provided the air is frequently changed? There is a limit, however, because only animal heat is at hand. We have been able to maintain a range from 54 to 60 degrees with the varying changes of a northern New York Winter.

A WELL-BUILT STABLE.—The stable is ceiled with matched lumber both inside and out, and on the southern and western sides, which are the sides exposed, as shown in Part III., an extra lining with building paper is put in between the inner and outer walls. This air chamber thus formed has two advantages, making a high temperature possible and also preventing quick condensation. A single wall, however perfect the ventilation, with its cold contact will condense vapor before a ventilating flue can get hold of it. We are using a single wall on another stable, and while we can keep up the temperature fairly well the stable does not seem so dry. The expense of side wall is not much greater than when double boards and paper are used. The actual cost of lumber for the side wall of this stable in Part III was 8,000 feet of inch lumber, planed and matched, worth $16 per 1,000, or $128, and the lumber used between the walls was worth $10, making a total cost of $138. Double boards and paper would have required 7,000 at $12 plus the surface planing, costing $1.50 per 1,000, making a total cost of $94.50. Cost of paper added would make $100, a saving of $38. I am not able to state the difference in cost of labor in putting on the surface planed, but I should say that it would be not more than $10 less, a total saving in this case of $50, very small indeed, and the subject is well worth careful attention. I would suggest and advise all who intend to adopt the King system of ventilation or any other system as good if anyone has succeeded in finding it, to build in the manner indicated.

STONE WALLS AND AIR SPACE.—I do not like stone side walls. It is very difficult indeed to get a full measure of sunlight through the windows, and unless an air space is left in the wall condensation will take place more readily than upon the board wall with air chamber. I have never been quite able to understand the general use of stone. Wood is cheaper. If the stone walls were not built higher than the base of the windows all would be well. Another saving was effected in the barn in Part III. over a two-story barn in size of timbers and thickness of wall. In a two-story barn great strain comes upon the wall and structural support, while in a ground plan the strain comes chiefly upon the ground. I am not in accord with the teaching that an animal needs one cubic foot of air space for each pound of live weight. If we were to build a box large enough to supply pure air without change the animal could not warm it. I find that we cannot reduce the space below one-half cubic foot per pound live weight without infringing upon the space necessary for handy and economical care of stock. If we take for granted that nine feet in the clear is correct we must have from 34 to 40 feet in width, depending upon whether the cows stand face or tails together. We are using both kinds, and each has its objections; quicker and easier feeding in case of heads together; with heads to the sides less width by six feet is required, from the fact that only one driveway is necessary to haul manure, one trip sufficing to clean both sides unless more than a load is made daily. Another item of saving is the cleaning of these drive platforms. In the double drive we are cleaning a space 16 feet wide, and in the single drive only nine feet. Where platforms are kept clean we find quite a saving of time. A six-foot manger is wide enough for a single row; a platform about five feet, and built like Fig. 390, A representing the stanchion or manger; back 18 to 20 inches to a point B the floor is level. Here a gentle rise takes place of 1⅛ inch in cement floors and 1½ inch in plank, ascending back to the point C. which is level with the floor line A, B. This does not disturb the animal by slipping as usually found on an incline from the manger to gutter. The same effect is given to the rear part of the platform, and the cows kept clean; a gutter eight inches from C to D 15 inches wide, and six inches from E to F, and a pitch of 1½ inch on the drive platform for each five feet.

H. E. COOK.

Jersey and Holstein Cross.

In your issue of November 30 the question of crossing the Jerseys and Holsteins successfully was discussed and decided in the negative. The decision was based chiefly on the premise that the two breeds were so unlike they possessed no common characteristics. While it is true that in form, color, size and milking qualities they are wholly different, it is also true that each is marked by positive qualities that assert themselves more conspicuously than do those of almost any other dairy breed. The most careless observer may detect the slightest mixture of Jersey blood in a herd of scrub cows, and it is this quality of persistence that underlies heredity. The same is equally true of the Holstein. The one excels as a producer of butter fat, but is somewhat deficient in capacity as a milk producer. The other is generally credited with the opposite qualities. Here then we have the ideal conditions of a successful combination, and the writer inclines strongly to the belief supported by observation, that with a Jersey bull of ordinary prepotency and a Holstein cow of large milk capacity, the progeny may be as safely counted on for good dairy animals as can those from any other cross. The utility of cross-breeding at all is still and fairly an open question.

Cornl. Ag'l College. L. P. C.

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Breeders' Directory

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123 HOLSTEINS all ages, for Sale DELLHURST FARMS, Mentor, Ohio.

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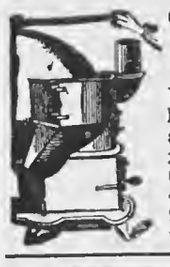

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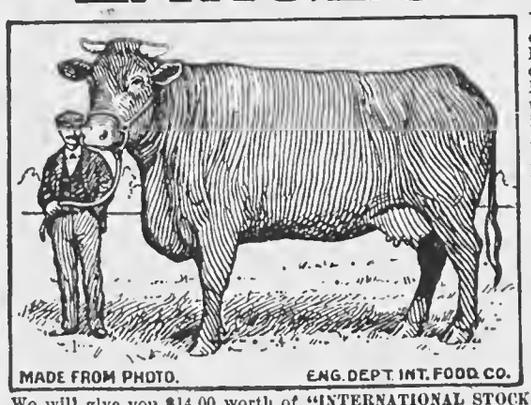

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3 FEEDS FOR ONE CENT

SHREDDED FODDER FOR SHEEP.

There seems to be some argument about the value of shredded corn fodder for feeding sheep. Some of our readers say that this fodder is better for feeding horses and eattle than for sheep. If you have fed it will you let us know what you think of it? Do you think it pays to shred the fodder? What grain is best fed with it?

Shredded corn is all right for horses and cattle; they clean it up pretty well. But the drawback is that so many people shred it too soon, before the pith is properly dry, and if not thoroughly dry it molds easily, and you do not get the full benefit. Our experience is that it is not first-class sheep feed.

Creston, Iowa. A. L. WILSON.

It pays to shred corn fodder to feed sheep, because you can then keep it in the dry and feed it to them fresh and bright. They will not eat much more of it shredded than whole, perhaps not as much, but if it gets wet and spoiled in the shock they will not eat it at all. Feed some grain with it that is rich in protein, or feed abundantly of wheat bran, and you will make a fine gain, but you cannot feed corn alone and shredded fodder and make it win, there is too little protein in the ration. W. O. WING.

Ohio.

We have not thought that it pays to shred the fodder. A great deal of it is being done among our neighbors, and they advise us that it is chiefly done to get the corn and fodder in while the weather is good. A great many recommend it for horses and cattle, not so much for its additional feeding value as for the soft, dry bedding that the refuse makes. In feeding fodder to breeding cows we prefer to run it through a cutting box, corn and all, cutting it into bits about an inch to two inches long. By this a feed of great bulk is made that is rich enough in grain food to form the main part of the Winter's feed, and still have the refuse left for bedding, without the expense of shredding. In addition to this ration we mix bran and a little oil meal for cows that have calves or are soon to calve.

Pendleton, Ind. C. E. SWAIN & SONS.

I have fed shredded corn stover to horses, cattle and sheep for a number of years, with good results. I have known of bad results where breeding ewes were fed corn fodder almost exclusively, getting too much of a carbonaceous ration, accompanied with too little exercise possibly. But I believe where they are properly managed corn stover can be made a very useful roughage. Bran and oats, equal parts by weight, make a desirable grain ration with corn stover, and if possible add some succulent food in form of roots. I think that this year especially it pays to shred, for all roughage must be saved and made to go as far as possible. Taking Timothy hay as a standard for roughage, and placing it at $12, corn stover is found to have a value of $8.25 per ton. When we consider the great losses occurring from having it whole, the disadvantage in handling, together with the greater amount of refuse, it would seem to be an advantage to shred and take care of it at above price. If, however, it were possible to secure the clover as hay at the market price I doubt very much whether it would pay to put any unnecessary expense to the fodder, as the actual feeding value of the clover is far greater relatively than the market price. For instance, one ton of Red clover hay contains 130 pounds of digestible protein, or blood and muscle-making properties, against 40 pounds in corn stover, and this is the chief element sought in our feed stuffs.

Pecatonica, Ill. JOHN HITCHCOCK.

10 Weeks for 10 Cents. You have several neighbors and friends who need THE R. N.-Y. We are going to help you to see that they get acquainted with it. For our part we will send the paper to them now 10 weeks for 10 cents—a cent a week. We ask you to call their attention to this offer. Perhaps you can get up a club. The 23 largest clubs will each get a cash premium January 1. Will you be one of them?

That Connecticut Milk Strike.

It is now past history, yet still another account of that milk war in Connecticut will be helpful. This is the way for farmers to "get together."

The situation has been bad for years. While other sections of New England milk trade have been more or less organized for the protection of the farmers, there was nothing of the kind on the Providence car running from Willimantic, Conn., to Providence, R. I., so of course the contractors "played horse" with the farmers just as they saw fit. The contractors offered 31 cents for a 10-quart can (this is delivered at depot). This is one cent per can higher than last Winter, but grain is so much higher that the farmers felt they could not afford to make milk at that price and demanded 36 cents per can, a raise of five cents. The farmers then proceeded to organize a milk producers' association at every depot on the line, and notified the contractors that they would stop November 16 if the price of 36 cents was not granted. The strike was quite general, and it is estimated that 600 cans were stopped out of the usual number of 800. The contractors got 100 cans from Boston for one day to help them out, but this left some peddlers entirely without any milk, and the contractors, after trying New York and Philadelphia in vain for extra supply, surrendered and granted the price asked. So much for coöperation among the farmers. The price asked is not unreasonable, and it is thought that the success this time may encourage the farmers to hold to their organization and induce others to join.

EVERETT E. BROWN.

Success With Broilers.

I notice in several of the papers statements that the broiler business is overdone, broilers a failure, they cannot be made to pay a profit, etc. I have a lot of broilers that were hatched in the Summer when eggs were very cheap, thus making the first cost less; the weather was very warm at times, thus using less oil to run the incubators, and as the warm weather also helped to keep the chicks warm there was less coal used than in colder weather to keep the brooder house warm enough for the little fellows. The pens in the brooding house are about 4x6 feet and the yards adjoining are but 16 feet long, and they have been kept in the house and yards right along, so we know always where they are and just where we have to go to feed them, and can easily see if they are properly attended to. Hatching them in the time that eggs were plentiful and cheap makes the first cost less, but we need to have that less, as we have to sell at the lowest price of the year, which is always in the late Fall. I am now getting 18 cents per pound for them dressed, which is simply killed and the feathers taken off, dry-picked. We pack in barrels and deliver to the station and the dealer pays us for them net without any freight or other expenses. The sizes that are wanted are one to two pounds each. We try to get them as near the two-pound weight as possible, as the last pound can be put on cheaper than the first. As to feed, they can be raised to the above size at an actual cost for feed even at the prevailing high prices from eight to 10 cents, and allowing five cents each for them when out of the incubator makes a cost of 15 cents each actual outlay. By careful selecting we kill so as to average lately 33 cents each or thereabout, and the expense in dressing is three cents each, so they net us 30 cents each. Less the actual cost of producing gives us 15 cents each for our work, which seems to pay as well as almost any other part of the business. We had at the middle of September nearly 4,000 chicks out, and now are marketing about 200 weekly, and have reduced the lot to about 1,300; most of these will be away before the first of the year.

D. A. MOUNT.

New Jersey.

Live Stock Notes.

BONE MEAL FOR COWS.—I have fed ground bone to milch cows and have found in many respects it is helpful, especially to those that are kept for breeding purposes. On the other hand, during the past few years I have not been so particular about its use. In fact, we have not used it for some time, and we have had very good results with our herd I would sum up regarding its use something as follows: That in a herd of dairy cows kept for breeding purposes, if the cows are not in their best and most vigorous condition, and if there is trouble with weak calves, the use of bone meal will be found very beneficial, but with a herd where these troubles do not exist, I would feel that my own experience did not warrant me in saying that the feeding of bone meal was necessary. WM. H. CALDWELL.

HOLSTEINS AT PAN-AMERICAN.—As to dairy test at the Pan-American, we believe all fair-minded men will agree that the estimates of the value of skim-milk should have been given in all tables published by the managers of this test. Would a farmer taking a load of wheat to mill expect to leave the bran and other by-products without having credit for same? With these products credited the Holstein-Friesians show a profit of $262.64 on total solids, being $26.84 greater than their next nearest competitor, and for total solids and gain in weight they surpass all other breeds. We believe if the results of this test had been published giving tables complete, that there would have been no complaint from our people, but they have been very misleading. The western farmer and dairyman who is fully posted with the outcome, will be very well satisfied with the result so far as our breed is concerned.

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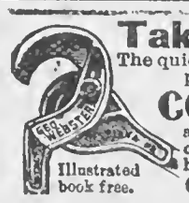

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NEXT WINTER it will be necessary for our farmers to study the question of stock foods. Corn, the great stock grain, will be high in price, and substitutes must be provided for it. How can these substitutes be found? Only by comparing other and cheaper foods with corn, and knowing beforehand how they will affect the animal. This comparison may be done by studying analyses, but a farmer cannot afford to spend the Winter in experimenting. He must know beforehand what others have found out. He can learn this by studying Prof. W. A. Henry's great book. Feeds and Feeding tells you just what you ought to know about foods and how to feed them. It is full and complete, and easy to read. Price, $2.
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HUMOROUS

Little drops of water,
Little specks of dew,
Make the big potatoes,
And the small ones, too.
And the grocer sells 'em
At so much a slice,
For to buy a whole one
No one has the price.
—St. Louis Post-Dispatch.

TEACHER: "James, you may tell where the Declaration of Independence was signed." James: "Please, Ma'am, at the bottom."—Indianapolis News.

DOCTOR: "Did you take my prescription, ma'am?" Patient: "Yes; but, say, doctor, paper's awful hard to get down, an' it didn't seem to do me no good."—Chicago News.

EASTERN TOURIST: "My gracious! Does the wind blow this way all the time?" Prominent Kansan: "Nope! Sometimes it turns around and blows the other way."—Puck.

HENPECKE: "Yes, we're going South this Winter." Pochuck: "Do you think the climate will agree with your wife?" Henpecke: "Will it? Why, it will have to!"—Browning-King Monthly.

INSURANCE SUPERINTENDENT (suspiciously): "How did your husband happen to die so soon after getting insured?" Wife: "He worked himself to death trying to pay the premiums."—The King.

"THEY used feather trimming largely in Colorado when I lived there, but it wasn't popular with those who wore it." "No?" "No. There was too much tar mixed with the feathers."—Browning-King Monthly.

THE DOCTOR: "I think you understand fully now the directions for those medicines, and this is for your dyspepsia." Patient: "Why, I haven't dyspepsia, doctor." The Doctor: "Oh, but you will have it when you've taken those other remedies."—Tit-Bits.

MRS. CRIMSONBEAK: "I see in the paper that a woman in looking after another woman to see what she had on, fell out of the window." Mr. Crimsonbeak: "Well, that only goes to show that some women in trying to follow the styles can go too far."—Yonkers Statesman.

MRS. BROWNLEY-BOGGS: "Mary, the salad was particularly delicious tonight. What did you use in it?" Mary: "I used them new kind o' yaller cabbages that Mr. John sent home, mum." Mrs. Brownley-Boggs (faintly): "Heavens, those were Chrysanthemums!"—Chicago News.

"MY friend," exclaimed the eloquent minister, "were the average man to turn and look himself squarely in the eyes, and ask himself what he really needed most, what would be the first reply suggested to his mind?" "A rubber neck!" shouted the precocious urchin in the rear of the room.—Tit-Bits.

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"Our village blacksmith was looking at it, and said it was a good forge."—Jos. Baxter, W. Dennis, Mass.
"The Farmers' Forge received of you is entirely satisfactory, and is a money and time-saving device to any farmer."
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"No farmer will regret buying it after using it once."—J. R. Hickitn, Richburg, S. C.
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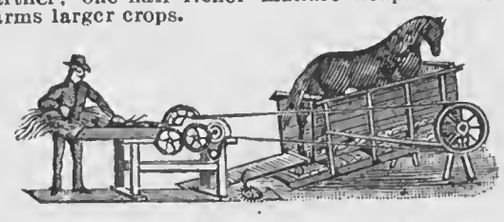
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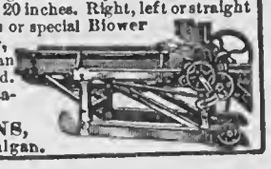
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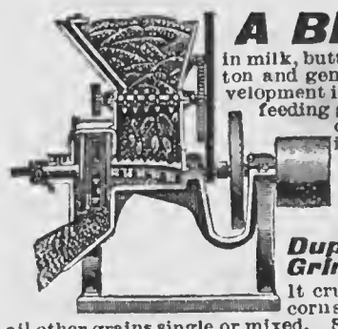
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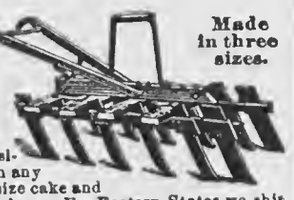
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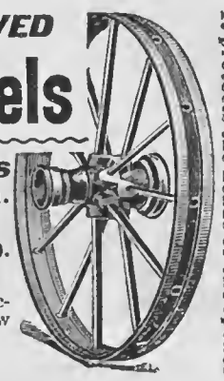
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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

PHOTO ENG. CO. N.Y.

VOL. LX. No. 2709. NEW YORK, DECEMBER 28, 1901. $1 PER YEAR

CORN FODDER FOR FATTENING LAMBS.

WHAT TO FEED WITH IT.

Should It Be Cut or Shredded?

This is the fourth Winter that I have had lambs in my lots fattening for market, and as corn fodder is one of the largest products of the farm, I have endeavored to learn its value as a part ration for the lambs. Research shows but one careful experiment in this direction, made at one experiment station, that of Michigan, that showing that fodder was undoubtedly of great value for this purpose. The papers have been full of statements of the value of this product for feeding purposes, but these statements are not backed by facts derived from careful experiments, and are made mainly by manufacturers of machinery for handling this crop. Consequently the greatest proof the farmer has of its value for feeding purposes is the avidity that farm animals show in consuming it, i. e., the relish they have for it. If properly fed they seem never to tire of it, but the fact that plainly shows up is that it is not a complete feed; that young cattle or horses fed all Winter all they will eat of it come out in the Spring without gain of weight. The point that concerns me in feeding the lambs is, how much of this product I can safely use as a part ration for the lambs in connection with clover hay, corn, and this Winter, barley straw, wheat straw, and Finger or Crab-grass hay. In growing corn here, the aim is always to perfect the grain before the corn is cut, and if properly cared for, the fodder is of fine quality. We never care to sacrifice the grain to improve the quality of the fodder, nor do we think the value is seriously lessened by ripening the corn before cutting. I feel sure that if I fed ear corn as the grain ration, and only fodder for roughness, I should then, as the lambs began to fill up, have trouble with constipation in the flock. Last Winter for a time I fed fodder twice a day, and clover hay once, and came to the conclusion that for safety they should have more hay and less fodder.

I feed the fodder whole in racks, and lose but little besides the stalks. The racks are 12 feet long; the fodder is bundled. I carry a bundle to a rack, drop the top into the rack, allowing the butts to rest up on the end of the rack, cut the string, divide the bundle, and turn one-half of it towards the other end of the rack with butts resting upon the end of the rack. This prevents the packing of the fodder in the bottom of the rack. Lambs do not feed down through the roughness fed them for the finer parts, like horses and cattle, but on top, pressing the mass down tighter all the time. This tendency I find it necessary to work against. I feed the fodder out of doors in racks. Yesterday it was raining and disagreeable most of the day, and no fodder was fed, but hay in racks under roof. I am in doubt whether they would eat any more of the fodder shredded than whole, probably not as much. The shredding reduces to dust many of the finer blades, and the dried tassel parts the lambs most relish. In the fine dust form they will not eat them. I am supported in this belief by a friend who has had before his lambs both whole and shredded fodder; he says they do not like the latter. If it was necessary for me to feed fodder under cover in the barn and sheds I would think seriously of cutting it with cutting box, to make it more easily handled. As it is fed in racks in the lots, its coarseness does not annoy me.

When the lambs are fattened and out of the lots to market, I turn my brood sows or feeding hogs into the lots, and feed shelled or ear corn, over the cornstalks, and they soon reduce them so they quickly decay and can be easily handled when it comes time to remove the manure. I am sure that cut fodder would be more acceptable to lambs, or sheep, than the shredded. Close observation as to their manner and habits of feeding, leads me to this conclusion. I think it would be well for the experiment stations to take hold of the fodder question and give the farmers more light as to its actual value; fed alone and in combination with other foods for lamb and sheep feed, as well as other stock of the farm. Experiments may have been made that have escaped my notice. If such is the case, I shall be glad to know of them.

Ross Co., Ohio. JOHN M. JAMISON.

AN EXPERIENCE WITH BEET PULP.

The article, "Notes on Old and New Feeds," on page 819, strikes me just right, and I give a little experience we have had with this beet feed. This Fall we purchased two tons of this feed at $2.50 per ton. After feeding it we failed to see where we gained, either in milk or butter, and we now think we could have used the $5 to better advantage. We had never used any of this feed before, and therefore knew nothing of its value, but as it seemed very cheap as compared with other feeds we thought at first we were doing well. When I loaded the stuff into the wagon from the car I found it was mighty heavy and had on two tons before I knew it. When I reached home I got down from the wagon and found water dripping from every crack in the wagon box, and now we have made up our minds that if we want to feed our cows beets we will raise the beets, and let the cows drink what water they want from the brook, instead of buying it for them at $2.50 per ton and drawing it 4½ miles in the bargain. A short time ago I was talking with a well-to-do farmer. He said he had also been using beet pulp, and had been paying $4.50 per ton and told of a dealer who was asking $6 per ton. But what set me thinking was that this very man had this last year raised sugar beets and delivered them at the car for $5 per ton, and then later on bought part of them back again at $4.50 with the additional weight of water. T. E. R.

A PUMPKIN CROP TO BE PROUD OF. FIG. 391.

GOOD PUMPKINS IN A BAD SEASON.

THE RESULTS OF INTENSIVE CULTURE.

One Success Among Many Failures.

Fig. 391 shows a picture of Malcom Huntley and a corner of a field of pumpkins grown by him during the past season on his farm near the shores of Lake Ontario, about five miles north of Wolcott, Wayne Co., N. Y. This represents a yield of nearly 20 tons per acre, the large pumpkin in the foreground weighing 97 pounds, and the one on which Mr. Huntley is sitting 73 pounds. Ordinarily, a field like this would be of little interest, but this year, when there has been almost a pumpkin famine, it has been an object lesson in intensive agriculture that people have gone miles to see. Last Spring the writer, employed by a Syracuse firm, made contracts with 43 farmers in the vicinity of Wolcott to grow and evaporate pumpkins, 100 acres being contracted for, which ought to have produced 50 tons of the evaporated product. Thirty-one of the contractors failed entirely to produce a crop, or produced so small a crop that it was sold to some of the 12 more successful contractors. Of the 43 contractors Mr. Huntley was the only one who was able to produce the expected amount from the acre contracted, and the amount produced by him, 1,150 pounds, practically was the product of three-fourths of an acre. If the whole acre had yielded as heavily as a part of it did Mr. Huntley believes he could have produced 2,000 pounds.

The almost complete failure of the pumpkin crop which was general throughout New York, Michigan, northern Illinois, northern Indiana, northern Ohio and northern Pennsylvania, was mostly due to unfavorable weather conditions, and to the ravages of the Black squash-bug. Mr. Huntley's success was due to two incentives that spurred him to action. First was the desire to secure as many dollars as possible from the crop, but most of all, Mr. Huntley says, was the fact that it is always humiliating to him to undertake a new thing and fail, so he selected a fertile piece of soil, gave the crop first-class tillage, hardly allowing a single weed to show its head, and when the bugs came he met them more than half way, well armed for the defense, and although it cannot be said that he won in the first round, he so crippled the enemy that they could not eat as fast as the vines grew; hence his success, which speaks volumes for thorough tillage and a grim determination to win in spite of adverse circumstances. J. O. WADSWORTH.

SHREDDED FODDER FOR STOCK.

On page 815 a writer tells of cutting corn fodder for hens. I have used a feed cutter not only in the manner mentioned, but to cut straw for the hens to scratch their grain from. My cutter can be adjusted to cut in five-eighths inch lengths. In this size clover can be used to good advantage steeped with bran to feed laying hens, or hens that one desires to have lay. You would be surprised to see how hogs will eat the same feed. Of course fattening hogs could not eat much of it to advantage, but for growing hogs it is undoubtedly a very cheap source of protein. Unless I am fattening sheep with poor teeth or finishing the fattening of fowls I simply put the ear corn through the cutter, cutting it to two-inch lengths by removing one-half the knives. Sheep, cattle and all kinds of fowls can readily remove the corn from the cob when

thus cut, and for hens it furnishes exercise. I prefer corn stover cut with this cutter into two-inch lengths to that run through a shredder. I have never tested the two side by side with my own stock, but I am certain I can feed the cut feed to my own stock with less waste than any of my neighbors do with shredded fodder (or stover). This may be the fault of the feeder. Many writers say that the refuse from shredded stover makes excellent bedding. I have nothing to say against the quality, but certainly if the quantity left by a horse or cow is sufficient to bed it properly the practice of feeding shredded stover is not an economical one. The tendency of the shredder is to make the whole mass more palatable. This makes it difficult for stock to separate the really undesirable portions from the rest, and the result is that more or less of the best of it is "nosed" over and is rejected. If cut the eatable portion is not so great, but the parts not eaten are easily sorted from the rest with no waste from being "nosed" about. Then if fodder (stover) is shredded when dry, as it often is, the leaves are pulverized and quite a large quantity lost. But neither method of preparing the stalks pays for feeding sheep. Careful experiments in feeding cut stalks to my own flock and observation of the feeding of others who used shredded stalks convinces me that sheep will leave a greater per cent prepared either way than when fed whole. J. D. P.

Archbold, Ohio.

R. N.-Y.—There seems to be a misunderstanding about this discussion of shredded fodder. Some of our readers refer to the work of the large machines which husk the ears and tear the stalk in pieces. On our own farm we use a machine which has an adjustible cutting cylinder, the "shredder" consisting of 24 sharp narrow claws or knives which split and tear the stalks. With us fodder torn in this way suits the stock better than that sliced off with a clean cut. In our experience they eat more of it. Where the fodder is simply chopped in pieces we have found that stock are likely to cut or bruise their gums in chewing it.

HENS THAT BALANCE THEIR RATION

And Save the Hen Man's Steps.

PART I.

The picture shown at Fig. 392 was taken in front of the barn of O. W. Mapes, the hen man. This barn is close to the road, and Mr. Mapes, who stands holding the bucket, believes in airing facts about agriculture. So he has written the announcement which appears on the little blackboard.

THE R. N.-Y. is somewhat responsible for this "balanced ration." Seven years ago we had a series of articles in which the various food elements were described and the importance of having a fair proportion of each brought out. At that time Mr. Mapes, though feeding over 1,000 hens, had not paid much attention to this side of the matter. Like many others, he fed grain and other foods, not knowing whether there was a surplus or a deficiency of the expensive muscle makers or protein. These articles led him to feed his hens with a lead pencil—that is, he took the analyses of the different foods and figured out his ration to see whether he could make it balance, and also to see whether he could feed his hens for less money. At that time his ration was about as follows:

Morning: A mash consisting of four pounds wheat bran, one pound cornmeal, one pound ground oats, one pound malt sprouts, one pound animal meal, 2¼ pounds pot cheese.

Noon: Four pounds of oats.

Night: Ten pounds whole corn.

This was the feed for 120 hens, and it gave fair results, but two of our Massachusetts readers gave Mr. Mapes new ideas. One of them told of keeping 29 hens in a little house 5x20, which cost only $7. These hens were laying 20 eggs per day in zero weather. They were fed each day three quarts of wheat feed and one-half pint of beef scrap and bone for breakfast, and three quarts of whole corn for supper, with plenty of cabbage and boiled potatoes now and then. Then came a man who made an average of $1.74 per year each from a flock of 250 hens. He let them take care of themselves, feeding wheat chiefly, and giving them a run on grass. This man said it did not pay to fuss with mashes, and that if grain and grass provided a balanced ration for cows, so it would for hens. Mr. Mapes spent some months in figuring and experimenting and finally hit upon a mixture of dried meat and various ground grains which he called the "balanced ration." This he fed with great success several years, but all the time the thought of the man who let his hens take care of themselves kept bobbing up. Has a hen sense enough to pick out her own food? In Summer, when she has free access to all sorts of food, she seems to balance her ration without the aid of the scientist or the fussy hen man. Mr. Mapes observed this, and so he began to feel his way along in a new direction. The result was that when I visited the farm in November the hens were actually feeding themselves! In former years the morning mash was mixed at the barn and carried in a wagon from house to house. This was no small job, as there are 40 houses well scattered. Thus far this Winter the hens have had no mash at all. In each house is a box of wheat and a box of corn, and a pan of skim-milk. The hens help themselves at will, and eat just what they want. Mr. Mapes has weighed the corn, the wheat and the milk repeatedly, and he says that the hens feed themselves just the proportions of protein, carbohydrates and fat that he gave them in his mixed balanced ration. The hens are kept constantly housed, and the warming device described two weeks ago keeps them comfortable. They are never hungry, but take small quantities of food at a time. They are laying as well as in former years, and are as happy and prosperous-looking as hens need ever be.

But do not hens need a mash or soft feed of some sort?

"Why?" answered Mr. Mapes. "If they are kept as warm as mine are they surely do not need it to heat them up. I do not know of any reason why a mash should be given except that it is the best ordinary form for feeding the strong protein portions of the food, such as meat or blood. As I am able to supply plenty of skim-milk I do not need to feed meat, and therefore the mash is not necessary. I do not expect to feed any this Winter, though the coldest weather may change my opinion about this."

Do you consider it really safe to leave a hen alone with unlimited food?

"Certainly—provided you give plenty of protein or muscle-making food so that she can easily digest it. It would not be safe to let a hen have nothing but corn before her, but with wheat added and some substance like milk she will surely do her own mixing.

THE SIGN OF THE HEN MAN. FIG. 392.

I have kept a hen in a berry crate for months with different foods within reach and she laid day after day and kept in perfect health."

Is there any substitute for the skim-milk?

"I think cut bone would answer and perhaps a cake made of bran, ground oats and animal meal dried and crumbled."

It would make this article too long to discuss in full Mr. Mapes's remarkable plan of feeding. He feeds the mixed ration to pigs. Why not let them balance their own rations? Is a pig more of a "hog" than a hen is? These and other points must be left until next week. H. W. C.

SEED SELLING; OLD AND NEW METHOD.

Seed selling through agents is a very old plan, the agent originally being the local storekeeper; this plan is still followed in some sections of the country, with the modification that flower seeds are now sent to the storekeeper in many instances through the mail instead of being delivered by team. In the early days firms like the Landreths, of Philadelphia, and the Shakers, of New Hampshire and New York, put their reputation into their seeds, and gave them a character for reliability, but other firms who entered the market with their box seed, mere money-makers, without a conscience, greatly injured the business through the districts where they marketed, making such seed a by-word for unreliability. This and the defect more general among the box trade of not supplying the newer improved varieties gave birth to the mail business, which was an effort to supply the public not only with good seed but with seed of improved varieties of flowers and vegetables. B. K. Bliss, I think, was the first to start the mail trade in an extensive way, and the late James Vick and Peter Henderson and myself followed closely after. In the early days of over 40 years ago, we had to pay letter postage on all seed, and it was not until special and cheaper rates were made by the Government that the mail seed business grew into its immensity. In the early days the great West was the especial market of the mail seedsmen, but as towns increased in size the seed trade would become localized in their midst, and our market would move on to fields and pastures new. In those times we nurtured through their infancy, by giving control of local territory, provided they would agree to sell our seed only, men who have since taken rank among the leading seedsmen of the country. J. C. Vaughan, the great seedsman of Chicago, was, in his early days, one of my proteges for two or three years, under this arrangement, and the thorough honesty he displayed in carrying out his part of the agreement, was but a manifestation of that reliability which has justly won for him the large patronage he now enjoys. The mail trade is still a large and live business, bringing to tens of thousands of isolated homes blessings in vegetables and flowers that were formerly the monopoly of the more densely settled sections. Besides selling seed directly to the farmer the mail business invited its customers to act as agents at a per cent of profit, and it also sought to graft its business on other trades by traveling agents for such taking this as an additional source of income. Within a few years the seed business has developed along lines now followed by so many trades, that of having traveling agents of its own to whom are allotted certain sections of country to be canvassed between harvest gathering and seed planting. This is a costly way of doing such a business, and one that will not pay outside of the region devoted to intense farming where the demand is for large quantities of the higher priced seed. In addition to the outlay for salary and traveling expenses, which in scattered communities are large, the sales are rarely for cash; this necessitates extra labor and delay in collecting, with the risks that are always incidental to a credit business.

Marblehead, Mass. J. J. H. GREGORY.

LEGAL REMEDIES FOR FOUL SEEDS.

I was greatly interested in the article on "A Seedsman's Guarantee" in your issue of December 7. The decision in that case is right on principle, and will not be reversed upon appeal, unless some merely technical error has crept in at the trial. That question was tried out in the courts here several years ago, and decided in favor of the farmer, who bought Alfalfa seed and got foul seed along with it. The jury awarded him the damages which he proved, and the court sustained the verdict of the jury. There is a general legal principle and implied warranty that anything is suitable for the purpose for which it is sold, and that a fair price warrants a good article. "Seed oats" means oats that are suitable for seeding, and not oats mixed with foul seed. Seed grain generally brings a higher price than grain for feeding, and a good price implies a good article suitable for the purpose for which it is sold. The farmer depends and has a legal right to depend upon the judgment of the seedsman, and it is the business of the seedsman to know what he is selling. The same is true of fruit trees. If a nurseryman sells infected stock and the farmer is injured thereby the nurseryman can be held to respond in damages. The same is also true as to animals. If a farmer buys an animal for breeding purposes and he proves to be diseased or worthless the seller can be required to make good the loss. It is a general rule that where an article is sold for a special or particular purpose, along with the article goes an implied warranty that it is suitable for that purpose. Farmers are not supposed to be experts, and are only required to use ordinary care in order to protect themselves. The seedsmen and nurserymen are presumed to be skilled in their special business, and are required to exercise a greater degree of care than the farmers who purchase from them. If the farmer knew that the grain was mixed with foul seed, or that the nursery stock was infected, and still used it, he would be guilty of such contributory negligence as would bar his recovery. If after receiving the seed or stock he should discover that it was unfit to use it would be his duty to return it to the seller at once or notify him that it was held subject to his order. T. W. H.

Topeka, Kan.

AMERICAN HAY IN FRANCE.—When investigating the stories about "adulterated hay," or rocks and sticks in the bales, we wrote to a number of foreign hay dealers. The following note is from M. Cottard, Havre, France:

"I am sorry to say rocks, sticks and similar things that we found in baled hay in 1893-1894 were not jokes, nor was buying baled hay a gamble then. France bought from North America's dealers in 1893-1894 thousands of tons of baled hay, and if we received many lots of Timothy and clover hay that were of prime quality and in good condition, I am sorry many of them, especially later in the season, gave us a big loss through bad condition. Then we found rocks, sticks and old damaged hay inside the bales, musty, etc. Many claims took place then, and finally American hay was discredited on our markets. We might have imported hay from your side in August and September last, your quotations being then lower than ours, but French buyers preferred to buy home hay dearer rather than buy American hay. I wish you might induce your friends to ship their best hay to France whenever we can do business with your country."

NATURAL GAS ON THE FARM.

How a Kansas Farmer Uses It.

PART II.

My house is L-shaped, has 10 rooms, 19 incandescent lights and five stoves. The gas leaves the main in a 1¼-inch pipe at a pressure of 290 pounds. There is a cut-off at the main, also in the main to guard against accidents. The gas passes through a large regulator that cost $7.50, and always gives just four pounds pressure. This pressure can be increased or decreased by setting the set screw. The turning on or off of all five stoves never affects the 19 lights in the least, so well does the regulator do its work assisted by the large volume of gas held in the pipes in the house. The plumbing of the house cost $106, and of the yard as much more. The incubator is in the cellar under the house, and is run by one gas lamp, and it never changes at all. The brooders are back of the house, and are warmed by gas taken from the pipe outside of the regulator. They can be kept at the same temperature all the time with scarcely any trouble. There is no blowing out of the lights and filling and trimming them; it is the same hot dry heat all the time. The big torch in the dooryard draws gas from outside the regulator, and any amount of light can be had without affecting the gas in the house.

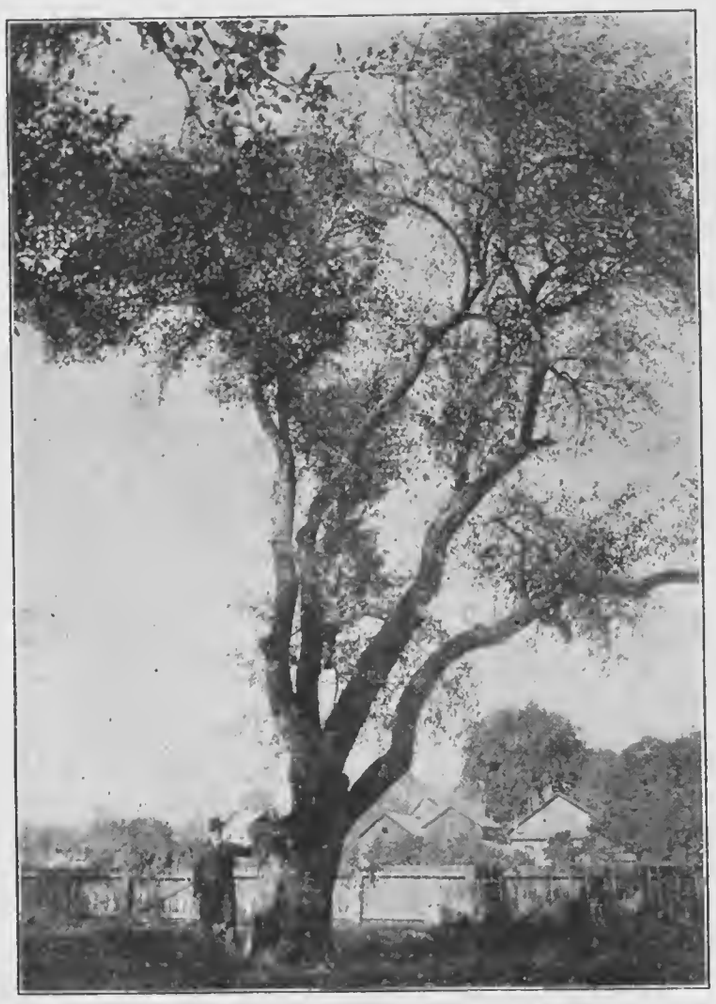
My blacksmith and woodwork shop is lighted up and heated by gas, also my feed or cook room, which is built on to the end of the shop. This room contains all the varieties of feed necessary to feed the hogs two months or more, and they are fed from the inside of this room without my having to go out. I have a heater or cooker 3x6 feet with inch iron straps across the bottom inside of it, and inside of this pan is another one with a sieve bottom that rests on the iron cross straps. I do not cook any feed but corn, and feed it three times a day. One-half bushel of corn makes 1½ bushel boiled feed, and with each half bushel shelled corn I use one pint of salt. The corn is put in the inside pan and water turned on, from the tank that sits above it, until the corn is covered so deep that it can boil 12 hours without getting dry. A light lights the room and a furnace burner is under the cooker. When the corn is ready to feed the fire is turned out and the hot water drawn off into the slop tank, which is high enough up to run the slop through two-inch pipes to the hog troughs in the yard outside the building. Cold water is then turned on to the corn and allowed to stand while the hogs are drinking their warm swill. I run the slop into two troughs by the aid of pipes and valves. The slop is made rich by the addition of shorts and milk. The hogs are called to drink by a whistle blown by gas pressure, and they drink and eat in a shed out of the weather. When the corn is cooled off the pan is hoisted up by ropes and pulleys and set over the feed mixer, where the corn is dumped, then sprinkled over with shorts and shoveled over until it is dry instead of wet and sloppy. It is salted to taste, warm, soft and very palatable and eagerly eaten. One-half the troughs are inside the building so the feed can be shoveled in to them without the hogs getting in the way. These hogs are the sows and gilts. The boars are kept across the yard below the orchard, and slop and feed is transported to them in a barrel on wheels. The hogs are fed three times a day, besides having roughness. The hoghouse that the sows sleep in has a plank floor over a foot of shale and in the shale under the floor are three six-inch gas mains that run the whole length of the building and return again, then pass up through the roof into a stand pipe. The house is eight feet wide and the six pipes run close together. A small jet of gas is burned in each pipe, and they get hot their entire length, thoroughly warming up the shale around the pipes and always keeping the plank floor just warm enough to be comfortable. No bedding is used, and the hogs and pigs do not pile up to sleep, but stretch out separately and enjoy life immensely. A single valve controls the heat in all three pipes and is turned up or down as the weather demands. The house has plenty of light and ventilation. The tank of water in the feed building supplies the sheep, cattle and horses in their respective yards, and is pumped from the well by the gas engine that runs my corn thrasher outfit.

In the hogyard I have pipes laid to burn trash with, and ashes and charcoal are thus always on hand, and the same pipes run the big traveling thrasher during our annual thrashing. The sheep shed, cow barn, thrasher building and horse stable are well supplied with gas jets, and I can thrash out an acre of corn after dark just as well as in day time, even though a great storm is raging, as beside the thrasher building is another one that always is kept full of bound corn. I have a stove in the long henhouse, and the only things that are not supplied with light and heat are the two herd boars and their numerous sons that are kept below the orchard, and about 200 yards away from the sows. If they needed it I should supply them with it. I have a wrapped hose that has a patent touch valve and it is used to blow up bicycle and automobile tires with gas, which does not injure the rubber. My boys have rooms of their own that are well lighted up, but they prefer to go out to the shop at night and parch corn and eat apples. They are fond of lighting up the thrasher room, starting the gas engine and pumping the tank full of water from the sheet water well 160 feet deep. We can thrash corn and grind it all at once, or do either separately. This cold, stormy morning is harsh outside, but inside the house and buildings 'tis like a "midsummer night's dream." J. C. NORTON.

Allen Co., Kan.

OLD FRENCH ORCHARD TREES.

Conspicuous objects in the scenery of the Straits country between Lake Erie and Lake Huron are the old French orchard trees. Some of these trees for size and productiveness are truly remarkable. A girth of eight and a height of 100 feet are not uncommon, and crops of 100 bushels to the tree have been known. The illustration, Fig. 393, shows one of these monarchs, an apple tree, the oldest and largest in the region, now growing in the pretty little city of Monroe, south of Detroit, famous for its nurseries. These magnificent trees, the crowning glory of the old French farm and orchard, are fast disappearing; partly from neglect, partly from old age, but more often swept away in the relentless march of modern improvement. From these trees, now nearly fruitless, and hoary with the moss of age, once came the golden, crimson and russet fruits that made the Detroit and the Rouge and Raisin River sections famous for their orchards. Here originated the Detroit Red, the Roseau of the natives; the Detroit Black, more famous; and some others of lesser note. From here were disseminated the Reinettes, Calvilles, Bellefleurs, Etoiles, the Drap d'Or, and the many strains of the Pomme de Neige, our delicious Snow. Downing has over a hundred of these Gallic names. Few pomologists appreciate the work done by the French colonists in Americanizing European apples.



A VETERAN APPLE TREE. FIG. 393.

Quite as interesting are the pears. The French farms were in strips, each of which possessed several of these fine pear trees. One specimen must surely have satisfied the wants of a family, however, as 50 bushels were a not unusual crop. Unlike the apples, there seems to have been but one well-marked variety. The fruit of this is of medium size, lemon yellow with a lively blush cheek, pyriform; with a crisp, breaking, juicy flesh, and a sweet, rich spiey flavor. Not the best for dessert, but unsurpassed for canning, drying and preserving. This truly deserving pear seems destined not to be perpetuated. Attempts have been made to grow and to sell the young trees, but all have failed, chiefly because it takes 20 years to come into bearing. The leisure-loving French fruit grower could wait; the impatient Yankee will not. Another quarter century will see the last of these noble trees, illustrious memorials of early western fruit growing —trees unsurpassed the world over—and we shall have not even a distinctive name to commemorate them in our annals of horticulture. The origin of the old orchards is shrouded in mystery. Records show that some of them were planted more than 125 years ago. Tradition says that the trees were brought from France to Montreal; thence to the Straits. But young plants could hardly have withstood the long sea voyage and the subsequent trip in canoe or batteau. It is scarcely probable that the trees were grafted, for that art could have been but little understood by a people skilled only in trapping and boating. It is more probable that the seeds were brought from France. True varieties are supposed not to come from seed, but the sorts named are fairly fixed as to type in the seed and their not coming exactly true would account for the great number of strains.

Michigan Agricultural College. W. P. HEDRICK.

CEMENT STABLE FLOORS.

PART I.

Much interest is now manifest over the use of cement in stable floors. How does it compare with plank in cost, safety and durability? How may it be built most cheaply, and at the same time permanently, is a question of daily occurrence. It seems to me fortunate at this time that lumber is comparatively high and cement comparatively cheap, while formerly the reverse was true, and farmers were slow to make changes when hemlock plank could be purchased for $8 to $10 per 1,000 feet, and imported Portland cement cost $4 a barrel. Such prices made the comparative cost of cement nearly or quite double as much as a plank floor ordinarily built. Its durability therefore was secondary in consideration. The actual cost of the permanent floor will depend somewhat upon the nicety with which the work is done, and whether or not the labor is all performed by skilled men. One skilled man with cheaper labor to follow will do well, or if the farmer himself can take the lead the work will be even cheaper than a plank floor. A perfect job done by a skilled man will cost nearly twice as much. Much prejudice exists against its use because it is cold; sure enough, cement, metals and stone are good conductors of heat, not that they are in and of themselves cold. We place the hand upon these substances and it feels cold until the heat of the hand has warmed the block through, while against wood or paper, non-conductors of heat, the feeling is soon warm, and we say wood is warm. Cement is also slippery. Yes, that is true if improperly finished. So, let us consider the methods of construction which will lead to a permanent and satisfactory floor.

In many localities drift stones are found; small "hard-heads," so-called, that will make a good foundation. After leveling the earth, and if it is a loamy soil treading or tamping it solid, a coating of these small stones may be hand placed about five to six inches thick. Hand placing seems necessary rather than shoveling them off without regard to location, for the reason that if the location of one to the other is not solid and firm we shall have a cracked surface eventually. They should also be laid to a line on top, so that when the cement is run into these crevices we shall have a smooth surface upon which to spread the finishing coat. The cheaper grades of cement, water lime, and the like, are just as good for the grouting mixed about one part cement to four or five parts sand made thin enough to run into every space and adhere to every portion of the surface of these small stones. Of course the grout can be placed directly upon the earth and be equally as good, but it will need be as thick as stone and cement together, and hence much more expensive. Where crushed stone or clean large gravel is easily and cheaply found, a good foundation, saving much cement, may be made of one part cheap cement, five parts coarse sand and five parts gravel or crushed stone, thoroughly mixed and spread to a depth of four inches; at least that depth wherever animals stand or walk. Of course walks and floors of light work may be if necessary more cheaply built. The finish coat of Portland is added to the surface in this case as noted when the large stones are used for grouting.

Many otherwise well-done jobs are ruined by dirty sand. Make no mistake, even if necessary to haul long distances in order to get a clean, sharp sand. This trouble has in my observation been most frequent when the work was done by an amateur. There is no reason why one may not do the work himself if he knows how. Otherwise get a competent man who will positively refuse to use any but a coarse, sharp, clean sand. Better use a sand so coarse that sifting is necessary to free it from coarse gravel than to use the fine salvy stuff so often found in the sections where the clay formations border on the sandy, loamy soils. Probably it will always pay to sift the sand; it will run better in the grouting, and finish much better in the last or surface coat. H. E. COOK.

PLOWING COW PEAS.—I notice W. L. M's. letter on page 770 about cow peas. Here we wait till after vines are dead, when with one horse they may be plowed, or if too heavy, broken with harrow first. If cows or horses do not like green vines, let them wilt all day after being cut, and soon they will be eaten, even if freshly cut. They have a strong flavor when green (I have tasted them), which leaves them as they wilt, but animals soon learn to like them. E. L. E.

Pomona, Fla.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Cheapening the Horse Ration.

What can be fed to cheapen the ration for a horse now that oats and corn are so high in price?

I know of no grain for a driving horse or one that you wish to keep in good condition for driving in the Spring, that can equal good clean oats. I have sometimes fed a mixed ration of oats, cracked corn and bran, equal parts by weight, but would not advise the feeding of this to a valuable road horse that one wanted to keep in good condition for present or future road work. My experience has been that road drivers do not stick for the little extra expense of oats and good care if their horses only show it when returned to them in the Spring. If you have a friend come to visit you, you do not mind the extra expense of good living; so let it be with the horse, one of man's best friends. The best feed is none too good for him. E. C. RYDER.

Middlebury, Vt.

We have always fed oats and bran, and continue to feed the same. We believe that the price of other grain has advanced in harmony with oats, therefore there could be no economy in substituting other feeds in the place of oats. In this State and in other corn-raising States the farmers feed principally corn to their horses, because it is cheaper than oats, and horses can be kept more economically. Corn costs more per bushel, but it goes very much further, so that the same money invested in corn as in oats will last longer. We do not feed corn, because we think oats much better. In regard to feeding brewer's grains we have had no experience, but we do mix a little oil meal with our bran and oats. The horses do not like the oil meal quite so well as they do the feed without it, but after they become used to eating it we think it is a good ration to mix with our other feed in small quantities. M'LAUGHLIN BROS.

Columbus, Ohio.

In my experience of feeding I have not yet found anything to take the place of oats for horses that are working hard, or are being driven fast. It is quite an easy matter to feed horses merely to winter them without much grain of any kind in this country, where we have lots of roots. Turnips are worth about 10 cents per bushel and carrots 12½ cents. I feed hay per day about 24 pounds, 10 cents; turnips and carrots, one peck, 2¾ cents; oats, four pounds, six cents; bran, two pounds, eight cents; total 20¾ cents. This amount will winter a 1,500-pound horse so that it will keep in fairly good condition. I do not approve of feeding much bran to driving horses or horses that are working hard; I can get better results from one pound of oats than two pounds of bran as regular feed for working horses. I consider bran more of a regulator than food. I have never tried distiller's grains, but have tried refuse of mills, such as mill seeds and oat dust, but don't consider it good horse feed. THOS. SKINNER.

Mitchell, Ontario.

New England Apple Questions.

D. A. K., Waitsfield, Vt.—1. How can we prevent bitter rot in apples? 2. How can we prevent the entire destruction of our apple crop by the Apple maggot or Railroad worm? I can plant, fertilize, prune, spray, graft, thin, pick, pack and market to my satisfaction and that of my customers, but all to no purpose if I cannot conquer above troubes.

ANS.—1. Bitter rot (Gloeosporium) may be held in check by spraying systematically with Bordeaux Mixture, followed by the ammoniacal solution of copper carbonate, or by sulphide of potassium (one-half ounce to one gallon water) toward the close of the season. Diseased leaves and fruits should be gathered and burned. This treatment may not prevent all trouble, but will certainly be found helpful. 2. The Apple maggot or "Railroad worm" (Trypeta pomonella) is the most serious pest the orchardists of New England have to meet. The only satisfactory preventive measure is to destroy infested fruit. For this reason many growers find the use of hogs or sheep in the orchard a very great advantage. Clean culture is advisable and refuse from cider mills and fruit cellars should be burned.

Maine Exp. Sta. W. M. MUNSON.

Is Beet Sugar Valuable?

H. E. M., Penn Yan, N. Y.—A few days ago I had occasion to buy a barrel of sugar. As beets are grown here for sugar I wanted to buy beet sugar and help our own home industry. One dealer said: "I would not use beet sugar, because it stinks." He did not say what it smelled of, but the sample shown at the Pan-American tasted and looked just like cane sugar. Another dealer said beet sugar would sweeten only half as far as cane sugar. He claimed he had tried it by making syrup from the same quantities of each, and the beet syrup had only one-half the body of syrup made from cane sugar. How is this? Are we raising sugar we cannot use? If beet sugar is as good as cane sugar these grocers should take a lesson in political economy, and sell goods grown at home rather than imported sugars.

ANS.—There is something the matter with those grocers. Refined sugar from the beet and from the cane is chemically the same. Each has the same sweetening power. What is known as glucose is a substance made from corn, and it has much less sweetening power than the sugar from cane or beets. The unrefined sugar from beets is not equal to that from cane, but when refined the sugars are fully equal. A large proportion of the sugar used in this country is beet sugar—coming from Germany and France. American refined beet sugar is as good as any sugar made in the world.

Plum Stock, Evergreens and Wind-breaks.

G. M., Johnstown, Pa.—1. What is meant by "Lombard stock?" Is it Lombard plum trees raised from seeds of Lombard plum? 2. What are the best evergreens to plant for wind-breaks? 3. What are the best quick growing trees for wind-breaks? 4. How are Lombardy poplars propagated? 5. On our heavy western Pennsylvania soils, which are somewhat rocky, can we successfully use the Cutaway disk plow and disk harrow?

ANS.—1. The Lombard plum reproduces itself fairly well from seeds, but seedlings are too scarce to be used extensively for stocks. It makes a splendid tree for top-working with other plums, but when used for that purpose is usually grown in the ordinary manner by budding or grafting on the Horse plum, Myrobalan, or some other common stock. 2. The Norway spruce and Siberian arbor vitæ are the most useful evergreens for wind-breaks in your latitude. The American arbor vitæ or White cedar is cheaper and a more rapid grower than the Siberian species, but is more brittle and open in growth. The native hemlock makes the finest and handsomest of wind-breaks, but is too slow and difficult to establish for ordinary use. The basket worm is often very destructive to the arbor vitæs, so that on the whole the Norway spruce planted in double or triple rows would be the safest evergreen to use. 3. The Carolina poplar cut back to branch near the soil is probably the best quick-growing deciduous tree for the purpose. Other suitable trees are the Soft or Silver maple and the Golden willow, Salix vitellina, but both should be cut back and kept closely pruned to keep the wind from near the soil surface. 4. Lombardy poplars are usually grown from hardwood cuttings in the same manner as currants or willows. The cuttings are taken in Fall or early Winter, made into bundles and buried in the ground until Spring. They are then set in rows in well-prepared soil, the rows being far enough apart for horse cultivation, and the cuttings about 10 inches apart in the row. In two or three years they will be large enough to transplant. 5. We have not been able to use either disk or Cutaway successfully on very rocky soil. Where the stones are small and round the tools do fair work, though the teeth and edges of the disks are easily chipped and dulled. On soil covered with flat stones the tools will not answer. In our experience the spring-tooth harrows are better for such locations.

More About Mr. Hitchings's Orchards.

L. C. S., Albion, N. Y.—I have been greatly interested in reading of G. G. Hitchings's success with apple trees in sod, and would like him to explain a few things. Does he ever plow or cultivate the ground, and what kind of grass does he raise on it? Does he mow the grass for a mulch, or in what way does he add fertility to the soil? Does he use chemicals, and if so, what? He speaks on page 802 of "nourishing the buds during Summer and Fall." What does he mean by this expression, and how is it done? An explanation of his methods would be of interest to many in this locality.

ANS.—If you have straw or any vegetable matter to mulch trees when first set to keep them from drying out, don't cultivate. If you have no available mulching material, then cultivate up and down the rows a distance of four feet each side of the row, thus forming the earth mulch to hold moisture. Keep up this cultivation until grass growing between the trees is large enough to mow; then place this grass around the trees. Continue this practice of mulching with grass each year, gradually extending as trees grow for 10 years; then let lie where cut. You will find at this time that you have accumulated a good supply of humus, and by its gradual decay plant food is furnished in sufficient quantity for good annual crops of fruit without the addition of any other fertilizer. In a young orchard just set seed with equal parts of Red clover, Timothy and Red-top; in an old orchard with Red-top alone, and this humus supply for old orchards must be helped out by the addition of manure, especially if previously cultivated. The clover in young orchards improves the texture of the soil, the Red-top finally takes its place and makes a fine thick aftermath like a carpet, which protects the roots from excessive heat or cold. You have probably noticed that manure applied for corn on sod ground in the Fall was more effective than a similar amount applied immediately before planting in the Spring. I am of the opinion that the bacterial action of the soil was encouraged by this practice. The same thing occurs by a mulch in an orchard during the Fall. You are releasing plant food by aid of these bacteria at a time your tree needs it most to give strength and vitality to the fruit buds, so that they may be able to set and perfect a crop of fruit the following year. By examining the soil under the mulch we find the feeding roots close to the surface. They appear very healthy and vigorous, and I believe they are the ones that are doing the tree the most good, and should be nourished and fed by decaying plant food and not mutilated by a cultivator. Last Summer I observed that many of the orchards along the line of the railroad from Buffalo to Niagara Falls looked unhealthy. I think it is a case of cultivator disease.

GRANT G. HITCHINGS.

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EVERYBODY'S GARDEN.

I would like to ask some questions about onions. I have works on onion culture and Onions for Profit, but they do not analyze my case. I have now bedded 10 bushels of potato; onions, six bushels large, and four Potato onions, six bushels large, and four 25 cents per dozen bunches, of three onions each. Our market prices now are $1 per bushel, and $2 for sets. 1. How should I grade my onions for planting? 2. Should I plant the large, or use those medium in size for raising sets? 3. Would it pay best to sell the large sets, and plant only small ones (in doing this they would be classed as large ones)? 4. In a cluster of three to six large enough for bunching is it advisabe to pull the whole bunch or leave one standing to mature? Our season was poor and I planted without regard to size. G. H. T.

Bloomington, Ind.

I quote the clause referring to the price obtained for bunching onions, as a matter of personal interest. The growers here would consider that an average price of 25 cents per dozen would be a very large price; one-half that amount would I think be more than is averaged here for the whole season through, and bunching onions should certainly be a money crop for our correspondent. 1. If, as inferred from the letter, the stock is the Multiplier or Potato onion so largely grown in the South, they should be graded, as only the larger bulbs will multiply, while the sets will produce large onions, but will not multiply. 2. Plant the large ones if you desire to keep up your stock, as the small ones will not multiply and you would be minus your sets, provided only small ones were planted. 3. This is practically answered in preceding, but it must be borne in mind that both large and small must be planted each year in order to keep up both the bunching, and set supply. 4. It would be better we think to pull the entire bunch, as the one left standing would be liable to be stunted in growth so it would mature only a bulb inferior in size at best, and the ground would require the same care the whole season through as it would to grow a full crop. As fast as the ground is cleared of the bunching onions it had better be cleared entirely and used for some other crop. However, bear in mind that some of the bunching onions must be left to mature, else you will run out of your crop of sets for the next year. To sum all up, keep these two facts before you. The large onions will multiply and produce your bunching onions, while the sets will produce your large onions, and both must be planted each year to keep up your supply. These two facts will decide you at once as to what you can keep or sell. Plant the large and small separately so that in harvesting, one kind will not interfere with the other.

A WISE DECISION.—C. P. B., Calumet, Mich., writes: "I have decided to subscribe for THE R. N.-Y. for one year, and enclose $1, I hope to receive the paper regularly and would be glad to learn of anything new in the line of improved agricultural machinery, etc." This is certainly a wise decision and thousands more should be like-minded. C. P. B. may rest assured that the paper will reach him regularly, and I know of no more reliable source of information as to improved farm machinery than the advertising columns of this paper. The standing announcement, "A Square Deal," on the editorial page is a sufficient guarantee of the reliability of the advertising patrons.

HOTBED MANURE.—It is just the right time now to begin to save manure for the hotbeds. Many act on the principle that anything in this line will answer, but the practical gardener fully knows how much of success depends on the best quality of manure, properly stored and prepared. If nothing better can be done, cow or mixed manure with considerable coarse litter will answer, but the best results will be obtained from clear grain-fed horse or mule manure. When a large quantity is required it is none too early to begin at once to save and prepare it. It should be stored secure from snow and rain, and forked over often enough to prevent burning or fire-fanging, as that seriously impairs its heating qualities. Freezing will not injure it provided it does not freeze sufficiently to prevent using when required for the beds. In forking over, all chunks should be thoroughly broken up, and all knots and bunches of coarse litter should be thoroughly shaken out. When cow manure is used more coarse litter should be mixed in than when horse manure is used exclusively. An ample supply should be prepared, for it is the mainspring of success in the hotbed work, and the mistake of a shortage is not easily rectified. J. E. MORSE.

Michigan.

Treatment for Apple Trees.

G. A. B., Clyde, N. Y.—I have about 500 apple trees three years old. The land is somewhat gravelly, and in fairly good condition. A year ago the land was covered with manure and sown to wheat, and in the Spring was seeded to Medium clover, which made a very heavy growth the past season. What treatment would you suggest the coming year? Shall I let the clover grow, cut a crop of hay, and plow under the rowen, or would you advise plowing under the clover the last of May, planting to beans, give good cultivation, and then sow to rye next Fall and plow that under the following Spring for some cultivated crop? Advise me as to the future treatment of the orchard.

ANS.—The growing of a crop of wheat in this apple orchard was a mistake, as it has been in many others. Not long since I saw a young apple orchard in the famous Blue Ridge country of Virginia that had been sown to wheat for two years past, and with serious effect. It has been stunted in growth. As the orchard of G. A. B. is now in clover, my advice is to plow it under early next Spring and put in some crop that will require cultivation during the early Summer. Potatoes would be a good crop. Beans might be put in after the ground had been tilled without any crop for several weeks. In no case would I cut and take off a crop of forage. Oats might be a good crop to sow next Fall for a Winter cover, but rye would live until the following Spring and might not be plowed under soon enough. No crop should be allowed to sap the ground of moisture at that time of year, especially.

VERMONT DEER.—Having printed complaints about the damage done by wild deer in Vermont it is no more than fair that we should also print the following from the Brattleboro Phoenix:

"Twenty-five years ago deer were extinct in Vermont, except in the northeast corner of the State, where the primeval forest stretches away to the great timber tracts of New Hampshire and Canada. Enterprising sportsmen from Rutland and vicinity brought from other States a few deer and liberated them in the mountains east of the Marble City. These deer were protected by stringent laws, they multiplied rapidly, and they gradually found their way to other sections of the State in small numbers. They have, however, never become numerous except in a few towns near where the deer were first set free more than 20 years ago. In fact, more than one-half of the 544 deer shot since an open season was established in 1898 have been killed in six or eight towns in Windsor and Rutland counties within a radius of 30 miles of the spot where the Rutland sportsmen started the experiment of stocking the State with deer. A few farmers in the wildest sections of Windsor and Rutland counties may sustain a slight damage to crops from the incursions of hungry deer, and similar conditions may exist in wildest Essex County, but not one Vermonter in 30 ever saw a wild deer in the State, and not one farmer in a hundred ever had his crop damaged by the animals."

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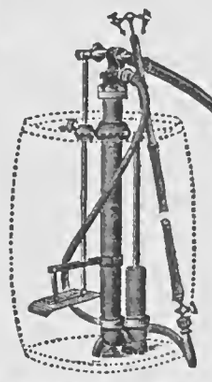

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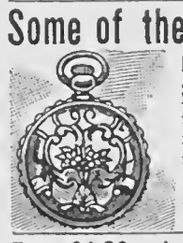

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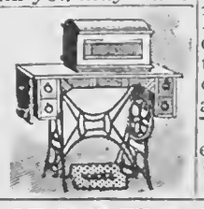

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Ruralisms

NOTES FROM THE RURAL GROUNDS.

SOME TOMATO TESTS.—We try many new tomatoes every season, but find too much space required to grow the multitude of new varieties sent out every Spring. The tomato has been worked up to great perfection in a short period, and though one of the most responsive of plants to horticultural influences, it cannot be expected to retain the same rate of improvement in the future. The new kinds sent out annually by seedsmen are very much alike, according to the type represented, but are often superior to existing strains in that they are carefully selected for special qualities, and, we may venture to say localities, in view of the enormous geographical range covered by American gardening operations. Aside from these seedsmen's varieties we always get a few of home development from readers of THE R. N.-Y. We grow them with much interest, as they generally have some special excellence, though many of the qualities that go to make commercial value are often absent. The following appeared most promising of this class:

EARLY PURPLE.—Wm. Rapp, Terrehaute, O. Planted out May 21. Strong and vigorous plant, fairly productive, large flat tomatoes, dull red in color. Pleasant quality, but too soft for market. Second early.

LATE PURPLE.—Wm. Rapp, Terrehaute, O. Planted May 21. Not so rank in growth as the former, but more productive. Large, flat and rather soft. Color, deep purplish red. Very good quality. Late midsummer.

DWARF CHAMPION TYPE.—G. M. Mack, Nicholson, Pa. Planted out May 23. Exceedingly dwarf and compact, dense dark green foliage, so thick that it must be cut away from lower clusters to secure early ripening. More productive and of brighter color than Champion. Midseason. Under high culture makes a fine variety for small gardens.

FIVE INTERESTING HYBRIDS of the very distinct variety Honor Bright were received from E. C. Green, Medina, O.; some with broad or potato-like foliage, and red or purplish fruit, others as dwarf and compact as Aristocrat or Champion. All retained the peculiarity first developed in their parent of coloring the green fruits first white, then yellow, then scarlet or crimson purple, as the case may be. All had the characteristic yellowish foliage of Honor Bright, though it varied much in form. This yellowness seemed to be so much accentuated by wet weather as to amount to weakness, though in average seasons Honor Bright is vigorous enough. The quality in most cases was very good when thoroughly matured. The various shadings of the fruits in the different stages of ripeness are not only very handsome, but serve to indicate the time for gathering in case they are to be shipped. All were firm enough to handle readily, and proved sufficiently productive considering the unfavorable season. Early to medium late.

ENEMIES OF THE PERNICIOUS SCALE.—The recent announcement from the National Department of Agriculture that the natural parasite of the pervasive San José scale had been discovered in north China, in a region supposed to be the original home of the scale, in the form of a Chinese "lady bug," is very encouraging, and we shall all be glad when the distribution of these hardy and energetic little beetles begins, as accumulating experience makes it plain that the extinction of the pest by sprays and chemicals is a laborious and uncertain matter. Crude petroleum and potash whale-oil soap, so often recommended in these columns, remain the only practical means for clearing infested trees, but it must be remembered that these powerful insecticides are alike fatal to friend and foe—they kill the beneficent parasites, if present, even more readily than the well-armored scales—and should only be applied in late Winter, when insect life is dormant. We find the handsome little native Twice-stabbed lady beetle increasing on the Rural Grounds, and gathering on the few trees that become infested with scales each Summer. They stick closely to the trees, remaining until hard freezing weather, and may plainly be seen dining on the minute scales on sunny days. If removed to adjoining trees free from scales they soon leave and presumably find their way back to their lunch counter. They do not breed fast enough, however, in the opinion of Prof. John B. Smith, of the New Jersey Experiment Station, to become an important factor in exterminating the scale. It is to be hoped this Chinese cousin, with its countless generations of hereditary experience in dealing with scales behind it will prove adapted to our climate and conditions. Now is the time to make a thorough examination of all trees and shrubs likely to become infested, so that thorough work may be done with the spray pump in the hurried days when the swelling buds indicate the safest time for oily applications. Other parasites of microscopic size have been reported as preying on the Pernicious scale, and it is possible that natural enemies of this character may so increase as materially to check its spread among wild plants, but cultivated trees will doubtless require special attention and vigorous treatment when infested for a long time to come. In the light of our own experience, and in consideration of the importance of the subject, we make no apology for repeating the advice closely to examine all trees and shrubs about the farm, and send specimens of infested twigs and bark to the nearest Experiment Station if in doubt as to the character of the pest. If identified as Pernicious or San José scale it will be well to head back severely just before growth starts, coat the large wounds with paint or shellac, and spray thoroughly with petroleum or whale-oil soap solution, (two pounds of soap to a gallon of warm water) when the buds show signs of swelling. We use the oil pure on trees showing any incrustation of scales, and the soap solution when only scattering young scales can be detected. The oil is most effectual, and is visible for nearly a year, limiting the spread of any scales that may be missed for that time, but it is known to be more dangerous to the tree, though we never have had any ill effects. The object of pruning is to reduce the surface to be treated, as it is not easy to coat fine twigs completely with oil or thick soapy solutions without getting an excess about the trunk. The trimmings should be piled in some convenient place and left until late May or June to allow any insect parasites to escape, and then burned.

W. V. F.

THE OHIO HORTICULTURAL SOCIETY

PART I.

The thirty-fifth annual meeting of this society was held at Lancaster, O., December 4-5-6. The weather being fine, the attendance good and the programme of more than ordinary interest, the convention was a success in every particular. The reports from members of the various districts of the State, indicated a variable crop of apples, probably averaging 50 per cent of a full crop. However, those who grimly maintained their grip on the pump and nozzle and kept their poisonous Bordeaux fog flying, were richly rewarded. The Cox Brothers, of Lawrence County, who make a specialty of growing Rome Beauties, reported a moderate crop of very fine apples—aggregating 1,700 barrels. The last of their fancy grade of Rome Beauties sold for $5 per barrel. Notwithstanding all that has been said against the Kieffer pear, reports from nearly all sections of the State place it at the head of the list for profit. Kieffers, this season, sold from $1 to $1.50 per bushel, and the demand was not satisfied. Peaches were reported a heavy crop from all sections of the State. Young trees and those from which much of the fruit had been thinned, produced fine specimens that sold from 75 cents to $1.50 per bushel, while unthinned trees were broken under their great burden of undersized fruit that could be purchased for almost any figure from 50 cents down. The plum crop, though variable, and affected seriously, in some localities, by rotting, was above the average. The Japan varieties had their second inning, in our State, since their introduction. The first crop of Ogon, on trees planted nine years, was reported. They were large, beautiful and of fair quality, but the liability of the bloom to be killed by late frosts makes them unprofitable to grow for market or home use. Burbank bore well, but rotted badly in many places. It is the general verdict that although the "Japs" are very attractive in form and color, and sell fairly well, they cannot compare with our better European varieties. The Bradshaw is undoubtedly at the head of its class as an early plum. Lombard holds its own as a reliable general-purpose variety. Imperial Gage was mentioned as having done well the past season, and is highly appreciated for its fine quality. Richland was quite favorably mentioned by those who have tested it. It is said to be superseding the damson wherever it is becoming known. Archduke, Grand Duke and Monarch are recognized as leaders among the large, late plums, and promise to be a source of profit because of their season of ripening and comparative freedom from rot. G. W. Gill of Columbus, described a new plum, or rather an old one that is just becoming known outside the neighborhood in which it originated. The original tree came from a seed planted in 1825. Mr. Kelso, for whom the plum has been named, purchased the farm, on which the old tree was still alive, in 1866; since which time the variety has become a local favorite among the farmers of Sabina, Clinton Co. The Kelso is a dark blue in color, from one-third to one-half larger than the damson. In form it is nearly round. The flesh is a rich, dark red. It is a freestone with a seed smaller than the damson. It is said not to suffer from the eureulio, and is not susceptible to black knot. Another member stated that he knew the Kelso, and that it is promising for home use and market.

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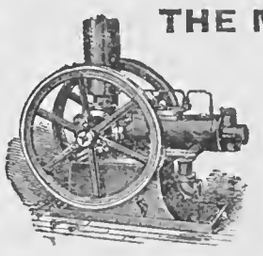

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HOPE FARM NOTES

WATER SUPPLY.—I have often told about our water system but every now and then a new reader asks questions like the following:

I see that the Hope Farmer has a system of water works on the farm. I would like to know what kind of power he uses. I see mention of a windmill. I would like to know what he does to pump when the wind does not blow, and how does he work it in the Winter? What kind of a supply has he, a spring or a well, and about how much will it cost to build one like his? How much land will a windmill irrigate? I mean to grow a crop. It is a dry country out here, and I think we would help to grow a garden. T. M. H.

It is an old story to most of us that when we bought Hope Farm there was no drinking water at hand. An old well near the house about 80 feet deep had never been satisfactory and had been filled up. There were two big cisterns for rain water in the cellar. On the hillside about one-third of a mile from the house is a fine spring. My first plan was to pipe this spring water to the house and barn. At that time iron pipe was so high that I gave this scheme up. I knew that a good water supply would increase the value of the farm far above the actual cost of supplying it. The result was that we engaged a man to drill a six inch well. He struck solid rock at 16 feet, and tapped a water vein at about 90 feet. I intended to stop at about 100 feet, but through some misunderstanding he kept on to 140 feet, the water finally rising to within 40 feet of the surface. This gives us an abundance of pure water—better, I think, than that from the spring.

WATER WORKS.—It is all well enough to have plenty of water 40 feet below ground, but one might die of thirst unless it is brought to the surface. I am not satisfied with merely bringing it to the surface either. It should be hoisted above ground and stored there so as to run where you want it. You elevate a boy's spirits and he will run his legs off on your errands. In like manner if you elevate water it will find legs to run to barn or kitchen far ahead of the men folks, who are asked to carry it in buckets. Our well is located in the barnyard. After some figuring I decided to buy a windmill, which was put up over the well. Just under the roof of the barn we put a wooden tank holding 1,300 gallons. An inch iron pipe runs from the pump at the windmill up through the barn into this tank. A short distance from the pump a branch pipe runs to the house, entering through the cellar wall, and by means of a water-back in the kitchen range giving us hot water in the kitchen. We expect later to put a smaller tank at the house, and arrange for a bath room. This system has worked well. The windmill has now been in operation 26 months. During that time the tank has been dry so that hand pumping was needed only twice. In one case it was our own fault, as we neglected to use the wind when the tank was nearly empty. In the other case there was hardly a breeze for nearly 10 days at a time. This was very unusual for our country, and with a larger tank I doubt whether there would be any need of hand pumping. The cost of the whole outfit was not far from $450. The drilling of the well cost $2 per foot, or $280 in all. I regard it as a good investment, aside from the great comfort and convenience which a constant water supply means. I have been asked whether I would borrow the money to put up such an outfit on a farm! In a sense that is just what I did, for the money which this cost might have been used to eat a hole in the mortgage. I felt that so long as the farm was without drinking water it would be slow of sale, with the buyer dictating the price. These were just the conditions which enabled me to secure it at a low figure. I felt that a good water supply would change the condition and give the advantage to the seller. While I do not like to think of selling the farm I consider it a duty to try to make any property rise to its true value. Where a water system must be regarded as a convenience rather than a business investment I doubt the wisdom of going in debt for it. As for irrigation, I have no faith in wind power for providing water, unless one has a very large pond or reservoir above land to be irrigated. I hope some day to use the water from the spring for irrigating.

POSSIBLE CHANGES.—No man is wise enough to start a new plan of this sort and get it right the first time. He may have the best advice in the world, but advice will never spell personal experience. If I were starting the thing over again I might change several things. I think I would locate the well and mill nearer the house, and put cut-off valves in the pipe, so as to separate house and barn supplies. I would have a tank in the house so as to be entirely independent of the big barn tank, which must be cleaned several times a year. I would make the barn tank at least three times as large. My mill wheel is 10 feet in diameter. I would get a larger one, and have it geared so as to run some other machinery. With this outfit I could put a power house over the well and run light machinery on windy days. I am not sure that I would get a mill were I starting again. I like the portable gasoline engines. They can be mounted on low trucks and wheeled about from one part of the farm to another for all kinds of work. We could use one to pump, run the saw or shredder, or grind. This is the way the gas engine looks to me at a distance. I have before now spent time and money running after new and promising friends, only to look back and see that the old friends were, after all, the best. Some of these old friends resented my running from them and turned a cold shoulder when I came back, but the old windmill will continue to harness the wind at the old stand without complaint.

COMFORT.—I write this on Saturday night. It was dark and gloomy through the afternoon and the sorrowful day ended in tears. We came home in the big wagon in the face of a driving rain. Old Frank hauled us through the mud over the hills and along the level places, shaking himself with a sigh of relief as he halted in the Hope Farm yard. There was a big fire in the wood stove, and Aunt Emma and the Madame were putting the last finger tips on supper. Half a dozen lamps were burning, for our folks like to let their lights shine when they are most needed. The baked beans, Indian pudding and brown bread needed little sauce on such a night after a hard day's work. After supper I went with the Bud and the Graft to see that all the stock was safe and dry. It was well that we went, for there were six foolish hens huddled into a corner with the rain dripping on them. I would give these hens a premium for silliness, were it not that I have known men and boys to get out of a good home for less cause. We soon had them safely in the house. We looked up all our barn friends, and now as I see the great raindrops flatten against the window pane and slide sullenly down I know that all hands, from Grandmother down to the sick chickens in the brooder are safe from the storm. Hope Farm represents "Home, sweet home" to 13 humans and 154 brutes tonight, and every one of them has a full stomach, I hope an empty bag of regrets, a warm nest and cool and comforting memories. I am well content therefore to let the storm cry impotently at the windows because it cannot get inside. The wood fires are roaring, the apple barrels are full, there are three chickens in the pantry ready for tomorrow's dinner—in fact bodily comforts are well provided for. The little folks have had their bath and are now cuddling down for sleep. They have written their letters to Santa Claus and thus all their childish wishes are known. Happily their wishes may all be gratified, for we have been able to keep these little folks satisfied and happy with simple things.

So you will see that the Hope Farm folks are closing the week gently and hopefully. Why, we even have room for a few more should there be any homeless ones adrift in this cruel storm. But some one will shrug his shoulders and say with a half sneer: "Ah! this man would not talk so hopefully of his so-called comfort if he knew what real trouble is. You would hear another story from him if the shadow that rests on *my* home came over the threshold of Hope Farm!"

Now it is close to Christmas, and I feel like taking the privilege which belongs to an old friend of talking right out to you. The Madame and I sometimes think that our burdens are pretty heavy, and that there are several black shadows tied fast to us. The problems of life which are presented to us for solution seem at times overpowering. Were I to write the truth about some of the unpleasant things that have stood in our path you would accuse me of reading a chapter out of a romance. I merely refer to this, here at the end of the year, that those who sit in sad and lonely homes to-night, perhaps communing with some dark and bitter sorrow, may realize that the Hope Farm folks know and understand. It is a part of your duty and mine to carry on our shoulders a portion of the great burden of sorrow and trouble which God has placed in the world. We may carry this as we would a dead weight—a millstone around the neck—or we may shoulder it gloriously as a cross that uplifts rather than bears down. Let us not discuss it or think about it except in the hope and belief that along with it is given the power to turn it into strength and blessing. To those who are hopeful and happy to-night I would say share your happiness with others and thus increase it. There are those to whom this storm brings only haunting memories of grief and trouble. The raindrops flatten on the glass, but the mournful spirit of the storm breaks through and penetrates the very soul. When sorrow clouds the mind there is only one way to remove it, and that is to share another's sorrow and thus destroy the germ! Why refer to these things now? Why not talk about crops? Because we are close to Christmas—the birthday of One who came on earth to give man a new moral opportunity. The Hope Farm man doesn't pretend to be a model farmer, and the Madame wouldn't stand a chance in a contest for a model housekeeper, but as we run back in memory over a good many stormy years we feel more and more convinced that what the people of this land need above all else is the knowledge of this same moral opportunity. H. W. C.

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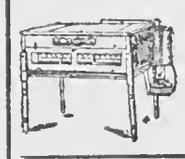
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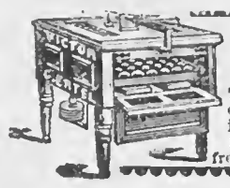
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SATURDAY, DECEMBER 28, 1901.

THE House Committee on Agriculture has fixed January 8 as the date for taking up the oleo bill. This early start indicates a desire to push the bill along, and we hope the force behind it will be strong enough to crowd it over all obstructions.

*

HERE is a business question which will be discussed next season. In consigning goods (fruits or other produce) to commission men in large cities, is it best to let one firm have it all or to divide between several? There are many sides to the question, and we would like many opinions and suggestions.

*

WHY not take a hint from that little blackboard on Mr. Mapes's barn? Have you not something to say to the public? It can hardly be that all your ideas are for home consumption. Let the public in when you have anything to sell or buy. Chalk up your wishes, and thus make sure of the long end of the wishbone.

*

ON page 839 we referred to Elmer E. Hubbard's school in Cuba, and the need of a gardener. Our readers will be glad to learn that the first volunteer for this place has come forward! It is a great satisfaction to realize that whenever we ask R. N.-Y. readers for information or public service some one is sure to respond!

*

WHAT a farmer that was (first page) who raised sugar beets and sold them at $5 per ton and then bought back the pulp at $4.50! He was—but hold on before we express our opinion. Let us all make sure that we never did anything like it. If all waited until that time what a solemn and reflective silence would fall over the world!

*

SPEAKING about the famous "seed oats" case recently aired in THE R. N.-Y., a reader wants to know whether he can make Uncle Sam pay for the damage done by weed seed. This man received some onion seed in the Government free seed distribution, and planted it. The onions were of little account, but mixed with them was a fine lot of weeds which seeded the whole garden! There will be small show for obtaining damages, for Uncle Sam has fooled himself into the belief that he really does a good thing by distributing these seeds!

*

WE find that farmers are divided in their opinion of the Chinese Exclusion Act. Some of them favor Chinese immigration, as they argue that this would provide farm laborers and thus enable them to work their farms to better advantage. We think they would be disappointed in this, for the Chinaman is not likely to go to farms where he would be obliged to work alone. He will stay in town, or else work in gangs on farms large enough to employ a large number. There is no doubt about the demand for good farm labor. Not a day passes that we do not receive a request from some farmer who has been worked almost to a standstill for lack of steady helpers. The situation in England is even worse than here—the workmen crowding to town and city leaving the farmer alone. This seems to be one of the industrial taxes which the farmer in a manufacturing country must pay for his "home market." The introduction of large numbers of Chinese laborers would not be likely to benefit the smaller farmer. It would be more likely to increase his competition, for the cheap Chinese labor would be employed chiefly by the large western farmers, and thus increase their output.

*

THE meeting of the New York State Fruit Growers' Association at Syracuse on January 8-9 will be a notable occasion. This Society is less than one year old, yet it has already nearly 600 members. It won the cash first prize at the New York State Fair, and a gold medal at the Buffalo Exposition. That is doing pretty well for a child barely out of its cradle, but it only suggests the possible power for helpful business which the Society will show when it grows up. This is a business organization, and in no sense a rival of the horticultural societies.

*

LET a man ride through the best dairy districts in New York State after an absence of 10 years, and he will be astonished at the number of silos. We recently saw nine at one time from the windows of a railroad train. New ones are being put up every year, and they are changing the character of farming in whole sections. Years ago the institute speakers argued at length in favor of silage, and for a time they felt that they were making slow progress. The farmers often waited until the speakers had begun to talk of something else before they were ready to build the silo. The speaker must often work years ahead of his audience, but if his words are true he need not be afraid to leave them and pass on, for they will be passed along by those who hear him.

*

THE threatened famine in Russia will be very discouraging to the export trade in cereals, which the government of that country is seeking to promote. Only two provinces out of more than 70 are said to have produced a full harvest, and the area of scarcity exceeds half a million square miles. The Russian government cannot, with any justice, permit an extensive export of cereals in the face of these conditions. It is like China, which the well-informed say, is not likely to compete with the outside world in agricultural products, even when vast areas are reclaimed or restored to tillage, because there is always a vast and increasing population, which, unless cut down by war, must keep pace with the food supply. It is likely that Russia will hasten to open up the grain-growing districts of Siberia, which are described as the granaries of the future.

*

WE have received the following note, which we are glad to make public:

> Acting upon the advice of THE R. N.-Y. that the farmers of New York State write to their Representative in Congress in behalf of the Tawney oleo bill I would suggest that each and every reader of this paper, on the first day of January, 1902, write a letter to J. W. Wadsworth or Sereno E. Payne or both, in behalf of this bill. Let every friend of pure butter take a hand, remember the date, and let's show them the farmers of old York State are watching them with a view to "future reference." E. C. W.
> Bennettsville, N. Y.

That is a good plan for starting the new year properly. This expenditure of four cents will bring sure results. Mr. Wadsworth is said to be looking into the future for State political honors. Therefore every farmer in New York is justified in sticking a postage stamp on his back.

*

A SOUTHERN firm has been operating over a wide section with an endless-chain easy-work-at-home scheme that brought to the operators, at one time, it is said, $5,000 a day or more. Advertisements asking for girls to do steady work at home, in their leisure, for which they were to be paid $20 a month, appeared in many papers with a rural circulation. Men were barred, and as there are many girls, like the one who recently wrote for advice to THE R. N.-Y., who would like some paid occupation which would not interfere with their home duties, the responses came in great quantities. The applicants were told to buy 60 cherry trees of unstated variety and age for $12. These they could sell their friends at a profit if they wished. Then they would be paid $20 a month, and all they would have to do was to write five letters a day to friends or persons whose names they knew, extending the same offer, and saying the writer was earning $20 a month. This bait attracted many a dollar that represented self-denial or sacrifice. The end soon came, however; the Post Office Department decided that the firm was not carrying out its promises, and an indictment was found on the charge of using the mails for fraudulent purposes. Such despicable frauds as these are specially designed to prey upon the inexperienced, whose necessities make the expenditure of every dollar—perhaps every dime—a matter of careful consideration. The Post Office Department is very energetic in exposing them, but it is difficult to give these swindlers all the publicity they deserve. THE R. N.-Y. has investigated many hundreds of these advertisers, and it can only reiterate the advice to send no money to those who promise easy home employment.

*

IN spite of strong protest Speaker Henderson reappointed Hon. J. W. Wadsworth as chairman of the House Committee on Agriculture. THE R. N.-Y. made its fight fairly and openly, and has no regrets to offer. Charles Y. Knight, of the National Dairy Union, who had charge of the dairy interests at Washington, gives this explanation:

> We found great pressure being brought to bear upon Speaker Henderson by the agricutural press and leading farmers of the country to prevent the reappointment of Congressman Wadsworth of New York, chairman of the Agricultural Committee. The speaker was "twixt devil and deep sea." Committee promotions and chairmanships in Congress come largely through length of service, and when a chairman drops out the ranking member, that is, the next oldest in service, takes the place. The next in succession in the Agricultural Committee is Hon. E. S. Henry, of Connecticut, a staunch and tried friend of ours. He assured us that while he himself would gain promotion through the rejection of Wadsworth he could not approve of the demands that the Speaker humillate Wadsworth in that manner. The controversy had assumed a condition where, not Wadsworth, but the Speaker, was bearing the brunt of this criticism and these protests, and as Mr. Henderson was our leader on the Republican side in 1886 and fought hardest for the passage of the original oleomargarine law in the Hatch bill, we concluded that in justice to himself we should carry these protests no further and notified the Speaker that under the circumstances we should acquiesce in the appointment of Mr. Wadsworth.

A good soldier should follow into battle. THE R. N.-Y. did its share in the preliminary skirmish. There never was anything quite like the way our friends have voted with the postage stamp. We opposed this compromise as a matter of principle. Still, we realize that it is a distinct victory for the farmers. It would not have been won had they not responded nobly to the call and made their power felt. Last year the Committee was carried by one doubtful vote, after much urging. This year it stands 12 to 5 against oleo. Let no man believe, however, that Mr. Wadsworth, in spite of the chastening he has received, has taken off the armor of oleo. He is still in a position to delay the bill. Watch him! Keep at him with the postage stamps.

*

BREVITIES.

PLEA OF THE YOUNG EVERGREENS.

We hide the stony mountain side with green,
And grow in beauty where the plain was bare;
We cling to crannies of the walled ravine,
And through faint valleys waft a strengthening air.
We veil the prairies from the heat, while slow
Across their farmsteads breathes our Summer balm,
And shield them when the winds of Winter blow,
And all our aisles and pleasant rooms are calm.
Men drag us from our fragrant winding vales,
They fell us on the mountain slopes, and bare
The prairies unto heat, and freezing gales,
And thinned, the chaparral plains fail unaware.
They tear us from the wall-chinks of the glens,
And hew us on the marsh we helped to drain,
And where our beauty graced, the tawny fens
Shall lapse to weeds and sworded flags again.
Spare us!—oh! spare our youth with verdure crowned—
Our groves return to deserts when we pass;
The coasts which we revived in sands are drowned;
Bare slopes but yield their stones and bitter-grass.
Spare us! we bring you beauty, shelter, wealth,
Oh! waste us not. Oh! keep with guiltless show
The Holy Time; and life, and joy, and health,
Be gifts to you, while winds of Winter blow.
—Eliza Woodworth, in Birds and Nature.

WHAT is the best antidote for the devil? Hard, honest work!

TEN to one you cannot compete with the windmill in turning wind into work.

YES, there are two sides to every question, but is there more than one *right side?*

Do you know of anyone who is raising any of the large foreign chestnuts for his own eating? Are they not like the Kieffer pear—for sale?

WHAT is the best antedote for the devil? Hard, honest ure to understand that they do their best work under the direction of some one else.

FRUIT Inspectors in the State of Washington keep a very close watch over trees imported from other States, and where infected with disease or insects the whole lot is destroyed. It is felt that the development of the State depends largely upon the fruit industry, which must be encouraged in every way.

The lady who wrote the article on page 835 about centralized schools means business. She now writes: "I know of no other way to prove my statements than for some one who is in favor of the school to come and ride around in those wagons with kids a week or two. I will board him free of charge!" Come, now, ye centralized gentlemen, here's your chance!

IT is against the law to kill an eagle in New York State—no matter how many of your chickens he may destroy. Your claim for damages will rest against the State of New York—which in protecting the eagle assumes responsibility for his mischief.

Events of the Week

DOMESTIC.—Prominent cattlemen of Choctaw Nation will be ejected from the Indian domain, being regarded as intruders by the Choctaw tribal government. It is claimed that the Indians have the backing of the Interior Department. Many cattlemen who own a thousand head of cattle have been served with ejectment notices. This order has created consternation among cattlemen. The step is being taken for the purpose of alloting grazing lands, which cannot be done, it is said, because cattlemen have heretofore refused to vacate lands. . . . . Andrew Carnegie's gift of $10,000,000 to the nation, to be used to promote higher education, must be made in cash or the President may not advise Congress to accept it. It is said that President Roosevelt has already written to the ironmaster to this effect, for the reason that he does not wish the Government made the trustee of a fund consisting of "Steel Trust" bonds. Had Mr. Carnegie offered to give $10,000,000 in cash it is unlikely that there would have been any objection to the acceptance of the gift in behalf of the nation, but a number of members of Congress are known to have serious objection to the character of the gift as it is offered, feeling that it would be inadvisable for the Government to undertake such a trust. . . . . The finding of the Schley Court of Inquiry was made public December 13. Two reports were submitted, the court agreeing upon the facts, but not upon the opinions based thereon. The majority, Admirals Benham and Ramsay, condemn Admiral Schley for various acts of omission, and find that his conduct was "characterized by vacillation, dilatoriness and lack of enterprise." They say however, that in the battle he was "self-possessed, and he encouraged in his own person his subordinate officers and men." Admiral Dewey made a separate report sustaining Admiral Schley and giving him credit as the officer in command for "the glorious victory which resulted in the total destruction of the Spanish ships." The court agreed in recommending that no further proceedings be taken. . . . . The heaviest bail bond ever demanded in a criminal case was exacted by Judge Aspinall, of New York, December 13, in the case of William F. Miller, head of the 520 per cent Franklin syndicate. Miller, who was sentenced to a term of imprisonment at Sing Sing, recently obtained an order for a new trial, and was brought before Judge Aspinall on a motion for release on bail. The bond was fixed at $72,500. . . . . A terrific rain storm extended over Pennsylvania, New York, and adjacent coast States December 14. The havoc in the Pennsylvania coal region will reach millions of dollars; mines are flooded, and railroad property destroyed. It will be weeks before some of the mines can be operated again; 48 mines were flooded in the Schuylkill Valley, and hundreds of mules drowned. The Schuylkill, Juniata, Lehigh and Susquehanna Rivers rose 15 feet. At Syracuse, N. Y., a sudden rise in Onondaga Creek drove 500 families from their homes, and caused damage amounting to $250,000. At Canastota farmers will lose heavily from the flooding of celery fields. A phenomenal rise of the Mohawk River has caused great distress in the vicinity of Utica. At Ithaca the flood was the most disastrous since 1857; loss about $500,000. Some loss of life occurred in several localities. . . . . A railroad collision at Perryville, Ill., December 15, caused the death of eight persons. . . . . At Essex, Mont., a train was derailed December 15; eight persons killed and 16 injured. . . . . The business portion of Salem, W. Va., was destroyed by fire December 15; loss $200,000.

CONGRESS.—The Senate Committee on Interoceanic Canals has decided to pay no attention to the claims of the Maritime Canal Company, of Nicaragua, which claims to have purchased the route surveyed and recommended by the Canal Commission, and which insists that all franchises and concessions have been conveyed to it by the Nicaraguan Government in consideration of a large sum of money. The decision of the committee was reached upon the recommendation of Secretary Hay, who informed Mr. Morgan that the Government of Nicaragua had admitted the sale of lands to the company, and granting franchises and concessions, but that the sale had been annulled and the franchises revoked since it was made public that the Nicaragua route had been selected. Secretary Hay has decided not to consider the claims of the company, but to regard the action of Nicaragua as official and final. The effect of this action on the part of the State Department leaves the Maritime Company without power to obstruct canal legislation during the present Congress. The change of front by Nicaragua, however strange it may be regarded, is not likely to bring about further complications and thus delay legislation for the beginning of construction. . . . . The anxiety of the Pacific coast over the extension of the Chinese Exclusion act seems to be justified by the complications that are appearing in the matter from day to day. The fact that it is seriously proposed to extend the Exclusion act for but two years, and that Senator Proctor has introduced a bill to this effect, is now giving the advocates of complete exclusion no small amount of annoyance. The Proctor bill is based on the argument that the treaty that was negotiated with China in 1894 has but two years to run, and that it would be bad policy to pass a 10 years' Exclusion law now, when in a short time we shall want to make another treaty with the Yellow Empire. This phase of the situation is also colored by the aim of the Administration to continue as far as possible the policy of McKinley in regard to the "Open Door." The Chinese Government has already protested against the exclusion of their merchants and artisans from the Philippines, and the argument is made that the United States should not expect China to grant us any special trade advantages if we propose to keep her people out of the Philippines, where they are a thrifty and rich element. Minister Wu has already laid before the State Department the objection of the Chinese Government to the attitude of the United States in regard to the free admission of the Chinese in the Philippines, and the correspondence has been sent to Congress.

FARM AND GARDEN.—Among exhibitors who received gold medals for displays of seeds at the Pan-American Exposition are Frank H. Battles, Rochester, N. Y.; J. J. Bell, Deposit, N. Y.; Briggs Bros., Rochester, N. Y.; Crossman Bros., Rochester, N. Y.; Cleveland Seed Co., Cape Vincent, N. Y.; Henry A. Dreer, Philadelphia; The Albert Dickinson Co., Chicago; F. H. Ebling, Syracuse, N. Y.; Harvey Seed Co., Buffalo; Jerome B. Rice Co., Cambridge, N. Y.; J. M. Thorburn & Co., New York City; James Vick's Sons, Rochester, N. Y.; State of Wisconsin; Whitney-Eckstein Seed Co., Buffalo; Massachusetts Agricultural College, Amherst, Mass., agricultural and botanical collection. Minister of Agriculture, Buenos Ayres, collective exhibit of seeds. T. Howard, Canada, location not given, white and black oats.

Cattle show week began in London, England, December 9. The idea of a Christmas exhibition of cattle was started by the Smithfield Club, in 1798, and the show which was opened by the King at Agricultural Hall, Islington, December 9, is the 103d of its kind. The King has been a frequent prize winner at Agricultural Hall, and this year he again contributes extensively to the cattle and sheep divisions. The prizes offered amount in value to nearly $18,000, or about $1,500 less than the average.

The nineteenth annual convention of the American Forestry Association began at Washington, D. C., December 11. Secretary Wilson made the opening address, referring to the increase in the movement for forestry preservation. Dr. B. E. Fernow, of the New York State College of Forestry, presided. Committee reports were discussed, favoring setting aside 500,000 acres of public land for forestry in Nebraska, the creation of the National Appalachian Park, for forest reserve, and consolidation of all Government forestry work under the Department of Agriculture.

The thirtieth annual meeting of the Kansas State Grange began at Topeka December 10. Thirty-six accredited delegates were present. The largest delegation was from Johnson County, where the order maintains coöperative stores, which did a business of $240,000 in 1900. The main store of the Johnson County association is at Olathe, and branch stores are at Stanley, Gardner, Edgerton and Prairie Center. This association has been in successful coöperation since 1876. It is governed by rules laid down by the National Grange. The stock is held by members of the order. The capital of the concern was originally $20,000. It is now $100,000. Other coöperative associations are maintained by the order in Miami, Osage and Linn Counties, but they are not as strong as the Johnson County enterprise. In 1900 the State Grange numbered 2,324 members, included in 44 subordinate Granges.

The Colorado State Grange will meet at Denver January 14-16, 1902; secretary, J. A. Newcomb, Golden, Col.

The Connecticut State Dairymen's Association will meet at Hartford January 22-23, 1902; secretary, George E. Manchester, Winsted, Conn.

The Connecticut State Grange will meet at Hartford January 14-16, 1902; secretary, H. F. Potter, North Haven, Conn.

The Illinois State Dairymen's Association will meet at Freeport January 7-9; secretary, George Caven, 154 Lake street, Chicago, Ill.

The Indiana State Dairymen's Association met at Plainfield, Ind., December 18-19.

Among the approaching conventions at Lincoln, Neb., are the State Dairymen's Association, January 22-24; the State Horticultural Society, January 7; the State Board of Agriculture, January 20-25; State Farmers' Institutes, January 20-25, and State Sugar Beet Growers' Association, January 20-25.

The New Jersey State Horticultural Society will meet at Trenton January 8-9; secretary, H. J. Budd, Mt. Holly, N. J.

The New York State Fruit Growers' Association will meet at Syracuse January 8-9; secretary F. E. Dawley, Fayetteville, N. Y.

The American Cranberry Growers' Association will meet in Philadelphia January 28.

At the annual meeting of the Indiana State Horticultural Society the following officers were elected: President, W. W. Stevens, Salem; first vice-president, E. B. Davis, Cartersburg; second vice-president, E. M. C. Hobbs, Salem; third vice-president, E. C. Reed, Vincennes; fourth vice-president, J. C. Grossman, Walcottville; secretary, W. B. Flick, Lawrence; treasurer, Sylvester Johnson, Irvington; executive committee, Prof. James Troop, Purdue University, J. A. Burton, Orleans, and H. H. Swain, South Bend. Next year's meeting will take place at the State House, Indianapolis, the first Wednesday after the first Monday in December. During the Summer the State Horticultural Society will meet with the Johnson County Horticultural Society.

Under rules laid down by the new Yale School of Forestry and the Connecticut State Agricultural Experiment Station in New Haven, a large State park is being provided for. The purchase is in the hands of Walter Mulford, who has been appointed State Forester under the provisions of the law passed a year ago, which provide for a permanent study of forestry and a State park.

The twenty-ninth session of the Pennsylvania State Grange began at Johnstown December 10, when Master W. F. Hill addressed nearly 1,000 delegates. In the evening there was a public meeting, at which Mayor Woodruff and J. J. Thomas welcomed the Grangers, William T. Creasy responding. An address on "Forestry," by Attorney C. C. Greer, was well received, and Attorney T. J. Itell, discussing "The Law of Progress," disclosed radical thought along economical lines. Master Hill's address was an exhaustive treatment of the agricultural situation. In 1850, he said, there was $8,500,000,000 of wealth in the United States, and farmers had $5,000,000,000 of it. In 1890 the country's wealth had increased to $64,000,000,000, but the farmers had but $16,000,000,000 of it, although 75 per cent of all wealth annually produced was produced by the farmers. In other words, farmers possessed 60 per cent of the wealth of this country in 1850. During the next 40 years they produced more wealth than all other interests combined, but other interests had absorbed three-fourths of it, and the farmer finds himself the owner of but one-fourth of it. "Is it not our right, then," he asked, "to insist that we shall have a fair share of the profit our own harvests yield? Should it not be our aim to handle these products from sowing to marketing in a skillful and businesslike manner?" Mr. Hill opposes the Ship Subsidy bill, favors radical reform in State taxation, advocates free rural mail delivery, election of United States Senator by direct vote of the people, anti-trust laws, the revision of the fees and salaries of State and Federal officers, and the protection of dairy interests by the passage of House bill No. 3717. He thought the killing of birds for sport, causing an alarming increase of insects, beetles and worms, should attract the attention of legislators.

Too Much for the Miller.

The farmers in this section have to go some distance to get their wheat ground, and the millers take about one-half to one-third for grinding, and the flour is no better than we used to get 40 years ago. I would ask whether the millers have a right to do that, or are the farmers obliged to let them grind our wheat to halves? It comes pretty tough on the farmer who raises his wheat on shares, and then lets the miller take half of that for grinding. Is that the way they do all over the country? If so we would better stop raising wheat. I would like to hear from other farmers on this question.

Chautauqua Co., N. Y. J. H. A.

R. N.-Y.—We wish to hear from other farmers about this. What is the toll in *your* neighborhood? The average share for the miller is about 10 per cent. Few farmers take the trouble to weigh before and after grinding. The best plan is to agree upon a price for grinding 100 pounds of grain and take it all home.

"Red Albumen" for Hens.

Every now and then the gullible farmer is fooled, and the agricultural press is loud in advising him to subscribe for some paper to protect him. But the gullible editor also bites at baits himself. The notorious J. M. Bain would, several times a year, secure a column of free advertising in the guise of an innocent-looking communication. Now comes the "red albumen" man, who mentions the wonderful advantages of "red" albumen as an egg food. He gives no name, but you can get it at the drug store. Of course the druggist, in the face of inquiries, orders from the wholesalers, and the red albumen man in the background gets rich without paying a cent for his advertising, while the editor sits down and warns his readers against "gold bricks," etc. Four different "red" albumen communications came to me, intended for as many different papers, the article "going the rounds" of the press, and probably every newspaper and agricultural journal received one. Samples of red albumen showed it to be ground meat and bone, and perhaps a little blood. The odor alone will expose it. It is worth, wholesale, about two or three cents a pound, and need not be bought from a druggist. There is no such thing as "red" albumen, unless materials containing albumen may be so regarded, such as blood, nor has pure albumen any odor. I am not finding fault with the "red" albumen man. He simply "worked" the agricultural press and did it well. The fools (editors) are not all dead yet. In justice to some editors, however, I will state that they rejected the bait. P. H. JACOBS.

Hammonton, N. J.

R. N.-Y.—We have received dozens of copies of the printed letter from the "red" albumen man. In every case thus far these clippings were taken from city papers. We do not think that any reputable agricultural paper paid any attention to it; but the daily and weekly city papers jumped at the bait. Wholesale druggists in this city tell us that there has been a great demand for "red" albumen. At first they looked upon it as a joke, but orders poured in from the country until the price advanced. In some cases they furnished a substance used for dyeing! The trick was well worked, but few agricultural papers were caught by it. The city papers did the damage in this case!

CALIFORNIA NOTES.—The farmers in this vicinity are well along with their work; crops secured, and much of the land being put in cultivation for another crop. This year main crop was Lima beans; next perhaps comes the English walnut. Both have been fair crops and are selling at good prices. Hay plenty at about $10 per ton. Lemons have done well and the harvest lasts most the year. Prices have not been sufficient to please all. Oranges are ripening and promise well. They are not extensively grown here, so there are not enough yet fully to supply the home market. Apples are a rather short crop, pears not over plenty, particularly on old trees. Olives are a large crop, but prices low delivered at the oil mills. Some will be pickled but that will be but a small part of the crop. Oil makers do not like to pay over two cents per pound so there will not be a large margin left after the cost of picking and the freight bills are paid. Cost of picking one-half to one cent per pound—when the work is hired done. Potatoes a light crop and well up in price. Onions scarce and high. Prices for grain are lower than farmers like to work for, and few others will work for such small pay. Weather nice and warm. We have had rain enough to start the grass but more is needed to keep the land in order for the plow and keep up growing crops. O. N. C.

Santa Barbara Co., Cal.

THE COST OF CORN.—As to the exact cost of raising corn on level prairie land, it differs, as you well know, with the cost of living. Day labor costs (except in haying or harvesting) $1, but as I hire by the month at $20, and that generally the highest for common hands, I have charged 67 cents a day as the cost to me. If I hire horses I am charged 50 cents a day, and that is the price in the following figures. We generally expect a hand with a 16-inch plow and three horses to plow thoroughly three acres a day, and what I mean by thoroughly is to stir all the ground. I have seen more ground gone over, but I could not call it plowed as I would want it. Three horses and man one day, $2.17, which would make one acre cost 72 1-3 cents. When harrowing with three horses and lapping well we call 20 acres a day's work; therefore, at the same price for day's labor an acre of harrowing once is 10 1-3 cents, and we generally give four harrowings. If we put on four horses 24 acres is considered right, and that costs 11⅓ cents an acre. In planting corn with a single team eight acres is considered an average day's work, and at the above figures would make it cost 20⅞ cents an acre. In cultivating seven acres a day on an average, costing 23 6-7 cents an acre, and as we always give three stirrings, and if possible four if the corn does not grow too fast, it makes it either 71 4-7 cents or 95 3-7 cents, according to the number of stirrings. Husking costs generally $1 a day for hand, or 2½ cents a bushel, when boarding the hand. Some hands husk from 50 to 70 bushels a day. There are some who can do more, but they are above the general rule of workers. This year our corn will cost us nearly $1.50 an acre. It would be right to add the interest of what all the tools cost, and the damage accruing to the use of same to get the exact cost. R. C. S.

Campbell, Iowa.

Woman and Home

From Day to Day.

PA'S AWFUL IGNORANCE.

Most every day when I'm at school
The teacher tells us things
About the birds and animals
And presidents and kings,
And then, at night, when I ast pa
If what she says is so,
He reads his paper right along
And says: "Oh, I dunno!"

One day she told us that the world
Is round, just like a ball,
And that there's nothing down below
It's standin' on at all.
I ast pa if she told the truth,
He read his paper, though,
And put his feet up on a chair,
And said: "Oh, I dunno!"

And onee the teacher said the sky
Ain't heaven's floor, and tried
To make us think no angels walk
Along the other side.
And so that night I ast my pa,
And all he said was: "Oh,
Don't bother me about sueh things,
I'm busy—I dunno!"

One time a bigger boy he said
The doctor didn't bring
My little baby sister in
A box—no sueh thing!
That night I ast my pa if what
That big boy said was so,
And pa he answered: "Oh, keep still—
Confound it, I dunno!"

I used to kind of think somehow
That my pa knew a lot—
But that was wrong, or if he did
I guess that he's forgot.
Since I've got started into school,
Most every day or so
I hear about a hundred things
Pa doesn't seem to know.

—Chicago Record-Herald.

*

A WRITER in the London Hospital says that "for strangers to kiss a baby is a piece of abominable impertinence." Careful mothers will agree with this, though they may not accept the further assertion that this salutation is "an unforgivable sanitary sin."

*

VEGETABLE parchment paper is now prepared especially for household use. It toughens when wet, and is airtight; hence is very useful to wrap up meat or fish. It does not tear like ordinary paper, and is excellent to use in the bottom of cake tins when baking. The manufacturers highly recommend the use of parchment paper as a dishcloth; it is tough enough for the purpose, and may be burned after using.

*

IN cooking cranberries, which are always a Winter relish, the sugar should never be added until the berries crack open; if sweetened before this the fruit is tough and hard. Of course this fruit must always be cooked in agate, porcelain or stoneware; it is too acid for contact with metal. A nice way to serve cranberry jelly is to mold in glasses, then turn out and cut in slices like bread. A round slice of the ruby jelly, with a little heap of whipped cream upon it, makes a very pretty dessert.

*

A MERE man suggests that the shapeless raglans that are so popular for women's wear offer an inviting field for inexperienced amateur seamstresses. If a raglan appears to fit it isn't a fit, according to fashion's requirements; the more "slack" there is at the waist and the more dip at the hem the better. The raglan is certainly a leveling and democratic garment; in it all women appear upon an equal level of unshapeliness. It rages with great violence everywhere, but has become so common that it will soon lose favor, and by another season will be advised only in its proper place; that of a useful extra wrap to wear in stormy weather, or to cover a gown that needs protection. It is, properly, a driving rather than a walking coat. One of the humors of the season is to see a woman trailing through the city streets with a raglan which rests an inch or two on the ground all round, striving at the same time to hold up a long-tailed frock which, with the innate depravity of such garments, insists on dipping down in a series of scallops. There are some fashions that cause one to endorse, temporarily at least, the opinion of those ancient theologians who argued that woman is not to be regarded as a reasoning being.

*

A READER asks what the cold cream used as an emollient for chapped and roughened skin is made from. Its proper constituents are oil of sweet almonds, white wax, spermaceti and rose water, but many of the cheap and highly perfumed creams sold contain less innocent ingredients. Our formula is: White wax and spermaceti, of each one ounce; oil of sweet almonds, five ounces; rose water, 1½ ounce, in which a pinch of borax (20 grains) is dissolved. Shave up the wax and spermaceti and with the oil, put in a little porcelain kettle over a slow heat. (Our mixing vessel is a Dundee mamalade pot, put towards the back of the stove.) When melted together remove from the stove and stir in the rose water, which may be warmed by standing the bottle in a pan of hot water. Stir thoroughly together; some say beat together with an egg beater, but we have never done this. If further perfume is desired, add before it thickens. This is not troublesome to make; is cheaper than the readymade article, and one has confidence in its ingredients.

*

ANY mother who thinks that the average boy has a cavernous appetite should study the housewifely exertions of a small bird with a nest full of hungry nurslings. A naturalist who watched a wren's nest last Summer states that Mrs. Wren made 110 trips to her nest during four hours and a half, and this was the bill of fare devoured by her three children: Twenty green caterpillars, 16 May flies, 29 unidentified insects, 11 worms, two bugs, 10 grasshoppers, seven spiders, and a chrysalis or two. We have often heard a wren of our acquaintance, who nested near the house year after year, scolding her husband severely at bedtime; no doubt she was telling him that she was just tired to death, after being on her wings all day looking after the children!

A CANADIAN DISH CLOSET. FIG. 394.
Second Prize in Photographic Competition.

A Handy Dish Closet.

SECOND-PRIZE PICTURE IN THE PHOTOGRAPHIC COMPETITION.

The accompanying picture illustrates a dish closet built over an opening, left in the wall between kitchen and dining-room. It is built on the dining-room side. The door on the kitchen side does not extend down to the floor, only to the lower shelf. The drawers are a handy place in which to keep table linen, towels, etc. MRS. HUGH AITON.

Best Squash and Pumpkins for Pies.

What varieties of squash and pumpkin are best for pie-making? Which have the richest and driest flesh? READER.

The little sugar pumpkin and the Hubbard squash are the best for pies. I asked one woman what squash she liked best, and she said "these little sugar pumpkins." When pressed further she said if she had to use squash she preferred Hubbard. Two others that I asked declared in favor of the Hubbard. A good squash should be so hard-shelled that it has to be chopped open with an ax or else dropped on the stone doorstep. Then scoop out the seeds and steam the pieces, shells, squash and all, and when tender, dry a little in the oven and then scrape out the flesh. S. B. R.

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SAME PRICE

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THE MODERN STOVE POLISH

Brilliant, Clean, Easily Applied, Absolutely Odorless

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And other Insects can be Controlled by Using
Cood's Caustic Potash Whale-Oil Tobacco Soap No. 6.
Kegs, 50 lbs. ea., 5½c. lb. | ½ Bbl., about 275 lbs., 4c. lb
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THE
POULTRY-HOUSE
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As a water-proof covering for Poultry-Houses, RUBEROID has no equal. Keeps the houses cool during the warm weather, and warm in Winter, and the chicks dry and comfortable. The sun cannot melt it.
THE STANDARD PAINT CO.,
100 William Street,
NEW YORK.

Ruggle's Christmas Tree.

Randolph P. Ruggle was a remarkable man—a very remarkable man. Everything considered, I believe he was the most remarkable man I ever knew. He was a New Englander, born in Connecticut, and was of the best Puritan stock. He was always proud of the fact that most of his male ancestors had been clergymen, or at least teachers. At the time of which I am speaking he was middle-aged, or somewhat past, tall, thin, long-whiskered and with a wonderfully magnetic eye. He was, in fact, something of a mystic in feeling, but strictly practical in his actions and fully conversant with the ways of the world. He was resourceful, full of energy and never lacking the courage of his convictions; all of which made him a leader of men.

It was early in the year '48, or it may have been '49 or '50—the exact date doesn't matter—that Ruggle formed a colony to go to California. I was among the first to join. There were some 60 or 70 families, making, counting the children, over 200 souls. We arrived early in the Spring, in time to plant our crops, which Ruggle did not fail to see included plenty of beans, pumpkins and other New England luxuries. He had a strong love for everything pertaining to the region of his birth, and his dream was to build up a community which should be a slice cut out of the Connecticut River Valley. Tobacco culture, however, he barred, as well as the manufacture of New England rum. But he brought along a quantity of turkey eggs, mindful of the Thanksgiving season, and these he set under blue jays, one egg to each jay. Strange as it may seem, he had very good luck with this rather odd form of incubation, since he seemed to have the same mysterious influence over the brute creatures that he had over men.

The efforts of Randolph P. Ruggle to establish a little New England were pretty successful, not withstanding that we were in a perfect wilderness and with no communication with the outside world. Our colony included a Congregational minister named Snow, and one of the first buildings erected was a church—meeting house Ruggle preferred to call it. This we used also for a school room on week-days, the oldest Ruggle girl assuming the position of school ma'am. Ruggle established town meetings, and we met and elected road overseers, though there were no roads, and a justice of the peace, though there wasn't any crime, and selectmen, though they had precious little to do. In fact, about the only thing we missed was the New England weather, or, rather, weather served in the New England style, samples of all the different kinds in one day; and sometimes we thought Ruggle was thinking about introducing that, as he spent a good deal of time gazing at the sky. But if this was his idea nothing came of it, and we had to get along with the regular native climate.

Thanksgiving Day was a great event with us, and we couldn't have seen it through in better shape if we'd been living at East Upper Puddleford Center, Conn. Early morning services in the church, and later pie of all kinds, not and cold, with and without upper crusts, and those blue-jay turkeys. It ran on till shortly before Christmas, when we noticed that Ruggle was getting very much worried over something. We thought it was about his wife's Christmas present. He set great store by his wife, and they were a most devoted couple—used to wander about hand in hand, presenting an impressive sight, he measuring about six feet four and she being somewhere in the neighborhood of the four-foot-six class. You see, he had always made it a practice to give her a Christmas present which nobody else ever got, and it rather stumped him to come at such a gift out there in the wilderness. He was about this just as he was about everything else—bound to be original. Once he'd given her a new sidewalk in front of the house, and another time he cut down a tree and gave her a view she wanted, and on still another occasion he had cleaned out the kitchen chimney and called the improved draft her Christmas present. But this time he couldn't seem to hit on anything, though we soon saw that this wasn't all that was worrying him. At last we found out that he had got his heart set on having a Christmas tree—about the most absurd notion that he could have got into his head. But that's the way he was—the greater the difficulties the more determined it made him.

You might think, of course, that, situated as we were, a Christmas tree would have been right in our line and easier than hanging up our stockings, but you would be wrong. Every tree within reach was in the neighborhood of 400 feet high and from 75 to 100 in circumference. Any man in the world except Randolph P. Ruggle would have seen the hopelessness of the thing. But he just kept the outer corner of one eye cocked up at those ridiculous redwoods and went on thinking. Most self-sufficient man I ever knew, Randolph P. Ruggle was.

One day, a week before Christmas, Ruggle happened to meet me near his house, and says he:

"Well, we're going to have a Christmas tree—that's one thing settled and off my mind."

"But, Mr. Ruggle," I answered, "I can't see how it's possible. The trees around here average 350 feet high and ——"

"Never mind their average," he broke in. "We aren't going to use the whole grove. I've found one over a quarter of a mile from here which is no size at all—a mere bush."

"How high is it?"

"Oh, not over 265 feet—just a dwarf. Perhaps 15 feet in diameter at the base."

"But the church isn't over 18 feet to the ridgepole. I don't see how we can get in even such a little sprig as that," I returned—pretty sarcastic, I'm afraid.

"I've been guessing myself that it would stretch the edifice somewhat," he answered, just as cool as when he first spoke. "Do you happen to know of any law against a Christmas tree sticking up a little mite through the roof?"

"No," I replied.

"That's what ours is going to do."

"But it seems to me that the job of moving this shrub that you're talking about is going to be something of a staggerer."

"I didn't say that we were going to move it. Did you ever hear of Mohammed and the mountain?"

"Yes."

"Precisely. Mohammed was all right in many ways, if he was a foreigner. We shall move that church over to the tree, take off the rear end, cut a 15-foot scallop in the floor and roof, back it up around the tree and then clap on the end; and there you are. I don't see what more any reasonable person could want. We're in a new country and we've got to make the best of things. It won't stick up but 247 feet, anyhow."

Well, of course when Randolph P. Ruggle made up his mind to a thing that settled it, and in three days everything was arranged as he had planned. "There!" said Randolph P. Ruggle; "there you are. The children won't have to go without their Christmas tree. Only a little over 150 feet to the first branches and plenty of room for the presents. A man can put on a house and lot or an ocean steamer if he wants to. No crowding of the wax candles and setting thing afire. Beats one of those little house trees all hollow. Everything shut off from the view of the audience and the element of surprise introduced."

But Ruggle couldn't get over his inability to think of something to give his wife. When people began to fetch things to put on the tree the last afternoon it brought this to his mind more than ever. "She'll be expecting something, and she'll be the only person who won't get anything," he said. "But I'll let her go without before I'll give her some commonplace gimcrack."

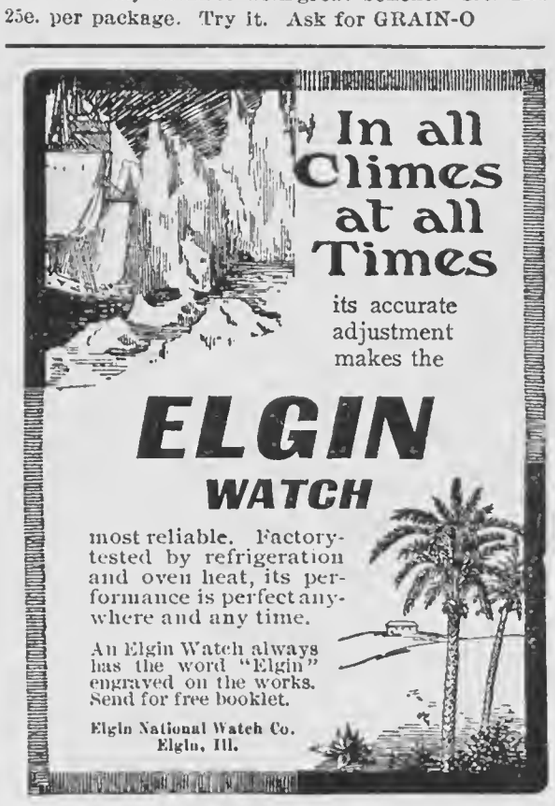
Of course the trimming of the tree and the putting on of the presents fell to Randolph P. Ruggle. We thought he was going to find it difficult to get up, but he didn't. The bark was pretty rough and he went up, like a cat, driving in spikes occasionally where the trunk was too smooth to afford a foothold. Before he started he tied the end of a ball of twine to the tail of his long blue coat, with the brass buttons, which he always wore; and when he reached the top he drew up a rope with the string and hoisted the other things with the rope. Trimmed it all up with festoons of popcorn and red apples, and tinsel, and candles, and it blazed and sparkled like a skyrocket just as it explodes. When it came time for the exercises Randolph P. Ruggle went up in the tree again and let the presents down with his rope, a dozen at a time, and we passed them through the window of the church, where Rev. Mr. Snow distributed them to the congregation with chirpy and good-natured little humorous remarks. When the last present was off Randolph P. Ruggle started to let himself down by tying one end of the rope around his body under his arms and then throwing the rope over a branch, taking it in both hands and paying it out as he descended. But he had miscalculated its length and he reached the other end while still 30 feet from the ground. Here he remained suspended, and the prospect looked pretty dark for Randolph P. Ruggle, as he wasn't able to pull himself back up. But finally we reached up with a long pole which had a hook on the end of it, and, getting the hook through the back of his blue coat, began lowering him. Somebody called out: "Pass him through the window for his wife's Christmas present," and this we did, Mr. Snow making appropriate remarks as we laid Randolph P. Ruggle down in front of the lady.

A very remarkable man was Randolph P. Ruggle—very remarkable—and I shall never see a Christmas tree or a blue jay either, for that matter, without thinking of him.—Harper's Magazine.

MOTHERS.—Be sure to use "Mrs. Winslow's Soothing Syrup" for your children while Teething. It is the Best.—*Adv.*

THERE IS A CLASS OF PEOPLE

Who are injured by the use of coffee. Recently there has been placed in all the grocery stores a new preparation called GRAIN-O, made of pure grains, that takes the place of coffee. The most delicate stomach receives it without distress, and but few can tell it from coffee. It does not cost over ¼ as much. Children may drink it with great benefit. 15c. and 25c. per package. Try it. Ask for GRAIN-O

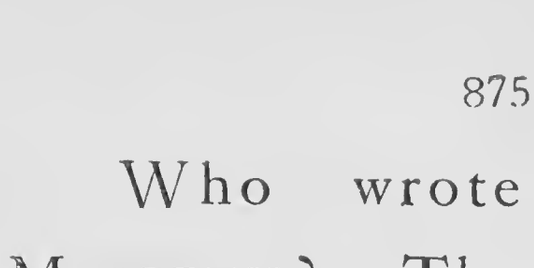


Who wrote MACBETH? The wise woman who got into some lamp trouble or other.

My name on every one.

If you'll send your address, I'll send you the Index to Lamps and their Chimneys, to tell you what number to get for your lamp.

MACBETH, Pittsburgh.



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Orders will be filled by return mail for Christmas and New Year's presents.

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Men's Size Watches.
"P. S. BARTLETT" OR "G. M. WHEELER."

We give you your choice. They are full 17-jeweled watches. They are adjusted by experts and are first-class in every respect. They come cased at following prices, including free safe delivery:

In solid ore-silver case, open face	$12.25
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In sterling silver case, 3 oz. case, open face or hunting	16.15
In 25-year gold filled case, open face	18.56
In 25-year gold filled case, hunting	21.37

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14-K. GOLD-FILLED CASE.
FULL 15-JEWELED WORKS.

No. 7 is a lady's full 15-jeweled hunting case watch. The works Waltham or Elgin. The case is 14-Kt. gold filled, guaranteed to 25 years. Price delivered in good running order, $14.50.

All watches are fully guaranteed. Money returned if not satisfied. The watches are sold only to subscribers. You can get any watch free by getting up a club of subscriptions.

Address
THE RURAL NEW-YORER, NEW YORK.

MARKETS

THE WEEK'S QUOTATIONS.

WHOLESALE PRICES.

NEW YORK, DECEMBER 21, 1901.

GRAIN.

Wheat, No. 1, N'th'n, Duluth Spot	—	@	85¼
No. 1, hard, Duluth, to arrive.	—	@	92½
No. 2, red, new	—	@	86
Corn, No. 2, mixed, elevator	—	@	70¾
Oats, No. 2, mixed	—	@	51
Rye, No. 2, W'n, c. i. f., Buf	—	@	67
Barley, feeding	63	@	65
Malting	67	@	70
Buckwheat, per 100 pounds	—	@1	27

BEANS.

Marrow, 1901, choice, per bu	2 40	@	—
Poor to good	2 00	@2	35
Medium, 1901, choice	2 02½	@2	05
Pea, 1901, choice	1 95	@2	00
Medium and Pea, poor to good	1 75	@1	90
Red kidney, 1901, choice	—	@2	20
Poor to good	1 80	@2	10
White kidney, 1901, choice	2 40	@2	45

Quotations on white beans are now based on 60 lbs. per bushel in this market.

FEED.

Spring bran, coarse, spot	—	@25	00
Winter bran	—	@27	00
Red Dog	—	@27	00
No grade flour	—	26	50
Linseed meal, ton	—	30	50

HAY AND STRAW.

Hay, No. 1	85	@	90
No. 2	75	@	80
No. 3	65	@	67½
Clover	50	@	60
Clover, mixed	60	@	70
Straw, rye, long	70	@	85

MILK.

New York Exchange price 3½ cents per quart, in 26-cent freight zone.

BUTTER.

Creamery, extra, per lb	—	@	25
Firsts	22	@	24
Seconds	19	@	21
June, extras	—	@	21½
June, firsts	19½	@	21
June, seconds	18	@	19
State dairy, tubs, fresh, fancy	22	@	23
Tubs, firsts	19	@	21
Tubs, seconds	17	@	18
Tubs, thirds	15	@	16
W'n imitation creamery, fancy	18	@	18½
W'n factory, fresh, firsts	15	@	15½
Fresh, fair to good	14	@	14¾
June, fancy	15	@	15¼
June fair to choice	14	@	14¾
Rolls, fresh, choice	16	@	17
Fresh, common to prime	13	@	15

Exports since May 1, 1901, 7,537,556 pounds.

EGGS.

QUOTATIONS LOSS OFF.

State and Pa., average, prime, per doz.	—	@	32
W'n, fresh, gathered, choice, per doz.	—	@	31

QUOTATIONS AT MARK.

Nearby, State and Pa., fresh gathered, fancy, selected, per doz.	32	@	35
Average best lots	29	@	30
Fair to good	25	@	28
W'n fresh gathered graded	28½	@	29
Regular packings	23	@	28
Kentucky, fresh gathered	23	@	28
Tennessee, fresh gathered	23	@	28
W'n, fresh gathered, dirtles	17½	@	18
Refrigerator, fall packed	19	@	23
Refrigerator, early packed	16½	@	20
Refrigerator, dirties	15	@	16
Limed, Western	16	@	17½

COUNTRY-DRESSED MEATS.

Calves—Veal, prime, per lb	—	@	10
Fair to good, per lb	8½	@	9½
Common to medium per lb	5	@	7
Buttermilks, per lb	7	@	8
Grassers, per lb	5	@	5½
Pork — Jersey, dressed, light, per lb	7¾	@	8¼
Jersey, d's'd, medium, per lb	7¼	@	7½
Jersey d's'd, heavy, per lb	6	@	7
Roasting pigs, per lb	10	@	13

GAME.

Quail, prime, per doz	2 50	@2	75
Grouse, per pair	1 50	@2	00
Partridges, per pair	—	@1	50
Woodcock, per pair	1 00	@1	25
English snipe, per doz	—	@2	50
Wild Ducks—Canvas, per pair	2 50	@3	00
Mallard, per pair	75	@1	00
Teal, blue wing, per pair	60	@	75
Teal, green wing, per pair	40	@	50
Rabbits, per pair	15	@	20

LIVE POULTRY.

Spring chickens, per lb	—	@	9
Fowls, prime, per lb	—	@	10
Roosters, per lb	—	@	6
Turkeys, per lb	9	@	10
Ducks—Average W'n, per pair	65	@	75
Average S'n, per pair	50	@	60
Geese—Average W'n, per pair	1 00	@1	12
Average S'n, per pair	90	@1	00
Pigeons, mixed, per pair	—	@	20

DRESSED POULTRY.

Turkeys — Jersey & up-river fancy	—	@	14
Jersey & up-river, fair to g'd.	11	@	13
Maryland & Delaware, fancy.	13	@	14
Maryland & Del., fair to good	11	@	12
State & Pennsylvania, fancy	12	@	13
Ohio & Mich., scalded, fancy.	—	@	12
Other W'n, scalded, fancy	11½	@	12
Other W'n, dry-picked, fancy	—	@	11½
Chickens—Phila., selected, large	15	@	16
Philadelphia, mixed sizes	12	@	12½
State & Pennsylvania, fancy	10½	@	11
State & Pa., fair to good	9	@	9½
Ohio & Mich., scalded, fancy	10	@	11
Ohio & Mich., scalded, fair to good	8½	@	9½
Fowls—Ohio & Mich., fancy, scalded	9	@	9½
Other W'n, dry-picked, choice.	—	@	9
Other W'n, scalded, choice	8	@	9
W'n, poor to fair	7	@	8
Ducks—Maryland & Del., fancy.	12	@	13
Maryland & Del., fair to good.	10	@	11
Ohio & Michigan, fancy	12	@	12½
Poor to fair	7	@	10
Geese—Maryland & Del., prime	11	@	12
Western, prime	9	@	10
Poor	6	@	8
Squabs — Prime, large, white, per doz.	—	@2	50
Mixed, per doz	1 75	@2	00
Dark, per doz	1 25	@1	50

HOTHOUSE PRODUCTS.

Lettuce, per case	1 00	@1	50
Cucumbers—No. 1, per doz	—	@1	00
No. 2, per box	2 00	@4	00
Mushrooms — Good to fancy, per lb	30	@	40
Poor to fair, per lb	15	@	25
Tomatoes, per lb	20	@	25

DRIED FRUITS.

Apples—Evaporated, 1901, fancy, per lb.	10	@	11
Evaporated, 1901, prime	8¾	@	9
Evaporated, 1901, poor to good	6½	@	8½
Evaporated, 1900, fancy, per lb	10	@	10½
Evap., 1900, com. to prime	6	@	8½
Sun-dried, 1901, Va., sliced	4¾	@	6
Sun-dried, 1901, Ohio & Mich., quarters	5	@	6
Sun-dried, 1901, Tenn., coarse cut	3¾	@	4½
Chops, 1901, per 100 lbs	1 80	@2	45
Cores and skins, 1901, per 100	1 60	@2	12
Raspberries—Evap., 1901, per lb.	23	@	23½
Sun-dried, 1901, per lb	20	@	21
Blackberries, 1901, per lb	7	@	7½
Huckleberries, 1901, per lb	17	@	18
Cherries—Nearby, 1901, per lb	15	@	15½
Southern, 1901	13½	@	14

FRESH FRUITS.

Apples—York Imperial, per bbl.	3 50	@4	50
Spitzenburg, prime to fancy	4 50	@7	00
N. Spy, good to fancy, p. bbl.	3 50	@4	50
Snow, good to choice, per bbl.	3 50	@5	00
King, per bbl.	4 00	@5	50
Ben Davis, per bbl.	3 50	@4	50
Greening, per bbl.	4 00	@5	50
Baldwin, prime, per bbl.	4 00	@4	75
Red winter sorts, fair to good.	3 00	@3	50
Inferior, per bbl.	1 75	@2	50
Pears—Seckel, nearby, per bu. box	1 00	@1	50
Beurre Bosc, per bbl.	3 00	@4	00
Beurre Clairgeau, per bbl.	2 50	@3	50
Keiffer, per bbl.	2 50	@3	00
Common, per bbl.	1 50	@2	00
Grapes—Catawba, case 10 3-lb. baskets	1 00	@1	15
Catawba, per small basket	9	@	12
Concord, case 10 3-lb. baskets.	1 00	@1	15
Concord, small basket	10	@	13
Cranberries — Cape Cod, fancy, large, late varieties, per bbl.	—	@7	50
Cape Cod, large, late, good to choice	6 00	@7	00
Cape Cod, early Black, fancy, dark, per bbl.	6 50	@7	00
Jersey, per bbl.	6 00	@6	25
Jersey, per crate	1 60	@2	00

VEGETABLES.

Potatoes—Long Island, per bbl.	2 50	@2	62
Maine, prime, per bag	2 30	@2	40
Maine, per 180 lbs.	2 62	@2	75
State, prime, per 180 lbs.	2 25	@2	50
State, fair to prime, per sack.	2 00	@2	25
German, good to prime, per 112-lb. bag	1 40	@1	50
Belgian, per 168-lb. bag	2 00	@2	10
Scotch, prime, per 168-lb. bag.	2 00	@2	25
Irish & English, per 168-lb. bag	2 00	@2	15
Foreign, inferior, per bag	1 50	@1	75
Sweet Potatoes—South Jersey, per bbl.	2 25	@3	00
Beets—Jersey and L. I., per bbl.	—	@1	00
N. O., per 100 bunches	2 50	@5	00
Brussels sprouts, per quart	4	@	8
Chicory, N. O., per bbl.	3 00	@4	00
Cauliflowers—Fair to fancy, per bbl.	2 00	@6	00
Culls, per bbl.	1 00	@1	50
California, per case	2 25	@2	50
Celery—State and W'n, per doz. roots	12	@	40
Jersey & L. I., per doz. flat bunches	—	@	75
Carrots—Long Island, per bbl.	—	@1	00
Cabbages—L. I. Flat Dutch, per 100	3 00	@4	00
State, per ton	10 00	@12	00
Eggplants — Fla., per ½-bbl. crate	3 00	@5	00
Escarol—N. O., per bbl.	3 50	@5	00
Kohlrabi — N. O., per 100 bunches	3 00	@5	00
Kale—Norfolk, per bbl.	40	@	65
Lettuce—N. O., per bbl.	3 00	@4	00
Florida, per basket	1 00	@2	00
Onions—Orange Co., white, per bag	2 00	@4	00
Orange Co. red, per bag	3 00	@3	25
Orange Co., yellow, per bag	2 75	@3	25
Orange Co., poor to fair, per bag	1 50	@2	50
Connecticut, white, per bbl.	3 50	@5	50
Connecticut, yellow, per bbl.	3 00	@3	50
Connecticut, red, per bbl.	3 25	@3	75
State & W'n, yellow, per bbl.	3 00	@3	40
State & W'n, red, per bbl.	3 25	@3	75
New Orleans shallots, per 100 bunches	2 50	@3	00
Romaine—N. O., per bbl.	3 00	@4	00
Spinach—Baltimore, per bbl.	1 00	@1	75
Norfolk, per bbl.	—	@3	00
Squash, Hubbard, per bbl.	—	@2	00
Marrow, per bbl.	1 75	@2	00
Pumpkins, per bbl.	1 25	@1	50
String Beans—Fla., green, per crate or bush. basket	3 00	@4	00
Wax, per crate or basket	2 50	@3	50
Turnips—Jersey, Russia, p. box.	—	@	75
Canada, Russia, per bbl.	75	@	85
Tomatoes—Florida, per carrier.	2 50	@3	50

FURS.

Black bear	15 00	@28	00
Cubs and yearlings	6 00	@13	00
Beaver, large	7 00	@ 8	00
Medium	5 00	@ 6	00
Small	3 00	@ 4	00
Red fox	2 00	@ 4	00
Gray fox	75	@	85
Wolf, prairie	1 25	@ 1	50
Marten, dark	4 00	@12	00
Pale	2 50	@ 4	00
Skunk, black	1 20	@ 1	40
Half-striped	70	@	80
Long-striped	75	@	85
White	15	@	20
Raccoon	90	@ 1	25
Opossum, large	40	@	60
Medium	25	@	30
Small	12	@	15
Mink	2 50	@ 3	00
Muskrat, winter	12	@	13
Fall	9	@	10
Kits	2	@	3

Can You

do a little pleasant and profitable work for us in your own town? No experience necessary. We will explain just what you have to do. The work will be light, and we will arrange for the time you shall be able to give to it. We can give you work for all your time or just for your spare time. Write for full particulars. THE RURAL NEW-YORKER, NEW YORK.

BUSINESS BITS.

WE are in receipt of the Sure Hatch Incubator Company's fifth annual catalogue. It is a book of 166 pages, over 200 illustrations, and contains a vast amount of poultry information, plans for poultry houses, yards, etc., chapters on practical poultry-raising, and how to make money on a small investment, etc.

THIS is the year for farmers to grind corn and cobs for feeding purposes. It has been quite clearly demonstrated at a number of the experiment stations that 70 pounds of corn and cob meal has, when fed to hogs, about the same feeding value as 70 pounds of pure cornmeal. Experiments are not so conclusive when fed to cattle, but many practical farmers have found in the past, even when corn was cheap, that cattle fed on corn and cob meal, with little or no other roughness, made remarkable gains. Whether it pays to grind corn and cob meal even under this showing depends largely on the price of corn. This year corn is high, and farmers cannot afford to pay toll. Get a good grinder and do your neighbors' grinding also.

AN ice crop has become just about as much of a necessity to the modern farmer and dairyman as his hay or grain crops. But how many invest in suitable ice tools? When the ice is just right it should be harvested in a hurry, and then is the advantage of having at hand a first-class plow, such as the Ice King, made by Wm. F. Wood & Co., Arlington, Mass. Catalogue, "How to Harvest Ice," free.

B. H. GREIDER, the well-known poultryman, of Florin, Pa., is breeding 50 varieties of poultry to a very high standard of excellence. Mr. Greider's catalogue for the year 1902 is now ready for distribution. It is illustrated in colors and describes all of his varieties of prize-winning poultry, and gives a great deal of interesting and valuable information on poultry topics. It is worth a great deal more than the 10 cents in silver or stamps asked for it. Address B. H. Greider, Florin, Pa.

IN regard to the peach orchard of the Vermont man, page 660, the one which does not bear, let me suggest that he treats it too well. Let him try it in sod for awhile. At our town fair, this Fall, fine peaches were exhibited, grown on one of the hills here. We are much farther north than he, and I think the tree or trees are not cultivated. G. S PAINE.

Maine.

Never let a little child's cold "run on." There is sure danger and perhaps death at the end of it. The infantile organs are always helped by Dr. D. Jayne's Expectorant, and the little ones like it.—*Adv.*

WE HAVE FOR SALE

a large stock of new Clover Seed; also Dairy, Poultry and Kennel Feeds; Fertilizer Materials, etc.
CHAS. H. REEVE, 187 Washington St., New York.

Oldest Commission House in New York. Established 1838. Butter cheese, eggs, pork, poultry, dressed calves, game, &c. E. B. WOODWARD, 302 Greenwich Street, New York.

GEO. P. HAMMOND. EST. 1875. FRANK W. GODWIN.

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Commission Merchants and Dealers in all kinds of COUNTRY PRODUCE, Apples, Peaches, Berries. Butter, Eggs, Cheese, Poultry. Mnshrooms and Hothouse Products a Specialty. Consignments solicited. 34 & 36 Little 12th St., New York.

WANTED

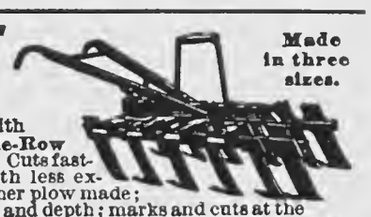
No. 2 and Clover Grades of Hay.

F. D. HEWITT,

120 Liberty Street, New York.

ICE PLOWS $12. Also Ice Tools. Write for discounts. H. PRAY, No. Clove, N.Y

ICE CUTTING



Made in three sizes.

is quickly done with DORSCH Double-Row STEEL PLOW. Cuts faster, easier, and with less expense than any other plow made; cuts any size cake and depth; marks and cuts at the same time. Pays for itself in less than two days. For Eastern States we ship from Albany, N.Y. Get catalogue and prices. John Dorsch & Sons, 226 Wells St. Milwaukee, Wis.

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Oldest and Best Grinding Mill Made

Will crush and grind corn and cob and all kinds of grain, mixed or separate. Grinds faster, finer and with less power than other mills. Are built strong, well made of good material, and will last a lifetime. Small size adapted for wind and tread power. Made in four sizes for 1, 4, 8 and 10 H. P. Free Catalogue.
THOS. ROBERTS, Box 92, Springfield, O.

CUT YOUR ICE

WITH A FIRST-CLASS

Ice Plow

THE "ICE KING"

Manufactured especially for small ice harvesters. Cuts as much ice in a day as 50 men can cut with saws. Send for 52 page catalogue, edition 24, "How to Harvest Ice" mailed on request. Stocks in all principal Western cities. WM. T. WOOD & CO., ARLINGTON, MASS., Ice Tool Makers. *Established 1834.*

WHEN you write advertisers mention THE R. N.-Y. and you will get a quick reply and "a square deal." See our guarantee 8th page.

Wants, For Sale or Exchange

WANTED—Farmers and Dairymen, $30 to $50, with house or board. Only competent men with good references. The Rural Agency, Durham, N. H.

WANTED—A working farmer, married, who has had experience with fruit trees. J. A. NUGENT, New Brunswick, N. J., F. R. D. No. 6

WANTED—A married man desires position as overseer of farm, dairy or otherwise first-class butter-maker, and understands general farm machinery. Address FARMER, Box 14, Hydetown, Pa.

WANTED.—Reliable man to help handle small dairy farm. Must be good milker, and able to do general farm work. Good home, good wages and steady job for right party. D. A. KNEELAND, Mountain Home Farm, Waitsfield, Vt.

Southern Illinois Fruit Belt, 450 acres rich uncleared prairie land, in 40 to 80 acre tracts, at $7 to $15 per acre.
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VIRGINIA FARMS FOR SALE

Good land. Mild healthy climate, Schools convenient. Low prices, easy terms. Free catalogue. R. B. CHAFFIN & CO. (Inc.), Richmond, Va.

BIG FARM BARGAIN—485 ACRES; adjoins corporate limit of county town [illegible] produces 50 bus. corn, 30 bus. wheat per acre. P[illegible] R[illegible]ding within 50 yds. of barn. Tel. comm[illegible]tion a[illegible] and long distance. 50 a. young straw[illegible]es—fe[illegible] and mulched. 26 a. English clover—fine stand. S[illegible]r stock, grain and grass farm. *Quick Sale Price $13,000.* Easily worth $20,000. $5,000 cash, balance easy terms, if desired. Immediate possession. Write to-day. Address Lock Box 138, Salisbury, Md.

GLENN RANCH,

Glenn County, California,

FOR SALE IN SUBDIVISIONS.

This famous and well-known farm, the home of the late Dr. Glenn, "the wheat king," has been surveyed and subdivided. It is offered for sale in any sized government subdivision at remarkably low prices, and in no case, it is believed, exceeding what it is assessed for County and State taxation purposes.

This great ranch of 40,000 acres runs up and down the western bank of the Sacramento River for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

F. C. LUSK,

Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, of Chico, Butte County, California.

For Sale Cheap.

One No. 13 Ohio Shredder.
A "New Era" Gasoline Engine, 14 Horse Power.
1,000 feet 2½-inch Iron Pipe.
One Rotary Force Pump; capacity 300 gals. per min.
Check Valves, Shut-Offs, etc.
WALTER F. TABER, Lakeview Farm, Poughkeepsie, N. Y.

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Free Homesteads, Free Timber Lands, Free Grazing Lands, Free Mineral Lands, Free Stone & Coal Lands — Located by Counties, and giving fullest information about free government lands and how to secure them.

100 pages packed full of information to Land Seekers.
A BILLION ACRES OPEN TO FREE ENTRY.

VACANT GOVERNMENT LANDS is the title of a new book just published giving the number of acres and the kind of land described that is open to settlement in each county of every public land State and Territory. The location of each land office to which applications are to be made, with blank form of application. It tells about irrigation and irrigated lands. About oil and saline lands. How to acquire townsites and millsites. With many diagrams and tables revised up to date. This book will be mailed to any address with six months' subscription to THE FARMER, St. Paul, Minn. The oldest and leading farm paper in the State, all for 25 cents.
Address, WEBB PUBLISHING CO., Publishers, 53 E. 4th, St., St. Paul, Minn.

As We Go to Press.

"A MERRY CHRISTMAS."

Once more the cycle of time has brought us to the greatest festive season in the calendar of the year. It is a time when every Christian heart is filled with new hope for himself and an ardent inspiration of charity and good wishes towards his fellow men. At the Yuletide above all other times we feel a spirit of benevolence. No matter how neglectful we may be of our kin or neighbor at other seasons of the year, at Christmas every one wishes to do something to make another human being happy. This yearning of the heart need not go unsatisfied because of want of means to express one's full feelings, since it is in the sentiment rather than in the means used to express it that we find the real source of happiness. A kind word, a letter to a distant friend, or any little token of remembrance may be more appreciated by some heart yearning for sympathy than the most costly gift to those who are already satiated with material comforts. Perhaps there is some one estranged from the family circle waiting in the shadow of his own mistaken pride for the kindly word to restore him or her to the full light and warmth of your affection and love. No one should hesitate to make the advance lest he should meet with an unkind repulse or for a just sense of wrong to himself. The effort will at least serve to bring under control and subjection the less desirable element of our own nature, and such a victory over self affords far greater satisfaction than can result from any other triumph.

Then, too, kindly acts, like all other human efforts, become easier of performance as we repeat them. As we feed the hungry, clothe the naked or relieve any distress we come closer to the objects of our charity or benevolence and feel a kindlier sympathy for them. So, too, in our daily service, whether performed in line of duty for a little child or for those by nature depending on us for support, or in the intercourse of business for mutual good, the effort to be of service to another—even for a reward—when pursued with an honest purpose inspires a feeling of interest almost akin to affection for those whom we try to serve, even though their faces and voices may not be familiar to us.

It is something of this feeling of interest and sympathy that we develop during the year in our constant efforts to be of service to our patrons and subscribers, and it is the reciprocation of this sympathy and interest we read with pleasure and satisfaction as our daily mails from you bring us encouragement and cheer in both word and kindly offices. In kindly appreciation of this mutual interest, with this the last message of the old year, we send our greeting to all members of THE R. N.-Y. family. We hope that cheer and happiness may abide in every home at this festive time, and that peace and prosperity may attend you from the beginning to the end of the new year.

BOOK BULLETIN

FOR SALE BY THE RURAL NEW-YORKER.

PRIZE GARDENING.—This compact volume of 322 pages gives a record of the experience of a number of practical gardeners who participated in a prize garden contest. The knowledge thus summarized extends over a wide range of country, and the contestants include all classes, from small amateurs to professional market gardeners. Gardening by men, women, boys and girls; farm gardens, town and city gardens—all are here described. The result is a mass of personal experience that could be obtained in no other way. There are numerous illustrations. Price, postpaid, $1.

THE GARDEN OF A COMMUTER'S WIFE.—This bright and entertaining book tells of a woman's country life and gardening experiences. It is very pleasant reading, and while it will appeal especially to those whose tastes are for rural pleasures, it will also point the way towards them to others who do not fully realize what a privilege it is to live away from bricks and mortar. There is a wholesome human interest running through the book. It is charmingly bound and illustrated, and would form a very desirable gift book for any flower-loving woman. Published by Macmillan & Co.; will be sent postpaid from this office. Price, $1.50.

THE MOHAWK VALLEY; ITS LEGENDS AND ITS HISTORY.—This book deals with the period between 1609 and 1780. It tells of the French and Indian wars and the Revolutionary period; links legend with history, and gives a vivid picture of the stirring adventures of the pioneers. We read in it of the French Jesuits who penetrated the wilderness as missionaries—in many cases to die for their faith by cruel martyrdom; of the early French and English settlers, and of the gradual change from deep forests to fertile farms. This book will be of absorbing interest to all students of American history, and especially to those who have any association with the picturesque Mohawk Valley. It is a handsome volume, sumptuously illustrated with numerous beautiful photogravures. Published by G. P. Putnam's Sons. Price, $3.50; postage additional.

THE RURAL NEW YORKER,
409 Pearl St., New York.

MARKET NOTES

EGGS are up one to five cents, the latter figure being the rise on fancy fresh. Cold weather in the producing sections has discouraged the hens, and they are taking a longer vacation than usual. The continued scarcity of fresh receipts has caused a decided firmness in the better grades of refrigerators.

MILK SHORTAGE.—The storm of December 14-15 did so much damage to the railroads supplying New York that milk trains were all delayed. Delaware and Ulster counties, from which large quantities come, were entirely cut off. Dealers say that Monday was the worst day in the milk business since the blizzard of 1888. Prices doubled, and in some cases went as high as $5 per 40-quart can. Middlemen, under contract to furnish hotels and clubs, telegraphed for all that they could get from nearby New Jersey dairies, and bought here and there of small dealers, who could neglect customers for one day without serious damage to their own trade.

APPLE WOOD.—We are asked whether there is any extensive demand for this wood in New York. Some time ago we made a quite thorough canvass of the dealers who might be expected to handle it, and were unable to find any who appeared to be much interested. Formerly large quantities of apple wood were used in the manufacture of pipes in imitation of briar, but a kind of gum wood, which can be worked to better advantage, has largely taken its place. There is a limited use for apple wood in the manufacture of tool handles, but most of these factories are in smaller towns, and are able to get all that they need from neighboring farmers at little above cord-wood rates.

LABEL AND QUALITY.—On page 749 "Niagara White Grapes," packed by No. 723, were mentioned as sought by a buyer because he had had the same man's pack before, and found them first-class. That label, with the quality behind it, was an excellent advertisement. The number gave the package a personality, showing the buyer that the packing had been done by somebody who was willing to stake his reputation on the contents of the basket. As a contrast to this, showing the worthlessness of a label unless it stands for merit and places the responsibility for packing upon some one in particular, the following is a fair illustration. I bought a small basket of Catawbas bearing the label of the Lake Keuka Grape Marketing Co., Lyon brand. The statement was made on the cover that every bunch was carefully selected. That might have been true, but evidently they had selected the smallest and poorest for that particular basket. The bunches on top were of fair size, but the others were so small and inferior that the packing could not have been an accident. Whoever fixed up those grapes meant to deceive the buyer. Of course, it does not necessarily follow that the company whose name was on the package was responsible for the poor quality of the fruit, for the label might have been stolen, and there was no special packer's number to lay the blame to. It is hardly to be supposed that a company would go to the expense of getting up a mark to advertise their goods, and then counteract all the good effect of the advertising by a wilful deception. This system of branding is certainly defective. A label without any personal packer's mark or number is easily stolen and used by others as a cloak for poor quality.

GYMNASTICS BY MAIL.—A reader asks:

"Are the offers of physical instructors so persistently advertised worth investing in or not? They charge from $10 to $15 for their system, to be paid in advance, of course, giving their assurance only as guaranty of satisfaction."

Probably the claims made by many of these people are rather extravagant, yet, as a rule, their methods of exercising are reasonable, and a healthy person who follows them out carefully will be surprised at the bodily development gained. The regular employment of the majority of people does not call for the use of nearly all the muscles, and hence any system that will exercise these unused muscles properly is a good thing. The blacksmith's arm is usually out of proportion to the rest of his body. About the only men whose bodies are uniformly developed are the professional athletes, and this uncommon bodily strength is not infrequently gained at the expense of mental discipline. While the suggestions of professionals are of value on account of the attention they have given to these matters, we should not care to pay any large sum for this instruction by mail, as a person by carefully studying himself and using common sense and persistence can get up a set of exercises that will to a certain extent answer the same purpose. There is great advantage in a regular system, for one is more likely to carry it out faithfully than if he goes at it in a haphazard way. Of course, those who have any weakness should be careful not to overdo in exercising, as this will result in more harm than good. Few people have the time for the training necessary to become athletes, but an intelligent use of 10 minutes a day in filling the lungs with air and stirring up the sleepy muscles will straighten up the hollow chested and give new ideas of life to many who continually feel worn out. "How to Get Strong," by Blaikie, is an instructive manual on this subject.

W. W. H.

NEW YORK STATE DAIRYMEN MEET.

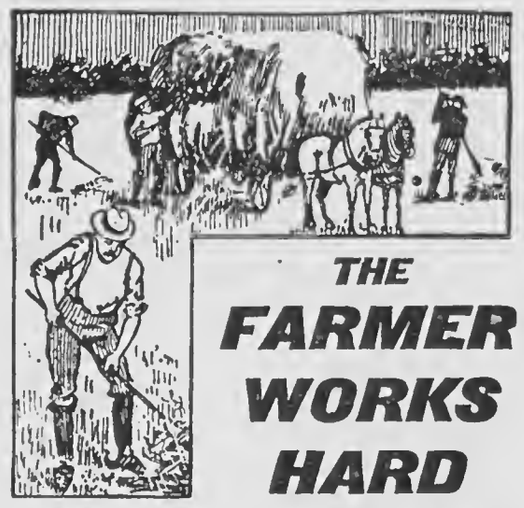
A Good Meeting at Olean.

PART II.

In speaking of oleomargarine legislation, Hon. Wm. Grout said: "In 1889 there were 104,000,000 pounds of this spurious stuff made and eaten as butter. Only a limited quantity of it found its way through the retail dealers, and the greater part of it was consumed at hotels, restaurants, large boarding houses, etc., these being furnished by the manufacturers direct. It sold at the price of butter. Whenever you took a meal away from your own house—not at the home of a neighboring farmer, for farmers don't have to use oleomargarine, but at a hotel, eating house, in city or village, it was one chance in nine that you were eating oleomargarine in the place of butter. What is the secret of this great fraud's success? There is money in it. The 104,000,000 pounds would give a clear profit to the makers of $15,000,000. The State laws have been as well enforced as they can with the means at command. The only remedy for this fraudulent sale is taxation by the National Government. The substance of the whole business is, here is a great fraud; shall it be stopped? That is the question in which the whole body of American people are concerned. Think what a reproach it is to us that it should be so. It puts under suspicion every pound of honest butter sent abroad. We can put this tax upon it. Let us do it."

Major H. A. Alvord spoke on some features of dairying in Europe. He said that in the islands of Jersey and Guernsey two grades of cattle have been raised and kept pure for centuries. Pasturage is high, and the cattle are tethered and watched by women and children. In Normandy, on the coast of France, we find larger, coarse-boned cattle. The farmers have no means of cooling milk, and know nothing of what they lose in butter fat. The butter is sold fresh, salt being used only as a cover for poor quality. The milk supply of Paris is shipped in on open flat cars in all kinds of weather, and is not expected to remain sweet for any great length of time. In Ireland there are many coöperative butter factories. In England and Scotland the production of milk comes first, and the demand for this is not fully met. The two types of English cheese are Cheddar and Stilton. "I found nothing in the length and breadth of Europe in which American dairymen do not excel, and we need not be ashamed to hold up our products in competition with those who have been engaged in the dairy industry for centuries."

Assistant Commissioner Flanders spoke on oleomargarine legislation, and the need of interstate laws to protect New York cheese makers. Mr. Grout made the statement that large quantities of oleo are annually sold in New York State, but Mr. Flanders showed how the State Department has been able to handle the fraud and corner it.

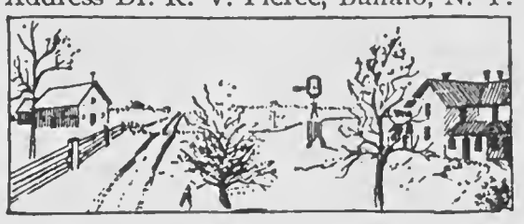


THE FARMER WORKS HARD

For a living. He has to. He must "make hay while the sun shines," no matter how he feels. The result is overwork. The stomach usually gives the first sign of strain. The organs of digestion and nutrition are deranged. Food does not nourish. Indigestion appears. In such a case Dr. Pierce's Golden Medical Discovery re-establishes the health by a complete cure of the diseased organs of digestion and nutrition. It cleanses the stomach, purifies the blood and removes the causes of disease. It is a temperance medicine, and contains no whisky nor alcohol.

"I was troubled with indigestion for about two years," writes Wm. Bowker, Esq., of Juliaette, Latah Co., Idaho. "I tried different doctors and remedies but to no avail, *until I wrote to Dr. Pierce* and he told me what to do. I suffered with a pain in my stomach and left side and thought it would kill me. I am glad to write and let you know that I am all right. I can do my work now without pain and I don't have that tired feeling that I used to have. Five bottles of Dr. Pierce's Golden Medical Discovery and two vials of his 'Pleasant Pellets' cured me."

Sick people can consult Dr. Pierce by letter free. All correspondence private. Address Dr. R. V. Pierce, Buffalo, N. Y.



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The Dr. Von Post great Holland Remedy, "QUICKRELIEF," in capsule form, QUICKLY CURES RHEUMATISM IN ITS WORST FORMS. No free doctors. No free samples. No free humbug, but an HONEST and special QUICK RELIEVING remedy. Don't wait and suffer. Price, by mail, $1 per hundred, or send 25 cents in silver and get 25 capsules for trial. Your "quarter" back if not satisfactory. JOHN H. POST, Deep River, Conn.

BARNS—Write for free book how to build. FRANK BRYAN, Mechanicsburg, O.

PORK IS HIGH, sell your grades and buy
Willswood Farm Berkshires
Our PRICES SAME as when pork is LOW. Boars and Sows farrowed in Augnst.
WILLS A. SEWARD, Budd's Lake, N. J.

ONE DOLLAR $
The Jersey Bulletin
The only strictly Jersey cattle and purely dairy publication.
Reduced to One Dollar a Year.
Sample free. Address
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All Hands Need It

when all known resources fail, no matter how deep-seated, complex, chronic or acute the case, its penetrating, absorptive, antiseptic power is unfailing.

Veterinary Pixine

brings quick relief. Scratches, Grease Heel, Mud Fever (that defied treatment for years); Abscesses, Stinging Sores, Hoof Rot, Cow Pox, Mange, all Inflammatory Swellings, Old Sores and Skin Disease

Absolutely Cured.

Heals without Scab. Stimulates New Growth of Hair—natural color. It penetrates, soothes and heals. Money back if it fails.

2 oz., 25c.; 8 oz., 50c.; 5-lb. pkge., $4.
At all druggists and dealers or sent prepaid.
TROY CHEMICAL CO., TROY, N. Y.

Live Stock and Dairy

AILING ANIMALS.

Gangrene of Tail in Cow.

My cow has gangrene of tail. How may I cure it? Will it affect the healthfulness of the milk for family use? Will her calf, dropped in May next, inherit the disease? If the cow cannot be cured, is it safe to butcher the cow or her calf? E. W. K.

New York.

If it be near the end of the tail amputate it one joint above. If near the roots a veterinary must treat it. If only a joint at the extremity is involved the cow's health will not be seriously affected, and her milk will be wholesome for human food. The calf will not inherit it. If she cannot be cured her meat is not wholesome food, but her calf would be sound at birth as far as the mother's disease is concerned.

Horse Out of Condition.

I have a horse about 13 years old, usually spirited and a willing traveler, scarcely ever needing spur or whip. For the past three weeks or so, he has been sluggish. Will start off briskly, but after going a short distance, frequently stops suddenly, as if out of wind. The horse was never known to balk in the eight years I have owned him. He will spurt up awhile from touch of whip. He shows this disposition more in mornings than at other times. In afternoons he appears to have more life and go about him. Can you tell me what the trouble is, and a remedy? Manure and urine seem to be normal. Feed—corn on cob and blade fodder. Eats heartily. J. F. C.

Charlotte Hall, Md.

Your horse may have no disease at all. If any it is a heart trouble of some nature which would require a personal examination to determine. My opinion, however, is that your feeding exclusively upon ear corn and fodder is the sole cause of his lifeless condition. Corn can fatten when digested, but a 13-year-old horse does not often masticate it properly, consequently the corn is not well digested, but even if it was it does not contain protein enough to furnish nerve and muscle energy. Your blade fodder no animal could work upon, and hardly live upon. An animal might eat of it to near the point of bursting its stomach, and yet not be fed. Get some good, fine, well-cured mixed hay and feed; procure some oats and mix two-thirds oats, one-third corn. Have them ground and feed, and, I think, you will have a horse of more life.

FEEDING BEEF CATTLE AND HOGS.

I wish to feed some two-year-old cattle for the Spring market. Would I better get my corn shredded at three cents a bushel, and mix with oats and get it chopped at six cents a bag for chopping, or would I better feed it just as it is and let shotes follow the cattle? My corn was planted with a drill four feet apart, and cut with a harvester, and I have it all in my barn. Would you advise keeping my cattle in the basement, or let them run out in a large roomy shed during the day? I have an abundance of water in the basement; also in the shed. I have mixed hay, wheat and oat straw for roughage. Would I better sell my wheat at 70 cents a bushel and buy shorts at $18 a ton for pig feeding, or grind my wheat at six cents a bag for grinding? What way would you advise feeding shorts to pigs, soak it from one feed to another, or scald it? U. G. B.

Ribble, Mich.

With the present high price of all feeding stuffs, the greatest economy should be followed in their use. Consequently I should rather pay six cents a two-bushel sack and feed ground feed, than feed whole grain. To be sure if hogs followed the steers, the loss of grain would be comparatively small, unless fed out of doors and snow covering the manure more or less. In feeding trials in Kansas, steers fed ear corn in one experiment made slightly better gains than those fed cornmeal, but it required six per cent more grain to do it. In a second trial, a saving of 35 per cent was made by grinding. This, however, was an excessive amount. Where shotes followed steers fed ear corn they obtained more than half of their feed from the droppings. As a general thing, however, it is my belief that well-ground feed gives greater returns per pound fed than does the coarse or complete grain or seed. It is simply a question then as to cost of grinding. At this time I believe it will pay to grind at the price given by U. G. B. If one can shred his stover and get it under cover in dry condition, he will not be likely ever to want to feed the entire stalk again. The shredded material is eaten more economically, keeps better through the Winter than shocks out of doors, handles better in the manger, feed lot or feed trough, and what may be left makes good bedding, and is readily converted into manure that can be handled easily. I would by all means turn the cattle into the open air and sunshine every day if possible, or let them run to a roomy shed for shelter. It is more healthy than the basement barn.

You certainly will do better to sell your wheat at 70 cents a bushel and buy shorts, rather than feed wheat. You can get more nutriment from a ton of shorts than from the wheat, and you will save money by the operation in addition. In feeding experiments at the Indiana Station hogs were fed cornmeal and shorts, dry, and also mixed with water in varying proportions. The pigs given the dry feed did slightly the best of the four lots fed. If one finds it somewhat more convenient to feed a slop, then it is advisable to use about twice as much lukewarm water in Winter as the grain amounts to, mixing the water with grain at the time of feeding. It is not necessary either to soak or scald.

C. S. PLUMB.

THE MILK SITUATION.

The milk business is not being carried on very extensively. Milk is bought at the shipping station by the Starlight Dairy Co., for which they pay $1.27 per can of 40 quarts. Feed is very high; meal, $1.50 per 100; middlings, $1.50, and other feeds in proportion. The hay crop was an average one. The cold weather which we have just been having has dried off the cows amazingly. Farmers had to commence feeding about one month earlier this year, which will make the feeding season a long one, and will undoubtedly make a scarcity of hay. The F. S. M. P. A. is not being conducted in this section. V. T. W.

Starlight, Pa.

Supplies of milk at shipping station here are running low. The cold wave and snowstorm that struck us a week or more since made it necessary for dairymen to yard and stable the stock and supply them wholly with dry feed. The change of feed and temperature has nearly cut the supply of milk in half, so that the shipping station and milk dealers in Towanda found themselves short, and have been out canvassing among butter-making farmers for milk to supply their regular customers. Our shipping station here is owned by Piollets, and leased by parties in Scran[illegible] pay the patrons the New York Exc[illegible] price, less 26 cents per can the year through, payment being made on the 15th of each month for all milk delivered in the month previous. At present there are 20 patrons hauling and about 13 40-quart cans received at station, leaving the shipper from 15 to 20 cans short on supply. The milk usually goes to Scranton and Wilkesbarre, but this Fall and Winter it goes to New York, a portion in cans and remainder in bottles. Cows are going into Winter quarters in fair condition, but the yield of milk is much less than it was last year at this time. Feed of all kinds is high, and farmers are not feeding to make milk, as they can see no money in it even at present prices. The calves are nearly all deaconed or vealed, mostly the latter, for which there is a good demand at fair prices. Farmers here are coming to the conclusion that making milk at middlemen's prices is not a very paying business, and are slowly reducing stock and giving more attention to other lines of farming that they hope will pay better. Our local F. S. M. P. A. is still alive, but not very active. Many of our original membership have dropped out, or failed to pay dues, leaving a few of the faithful who, though unable to accomplish much, are still pleased and rejoiced at the successful coöperative movement in other parts, believing that the time will yet come when the milk producers will have a word to say about the price of their valuable and indispensable product. E. G. O.

Wysox, Pa.

THE past year has been such a busy one that I raised two pigs instead of caring for chickens, and when my now big porkers are sold think for the time and feed spent upon them they will pay better than the hens would have done. MRS. G. L. ROSS.

Wisconsin.

My herd of 40 purebred Holsteins is doing extremely well and is in nice, thrifty condition. I have a herd of about 80 hogs, the major portion of which are purebred Berkshires. My hogs are also doing well. Pork is bringing a good price in this locality. There is a new creamery being erected at Delphi which we trust will help the farmers in this locality on the price of milk. Our milk at the present time goes to New York from the shipping station at Oran. W. W. CHENEY.

Manlius, N. Y.

INDIANA CATTLE DYING.—Many cattle are dying in certain localities in Indiana from the effects of eating cornstalks in the field. The theory was first advanced that the smut on the stalks occasioned the animal's death. This theory, however, has been proven erroneous. Dr. Klatz, Assistant State Veterinarian, proved this theory to be wrong by experimenting by feeding cows a bushel each of the smut gathered from the stalks each day. This he kept up for several weeks, and to his surprise the bovines thrived and gave more milk than usual. He is unable to explain the exact cause of the trouble, but advises all farmers to abstain from turning their cattle into stalk fields. R. D. F.

10 Weeks for 10 Cents. You have several neighbors and friends who need THE R. N.-Y. We are going to help you to see that they get acquainted with it. For our part we will send the paper to them now 10 weeks for 10 cents—a cent a week. We ask you to call their attention to this offer. Perhaps you can get up a club. The 23 largest clubs will each get a cash premium January 1. Will you be one of them?

Tuttle's Elixir

Cures all species of *lameness, curbs, splints, contracted cord, thrush, etc.* in horses. Equally good for internal use in *colic, distemper, founder, pneumonia, etc.* Satisfaction guaranteed or money refunded. *Used and endorsed by Adams Express Company.*

TUTTLE'S FAMILY ELIXIR Cures rheumatism, sprains, bruises, etc. Kills pain instantly. Our 100-page book, "Veterinary Experience" FREE.

Dr. S. A. TUTTLE. 30 Beverly St., Boston, Mass.

Beware of so-called Elixirs—none genuine but Tuttle's.

Avoid all blisters: they offer only temporary relief if any

Fully Guaranteed.

The Highest Endorsement is given by agricultural colleges and veterinary surgeons to the KEYSTONE **Dehorning Knife**

Cuts on four sides at once. Does not bruise nor crush. Send for circulars. Orders with cash shipped from Chicago, if desired.

H. T. PHILLIPS, Pomeroy, Pa. (Successor to A. C. BROSIUS.)

Easy Harness

All harness, old or new, is made pliable and easy—will look better and wear longer—by the use of

Eureka Harness Oil

The finest preservative for leather ever discovered. Saves many times its cost by improved appearances and in the cost of repairs. Sold everywhere in cans—all sizes.

Made by STANDARD OIL CO.

Breeders' Directory

You Can't Afford a Grade Bull when I will sell you a Registered Jersey Bull at a reasonable price. Ida's Stoke Pogis or Exile stock. R. F. SHANNON, 907 Liberty Street, Pittsburg, Pa.

"QUALITY" For Sale—Two A. J. C. C Bull Calves, full brothers in blood. No. 1, dropped August 30, 1901; dam's test 17 pounds 5 ounces from 265 pounds milk. 8,619 pounds milk last year. No. 2, dropped September 23, 1901; dam's test 17 pounds 12 ounces from 280 pounds 12 ounces milk; 7 244 pounds milk last year with second calf. Granddams and great granddams tested cows. They have the "Quality," and are for sale at reasonable prices. For particulars write E. W. MOSHER, Aurora, N. Y.

123 HOLSTEINS all ages, for Sale DELLHURST FARMS, Mentor, Ohio.

For Sale—PUREBRED HOLSTEIN-FRIESIANS from best families. A registered bull ready for service and bull calves. Also have purebred BERKSHIRE SWINE and SCOTCH COLLIE PUPS at low figures. Write for breeding and prices. W. W. CHENEY, Manlius, N. Y.

FOR SALE—Registered Hereford Bull, 1,500 pounds, three years old, first-prize winner, well marked and gentle. For price address E. H. PALMER, Mgr. "Fernside," So. Lee, Mass.

Purebred Ayrshire Bull Calf for sale, two months old, a descndent of the celebrated Duchess of Smithfield and of the champion World's Fair Bull, Rising Star. Wilbur F. Scott, Hawley, Mass

JACKS FOR SALE An extra fine lot of Jacks; all premium Jacks. All stock delivered free aboard cars at city of Indianapolis, Ind. Address Baker's Jack Farm, Lawrence, Ind

$23.75 for top Poland-China sow, bred for Spring. These are the mellow, easy keepers. $10 for Sept. pigs. K. HAWK, Mechanicsburg, Ohio

Reg. P. Chinas, Berkshires and C. Whites.

Choice Pigs, 8 weeks old, mated not akin. Bred Sows and Service Boars. POULTRY. Write for hard times prices and free circular. HAMILTON & CO., Rosenvick, Chester Co., Pa.

2000 FERRETS. First-class stock. Some Trained. New Price-list free. N. A. KNAPP, Rochester, Lorain Co., O.

ANGORA GOATS are handsome, hardy and profitable. Prize stock. Low prices. Large cir. E. W. Cole & Co., Kenton, O

ANCORA GOATS We are offering the following for sale, all of the Bailey Strain:

100 Angora Does
40 Yearling Wethers

Lot of Fine Bucks. Photographs and prices on application. Correspondence solicited. Address W. P. BROWNING, Westerly, R. I.

Light Brahmas and White Plymouth Rocks. Fine birds of each fit to show. Thirty years a shipper of Fine Poultry. J. A. Roberts, Malvern, Pa

For Sale—300 Choice Barred and Buff P. Rocks; also White and Silver Wyandottes. Price reasonable. DR. S. C. MOYER, Lansdale, Pa.

BARGAINS—200 cockerels at $1 each. Buff Wyan; Buff Rocks; S. C. White Leghorns; R. C. Brown Leghorns. Everyone a thoroughbred. A. B. KATKAMIER, Macedon, N. Y.

Cockerels—Choice W. Wyan., P. Rocks, Brahmas, Cochins, Leghorns, from prize-winning stock. 23 varieties of land and water fowls. Satisfaction guaranteed. Big catalogue free. Pine Tree Farm, Box T, Jamesburg, N. J.

Brooke Meadow Farm has for sale M. B. Turkeys, bred from 40-lb. Tom. Single birds, $3; pair, $5. JOHN H. JANNEY, Brighton, Md.

White Holland Turkeys large strain. Some extra-fine ones. Prices reasonable. MRS. L. J. WILLIAMS, Bushnell, Ash. Co., O

Collie Pups—Spayed Females. Circulars. SILAS DECKER, South Montrose, Pa.

LATEST IMPROVED DEHORNER (Newton's Patent.)

Every Dehorner Guaranteed

THOUSANDS IN USE.

Ask your hardware dealer for them or write

E. M. BROWN MFG. CO., • • DECATUR, ILL.

There are only two classes of Root Cutters. There is only one in the first class. That one is the

BANNER Root Cutter.

It's the one with the self-feeding, shaking grate—shakes out all dirt, gravel, etc. Saves the knives and makes clean, wholesome stock food. It literally makes ribbons of all roots and vegetables. Prevents all choking. It cuts fast and turns easy. Thousands in use and not a single complaint. We make the Banner in 7 sizes for hand and power. Our Illustrated Catalogue tells the whole story. Ask for it. It's Free.

O. E. THOMPSON & SONS, Ypsilanti, Mich.

Largest Root Cutter Makers in the World.

5 for $4 Send us a club of four subscriptions with $4 and we will advance your own subscription one year free. New yearly subscribers will now get the paper from the time subscription is received until January 1, 1903. Get up a club at once.

WHAT BULL FOR LARGE BUTTER COW

A reader in New York State says that he has a herd of cows that are purebred or are three-fourths Jersey. They are small, and in order to sell his surplus stock to advantage he must have a bigger and heavier animal. At the same time he wants to keep his cream yield up. He will have to buy a purebred bull next Spring, and wishes to know what breed he can get to increase the size of his cows, and at the same time keep up the butter yield.

It is doubtful whether your correspondent can combine with economy dairy and beef qualities. If this plan is to raise steers from the male offspring he might increase the size of his stock somewhat by the use of a Guernsey bull, and still get heifers of a good butter type. We would not advise the use of a bull of any of the beef breeds, nor even a Holstein, if butter is the chief object sought after. A Guernsey bull, of high breeding, from some good butter strain, will give larger offspring than a Jersey, and will probably transmit butter qualities fully equal.

C. S. PHELPS.

Your reader should purchase a Guernsey bull of a large family, that is, one from a large sire and dam. We have had them nearly as large as Short-horn bulls. If the larger specimens of the Guernseys are crossed with the Jerseys, the yield of cream will not be diminished, its color will be improved and the size of the offspring enlarged about 20 per cent. These breeds cross very kindly, whereas if the small Jersey be crossed with the Holstein, or, in fact, with any other of the milking breeds but the Guernsey, the likelihood is that the calves will be unlike in size and in milk and cream production. I. P. ROBERTS.

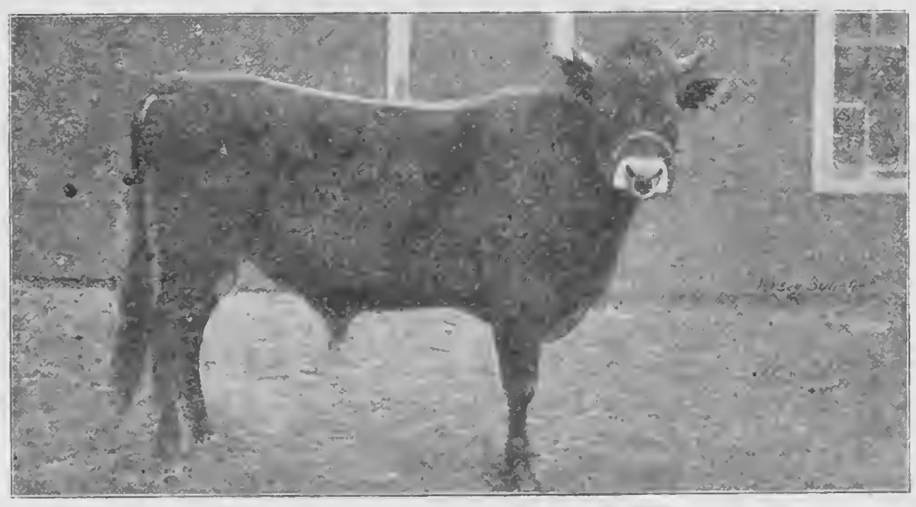
The use of a large, fleshy type of Guernsey male would naturally produce larger offspring, and still keep up the quality of the milk. Further, this cross would in all probability be a very harmonious one, as the Jersey and Guernsey come from a common ancestry, and even to-day have much in common. Logically, this is the best cross, if the surplus stock is to be sold for dairy purposes, and the heifers raised to become dairy cows. If, however, the butcher is the party to be catered to then another cross would seem more fitting. If, for example, an Ayrshire male could be secured, that came from an ancestry that produced milk rich in butter fat, the object might be attained. A Red Poll bull from a rich milk strain could also be used, and this last would give calves that would be the most salable to the butcher. Violent crosses on small cows are quite undesirable, and the suggested Red Poll male is the most violent of the three. A large bull will be more or less apt to sire large calves, and then the danger of difficult calving will be more likely to occur than where a more harmonious mating is used. Personally, I should be disposed to use the Guernsey male, and then if necessary mate the larger females of this cross to a larger type of bull if wanted. Why not buy and develop a high-class strain of deep-milking Short-horns or Red Polls instead of crossing at all? C. S. PLUMB.

There are two courses of action open to your correspondent. The first, and to my mind the more desirable one, is to select a Jersey sire from a family of this breed noted for their size, vigor and rugged constitutions. The individual should be large with a very masculine appearance. A great injury has been done the Jersey breed through the selection of Jersey sires having a "cowy look." It is not at all incompatible to have a bull full of strength, vigor and masculinity, and yet possessed of all the quality that could be asked for. Many of our breeders and dairymen have mistaken delicacy and effeminacy in a bull for quality, and the result has been disaster. There are a number of Jersey breeders, especially in the West, that are doing their utmost to undo much of the injury that has been done this magnificent breed of dairy cattle through the use of such bulls, and I should be very glad to give your correspondent the names of some of these men, whose first consideration in selecting a Jersey is evidence of a vigorous constitution. The second course that might be pursued, and one that has been followed by a number of dairymen in Wisconsin with very satisfactory results, is to purchase a strong and vigorous Guernsey bull possessed of dairy quality, and cross him on these grade Jersey cows. There is apparently something invigorating about the introduction of an outcross of blood from another breed with purebred animals that infuses them with fresh life and vigor at once. Why this should be so is not so easily explained, but the fact remains. The Guernsey and Jersey breeds are so nearly the same in their breed characteristics that the cross is not a violent one, and to use a common expression "nicks" remarkably well, the offspring being very uniform in type and quality, and make excellent dairy animals. The Guernseys as a breed are larger, stronger, and as a consequence are more popular to-day in many dairy districts than are the Jerseys. Either one of these courses should lead to the desired result. W. L. CARLYLE.

Madison, Wis.

A WELL-BRED JERSEY BULL.

George E. Peer says in regard to the young bull pictured at Fig. 395: "It might be stated that Melia Ann's King 56581 was bred to order. Having purchased his sire, I bred him to Lottie Melia Ann 100775 (who is a sister of Pride's Olga 4th, with a test of 17 pounds ½ ounce from 420 pounds nine ounces milk, both being sired by the same bull), with hopes of securing a bull fit to head my herd. In this my expectations were fully realized, and Melia Ann's King was the result. Next to his famous sire he is the highest standard-bred pure St. Lambert-Melia Ann bull living, and the only one with 50 per cent of old Melia Ann's blood." The picture was taken in his 17-month form. His sire was Melia Ann's Son 22041; he in turn being sired by Lucy's Stoke Pogis 11544, and out of the great old cow Melia Ann 5444, who has a butter record of 18 pounds ½ ounce in a week made upon grass alone. The dam of Melia Ann's King 56581 is Lottie Melia Ann 100775, with a test of 21 pounds two ounces from 305 pounds of milk in seven days, her sire being Melia Ann's Stoke Pogis 22042, sire of 10 tested cows, among them Pride's Olga 4th 96870, the sweepstakes cow at the Pan-American, whose record of 65¼ pounds of milk in one day, 420 pounds nine ounces in seven days, and 27 pounds ½ ounce of butter in a week, is well-known to the readers of THE R. N.-Y. The dam of Lottie Melia Ann 100775 is Melia Ann 3rd 68070—375 pounds eight ounces of milk and 28 pounds eight ounces of butter in a week. Melia Ann 3rd is a full sister to Melia Ann's Son 22041 and to Melia Ann's Stoke Pogis 22042.



THE JERSEY BULL MELIA ANN'S KING 56581. FIG. 395.

HOW MUCH MEAT FOR HENS?

My feed for my White Leghorn hens and pullets is one-third each of corn, wheat and buckwheat mixed morning and night (what they will pick up clean); at noon, one-half by weight of bran and gluten meal, one-third cooked potatoes, all wet up with sweet skim-milk, also meat scraps, cabbage or beets for green food. Can I better the ration? They are looking fine, but are not laying yet; were hatched in April and May. Could I use basswood boards, just sawed, from a tree cut last Spring to put on the under side of my rafters to henhouse, to stuff with straw (like Van Dreser), or would they be too damp? G. L. F.

G. L. F. does not mention the amount of meat scrap used in the mash, which is one of the most important parts of the food for good results in egg production. I have had the best results, usually, in feeding about four to five pounds daily to each 100 fowls. If the food is mixed with milk, as in this case, I should feed about one pound of meat to each 25 hens. I should either use cut clover hay, about one-half the whole bulk of the food in the mash, or else give them clover hay, cornstalks, etc., to pick at as they want. To anyone who has never given his fowls such it will be surprising the amount of these bulky feeds they will eat. On most farms there is a large amount of hay seed, clover leaves, etc., that will accumulate under the mows, where the hay is thrown down for the stock. This in many instances goes to waste, while if it were given to the fowls they would turn it to good account. The grain food should be fed in litter, so they will have to scratch for it; a busy hen is a healthy one. Cut cornstalks make the best scratching material I have ever tried. G. L. F. does not mention anything about grit and clean drinking water, but as he says they are looking fine I judge they are both supplied. I should not hesitate to use the unseasoned basswood boards for lining. If the roof does not leak and the location is high and dry, the house is opened on bright days and kept closed as tightly as possible on cold nights, there need be no fear of bad results from dampness. J. E. S.

Sharples "Tubular" Dairy Separators.

Official Report of State Authorities.

University of Wisconsin—630 lbs per hour; test skim milk...01
Conn. Agr. College—927 lbs per hour; test skim milk.....02
Ohio State University—"Doing good work" test skim milk.02
Univ. of Tenn.—"Very satisfactory;" test skim milk....trace
N. H. Agr. College—"The boys like it;" test skim milk...01
Hatch Experiment Station, Mass.—692 lbs per hour; test skim milk 02
Kansas State Agr. College—660 lbs per hour; test skim milk.....03
Pennsylvania Agr. College—"Did very good work. It skims very clean."
University of Nebraska—"Runs very light. Doing good work."
Tuskegee, Ala., Industrial Inst.—"The thoroughness of skimming is remarkable.

SHARPLES CO., Chicago, Ills. P. M. SHARPLES, West Chester, Pa.

EMPIRE
THE LEADING CREAM SEPARATOR
CATALOGUE FREE
U.S. BUTTER EXTRACTOR CO. BLOOMFIELD N.J.
WESTERN OFFICE FISHER BLOG CHICAGO

NO HUMBUG—3 Perfect Tools In One.
Humane Swine V Stock Marker and Calf Dehorner. Stops swine of all ages from rooting. Makes 48 different ear marks, large or small. No change of blade. Extracts Horns. Testimonials free. Price $1.50, or send $1.00, get it on trial. If it suits, send balance. Pat'd Apr. 23, 1901.
FARMER BRIGHTON, FAIRFIELD, IOWA.

COOK YOUR FEED and SAVE Half the Cost—with the
PROFIT FARM BOILER
With Dumping Caldron. Empties its kettle in one minute. The simplest and best arrangement for cooking food for stock. Also make Dairy and Laundry Stoves, Water and Steam Jacket Kettles, Hog Scalders, Caldrons, etc. Send for circulars.
D. R. SPERRY & CO., Batavia, Ill.

FISTULA AND POLL EVIL
Fleming's Fistula and Poll Evil Cure is a new, scientific & certain remedy.
NO COST IF IT FAILS.
Write today for important circular No. 441
FLEMING BROS., Chemists, Union Stock Yards, Chicago.
Cured in 15 to 30 Days

BRAND NEW STEEL ROOFING

Bought at Receivers' Sale. Sheets either flat, corrugated or "V" crimped. No tools except a hatchet or hammer is needed to lay the roofing. We furnish free with each order enough paint to cover and nails to lay. Price per square, $1.75
A square means 100 square ft. Write for Free Catalogue No. 67 on General Merchandise. Chicago House Wrecking Co., West 35th and Iron Sts., Chicago, Ill.

A CARD.

PARIS SEPARATOR AWARDS.

The De Laval Cream Separators received the **GRAND PRIZE** award at the Paris Exposition, in the name of "SOCIETE ANONYME SEPARATOR," which is the French translation of "AKTIEBOLAGET SEPARATOR," the Swedish name of the De Laval European organization, both names meaning "SHAREHOLDER'S SEPARATOR COMPANY, LIMITED"

The repeated misrepresentation of the VERMONT FARM MACHINE Co. (manufacturers of the so-called "U. S." separator) in this regard, culminating with the malicious falsehood that no such award was made and that the De Laval Company is guilty of "lying" in so claiming brings the matter to a point where common business self-respect demands that some radical action be taken.

We have, therefore, this day instructed counsel to at once take such legal steps as may be justified and proper in the circumstances against both the VERMONT FARM MACHINE Co. and, where practicable, such papers as may have given advertising publication to these false and libelous statements.

THE DE LAVAL SEPARATOR CO.

New York, Dec. 17, 1901.

HUMOROUS

The early bird may catc worm,
And start triumphantl rill,
Which proves, despite its le squirm.
The early worm just the bill.
edit Post.

Cornell University Library 28 TO1

"SOMEBODY has sent 3,669 to the conscience fund." "Say an must be awful rich who can affo have a conscience like that."—land Plain Dealer.

"Do you know what they call hash at our boarding house?" "No; what?" "The substance of things hoped for, the evidence of things not seen."—Washington Times.

"I SEE you are reading the dictionary. Do you find it interesting?" "No; more amusing than interesting. It spells words so different from the way I spell them."—Judge.

WILLIE: "Pa, this paper says: 'Beef makes brawn, and fish makes brains.' Why do fish make brains?" Pa: "Probably because they travel in schools; now run away and play."—Philadelphia Press.

"Now, Johnny," said the Sunday school teacher, "you may tell us what a prophet is." "Why," replied Johnny, "it's a fellow that's always lookin' for a chance to say 'I told you so.'"—Philadelphia Press.

STYLISH LADY VISITOR (to small boy, while waiting for hostess to come down): "What is the matter with Fido, that you are watching him so closely?" Small Boy: "Mamma said that your hat was enough to make a dog laugh, and I wanted to see him do it."—Tit-Bits.

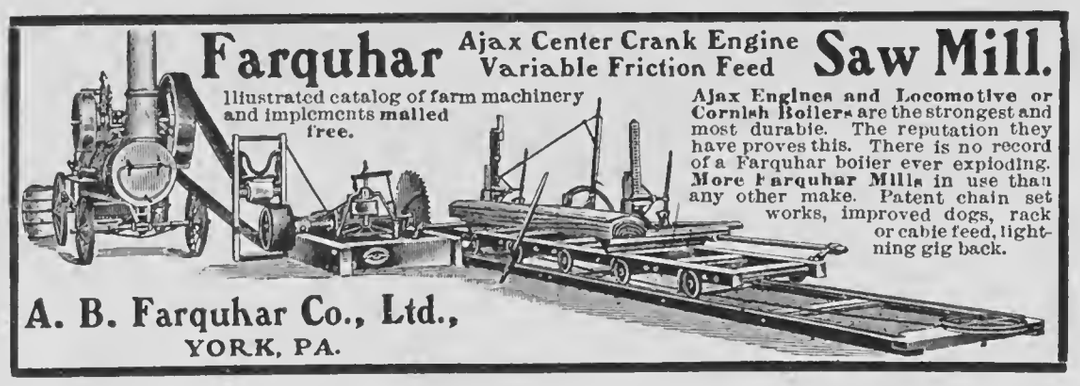
CALLER: "And are your papa and mamma going to take you to Europe with them when they go?" Tommy: "Yes'm." Caller: "And aren't you afraid?" Tommy: "No'm. I ain't afraid o' nothin'. I've been vaccinated."—Catholic Standard and Times.

"THIS," said the proud young wife as she passed the plate to her trusting husband, "is White Mountain cake." The deluded man made several attempts to bite it. "What do you think of it, dear?" she asked. "Well," he said with a feeble smile, "it is very realistic."—Judge.

BOMOSA COFFEE
BEST GROWN
BEST and MOST ECONOMICAL COFFEE GROWN. 33c.
Requires Only TWO-THIRDS the regular quantity. Always packed in 1-lb. trade-mark red bags.
Good Coffees 12c. and 15c.
Good Teas 30c. and 35c.
For special terms address
The Great American Tea Co.,
31 & 33 Vesey St., New York.
P. O. Box 289.

WIRE FENCE AT WHOLESALE.
Also Coiled spring, plain and Barb wire. Send for Cat. and prices. W. H. Mason & Co., Box 67, Leesburg, O.

Big Calves
Veal calves finished on Victor Corn and Oat Feed bring highest price. Cannot be distinguished from "whole-milk veal." If calves are to be raised, feed Victor Corn and Oat Feed early and continuously. Quick, heavy growth and perfect proportion follow.
For free booklet, "Feeding for Flesh," address
THE AMERICAN CEREAL CO.
Chicago, Ill.
Manufacturers of
Victor C. & O. Feed


Farquhar Ajax Center Crank Engine Variable Friction Feed Saw Mill.
Illustrated catalog of farm machinery and implements mailed free.
Ajax Engines and Locomotive or Cornish Boilers are the strongest and most durable. The reputation they have proves this. There is no record of a Farquhar boiler ever exploding. More Farquhar Mills in use than any other make. Patent chain set works, improved dogs, rack or cable feed, lightning gig back.
A. B. Farquhar Co., Ltd.,
YORK, PA.

MORE PROOF SHOWING THAT THE DeLAVAL CO.
ARE TELLING THE TRUTH WHEN THEY ACKNOWLEDGE THAT THERE
HAS BEEN LYING ABOUT PARIS SEPARATOR AWARDS

In our last advertisement we referred to three statements that were in a recent DeLaval advertisement, by which they hoped to make readers believe that the name "Aktiebolaget Separator" did appear on the official list of awards distributed at the Paris Exposition and claiming "Aktiebolaget Separator" to be their European organization, regardless of the fact that less than a month before they claimed "Société Anonyme Separator" to be their European organization. However, they dropped this latter claim like a piece of hot iron when we proved that "Société Anonyme Separator" exhibited at Paris a Butter Radiator and not a Cream Separator, and are again claiming "Aktiebolaget Separator."

One of the letters referred to purported to be signed by U. S. Consul-General at Stockholm, Sweden, under the date of April 17, 1901, reads as follows:

"From evidence this day furnished me I am able to certify that the Separator Company, Ltd., (Aktiebolaget Separator) of this city did receive the 'Grand Prize' for their Alpha-DeLaval Separators at the Paris Exposition in the year 1900, as per announcement in the 'Journal Officiel' Paris, of August 18, 1900, this day presented at this office."

NOTICE, this statement says "as per announcement in the 'Journal Officiel' of August 18, 1900."

Grands prix.

Egrot et Grangé et Guillaume. — France.
Société anonyme Separator. — Suède.
Simon frères. — France.
Burmeister et Wain. — Danemark
Garin (Edmond). — France.
Domaine de la couronne et des haras Godollo. — Hongrie.
Domaine de l'Etat Bozja-Kovina. — Hongrie.
Administration du domaine de la couronne. — Roumanie.
Kœbers Einsen werk. — Allemagne.

Médailles d'or.

Jacq.
Baqué
Ferme
Niels
Peliss
Carne
Merc
Dair

Ch
Bec
Ant
Buh
Par
Ja

As to the truth of this we ask the readers to examine the photographic reproduction given herewith of the list of winners of the Grand Prize at Paris in Class 37, the one in which cream separators and other dairy goods were entered, as published in the 'Journal Officiel' dated August 18, 1900, and see if they can find the name of "Aktiebolaget Separator." We cannot and do not believe anyone else can.

Also notice the date of the statement—April 17, 1901, then bear in mind that seven months later, in November, 1901, the DeLaval Co. claimed their award through the "Société Anonyme Separator," but being cornered, they go back to their former claim that the award came through the "Aktiebolaget Separator."

In the light of this photographic re-production and these statements we claim that our statement that the Official List of Awards published and distributed at the Paris Exposition contained no mention of any award to the DeLaval Separator Co. or the Aktiebolaget Separator is absolutely true.

The sum and substance of the whole matter is it is terribly galling to the DeLaval Separator Co. to be continually beaten by the United States Separator, and they attempt to bluff off their defeats by publishing all sorts of statements in their advertisements, claiming first one thing and then another. It shows that they have very little respect for the intelligence of readers when they make separate and contradictory claims within two weeks of one another.

THE UNITED STATES SEPARATOR WINS ON ITS MERITS
AND STANDS TO-DAY THE
STANDARD SEPARATOR OF THE WORLD
VERMONT FARM MACHINE CO., Bellows Falls, Vt.
247

STEVENS
Anti-friction, Bridge tree, Automatic adjusting, Self-sharpening, Covered gears, Light draft, Non-choking Hand, Sweep, and Power farm mills, for all purposes. Will grind all grain to any degree of fineness. Thousands in daily use everywhere. Send for free catalogue C. Agents wanted.
STEVENS MFG. CO.,
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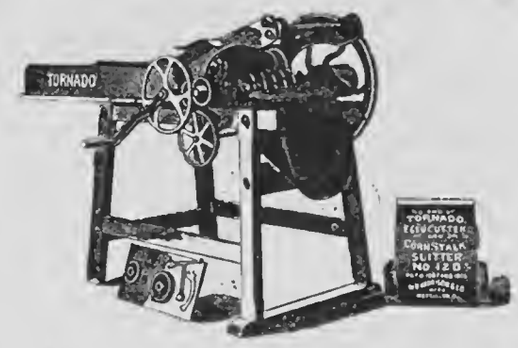

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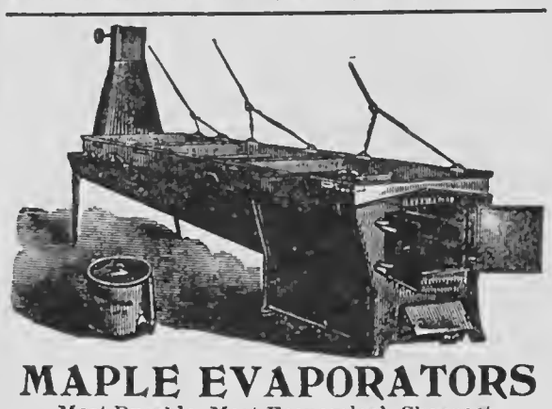
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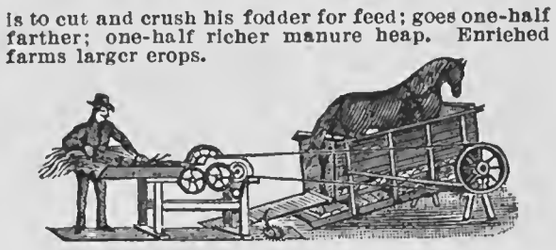
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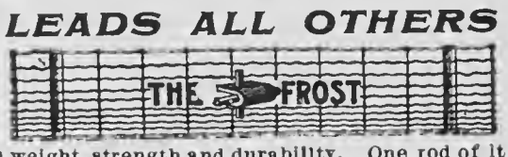

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